SYBASE®

DataWindow® Object Reference

DataWindow .NET™

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Contents

About This Book

Subject

This book provides reference information for the DataWindow® object. It describes DataWindow expressions and the functions you use with them, and properties of DataWindow objects.

Audience

This book is for anyone developing applications that use DataWindow .NET™ in the .NET Framework. It assumes that:

- You are familiar with the DataWindow painter. If not, see the DataWindow Designer *User's Guide*.
- You are an experienced user of Visual Basic or C# and your development environment. If not, see the documentation for your development environment and your language of choice.

Related books

For a complete list of books and online documentation, see the preface of the DataWindow .NET *Programmer's Guide*.

Code samples

You can find sample code on the Sybase CodeXchange Web site at http://datawindownet.codexchange.sybase.com and in the *Sybase\DataWindow .NET 2.5\Code Examples* directory.

Other sources of information

Use the Sybase Getting Started CD, the SyBooks CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.
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CHAPTER 1

DataWindow Operators and Expressions

About this chapter

You use an expression to request that a DataWindow object perform a computational operation. This chapter explains how expressions work and how to write them.

Contents

Where you use DataWindow expressions

A DataWindow expression is a combination of data, operators, and functions that, when evaluated, results in a value. An expression can include column names, operators, DataWindow expression functions, and constants such as numbers and text strings.

In painters

DataWindow expressions are associated with DataWindow objects and reports. You specify them in the DataWindow painter. You can also specify expressions in the Database painter, although these expressions have a slightly different format and are used only in validation rules.

For information about DataWindow expression functions that you can use in expressions, see “Using DataWindow expression functions” on page 13, or look up the function you want in online Help.

In painters, you use expressions in these ways:

Table 1-1: Using DataWindow expressions in painters

In this painter	Expressions are used in
DataWindow painter	Computed fields
	Conditional expressions for property values
	Validation rules
	Filters
	Sorting
	Series and values in graphs
	Columns, rows, and values in crosstabs
Database painter	Validation rules

Other types of expressions you use
You also use expressions in Quick Select, SQL Select, and the Query painter to specify selection criteria, and in SQL Select and the Query painter to create computed columns. In these painters you are using SQL operators and DBMS-specific functions, not DataWindow expression operators and functions, to create expressions.

Some of the specific places where you use expressions are described here.

In computed fields

Expressions for computed fields can evaluate to any value. The datatype of the expression becomes the datatype of the computed field:

Table 1-2: Using expressions in computed fields

Expression	Description
Today ( )	Displays the date using the Today function
Salary/12	Computes the monthly salary
Sum (Salary for group 1)	Computes the salary for the first group using the Sum aggregate function
Price*Quantity	Computes the total cost

Expressions for graphs and crosstabs
You can use similar expressions for series and values in graphs and for columns, rows, and values in crosstabs.

In filters

Filter expressions are boolean expressions that must evaluate to true or false:

Table 1-3: Using expressions with filters

Expression	Description
Academics = "*****" AND Cost = "$$$"	Displays data only for colleges with both a 5-star academic rating and a $$$ cost rating
Emp_sal < 50000	Displays data for employees with salaries less than $50,000
Salary > 50000 AND Dept_id BETWEEN 400 AND 700	Displays data for employees in departments 400, 500, 600, and 700 with salaries greater than $50,000
Month(Bdate) = 9 OR Month(Bdate) = 2	Displays data for people with birth dates in September or February
Match (Lname, "[^ABC]")	Displays data for people whose last name begins with A, B, or C

In validation rules for table columns

Validation rules are boolean expressions that compare column data with values and that use relational and logical operators. When the validation rule evaluates to false, the data in the column is rejected.

In the DataWindow painter When you specify a validation rule in the DataWindow painter, you should validate the newly entered value. To refer to the newly entered value, use the GetText function. Because GetText returns a string, you also need a data conversion function (such as Integer or Real) if you compare the value to other types of data.

If you include the column name in the expression, you get the value that already exists for the column instead of the newly entered value that needs validating.

In the Database painter When you specify the validation rule in the Database painter, you are defining a general rule that can be applied to any column. Use `@placeholder` to stand for the newly entered value. The name you use for `@placeholder` is irrelevant. You can assign the rule to any column that has a datatype appropriate for the comparison.

When you define a DataWindow object, a validation rule assigned to a column is brought into the DataWindow object and converted to DataWindow object syntax. `@placeholder` is converted to GetText and the appropriate datatype conversion function.

Other columns in the rule You can refer to values in other columns for the current row by specifying their names in the validation rule:

Table 1-4: Using expressions with values from other columns

Expression in Database painter	Expression in DataWindow painter	Description
@column >= 10000	Integer(GetText())>= 10000	If a user enters a salary below $10,000, an error message displays.
@column IN (100, 200, 300)	Integer(GetText()) IN (100, 200, 300)	If a user does not enter a department ID of 100, 200, or 300, an error message displays.
@salary > 0	Long(GetText()) > 0	If a user does not enter a positive number, an error message displays.
Match(@disc_price, "^[0-9]+$") and @disc_price < Full_Price	Match(GetText( ), "^[0-9]+$") and Real(GetText()) < Full_Price	If a user enters any characters other than digits, or the resulting number is greater than or equal to the value in the Full_Price column, an error message displays.

Operators used in DataWindow expressions

An operator is a symbol or word in an expression that performs an arithmetic calculation or logical operation; compares numbers, text, or values; or manipulates text strings.

Four types of operators are available:

- **Arithmetic** for numeric datatypes. See “Arithmetic operators in DataWindow expressions” on page 5.
- **Relational** for all datatypes. See “Relational operators in DataWindow expressions” on page 5.
- **Logical** for all datatypes. See “Logical operators in DataWindow expressions” on page 9.
- **Concatenation** for string datatypes. See “Concatenation operator in DataWindow expressions” on page 10.

Arithmetic operators in DataWindow expressions

When you write an expression, you can use the following arithmetic operators:

Table 1-5: Using expressions with arithmetic operators

Operator	Meaning	Example
+	Addition	SubTotal + Tax
-	Subtraction	Price - Discount
*	Multiplication	Quantity * Price
/	Division	Discount / Price
^	Exponentiation	Rating ^ 2.5

Multiplication and division

Multiplication and division are carried out to full precision (16–18 digits). Values are rounded:

Table 1-6: Value rounding in DataWindow expressions

Expression	Value
20.0/3	6.666666666666667
3*(20.0/3)	20
Truncate(20.0/3,4)	6.6666

Calculations with null

When you form an arithmetic expression that contains a null value, the expression becomes null. Thinking of null as *undefined* makes this easier to understand. For example, when a null column is multiplied by 5, the entire expression also evaluates to null. Use the IsNull function to explicitly check for the null value.

Boolean expressions that contain a null value evaluate to false rather than to null. For more information, see "Relational operators in DataWindow expressions" next.

Relational operators in DataWindow expressions

You use relational operators to compare a value with other values. The result is a boolean expression whose value is always true or false.

Since the result of a boolean expression is always true or false, a relational operator that compares a value to null evaluates to false. For example, the expression "column > 5" evaluates to false (and "NOT column > 5" evaluates to true) when the column value is null.

When you write an expression, you can use the following relational operators (more information about LIKE, IN, and BETWEEN follows the table):

Table 1-7: Using expressions with relational operators

Operator	Meaning	Example
=	Is equal to	Price = 100
>	Is greater than	Price > 100
<	Is less than	Price < 100
<>	Is not equal to	Price <> 100
>=	Greater than or equal to	Price >= 100
<=	Less than or equal to	Price <= 100
NOT =	Is not equal to	Price NOT= 100
LIKE	Matches this specified pattern.	Emp_lname LIKE 'C%' OR Emp_lname LIKE 'G%'
IN	Is in this set of values.	Dept_id IN (100, 200, 500)
BETWEEN	Is within this range of values. The range includes the first and last values.	Price BETWEEN 1000 AND 3000
NOT LIKE	Does not match this specified pattern.	Emp_lname NOT LIKE 'C%' AND Emp_lname NOT LIKE 'G%'
NOT IN	Is not in this set of values.	Dept_id NOT IN (100, 200, 500)
NOT BETWEEN	Is outside this range of values. The range includes the first and last values.	Price NOT BETWEEN 1000 AND 2000

Special characters for operations with strings

You can use the following special characters with relational operators that take string values:

Table 1-8: Special characters for use in expressions with relational operators

Special character	Meaning	Example
% (percent)	Matches any group of characters.	Good% matches all names that begin with Good.
_ (underscore)	Matches any single character.	Good _ _ _ matches all 7-letter names that begin with Good.

LIKE and NOT LIKE operators

Use LIKE to search for strings that match a predetermined pattern. Use NOT LIKE to search for strings that do not match a predetermined pattern. When you use LIKE or NOT LIKE, you can use the % or _ characters to match unknown characters in a pattern.

For example, the following expression for the Background.Color property of the Salary column displays salaries in red for employees with last names beginning with F and displays all other salaries in white:

```
If(emp_lname LIKE'F%',RGB(255,0,0),RGB(255,255,255))
```

Escape keyword

If you need to use the % or _ characters as part of the string, you can use the escape keyword to indicate that the character is part of the string. For example, the _ character in the following filter string is part of the string to be searched for, but is treated as a wildcard:

```
comment LIKE ~'%o_a15progress%~'
```

The escape keyword designates any character as an escape character (do not use a character that is part of the string you want to match). In the following example, the asterisk (*) character is inserted before the _ character and designated as an escape character, so that the _ character is treated as part of the string to be matched:

```
comment like ~'%o*_a15progress%~' escape ~'*~'
```

BETWEEN and NOT BETWEEN operators

Use BETWEEN to check if a value is within a range of values. Use NOT BETWEEN to check if a value is *not* in a range of values. The range of values includes the boundary values that specify the range.

For example, the following expression for the Background.Color property of the Salary column displays salaries in red when an employee's salary is between $50,000 and $100,000 and displays all other salaries in white:

```
If(salary BETWEEN 50000 AND 100000, RGB(255,0,0),
RGB(255,255,255))
```

You can use the BETWEEN and NOT BETWEEN operators with string values. For example, if the following expression is used for the Visual property of a column, column values display only for departments listed alphabetically between Finance and Sales:

```
If(dept_name BETWEEN 'Finance' AND 'Sales',1,0)
```

The % or _ characters can be used when you are using string values with the BETWEEN and NOT BETWEEN operators. This example might include more department listings than the previous example:

```
If(dept_name BETWEEN 'F%' AND 'S%',1,0)
```

You can also use the BETWEEN and NOT BETWEEN operators with methods. For example:

```
GetRow( ) BETWEEN 5 AND 8
```

IN and NOT IN operators

Use IN to check if a value is in a set of values. Use NOT IN to check if a value is *not* in a set of values.

For example, the following expression for the Background.Color property of the Salary column displays salaries in red for employees in department 300 or 400 having a salary between $50,000 and $100,000, and displays all other salaries in white:

```
If(dept_id IN (300,400) and salary BETWEEN 50000 AND
100000, RGB(255,0,0), RGB(255,255,255))
```

Comparing strings in DataWindow expressions

When you compare strings, the comparison is case sensitive. Leading blanks are significant, but trailing blanks are not.

Case-sensitivity examples

Assume City1 is “Austin” and City2 is “AUSTIN”. Then:

```
City1=City2
```

returns false.

To compare strings regardless of case, use the Upper or Lower function. For example:

```
Upper(City1)=Upper(City2)
```

returns true.

For information about these functions, see “Using DataWindow expression functions” on page 13.

Blanks examples

Assume City1 is `"Austin"` and City2 is `" Austin "`. Then the expression:

```
City1=City2
```

returns false. DataWindow .NET removes the trailing blank before making the comparison, but it does not remove the leading blank.

To prevent leading blanks from affecting a comparison, remove them with one of the trim functions: Trim or LeftTrim.

For example:

```
Trim(City1)=Trim(City2)
```

returns true.

To compare strings when trailing blanks are significant, use an expression such as the following to ensure that any trailing blanks are included in the comparison:

```
City1 + ">" = City2 + ">"
```

For information about these functions, see "Using DataWindow expression functions" on page 13.

Logical operators in DataWindow expressions

You use logical operators to combine boolean expressions into a larger boolean expression. The result is always true or false:

Table 1-9: Using expressions with logical operators

Operator	Meaning	Example
NOT	Logical negation. If A is true, NOT A is false. If A is false, NOT A is true.	NOT Price = 100
AND	Logical *and*. A AND B is true if both are true. A AND B is false if either is false.	Tax > 3 AND Ship < 5
OR	Logical *or*. A OR B is true if either is true or both are true. A OR B is false only if both are false.	Tax > 3 OR Ship < 5

When you combine two or more boolean expressions to form a new expression, the new expression is either true or false. The following truth table shows how true and false expressions are evaluated to form an expression that is either true or false.

For example, if "My dog has fleas" is true and "My hair is brown" is false, then "My dog has fleas OR my hair is brown" is true, and "My dog has fleas AND my hair is brown" is false:

Table 1-10: Combining expressions with logical operators

If one expression has this value	And the logical operator is	And if another expression has this value	The resulting expression has this value
TRUE	AND	TRUE	TRUE
TRUE	AND	FALSE	FALSE
FALSE	AND	TRUE	FALSE

If one expression has this value	And the logical operator is	And if another expression has this value	The resulting expression has this value
FALSE	AND	FALSE	FALSE
TRUE	OR	TRUE	TRUE
TRUE	OR	FALSE	TRUE
FALSE	OR	TRUE	TRUE
FALSE	OR	FALSE	FALSE
NOT TRUE	AND	TRUE	FALSE
NOT TRUE	AND	FALSE	FALSE
NOT FALSE	AND	TRUE	TRUE
NOT FALSE	AND	FALSE	FALSE
NOT TRUE	OR	TRUE	TRUE
NOT TRUE	OR	FALSE	FALSE
NOT FALSE	OR	TRUE	TRUE
NOT FALSE	OR	FALSE	TRUE

If you use a logical operator with a boolean function that returns null, the term with the null return value is evaluated as false. If you use the NOT logical operator with a boolean function that returns null, the complete term evaluates to true. For example, `NOT gf_boolean ()` evaluates to true when gf_boolean returns null.

Concatenation operator in DataWindow expressions

The concatenation operator joins the contents of two variables of the same type to form a longer value. You can concatenate strings and blobs.

To concatenate values, you use the plus sign (+) operator.

Table 1-11: Using expressions with concatenation operator

String expression	Value
"over" + "stock"	overstock
Lname + ', ' + Fname	If Lname is Hill and Fname is Craig, then "Hill, Craig"

Using quotes
You can use either single or double quotes in string expressions. For example, the expression “over” + “stock” is equivalent to the expression `'over' + 'stock'`.

Operator precedence in DataWindow expressions

To ensure predictable results, operators in DataWindow expressions are evaluated in a specific order of precedence. When operators have the same precedence, they are evaluated from left to right.

The following table lists the operators in descending order of precedence:

Table 1-12: Operator precedence in DataWindow expressions

Operator	Purpose
( )	Grouping
^	Exponentiation
*, /	Multiplication and division
+, -	Addition and subtraction; string concatenation
IN,LIKE,BETWEEN	SQL SELECT statement conditions
=, >, <, <=, >=, <>	Relational operators
AND,OR	Logical *and* and logical *or*
NOT	Logical negation

Overriding the precedence order

Since expressions in parentheses are evaluated first, to override the precedence order, enclose expressions in parentheses. You can also use parentheses to clarify the order of evaluation. Within each set of parentheses, precedence order applies.

In the expression `x+y*a+b`, `y` is first multiplied by `a` (because multiplication has a higher precedence than addition). The result of the multiplication is then added to `x` and this result is then added to `b` (because the + operators are evaluated left to right).

To force evaluation in a different order, group expressions with parentheses. For example, in the expression `x+(y*(a+b))`, `a+b` is evaluated first. The sum `a+b` is then multiplied by `y`, and this product is added to `x`.

Evaluating DataWindow expressions in code

In code, you use methods, properties, and data expressions for the DataWindow control to get information about the state of the DataWindow: the current row, the highlighted row, values of particular items. You can get other information by accessing properties of the DataWindow object, either with the Describe function or with property expressions.

For example, if you need to find the current row in a DataWindow, use the DataWindow control property CurrentRow:

```
rownum = dw1.CurrentRow
```

If you need to find the first row on the current page in a DataWindow, there is no DataWindow control function to return this information, but you can find it in the appropriate DataWindow object property:

```
strFirst = dw1.Describe("DataWindow.FirstRowOnPage")
strLast = dw1.Describe("DataWindow.LastRowOnPage")
dw1.Text = "Rows " + strFirst + " to " + strLast
```

In some cases, however, information you need might not be available either by using DataWindow control functions or by accessing DataWindow object properties.

DataWindow expression functions sometimes provide information that is available in no other way. These functions, which are available within a DataWindow expression, are documented in "Using DataWindow expression functions" on page 13.

Evaluating conditional DataWindow expressions with current data

Querying a property for a column

Values for column properties normally apply to all the rows in the column. For example, if you set the Protect property to "1" for the Emp_Id column, the user will be unable to modify Emp_Id for any of the rows. If you query the property value for this column at runtime, it will return "1".

When the column has a conditional expression

Instead of a constant, you can assign a conditional expression to some column properties. Such properties are set on a row-by-row basis at runtime.

For example, you might wish to allow users to enter an employee id for new rows but protect this value for existing rows. The conditional expression for this column's Protect property would be:

```
If(IsRowNew(), 0, 1)
```

When you query the Protect property at runtime, the result in this case would be the actual expression (preceded by a default value and a tab character and enclosed in quotes) instead of the property value. The value for the Protect property would be:

```
"0 <tab> If(IsRowNew(), 0, 1)"
```

CHAPTER 2

DataWindow Expression Functions

About this chapter

This chapter provides syntax, descriptions, and examples of the functions you can use in expressions in the DataWindow painter.

Contents

Using DataWindow expression functions

In the DataWindow painter, you can use DataWindow expression functions in expressions for computed fields, filters, validation rules, and graphed data, with some exceptions.

The dialog boxes in which you define expressions include a list box that lists the available functions and their arguments. The dialog boxes make it easy to insert a function into the expression.

For information about expressions, see Chapter 1, “DataWindow Operators and Expressions.”

Return values for functions and expressions

DataWindow expression functions can return the following datatypes:

- Double
- Decimal
- String
- DateTime
- Time

Within an expression, a function can return other datatypes (such as boolean, date, or integer), but the final value of an expression is converted to one of these datatypes.

Restrictions for aggregate functions

An aggregate function is a function (such as Avg, Max, StDev, and Sum) that operates on a range of values in a column. When you use an aggregate function, some restrictions apply. You cannot use an aggregate function:

- In a filter
- In a validation rule
- As an argument for another aggregate function

When you use aggregate functions, they cancel the effect of setting Retrieve Rows As Needed. To do the aggregation, the DataWindow object always retrieves all rows.

Formatting for the locally correct display of numbers

No matter what country you are creating objects and developing an application in, you must use U.S. number notation in numbers or number masks in display formats, edit masks, and DataWindow expressions. This means that when you specify a number or number mask, use a comma as the thousands delimiter and period for the decimal place.

Numbers display appropriately in whatever countries you deploy applications in. At runtime, the locally correct symbols for numbers display (because the international Control Panel settings are used) when numbers are interpreted. For example, in countries where comma represents the decimal place and period represents thousands, users see numbers in those formats at runtime.

For information about the locally correct display of dates and day names, see String on page 129 and DayName on page 57.

Four examples

Example 1: counting null values in a column

A null value is a marker used to fill a place in a column where data is missing for any reason. The value might not be applicable, or it might be missing or unknown. When a database table is created, each column in the table either allows null values or does not allow them. The column or set of columns that define the primary key cannot allow null values. Sometimes it is useful to know how many null values there are in a particular column.

What you want to do

Suppose you are working with the Fin_code table in the Enterprise Application Sample Database. The Fin_code table has three columns:

Table 2-1: Columns in the Fin_code table

Column	What the column is	Allows null values?
Code	Unique financial identifier (primary key)	No
Type	Code type: expense or revenue	No
Description	Code description: the department incurring the expense or getting the revenue	Yes

You create a DataWindow object using the Code and Description columns. You want to know the number of null values in the Description column.

How to do it

In the DataWindow object, you create a computed field that uses functions to display the number of null values in the Description column.

For the sake of demonstrating the use of functions, the following computed fields are created in the Summary band of the DataWindow object (with text objects that tell you what information each computed field is providing):

```
Count(description for all)
```

counts the number of descriptions (that are not null);

```
Sum(If(IsNull(description), 1, 0))
```

returns a 1 if the description column is null, a 0 if the description column is not null, and then adds the total;

```
Count(id for all)
```

counts the number of IDs (which is also the number of rows);

```
Sum(If(IsNull(description), 1, 1))
```

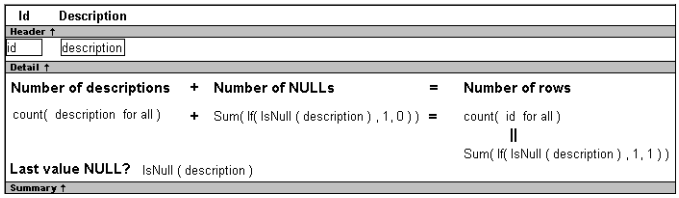
adds the number of nulls and not nulls in the description column (which is the total number of rows) and should match the result of the `Count( id for all )` function; and

```
IsNull(description)
```

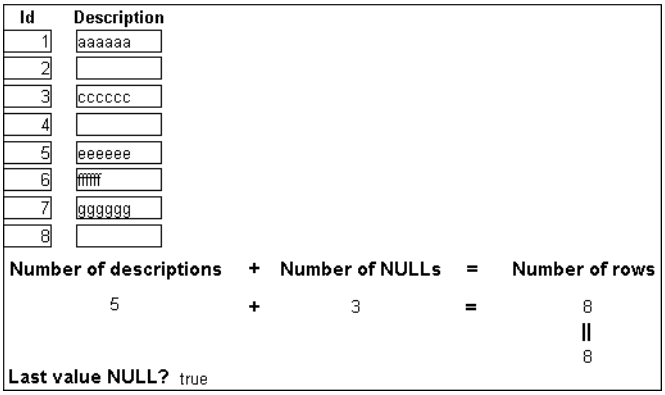
evaluates whether the last row in the table has a description that is null. The return value of the IsNull function is true or false.

What you get

Here is the design for the DataWindow object.



Here is the DataWindow object showing eight descriptions, three of which are null and five of which are not null. The last description for Id=8 is null.



Example 2: counting male and female employees

Example 1 demonstrates the use of the Sum and Count functions. Sum and Count are two examples of a class of functions called aggregate functions.

An aggregate function is a function that operates on a range of values in a column. The aggregate functions are:

Avg	Large	Mode	Sum
Count	Last	Percent	Var
CumulativePercent	Max	Small	VarP
CumulativeSum	Median	StDev	
First	Min	StDevP	

About crosstab functions
Although the crosstab functions (CrosstabAvg, CrosstabAvgDec, CrosstabCount, CrosstabMax, CrosstabMaxDec, CrosstabMin, CrosstabMinDec, CrosstabSum, and CrosstabSumDec) behave like aggregate functions, they are not included on the list because they are for crosstabs only and are designed to work in the crosstab matrix.

A few restrictions apply to the use of aggregate functions. You cannot use an aggregate function:

- In a filter
- In a validation rule
- As an argument for another aggregate function

This example demonstrates the use of the Sum aggregate function.

What you want to do

Using the employee table in the EAS Demo DB as the data source, you create a DataWindow object using at least the Emp_id and the Sex columns. You want the DataWindow object to display the number of male employees and female employees in the company.

How to do it

In the summary band in the workspace, add two computed fields to the DataWindow object that use the Sum and If functions:

```
Sum(If(sex = "M", 1, 0))
```

counts the number of males in your company;

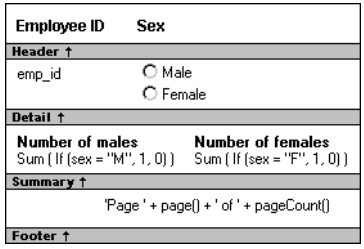
```
Sum(If(sex = "F", 1, 0))
```

counts the number of females in your company.

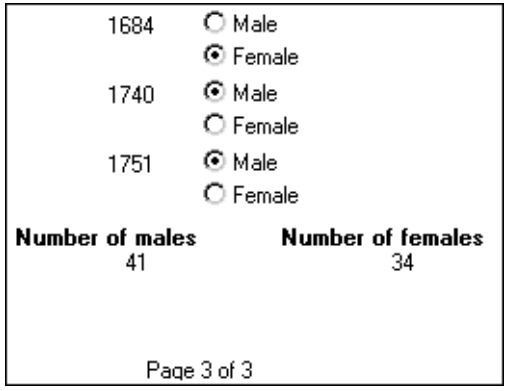
By clicking the Page computed field button, you can also add a Page computed field in the footer band to display the page number and total pages at the bottom of each page of the DataWindow object.

What you get

Here is what the design of the DataWindow object looks like.



Here is the last page of the DataWindow object, with the total number of males and females in the company displayed.



If you want more information

What if you decide that you also want to know the number of males and females in each department in the company?

❖ **To display the males and females in each department:**

1 Select Design>Data Source from the menu bar so that you can edit the data source.

2 Select Design>Select tables from the menu bar and open the Department table in the Select painter workspace, which currently displays the Employee table with the Emp_id and Sex columns selected.

3 Select the department_dept_name column to add it to your data source.

4 Select Rows>Create Group from the menu bar to create a group and group by department name.

5 In the trailer group band, add two additional computed fields:

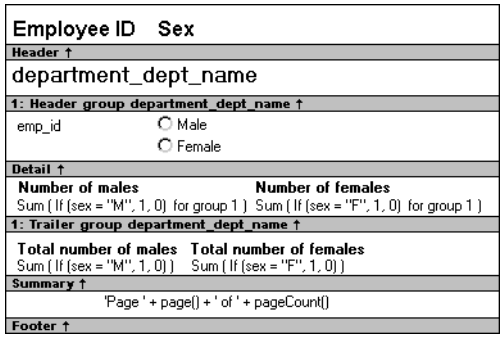
```
Sum(If(sex = "M", 1, 0) for group 1)
```

counts the number of males in each department;

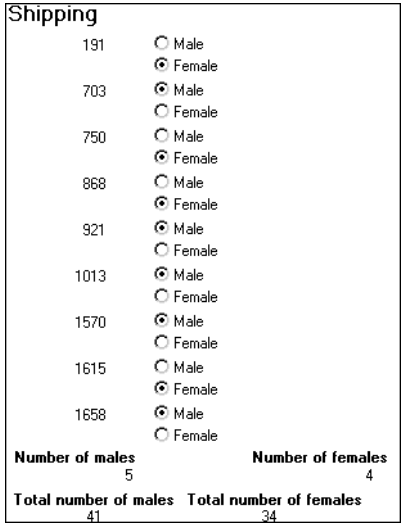
```
Sum(If(sex = "F", 1, 0) for group 1)
```

counts the number of females in each department.

Here is what the design of the grouped DataWindow object looks like.



Here is the last page of the DataWindow object with the number of males and females in the shipping department displayed, followed by the total number of males and females in the company.



Example 3: creating a row indicator

This example demonstrates the use of several functions: Bitmap, Case, CurrentRow, GetRow, and RGB.

What you want to do

Using the Employee table in the Enterprise Application Sample Database, you create a DataWindow object using the Emp_id, Emp_fname, Emp_lname, and Salary columns.

In the painter, you want to display a number of items such as the number of the current row, an arrow that is an indicator of the current row, and the salary for an employee with a background color that depends on what the salary is.

How to do it

In the workspace, add the following:

- A computed field CurrentRow( ), which displays the number of the current row.
- A picture object, which is a right-arrow, for which you define an expression for the arrow's visible property:

  ```
  If(CurrentRow()= GetRow(), 1, 0)
  ```

  The expression causes an arrow to display in the current row and no arrow to display in other rows.
- A computed field using the If, CurrentRow, and GetRow functions:

  ```
  If(CurrentRow() = GetRow(),"Current","Not current")
  ```

  displays the word "Current" when the row is the current row and "Not current" for all other rows.
- A computed field (typed on one line) using the Bitmap, CurrentRow, and GetRow functions:

  ```
  Bitmap(If(CurrentRow()= GetRow(),
  "c:\sampl\ex\code\indicatr.bmp", " "))
  ```

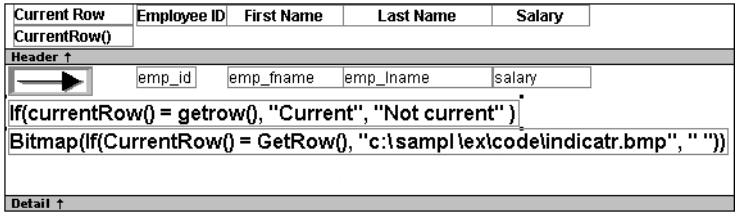
  displays an arrow bitmap for the current row and no bitmap for all other rows.
- An expression for the Background.Color property of the salary column:

  ```
  Case(salary WHEN IS >60000 THEN RGB(192,192,192)
  WHEN IS >40000 THEN RGB(0,255,0) ELSE
  RGB(255,255,255))
  ```

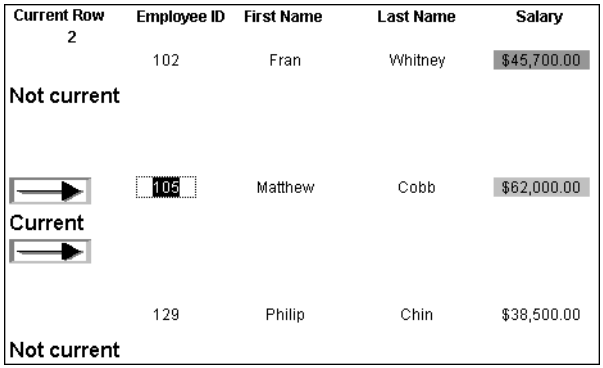
  The expression causes a salary above $40,000 to display in green, a salary above $60,000 to display in gray, and all other salaries to display in white.

What you get

Here is what the design of the DataWindow object looks like:



Here is what the data looks like with the second row current.



Notice that the number of the current row is 2; the first row and the third row are "Not current" (and therefore display no bitmap); and the second row, which is the current row, displays the arrow row indicator.

On your screen, the salary in the first row has a green background because it is more than $40,000; the salary in the second row has a gray background because it is more than $60,000; and the salary in the third row has a white background, which matches the background of the DataWindow object.

Example 4: displaying all data when a column allows nulls

When you create an arithmetic expression that has a null value, the value of the expression is null. This makes sense, since null means essentially undefined and the expression is undefined, but sometimes this fact can interfere with what you want to display.

What you want to do

A table in your database has four columns: Id, Corporation, Address1, and Address2. The Corporation, Address1, and Address2 columns allow null values. Using this table as the data source, you create a DataWindow object using the four columns. You now want the DataWindow object to display both parts of the address, separated by a comma.

You create a computed field to concatenate Address1 and Address2 with a comma separator. Here is the expression that defines the computed field:

```
address1 + ", " + address2
```

When you preview the DataWindow object, if either Address1 or Address2 is null, no part of the address displays because the value of the expression is null. To display a part of the address, you need to create a computed field that forces evaluation even if Address2 is null. Note that Address2 is assumed to have data only if Address1 has data for a particular row.

How to do it

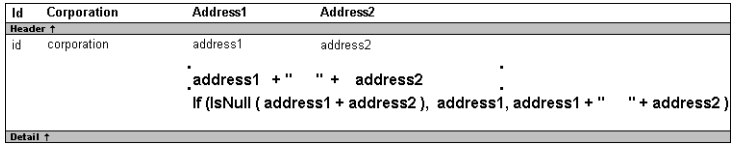
In the detail band, create a computed field that uses the If and IsNull functions:

```
If(IsNull(address1 + address2), address1, address1
+ ", " + address2)
```

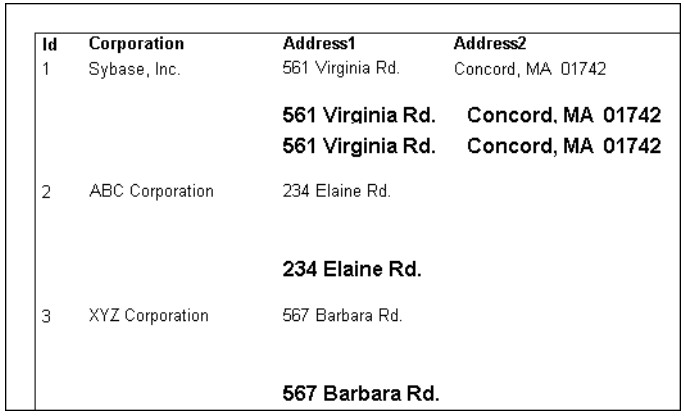
The computed field says this: if the concatenation of the addresses is null (because address2 is null), then display address1, and if it is not null, display both parts of the address separated by a comma.

What you get

Here is what the design of the DataWindow object looks like. It includes both the computed field that does not work and the one that does.



When you preview the DataWindow object, notice that the first computed field displays null for ABC Corporation and XYZ Corporation. The second computed field displays the first part of the address, which is not null.



Alphabetical list of DataWindow expression functions

The list of DataWindow expression functions follows in alphabetical order.

Abs

Description

Calculates the absolute value of a number.

Syntax

Abs (*n*)

Argument	Description
n	The number for which you want the absolute value

Return value

The datatype of *n*. Returns the absolute value of *n*.

Examples

This expression counts all the product numbers where the absolute value of the product number is distinct:

```
Count(product_number for All DISTINCT Abs
(product_number))
```

Only data with an absolute value greater than 5 passes this validation rule:

```
Abs(value_set) > 5
```

See also

Count

ACos

Description

Calculates the arc cosine of an angle.

Syntax

ACos (*n*)

Argument	Description
n	The ratio of the lengths of two sides of a triangle for which you want a corresponding angle (in radians). The ratio must be a value between -1 and 1.

Return value

Double. Returns the arc cosine of *n* if it succeeds.

Examples

This expression returns 0:

```
ACos(1)
```

This expression returns 3.141593 (rounded to six places):

```
ACos(-1)
```

This expression returns 1.000000 (rounded to six places):

```
ACos(.540302)
```

See also

Cos
ASin
ATan

Asc

Description

Converts the first character of a string to its Unicode code point. A Unicode code point is the numerical integer value given to a Unicode character.

Syntax

Asc (*string*)

Argument	Description
string	The string for which you want the code point value of the first character

Return value

Unsigned integer. Returns the code point value of the first character in *string*.

Usage

Use Asc to test the case of a character or manipulate text and letters.

To find out the case of a character, you can check whether its code point value is within the appropriate range.

Examples

This expression for a computed field returns the string in code_id if the code point value of the first character in code_id is A (65):

```
If (Asc(code_id) = 65, code_id, "Not a valid code")
```

This expression for a computed field checks the case of the first character of lname and if it is lowercase, makes it uppercase:

```
IF (Asc(lname) > 64 AND Asc(lname) < 91, lname,
WordCap(lname))
```

See also

Char
WordCap

AscA

Description

Converts the first character of a string to its ASCII integer value.

Syntax

AscA (*string*)

Argument	Description
string	The string for which you want the ASCII value of the first character

Return value

Integer. Returns the ASCII value of the first character in *string*.

Usage

Use AscA to test the case of a character or manipulate text and letters.

To find out the case of a character, you can check whether its ASCII value is within the appropriate range.

Examples

This expression for a computed field returns the string in code_id if the ASCII value of the first character in code_id is A (65):

```
If (AscA(code_id) = 65, code_id, "Not a valid code")
```

This expression for a computed field checks the case of the first character of lname and if it is lowercase, makes it uppercase:

```
IF (AscA(lname) > 64 AND AscA(lname) < 91, lname,
WordCap(lname))
```

See also

CharA
WordCap

ASin

Description

Calculates the arc sine of an angle.

Syntax

ASin (*n*)

Argument	Description
n	The ratio of the lengths of two sides of a triangle for which you want a corresponding angle (in radians). The ratio must be a value between -1 and 1.

Return value

Double. Returns the arc sine of *n* if it succeeds.

Examples

This expression returns .999998 (rounded to six places):

```
ASin(.84147)
```

This expression returns .520311 (rounded to six places):

```
ASin(LogTen (Pi (1)))
```

This expression returns 0:

```
ASin(0)
```

See also

Sin
ACos
ATan
Pi

ATan

Description: Calculates the arc tangent of an angle.

Syntax: **ATan** (*n*)

Argument	Description
n	The ratio of the lengths of two sides of a triangle for which you want a corresponding angle (in radians)

Return value: Double. Returns the arc tangent of *n* if it succeeds.

Examples: This expression returns 0:

```
ATan(0)
```

This expression returns 1.000 (rounded to three places):

```
ATan(1.55741)
```

This expression returns 1.267267 (rounded to six places):

```
ATan(Pi(1))
```

See also: Tan
ASin
ACos

Avg

Description: Calculates the average of the values of the column.

Syntax: **Avg** (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the average of the data values. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.

Argument	Description
FOR *range* (optional)	The data that will be included in the average. For most presentation styles, values for *range* are: • ALL – (Default) The average of all values in *column*. • GROUP *n* – The average of values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The average of the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The average of all values in *column* in the crosstab. For Graph and OLE objects, specify one of the following: • GRAPH – (Graphs only) The average of values in *column* in the range specified for the Rows option. • OBJECT – (OLE objects only) The average of values in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Avg to consider only the distinct values in *column* when calculating the average. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The numeric datatype of the column. Returns the average of the values of the rows in *range*.

Usage

If you specify *range*, Avg returns the average value of *column* in *range*. If you specify DISTINCT, Avg returns the average value of the distinct values in *column*, or if you specify *expresn*, the average of *column* for each distinct value of *expresn*.

For graphs and OLE objects, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.
- For OLE controls, Rows can be All, Current Row, Page, or Group. The available choices depend on the layer the control occupies.

In calculating the average, null values are ignored.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the average of the values in the column named salary:

```
Avg(salary)
```

This expression returns the average of the values in group 1 in the column named salary:

```
Avg(salary for group 1)
```

This expression returns the average of the values in column 5 on the current page:

```
Avg(#5 for page)
```

This computed field returns Above Average if the average salary for the page is greater than the average salary:

```
If(Avg(salary for page) > Avg(salary), "Above Average",
" ")
```

This expression for a graph value sets the data to the average value of the sale_price column:

```
Avg(sale_price)
```

This expression for a graph value sets the data value to the average value of the sale_price column for the entire graph:

```
Avg(sale_price for graph)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the average of the order amount for the distinct order numbers:

```
Avg(order_amt for all DISTINCT order_nbr)
```

See also

Median
Mode

Bitmap

Description

Displays the specified bitmap.

For computed fields only
You can use the Bitmap function *only* in a computed field.

Syntax

Bitmap (*string*)

Argument	Description
string	A column containing bitmap files, a string containing the name of an image file (a BMP, GIF, JPEG, RLE, or WMF file), or an expression that evaluates to a string containing the name of an image file

Return value

The special datatype bitmap, which *cannot* be used in any other function.

Usage

Use Bitmap to dynamically display a bitmap in a computed field. When *string* is a column containing bitmap files, a different bitmap can display for each row.

Examples

These examples are all expressions for a computed field.

This expression dynamically displays the bitmap file contained in the column named employees:

```
Bitmap(employees)
```

If the employees column is column 3, this next expression gives the same result as the expression above:

```
Bitmap(#3)
```

This expression displays the bitmap *tools.bmp*:

```
Bitmap("TOOLS.BMP")
```

This expression tests the value in the column named password and then uses the value to determine which bitmap to display:

```
Bitmap(If(password = "y", "yes.bmp", "no.bmp"))
```

See also

“Example 3: creating a row indicator” on page 19

Case

Description

Tests the values of a column or expression and returns values based on the results of the test.

Syntax

Case (*column* WHEN *value1* THEN *result1* { WHEN *value2* THEN *result2* { ... } } { ELSE *resultelse* })

Argument	Description
column	The column or expression whose values you want to test. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. *Column* is compared to each *valuen*.
WHEN (optional)	Introduces a value-result pair. At least one WHEN is required.
valuen	One or more values that you want to compare to values of *column*. A value can be: • A single value • A list of values separated by commas (for example, 2, 4, 6, 8) • A TO clause (for example, 1 TO 20) • IS followed by a relational operator and comparison value (for example, IS>5) • Any combination of the above with an implied OR between expressions (for example, 1,3,5,7,9,27 TO 33, IS>42)
THEN	Introduces the result to be returned when *column* matches the corresponding *valuen*.
resultn	An expression whose value is returned by Case for the corresponding *valuen*. All *resultn* values must have the same datatype.
ELSE (optional)	Specifies that for any values of *column* that do not match the values of *valuen* already specified, Case returns *resultelse*.
resultelse	An expression whose value is returned by Case when the value of *column* does not match any WHEN *valuen* expression.

Return value

The datatype of *resultn*. Returns the result you specify in *resultn*.

Usage

If more than one WHEN clause matches *column*, Case returns the result of the first matching one.

Examples

This expression for the Background.Color property of a Salary column returns values that represent red when an employee's salary is greater than $70,000, green when an employee's salary is greater than $50,000, and blue otherwise:

```
Case(salary WHEN IS >70000 THEN RGB(255,0,0) WHEN IS
>50000 THEN RGB(0,255,0) ELSE RGB(0,0,255))
```

This expression for the Background.Color property of an employee Id column returns red for Id 101, gray for Id 102, and black for all other Id numbers:

```
Case(emp_id WHEN 101 THEN 255 WHEN 102 THEN
RGB(100,100,100) ELSE 0)
```

This expression for the Format property of the Marital_status column returns Single, Married, and Unknown based on the data value of the Marital_status column for an employee:

```
Case(marital_status WHEN 'S'THEN 'Single' WHEN 'M' THEN
'Married' ELSE 'Unknown')
```

See also

"Example 3: creating a row indicator" on page 19
If

Ceiling

Description

Retrieves the smallest whole number that is greater than or equal to a specified limit.

Syntax

Ceiling (*n*)

Argument	Description
n	The number for which you want the smallest whole number that is greater than or equal to it

Return value

The datatype of *n*. Returns the smallest whole number that is greater than or equal to *n*.

Examples

These expressions both return - 4:

```
Ceiling(-4.2)

Ceiling(-4.8)
```

This expression for a computed field returns ERROR if the value in discount_amt is greater than the smallest whole number that is greater than or equal to discount_factor times price. Otherwise, it returns discount_amt:

```
If(discount_amt <= Ceiling(discount_factor * price),
String(discount_amt), "ERROR")
```

To pass this validation rule, the value in discount_amt must be less than or equal to the smallest whole number that is greater than or equal to discount_factor times price:

```
discount_amt <= Ceiling(discount_factor * price)
```

See also

Int
Round
Truncate

Char

Description

Converts an integer to a Unicode character.

Syntax

Char (*n*)

Argument	Description
n	The integer you want to convert to a character

Return value

String. Returns the character whose code point value is *n*.

Examples

This expression returns the escape character:

```
Char(27)
```

See also

Asc

CharA

Description

Converts an integer to an ASCII character.

Syntax

CharA (*n*)

Argument	Description
n	The integer you want to convert to a character

Return value

String. Returns the character whose ASCII value is *n*.

Examples

This expression returns the escape character:

```
CharA(27)
```

See also

AscA

Cos

Description

Calculates the cosine of an angle.

Syntax

Cos (*n*)

Argument	Description
n	The angle (in radians) for which you want the cosine

Return value

Double. Returns the cosine of *n*.

Examples

This expression returns 1:

```
Cos(0)
```

This expression returns .540302:

```
Cos(1)
```

This expression returns - 1:

```
Cos(Pi(1))
```

See also

Pi
Sin
Tan

Count

Description

Calculates the total number of rows in the specified column.

Syntax

Count (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the number of rows. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column.

Argument	Description
FOR *range* (optional)	The data that will be included in the count. For most presentation styles, values for *range* are: • ALL – (Default) The count of all rows in *column*. • GROUP *n* – The count of rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The count of the rows in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The count of all rows in *column* in the crosstab. For Graph and OLE objects, specify one of the following: • GRAPH – (Graphs only) The count of values in *column* in the range specified for the Rows option. • OBJECT – (OLE objects only) The count of values in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Count to consider only the distinct values in *column* when counting the rows. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Usage

If you specify *range*, Count determines the number of rows in *column* in *range*. If you specify DISTINCT, Count returns the number of the distinct rows displayed in *column*, or if you specify *expresn*, the number of rows displayed in *column* where the value of *expresn* is distinct.

For graphs and OLE objects, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range.

Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.
- For OLE controls, Rows can be All, Current Row, Page, or Group. The available choices depend on the layer the control occupies.

Null values in the column are ignored and are not included in the count.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the number of rows in the column named emp_id that are not null:

```
Count(emp_id)
```

This expression returns the number of rows in the column named emp_id of group 1 that are not null:

```
Count(emp_id for group 1)
```

This expression returns the number of dept_ids that are distinct:

```
Count(dept_id for all DISTINCT)
```

This expression returns the number of regions with distinct products:

```
Count(region_id for all DISTINCT Lower(product_id))
```

This expression returns the number of rows in column 3 on the page that are not null:

```
Count(#3 for page)
```

See also

"Example 1: counting null values in a column" on page 14

CrosstabAvg

Description

Calculates the average of the values returned by an expression in the values list of the crosstab. When the crosstab definition has more than one column, CrosstabAvg can also calculate averages of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabAvg (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the average of the returned values. The crosstab expression must be numeric.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Double. Returns the average of the crosstab values returned by expression *n* for all the column values or, optionally, for a subset of column values. To return a decimal datatype, use CrosstabAvgDec.

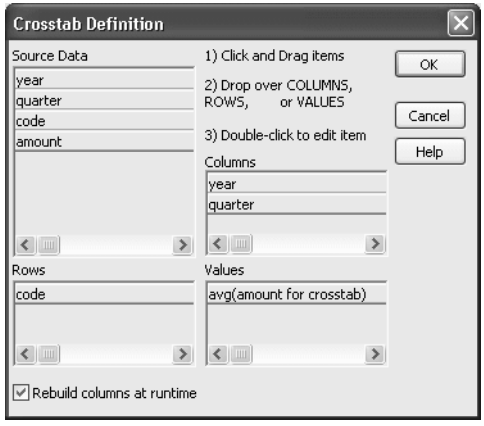
Usage

This function is meaningful *only* for the average of the values of the expression in a *row* in the crosstab. This means you can use it only in the detail band, not in a header, trailer, or summary band.

Null values are ignored and are not included in the average.

How functions in a crosstab are used When a crosstab is generated from your definition, the appropriate computed fields are automatically created using the Crosstab functions. To understand the functions, consider a crosstab with two columns (year and quarter), a row (product), and the values expression Avg(amount for crosstab).

The Crosstab Definition dialog box looks like this.



When you define the crosstab described above, the painter automatically creates the appropriate computed fields. A computed field named avg_amount returns the average of the quarterly figures for each year. Its expression is:

```
CrosstabAvg(1, 2, "@year")
```

A second computed field named grand_avg_amount computes the average of all the amounts in the row. Its expression is:

```
CrosstabAvg(1)
```

Other computed fields in the summary band use the Avg function to display the average of the values in the amount column, the yearly averages, and the final average.

The crosstab in the Design view looks like this.

Header[1]			
	@year	**@year Avg**	
Header[2]			
Code	**@quarter**		**Grand Avg**
Header[3]			
code	amount	**crosstabavg(1, 2, "@year")**	**crosstabavg(1)**
Detail			
"Grand Avg"	**avg(amount for all)**	**avg(avg_amount for all)**	**avg(grand_avg_amount for all)**
Summary			
Footer			

Each row in the crosstab (after adjusting the column widths) has cells for the amounts in the quarters, a repeating cell for the yearly average, and a grand average. The crosstab also displays averages of the amounts for all the financial codes in the quarters in the summary band at the bottom.

	Year	Quarter								
	1997				1997 Avg	1998				1998 Avg
Code	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
e1	101	93	129	145	**117**	153	149	157	163	**156**
e2	403	459	609	632	**526**	643	687	898	923	**788**
e3	1,437	2,033	2,184	2,145	**1,950**	2,478	2,998	3,702	3,600	**3,195**
e4	623	784	856	1,043	**827**	1,051	1,158	1,459	1,439	**1,277**
e5	381	402	412	467	**416**	523	749	723	748	**686**
r1	1,023	2,033	2,998	3,014	**2,267**	3,114	3,998	6,523	7,267	**5,226**
r2	234	459	601	944	**560**	992	1,195	1,704	1,823	**1,429**
Grand Avg	**600**	**895**	**1,113**	**1,199**	**952**	**1,279**	**1,562**	**2,167**	**2,280**	**1,822**

1999				1999 Avg	
Q1	Q2	Q3	Q4		Grand Avg
198	204	214	231	**212**	**161**
921	975	984	982	**966**	**760**
4,139	4,500	4,532	5,298	**4,617**	**3,254**
1,462	1,472	1,439	1,498	**1,468**	**1,190**
798	983	956	963	**925**	**675**
9,144	10,988	13,567	15,199	**12,225**	**6,572**
1,839	2,011	2,897	4,129	**2,719**	**1,569**
2,643	**3,019**	**3,513**	**4,043**	**3,304**	**2,026**

What the function arguments mean When the crosstab definition has more than one column, you can specify column qualifiers for any of the Crosstab functions, so that the crosstab displays calculations for groups of column values. As illustrated previously, when year and quarter are the columns in the crosstab, the expression for the computed field is:

```
CrosstabAvg(1, 2, "@year")
```

The value 2 refers to the quarter column (the second column in the Crosstab Definition dialog) and "@year" specifies grouping values from the year column (meaning the function will average values for the quarters within each year). The value 1 refers to the crosstab-values expression that will be averaged. In the resulting crosstab, the computed field repeats in each row after the cells for the quarters within each year.

Tips for defining crosstabs When you define a crosstab with more than one column, the order of the columns in the Columns box of the Crosstab Definition dialog box governs the way the columns are grouped. To end up with the most effective expressions, make the column that contains the grouping values (for example, year or department) the first column in the Columns box and the column that contains the values to be grouped (for example, quarter or employee) second.

To display calculations for groups of rows, define groups as you would for other DataWindow presentation styles and define computed fields in the group header or footer using noncrosstab aggregation functions, such as Avg, Sum, or Max.

Reviewing the expressions
To review the expressions defined for the crosstab values, open the Crosstab Definition dialog box (select Design>Crosstab from the menubar).

Examples

The first two examples use the crosstab expressions shown below:

```
Count(emp_id for crosstab),Sum(salary for crosstab)
```

This expression for a computed field in the crosstab returns the average of the employee counts (the first expression):

```
CrosstabAvg(1)
```

This expression for a computed field in the crosstab returns the average of the salary totals (the second expression):

```
CrosstabAvg(2)
```

Consider a crosstab that has two columns (region and city) and the values expression Avg(sales for crosstab). This expression for a computed field in the detail band computes the average sales over all the cities in a region:

```
CrosstabAvg(1, 2, "@region")
```

This expression for another computed field in the same crosstab computes the grand average over all the cities:

```
CrosstabAvg(1)
```

See also

CrosstabAvgDec
CrosstabCount
CrosstabMax
CrosstabMin
CrosstabSum

CrosstabAvgDec

Description

Calculates the average of the values returned by an expression in the values list of the crosstab and returns a result with the decimal datatype. When the crosstab definition has more than one column, CrosstabAvgDec can also calculate averages of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabAvgDec (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the average of the returned values. The crosstab expression must be numeric.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Decimal. Returns the average of the crosstab values returned by expression *n* for all the column values or, optionally, for a subset of column values.

Usage

Use this function instead of CrosstabAvg when you want to return a decimal datatype instead of a double datatype. For more information, see CrosstabAvg.

See also

CrosstabMaxDec
CrosstabMinDec
CrosstabSumDec

CrosstabCount

Description

Counts the number of values returned by an expression in the values list of the crosstab. When the crosstab definition has more than one column, CrosstabCount can also count the number of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabCount (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the total number of returned values.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Long. Returns the number of values returned by expression *n* for all the column values or, optionally, for a subset of column values.

Usage

This function is meaningful *only* for the count of the values of the expression in a *row* in the crosstab. This means you can use it only in the detail band, not in a header, trailer, or summary band.

Null values are ignored and are not included in the count.

For more information about restricting the calculation to groups of values when the crosstab definition has more than one column, see Usage for CrosstabAvg.

Reviewing the expressions
To review the expressions defined for the crosstab values, open the Crosstab Definition dialog box (select Design>Crosstab from the menubar).

Examples

These examples all use the crosstab-values expressions shown below:

```
Count(emp_id for crosstab),Sum(salary for crosstab)
```

This expression for a computed field in the crosstab returns the count of the employee counts (the first expression):

```
CrosstabCount(1)
```

This expression for a computed field in the crosstab returns the count of the salary totals (the second expression):

```
CrosstabCount(2)
```

The next two examples use a crosstab with two columns (year and quarter), a row (product), and the values expression Avg(sales for crosstab).

This expression for a computed field returns the count of the sales for each year:

```
CrosstabCount(1, 2, "@year")
```

This expression for a computed field returns the count of all the sales in the row:

```
CrosstabCount(1)
```

For an example illustrating how the painter automatically defines a crosstab by creating computed fields using the Crosstab functions, see CrosstabAvg.

See also

CrosstabAvg
CrosstabMax
CrosstabMin
CrosstabSum

CrosstabMax

Description

Calculates the maximum value returned by an expression in the values list of the crosstab. When the crosstab definition has more than one column, CrosstabMax can also calculate the maximum of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabMax (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the maximum returned value. The expression's datatype must be numeric.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Double. Returns the maximum value returned by expression *n* for all the column values or, optionally, for a subset of column values. To return a decimal datatype, use CrosstabMaxDec.

Usage

This function is meaningful *only* for the maximum of the values of the expression in a *row* in the crosstab. This means you can use it only in the detail band, not in a header, trailer, or summary band.

Null values are ignored and are not included in the comparison.

For more information about restricting the calculation to groups of values when the crosstab definition has more than one column, see Usage for CrosstabAvg.

Reviewing the expressions
To review the expressions defined for the crosstab values, open the Crosstab Definition dialog box (select Design>Crosstab from the menubar).

Examples

These examples all use the crosstab-values expressions shown below:

```
Count(emp_id for crosstab),Sum(salary for crosstab)
```

This expression for a computed field in the crosstab returns the maximum of the employee counts (the first expression):

```
CrosstabMax(1)
```

This expression for a computed field in the crosstab returns the maximum of the salary totals (the second expression):

```
CrosstabMax(2)
```

The next two examples use a crosstab with two columns (year and quarter), a row (product), and a values expression Avg(sales for crosstab).

This expression for a computed field returns the largest of the quarterly average sales for each year:

```
CrosstabMax(1, 2, "@year")
```

This expression for a computed field returns the maximum of all the average sales in the row:

```
CrosstabMax(1)
```

For an example illustrating how the painter automatically defines a crosstab by creating computed fields using the Crosstab functions, see CrosstabAvg.

See also

CrosstabAvg
CrosstabCount
CrosstabMaxDec
CrosstabMin
CrosstabSum

CrosstabMaxDec

Description

Calculates the maximum value returned by an expression in the values list of the crosstab and returns a result with the decimal datatype. When the crosstab definition has more than one column, CrosstabMaxDec can also calculate the maximum of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabMaxDec (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the maximum returned value. The expression's datatype must be numeric.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Decimal. Returns the maximum value returned by expression *n* for all the column values or, optionally, for a subset of column values.

Usage

Use this function instead of CrosstabMax when you want to return a decimal datatype instead of a double datatype. For more information, see CrosstabMax.

See also

CrosstabAvgDec
CrosstabMinDec
CrosstabSumDec

CrosstabMin

Description

Calculates the minimum value returned by an expression in the values list of the crosstab. When the crosstab definition has more than one column, CrosstabMin can also calculate the minimum of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabMin (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the minimum return value. The expression's datatype must be numeric.

Argument	Description
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Double. Returns the minimum value returned by expression *n* for all the column values or, optionally, for a subset of column values. To return a decimal datatype, use CrosstabMinDec.

Usage

This function is meaningful *only* for the minimum of the values of the expression in a *row* in the crosstab. This means you can use it only in the detail band, not in a header, trailer, or summary band.

Null values are ignored and are not included in the comparison.

For more information about restricting the calculation to groups of values when the crosstab definition has more than one column, see Usage for CrosstabAvg.

Reviewing the expressions
To review the expressions defined for the crosstab values, open the Crosstab Definition dialog box (select Design>Crosstab from the menubar).

Examples

These examples all use the crosstab-values expressions shown below:

```
Count(emp_id for crosstab),Sum(salary for crosstab)
```

This expression for a computed field in the crosstab returns the minimum of the employee counts (the first expression):

```
CrosstabMin(1)
```

This expression for a computed field in the crosstab returns the minimum of the salary totals (the second expression):

```
CrosstabMin(2)
```

The next two examples use a crosstab with two columns (year and quarter), a row (product), and the values expression Avg(sales for crosstab).

This expression for a computed field returns the smallest of the quarterly average sales for each year:

```
CrosstabMin(1, 2, "@year")
```

This expression for a computed field returns the minimum of all the average sales in the row:

```
CrosstabMin(1)
```

For an example illustrating how the painter automatically defines a crosstab by creating computed fields using the crosstab functions, see CrosstabAvg.

See also

CrosstabAvg
CrosstabCount
CrosstabMax
CrosstabMinDec
CrosstabSum

CrosstabMinDec

Description

Calculates the minimum value returned by an expression in the values list of the crosstab and returns a result with the decimal datatype. When the crosstab definition has more than one column, CrosstabMinDec can also calculate the minimum of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabMinDec (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the minimum return value. The expression's datatype must be numeric.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Decimal. Returns the minimum value returned by expression *n* for all the column values or, optionally, for a subset of column values.

Usage

Use this function instead of CrosstabMin when you want to return a decimal datatype instead of a double datatype. For more information, see CrosstabMin.

See also

CrosstabAvgDec
CrosstabMaxDec
CrosstabSumDec

CrosstabSum

Description

Calculates the sum of the values returned by an expression in the values list of the crosstab. When the crosstab definition has more than one column, CrosstabSum can also calculate the sum of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabSum (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the sum of the returned values. The expression's datatype must be numeric.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Double. Returns the total of the values returned by expression *n* for all the column values or, optionally, for a subset of column values. To return a decimal datatype, use CrosstabSumDec.

Usage

This function is meaningful *only* for the sum of the values of the expression in a *row* in the crosstab. This means you can use it only in the detail band, not in a header, trailer, or summary band.

Null values are ignored and are not included in the sum.

For more information about restricting the calculation to groups of values when the crosstab definition has more than one column, see Usage for CrosstabAvg.

Reviewing the expressions
To review the expressions defined for the crosstab values, open the Crosstab Definition dialog box (select Design>Crosstab from the menubar).

Examples

These examples all use the crosstab-values expressions shown below:

```
Count(emp_id for crosstab),Sum(salary for crosstab)
```

This expression for a computed field in the crosstab returns the sum of the employee counts (the first expression):

```
CrosstabSum(1)
```

This expression for a computed field in the crosstab returns the sum of the salary totals (the second expression):

```
CrosstabSum(2)
```

The next two examples use a crosstab with two columns (year and quarter), a row (product), and the values expression Avg(sales for crosstab).

This expression for a computed field returns the sum of the quarterly average sales for each year:

```
CrosstabSum(1, 2, "@year")
```

This expression for a computed field returns the sum of all the average sales in the row:

```
CrosstabSum(1)
```

For an example illustrating how the painter automatically defines a crosstab by creating computed fields using the Crosstab functions, see CrosstabAvg.

See also

CrosstabAvg
CrosstabCount
CrosstabMax
CrosstabMin
CrosstabSumDec

CrosstabSumDec

Description

Calculates the sum of the values returned by an expression in the values list of the crosstab and returns a result with the decimal datatype. When the crosstab definition has more than one column, CrosstabSumDec can also calculate the sum of the expression's values for groups of column values.

For crosstabs only
You can use this function *only* in a crosstab DataWindow object.

Syntax

CrosstabSumDec (*n* {, *column*, *groupvalue* })

Argument	Description
n	The number of the crosstab-values expression for which you want the sum of the returned values. The expression's datatype must be numeric.
column (optional)	The number of the crosstab column as it is listed in the Columns box of the Crosstab Definition dialog box for which you want intermediate calculations.
groupvalue (optional)	A string whose value controls the grouping for the calculation. *Groupvalue* is usually a value from another column in the crosstab. To specify the current column value in a dynamic crosstab, rather than a specific value, specify @ plus the column name as a quoted string.

Return value

Decimal. Returns the total of the values returned by expression *n* for all the column values or, optionally, for a subset of column values.

Usage

Use this function instead of CrosstabSum when you want to return a decimal datatype instead of a double datatype. For more information, see CrosstabSum.

See also

CrosstabAvgDec
CrosstabMaxDec
CrosstabMinDec

CumulativePercent

Description

Calculates the total value of the rows up to and including the current row in the specified column as a percentage of the total value of the column (a running percentage).

Syntax

CumulativePercent (*column* { FOR *range* })

Argument	Description
column	The column for which you want the cumulative value of the rows up to and including the current row as a percentage of the total value of the column for *range*. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data that will be included in the cumulative percentage. For most presentation styles, values for *range* are: • ALL – (Default) The cumulative percentage of all rows in *column*. • GROUP *n* – The cumulative percentage of rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The cumulative percentage of the rows in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The cumulative percentage of all rows in *column* in the crosstab. For Graph and OLE objects, specify one of the following: • GRAPH – (Graphs only) The cumulative percentage of values in *column* in the range specified for the Rows option. • OBJECT – (OLE objects only) The cumulative percentage of values in *column* in the range specified for the Rows option.

Return value

Long. Returns the cumulative percentage value.

Usage

If you specify *range*, CumulativePercent restarts the accumulation at the start of the range.

For graphs and OLE objects, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range.

Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.
- For OLE controls, Rows can be All, Current Row, Page, or Group. The available choices depend on the layer the control occupies.

In calculating the percentage, null values are ignored.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the running percentage for the values that are not null in the column named salary:

```
CumulativePercent(salary)
```

This expression returns the running percentage for the column named salary for the values in group 1 that are not null:

```
CumulativePercent(salary for group 1)
```

This expression entered in the Value box on the Data property page for a graph returns the running percentage for the salary column for the values in the graph that are not null:

```
CumulativePercent(salary for graph)
```

This expression in a crosstab computed field returns the running percentage for the salary column for the values in the crosstab that are not null:

```
CumulativePercent(salary for crosstab)
```

See also

Percent
CumulativeSum

CumulativeSum

Description

Calculates the total value of the rows up to and including the current row in the specified column (a running total).

Syntax

CumulativeSum (*column* { FOR *range* })

Argument	Description
column	The column for which you want the cumulative total value of the rows up to and including the current row for group. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data that will be included in the cumulative sum. For most presentation styles, values for *range* are: • ALL – (Default) The cumulative sum of all values in *column*. • GROUP *n* – The cumulative sum of values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The cumulative sum of the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The cumulative sum of all values in *column* in the crosstab. For Graph and OLE objects, specify one of the following: • GRAPH – (Graphs only) The cumulative sum of values in *column* in the range specified for the Rows option. • OBJECT – (OLE objects only) The cumulative sum of values in *column* in the range specified for the Rows option.

Return value

The appropriate numeric datatype. Returns the cumulative total value of the rows.

Usage

If you specify *range*, CumulativeSum restarts the accumulation at the start of the range.

For graphs and OLE objects, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.
- For OLE controls, Rows can be All, Current Row, Page, or Group. The available choices depend on the layer the control occupies.

In calculating the sum, null values are ignored.

Examples

This expression returns the running total for the values that are not null in the column named salary:

```
CumulativeSum(salary)
```

This expression returns the running total for the values that are not null in the column named salary in group 1:

```
CumulativeSum(salary for group 1)
```

This expression entered in the Value box on the Data property page for a graph returns the running total for the salary column for the values in the graph that are not null:

```
CumulativeSum(salary for graph)
```

This expression in a crosstab computed field returns the running total for the salary column for the values in the crosstab that are not null:

```
CumulativeSum(salary for crosstab)
```

See also

CumulativePercent

CurrentRow

Description

Reports the number of the current row (the row with focus).

Syntax

CurrentRow ( )

Return value

Long. Returns the number of the row if it succeeds and 0 if no row is current.

What row is current

The current row is not always a row displayed on the screen. For example, if the cursor is on row 7 column 2 and the user uses the scroll bar to scroll to row 50, the current row remains row 7 unless the user clicks row 50.

Examples

This expression in a computed field returns the number of the current row:

```
CurrentRow()
```

This expression for a computed control displays an arrow bitmap as an indicator for the row with focus and displays no bitmap for rows not having focus. As the user moves from row to row, an arrow marks where the user is:

```
Bitmap(If(CurrentRow() = GetRow(),"arrow.bmp",""))
```

Alternatively, this expression for the Visible property of an arrow picture control makes the arrow bitmap visible for the row with focus and invisible for rows not having focus. As the user moves from row to row, an arrow marks where the user is:

```
If(CurrentRow() = GetRow(), 1, 0)
```

See also

"Example 3: creating a row indicator" on page 19
GetRow

Date

Description

Converts a string whose value is a valid date to a value of datatype date.

Syntax

Date (*string*)

Argument	Description
string	A string containing a valid date (such as Jan 1, 2004, or 12-31-99) that you want returned as a date

Return value

Date. Returns the date in *string* as a date. If *string* does not contain a valid date, Date returns null.

Usage

The value of the string must be a valid date.

Valid dates Valid dates can include any combination of day (1–31), month (1–12 or the name or abbreviation of a month), and year (two or four digits). Leading zeros are optional for month and day. If the month is a name or an abbreviation, it can come before or after the day; if it is a number, it must be in the month location specified in the Windows control panel. A 4-digit number is assumed to be a year.

If the year is two digits, the assumption of century follows this rule: for years between 00 and 49, the first two digits are assumed to be 20; for years between 50 and 99, the first two digits are assumed to be 19. If your data includes dates before 1950, such as birth dates, always specify a four-digit year to ensure the correct interpretation.

The function handles years from 1000 to 3000 inclusive.

An expression has a more limited set of datatypes than the functions that can be part of the expression. Although the Date function returns a date value, the whole expression is promoted to a DateTime value. Therefore, if your expression consists of a single Date function, it will appear that Date returns the wrong datatype. To display the date without the time, choose an appropriate display format. (See "Using DataWindow expression functions" on page 13.)

Examples

These expressions all return the date datatype for July 4, 2004 when the default location of the month in Regional Settings is center:

```
Date("2004/07/04")
Date("2004 July 4")
Date("July 4, 2004")
```

See also

IsDate

DateTime

Description

Combines a date and a time value into a DateTime value.

Syntax

DateTime (*date* {, *time* })

Argument	Description
date	A valid date (such as Jan 1, 2005, or 12-31-99) or a blob variable whose first value is a date that you want included in the value returned by DateTime.
time (optional)	A valid time (such as 8am or 10:25:23:456799) or a blob variable whose first value is a time that you want included in the value returned by DateTime. If you include a time, only the hour portion is required. If you omit the minutes, seconds, or microseconds, they are assumed to be zeros. If you omit am or pm, the hour is determined according to the 24-hour clock.

Return value

DateTime. Returns a DateTime value based on the values in *date* and optionally *time*. If time is omitted, DateTime uses 00:00:00.000000 (midnight).

Usage

To display microseconds in a time, the display format for the field must include microseconds.

For information on valid dates, see Date.

Examples

This expression returns the values in the order_date and order_time columns as a DateTime value that can be used to update the database:

```
DateTime(Order_Date, Order_Time)
```

Using this expression for a computed field displays `11/11/01 11:11:00`:

```
DateTime(11/11/01, 11:11)
```

See also

Date
Time

Day

Description

Obtains the day of the month in a date value.

Syntax

Day (*date*)

Argument	Description
date	The date for which you want the day

Return value

Integer. Returns an integer (1–31) representing the day of the month in *date*.

Examples

This expression returns 31:

```
Day(2005-01-31)
```

This expression returns the day of the month in the start_date column:

```
Day(start_date)
```

See also

Date
IsDate
Month
Year

DayName

Description

Gets the day of the week in a date value and returns the weekday's name.

Syntax

DayName (*date*)

Argument	Description
date	The date for which you want the name of the day

Return value

String. Returns a string whose value is the name of the weekday (Sunday, Monday, and so on) for *date*.

Examples

This expression for a computed field returns Okay if the day in date_signed is not Sunday:

```
If(DayName(date_signed) <> "Sunday", "Okay", "Invalid
Date")
```

To pass this validation rule, the day in date_signed must not be Sunday:

```
DayName(date_signed) <> "Sunday"
```

See also

Date
Day
DayNumber
IsDate

DayNumber

Description

Gets the day of the week of a date value and returns the number of the weekday.

Syntax

DayNumber (*date*)

Argument	Description
date	The date from which you want the number of the day of the week

Return value

Integer. Returns an integer (1–7) representing the day of the week of *date*. Sunday is day 1, Monday is day 2, and so on.

Examples

This expression for a computed field returns Wrong Day if the date in start_date is not a Sunday or a Monday:

```
If(DayNumber(start_date) > 2, "Okay", "Wrong Day")
```

This expression for a computed field returns Wrong Day if the date in end_date is not a Saturday or a Sunday:

```
If(DayNumber(end_date) > 1 and DayNumber(end_date)
< 7, "Okay", "Wrong Day")
```

This validation rule for the column end_date ensures that the day is not a Saturday or Sunday:

```
DayNumber(end_date) >1 and DayNumber(end_date) < 7
```

See also

Date
Day
DayName
IsDate

DaysAfter

Description: Gets the number of days one date occurs after another.

Syntax: **DaysAfter** (*date1*, *date2*)

Argument	Description
date1	A date value that is the start date of the interval being measured
date2	A date value that is the end date of the interval

Return value: Long. Returns a long containing the number of days *date2* occurs after *date1*. If *date2* occurs before *date1*, DaysAfter returns a negative number.

Examples: This expression returns 4:

```
DaysAfter(2005-12-20, 2005-12-24)
```

This expression returns -4:

```
DaysAfter(2005-12-24, 2005-12-20)
```

This expression returns 0:

```
DaysAfter(2005-12-24, 2005-12-24)
```

This expression returns 5:

```
DaysAfter(2004-12-29, 2005-01-03)
```

See also: Date
SecondsAfter

Dec

Description: Converts the value of a string to a decimal.

Syntax: **Dec** (*string*)

Argument	Description
string	The string you want returned as a decimal

Return value: Decimal. Returns the contents of *string* as a decimal if it succeeds and 0 if *string* is not a number.

Usage

The decimal datatype supports up to 28 digits.

You can also append the letter D in upper or lowercase to identify a number as a decimal constant in DataWindow expressions. For example, `2.0d` and `123.456789012345678901D` are treated as decimals.

Examples

This expression returns the string 24.3 as a decimal datatype:

```
Dec("24.3")
```

This expression for a computed field returns "Not a valid score" if the string in the score column does not contain a number. The expression checks whether the Dec function returns 0, which means it failed to convert the value:

```
If ( Dec(score) <> 0, score, "Not a valid score")
```

This expression returns 0:

```
Dec("3ABC")    // 3ABC is not a number
```

This validation rule checks that the value in the column the user entered is greater than 1999.99:

```
Dec(GetText()) > 1999.99
```

This validation rule for the column named score insures that score contains a string:

```
Dec(score) <> 0
```

Describe

Description

Reports the values of properties of a DataWindow object and controls within the object. Each column and graphic control in the DataWindow object has a set of properties. You specify one or more properties as a string and Describe returns the values of the properties.

Syntax

Describe (*propertylist*)

Argument	Description
propertylist	A string whose value is a blank-separated list of properties or Evaluate functions

Return value

String. Returns a string that includes a value for each property or Evaluate function. A new line character (~n) separates the value of each item in *propertylist*.

If *propertylist* contains an invalid item, Describe returns an exclamation point (!) for that item and ignores the rest of *propertylist*. Describe returns a question mark (?) if there is no value for a property.

Usage

Specifying the values for *propertylist* can be complex. For information and examples, see the Describe method for the DataWindowControl.

Examples

This expression for a computed field in the header band of a DataWindow object displays the DataWindow object's SELECT statement:

```
Describe("DataWindow.Table.Select")
```

Exp

Description

Raises *e* to the specified power.

Syntax

Exp (*n*)

Argument	Description
n	The power to which you want to raise *e* (2.71828)

Return value

Double. Returns *e* raised to the power *n*.

Examples

This expression returns 7.38905609893065:

```
Exp(2)
```

See also

Log
LogTen

Fact

Description

Gets the factorial of a number.

Syntax

Fact (*n*)

Argument	Description
n	The number for which you want the factorial

Return value

Double. Returns the factorial of *n*.

Examples

This expression returns 24:

```
Fact(4)
```

Both these expressions return 1:

```
Fact(1)
Fact(0)
```

Fill

Description

Builds a string of the specified length by repeating the specified characters until the result string is long enough.

Syntax

Fill (*chars*, *n*)

Argument	Description
chars	A string whose value will be repeated to fill the return string
n	A long whose value is the number of characters in the string you want returned

Return value

String. Returns a string *n* characters long filled with repetitions of the characters in the argument *chars*. If the argument *chars* has more than *n* characters, the first *n* characters of *chars* are used to fill the return string. If the argument *chars* has fewer than *n* characters, the characters in *chars* are repeated until the return string has *n* characters.

Usage

Fill is used to create a line or other special effect. For example, asterisks repeated in a printed report can fill an amount line, or hyphens can simulate a total line in a screen display.

Examples

This expression returns a string containing 35 asterisks:

```
Fill("*", 35)
```

This expression returns the string -+-+-+-:

```
Fill("-+", 7)
```

This expression returns 10 tildes (~):

```
Fill("~", 10)
```

See also

FillA
Space

FillA

Description

Builds a string of the specified length in bytes by repeating the specified characters until the result string is long enough.

Syntax

FillA (*chars*, *n*)

Argument	Description
chars	A string whose value will be repeated to fill the return string
n	A long whose value is the number of bytes in the string you want returned

Return value

String. Returns a string *n* bytes long filled with repetitions of the characters in the argument *chars*. If the argument *chars* has more than *n* bytes, the first *n* bytes of *chars* are used to fill the return string. If the argument *chars* has fewer than *n* bytes, the characters in *chars* are repeated until the return string has *n* bytes.

Usage

In SBCS environments, Fill and FillA return the same results.

See also

Fill

First

Description

Reports the value in the first row in the specified column.

Syntax

First (*column* { FOR *range* { DISTINCT { *expresn* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the value of the first row. *Column* can be a column name or a column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column.
FOR *range* (optional)	The data that will be included when the value in the first row is found. Values for range depend on the presentation style. See the Usage section for more information.
DISTINCT (optional)	Causes First to consider only the distinct values in *column* when determining the first value. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The datatype of the column. Returns the value in the first row of *column*. If you specify *range*, First returns the value of the first row in *column* in *range*.

Usage

If you specify *range*, First determines the value of the first row in *column* in *range*. If you specify DISTINCT, First returns the first distinct value in *column*, or if you specify *expresn*, the first distinct value in *column* where the value of *expresn* is distinct.

For most presentation styles, values for *range* are:

- ALL – (Default) The value in the first of all rows in *column*.
- GROUP *n* – The value in the first of rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1.
- PAGE – The value in the first of the rows in *column* on a page.

For Crosstabs, specify CROSSTAB for *range* to indicate the first of all rows in *column* in the crosstab.

For Graphs specify GRAPH and for OLE objects specify OBJECT for *range*, to indicate the value in the first row in *column* in the range specified for the Rows option.

For graphs and OLE objects, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.
- For OLE controls, Rows can be All, Current Row, Page, or Group. The available choices depend on the layer the control occupies.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the first value in column 3 on the page:

```
First(#3 for page)
```

This expression returns the first distinct value in the column named dept_id in group 2:

```
First(dept_id for group 2 DISTINCT)
```

This expression returns the first value in the column named dept_id in group 2:

```
First(dept_id for group 2)
```

See also

Last

GetRow

Description

Reports the number of a row associated with a band in a DataWindow object.

Syntax

GetRow ( )

Return value

Long. Returns the number of a row if it succeeds, 0 if no data has been retrieved or added, and -1 if an error occurs. Where you call GetRow determines what row it returns, as follows:

If the control in the DataWindow object is in this band	GetRow returns
Header	First row on the page
Group header	First row in the group
Detail	The row in which the expression occurs
Group trailer	Last row in the group
Summary	Last row in the DataWindow object
Footer	Last row on the page

Examples

This expression for a computed field in the detail band displays the number of each row:

```
GetRow()
```

This expression for a computed field in the header band checks to see if there is data. It returns the number of the first row on the page if there is data, and otherwise returns No Data:

```
If(GetRow()= 0, "No Data", String(GetRow()))
```

See also

"Example 3: creating a row indicator" on page 19
CurrentRow

GetText

Description

Obtains the text that a user has entered in a column.

Syntax

GetText ( )

Return value

String. Returns the text the user has entered in the current column.

Usage

Use GetText in validation rules to compare what the user has entered to application-defined criteria before it is accepted into the data buffer.

Examples

This validation rule checks that the value the user entered in the column is less than 100:

```
Integer(GetText()) < 100
```

Hour

Description

Obtains the hour in a time value. The hour is based on a 24-hour clock.

Syntax

Hour (*time*)

Argument	Description
time	The time value from which you want the hour

Return value

Integer. Returns an integer (00–23) containing the hour portion of *time*.

Examples

This expression returns the current hour:

```
Hour(Now())
```

This expression returns 19:

```
Hour(19:01:31)
```

See also

Minute
Now
Second

If

Description

Evaluates a condition and returns a value based on that condition.

Syntax

If (*boolean*, *truevalue*, *falsevalue*)

Argument	Description
boolean	A boolean expression that evaluates to true or false.
truevalue	The value you want returned if the boolean expression is true. The value can be a string or numeric value.
falsevalue	The value you want returned if the boolean expression is false. The value can be a string or numeric value.

Return value

The datatype of *truevalue* or *falsevalue*. Returns *truevalue* if *boolean* is true and *falsevalue* if it is false. Returns null if an error occurs.

Examples

This expression returns Boss if salary is over $100,000 and Employee if salary is less than or equal to $100,000:

```
If(salary > 100000, "Boss", "Employee")
```

This expression returns Boss if salary is over $100,000, Supervisor if salary is between $12,000 and $100,000, and Clerk if salary is less than or equal to $12,000:

```
If(salary > 100000, "Boss", If(salary > 12000,
"Supervisor", "Clerk"))
```

In this example of a validation rule, the value the user should enter in the commission column depends on the price. If price is greater than or equal to 1000, then the commission is between .10 and .20. If price is less than 1000, then the commission must be between .04 and .09. The validation rule is:

```
(Number(GetText()) >= If(price >=1000, .10, .04)) AND
(Number(GetText()) <= If(price >= 1000, .20, .09))
```

The accompanying error message expression might be:

```
"Price is " +  If(price >= 1000, "greater than or
equal to", "less than") + " 1000. Commission must be
between " +  If(price >= 1000, ".10", ".04") + " and "
+  If(price >= 1000, ".20.", ".09.")
```

See also

“Example 1: counting null values in a column” on page 14
“Example 2: counting male and female employees” on page 16
“Example 3: creating a row indicator” on page 19
“Example 4: displaying all data when a column allows nulls” on page 21
Case

Int

Description

Gets the largest whole number less than or equal to a number.

Syntax

Int (*n*)

Argument	Description
n	The number for which you want the largest whole number that is less than or equal to it

Return value

The datatype of *n*. Returns the largest whole number less than or equal to *n*.

Examples

These expressions return 3.0:

```
Int(3.2)

Int(3.8)
```

These expressions return -4.0:

```
Int(-3.2)

Int(-3.8)
```

See also

Ceiling
Integer
Round
Truncate

Integer

Description

Converts the value of a string to an integer.

Syntax

Integer (*string*)

Argument	Description
string	The string you want returned as an integer

Return value

Integer. Returns the contents of *string* as an integer if it succeeds and 0 if *string* is not a number.

Examples

This expression converts the string 24 to an integer:

```
Integer("24")
```

This expression for a computed field returns "Not a valid age" if age does not contain a number. The expression checks whether the Integer function returns 0, which means it failed to convert the value:

```
If (Integer(age) <> 0, age, "Not a valid age")
```

This expression returns 0:

```
Integer("3ABC")    // 3ABC is not a number
```

This validation rule checks that the value in the column the user entered is less than 100:

```
Integer(GetText()) < 100
```

This validation rule for the column named age insures that age contains a string:

```
Integer(age) <> 0
```

See also

IsNumber

IsDate

Description

Tests whether a string value is a valid date.

Syntax

IsDate (*datevalue*)

Argument	Description
datevalue	A string whose value you want to test to determine whether it is a valid date

Return value

Boolean. Returns true if *datevalue* is a valid date and false if it is not.

Examples

This expression returns true:

```
IsDate("Jan 1, 99")
```

This expression returns false:

```
IsDate("Jan 32, 2005")
```

This expression for a computed field returns a day number or 0. If the date_received column contains a valid date, the expression returns the number of the day in date_received in the computed field, and otherwise returns 0:

```
If(IsDate(String(date_received)),
DayNumber(date_received), 0)
```

IsExpanded

Description

Tests whether a node in a TreeView DataWindow with the specified TreeView level and that includes the specified row is expanded.

Syntax

IsExpanded(long *row*, long *level*)

Argument	Description
row	The number of the row that belongs to the node
level	The TreeView level of the node

Return value

Returns true if the group is expanded and false otherwise.

Usage

A TreeView DataWindow has several TreeView level bands that can be expanded and collapsed. You can use the IsExpanded function to test whether or not a node in a TreeView DataWindow is expanded.

Examples

This expression returns true if the node that contains row 3 at TreeView level 2 is expanded:

```
IsExpanded(3,2)
```

IsNull

Description

Reports whether the value of a column or expression is null.

Syntax

IsNull (*any*)

Argument	Description
any	A column or expression that you want to test to determine whether its value is null

Return value

Boolean. Returns true if *any* is null and false if it is not.

Usage

Use IsNull to test whether a user-entered value or a value retrieved from the database is null.

Examples

This expression returns true if either a or b is null:

```
IsNull(a + b)
```

This expression returns true if the value in the salary column is null:

```
IsNull(salary)
```

This expression returns true if the value the user has entered is null:

```
IsNull(GetText())
```

See also

"Example 1: counting null values in a column" on page 14
"Example 4: displaying all data when a column allows nulls" on page 21

IsNumber

Description

Reports whether the value of a string is a number.

Syntax

IsNumber (*string*)

Argument	Description
string	A string whose value you want to test to determine whether it is a valid number

Return value

Boolean. Returns true if *string* is a valid number and false if it is not.

Examples

This expression returns true:

```
IsNumber("32.65")
```

This expression returns false:

```
IsNumber("A16")
```

This expression for a computed field returns "Not a valid age" if age does not contain a number:

```
If(IsNumber(age), age, "Not a valid age")
```

To pass this validation rule, Age_nbr must be a number:

```
IsNumber(Age_nbr) = true
```

See also

Integer

IsRowModified

Description

Reports whether the row has been modified.

Syntax

IsRowModified ( )

Return value

Boolean. Returns true if the row has been modified and false if it has not.

Usage

In a DataWindow object, when you use IsRowModified in bands other than the detail band, it reports on a row in the detail band. See GetRow for a table specifying which row is associated with each band for reporting purposes.

Examples

This expression in a computed field in the detail area displays true or false to indicate whether each row has been modified:

```
IsRowModified()
```

This expression defined in the Properties view for the Color property of the computed field displays the text (true) in red if the user has modified any value in the row:

```
If(IsRowModified(), 255, 0)
```

See also

GetRow

IsRowNew

Description

Reports whether the row has been newly inserted.

Syntax

IsRowNew ( )

Return value

Boolean. Returns true if the row is new and false if it was retrieved from the database.

Usage

In a DataWindow object, when you call IsRowNew in bands other than the detail band, it reports on a row in the detail band. See GetRow for a table specifying which row is associated with each band for reporting purposes.

Examples

This expression defined in the Properties view for the Protect property of a column prevents the user from modifying the column unless the row has been newly inserted:

```
If(IsRowNew(), 0, 1)
```

See also

GetRow

IsSelected

Description

Determines whether the row is selected. A selected row is highlighted using reverse video.

Syntax

IsSelected ( )

Return value

Boolean. Returns true if the row is selected and false if it is not selected.

Usage

When you use IsSelected in bands other than the detail band, it reports on a row in the detail band. See GetRow for a table specifying which row is associated with each band for reporting purposes.

Examples

This expression for a computed field in the detail area displays a bitmap if the row is selected:

```
Bitmap(If(IsSelected(), "beach.bmp", ""))
```

This example allows the DataWindow object to display a salary total for all the selected rows. The expression for a computed field in the detail band returns the salary only when the row is selected so that another computed field in the summary band can add up all the selected salaries.

The expression for cf_selected_salary (the computed field in the detail band) is:

```
If(IsSelected(), salary, 0)
```

The expression for the computed field in the summary band is:

```
Sum(cf_selected_salary for all)
```

See also

GetRow

IsTime

Description

Reports whether the value of a string is a valid time value.

Syntax

IsTime (*timevalue*)

Argument	Description
timevalue	A string whose value you want to test to determine whether it is a valid time

Return value

Boolean. Returns true if *timevalue* is a valid time and false if it is not.

Examples

This expression returns true:

```
IsTime("8:00:00 am")
```

This expression returns false:

```
IsTime("25:00")
```

To pass this validation rule, the value in start_time must be a time:

```
IsTime(start_time)
```

Large

Description

Finds a large value at a specified ranking in a column (for example, third-largest, fifth-largest) and returns the value of another column or expression based on the result.

Syntax

Large (*returnexp*, *column*, *ntop* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
returnexp	The value you want returned when the large value is found. *Returnexp* includes a reference to a column, but not necessarily the column that is being evaluated for the largest value, so that a value is returned from the same row that contains the large value.
column	The column that contains the large value you are searching for. *Column* can be a column name or a column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
ntop	The ranking of the large value in relation to the column's largest value. For example, when *ntop* is 2, Large finds the second-largest value.
FOR *range* (optional)	The data that will be included when the largest value is found. For most presentation styles, values for *range* are: • ALL – (Default) The largest of all values in *column*. • GROUP *n* – The largest of values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The largest of the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The largest of all values in *column* in the crosstab. For Graph objects, specify one of the following: • GRAPH – (Graphs only) The largest of values in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Large to consider only the distinct values in *column* when determining the large value. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you need to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The datatype of *returnexp*. Returns the *ntop*-largest value if it succeeds and -1 if an error occurs.

Usage

If you specify *range*, Large returns the value in *returnexp* when the value in *column* is the *ntop*-largest value in *range*. If you specify DISTINCT, Large returns *returnexp* when the value in *column* is the *ntop*-largest value of the distinct values in *column*, or if you specify *expresn*, the *ntop*-largest for each distinct value of *expresn*.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows are as follows:

- For the Graph presentation style, Rows is always All
- For Graph controls, Rows can be All, Page, or Group

Max might be faster
If you do not need a return value from another column and you want to find the largest value (*ntop* = 1), use Max; it is faster.

You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

These expressions return the names of the salespersons with the three largest sales (sum_sales is the sum of the sales for each salesperson) in group 2, which might be the salesregion group. Note that sum_sales contains the values being compared, but Large returns a value in the name column:

```
Large(name, sum_sales, 1 for group 2)
Large(name, sum_sales, 2 for group 2)
Large(name, sum_sales, 3 for group 2)
```

This example reports the salesperson with the third-largest sales, considering only the first entry for each person:

```
Large(name, sum_sales, 3 for all DISTINCT sum_sales)
```

See also

Small

Last

Description

Gets the value in the last row in the specified column.

Syntax

Last (*column* { FOR *range* { DISTINCTT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the value of the last row. *Column* can be a column name or a column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column.
FOR *range* (optional)	The data that will be included when the value in the last row is found. For most presentation styles, values for *range* are: • ALL – (Default) The value in the last of all rows in *column*. • GROUP *n* – The value in the last row in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The value in the last row in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The value in the last row in *column* in the crosstab. For Graph objects, specify the following: • GRAPH – (Graphs only) The value in the last row in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Last to consider only the distinct values in *column* when determining the last value. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The datatype of the column. Returns the value in the last row of *column*. If you specify *range*, Last returns the value of the last row in *column* in *range*.

Usage

If you specify *range*, Last determines the value of the last row in *column* in *range*. If you specify DISTINCT, Last returns the last distinct value in *column*, or if you specify *expresn*, the last distinct value in *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the last distinct value in the column named dept_id in group 2:

```
Last(dept_id for group 2 DISTINCT)
```

This expression returns the last value in the column named emp_id in group 2:

```
Last(emp_id for group 2)
```

See also

First

LastPos

Description

Finds the last position of a target string in a source string.

Syntax

LastPos (*string1*, *string2* , *searchlength*)

Argument	Description
string1	The string in which you want to find *string2*.
string2	The string you want to find in *string1*.
searchlength (optional)	A long that limits the search to the leftmost searchlength characters of the source string *string1*. The default is the entire string.

Return value

Long. Returns a long whose value is the starting position of the last occurrence of *string2* in *string1* within the characters specified in *searchlength*. If *string2* is not found in *string1* or if *searchlength* is 0, LastPos returns 0. If any argument's value is null, LastPos returns null.

Usage

The LastPos function is case sensitive. The entire target string must be found in the source string.

Examples

This statement returns 6, because the position of the last occurrence of RU is position 6:

```
LastPos("BABE RUTH", "RU")
```

This statement returns 3:

```
LastPos("BABE RUTH", "B")
```

This statement returns 0, because the case does not match:

```
LastPos("BABE RUTH", "be")
```

This statement searches the leftmost 4 characters and returns 0, because the only occurrence of RU is after position 4:

```
LastPos("BABE RUTH", "RU", 2)
```

See also

Pos

Left

Description

Obtains a specified number of characters from the beginning of a string.

Syntax

Left (*string*, *n*)

Argument	Description
string	The string containing the characters you want
n	A long specifying the number of characters you want

Return value

String. Returns the leftmost *n* characters in *string* if it succeeds and the empty string ("") if an error occurs.

If *n* is greater than or equal to the length of the string, Left returns the entire string. It does not add spaces to make the return value's length equal to *n*.

Examples

This expression returns BABE:

```
Left("BABE RUTH", 4)
```

This expression returns BABE RUTH:

```
Left("BABE RUTH", 40)
```

This expression for a computed field returns the first 40 characters of the text in the column home_address:

```
Left(home_address, 40)
```

See also

LeftA
Mid
Pos
Right

LeftA

Description

Obtains a specified number of bytes from the beginning of a string.

Syntax

LeftA (*string*, *n*)

Argument	Description
string	The string containing the characters you want
n	A long specifying the number of bytes you want

Return value

String. Returns the characters in the leftmost *n* bytes in *string* if it succeeds and the empty string ("") if an error occurs.

If *n* is greater than or equal to the length of the string, LeftA returns the entire string. It does not add spaces to make the return value's length equal to *n*.

Usage

In SBCS environments, Left and LeftA return the same results.

See also

MidA
PosA
RightA

LeftTrim

Description

Removes spaces from the beginning of a string.

Syntax

LeftTrim (*string*)

Argument	Description
string	The string you want returned with leading spaces deleted

Return value

String. Returns a copy of *string* with leading spaces deleted if it succeeds and the empty string ("") if an error occurs.

Examples

This expression returns RUTH:

```
LeftTrim(" RUTH")
```

This expression for a computed field deletes any leading blanks from the value in the column lname and returns the value preceded by the salutation specified in salut_emp:

```
salut_emp + " " +  LeftTrim(lname)
```

See also

RightTrim
Trim

Len

Description

Reports the length of a string in characters.

Syntax

Len (*string*)

Argument	Description
string	The string for which you want the length

Return value

Long. Returns a long containing the length of *string* in characters if it succeeds and -1 if an error occurs.

Examples

This expression returns 0:

```
Len("")
```

This validation rule tests that the value the user entered is fewer than 20 characters:

```
Len(GetText()) < 20
```

See also

LenA

LenA

Description: Reports the length of a string in bytes.

Syntax: **LenA** (*string*)

Argument	Description
string	The string for which you want the length

Return value: Long. Returns a long containing the length of *string* in bytes if it succeeds and -1 if an error occurs.

Usage: In SBCS environments, Len and LenA return the same results.

See also: Len

Log

Description: Gets the natural logarithm of a number.

Syntax: **Log** (*n*)

Argument	Description
n	The number for which you want the natural logarithm (base e). The value of *n* must be greater than 0.

Return value: Double. Returns the natural logarithm of *n*. An execution error occurs if *n* is negative or zero.

Inverse
The inverse of the Log function is the Exp function.

Examples: This expression returns 2.302585092:

```
Log(10)
```

This expression returns –.693147 ... :

```
Log(0.5)
```

Both these expressions result in an error at runtime:

```
Log(0)
Log(-2)
```

See also: Exp

LogTen

LogTen

Description

Gets the base 10 logarithm of a number.

Syntax

LogTen (*n*)

Argument	Description
n	The number for which you want the base 10 logarithm. The value of *n* must not be negative.

Return value

Double. Returns the base 10 logarithm.

Obtaining a number
The expression `10^n` is the inverse for `LogTen(n)`. To obtain *n* given number (`nbr = LogTen(n)`), use `n = 10^nbr`.

Examples

This expression returns 1:

```
LogTen(10)
```

The following expressions both return 0:

```
LogTen(1)
LogTen(0)
```

This expression results in an execution error:

```
LogTen(-2)
```

See also

Log

Long

Description

Converts the value of a string to a long.

Syntax

Long (*string*)

Argument	Description
string	The string you want returned as a long

Return value

Long. Returns the contents of *string* as a long if it succeeds and 0 if *string* is not a valid number.

Examples

This expression returns 2167899876 as a long:

```
Long("2167899876")
```

LookUpDisplay

Description

Obtains the display value in the code table associated with the data value in the specified column.

Syntax

LookUpDisplay (*column*)

Argument	Description
column	The column for which you want the code table display value

Return value

String. Returns the display value when it succeeds and the empty string (“”) if an error occurs.

Usage

If a column has a code table, a buffer stores a value from the data column of the code table, but the user sees a value from the display column. Use LookUpDisplay to get the value the user sees.

Code tables and data values and graphs
When a column that is displayed in a graph has a code table, the graph displays the data values of the code table by default. To display the display values, call this function when you define the graph data.

Examples

This expression returns the display value for the column unit_measure:

```
LookUpDisplay(unit_measure)
```

Assume the column product_type has a code table and you want to use it as a category for a graph. To display the product type descriptions instead of the data values in the categories, enter this expression in the Category option on the Data page in the graph’s property sheet:

```
LookUpDisplay(product_type)
```

Lower

Description

Converts all the characters in a string to lowercase.

Syntax

Lower (*string*)

Argument	Description
string	The string you want to convert to lowercase letters

Return value

String. Returns *string* with uppercase letters changed to lowercase if it succeeds and the empty string ("") if an error occurs.

Examples

This expression returns castle hill:

```
Lower("Castle Hill")
```

See also

Upper

Match

Description

Determines whether a string's value contains a particular pattern of characters.

Syntax

Match (*string*, *textpattern*)

Argument	Description
string	The string in which you want to look for a pattern of characters
textpattern	A string whose value is the text pattern

Return value

Boolean. Returns true if *string* matches *textpattern* and false if it does not. Match also returns false if either argument has not been assigned a value or the pattern is invalid.

Usage

Match enables you to evaluate whether a string contains a general pattern of characters. To find out whether a string contains a specific substring, use the Pos function.

Textpattern is similar to a regular expression. It consists of metacharacters, which have special meaning, and ordinary characters, which match themselves. You can specify that the string begin or end with one or more characters from a set, or that it contain any characters except those in a set.

A text pattern consists of metacharacters, which have special meaning in the match string, and nonmetacharacters, which match the characters themselves.

The following tables explain the meaning and use of these metacharacters:

Metacharacter	Meaning	Example
Caret (^)	Matches the beginning of a string	^C matches C at the beginning of a string.
Dollar sign ($)	Matches the end of a string	s$ matches s at the end of a string.
Period (.)	Matches any character	. . . matches three consecutive characters.
Backslash (\)	Removes the following metacharacter's special characteristics so that it matches itself	\$ matches $.
Character class (a group of characters enclosed in square brackets [ ])	Matches any of the enclosed characters	[AEIOU] matches A, E, I, O, or U. You can use hyphens to abbreviate ranges of characters in a character class. For example, [A-Za-z] matches any letter.
Complemented character class (first character inside the square brackets is a caret)	Matches any character *not* in the group following the caret	[^0-9] matches any character except a digit, and [^A-Za-z] matches any character except a letter.

The metacharacters asterisk (*), plus (+), and question mark (?) are unary operators that are used to specify repetitions in a regular expression:

Metacharacter	Meaning	Example
* (asterisk)	Indicates zero or more occurrences	A* matches zero or more As (no As, A, AA, AAA, and so on)
+ (plus)	Indicates one or more occurrences	A+ matches one A or more than one A (A, AAA, and so on)
? (question mark)	Indicates zero or one occurrence	A? matches an empty string ("") or A

Sample patterns The following table shows various text patterns and sample text that matches each pattern:

This pattern	Matches
AB	Any string that contains AB, such as ABA, DEABC, graphAB_one.
B*	Any string that contains 0 or more Bs, such as AC, B, BB, BBB, ABBBC, and so on. Since B* used alone matches any string, you would not use it alone, but notice its use in some the following examples.
AB*C	Any string containing the pattern AC or ABC or ABBC, and so on (0 or more Bs).
AB+C	Any string containing the pattern ABC or ABBC or ABBBC, and so on (1 or more Bs).
ABB*C	Any string containing the pattern ABC or ABBC or ABBBC, and so on (1 B plus 0 or more Bs).
^AB	Any string starting with AB.
AB?C	Any string containing the pattern AC or ABC (0 or 1 B).
^[ABC]	Any string starting with A, B, or C.
[^ABC]	A string containing any characters other than A, B, or C.
^[^abc]	A string that begins with any character except a, b, or c.
^[^a-z]$	Any single-character string that is not a lowercase letter (^ and $ indicate the beginning and end of the string).
[A-Z]+	Any string with one or more uppercase letters.
^[0-9]+$	Any string consisting only of digits.
^[0-9][0-9][0-9]$	Any string consisting of exactly three digits.
^([0-9][0-9][0-9])$	Any string consisting of exactly three digits enclosed in parentheses.

Examples

This validation rule checks that the value the user entered begins with an uppercase letter. If the value of the expression is false, the data fails validation:

```
Match(GetText(), "^[A-Z]")
```

See also

Pos

Max

Description

Gets the maximum value in the specified column.

Syntax

Max (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the maximum value. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data that will be included when the maximum value is found. For most presentation styles, values for *range* are: • ALL – (Default) The maximum value of all rows in *column*. • GROUP *n* – The maximum value of rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The maximum value of the rows in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The maximum value of all rows in *column* in the crosstab. For Graph objects, specify the following: • GRAPH – (Graphs only) The maximum value in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Max to consider only the distinct values in *column* when determining the largest value. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The datatype of the column. Returns the maximum value in the rows of *column*. If you specify *range*, Max returns the maximum value in *column* in *range*.

Usage

If you specify *range*, Max determines the maximum value in *column* in *range*. If you specify DISTINCT, Max returns the maximum distinct value in *column*, or if you specify *expresn*, the maximum distinct value in *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Null values are ignored and are not considered in determining the maximum.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the maximum of the values in the age column on the page:

```
Max(age for page)
```

This expression returns the maximum of the values in column 3 on the page:

```
Max(#3 for page)
```

This expression returns the maximum of the values in the column named age in group 1:

```
Max(age for group 1)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the maximum of the order amount for the distinct order numbers:

```
Max(order_amt for all DISTINCT order_nbr)
```

See also

Min

Median

Description

Calculates the median of the values of the column. The median is the middle value in the set of values, for which there is an equal number of values greater and smaller than it.

Syntax

Median (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the median of the data values. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data that will be included in the median. For most presentation styles, values for *range* are: • ALL – (Default) The median of all values in *column*. • GROUP *n* – The median of values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The median of the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The median of all values in *column* in the crosstab. For Graph objects, specify the following: • GRAPH – (Graphs only) The median of values in *column* in the range specified for the Rows.
DISTINCT (optional)	Causes Median to consider only the distinct values in *column* when determining the median. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The numeric datatype of the column. Returns the median of the values of the rows in *range* if it succeeds and -1 if an error occurs.

Usage

If you specify *range*, Median returns the median value of *column* in *range*. If you specify DISTINCT, Median returns the median value of the distinct values in *column*, or if you specify *expresn*, the median of *column* for each distinct value of *expresn*.

For graphs objects, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range.

Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

In calculating the median, null values are ignored.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the median of the values in the column named salary:

```
Median(salary)
```

This expression returns the median of the values in the column named salary of group 1:

```
Median(salary for group 1)
```

This expression returns the median of the values in column 5 on the current page:

```
Median(#5 for page)
```

This computed field returns Above Median if the median salary for the page is greater than the median for the report:

```
If(Median(salary for page) > Median(salary), "Above
Median", " ")
```

This expression for a graph value sets the data value to the median value of the sale_price column:

```
Median(sale_price)
```

This expression for a graph value entered on the Data page in the graph's property sheet sets the data value to the median value of the sale_price column for the entire graph:

```
Median(sale_price for graph)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the median of the order amount for the distinct order numbers:

```
Median(order_amt for all DISTINCT order_nbr)
```

See also

Avg
Mode

Mid

Description

Obtains a specified number of characters from a specified position in a string.

Syntax

Mid (*string*, *start* {, *length* })

Argument	Description
string	The string from which you want characters returned.
start	A long specifying the position of the first character you want returned (the position of the first character of the string is 1).
length (optional)	A long whose value is the number of characters you want returned. If you do not enter *length* or if *length* is greater than the number of characters to the right of *start*, Mid returns the remaining characters in the string.

Return value

String. Returns characters specified in *length* of *string* starting at character *start*. If *start* is greater than the number of characters in *string*, the Mid function returns the empty string (“”). If *length* is greater than the number of characters remaining after the *start* character, Mid returns the remaining characters. The return string is not filled with spaces to make it the specified length.

Examples

This expression returns “”:

```
Mid("BABE RUTH", 40, 5)
```

This expression returns BE RUTH:

```
Mid("BABE RUTH", 3)
```

This expression in a computed field returns ACCESS DENIED if the fourth character in the column password is not R:

```
If(Mid(password, 4, 1) = "R", "ENTER", "ACCESS DENIED")
```

To pass this validation rule, the fourth character in the column password must be 6:

```
Mid(password, 4, 1) = "6"
```

MidA

Description

Obtains a specified number of bytes from a specified position in a string.

Syntax

MidA (*string*, *start* {, *length* })

Argument	Description
string	The string from which you want characters returned.
start	A long specifying the position of the first byte you want returned (the position of the first byte of the string is 1).
length (optional)	A long whose value is the number of bytes you want returned. If you do not enter *length* or if *length* is greater than the number of bytes to the right of *start*, MidA returns the remaining bytes in the string.

Return value

String. Returns characters specified by the number of bytes in *length* of *string* starting at the byte specified by *start*. If *start* is greater than the number of bytes in *string*, the MidA function returns the empty string (“”). If *length* is greater than the number of bytes remaining after the *start* byte, MidA returns the remaining bytes. The return string is not filled with spaces to make it the specified length.

Usage

In SBCS environments, Mid and MidA return the same results.

See also

Mid

Min

Description

Gets the minimum value in the specified column.

Syntax

Min (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the minimum value. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data that will be included in the minimum. For most presentation styles, values for *range* are: • ALL – (Default) The minimum of all values in *column*. • GROUP *n* – The minimum of values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The minimum of the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The minimum of all values in *column* in the crosstab. For Graph objects, specify the following: • GRAPH – (Graphs only) The minimum of values in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Min to consider only the distinct values in *column* when determining the minimum value. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The datatype of the column. Returns the minimum value in the rows of *column*. If you specify *range*, Min returns the minimum value in the rows of *column* in *range*.

Usage

If you specify *range*, Min determines the minimum value in *column* in *range*. If you specify DISTINCT, Min returns the minimum distinct value in *column*, or if you specify *expresn*, the minimum distinct value in *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Null values are ignored and are not considered in determining the minimum.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the minimum value in the column named age in group 2:

```
Min(age for group 2)
```

This expression returns the minimum of the values in column 3 on the page:

```
Min(#3 for page)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the minimum of the order amount for the distinct order numbers:

```
Min(order_amt for all DISTINCT order_nbr)
```

See also

Max

Minute

Description

Obtains the number of minutes in the minutes portion of a time value.

Syntax

Minute (*time*)

Argument	Description
time	The time value from which you want the minutes

Return value

Integer. Returns the minutes portion of *time* (00 to 59).

Examples

This expression returns 1:

```
Minute(19:01:31)
```

See also

Hour
Second

Mod

Description

Obtains the remainder (modulus) of a division operation.

Syntax

Mod (*x*, *y*)

Argument	Description
x	The number you want to divide by *y*
y	The number you want to divide into *x*

Return value

The datatype of *x* or *y*, whichever datatype is more precise.

Examples

This expression returns 2:

```
Mod(20, 6)
```

This expression returns 1.5:

```
Mod(25.5, 4)
```

This expression returns 2.5:

```
Mod(25, 4.5)
```

Mode

Description

Calculates the mode of the values of the column. The mode is the most frequently occurring value.

Syntax

Mode (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the mode of the data values. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.

Argument	Description
FOR *range* (optional)	The data that will be included in the mode. For most presentation styles, values for *range* are: • ALL – (Default) The mode of all values in *column*. • GROUP *n* – The mode of values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The mode of the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The mode of all values in *column* in the crosstab. For Graph objects, specify: • GRAPH – (Graphs only) The mode of values in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Mode to consider only the distinct values in *column* when determining the mode. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The numeric datatype of the column. Returns the mode of the values of the rows in *range* if it succeeds and -1 if an error occurs.

Usage

If you specify *range*, Mode returns the mode of *column* in *range*. If you specify DISTINCT, Mode returns the mode of the distinct values in *column*, or if you specify *expresn*, the mode of *column* for each distinct value of *expresn*.

For graphs objects, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

In calculating the mode, null values are ignored.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the mode of the values in the column named salary:

```
Mode(salary)
```

This expression returns the mode of the values for group 1 in the column named salary:

```
Mode(salary for group 1)
```

This expression returns the mode of the values in column 5 on the current page:

```
Mode(#5 for page)
```

This computed field returns Above Mode if the mode of the salary for the page is greater than the mode for the report:

```
If(Mode(salary for page) > Mode(salary), "Above
Mode", " ")
```

This expression for a graph value sets the data value to the mode of the sale_price column:

```
Mode(sale_price)
```

This expression for a graph value entered on the Data page in the graph's property sheet sets the data value to the mode of the sale_price column for the entire graph:

```
Mode(sale_price for graph)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the mode of the order amount for the distinct order numbers:

```
Mode(order_amt for all DISTINCT order_nbr)
```

See also

Avg
Median

Month

Description

Gets the month of a date value.

Syntax

Month (*date*)

Argument	Description
date	The date from which you want the month

Return value

Integer. Returns an integer (1 to 12) whose value is the month portion of *date*.

Examples

This expression returns 1:

```
Month(2005-01-31)
```

This expression for a computed column returns Wrong Month if the month in the column expected_grad_date is not 6:

```
If(Month(expected_grad_date) = 6, "June", "Wrong
Month")
```

This validation rule expression checks that the value of the month in the date in the column expected_grad_date is 6:

```
Month(expected_grad_date) = 6
```

See also

Day
Date
Year

Now

Description

Obtains the current time based on the system time of the client machine.

Syntax

Now ( )

Return value

Time. Returns the current time based on the system time of the client machine.

Usage

Use Now to compare a time to the system time or to display the system time on the screen. The timer interval specified for the DataWindow object determines the frequency at which the value of Now is updated. For example, if the timer interval is one second, it is updated every second. The default timer interval is one minute (60,000 milliseconds).

Examples

This expression returns the current system time:

```
Now()
```

This expression sets the column value to 8:00 when the current system time is before 8:00 and to the current time if it is after 8:00:

```
If(Now() < 08:00:00, '08:00:00', String(Now()))
```

The displayed time refreshes every time the specified time interval period elapses.

See also

If
Year

Number

Description

Converts a string to a number.

Syntax

Number (*string*)

Argument	Description
string	The string you want returned as a number

Return value

A numeric datatype. Returns the contents of *string* as a number. If *string* is not a valid number, Number returns 0.

Examples

This expression converts the string 24 to a number:

```
Number("24")
```

This expression for a computed field tests whether the value in the age column is greater than 55 and if so displays N/A; otherwise, it displays the value in age:

```
If(Number(age) > 55, "N/A", age)
```

This validation rule checks that the number the user entered is between 25,000 and 50,000:

```
Number(GetText())>25000 AND Number (GetText())<50000
```

Page

Description — Gets the number of the current page.

Syntax — **Page** ( )

Return value — Long. Returns the number of the current page.

Calculating the page count
The vertical size of the paper less the top and bottom margins is used to calculate the page count. When the print orientation is landscape, the vertical size of the paper is the shorter dimension.

Examples — This expression returns the number of the current page:

```
Page()
```

In the DataWindow object's footer band, this expression for a computed field displays a string showing the current page number and the total number of pages in the report. The result has the format Page *n* of *total*:

```
'Page ' +  Page() + ' of ' + PageCount()
```

See also — PageAbs
PageAcross
PageCount
PageCountAcross

PageAbs

Description — Gets the absolute number of the current page.

Syntax — **PageAbs** ( )

Return value — Long. Returns the absolute number of the current page.

Usage — Use this function for group reports that have ResetPageCount = yes. It returns the absolute page number, ignoring the page reset count. This enables you to number the grouped pages, but also to obtain the absolute page when the user wants to print the current page, regardless of what that page number is in a grouped page report.

Examples — This expression returns the absolute number of the current page:

```
PageAbs()
```

This example obtains the absolute page number for the first row on the page in the string variable *ret*:

```
string ret, row
row = dw1.Object.DataWindow.FirstRowOnPage
ret = dw1.Describe("Evaluate('pageabs()', "+row+")")
```

See also

Page
PageCount
PageCountAcross

PageAcross

Description

Gets the number of the current horizontal page. For example, if a report is twice the width of the print preview window and the window is scrolled horizontally to display the portion of the report that was outside the preview, PageAcross returns 2 because the current page is the second horizontal page.

Syntax

PageAcross ( )

Return value

Long. Returns the number of the current horizontal page if it succeeds and -1 if an error occurs.

Examples

This expression returns the number of the current horizontal page:

```
PageAcross()
```

See also

Page
PageCount
PageCountAcross

PageCount

Description

Gets the total number of pages when a DataWindow object is being viewed in Print Preview. This number is also the number of printed pages if the DataWindow object is not wider than the preview window. If the DataWindow object is wider than the preview window, the number of printed pages will be greater than the number PageCount gets.

Syntax

PageCount ( )

Return value

Long. Returns the total number of pages.

Usage

PageCount applies to Print Preview.

Calculating the page count
The vertical size of the paper less the top and bottom margins is used to calculate the page count. When the print orientation is landscape, the vertical size of the paper is the shorter dimension.

Examples

This expression returns the number of pages:

```
PageCount()
```

In the DataWindow object's footer band, this expression for a computed field displays a string showing the current page number and the total number of pages in the report. The result has the format *Page n of total*:

```
'Page ' + Page() + ' of ' +  PageCount()
```

See also

Page
PageAcross
PageCountAcross

PageCountAcross

Description

Gets the total number of horizontal pages that are wider than the Print Preview window when a DataWindow object is viewed in Print preview.

Syntax

PageCountAcross ( )

Return value

Long. Returns the total number of horizontal pages if it succeeds and -1 if an error occurs.

Usage

PageCountAcross applies to Print Preview.

Examples

This expression returns the number of horizontal pages in the Print Preview window:

```
PageCountAcross()
```

See also

Page
PageAcross
PageCount

Percent

Description

Gets the percentage that the current value represents of the total of the values in the column.

Syntax

Percent (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the value of each row expressed as a percentage of the total of the values of the column. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data to be included in the percentage. For most presentation styles, values for *range* are: • ALL – (Default) The percentage that the current value represents of all rows in *column*. • GROUP *n* – The percentage that the current value represents of rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The percentage that the current value represents of the rows in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The percentage that the current value represents of all rows in *column* in the crosstab. For Graph objects, specify one of the following: • GRAPH – (Graphs only) The percentage that the current value represents of values in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Percent to consider only the distinct values in *column* when determining the percentage. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

A numeric datatype (decimal, double, integer, long, or real). Returns the percentage the current row of *column* represents of the total value of the column.

Usage

Usually you use Percent in a column to display the percentage for each row. You can also use Percent in a header or trailer for a group. In the header, Percent displays the percentage for the first value in the group, and in the trailer, for the last value in the group.

If you specify *range*, Percent returns the percentage that the current row of *column* represents relative to the total value of *range*. For example, if column 5 is salary, `Percent(#5 for group 1)` is equivalent to `salary/(Sum(Salary for group 1))`.

If you specify DISTINCT, Percent returns the percent that a distinct value in *column* represents of the total value of *column*. If you specify *expresn*, Percent returns the percent that the value in *column* represents of the total for *column* in a row in which the value of *expresn* is distinct.

Formatting the percent value
The percentage is displayed as a decimal value unless you specify a format for the result. A display format can be part of the computed field's definition.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Null values are ignored and are not considered in the calculation.

Not in validation rules, filter expressions, or crosstabs
You cannot use Percent or other aggregate functions in validation rules or filter expressions. Percent does not work for crosstabs; specifying "for crosstab" as a range is not available for Percent.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the value of each row in the column named salary as a percentage of the total of salary:

```
Percent(salary)
```

This expression returns the value of each row in the column named cost as a percentage of the total of cost in group 2:

```
Percent(cost for group 2)
```

This expression entered in the Value box on the Data tab page in the Graph Object property sheet returns the value of each row in the qty_ordered as a percentage of the total for the column in the graph:

```
Percent(qty_ordered for graph)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the order amount as a percentage of the total order amount for the distinct order numbers:

```
Percent(order_amt for all DISTINCT order_nbr)
```

See also

CumulativePercent

Pi

Description

Multiplies pi by a specified number.

Syntax

Pi (*n*)

Argument	Description
n	The number you want to multiply by pi (3.14159265358979323...)

Return value

Double. Returns the result of multiplying *n* by pi if it succeeds and -1 if an error occurs.

Usage

Use Pi to convert angles to and from radians.

Examples

This expression returns pi:

```
Pi(1)
```

Both these expressions return the area of a circle with the radius Rad:

```
Pi(1) * Rad^2
Pi(Rad^2)
```

This expression computes the cosine of a 45-degree angle:

```
Cos(45.0 * (Pi(2)/360))
```

See also

Cos
Sin
Tan

Pos

Description

Finds one string within another string.

Syntax

Pos (*string1*, *string2* {, *start* })

Argument	Description
string1	The string in which you want to find *string2*.
string2	The string you want to find in *string1*.
start (optional)	A long indicating where the search will begin in *string*. The default is 1.

Return value

Long. Returns a long whose value is the starting position of the first occurrence of *string2* in *string1 after* the position specified in *start*. If *string2* is not found in *string1* or if *start* is not within *string1*, Pos returns 0.

Usage

The Pos function is case sensitive.

Examples

This expression returns the position of the letter *a* in the value of the last_name column:

```
Pos(last_name, "a")
```

This expression returns 6:

```
Pos("BABE RUTH", "RU")
```

This expression returns 1:

```
Pos("BABE RUTH", "B")
```

This expression returns 0 (because the case does not match):

```
Pos("BABE RUTH", "be")
```

This expression returns 0 (because it starts searching at position 5, after the occurrence of BE):

```
Pos("BABE RUTH", "BE", 5)
```

See also

LastPos
Left
Mid
PosA
Right

PosA

Description

Finds one string within another string.

Syntax

PosA (*string1*, *string2* {, *start* })

Argument	Description
string1	The string in which you want to find *string2*.
string2	The string you want to find in *string1*.
start (optional)	A long indicating the position in bytes where the search will begin in *string*. The default is 1.

Return value

Long. Returns a long whose value is the starting position of the first occurrence of *string2* in *string1 after* the position in bytes specified in *start*. If *string2* is not found in *string1* or if *start* is not within *string1*, PosA returns 0.

Usage

In SBCS environments, Pos and PosA return the same results.

See also

LastPos
LeftA
MidA
Pos
RightA

ProfileInt

Description

Obtains the integer value of a setting in the specified profile file.

Syntax

ProfileInt (*filename*, *section*, *key*, *default*)

Argument	Description
filename	A string whose value is the name of the profile file. If you do not specify a full path, ProfileInt uses the operating system's standard file search order to find the file.
section	A string whose value is the name of a group of related values in the profile file. In the file, section names are in square brackets. Do not include the brackets in *section*. *Section* is not case sensitive.
key	A string specifying the setting name in *section* whose value you want. The setting name is followed by an equal sign in the file. Do not include the equal sign in *key*. *Key* is not case sensitive.
default	An integer value that ProfileInt returns if *filename* is not found, if *section* or *key* does not exist in *filename*, or if the value of *key* cannot be converted to an integer.

Return value

Integer. Returns *default* if *filename* is not found, *section* is not found in *filename*, *key* is not found in *section*, or the value of *key* is not an integer. Returns -1 if an error occurs.

Usage

Use ProfileInt and ProfileString to get configuration settings from a profile file you have designed for your application. ProfileInt and ProfileString can read files with ANSI or UTF16-LE encoding.

Examples

This example uses the following *PROFILE.INI* file:

```
[MyApp]
Maximized=1

[Security]
Class = 7
```

This expression tries to return the integer value of the keyword Minimized in section MyApp of file *C:\PROFILE.INI*. It returns 3 if there is no MyApp section or no Minimized keyword in the MyApp section. Based on the sample file above, it returns 3:

```
ProfileInt("C:\PROFILE.INI", "MyApp", "minimized", 3)
```

See also

ProfileString

ProfileString

Description

Obtains the string value of a setting in the specified profile file.

Syntax

ProfileString (*filename*, *section*, *key*, *default*)

Argument	Description
filename	A string whose value is the name of the profile file. If you do not specify a full path, ProfileString uses the operating system's standard file search order to find the file.
section	A string whose value is the name of a group of related values in the profile file. In the file, section names are in square brackets. Do not include the brackets in *section*. *Section* is not case sensitive.
key	A string specifying the setting name in *section* whose value you want. The setting name is followed by an equal sign in the file. Do not include the equal sign in *key*. *Key* is not case sensitive.
default	A string value that ProfileString returns if *filename* is not found, if *section* or *key* does not exist in *filename*, or if the value of *key* cannot be converted to an integer.

Return value

String, with a maximum length of 4096 characters. Returns the string from *key* within *section* within *filename*. If *filename* is not found, *section* is not found in *filename*, or *key* is not found in *section*, ProfileString returns *default*. If an error occurs, it returns the empty string ("").

Usage

Use ProfileInt and ProfileString to get configuration settings from a profile file you have designed for your application. ProfileInt and ProfileString can read files with ANSI or UTF16-LE encoding.

Examples

This example uses the following section in the *PROFILE.INI* file:

```
[Employee]
Name="Smith"

[Dept]
Name="Marketing"
```

This expression returns the string for the keyword Name in section Employee in file *C:\PROFILE.INI*. It returns None if the section or keyword does not exist. In this case it returns Smith:

```
ProfileString("C:\PROFILE.INI", "Employee", "Name",
"None")
```

See also

ProfileInt

Rand

Description

Obtains a random whole number between 1 and a specified upper limit.

Syntax

Rand (*n*)

Argument	Description
n	The upper limit of the range of random numbers you want returned. The lower limit is always 1. The upper limit cannot exceed 32,767.

Return value

A numeric datatype, the datatype of *n*. Returns a random whole number between 1 and *n*.

Usage

The sequence of numbers generated by repeated calls to the Rand function is a computer-generated pseudorandom sequence.

Examples

This expression returns a random whole number between 1 and 10:

```
Rand(10)
```

Real

Description

Converts a string value to a real datatype.

Syntax

Real (*string*)

Argument	Description
string	The string whose value you want to convert to a real

Return value

Real. Returns the contents of a string as a real. If *string* is not a valid number, Real returns 0.

Examples

This expression converts 24 to a real:

```
Real("24")
```

This expression returns the value in the column temp_text as a real:

```
Real(temp_text)
```

RelativeDate

Description

Obtains the date that occurs a specified number of days after or before another date.

Syntax

RelativeDate (*date*, *n*)

Argument	Description
date	A date value
n	An integer indicating the number of days

Return value

Date. Returns the date that occurs *n* days after *date* if *n* is greater than 0. Returns the date that occurs *n* days before *date* if *n* is less than 0.

Examples

This expression returns 2005-02-10:

```
RelativeDate(2005-01-31, 10)
```

This expression returns 2005-01-21:

```
RelativeDate(2005-01-31, -10)
```

See also

DaysAfter

RelativeTime

Description

Obtains a time that occurs a specified number of seconds after or before another time within a 24-hour period.

Syntax

RelativeTime (*time*, *n*)

Argument	Description
time	A time value
n	A long number of seconds

Return value

Time. Returns the time that occurs *n* seconds after *time* if *n* is greater than 0. Returns the time that occurs *n* seconds before *time* if *n* is less than 0. The maximum return value is 23:59:59.

Examples

This expression returns 19:01:41:

```
RelativeTime(19:01:31, 10)
```

This expression returns 19:01:21:

```
RelativeTime(19:01:31, -10)
```

See also

SecondsAfter

Replace

Description

Replaces a portion of one string with another.

Syntax

Replace (*string1*, *start*, *n*, *string2*)

Argument	Description
string1	The string in which you want to replace characters with *string2*.
start	A long whose value is the number of the first character you want replaced. (The first character in the string is number 1.)
n	A long whose value is the number of characters you want to replace.
string2	The string that replaces characters in *string1*. The number of characters in *string2* can be greater than, equal to, or fewer than the number of characters you are replacing.

Return value

String. Returns the string with the characters replaced if it succeeds and the empty string ("") if it fails.

Usage

If the start position is beyond the end of the string, Replace appends *string2* to *string1*. If there are fewer characters after the start position than specified in *n*, Replace replaces all the characters to the right of character start.

If *n* is zero, then in effect Replace inserts *string2* into *string1*.

Examples

This expression changes the last two characters of the string David to e to make it Dave:

```
Replace("David", 4, 2, "e")
```

This expression returns MY HOUSE:

```
Replace("YOUR HOUSE", 1, 4, "MY")
```

This expression returns Closed for the Winter:

```
Replace("Closed for Vacation", 12, 8, "the Winter")
```

ReplaceA

Description

Replaces a portion of one string with another.

Syntax

ReplaceA (*string1*, *start*, *n*, *string2*)

Argument	Description
string1	The string in which you want to replace bytes with *string2*.
start	A long whose value is the number of the first byte you want replaced. (The first byte in the string is number 1.)
n	A long whose value is the number of bytes you want to replace.
string2	The string that replaces bytes in *string1*. The number of bytes in *string2* can be greater than, equal to, or fewer than the number of bytes you are replacing.

Return value

String. Returns the string with the bytes replaced if it succeeds and the empty string ("") if it fails.

Usage

If the start position is beyond the end of the string, ReplaceA appends *string2* to *string1*. If there are fewer bytes after the start position than specified in *n*, ReplaceA replaces all the bytes to the right of character *start*.

If *n* is zero, then in effect ReplaceA inserts *string2* into *string1*.

In SBCS environments, Replace and ReplaceA return the same results.

See also

Replace

RGB

Description

Calculates the long value that represents the color specified by numeric values for the red, green, and blue components of the color.

Syntax

RGB (*red*, *green*, *blue*)

Argument	Description
red	The integer value of the red component of the color
green	The integer value of the green component of the color
blue	The integer value of the blue component of the color

Return value

Long. Returns the long that represents the color created by combining the values specified in red, green, and blue. If an error occurs, RGB returns null.

Usage

The formula for combining the colors is:

Red + (256 * Green) + (65536 * Blue)

Use RGB to obtain the long value required to set the color for text and drawing objects. You can also set an object's color to the long value that represents the color. The RGB function provides an easy way to calculate that value.

Determining color components The value of a component color is an integer between 0 and 255 that represents the amount of the component that is required to create the color you want. The lower the value, the darker the color; the higher the value, the lighter the color.

The following table lists red, green, and blue values for the 16 standard colors:

Color	Red value	Green value	Blue value
Black	0	0	0
White	255	255	255
Light Gray	192	192	192
Dark Gray	128	128	128
Red	255	0	0
Dark Red	128	0	0
Green	0	255	0
Dark Green	0	128	0
Blue	0	0	255
Dark Blue	0	0	128
Magenta	255	0	255
Dark Magenta	128	0	128
Cyan	0	255	255
Dark Cyan	0	128	128
Yellow	255	255	0
Brown	128	128	0

Examples

This expression returns as a long 8421376, which represents dark cyan:

```
RGB(0,128,128)
```

This expression for the Background.Color property of a salary column returns a long that represents red if an employee's salary is greater than $50,000 and white if salary is less than or equal to $50,000:

```
If(salary>50000, RGB(255,0,0), RGB(255,255,255))
```

See also

"Example 3: creating a row indicator" on page 19

Right

Description

Obtains a specified number of characters from the end of a string.

Syntax

Right (*string*, *n*)

Argument	Description
string	The string from which you want characters returned
n	A long whose value is the number of characters you want returned from the right end of *string*

Return value

String. Returns the rightmost *n* characters in *string* if it succeeds and the empty string ("") if an error occurs.

If *n* is greater than or equal to the length of the string, Right returns the entire string. It does not add spaces to make the return value's length equal to *n*.

Examples

This expression returns HILL:

```
Right("CASTLE HILL", 4)
```

This expression returns CASTLE HILL:

```
Right("CASTLE HILL", 75)
```

See also

Left
Mid
Pos

RightA

Description

Obtains a specified number of characters from the end of a string.

Syntax

Right (*string*, *n*)

Argument	Description
string	The string from which you want characters returned
n	A long whose value is the number of characters you want returned from the right end of *string*

Return value

String. Returns the rightmost *n* characters in *string* if it succeeds and the empty string ("") if an error occurs.

If *n* is greater than or equal to the length of the string, RightA returns the entire string. It does not add spaces to make the return value's length equal to *n*.

Usage

In SBCS environments, Right and RightA return the same results.

See also

LeftA
MidA
PosA
Right

RightTrim

Description

Removes spaces from the end of a string.

Syntax

RightTrim (*string*)

Argument	Description
string	The string you want returned with trailing blanks deleted

Return value

String. Returns a copy of *string* with trailing blanks deleted if it succeeds and the empty string ("") if an error occurs.

Examples

This expression returns RUTH:

```
RightTrim("RUTH ")
```

See also

LeftTrim
Trim

Round

Description

Rounds a number to the specified number of decimal places.

Syntax

Round (*x* , *n*)

Argument	Description
x	The number you want to round.
n	The number of decimal places to which you want to round *x*. Valid values are 0 through 28.

Return value

Decimal. If *n* is positive, Round returns *x* rounded to the specified number of decimal places. If *n* is negative, it returns *x* rounded to (- *n* +1) places before the decimal point. Returns -1 if it fails.

Examples

This expression returns 9.62:

```
Round(9.624, 2)
```

This expression returns 9.63:

```
Round(9.625, 2)
```

This expression returns 9.600:

```
Round(9.6, 3)
```

This expression returns -9.63:

```
Round(-9.625, 2)
```

This expression returns -10:

```
Round(-9.625, -1)
```

See also

Ceiling
Int
Truncate

RowCount

Description

Obtains the number of rows that are currently available in the primary buffer.

Syntax

RowCount ( )

Return value

Long. Returns the number of rows that are currently available, 0 if no rows are currently available, and -1 if an error occurs.

Examples

This expression in a computed field returns a warning if no data exists and the number of rows if there is data:

```
If(RowCount() = 0, "No Data", String(RowCount()))
```

RowHeight

Description

Reports the height of a row associated with a band in a DataWindow object.

Syntax

RowHeight ( )

Return value

Long. Returns the height of the row in the units specified for the DataWindow object if it succeeds, and -1 if an error occurs.

Usage

When you call RowHeight in a band other than the detail band, it reports on a row in the detail band. See GetRow for a table specifying which row is associated with each band for reporting purposes.

When a band has Autosize Height set to true, you should avoid using the RowHeight DataWindow expression function to set the height of any element in the row. Doing so can result in a logical inconsistency between the height of the row and the height of the element. If you need to use RowHeight, you must set the Y coordinate of the element to 0 on the Position page in the Properties view, otherwise the bottom of the element might be clipped. You must do this for every element that uses such an expression. If you move any elements in the band, make sure that their Y coordinates are still set to 0.

You should not use an expression whose runtime value is greater than the value returned by RowHeight. For example, you should not set the height of a column to rowheight() + 30. Such an expression produces unpredictable results at runtime.

Examples

This expression for a computed field in the detail band displays the height of each row:

```
RowHeight()
```

See also

GetRow

Second

Description

Obtains the number of seconds in the seconds portion of a time value.

Syntax

Second (*time*)

Argument	Description
time	The time value from which you want the seconds

Return value

Integer. Returns the seconds portion of *time* (00 to 59).

Examples

This expression returns 31:

```
Second(19:01:31)
```

See also

Hour
Minute

SecondsAfter

Description: Gets the number of seconds one time occurs after another.

Syntax: **SecondsAfter** (*time1*, *time2*)

Argument	Description
time1	A time value that is the start time of the interval being measured
time2	A time value that is the end time of the interval

Return value: Long. Returns the number of seconds *time2* occurs after *time1*. If *time2* occurs before *time1*, SecondsAfter returns a negative number.

Examples: This expression returns 15:

```
SecondsAfter(21:15:30, 21:15:45)
```

This expression returns -15:

```
SecondsAfter(21:15:45, 21:15:30)
```

This expression returns 0:

```
SecondsAfter(21:15:45, 21:15:45)
```

See also: DaysAfter

Sign

Description: Reports whether the number is negative, zero, or positive by checking its sign.

Syntax: **Sign** (*n*)

Argument	Description
n	The number for which you want to determine the sign

Return value: Integer. Returns a number (-1, 0, or 1) indicating the sign of *n*.

Examples: This expression returns 1 (the number is positive):

```
Sign(5)
```

This expression returns 0:

```
Sign(0)
```

This expression returns -1 (the number is negative):

```
Sign(-5)
```

Sin

Description

Calculates the sine of an angle.

Syntax

Sin (*n*)

Argument	Description
n	The angle (in radians) for which you want the sine

Return value

Double. Returns the sine of *n* if it succeeds and -1 if an error occurs.

Examples

This expression returns .8414709848078965:

```
Sin(1)
```

This expression returns 0:

```
Sin(0)
```

This expression returns 0:

```
Sin(pi(1))
```

See also

Cos
Pi
Tan

Small

Description

Finds a small value at a specified ranking in a column (for example, third-smallest, fifth-smallest) and returns the value of another column or expression based on the result.

Syntax

Small (*returnexp*, *column*, *nbottom* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
returnexp	The value you want returned when the small value is found. *Returnexp* includes a reference to a column, but not necessarily the column that is being evaluated for the small value, so that a value is returned from the same row that contains the small value.
column	The column that contains the small value you are searching for. *Column* can be a column name or a column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.

Argument	Description
nbottom	The relationship of the small value to the column's smallest value. For example, when *nbottom* is 2, Small finds the second-smallest value.
FOR *range* (optional)	The data that will be included when finding the small value. For most presentation styles, values for *range* are: • ALL – (Default) The small value of all rows in *column*. • GROUP *n* – The small value of rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The small value of the rows in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The small value of all rows in *column* in the crosstab. For Graph objects, specify the following: • GRAPH – (Graphs only) The small value in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Small to consider only the distinct values in *column* when determining the small value. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The datatype of *returnexp*. Returns the *nbottom*-smallest value if it succeeds and -1 if an error occurs.

Usage

If you specify *range*, Small returns the value in *returnexp* when the value in *column* is the *nbottom*-smallest value in *range*. If you specify DISTINCT, Small returns *returnexp* when the value in *column* is the *nbottom*-smallest value of the distinct values in *column*, or if you specify *expresn*, the *nbottom*-smallest for each distinct value of *expresn*.

For graphs , you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range.

Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Min might be faster If you do not need a return value from another column and you want to find the smallest value (*nbottom* = 1), use Min; it is faster.

Not in validation rules or filter expressions You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

These expressions return the names of the salespersons with the three smallest sales (sum_sales is the sum of the sales for each salesperson) in group 2, which might be the salesregion group. Note that sum_sales contains the values being compared, but Small returns a value in the name column:

```
Small(name, sum_sales, 1 for group 2)
Small(name, sum_sales, 2 for group 2)
Small(name, sum_sales, 3 for group 2)
```

This example reports the salesperson with the third-smallest sales, considering only the first entry for each salesperson:

```
Small(name, sum_sales, 3 for all DISTINCT sum_sales)
```

See also

Large

Space

Description

Builds a string of the specified length whose value consists of spaces.

Syntax

Space (*n*)

Argument	Description
n	A long whose value is the length of the string you want filled with spaces

Return value

String. Returns a string filled with *n* spaces if it succeeds and the empty string ("") if an error occurs.

Examples

This expression for a computed field returns 10 spaces in the computed field if the value of the rating column is Top Secret; otherwise, it returns the value in rating:

```
If(rating = "Top Secret", Space(10), rating)
```

See also Fill

Sqrt

Description Calculates the square root of a number.

Syntax **Sqrt** (*n*)

Argument	Description
n	The number for which you want the square root

Return value Double. Returns the square root of *n*.

Usage `Sqrt(n)` is the same as `n ^.5`.

Taking the square root of a negative number causes an execution error.

Examples This expression returns 1.414213562373095:

```
Sqrt(2)
```

This expression results in an error at execution time:

```
Sqrt(-2)
```

StDev

Description

Calculates an estimate of the standard deviation for the specified column. Standard deviation is a measurement of how widely values vary from average.

Syntax

StDev (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want an estimate for the standard deviation of the values in the rows. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data to be included in the estimate of the standard deviation. For most presentation styles, values for *range* are: • ALL – (Default) The estimate of the standard deviation for all values in *column*. • GROUP *n* – The estimate of the standard deviation for values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The estimate of the standard deviation for the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range* to indicate the standard deviation for all values in *column* in the crosstab. For Graph objects specify GRAPH to indicate the standard deviation for values in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes StDev to consider only the distinct values in *column* when determining the standard deviation. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

Double. Returns an estimate of the standard deviation for *column*.

Usage

If you specify *range*, StDev returns an estimate for the standard deviation of *column* within *range*. If you specify DISTINCT, StDev returns an estimate of the standard deviation for the distinct values in *column*, or if you specify *expresn*, the estimate of the standard deviation of the rows in *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data tab page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Estimating or calculating actual standard deviation StDev assumes that the values in *column* are a sample of the values in the rows in the column in the database table. If you selected all the rows in the column in the DataWindow object's SELECT statement, use StDevP to compute the standard deviation of the population.

Not in validation rules or filter expressions You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

These examples all assume that the SELECT statement did not retrieve all the rows in the database table. StDev is intended to work with a subset of rows, which is a sample of the full set of data.

This expression returns an estimate for standard deviation of the values in the column named salary:

```
StDev(salary)
```

This expression returns an estimate for standard deviation of the values in the column named salary in group 1:

```
StDev(salary for group 1)
```

This expression returns an estimate for standard deviation of the values in column 4 on the page:

```
StDev(#4 for page)
```

This expression entered in the Value box on the Data tab page in the graph's property sheet returns an estimate for standard deviation of the values in the qty_used column in the graph:

```
StDev(qty_used for graph)
```

This expression for a computed field in a crosstab returns the estimate for standard deviation of the values in the qty_ordered column in the crosstab:

```
StDev(qty_ordered for crosstab)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the estimated standard deviation of the order amount for the distinct order numbers:

```
StDev(order_amt for all DISTINCT order_nbr)
```

See also

StDevP
Var

StDevP

Description

Calculates the standard deviation for the specified column. Standard deviation is a measurement of how widely values vary from average.

Syntax

StDevP (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the standard deviation of the values in the rows. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data to be included in the standard deviation. For most presentation styles, values for *range* are: • ALL – (Default) The standard deviation for all values in *column*. • GROUP *n* – The standard deviation for values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The standard deviation for the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range* to indicate the standard deviation for all values in *column* in the crosstab. For Graph objects specify GRAPH to indicate the standard deviation for values in *column* in the range specified for the Rows option.

Argument	Description
DISTINCT (optional)	Causes StDevP to consider only the distinct values in *column* when determining the standard deviation. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

Double. Returns the standard deviation for *column*.

Usage

If you specify *range*, StDevP returns the standard deviation for *column* within *range*. If you specify DISTINCT, StDevP returns an estimate of the standard deviation for the distinct values in *column*, or if you specify *expresn*, the estimate of the standard deviation of the rows in *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data tab page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Estimating or calculating actual standard deviation StDevP assumes that the values in *column* are the values in all the rows in the column in the database table. If you did not select all rows in the column in the SELECT statement, use StDev to compute an estimate of the standard deviation of a sample.

Not in validation rules or filter expressions You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

These examples all assume that the SELECT statement retrieved all rows in the database table. StDevP is intended to work with a full set of data, not a subset.

This expression returns the standard deviation of the values in the column named salary:

```
StDevP(salary)
```

This expression returns the standard deviation of the values in group 1 in the column named salary:

```
StDevP(salary for group 1)
```

This expression returns the standard deviation of the values in column 4 on the page:

```
StDevP(#4 for page)
```

This expression entered in the Value box on the Data tab page in the graph's property sheet returns the standard deviation of the values in the qty_ordered column in the graph:

```
StDevP(qty_ordered for graph)
```

This expression for a computed field in a crosstab returns the standard deviation of the values in the qty_ordered column in the crosstab:

```
StDevP(qty_ordered for crosstab)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the standard deviation of the order amount for the distinct order numbers:

```
StDevP(order_amt for all DISTINCT order_nbr)
```

See also

StDev
VarP

String

Description

Formats data as a string according to a specified display format mask. You can convert and format date, DateTime, numeric, and time data. You can also apply a display format to a string.

Syntax

String (*data* {, *format* })

Argument	Description
data	The data you want returned as a string with the specified formatting. *Data* can have a date, DateTime, numeric, time, or string datatype.
format (optional)	A string of the display masks you want to use to format the data. The masks consist of formatting information specific to the datatype of *data*. If *data* is type string, *format* is required. The format string can consist of more than one mask, depending on the datatype of *data*. Each mask is separated by a semicolon. See Usage for details on each datatype.

Return value

String. Returns *data* in the specified format if it succeeds and the empty string ("") if the datatype of *data* does not match the type of display mask specified or *format* is not a valid mask.

Usage

For date, DateTime, numeric, and time data, the system's default format is used for the returned string if you do not specify a format. For numeric data, the default format is the [General] format.

For string data, a display format mask is required. (Otherwise, the function would have nothing to do.)

The format can consist of one or more masks:

- Formats for date, DateTime, string, and time data can include one or two masks. The first mask is the format for the data; the second mask is the format for a null value.
- Formats for numeric data can have up to four masks. A format with a single mask handles both positive and negative data. If there are additional masks, the first mask is for positive values, and the additional masks are for negative, zero, and null values.

A format can include color specifications.

If the display format does not match the datatype, the attempt to apply the mask produces unpredictable results.

For information on specifying display formats, see the *User's Guide*.

Examples

This expression returns Jan 31, 2005:

```
String(2005-01-31, "mmm dd, yyyy")
```

This expression returns Jan 31, 2005 6 hrs and 8 min:

```
String(2005-01-31 06:08:00, 'mmm dd, yyyy, h "hrs
and" m "min"')
```

This expression:

```
String(nbr, "0000;(000);****;empty")
```

returns:

0123 if *nbr* is 123
(123) if *nbr* is -123
**** if *nbr* is 0
empty if nbr is null

This expression returns A-B-C:

```
String("ABC", "@-@-@")
```

This expression returns A*B:

```
String("ABC", "@*@")
```

This expression returns ABC:

```
String("ABC", "@@@")
```

This expression returns a space:

```
String("ABC", " ")
```

This expression returns 6 hrs and 8 min:

```
String(06:08:02,'h "hrs and" m "min"')
```

This expression returns 08:06:04 pm:

```
String(20:06:04, "hh:mm:ss am/pm")
```

This expression returns 8:06:04 am:

```
String(08:06:04, "h:mm:ss am/pm")
```

This expression returns 6:11:25.300000:

```
String(6:11:25.300000, "h:mm:ss.ffffff")
```

Sum

Description

Calculates the sum of the values in the specified column.

Syntax

Sum (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the sum of the data values. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data to be included in the sum. For most presentation styles, values for *range* are: • ALL – (Default) The sum of all values in *column*. • GROUP *n* – The sum of values in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The sum of the values in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The sum of all values in *column* in the crosstab. For Graph objects, specify the following: • GRAPH – (Graphs only) The sum of values in *column* in the range specified for the Rows option of the graph.
DISTINCT (optional)	Causes Sum to consider only the distinct values in *column* when determining the sum. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

The appropriate numeric datatype. Returns the sum of the data values in *column*.

Usage

If you specify *range*, Sum returns the sum of the values in *column* within *range*. If you specify DISTINCT, Sum returns the sum of the distinct values in *column*, or if you specify *expresn*, the sum of the values of *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Null values are ignored and are not included in the calculation.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

This expression returns the sum of the values in group 1 in the column named salary:

```
Sum(salary for group 1)
```

This expression returns the sum of the values in column 4 on the page:

```
Sum(#4 for page)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the sum of the order amount for the distinct order numbers:

```
Sum(order_amt for all DISTINCT order_nbr)
```

See also

“Example 1: counting null values in a column” on page 14
“Example 2: counting male and female employees” on page 16

Tan

Description: Calculates the tangent of an angle.

Syntax: **Tan** (*n*)

Argument	Description
n	The angle (in radians) for which you want the tangent

Return value: Double. Returns the tangent of *n* if it succeeds and -1 if an error occurs.

Examples: Both these expressions return 0:

```
Tan(0)
Tan(Pi(1))
```

This expression returns 1.55741:

```
Tan(1)
```

See also: Cos
Pi
Sin

Time

Description: Converts a string to a time datatype.

Syntax: **Time** (*string*)

Argument	Description
string	A string containing a valid time (such as 8 AM or 10:25) that you want returned as a time datatype. Only the hour is required; you do not have to include the minutes, seconds, or microseconds of the time or AM or PM. The default value for minutes and seconds is 00 and for microseconds is 000000. AM or PM is determined automatically.

Return value: Time. Returns the time in *string* as a time datatype. If *string* does not contain a valid time, Time returns 00:00:00.

Examples: This expression returns the time datatype for 45 seconds before midnight (23:59:15):

```
Time("23:59:15")
```

This expression for a computed field returns the value in the time_received column as a value of type time if time_received is not the empty string. Otherwise, it returns 00:00:00:

```
If(time_received = "" ,00:00:00,
Time(time_received))
```

This example is similar to the previous one, except that it returns 00:00:00 if time_received contains a null value:

```
If(IsNull(time_received), 00:00:00,
Time(time_received))
```

Today

Description — Obtains the system date and time.

Syntax — **Today** ( )

Return value — DateTime. Returns the current system date and time.

Usage — To display both the date and the time, a computed field must have a display format that includes the time.

Examples — This expression for a computed field displays the date and time when the display format for the field is "mm/dd/yy hh:mm":

```
Today()
```

See also — Now

Trim

Description — Removes leading and trailing spaces from a string.

Syntax — **Trim** (*string*)

Argument	Description
string	The string you want returned with leading and trailing spaces deleted

Return value — String. Returns a copy of *string* with all leading and trailing spaces deleted if it succeeds and the empty string ("") if an error occurs.

Usage — Trim is useful for removing spaces that a user might have typed before or after newly entered data.

Examples

This expression returns BABE RUTH:

```
Trim(" BABE RUTH ")
```

See also

LeftTrim
RightTrim

Truncate

Description

Truncates a number to the specified number of decimal places.

Syntax

Truncate (*x*, *n*)

Argument	Description
x	The number you want to truncate.
n	The number of decimal places to which you want to truncate *x*. Valid values are 0 through 28.

Return value

The datatype of *x*. If *n* is positive, returns *x* truncated to the specified number of decimal places. If *n* is negative, returns *x* truncated to (- *n* +1) places before the decimal point. Returns -1 if it fails.

Examples

This expression returns 9.2:

```
Truncate(9.22, 1)
```

This expression returns 9.2:

```
Truncate(9.28, 1)
```

This expression returns 9:

```
Truncate(9.9, 0)
```

This expression returns -9.2:

```
Truncate(-9.29, 1)
```

This expression returns 0:

```
Truncate(9.2, -1)
```

This expression returns 50:

```
Truncate(54, -1)
```

See also

Ceiling
Int
Round

Upper

Description

Converts all characters in a string to uppercase letters.

Syntax

Upper (*string*)

Argument	Description
string	The string you want to convert to uppercase letters

Return value

String. Returns *string* with lowercase letters changed to uppercase if it succeeds and the empty string ("") if an error occurs.

Examples

This expression returns BABE RUTH:

```
Upper("Babe Ruth")
```

See also

Lower

Var

Description

Calculates an estimate of the variance for the specified column. The variance is the square of the standard deviation.

Syntax

Var (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want an estimate for the variance of the values in the rows. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.

Argument	Description
FOR *range* (optional)	The data to be included in the estimate of the variance. For most presentation styles, values for *range* are: • ALL – (Default) The estimate of the variance for all rows in *column*. • GROUP *n* – The estimate of the variance for rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The estimate of the variance for the rows in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The estimate of the variance for all rows in *column* in the crosstab. For Graph objects, specify one of the following: • GRAPH – (Graphs only) The estimate of the variance for rows in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes Var to consider only the distinct values in *column* when determining the variance. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

Double or decimal if the arguments are decimal. Returns an estimate for the variance for *column*. If you specify *group*, Var returns an estimate for the variance for *column* within *group*.

Usage

If you specify *range*, Var returns an estimate for the variance for *column* within *range*. If you specify DISTINCT, Var returns the variance for the distinct values in *column*, or if you specify *expresn*, the estimate for the variance of the rows in *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range.

Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Estimating variance or calculating actual variance
Var assumes that the values in *column* are a sample of the values in rows in the column in the database table. If you select all rows in the column in the SELECT statement, use VarP to compute the variance of a population.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

These examples all assume that the SELECT statement did not retrieve all of the rows in the database table. Var is intended to work with a subset of rows, which is a sample of the full set of data.

This expression returns an estimate for the variance of the values in the column named salary:

```
Var(salary)
```

This expression returns an estimate for the variance of the values in the column named salary in group 1:

```
Var(salary for group 1)
```

This expression entered in the Value box on the Data property page in the graph's property sheet returns an estimate for the variance of the values in the quantity column in the graph:

```
Var(quantity for graph)
```

This expression for a computed field in a crosstab returns an estimate for the variance of the values in the quantity column in the crosstab:

```
Var(quantity for crosstab)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the estimate for the variance of the order amount for the distinct order numbers:

```
Var(order_amt for all DISTINCT order_nbr)
```

See also

StDev
VarP

VarP

Description

Calculates the variance for the specified column. The variance is the square of the standard deviation.

Syntax

VarP (*column* { FOR *range* { DISTINCT { *expres1* {, *expres2* {, ... } } } } })

Argument	Description
column	The column for which you want the variance of the values in the rows. *Column* can be the column name or the column number preceded by a pound sign (#). *Column* can also be an expression that includes a reference to the column. The datatype of *column* must be numeric.
FOR *range* (optional)	The data that will be included in the variance. For most presentation styles, values for *range* are: • ALL – (Default) The variance for all rows in *column*. • GROUP *n* – The variance for rows in *column* in the specified group. Specify the keyword GROUP followed by the group number: for example, GROUP 1. • PAGE – The variance for the rows in *column* on a page. For Crosstabs, specify CROSSTAB for *range*: • CROSSTAB – (Crosstabs only) The variance for all rows in *column* in the crosstab. For Graph objects, specify the following: • GRAPH – (Graphs only) The variance for rows in *column* in the range specified for the Rows option.
DISTINCT (optional)	Causes VarP to consider only the distinct values in *column* when determining the variance. For a value of *column*, the first row found with the value is used and other rows that have the same value are ignored.
expresn (optional)	One or more expressions that you want to evaluate to determine distinct rows. *Expresn* can be the name of a column, a function, or an expression.

Return value

Double or decimal if the arguments are decimal. Returns the variance for *column*. If you specify *group*, Var returns the variance for *column* within *range*.

Usage

If you specify *range*, VarP returns the variance for *column* within *range*. If you specify DISTINCT, VarP returns the variance for the distinct values in *column*, or if you specify *expresn*, the variance of the rows in *column* where the value of *expresn* is distinct.

For graphs, you do not select the range when you call the function. The range has already been determined by the Rows setting on the Data property page (the Range property), and the aggregation function uses that range. Settings for Rows include the following:

- For the Graph presentation style, Rows is always All.
- For Graph controls, Rows can be All, Page, or Group.

Estimating variance or calculating actual variance
VarP assumes that the values in *column* are the values in all rows in the column in the database table. If you did not select all the rows in the column in the SELECT statement, use Var to compute an estimate of the variance of a sample.

Not in validation rules or filter expressions
You cannot use this or other aggregate functions in validation rules or filter expressions.

Using an aggregate function cancels the effect of setting Retrieve Rows As Needed in the painter. To do the aggregation, a DataWindow object always retrieves all rows.

Examples

These examples all assume that the SELECT statement retrieved all rows in the database table. VarP is intended to work with a full set of data, not a subset.

This expression returns the variance of the values in the column named salary:

```
VarP(salary)
```

This expression returns the variance of the values in group 1 in the column named salary:

```
VarP(salary for group 1)
```

This expression returns the variance of the values in column 4 on the page:

```
VarP(#4 for page)
```

This expression entered in the Value box on the Data property page in the graph's property sheet returns the variance of the values in the quantity column in the graph:

```
VarP(quantity for graph)
```

This expression for a computed field in a crosstab returns the variance of the values in the quantity column in the crosstab:

```
VarP(quantity for crosstab)
```

Assuming a DataWindow object displays the order number, amount, and line items for each order, this computed field returns the variance of the order amount for the distinct order numbers:

```
VarP(order_amt for all DISTINCT order_nbr)
```

See also

StDevP
Var

WordCap

Description

Sets the first letter of each word in a string to a capital letter and all other letters to lowercase (for example, ROBERT E. LEE would be Robert E. Lee).

Syntax

WordCap (*string*)

Argument	Description
string	A string or expression that evaluates to a string that you want to display with initial capital letters (for example, Monday Morning)

Return value

String. Returns *string* with the first letter of each word set to uppercase and the remaining letters lowercase if it succeeds, and null if an error occurs.

Examples

This expression returns Boston, Massachusetts:

```
WordCap("boston, MASSACHUSETTS")
```

This expression concatenates the characters in the emp_fname and emp_lname columns and makes the first letter of each word uppercase:

```
WordCap(emp_fname + " " + emp_lname)
```

Year

Description

Gets the year of a date value.

Syntax

Year (*date*)

Argument	Description
date	The date value from which you want the year

Return value

Integer. Returns an integer whose value is a 4-digit year adapted from the year portion of *date* if it succeeds and 1900 if an error occurs.

If the year is two digits, then the century is set as follows. If the year is between 00 to 49, the first two digits are 20; if the year is between 50 and 99, the first two digits are 19.

Usage

Obtains the year portion of *date*. Years from 1000 to 3000 inclusive are handled.

If your data includes dates before 1950, such as birth dates, always specify a 4-digit year so that Year (and other functions, such as Sort) interpret the date as intended.

Regional settings
To make sure you get correct return values for the year, you must verify that yyyy is the Short Date Style for year in the Regional Settings of the user's Control Panel.

Examples

This expression returns 2005:

```
Year(2005-01-31)
```

See also

Day
Month

CHAPTER 3

DataWindow Object Properties

About this chapter

This chapter describes the properties that control the appearance and behavior of a DataWindow object.

Contents

Overview of DataWindow object properties

DataWindow object properties apply to the DataWindow object itself, not to the DataWindow control or DataStore that contains it. There are several ways you can affect the values of DataWindow object properties at runtime:

- Use the general-purpose Describe and Modify methods to get and set property values.
- Use the GetProperty and SetProperty methods.
- Use properties of classes derived from Sybase.DataWindow.GraphicObject.
- Use descendants of the ExpressionBasedProperty class. Each descendant has two properties: Expression and Value. The Expression property is a String. The Value property is of the datatype required in the expression.
- For many properties, enter expressions in the painter that set properties conditionally at runtime.
- Use the DataWindowSyntaxFromSql method to generate DataWindow source code that sets some DataWindow properties. You can use the generated code in the Create method to create new DataWindows.

Summary tables in the first part of this chapter

The tables in "Controls in a DataWindow and their properties" on page 145 list the properties for each control within a DataWindow object, with short descriptions. There are also tables for DataWindowSyntaxFromSql object keywords. After the first table of DataWindow properties, the tables are alphabetical by control and keyword name.

The tables include check mark columns that identify whether you can use that property with Modify (*M*) or DataWindowSyntaxFromSql (*S*). When (*exp*) is included in the description, you can specify a DataWindow expression as the value for that property. A DataWindow expression lets you specify conditions for determining the property value.

You can get the value of all properties in all tables
At runtime, you can use Describe or GetProperty to get the value of all properties listed in all tables.

Alphabetical reference list in the second part of this chapter

The second half of this chapter is an alphabetical list of properties with descriptions, syntax, and examples. When you find a property you want to use in the first part, look up the property in the alphabetical list to find the specific syntax you need to use. In the tables that describe the property values, (*exp*) again indicates that you can use a DataWindow expression for the value.

Controls in a DataWindow and their properties

The tables in this section list the properties that apply to DataWindow objects and DataWindowSyntaxFromSql (Group, Style, and Title) keywords.

Properties for the DataWindow object

An x in the M (Modify) column means you can change the property. An x in the S column means you can use the property with the DataWindowSyntaxFromSql method. When (*exp*) is included in the description, you can specify a DataWindow expression as the value for that property.

Property for the DataWindow	M	S	Description
Attributes			All general properties.
Bands			List of bands.
Bandname.property	x		Color, height, and so on for a band, where *bandname* is Detail, Footer, Header, Summary, Trailer, or TreeView.Level.

Property for the DataWindow	M	S	Description
Bandname.Text	x		Rich text content where *bandname* is Detail, Footer, or Header.
Color	x	x	Background color.
Column.Count			Number of columns.
Crosstab.property	x		Settings for a crosstab DataWindow.
CSSGen.property	x		Settings that specify the physical path to which a generated CSS style sheet is published and the URL where the style sheet is located.
Data			Description of data.
Data.HTML			Description of the data and format of the DataWindow in HTML format.
Data.HTMLTable			Description of the data in the DataWindow in HTML table format.
Data.XHTML			A string containing the row data content of the DataWindow object in XHTML format.
Data.XML			A string containing the row data content of the DataWindow object in XML format.
Data.XMLDTD			A string containing the full document type definition (DTD) of the XML output for a DataWindow object.
Data.XMLSchema			A string containing the full schema of the XML output of a DataWindow object.
Data.XMLWeb			A string containing browser-specific JavaScript that performs the XSLT transformation on the browser after the XML Web DataWindow generator generates all necessary components.
Data.XSLFO			A string containing XSL Formatting Objects (XSL-FO) that represents the data and presentation of the DataWindow object.
Detail.property	x		Color, height, and so on for the detail band.
EditMask.property	x		Settings for EditMask edit style.
Export.PDF.Distill.CustomPostScript	x		Setting that enables you to specify the PostScript printer driver settings used when data is exported to PDF using the Distill! method.
Export.PDF.Method			Setting that determines whether data is exported to PDF from a DataWindow object by printing to a PostScript file and distilling to PDF, or by saving in XSL Formatting Objects (XSL-FO) format and processing to PDF.
Export.PDF.XSLFOP.Print	x		Setting that enables you to send a DataWindow object directly to a printer using platform-independent Java printing when using the XSL-FO method to export to PDF. This is an option of the Apache FOP processor.
Export.XHTML.TemplateCount			The number of XHTML export templates associated with a DataWindow object.
Export.XHTML.Template[ ].Name			The name of an XHTML export template associated with a DataWindow object.

Property for the DataWindow	M	S	Description
Bandname.Text	x		Rich text content where *bandname* is Detail, Footer, or Header.
Color	x	x	Background color.
Column.Count			Number of columns.
Crosstab.property	x		Settings for a crosstab DataWindow.
CSSGen.property	x		Settings that specify the physical path to which a generated CSS style sheet is published and the URL where the style sheet is located.
Data			Description of data.
Data.HTML			Description of the data and format of the DataWindow in HTML format.
Data.HTMLTable			Description of the data in the DataWindow in HTML table format.
Data.XHTML			A string containing the row data content of the DataWindow object in XHTML format.
Data.XML			A string containing the row data content of the DataWindow object in XML format.
Data.XMLDTD			A string containing the full document type definition (DTD) of the XML output for a DataWindow object.
Data.XMLSchema			A string containing the full schema of the XML output of a DataWindow object.
Data.XMLWeb			A string containing browser-specific JavaScript that performs the XSLT transformation on the browser after the XML Web DataWindow generator generates all necessary components.
Data.XSLFO			A string containing XSL Formatting Objects (XSL-FO) that represents the data and presentation of the DataWindow object.
Detail.property	x		Color, height, and so on for the detail band.
EditMask.property	x		Settings for EditMask edit style.
Export.PDF.Distill.CustomPostScript	x		Setting that enables you to specify the PostScript printer driver settings used when data is exported to PDF using the Distill! method.
Export.PDF.Method			Setting that determines whether data is exported to PDF from a DataWindow object by printing to a PostScript file and distilling to PDF, or by saving in XSL Formatting Objects (XSL-FO) format and processing to PDF.
Export.PDF.XSLFOP.Print	x		Setting that enables you to send a DataWindow object directly to a printer using platform-independent Java printing when using the XSL-FO method to export to PDF. This is an option of the Apache FOP processor.
Export.XHTML.TemplateCount			The number of XHTML export templates associated with a DataWindow object.
Export.XHTML.Template[ ].Name			The name of an XHTML export template associated with a DataWindow object.

Property for the DataWindow	M	S	Description
Export.XHTML.UseTemplate	x		Setting that optionally controls the logical structure of the XHTML generated by a DataWindow object from a DataWindow data expression using dot notation.
Export.XML.HeadGroups	x		Setting that causes elements, attributes, and all other items above the Detail Start element in an XML export template for a group DataWindow to be iterated for each group in the exported XML.
Export.XML.IncludeWhitespace	x		Setting that determines whether the XML document is formatted by inserting whitespace characters (carriage returns, linefeeds, tabs, and spacebar spaces).
Export.XML.MetaDataType	x		Setting that controls the type of metadata generated with the XML exported from a DataWindow object using the SaveAs method or a .Data.XML expression.
Export.XML.SaveMetaData	x		Setting that controls the storage format for the metadata generated with the XML exported from a DataWindow object using the SaveAs method or a .Data.XML expression.
Export.XML.TemplateCount			The number of XML export templates associated with a DataWindow object.
Export.XML.Template[ ].Name			The name of an XML export template associated with a DataWindow object.
Export.XML.UseTemplate	x		Setting that optionally controls the logical structure of the XML exported from a DataWindow object using the SaveAs method or the .Data.XML property.
FirstRowOnPage			The row number of the first displayed row.
Font.Bias	x		Treat fonts as display or printer.
Footer.property	x		Color, height, and so on for the footer band (see *Bandname.property* in this table).
Grid.ColumnMove	x		Whether the user can drag to reposition columns.
Grid.Lines	x		Options for lines in grid DataWindow and crosstab.
Header.#.property	x		Color, height, and so on for a group's header band.
Header.property	x		Color, height, and so on for the header band.
Help.property	x		Help settings for DataWindow actions.
HideGrayLine	x		Whether a gray line displays at page boundaries.
HorizontalScrollMaximum			Width of scroll box in the horizontal scroll bar.
HorizontalScrollMaximum2			Width of second scroll box when scroll bar is split.
HorizontalScrollPosition	x		Position of the scroll box in the scroll bar.
HorizontalScrollPosition2	x		Position of scroll box in second split scroll bar.
HorizontalScrollSplit	x		The position of the split in the scroll bar.
HTMLDW	x		(*exp*) Whether HTML for the DataWindow is interactive and coordinated with a server component for retrievals and updates.
HTMLGen.property	x		(*exp*) Settings for HTML generation.
HTMLTable.property	x		Settings for the display of DataWindow data when displayed in HTML table format.

Property for the DataWindow	M	S	Description
Import.XML.Trace	x		Setting that determines whether import trace information is written to a log file.
Import.XML.TraceFile	x		Specifies the name and location of an import trace file.
Import.XML.UseTemplate	x		Setting that optionally controls the logical structure of the XML imported from an XML file to a DataWindow object using the ImportFile method.
JSGen.property	x		Settings that specify the physical path to which generated JavaScript is published and the URL indicating the location of the generated JavaScript.
Label.property	x	x	Settings for the Label presentation style.
LastRowOnPage			The last visible row on the page.
Message.Title	x	x	The title of the dialog box that displays errors.
Nested			Whether the DataWindow has nested reports.
NoUserPrompt	x		Determines whether an error message is displayed to the user.
Objects			The controls in the DataWindow.
OLE.Client.property	x		Settings for the DataWindow as OLE client.
Pointer	x		(*exp*) The pointer when over the DataWindow.
Print.Preview.property	x		Various settings for print preview.
Print.property	x	x	Various settings for printing.
Printer	x		The currently selected printer.
Processing			Processing required by the presentation style.
QueryMode	x		Whether the DataWindow is in query mode.
QuerySort	x		Whether to sort the result set from the query.
ReadOnly	x		Whether the DataWindow is read-only.
Retrieve.AsNeeded	x		Whether to retrieve data only as needed.
RichText.property	x		Settings for a RichText DataWindow.
Row.Resize	x		Whether user can change the height of rows.
Rows_Per_Detail		x	Number of rows in each column of N-Up style.
Selected	x		List of selected controls.
Selected.Data			List of selected data.
Selected.Mouse	x		Whether user can use the mouse to select.
ShowBackColorOnXP	x		Whether the background color that you select for a button displays on Windows XP.
ShowDefinition	x		(*exp*) Display column names instead of data.
Sparse	x		(*exp*) The repeating columns to be suppressed.
Storage			The amount of storage used by DataWindow.
StoragePageSize			The default page size for DataWindow storage.
Summary.property	x		Color, height, and so on for the summary band.
Syntax			The syntax of the DataWindow.
Syntax.Data			The data of the DataWindow in parse format.

Property for the DataWindow	M	S	Description
Syntax.Modified	x		Whether the syntax has been modified.
Table.property	x		Various settings for the database.
Table.sqlaction.property	x		Stored procedures for update activity.
Timer_Interval	x	x	The milliseconds between timer events.
Trailer.#.property	x		Color, height, and so on for a group's trailer band.
Tree.property	x		Settings for a TreeView DataWindow.
Tree.Leaf.TreeNodeIconName	x		The file name of the tree node icon in the detail band of a TreeView DataWindow.
Tree.Level.#.property	x		The file name of the icon for a TreeView node in a TreeView level band when the icon is in either the expanded or collapsed state.
Units		x	The unit of measure for the DataWindow.
VerticalScrollMaximum			The height of the scroll box in the scroll bar.
VerticalScrollPosition	x		The position of the scroll box in the scroll bar.
XHTMLGen.Browser	x		A string that identifies the browser in which XHTML generated within an XSLT style sheet is displayed.
XMLGen.property	x		Settings that specify the physical path to which XML is published and the URL referenced by the JavaScript that transforms the XML to XHTML.
XSLTGen.property	x		Settings that specify the physical path to which the generated XSLT style sheet is published and the URL referenced by the JavaScript that transforms the XML to XHTML.
Zoom	x		The scaling percentage of the DataWindow.

Property for the DataWindow	M	S	Description
Attributes			All general properties.
Bands			List of bands.
Bandname.property	x		Color, height, and so on for a band, where *bandname* is Detail, Footer, Header, Summary, or Trailer.
Color	x	x	Background color.
Column.Count			Number of columns.
Crosstab.property	x		Settings for a crosstab DataWindow.
CSSGen.property	x		Settings that specify the physical path to which a generated CSS style sheet is published and the URL where the style sheet is located.
Data			Description of data.
Data.HTML			Description of the data and format of the DataWindow in HTML format.
Data.HTMLTable			Description of the data in the DataWindow in HTML table format.

Property for the DataWindow	M	S	Description
Data.XHTML			A string containing the row data content of the DataWindow object in XHTML format.
Data.XML			A string containing the row data content of the DataWindow object in XML format.
Data.XMLDTD			A string containing the full document type definition (DTD) of the XML output for a DataWindow object.
Data.XMLSchema			A string containing the full schema of the XML output of a DataWindow object.
Data.XMLWeb			A string containing browser-specific JavaScript that performs the XSLT transformation on the browser after the XML Web DataWindow generator generates all necessary components.
Data.XSLFO			A string containing XSL Formatting Objects (XSL-FO) that represents the data and presentation of the DataWindow object.
Detail.property	x		Color, height, and so on for the detail band.
EditMask.property	x		Settings for EditMask edit style.
Export.PDF.Distill.CustomPostScript	x		Setting that enables you to specify the PostScript printer driver settings used when data is exported to PDF using the Distill! method.
Export.PDF.Method			Setting that determines whether data is exported to PDF from a DataWindow object by printing to a PostScript file and distilling to PDF, or by saving in XSL Formatting Objects (XSL-FO) format and processing to PDF.
Export.PDF.XSLFOP.Print	x		Setting that enables you to send a DataWindow object directly to a printer using platform-independent Java printing when using the XSL-FO method to export to PDF. This is an option of the Apache FOP processor.
Export.XHTML.TemplateCount			The number of XHTML export templates associated with a DataWindow object.
Export.XHTML.Template[ ].Name			The name of an XHTML export template associated with a DataWindow object.
Export.XHTML.UseTemplate	x		Setting that optionally controls the logical structure of the XHTML generated by a DataWindow object from a DataWindow data expression.
Export.XML.HeadGroups	x		Setting that causes elements, attributes, and all other items above the Detail Start element in an XML export template for a group DataWindow to be iterated for each group in the exported XML.
Export.XML.IncludeWhitespace	x		Setting that determines whether the XML document is formatted by inserting white space characters (carriage returns, linefeeds, tabs, and spacebar spaces).

Property for the DataWindow	M	S	Description
Export.XML.MetaDataType	x		Setting that controls the type of metadata generated with the XML exported from a DataWindow object using the SaveAs method or a .Data.XML expression.
Export.XML.SaveMetaData	x		Setting that controls the storage format for the metadata generated with the XML exported from a DataWindow object using the SaveAs method or a .Data.XML expression.
Export.XML.TemplateCount			The number of XML export templates associated with a DataWindow object.
Export.XML.Template[ ].Name			The name of an XML export template associated with a DataWindow object.
Export.XML.UseTemplate	x		Setting that optionally controls the logical structure of the XML exported from a DataWindow object using the SaveAs method or the .Data.XML property.
FirstRowOnPage			The row number of the first displayed row.
Font.Bias	x		Treat fonts as display or printer.
Footer.property	x		Color, height, and so on for the footer band (see *Bandname.property* in this table).
GraphType	x		(*exp*) The type of graph (pie, bar, and so on) for a Graph DataWindow. For additional Graph properties, see "Properties for Graph controls in DataWindow objects" on page 157.
Grid.ColumnMove	x		Whether the user can drag to reposition columns.
Grid.Lines	x		Options for lines in grid DataWindow and crosstab.
Header.#.property	x		Color, height, and so on for a group's header band.
Header.property	x		Color, height, and so on for the header band.
Help.property	x		Help settings for DataWindow actions.
HideGrayLine	x		Whether a gray line displays at page boundaries.
HorizontalScrollMaximum			Width of scroll box in the horizontal scroll bar.
HorizontalScrollMaximum2			Width of second scroll box when scroll bar is split.
HorizontalScrollPosition	x		Position of the scroll box in the scroll bar.
HorizontalScrollPosition2	x		Position of scroll box in second split scroll bar.
HorizontalScrollSplit	x		The position of the split in the scroll bar.
HTMLDW	x		(*exp*) Whether HTML for the DataWindow is interactive and coordinated with a server component for retrievals and updates.
HTMLGen.property	x		(*exp*) Settings for HTML generation.
HTMLTable.property	x		Settings for the display of DataWindow data when displayed in HTML table format.
Import.XML.Trace	x		Setting that determines whether import trace information is written to a log file.
Import.XML.TraceFile	x		Specifies the name and location of an import trace file.

Property for the DataWindow	M	S	Description
Import.XML.UseTemplate	x		Setting that optionally controls the logical structure of the XML imported from an XML file to a DataWindow object using the ImportFile method.
JSGen.property	x		Settings that specify the physical path to which generated JavaScript is published and the URL indicating the location of the generated JavaScript.
Label.property	x	x	Settings for the Label presentation style.
LastRowOnPage			The last visible row on the page.
Message.Title	x	x	The title of the dialog box that displays errors.
Nested			Whether the DataWindow has nested reports.
NoUserPrompt	x		Determines whether an error message is displayed to the user.
Objects			The controls in the DataWindow.
OLE.Client.property	x		Settings for the DataWindow as OLE client.
Pointer	x		(*exp*) The pointer when over the DataWindow.
Print.Preview.property	x		Various settings for print preview.
Print.property	x	x	Various settings for printing.
Printer	x		The currently selected printer.
Processing			Processing required by the presentation style.
QueryMode	x		Whether the DataWindow is in query mode.
QuerySort	x		Whether to sort the result set from the query.
ReadOnly	x		Whether the DataWindow is read-only.
Retrieve.AsNeeded	x		Whether to retrieve data only as needed.
Row.Resize	x		Whether user can change the height of rows.
Rows_Per_Detail		x	Number of rows in each column of N-Up style.
Selected	x		List of selected controls.
Selected.Data			List of selected data.
Selected.Mouse	x		Whether user can use the mouse to select.
ShowDefinition	x		(*exp*) Display column names instead of data.
Sparse	x		(*exp*) The repeating columns to be suppressed.
Storage			The amount of storage used by DataWindow.
StoragePageSize			The default page size for DataWindow storage.
Summary.property	x		Color, height, and so on for the summary band.
Syntax			The syntax of the DataWindow.
Syntax.Data			The data of the DataWindow in parse format.
Syntax.Modified	x		Whether the syntax has been modified.
Table.property	x		Various settings for the database.
Table.sqlaction.property	x		Stored procedures for update activity.
Timer_Interval	x	x	The milliseconds between timer events.
Trailer.#.property	x		Color, height, and so on for a group's trailer band.

Property for the DataWindow	M	S	Description
Units		x	The unit of measure for the DataWindow.
VerticalScrollMaximum			The height of the scroll box in the scroll bar.
VerticalScrollPosition	x		The position of the scroll box in the scroll bar.
XHTMLGen.Browser	x		A string that identifies the browser in which XHTML generated within an XSLT style sheet is displayed.
XMLGen.property	x		Settings that specify the physical path to which XML is published and the URL referenced by the JavaScript that transforms the XML to XHTML.
XSLTGen.property	x		Settings that specify the physical path to which the generated XSLT style sheet is published and the URL referenced by the JavaScript that transforms the XML to XHTML.
Zoom	x		The scaling percentage of the DataWindow.

Properties for Button controls in DataWindow objects

Property for a Button	M	Description
AccessibleDescription	x	A description of the control for use by assistive technology tools.
AccessibleName	x	A descriptive label for the control.
AccessibleRole		A description of the kind of user-interface element that the control is.
Background.property	x	Background settings for the button.
Color	x	(*exp*) The text color.
DefaultPicture	x	Whether or not the action's default picture is to be used on the button (user-defined action has no default picture).
Enabled	x	Determines whether a button control on a DataWindow is enabled.
Filename	x	(*exp*) Name of the file containing the picture to be used on the button (if not specified, just the text is used).
Font.property	x	(*exp*) Font settings for the text.
HTextAlign	x	(*exp*) How the text in the button is horizontally aligned. Values are: 0 (center), 1 (left), 2 (right).
Height	x	(*exp*) The height of the button control.
HideSnaked	x	Whether the button control appears once per page when printing newspaper columns.
Moveable	x	Whether the user can move the button control.
Name		The name of the button control.
Pointer	x	(*exp*) The pointer image when it is over the button control.
Resizeable	x	Whether the user can resize the button control.
SlideLeft	x	(*exp*) Whether the button control moves left to fill in empty space.
SlideUp	x	(*exp*) How the button control moves up to fill in empty space.

Property for a Button	M	Description
SuppressEventProcessing	x	Whether or not ButtonClicked and ButtonClicking events are fired for this particular button.
Tag	x	(*exp*) The tag text for the button control.
Text	x	(*exp*) The displayed text.
Type		The control's type, which is button.
VTextAlign	x	(*exp*) How the text in the button is vertically aligned. Values are: 0 (center), 1 (top), 2 (bottom), 3 (multiline).
Visible	x	(*exp*) Whether the button control is visible.
Width	x	(*exp*) The width of the button control.
X	x	(*exp*) The x coordinate of the button control.
Y	x	(*exp*) The y coordinate of the button control.

Properties for Column controls in DataWindow objects

Property for a Column	M	S	Description
AccessibleDescription	x		A description of the control for use by assistive technology tools.
AccessibleName	x		A descriptive label for the control.
AccessibleRole			A description of the kind of user-interface element that the control is.
Accelerator	x		(*exp*) The accelerator key for the column.
Alignment	x		(*exp*) The alignment of the column's text.
Attributes			A list of the properties of the column.
Background.property	x	x	(*exp*) Background settings for the column.
Band			The band containing the column.
BitmapName			Whether the column's content names a picture that will be displayed instead of the text.
Border	x	x	(*exp*) The type of border around the column.
CheckBox.property	x		Settings for CheckBox edit style.
Color	x	x	(*exp*) The text color.
ColType			The column's datatype.
Criteria.property	x		Settings for column in Prompt for Criteria dialog box.
dbAlias	x		An alias for the name of the database column.
dbName	x		The name of the database column.
dddw.property	x		Settings for DropDownDataWindow edit style.
ddlb.property	x		Settings for DropDownListBox edit style.
Edit.property	x	x	Settings for Edit edit style.
EditMask.property	x		Settings for EditMask edit style.
Font.property	x	x	(*exp*) Font settings for the column text.

Property for a Column	M	S	Description
Format	x		(*exp*) The column's display format.
Height	x		(*exp*) The height of the column.
Height.AutoSize	x		Whether column height is adjusted to fit the data.
HideSnaked	x		Whether the control appears once per page when printing newspaper columns.
HTML.property	x		(*exp*) Settings for creating hyperlinks for column data.
Identity	x		Whether the DBMS sets the column's value.
ID			The number of the column.
Ink.property	x		Settings for Ink attributes of the InkEdit edit style.
InkEdit.property	x		Settings for InkEdit edit style.
Initial	x		The initial value in the column for a new row.
Key	x		Whether column is part of the table's primary key.
Moveable	x		Whether the user can move the column.
Name			The name of the column.
Pointer	x		(*exp*) The pointer's image when it is over the column.
Protect	x		(*exp*) Whether the column is protected from changes.
RadioButtons.property	x		Settings for RadioButton edit style.
Resizeable	x		Whether the user can resize the column.
SlideLeft	x		(*exp*) Whether the column moves left to fill in space.
SlideUp	x		(*exp*) How the column moves up to fill in space.
TabSequence	x		The position of the column in the tab order.
Tag	x		(*exp*) The tag text for the column.
Type			The control's type, which is Column.
Update	x		Whether the column is updatable.
Validation	x		(*exp*) The validation expression for the column.
ValidationMsg	x		(*exp*) The message displayed when validation fails.
Values (for columns)	x		The values in the column's code table.
Visible	x		(*exp*) Whether the column control is visible.
Width	x		(*exp*) The width of the column.
X	x		(*exp*) The x coordinate of the column.
Y	x		(*exp*) The y coordinate of the column.

Properties for Computed Field controls in DataWindow objects

Property for a computed field	M	Description
AccessibleDescription	x	A description of the control for use by assistive technology tools.
AccessibleName	x	A descriptive label for the control.

Property for a computed field	M	Description
AccessibleRole		A description of the kind of user-interface element that the control is.
Alignment	x	(*exp*) The alignment of the computed field's text.
Attributes		A list of the properties of the computed field.
Background.property	x	(*exp*) Background settings for the computed field.
Band		The band containing the computed field.
Border	x	(*exp*) The type of border around the computed field.
Color	x	(*exp*) The text color.
ColType		The column's datatype.
Expression	x	The expression for the computed field.
Font.property	x	(*exp*) Font settings for the computed field.
Format	x	(*exp*) The computed field's display format.
Height	x	(*exp*) The height of the computed field.
Height.AutoSize	x	Whether the computed field's height is adjusted to fit the data.
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
HTML.property	x	(*exp*) Settings for creating hyperlinks for the computed field.
Moveable	x	Whether the user can move the computed field.
Name		The name of the computed field.
Pointer	x	(*exp*) The pointer image when it is over the computed field.
Resizeable	x	Whether the user can resize the computed field.
SlideLeft	x	(*exp*) Whether the computed field moves left to fill in space.
SlideUp	x	(*exp*) How the computed field moves up to fill in empty space.
Tag	x	(*exp*) The tag text for the computed field.
Type		The control's type, which is Compute.
Visible	x	(*exp*) Whether the computed field control is visible.
Width	x	(*exp*) The width of the computed field.
X	x	(*exp*) The x coordinate of the computed field.
Y	x	(*exp*) The y coordinate of the computed field.

Properties for Graph controls in DataWindow objects

Property for a Graph	M	Description
AccessibleDescription	x	A description of the control for use by assistive technology tools.
AccessibleName	x	A descriptive label for the control.
AccessibleRole		A description of the kind of user-interface element that the control is.
Attributes		A list of the properties of the graph.

Property for a Graph	M	Description
Axis	x	(*exp*) List of items (categories, series, or values) for the axis.
Axis.property	x	(*exp*) Properties for a graph axis.
Axis.DispAttr	x	(*exp*) Display properties for an axis (see DispAttr.*fontproperty* in this table).
BackColor	x	(*exp*) The background color of the graph.
Band		The band containing the graph.
Border	x	(*exp*) The type of border around the graph.
Category	x	(*exp*) List of categories for the axis (see *Axis* in this table).
Category.property	x	(*exp*) Properties for the Category axis (see *Axis.property* in this table).
Category.DispAttr	x	(*exp*) Display properties for the Category axis (see DispAttr.*fontproperty* in this table).
Color	x	(*exp*) The text color.
Depth	x	(*exp*) The depth of a 3D graph.
DispAttr.fontproperty	x	Font settings for various components of the graph.
Elevation	x	(*exp*) The elevation of a 3D graph.
GraphType	x	(*exp*) The type of graph (pie, bar, and so on).
Height	x	(*exp*) The height of the graph.
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
Legend	x	(*exp*) The location of the legend.
Legend.DispAttr.fontproperty	x	(*exp*) Display properties for the legend.
Moveable	x	Whether the user can move the graph.
Name		The name of the graph control.
OverlapPercent	x	(*exp*) The overlap between data markers in different series.
Perspective	x	(*exp*) The distance of the graph from the front of the window.
Pie.DispAttr.fontproperty	x	(*exp*) Display properties for the pie slice labels.
PlotNullData	x	Whether a continuous line is drawn in a line graph when there is no data.
Pointer	x	(*exp*) The pointer image when it is over the graph.
Range		The rows in the DataWindow that are included in the graph.
Resizeable	x	Whether the user can resize the graph.
Rotation	x	(*exp*) The left-to-right rotation of a 3D graph.
Series	x	(*exp*) List of series for the axis (see *Axis* in the table).
Series.property	x	(*exp*) Properties for the Series axis (see *Axis.property* in this table).
Series.DispAttr	x	(*exp*) Display properties for the Series axis (see DispAttr.*fontproperty* in this table).
ShadeColor	x	(*exp*) The color of the back edge for 3D data markers.
SizeToDisplay	x	(*exp*) Whether to size the graph to the display area.
SlideLeft	x	(*exp*) Whether the graph moves left to fill in empty space.

Property for a Graph	M	Description
SlideUp	x	(*exp*) How the graph moves up to fill in empty space.
Spacing	x	(*exp*) The gap between categories.
Tag	x	(*exp*) The tag text for the graph.
Title	x	(*exp*) The graph's title.
Title.DispAttr.fontproperty	x	(*exp*) Display properties for the title.
Type		The control's type, which is graph.
Values	x	(*exp*) List of values for the axis (see *Axis* in the table).
Values.property	x	(*exp*) Properties for the Values axis (see *Axis.property* in the table).
Values.DispAttr	x	(*exp*) Display properties for the Values axis (see DispAttr.*fontproperty* in the table).
Visible	x	(*exp*) Whether the graph control is visible.
Width	x	(*exp*) The width of the graph.
X	x	(*exp*) The x coordinate of the graph.
Y	x	(*exp*) The y coordinate of the graph.

Properties for GroupBox controls in DataWindow objects

Property for a GroupBox	M	Description
AccessibleDescription	x	A description of the control for use by assistive technology tools.
AccessibleName	x	A descriptive label for the control.
AccessibleRole		A description of the kind of user-interface element that the control is.
Attributes		A list of the properties of the GroupBox control.
Background.property	x	(*exp*) Background settings for the GroupBox control.
Band		The band containing the GroupBox control.
Border	x	(exp) Border style: 2 (box), 5 (3D lowered), 6 (3D raised).
Color	x	(*exp*) The text color.
Font.property	x	(*exp*) Font settings for the text.
Height	x	(*exp*) The height of the GroupBox control.
HideSnaked	x	Whether the GroupBox control appears once per page when printing newspaper columns.
Moveable	x	Whether the user can move the GroupBox control.
Name		The name of the GroupBox control.
Pointer	x	(*exp*) The pointer image when it is over the GroupBox control.
Resizeable	x	Whether the user can resize the GroupBox control.
SlideLeft	x	(*exp*) Whether the GroupBox control moves left to fill in empty space.
SlideUp	x	(*exp*) How the GroupBox control moves up to fill in empty space.
Tag	x	(*exp*) The tag text for the GroupBox control.

Property for a GroupBox	M	Description
Text	x	(*exp*) The displayed text.
Type		The control's type, which is GroupBox.
Visible	x	(*exp*) Whether the GroupBox control is visible.
Width	x	(*exp*) The width of the GroupBox control.
X	x	(*exp*) The x coordinate of the GroupBox control.
Y	x	(*exp*) The y coordinate of the GroupBox control.

Properties for the Group keyword

You use these properties when generating DataWindow source code with the DataWindowSyntaxFromSql method.

Property	Description
NewPage (Group keywords)	Whether a change in a group column's value causes a page break.
ResetPageCount	Whether a new value in a group column restarts page numbering.

Properties for InkPicture controls in DataWindow objects

Property for an InkPicture	M	Description
BackImage		The column containing the background image for the InkPicture.
Band		The band containing the InkPicture.
Border	x	(*exp*) The type of border around the InkPicture.
Enabled	x	(*exp*) Whether the control is enabled.
Height	x	(*exp*) The height of the InkPicture.
Ink.property	x	(*exp*) Attributes of the ink in the InkPicture.
InkPic.property	x	(*exp*) Properties that specify the behavior of the InkPicture.
KeyClause	x	(*exp*) The key clause used when retrieving the blob.
Moveable	x	Whether the user can move the InkPicture.
Name		The name of the InkPicture control.
Pointer	x	(*exp*) The pointer image when it is over the InkPicture.
Resizeable	x	Whether the user can resize the InkPicture.
SlideLeft	x	(*exp*) Whether the InkPicture moves left to fill in empty space.
Table (for InkPicture and TableBlobs)	x	(*exp*) The table that contains large binary columns used in the control.
Tag	x	(*exp*) The tag text for the InkPicture.
Visible	x	(*exp*) Whether the InkPicture control is visible.
Width	x	(*exp*) The width of the InkPicture.

Property for an InkPicture	M	Description
X	x	(*exp*) The x coordinate of the InkPicture.
Y	x	(*exp*) The y coordinate of the InkPicture.

Properties for Line controls in DataWindow objects

Property for a Line	M	Description
Attributes		A list of the properties of the line.
Background.property	x	(*exp*) Background settings for the line.
Band		The band containing the line.
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
Moveable	x	Whether the user can move the line.
Name		The name of the line control.
Pen.property	x	(*exp*) Appearance settings of the line.
Pointer	x	(*exp*) The pointer image when it is over the line.
Resizeable	x	Whether the user can resize the line.
SlideLeft	x	(*exp*) Whether the line moves left to fill empty space.
SlideUp	x	(*exp*) How the line moves up to fill empty space.
Tag	x	(*exp*) The tag text for the line.
Type		The control's type, which is Line.
Visible	x	(*exp*) Whether the Line control is visible.
X1, X2	x	(*exp*) The x coordinate of each end of the line.
Y1, Y2	x	(*exp*) The y coordinate of each end of the line.

Properties for OLE Object controls in DataWindow objects

Property for OLE Object control	M	Description
Activation	x	The way the OLE Object control is activated.
Attributes		A list of the properties of the OLE Object control.
Band		The band containing the OLE Object control.
BinaryIndex		An internal pointer.
Border	x	(*exp*) The type of border around the OLE Object control.
ClientName	x	The name of the OLE client in the server window.
ContentsAllowed	x	Whether the control can be embedded, linked, or both.
DisplayType	x	Whether the control displays an icon or contents.
GroupBy	x	(*exp*) The grouping columns for the transferred data.
Height	x	(*exp*) The height of the OLE Object control.

Property for OLE Object control	M	Description
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
LinkUpdateOptions	x	How a linked control is updated.
Moveable	x	Whether the user can move the OLE Object control.
Name		The name of the OLE Object control.
Pointer	x	(*exp*) The pointer image when it is over the control.
Range		Method for choosing the rows transferred to the OLE control.
Resizeable	x	Whether the user can resize the OLE Object control.
SizeToDisplay	x	(*exp*) Whether the OLE Object control is automatically sized to the display area.
SlideLeft	x	(*exp*) Whether the control moves left to fill in space.
SlideUp	x	(*exp*) How the control moves up to fill in space.
Tag	x	(*exp*) The tag text for the control.
Target	x	(*exp*) The columns or expressions whose data you want to transfer to the OLE Object control.
Type		The control's type, which is OLE.
Visible	x	(*exp*) Whether the control is visible.
Width	x	(*exp*) The width of the control.
X	x	(*exp*) The x coordinate of the control.
Y	x	(*exp*) The y coordinate of the control.

Properties for Oval, Rectangle, and RoundRectangle controls in DataWindow objects

Property	M	Description
Attributes		A list of the properties of the control.
Background.property	x	(*exp*) Background settings for the control.
Band		The band containing the control.
Brush.property	x	(*exp*) Settings for fill pattern and color.
Height	x	(*exp*) The height of the control.
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
Moveable	x	Whether the user can move the control.
Name		The name of the control.
Pen.property	x	(*exp*) Appearance settings of the control.
Pointer	x	(*exp*) The pointer image when it is over the control.
Resizeable	x	Whether the user can resize the control.
SlideLeft	x	(*exp*) Whether the control moves left to fill empty space.
SlideUp	x	(*exp*) How the control moves up to fill empty space.

Property	M	Description
Tag	x	(*exp*) The tag text for the control.
Type		The control's type, which is ellipse, rectangle, or roundrectangle.
Visible	x	(*exp*) Whether the control is visible.
X	x	(*exp*) The x coordinate of the control.
Y	x	(*exp*) The y coordinate of the control.

Additional properties for RoundRectangle controls in DataWindow objects

Properties for Oval, Rectangle, and RoundRectangle controls in DataWindow objects also apply to RoundRectangle controls.

Property	M	Description
EllipseHeight	x	(*exp*) The radius of the vertical part of the rounded corner.
EllipseWidth	x	(*exp*) The radius of the horizontal part of the rounded corner.

Properties for Picture controls in DataWindow objects

Property for a Picture	M	Description
AccessibleDescription	x	A description of the control for use by assistive technology tools.
AccessibleName	x	A descriptive label for the control.
AccessibleRole		A description of the kind of user-interface element that the control is.
Attributes		A list of the properties of the picture.
Band		The band containing the picture.
Border	x	(*exp*) The type of border around the picture.
Filename	x	(*exp*) The file containing the picture.
Height	x	(*exp*) The height of the picture.
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
HTML.property	x	(*exp*) Settings for creating a hyperlink for the picture.
Invert	x	(*exp*) Whether the colors are displayed inverted.
Moveable	x	Whether the user can move the picture.
Name		The name of the picture control.
Pointer	x	(*exp*) The pointer image when it is over the picture.
Resizeable	x	Whether the user can resize the picture.
SlideLeft	x	(*exp*) Whether the picture moves left to fill in empty space.
SlideUp	x	(*exp*) How the picture moves up to fill in empty space.
Tag	x	(*exp*) The tag text for the picture.
Type		The control's type, which is picture.

Property for a Picture	M	Description
Visible	x	(*exp*) Whether the picture control is visible.
Width	x	(*exp*) The width of the picture.
X	x	(*exp*) The x coordinate of the picture.
Y	x	(*exp*) The y coordinate of the picture.

Properties for Report controls in DataWindow objects

Property for a Report	M	Description
Attributes		A list of the properties of the report.
Band		The band containing the report.
Border	x	(*exp*) The type of border around the report.
Criteria	x	The search condition of the WHERE clause that relates the report to the main DataWindow.
DataObject	x	The name of the DataWindow that is the nested report.
Height	x	(*exp*) The height of the report.
Height.AutoSize	x	Whether the height of the control will be adjusted to display all the data.
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
Moveable	x	Whether the user can move the report.
Name		The name of the Report control.
Nest_Arguments	x	Retrieval arguments for the report.
NewPage (Report controls)	x	Whether to start the report on a new page (composite only).
Pointer	x	(*exp*) The pointer image when it is over the report.
Resizeable	x	Whether the user can resize the report.
SlideLeft	x	(*exp*) Whether the report moves left to fill in empty space.
SlideUp	x	(*exp*) How the report moves up to fill in empty space.
Tag	x	(*exp*) The tag text for the report.
Trail_Footer	x	Where to print the footer (composite only).
Type		The control's type, which is report.
Visible	x	(*exp*) Whether the Report control is visible.
Width	x	(*exp*) The width of the report.
X	x	(*exp*) The x coordinate of the report.
Y	x	(*exp*) The y coordinate of the report.

Properties for the Style keyword

You use these properties when generating DataWindow source code with the DataWindowSyntaxFromSql method.

Property	Description
Detail_Bottom_Margin	Bottom margin of the detail area.
Detail_Top_Margin	Top margin of the detail area.
Header_Bottom_Margin	Bottom margin of the header area.
Header_Top_Margin	Top margin of the header area.
Horizontal_Spread	Horizontal space between columns in the detail area.
Left_Margin	The left margin of the DataWindow.
Report	Whether the DataWindow is a read-only report.
Type	The presentation style.
Vertical_Size	The height of the columns in the detail area.
Vertical_Spread	The vertical space between columns in the detail area.

Properties for TableBlob controls in DataWindow objects

Property for a TableBlob	M	Description
Attributes		A list of the properties of the TableBlob.
Band		The band containing the TableBlob.
Border	x	(*exp*) The type of border around the TableBlob.
ClientName	x	The name of the OLE client in the server window.
Height	x	(*exp*) The height of the TableBlob.
HideSnaked	x	Whether the control appears once per page when printing newspaper columns.
ID		The number of the TableBlob.
KeyClause	x	(*exp*) The key clause used when retrieving the blob.
Moveable	x	Whether the user can move the TableBlob.
Name		The name of the TableBlob.
OLEClass	x	(*exp*) The name of the TableBlob's OLE column.
Pointer	x	(*exp*) The pointer image when it is over the TableBlob.
Resizeable	x	Whether the user can resize the TableBlob.
SlideLeft	x	(*exp*) Whether the TableBlob moves left to fill empty space.
SlideUp	x	(*exp*) How the TableBlob moves up to fill empty space.
Tag	x	(*exp*) The tag text for the control.
Template	x	(*exp*) The file used to start the OLE application.
Type		The control's type, which is TableBlob.
Visible	x	(*exp*) Whether the TableBlob is visible.

Property for a TableBlob	M	Description
Width	x	(*exp*) The width of the TableBlob.
X	x	(*exp*) The x coordinate of the TableBlob.
Y	x	(*exp*) The y coordinate of the TableBlob.

Properties for Text controls in DataWindow objects

Property for text	M	S	Description
AccessibleDescription	x		A description of the control for use by assistive technology tools.
AccessibleName	x		A descriptive label for the control.
AccessibleRole			A description of the kind of user-interface element that the control is.
Alignment	x	x	The alignment of the text.
Attributes			A list of the properties of the text control.
Background.property	x	x	(*exp*) Background settings for the text control.
Band			The band containing the text control.
Border	x	x	(*exp*) The type of border around the text control.
Color	x	x	(*exp*) The text color.
Font.property	x	x	(*exp*) Font settings for the text.
Height	x		(*exp*) The height of the text control.
Height.AutoSize	x		Whether the control's height is adjusted to fit the data.
HideSnaked	x		Whether the control appears once per page when printing newspaper columns.
HTML.property	x		(*exp*) Settings for creating a hyperlink for the text.
Moveable	x		Whether the user can move the text control.
Name			The name of the text control.
Pointer	x		(*exp*) The pointer image when it is over the text control.
Resizeable	x		Whether the user can resize the text control.
SlideLeft	x		(*exp*) Whether the text control moves left to fill space.
SlideUp	x		(*exp*) How the text control moves up to fill empty space.
Tag	x		(*exp*) The tag text for the text control.
Text	x		(*exp*) The displayed text.
Type			The control's type, which is Text.
Visible	x		(*exp*) Whether the control is visible.
Width	x		(*exp*) The width of the text control.
X	x		(*exp*) The x coordinate of the text control.
Y	x		(*exp*) The y coordinate of the text control.

Title keyword

You use this property when generating DataWindow source code with the DataWindowSyntaxFromSql method.

Property	Description
Title("string")	The title for the DataWindow.

Alphabetical list of DataWindow object properties

The properties for DataWindow objects and controls within a DataWindow object follow in alphabetical order.

The syntax for Describe and Modify arguments is shown for all properties. The syntax for GetProperty and SetProperty is the same for all properties.

For properties of the DataWindow object itself, the syntax is:

propertyvalue = *dwc*.GetProperty ("*propertyname*");
dwc.SetProperty ("*propertyname*", "*propertyvalue*");

For properties of controls in the DataWindow object, the syntax is:

propertyvalue = *dwc*.GetProperty ("*controlname*.*propertyname*");
dwc.SetProperty ("*controlname*.*propertyname*", "*propertyvalue*");

The simple Visual Basic example shown for most properties can be used in C# by adding a semicolon to the end of each statement.

To see the properties organized by type of control or syntax keyword, see "Controls in a DataWindow and their properties" on page 145.

Accelerator

Description

The accelerator key that a user can press to select a column in the DataWindow object.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.Accelerator { = '*acceleratorkey* ' }"

Parameter	Description
columnname	The name of the column for which you want to get or set the accelerator key.
acceleratorkey	(*exp*) A string expression whose value is the letter that will be the accelerator key for *columnname*. *Acceleratorkey* can be a quoted DataWindow expression.

Usage

An accelerator key for a column allows users to select a column (change focus) with a keystroke rather than with the mouse. The user changes focus by pressing the accelerator key in combination with the Alt key.

In the painter Select the control and set the value in the Properties window, Behavior category.

Displaying the accelerator The column does not display the key. To let users know what key to use, you can include an underlined letter in a text control that labels the column. When you enter the text control's label, precede the character you want underlined with an ampersand (&).

Examples

```
[Visual Basic]
Dim AccKey as String
dw1.SetProperty("EmpName.Accelerator","A")
AccKey = dw1.GetProperty("EmpName.Accelerator")
AccKey = dw1.Describe("EmpName.Accelerator")
dw1.Modify("EmpName.Accelerator='A'")
```

```
[C#]
string AccKey;
dw1.SetProperty("EmpName.Accelerator","A");
AccKey = dw1.GetProperty("EmpName.Accelerator");
AccKey = dw1.Describe("EmpName.Accelerator");
dw1.Modify("EmpName.Accelerator='A'");
```

AccessibleDescription

Description

A description of the control and/or its purpose for use by accessibility tools such as readers for visually-impaired users.

Applies to

Column, computed field, picture, text, graph, group box, and button controls

Syntax

Describe and Modify argument:

"*controlname*. { = '*description* ' }"

Parameter	Description
columnname	The name of the control for which you want to get or set the accessible description
description	(*exp*) A string that describes the control's purpose or appearance

Usage

You do not need to supply a description if the AccessibleName and AccessibleRole properties adequately describe the control, as in the case of a button with the label OK. You should provide a description for a picture or report control.

In the painter In the Accessibility category in the Properties window, type a description in the AccessibleDescription text box.

Examples

```
[Visual Basic]
strData = dw1.Describe("b_1.AccessibleDescription")
dw1.Modify("b_1.AccessibleDescription='Scrolls to next
row'")
```

AccessibleName

Description

A label that briefly describes the control for use by accessibility tools such as readers for visually-impaired users.

Applies to

Column, computed field, picture, text, graph, group box, and button controls

Syntax

Describe and Modify argument:

"*controlname*.AccessibleName { = '*description* ' }"

Parameter	Description
columnname	The name of the control for which you want to get or set the accessible description
description	(*exp*) A string that briefly describes the control

Usage

The AccessibleName property is a brief description, such as the text in a button or the name of a menu item.

In the painter In the Accessibility category in the Properties window, type a name in the AccessibleName text box.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("b_1.AccessibleName")
dw1.Modify("b_1.AccessibleName='Next'")
```

AccessibleRole

Description

A description of the kind of user-interface element that the control is, for use by accessibility tools such as readers for visually-impaired users.

Applies to

Column, computed field, picture, text, graph, group box, and button controls

Syntax

Describe and Modify argument:

"*controlname*.AccessibleRole { = '*enumeratedvalue* ' }"

Parameter	Description
columnname	The name of the control for which you want to get or set the accessible description
description	(*exp*) A number specifying the type of AccessibleRole as a numeric value of the AccessibleRole DataWindow constant.

Usage

The description is a member of the AccessibleRole enumerated variable. The default role is defaultrole! and is used when the role cannot be determined.

Table 3-1: AccessibleRole values for DataWindow controls

Control	AccessibleRole
Button	pushbuttonrole!
Column	textrole!
Computed field	statictextrole!
Graph	diagramrole!
Group box	groupingrole!
Picture	graphicrole!
Text	statictextrole!

In the painter In the Accessibility category in the Properties window, select a value in the AccessibleRole drop-down list.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("b_1.AccessibleRole")
```

Action

Description: The action a user can assign to a button control.

Applies to: Button controls

Syntax: Describe and Modify argument:

"*buttonname*.Action { = ' *value* ' }"

Parameter	Description
buttonname	The name of the button for which you want to assign an action.
value	The action value assigned to the button. Values are listed in the following table.

Value	Action	Description	Value returned to ButtonClicked event
0	UserDefined	(Default) Allows for programming of the ButtonClicked and ButtonClicking events with no intervening action occurring.	Return code from the user's coded event script.
1	Retrieve (Yield)	Retrieves rows from the database. Before retrieval actually occurs, option to yield is turned on. This allows the Cancel action to take effect during a long retrieve.	Number of rows retrieved.
2	Retrieve	Retrieves rows from the database. The option to yield is not automatically turned on.	Number of rows retrieved.
3	Cancel	Cancels a retrieval that has been started with the option to yield.	0
4	PageNext	Scrolls to the next page.	The row displayed at the top of the DataWindow control when the scrolling is complete or attempts to go past the first row. -1 if an error occurs.
5	PagePrior	Scrolls to the prior page.	The row displayed at the top of the DataWindow control when the scrolling is complete or attempts to go past the first row. -1 if an error occurs.
6	PageFirst	Scrolls to the first page.	1 if successful. -1 if an error occurs.

Value	Action	Description	Value returned to ButtonClicked event
7	PageLast	Scrolls to the last page.	The row displayed at the top of the DataWindow control when the scrolling is complete or attempts to go past the first row. -1 if an error occurs.
8	Sort	Displays Sort dialog box and sorts as specified.	1 if successful. -1 if an error occurs.
9	Filter	Displays Filter dialog box and filters as specified.	Number of rows filtered. Number < 0 if an error occurs.
10	DeleteRow	If button is in detail band, deletes row associated with button; otherwise, deletes the current row.	1 if successful. -1 if an error occurs.
11	AppendRow	Inserts row at the end.	Row number of newly inserted row.
12	InsertRow	If button is in detail band, inserts row using row number associated with the button; otherwise, inserts row using the current row.	Row number of newly inserted row.
13	Update	Saves changes to the database. If the update is successful, a COMMIT is issued. If the update fails, a ROLLBACK is issued	1 if successful. -1 if an error occurs.
14	SaveRowsAs	Displays Save As dialog box and saves rows in the format specified.	Number of rows filtered.
15	Print	Prints one copy of the DataWindow object.	0
16	Preview	Toggles between preview and print preview.	0
17	PreviewWithRulers	Toggles between rulers on and off.	0
18	QueryMode	Toggles between query mode on and off.	0
19	QuerySort	Specifies sorting criteria (forces query mode on).	0
20	QueryClear	Removes the WHERE clause from a query (if one was defined).	0

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
Dim ActionValue as String
dw1.SetProperty("RetrieveButton.Action", "2")
ActionValue = dw1.Describe("RetrieveButton.Action")
dw1.Modify("RetrieveButton.Action = '2'")
```

```
[C#]
string ActionValue;
dw1.SetProperty("RetrieveButton.Action", "2"
ActionValue = dw1.Describe("RetrieveButton.Action")
dw1.Modify("RetrieveButton.Action = '2'")
```

Activation

Description

The way the server for the OLE object in the OLE Object control is activated. Choices include letting the user activate the object by double-clicking or putting activation under program control.

Applies to

OLE Object controls

Syntax

Describe and Modify argument:

"*olecontrolname*.Activation { = ' *activationtype* ' }"

Parameter	Description
olecontrolname	The name of the OLE Object control for which you want to get or set the activation method.
activationtype	(*exp*) A number specifying the method of activation for the OLE object. *Activationtype* can be a quoted DataWindow expression. Values are: 0 – The object has to be activated with the Activate method. 1 – The user can activate the object by double-clicking on it. 2 – The object activates when the container gets focus.

Usage

In the painter Select the control and set the value in the Properties window, Options category.

Examples

```
[Visual Basic]
Dim ActType as String
dw1.GetProperty("OLEReport.Activation")
ActType = dw1.Describe("OLEReport.Activation")
dw1.Modify("OLEReport.Activation='2'")
```

```
[C#]
string ActType;
dw1.GetProperty("OLEReport.Activation");
ActType = dw1.Describe("OLEReport.Activation");
dw1.Modify("OLEReport.Activation='2'");
```

Alignment

Description

The alignment of the control's text within its borders.

Applies to

Column, Computed Field, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Alignment { = ' *alignmentvalue* ' }"

DataWindowSyntaxFromSql:

Text (... Alignment = *alignmentvalue* ...)

Parameter	Description
controlname	The name of the control for which you want to get or set the alignment.
alignmentvalue	(*exp*) A number specifying the type of alignment for the text of *controlname*. *Alignmentvalue* can be a quoted DataWindow expression. Values are: 0 – (Default) Left 1 – Right 2 – Center 3 – Justified When generating DataWindow syntax with DataWindowSyntaxFromSql, the setting for Alignment applies to all text controls used as column labels.

Usage

When you select justified, the last line of text is not stretched to fill the line. Controls with only one line of text look left aligned.

In the painter Select the control and set the value using the Properties window, Appearance category.

Examples

```
[Visual Basic]
Dim AlignVal As String
WC1.SetProperty("EmpName.Alignment", "2")
AlignVal = dw1.Describe("EmpName.Alignment")
dw1.Modify("EmpName.Alignment='2'")
```

```
[C#]
string AlignVal;
WC1.SetProperty("EmpName.Alignment", "2");
AlignVal = dw1.Describe("EmpName.Alignment");
dw1.Modify("EmpName.Alignment='2'");
```

Arguments

Description

The retrieval arguments required by the data source. You specify retrieval arguments in the DataWindow's SELECT statement and you provide values for the retrieval arguments when you call the Retrieve method.

Applies to

Database table for the DataWindow object

Used in DataWindow syntax.

Syntax

Table(Arguments = ((*name1*, *type*), (*name2*, *type*) ...) ...)

Parameter	Description
name	The name of the retrieval argument
type	The type of the argument: • Date or a Date list • DateTime or a DateTime list • Number or a Number list • String or a String list • Time or a Time list

Usage

In the painter Set the value in the SQL Select painter or Query painter.

Open the SQL Select painter by selecting Design>Data Source from the menu bar in the DataWindow painter, or create or open a query in the Query painter. Then select Design>Retrieval Arguments.

Attributes

Description

A tab-separated list of all the properties that apply to a control.

Applies to

DataWindow, Button, Column, Computed Field, Graph, GroupBox, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe argument:

"*controlname*.Attributes"

Examples

```
[Visual Basic]
Dim AttrStr as String
AttrStr = dw1.GetProperty("EmpNameText.Attributes")
AttrStr = dw1.Describe("DataWindow.Attributes")
AttrStr = dw1.Describe("EmpNameText.Attributes")
```

```
[C#]
string AttrStr;
AttrStr = dw1.GetProperty("EmpNameText.Attributes");
AttrStr = dw1.Describe("DataWindow.Attributes");
AttrStr = dw1.Describe("EmpNameText.Attributes");
```

Axis

Description

The list of items or the expression associated with an axis of a graph. Each item is separated by a comma. You can ask for the list of categories on the Category axis, the series on the Series axis, or the values on the Values axis.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname.axis* { = ' *list* ' }"

Parameter	Description
graphname	The name of the graph within the DataWindow object for which you want to get or set the list of items for *axis*.
axis	An axis name. Values are: • Category • Series • Values
list	A string listing the categories, series, or values for the graph. The content of the list depends on the axis you specify. The items in the list are separated by commas. List is quoted.

Usage

In the painter Select the graph control and set the value by selecting a column or expression for each axis in the Properties window, Axis category.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("gr1.Category")
ls_data = dw1.Describe("gr1.Series")
ls_data = dw1.Describe("gr1.Values")
dw1.Modify("gr1.Series='Actual, Budget'")
```

Axis.property

Description: Settings that control the appearance of an axis on a graph.

Applies to: Graph controls

Syntax: Describe and Modify argument:

"*graphname*.*axis*.*property* { = *value* }"

Parameter	Description
graphname	The name of the graph within the DataWindow object for which you want to get or set a property value for an axis.
axis	An axis name. Values are: • Category • Series • Values
property	A property for the axis. Properties and their settings are listed in the table that follows.
value	The value to be assigned to the property. For axis properties, *value* can be a quoted DataWindow expression.

Property for Axis	Value
AutoScale	(*exp*) A boolean number specifying whether the DataWindow server scales the axis automatically. Enabled when the axis displays nonstring data. Values are: 0 – No, do not automatically scale the axis. 1 – Yes, automatically scale the axis.
DispAttr.*fontproperty*	(*exp*) Properties that control the appearance of the text that labels the axis divisions. For a list of font properties, see the main entry for DispAttr.*fontproperty*. Painter: Text category. Choose Category Axis Text, Series Axis Text, or Values Axis Text from the TextObject list, and set font properties.
DisplayEveryNLabels	(*exp*) An integer specifying which major axis divisions to label. For example, 2 means label every other tick mark. Values 0 and 1 both mean label every tick mark. If the labels are too long, they are clipped.

Property for Axis	Value
DropLines	(*exp*) An integer indicating the type of drop line for the axis. Values are: 0 – None 1 – Solid 2 – Dash 3 – Dot 4 – DashDot 5 – DashDotDot
Frame	(*exp*) An integer indicating the type of line used for the frame. Values are 0–5. See DropLines in this table for their meaning. Available for 3D graph types.
Label	(*exp*) A string whose value is the axis label.
LabelDispAttr. *fontproperty*	(*exp*) Properties that control the appearance of the axis label. For a list of font properties, see the main entry for DispAttr.*fontproperty*. Painter: Text category. Choose Category Axis Label, Series Axis Label, or Values Axis Label from the TextObject list, and set font properties.
MajorDivisions	(*exp*) An integer specifying the number of major divisions on the axis.
MajorGridLine	(*exp*) An integer specifying the type of line for the major grid. Values are 0–5. See DropLines in this table for their meaning.
MajorTic	(*exp*) An integer specifying the type of the major tick marks. Values are: 1 – None 2 – Inside 3 – Outside 4 – Straddle
MaximumValue	(*exp*) A double specifying the maximum value for the axis.
MinimumValue	(*exp*) A double specifying the minimum value for the axis.
MinorDivisions	(*exp*) An integer specifying the number of minor divisions on the axis.
MinorGridLine	(*exp*) An integer specifying the type of line for the minor grid. Values are 0–5. See DropLines in this table for their meaning.
MinorTic	(*exp*) An integer specifying the type of the minor tick marks. Values are: 1 – None 2 – Inside 3 – Outside 4 – Straddle
OriginLine	(*exp*) An integer specifying the type of origin line for the axis. Values are 0–5. See DropLines in this table for their meaning. Enabled for numeric data axes.
PrimaryLine	(*exp*) An integer specifying the type of primary line for the axis. Values are 0–5. See DropLines in this table for their meaning.

Property for Axis	Value
RoundTo	(*exp*) A double specifying the value to which you want to round the axis values. Specify both a value and a unit (described next).
RoundToUnit	(*exp*) An integer specifying the units for the rounding value. The units must be appropriate for the axis datatype. Values are: 0 – Default, for an axis of any datatype 1 – Years, for an axis of type date or DateTime 2 – Months, for an axis of type date or DateTime 3 – Days, for an axis of type date or DateTime 4 – Hours, for an axis of type time or DateTime 5 – Minutes, for an axis of type time or DateTime 6 – Seconds, for an axis of type time or DateTime 7 – Microseconds, for an axis of type time or DateTime
ScaleType	(*exp*) An integer specifying the type of scale used for the axis. Values are: 1 – Scale_Linear 2 – Scale_Log10 3 – Scale_Loge
ScaleValue	(*exp*) An integer specifying the scale of values on the axis. Values are: 1 – Scale_Actual 2 – Scale_Cumulative 3 – Scale_Percentage 4 – Scale_CumPercent
SecondaryLine	(*exp*) An integer specifying the type of secondary line for the axis. The line is parallel to and opposite the primary line and is usually not displayed in 2D graphs. Values are 0–5. See DropLines in this table for their meaning.
ShadeBackEdge	(*exp*) A boolean number specifying whether the back edge of the axis is shaded. Values are: 0 – No, the back edge is not shaded 1 – Yes, the back edge is shaded
Sort	(*exp*) An integer specifying the way the axis values should be sorted. (Does not apply to the Values axis.) Values are: 0 – Unsorted 1 – Ascending 2 – Descending

Usage

In the painter Select the graph control or the Graph DataWindow object and set the value in the Properties window. To set most axis properties, select the Axis category and an axis in the Axis drop-down list. Font properties are set in the Text category.

Examples

```
[Visual Basic]
Dim PropVal As String
PropVal = dw1.GetProperty("Graph1.Category.AutoScale")
dw1.SetProperty("Category.LabelDispAttr.Alignment", "
2")
PropVal = dw1.Describe("Graph1.Category.AutoScale")
dw1.Modify("Graph1.Series.AutoScale=0")
dw1.Modify("Graph1.Values.Label='Cities'")
dw1.Modify("Graph1.Category.LabelDispAttr.Alignment=2"
)

[C#]
string PropVal;
PropVal =
dw1.GetProperty("Graph1.Category.AutoScale");
dw1.SetProperty("Category.LabelDispAttr.Alignment", "
2");
PropVal = dw1.Describe("Graph1.Category.AutoScale");
dw1.Modify("Graph1.Series.AutoScale=0");
dw1.Modify("Graph1.Values.Label='Cities'");
dw1.Modify("Graph1.Category.LabelDispAttr.Alignment=2"
);
```

BackColor

Description

The background color of a graph in a DataWindow.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.BackColor { = *long* }"

Parameter	Description
graphname	The graph whose background color you want to get or set.
long	(*exp*) A long expression specifying the color (red, green, and blue values) to be used as the graph's background color. *Long* can be a quoted DataWindow expression.

Usage

In the painter Select the graph control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
Dim BColor As String
dw1.SetProperty("Graph1.BackColor", "250")
BColor = dw1.Describe("Graph1.BackColor")
dw1.Modify("Graph1.BackColor=250")

[C#]
string BColor;
dw1.SetProperty("Graph1.BackColor", "250");
BColor = dw1.Describe("Graph1.BackColor");
dw1.Modify("Graph1.BackColor=250");
```

Background.*property*

Description

Settings for the color and transparency of a control.

Applies to

Button, Column, Computed Field, GroupBox, Line, Oval, Rectangle, RoundRectangle, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Background.*property* { = ' *value* ' }"

DataWindowSyntaxFromSql:

Column (Background.*property* = *value*)
Text (Background.*property* = *value*)

Parameter	Description
controlname	The control whose Background properties you want to get or set. When generating DataWindow syntax with DataWindowSyntaxFromSql, the Background settings apply to all columns or all text controls.
property	A property that applies to the background of a control, as listed in the Property table below.
value	Values for the properties are shown below. *Value* can be a quoted DataWindow expression.

Property for Background	Value
Color	(*exp*) A long expression specifying the color (the red, green, and blue values) to be used as the control's background color.
Mode	(*exp*) A number expression specifying the mode of the background of *controlname*. Values are: 0 – Make the control's background opaque. 1 – Make the control's background transparent.

Usage

In the painter Select the control and set the value in the Properties window, Appearance category.

When you choose a Brush Hatch fill pattern other than Solid for an Oval, Rectangle, or RoundRectangle control, the Background Color and the Brush Color are used for the pattern colors.

Background color of a button The Background.Color property is not supported on Windows XP by default because the current XP theme controls the appearance of the button. Set the ShowBackColorOnXP property of the DataWindow object to force the color change to take effect.

Background color of a line The background color of a line is the color that displays between the segments of the line when the pen style is not solid.

Transparent background If Background.Mode is transparent (1), Background.Color is ignored.

DropDownDataWindows and GetChild When you set Background.Color and Background.Mode for a column with a DropDownDataWindow, references to the DropDownDataWindow become invalid. Call GetChild again after changing these properties to obtain a valid reference.

Examples

```
[Visual Basic]
Dim BGProperty As String
dw1.SetProperty("Oval2.Background.Color", "RGB(255, 0,
128)")
BGProperty = dw1.Describe("Oval2.Background.Color")
dw1.Modify("EmpName.Background.Color='11665407'")
BGProperty = dw1.Describe("EmpName.Background.Mode")
dw1.Modify("EmpName.Background.Mode='1'")
dw1.Modify("RndRect1.Background.Mode='0'")
```

```
[C#]
string BGProperty;
dw1.SetProperty("Oval2.Background.Color", "RGB(255, 0,
128)");
BGProperty = dw1.Describe("Oval2.Background.Color");
dw1.Modify("EmpName.Background.Color='11665407'");
BGProperty = dw1.Describe("EmpName.Background.Mode");
dw1.Modify("EmpName.Background.Mode='1'");
dw1.Modify("RndRect1.Background.Mode='0'");
```

BackImage

Description

The column that contains the background image for an InkPicture control in a DataWindow.

Applies to

InkPicture controls

Syntax

Describe and Modify argument:

".BackImage{ = *colname* }"

Parameter	Description
	The graph whose background color you want to get or set.
colname	A string value specifying the name of the long binary column that contains the background image for the control.

Usage

In the painter Select the InkPicture control and set the value in the Properties window, Definition category. The image format can be JPEG, GIF, BMP, or ICO. If you change the image, call the Retrieve method to force the DataWindow to retrieve the new image.

Examples

```
[Visual Basic]
backimg = dw1.GetProperty("inkPic1.BackImage")
DWBand = dw1.Describe("inkPic1.Band")
```

```
[C#]
backimg = dw1.GetProperty("inkPic1.BackImage");
DWBand = dw1.Describe("inkPic1.Band");
```

Band

Description

The band or layer in the DataWindow object that contains the control. The returned text is one of the following, where # is the level number of a group: detail, footer, header, header.#, summary, trailer.#, tree.level.#, foreground, background.

Applies to

Button, Column, Computed Field, Graph, GroupBox, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Band"

Parameter	Description
controlname	The name of the control within the DataWindow for which you want the band it occupies

Usage

In the painter Select the control and set the value in the Properties window, Layout category. When the control's layer is Band, you can drag the control into another band.

Examples

```
[Visual Basic]
DWBand = dw1.GetProperty("emp_title.Band")
DWBand = dw1.Describe("emp_title.Band")

[C#]
DWBand = dw1.GetProperty("emp_title.Band");
DWBand = dw1.Describe("emp_title.Band");
```

Bandname.property

Description: Settings for the color, size, and pointer of a band in the DataWindow object.

Applies to: DataWindows

Syntax: Describe and Modify argument:

"DataWindow.*bandname*{.#}.*property* { = *value* }"

Parameter	Description
bandname	The identifier of a band in the DataWindow object. Values are: • Detail • Footer • Summary • Header • Trailer • Tree.Level
#	The number of the group or TreeView level you want when *bandname* is Header, Trailer, or Tree.Level. The group must exist.
property	A property that applies to the band, as listed in the table below.
value	Values for the properties are shown in the following table.

Property for Bandname	Value
Color	(*exp*) A long specifying the color (the red, green, and blue values) to be used as the band's background color. *Value* can be a quoted DataWindow expression. Painter: General category.
Height	An integer specifying the height of the detail area in the unit of measure specified for the DataWindow. Painter: General category. For another way of setting the height of the detail band, see the SetDetailHeight method.

Property for Bandname	Value
Height.AutoSize	Allows the band to grow to display a row, picture, or nested report without cutting off any of its content. In the detail band, selecting this property sets the minimum height for all rows to the size specified by the Height property for the band. Values are: No – Fixes the band height to the size set for the Height property of the band. Yes – Adjusts the band height to accommodate the full content of a row or the controls in the band. However, the band height cannot be reduced below the value set for the Height property of the band. This property can be especially useful to set on the detail band when it contains rows with a text column that you want to display without cutting off any of the text. The height of the detail band must not grow larger than a page, except when it contains nested DataWindows with the Report.Height.AutoSize property set to Yes. You can set this property on individual columns and controls as well as on the band itself. For more information, see the Height.AutoSize property for DataWindow objects. There are some limitations on the use of this property: • The Height.Autosize property is not supported on DataWindows with Graph or Label presentation styles. • Nested report overflow to the next page is supported in detail bands only. • Bands cannot be autosized if autosizing would preclude the display of at least one detail band row per page. Painter: General category when the band is selected.
Pointer	(*exp*) A string specifying a value of the Pointer enumerated datatype or the name of a cursor file (.CUR) to be used for the pointer. See the SetPointer method for a list of Pointer values. *Pointername* can be a quoted DataWindow expression. This property is not supported in Web DataWindows. Painter: Pointer category.
Suppress	A boolean that lets you suppress group headers after page breaks. You can set this property on group header bands only. When a group listing straddles a page break, all group headers for which you set this property will be suppressed. The suppressed headers do not display at the top of the page. However, if the page break coincides with the start of a new group, only headers above the current group header can be suppressed. Values are: No – Does not suppress group headers. Yes – Suppresses group headers. Painter: General category when a group header band is selected.

Usage

In the painter Select the band by clicking the gray divider for the band. Set the value in the Properties window.

Examples

```
[Visual Basic]
Dim PropVal As String
PropVal = dw1.GetProperty("DataWindow.Detail.Height")
dw1.SetProperty("DataWindow.Detail.Pointer",
"hand.cur")

PropVal = dw1.Describe("DataWindow.Detail.Height")
PropVal =
dw1.Describe("DataWindow.Detail.Height.AutoSize")
dw1.Modify("DataWindow.Detail.Pointer='hand.cur'")

dw1.Modify("DataWindow.Detail.Pointer=' ~"Cross!~" ~t
if(emp_status=~"a~", ~"HourGlass!~", ~"Cross!~")'")

dw1.Modify("DataWindow.Footer.Height=250")
ColorVal = RGB(200, 200, 500)
dw1.Modify("DataWindow.Trailer.2.Height=500")
dw1.Modify("DataWindow.Summary.Pointer='total.cur'")
```

```
[C#]
string PropVal;
PropVal = dw1.GetProperty("DataWindow.Detail.Height");
dw1.SetProperty("DataWindow.Detail.Pointer",
"hand.cur");

PropVal = dw1.Describe("DataWindow.Detail.Height");
PropVal =
dw1.Describe("DataWindow.Detail.Height.AutoSize");
dw1.Modify("DataWindow.Detail.Pointer='hand.cur'");

dw1.Modify("DataWindow.Detail.Pointer=' ~"Cross!~" ~t
if(emp_status=~"a~", ~"HourGlass!~", ~"Cross!~")'")

dw1.Modify("DataWindow.Footer.Height=250");
ColorVal = RGB(200, 200, 500);
dw1.Modify("DataWindow.Trailer.2.Height=500");
dw1.Modify("DataWindow.Summary.Pointer='total.cur'");
```

Bandname.Text

Description

(RichText presentation style only—not in DataWindow .NET) The rich text content of the specified band as an ASCII string.

Applies to

DataWindows in the RichText presentation style

Syntax

Describe and Modify argument:

"DataWindow.*bandname*.Text { = *rtfstring* }"

Parameter	Description
bandname	The identifier of a band in the DataWindow object that has the RichText presentation style. Values are: • Detail • Header • Footer
rtfstring	A string whose value is the rich text content of the band. The string includes the rich text formatting codes, text, and input fields. Text assigned to the header or footer band is ignored if RichText.HeaderFooter is set to no. When you assign text using the Modify method, nested quotes must be represented with tildes and quotes. If your data is a pure RTF string, use the PasteRTF method.

Bands

Description

A list of the bands in the DataWindow object. The list can include one or more of the following band identifiers, where # is the level number of a group: Detail, Footer, Header, Header.#, Summary, Trailer.#, Tree.Level.#. The items in the list are separated by tabs.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Bands"

Examples

```
[Visual Basic]
Dim BandList As String
BandList = dw1.GetProperty("DataWindow.Bands")
BandList = dw1.Describe("DataWindow.Bands")
```

```
[C#]
string BandList;
BandList = dw1.GetProperty("DataWindow.Bands");
BandList = dw1.Describe("DataWindow.Bands");
```

BinaryIndex

Description — An internal index that the DataWindow server uses to manage the OLE Object control in the library. There is no reason to get this value; the value has no external significance.

Applies to — OLE Object controls

Syntax — "*olecontrolname*.BinaryIndex"

BitmapName

Description — Whether the DataWindow server interprets the column's value as the name of a picture file and displays the picture instead of the text. BitmapName's value is either Yes or No.

Applies to — Column controls

Syntax — Describe argument:

"*columnname*.BitmapName"

Usage — **In the painter** Select the control and set the value in the Properties window, General category.

Examples

```
ls_data = dw1.Describe("emp_name.BitmapName")
```

Border

Description — The type of border for the control.

Applies to — Column, Computed Field, Graph, GroupBox, OLE, Picture, Report, TableBlob, and Text controls

Syntax — Describe and Modify argument:

"*controlname*.Border { = ' *value* ' }"

DataWindowSyntaxFromSql:

Column (... Border = *value* ...)

Text (... Border = *value* ...)

Parameter	Description
controlname	The name of the control whose border you want to get or set. When generating DataWindow syntax with DataWindowSyntaxFromSql, the Border setting applies to all columns or all text controls.
value	(*exp*) A number specifying the type of border. Values are: 0 – None 1 – Shadow 2 – Rectangle 3 – Resize 4 – Line 5 – 3D Lowered 6 – 3D Raised The value can be a quoted DataWindow painter expression. When you change between Resize and another border, change the Resizeable property too so that the control's appearance and behavior match.

Usage

In the painter Select the control and set the value in the Properties window, Appearance category.

Changing the Border setting between Resize and another border affects the Resizeable option in the Layout category. To make another border resizable, choose the border then reset Resizeable.

On Windows XP, to display the border of a text column with the XP style (by default, a blue box), set the Border property to Lowered and the BackgroundColor of the font to Window Background.

For a Picture in a Web DataWindow that is a link, the default border displays unless you set the Border property to 0.

For examples of other ways to set properties, using Border as an example, see the DataWindow .NET *Programmer's Guide*.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("emp_name_t.Border")
dw1.Modify("emp_name_t.Border='6'")
```

Brush.*property*

Description — Settings for the fill pattern and color of a graphic control.

Applies to — Oval, Rectangle, and RoundRectangle controls

Syntax — Describe and Modify argument:

"*controlname*.Brush.*property* { = ' *value* ' }"

Parameter	Description
controlname	The name of the Line, Oval, Rectangle, RoundRectangle, or Text control whose Brush property you want to get or set.
property	A property that applies to the Brush characteristics of a control, as listed in the table below.
value	Values for the properties are shown in the next table. Value can be a quoted DataWindow expression.

Property for Brush	Value
Color	(*exp*) A long expression specifying the color (the red, green, and blue values) to be used to fill the control.
Hatch	(*exp*) A number expression specifying the fill pattern of *controlname*. Values are: 0 – Horizontal 1 – Bdiagonal (lines from lower left to upper right) 2 – Vertical 3 – Cross 4 – Fdiagonal (lines from upper left to lower right) 5 – DiagCross 6 – Solid 7 – Transparent

Usage — **In the painter** Select the control and set the value in the Properties window, Appearance category.

When you choose a Brush Hatch fill pattern other than Solid, the Background Color and the Brush Color are used for the pattern colors.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("oval_1.Brush.Hatch")
dw1.Modify("oval_1.Brush.Hatch='5'")
dw1.Modify("oval_1.Brush.Color='16731766'")
```

Category

See Axis, Axis.property, and DispAttr.fontproperty.

CheckBox.*property*

Description — Settings for a column whose edit style is CheckBox.

Applies to — Column controls

Syntax — DataWindow .NET dot notation:

((CheckBox) *colname*.EditStyle).*property* [C#]
CType(*colname*.EditStyle, CheckBox).*property* [Visual Basic]

Describe and Modify argument:

"*columnname*.CheckBox.*property* { = *value* }"

Parameter	Description
columnname	The column whose edit style is CheckBox for which you want to get or set property values.
property	A property for the CheckBox edit style, as listed in the table below.
value	Values for the properties are shown in the table below. For CheckBox properties, *value* cannot be a DataWindow expression.

Property for CheckBox	Value
LeftText	Whether the CheckBox label is to the left or right of the CheckBox. Values are: Yes – Display the label on the left. No – Display the label on the right. Painter: Behavior category.
Off	A string constant specifying the column value when the CheckBox is off (unchecked). The resulting value must be the same datatype as the column. Painter: Behavior category.
On	A string constant specifying the value that will be put in the column when the CheckBox is on (checked). The resulting value must be the same datatype as the column. Painter: Behavior category.

Property for CheckBox	Value
Other	A string constant specifying the value that will be put in the column when the CheckBox is in the third state (neither checked nor unchecked). The value must be the same datatype as the column. Painter: Behavior category. This option is available when ThreeStates is True.
Scale	Whether you want to scale the 2D CheckBox. Takes effect only when the ThreeD property is False. Values are: Yes – Scale the CheckBox. No – Do not scale the CheckBox. Painter: Behavior category.
Text	A string specifying the CheckBox's label text. Painter: Behavior category.
ThreeD	Whether the CheckBox should be 3D. Values are: Yes – Make the CheckBox 3D No – Do not make the CheckBox 3D Painter: Behavior category.
ThreeStates	Whether the CheckBox should have three states. Values are: Yes – The CheckBox has three states No – The CheckBox does not have three states Painter: Behavior category.

Usage

In the painter Select the control and set values in the Properties window, Behavior category, when EditStyle is CheckBox.

In DataWindow .NET, you can use the CheckBox class to set CheckBox style properties using dot notation. See the description of the CheckBox class in the online Help in Visual Studio .NET for a complete list of properties. Some properties have different names in DataWindow .NET.

Examples

```
[Visual Basic]
dw1.Modify("emp_gender.CheckBox.3D=no")
dw1.Modify("emp_status.CheckBox.Off='Terminated'")
dw1.Modify("emp_status.CheckBox.On='Active'")
dw1.Modify("emp_status.CheckBox.Other='Unknown'")
```

```
[Visual Basic]
If TypeOf empBnfts.EditStyle Is CheckBox Then
   CType(empBnfts.EditStyle, CheckBox).LeftText = True
ElseIf
...
```

```
[C#]
if (empBnfts.EditStyle is CheckBox)
{
   ((Checkbox)empBnfts.EditStyle).LeftText = true;
}
else
....
```

ClientName

Description

The name of the OLE client. The default is “Untitled.” ClientName is used by some applications in the server window’s title.

Applies to

OLE Object and TableBlob controls

Syntax

Describe and Modify argument:

"*controlname*.ClientName { = ' *clientname* ' }"

Parameter	Description
controlname	The name of a blob column or an OLE Object control.
clientname	(*exp*) A string expression to be used in the title of the server application’s window. For a blob, the string usually includes data from the current row so that the window title can identify the blob’s row. Begin the string with a tab (~t) when you modify the value so that the DataWindow server evaluates the expression instead of displaying it.

Usage

In the painter Select the control and set the value in the Properties window, Definition category.

Examples

```
[Visual Basic]
cname = dw1.Describe("emppict_blob.ClientName")

dw1.Modify("emppict_blob.ClientName='" +  _
"~t~"Data for ~" + String(emp_id)'")
```

Color

Description

The text color of the column or the background color of the DataWindow.

The color affected by the Color property depends on the control:

- For the DataWindow, Color specifies the background color
- For columns, computed fields, and text, Color specifies the text color
- For graphs, Color specifies the line color used for axes, borders around data markers, tick marks, and the outline of the box for 3D graphs

Applies to

DataWindow, Button, Column, Graph, and GroupBox controls

Syntax

Describe and Modify argument:

"DataWindow.Color { = *long* }"

"*controlname.*Color { = *long* }"

DataWindowSyntaxFromSql:

DataWindow (Color = *long*)

Column (Color = *long*)

Parameter	Description
controlname	The column whose text color you want to set or the graph whose line color you want to set.
long	(*exp* for columns only) A long value specifying the color of the column text or the DataWindow background. When you are specifying the text color of a column, you can specify a DataWindow expression in quotes. You cannot specify an expression for the DataWindow background color. When generating DataWindow syntax with DataWindowSyntaxFromSql, the Color setting for Column applies to all columns.

Usage

In the painter For the DataWindow background, click the DataWindow to deselect all controls and set the value in the Properties window, General category.

For a column's text color, select the column and set the value in the Properties window, Appearance category.

For a graph's line color, select the graph and set the value in the Properties window, Appearance category.

Examples

```
[Visual Basic]
dw_back_color = dw1.Describe("DataWindow.Color")

column_text_color = dw1.Describe("emp_name.Color")

dw1.Modify( _
       "salary.Color='0~tIf(salary>90000,255,65280)'")
```

See also Background, BackColor

ColType

Description The datatype of the column or computed field.

Applies to Column and Computed Field controls

Syntax Describe argument:

"*controlname*.ColType"

Parameter	Description
controlname	The column for which you want the datatype. Possible datatypes are: • Char (*n*) – *n* is the number of characters • Date • DateTime • Decimal (*n*) – *n* is the number of decimal places • Int • Long • Number • Real • Time • Timestamp • ULong

Usage **In the painter** The value of ColType is derived from the data or expression you specify for the control. The value is displayed in the Column Specifications view.

Date column types
If you define a DataWindow with a column of type Date and deploy it with a DBMS that uses the DateTime datatype, set the StaticBind database parameter to 0 or No. This forces the DataWindow server to get a result set description before retrieving data and adjust the bind information if necessary.

For more information, see the StaticBind DBParm parameter in the online Help.

Examples

```
[Visual Basic]
ls_coltype = dw1.Describe("emp_id.ColType")
```

Column.Count

Description

The number of columns in the DataWindow object.

Applies to

DataWindows

Syntax

DataWindow .NET dot notation:

dw_control.ColumnCount

Describe argument:

"DataWindow.Column.Count"

Usage

In the painter The value is determined by the number of columns you select in the SQL Select painter, whether or not they are displayed.

In DataWindow .NET, you can use the ColumnCount property on DataWindowControl, WebDataWindowControl, DataStore, and DataWindowChild to get the number of columns.

Column limit
There is a limit of 1000 on the number of columns in a DataWindow object.

Examples

```
[C#}
short ColCount;
ColCount = dw1.ColumnCount;

[Visual Basic]
ls_colcount = dw1.Describe("DataWindow.Column.Count")
```

ContentsAllowed

Description

The way the OLE Object control holds the OLE object. You can restrict the container to only embedded or only linked objects, or you can allow either type.

Applies to

OLE Object controls

Syntax

Describe and Modify argument:

"*olecontrolname*.ContentsAllowed { = ' *contentstype* ' }"

Parameter	Description
olecontrolname	The name of the OLE Object control for which you want to get or set the type of contents.
contentstype	A number specifying whether the OLE object in the control has to be embedded, has to be linked, or can be either embedded or linked. Values are: 0 – Embedded 1 – Linked 2 – Any

Usage

In the painter Select the control and set the value in the Properties window, Options category.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("ole_report.ContentsAllowed")

dw1.Modify("ole_report.ContentsAllowed='2'")
```

Criteria

Description

The search condition of the WHERE clause for a related report. The Criteria property defines the connection between the related report and the DataWindow.

Applies to

Report controls

Syntax

Describe and Modify argument:

"*reportname*.Criteria { = *string* }"

Parameter	Description
reportname	The name of the report control for which you want to get or set Criteria.
string	An expression that will be the search condition of the WHERE clause for the related report.

Examples

```
[Visual Basic]
ls_colcount = dw1.Describe("rpt_1.Criteria")

dw1.Modify("rpt_1.Criteria='emp_id=:emp_id'")
```

See also Nest_Arguments DataWindow object property

Criteria.*property*

Description Settings for the Prompt for Criteria dialog box. When Prompt for Criteria is enabled, the DataWindow server prompts the user to specify criteria for retrieving data whenever the Retrieve method is called. Note that the Required property also affects query mode.

Syntax Describe and Modify argument:

"*columnname*.Criteria.*property* { = *value* }"

Parameter	Description
columnname	The name of the column for which you want to get or set Prompt for Criteria properties.
property	A property for the Prompt for Criteria dialog box. Properties and their settings are listed in the table below.
value	A Yes or No value to be assigned to the property. For Criteria properties, *value* cannot be a DataWindow expression.

Property for Criteria	Value
Dialog	Whether Prompt for Criteria is on for *columnname*. Values are: Yes – Include *columnname* in the Prompt for Criteria dialog box. No – (Default) Do not include *columnname* in the Prompt for Criteria dialog box. If the Dialog property is Yes for at least one column in the DataWindow, then the DataWindow server displays the Prompt for Criteria dialog box when the Retrieve method is called. Painter: Column Specifications view, Prompt check box.

Property for Criteria	Value
Override_Edit	Whether the user must enter data in the Prompt for Criteria dialog box according to the edit style defined for the column in the DataWindow object or be allowed to enter any specifications in a standard edit control. Values are: Yes – Allow the user to override the column's edit style and enter data in a standard edit control. No – (Default) Constrain the user to the edit style for the column. Painter: Properties window, Appearance category.
Required	Whether the user is restricted to the equality operator (=) when specifying criteria in query mode and in the Prompt for Criteria dialog box. Values are: Yes – Require the user to use the equality operator only. No – (Default) Allow the user to use any relational operator, including =, <>, <, >, >=, and <=. Painter: Properties window, Appearance category.

Usage

In the painter Set the values using the menus and Properties window as described in the table above.

Examples

```
[Visual Basic]
setting = dw1.Describe("empname.Criteria.Dialog")

dw1.Modify("empname.Criteria.Dialog=Yes")
dw1.Modify("empname.Criteria.Override_Edit=Yes")
dw1.Modify("empname.Criteria.Required=No")
```

Crosstab.*property*

Description

Settings for a DataWindow object whose presentation style is Crosstab.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Crosstab.*property* { = *value* }"

Parameter	Description
property	A property for a Crosstab DataWindow. Properties and their settings are listed in the table below.
value	A string expression listing the items to be assigned to the property. For Crosstab properties, *value* is always quoted and can be a DataWindow expression.

Property for Crosstab	Value
Columns	(*exp*) A string containing a comma- or tab-separated list of the names of columns that make up the columns of the crosstab. These are the columns that display across the top of the crosstab.
Rows	(*exp*) A string containing a comma- or tab-separated list of the names of columns that make up the rows of the crosstab.
SourceNames	(*exp*) A string containing a comma-separated list of column names to be displayed in the Crosstab Definition dialog box. The default names are the column names from the database.
StaticMode	A string indicating whether a dynamic crosstab should be put into a static mode. The dynamic crosstab remains in static mode until you set StaticMode to No. While the dynamic crosstab is in static mode, you can manipulate the properties of individual columns. Values are: Yes – StaticMode is enabled No – (Default) StaticMode is disabled
Values	(*exp*) A string containing a comma- or tab-separated list of expressions that will be used to calculate the values of the crosstab.

Usage

In the painter For DataWindow objects with the Crosstab presentation style, set the values in the Crosstab Definition dialog box. To display the dialog box, right-click in the Design view to display the pop-up menu and select Crosstab.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Crosstab.Columns")
dw1.Modify("DataWindow.Crosstab.Columns='dept_id'")

dw1.Modify("DataWindow.Crosstab.Rows='salary'")
dw1.Modify("DataWindow.Crosstab.Values='empname'")
dw1.Modify("DataWindow.Crosstab.StaticMode='yes'")
```

See also

CrosstabDialog function

CSSGen.*property*

Description

Settings that specify the physical path to which a generated CSS style sheet is published and the URL where the style sheet is located.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.CSSGen.*property* { = ' *value* ' }"

Parameter	Description
property	One of the following: • PublishPath • ResourceBase • SessionSpecific
value	(*exp*) PublishPath – a string that specifies the physical path of the Web site folder to which the DataWindow server publishes the generated CSS style sheet (*exp*) ResourceBase – a string that specifies the URL of the generated CSS style sheet to be referenced in a link element in the XHTML page (*exp*) SessionSpecific – a boolean that when set to "yes" forces a session-specific ID to be applied to any generated document names that would otherwise be shared

Usage

The PublishPath folder must correspond to the URL specified in the ResourceBase property. At runtime, after the DataWindow server generates the CSS style sheet to the PublishPath folder, it includes it in the final XHTML page by referencing it with the ResourceBase property in a <link> element.

Typically you share style (CSS), layout (XSLT), and control definitions (JS) for use by all clients; however, if you use dynamic DataWindow objects customized for specific clients, you can force generation of the DataWindow presentation-related document names to be specific to each client. You do this by setting the CSSGen.SessionSpecific property to "yes". This eliminates the possibility of server-side contention for presentation formats when the DataWindow generation is specific to the client.

In the painter In the Web Generation category in the Properties window for the DataWindow object, select CSS from the WebDW list, specify the Resource Base and Publish Path locations, and set the SessionSpecific property to True if you want to force generation of client-specific names.

In DataWindow .NET In DataWindow .NET, you can specify the physical directory in which dynamically created files, such as *.css*, *.js*, *.xml*, and *.xslt* files, and URL references are stored, using the XmlConfigurations.UrlPath property. If you specify a value for XmlConfigurations.UrlPath, it overrides the values for PublishPath and ResourceBase set in the DataWindow painter.

If you want to specify different paths for each of the different file types, if you want to specify a full path, or if you want to specify different paths for PublishPath and ResourceBase, set the properties in the DataWindow painter and leave the XmlConfigurations.UrlPath property empty in DataWindow .NET.

If you do not set these properties in the DataWindow painter or in DataWindow .NET, the files are saved in the current Web application's path.

Examples

These statements set the CSSGen.ResourceBase and CSSGen.PublishPath properties:

```
[Visual Basic]
dw1.Modify("DataWindow.CSSGen.PublishPath=
   'C:\Inetpub\wwwroot\MyWebApp\generatedfiles'")
dw1.Modify("DataWindow.CSSGen.ResourceBase=
   '/MyWebApp/generatedfiles'")
```

This statement sets the CSSGen.SessionSpecific property for a JSP page:

```
dwGen.Modify
   ("DataWindow.CSSGen.SessionSpecific='Yes'");
```

Data

Description

A tab-separated list describing the data in the DataWindow object.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Data"

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Data")
```

Data.HTML

Description

A string containing HTML and JavaScript that represents data and presentation of the DataWindow object.

The data is presented in a read-only HTML table or data-entry form, depending on settings of other properties.

Applies to

DataWindows

Syntax

Describe argument:

```
"DataWindow.Data.HTML"
```

Usage

When HTMLDW is set to False, the value of Data.HTML is the same as the value of HTMLTable—a read-only HTML table that displays all retrieved rows.

When the HTMLDW property is set to True, the value of Data.HTML is a form that supports data input with client scripts for data validation and events. The generated string for Data.HTML includes:

- HTML input elements
- JavaScript for validating newly entered data based on validation rules in the DataWindow object
- HTML and JavaScript for navigation based on DataWindow Button controls with scrolling actions
- State information about the modification status of data items

JavaScript for navigation passes the state of the DataWindow back to the page server in two variables: *objectname*_action and *objectname*_context. It also passes back any page parameters defined in the HTMLGen.SelfLinkArgs property. All the HTMLGen.property values affect the way HTML is generated.

The resulting Web DataWindow is a client-side control for a Web page with events and methods that can cooperate with a server component for a Web-based data entry application. For more information about the Web DataWindow, see the *Programmer's Guide*.

Exceptions If the DataWindow is in print preview mode, or there are no columns with non-zero tab order, the setting of HTMLDW is ignored and the generated HTML is a read-only table, not a data-entry form.

Examples

```
[Visual Basic]
strHtml = dw1.Describe("DataWindow.Data.HTML")
```

Data.HTMLTable

Description

The data in the DataWindow object described in HTML table format. This property is used in the process of dynamically creating Web pages from a database.

Applies to

DataWindows

Syntax

Describe argument:

```
"DataWindow.Data.HtmlTable"
```

Usage

Some presentation styles translate better into HTML than others. The Tabular, Group, Freeform, Crosstab, and Grid presentation styles produce good results. The Composite, TreeView, and Graph presentation styles produce HTML tables based on the result set only and not on the presentation style. DataWindows with overlapping controls in them might not produce the desired results. Nested reports are ignored; they are not included in the generated HTML.

The generated HTML for Data.HTMLTable is a read-only HTML Table element that includes:

- All retrieved rows (in contrast to the Web DataWindow, which paginates the result set)
- Hyperlinks for text, pictures, computed fields, and columns as defined in the HTML.property settings

Data.HTMLTable is not affected by the HTMLDW property and does not generate a client control with events and support for scripting in the Web page.

The values of HTMLGen.Browser and HTMLGen.Version affect the generated HTML. Setting these properties causes the generated HTML to be optimized for a specific level of HTML support or specific browser using style sheets and absolute positioning, if possible. For more information, see HTMLGen.property.

The resulting HTML table does not allow data entry.

An easy way to see a DataWindow in a Web browser The HTML string that the Data.HTMLTable property returns is equivalent to the string that is saved when you use either the File>Save Rows As HTML Table option in the DataWindow painter workspace or the SaveAs method.

To see what a DataWindow will look like, save it as an HTML file and open the file in a Web browser such as Netscape.

In the painter When HTMLDW is not selected, the Design>HTML Preview displays the value of Data.HTMLTable. Save an HTML file that you can use later in a browser with File>Save Rows As; set the Save As Type to HTML Table.

Examples

```
[Visual Basic]
ls_html = dw1.Describe("DataWindow.Data.HTMLTable")
```

Data.XHTML

Description

A string containing the row data content of the DataWindow object in XHTML format.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Data.XHTML"

Usage

If any of the Export.XHTML properties have been set, the string that is generated reflects the values of these properties.

The resulting XHTML string contains a <form> element that supports data input, which works with separate client scripts for data validation and events.

The generated XHTML string also includes:

- XHTML input elements
- XHTML and JavaScript for navigation based on DataWindow button controls with scrolling actions
- State information about the modification status of data items

JavaScript for navigation passes the state of the DataWindow back to the page server in two variables: *objectname_action* and *objectname_context*. It also passes back any page parameters defined in the HTMLGen.SelfLinkArgs property. All applicable HTMLGen.property values also affect the way the XHTML is generated.

The resulting XML Web DataWindow is a client-side control for a Web page, such as a JSP page, with events and methods that can cooperate with a server component for a Web-based data entry application.

Examples

The following statements set the template used by the DataWindow dw1 to t_report and return the generated XHTML document to the string ls_XHTML. To generate the string, the final statement invokes the XML Web DataWindow generator to generate the XHTML, CSS, and JavaScript components, applying the t_report template to the generated XHTML and CSS style sheet.

```
[Visual Basic]
dw1.Modify("DataWindow.Export.XHTML.UseTemplate =
   't_report'")
strXHTML = dw1.Describe("DataWindow.Data.XHTML")
```

Data.XML

Description

A string containing the row data content of the DataWindow object in XML format.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Data.XML"

Usage

If any of the Export.XML properties have been set, the string that is generated reflects the values of these properties.

Note If Export.XML.SaveMetaData is set to MetaDataExternal!, no metadata is generated in the string.

Examples

The following statements set the template used by the DataWindow dw1 to t_report, specify that metadata in the XMLSchema! format should be included in the generated XML, and return the generated XML document to the string ls_xml.

```
[Visual Basic]
dw1.Modify("DataWindow.Export.XML.UseTemplate =
   't_report'")
dw1.Modify("DataWindow.Export.XML.SaveMetaData =
   MetaDataInternal!")
dw1.Modify
   ("DataWindow.Export.XML.MetaDataType = XMLSchema!")
```

Data.XMLDTD

Description	A string containing the full document type definition (DTD) of the XML output for a DataWindow object.
Applies to	DataWindows
Syntax	Describe argument: "DataWindow.Data.XMLDTD"
Usage	Use this property to return the full DTD of the XML output of a DataWindow object separately from the generated XML document itself. The export template used affects the generated DTD.

Data.XMLSchema

Description	A string containing the full schema of the XML output of a DataWindow object.
Applies to	DataWindows
Syntax	Describe argument: "DataWindow.Data.XMLSchema"
Usage	Use this property to return the full schema of the XML output of a DataWindow object separately from the generated XML document itself. The export template used affects the generated schema.

Data.XMLWeb

Description	A string containing browser-specific JavaScript that performs the XSLT transformation on the browser after the XML Web DataWindow generator generates all necessary components.
Applies to	DataWindows
Syntax	Describe argument: "DataWindow.Data.XMLWeb"
Usage	If any of the Export.XHTML properties have been set, the string that is generated reflects the values of these properties. The resulting XHTML string contains a <form> element that supports data input, which works with separate client scripts for data validation and events.

The generated XHTML string also includes:

- XHTML input elements
- XHTML and JavaScript for navigation based on DataWindow button controls with scrolling actions
- State information about the modification status of data items

JavaScript for navigation passes the state of the DataWindow back to the page server in two variables: *objectname_action* and *objectname_context*. It also passes back any page parameters defined in the HTMLGen.SelfLinkArgs property. All applicable HTMLGen.property values also affect the way the XHTML is generated.

The resulting XML Web DataWindow is a client-side control for a Web page, such as a JSP page, with events and methods that can cooperate with a server component for a Web-based data entry application.

Data.XSLFO

Description

A string containing XSL Formatting Objects (XSL-FO) that represents the data and presentation of the DataWindow object.

This property is not supported in DataWindow .NET.

Applies to

DataWindows

Syntax

Describe argument:

```
"DataWindow.Data.XSLFO"
```

Usage

Use this property to return the data and presentation of a DataWindow object in XSL-FO format. The export template associated with the DataWindow object does not affect the generated string.

DataObject

Description

The name of the DataWindow object that is the nested report within the main DataWindow object.

Applies to

Report controls

Syntax

Describe and Modify argument:

"*reportname*.DataObject = ' *dwname* ' "

Parameter	Description
reportname	The name of the Report control in the main DataWindow object for which you want to get or set the nested DataWindow object
dwname	A string naming a DataWindow object in the application's libraries that is the DataWindow object for the report within the main DataWindow object

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("rpt_1.DataObject")
dw1.Modify("rpt_1.DataObject='d_empdata'")
```

dbAlias

Description

The name of the database column but with the table alias in place of the table name, if any. This value can be used to construct the update DataWindow syntax dynamically when an alias name is used for a table.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname.*dbAlias { = ' *dbcolumnname* ' }"

Parameter	Description
columnname	The name of the column for which you want the name of the corresponding database column qualified with the table alias name
dbcolumnname	The name of the database column associated with *columnname* qualified with the alias of the table name

Usage

DbAlias is the name of the database column in the format *tablealiasname.columnname*. The value of dbAlias does not include the quotes that can be part of the SQL syntax. This property can be used to construct update DataWindow syntax dynamically when an alias is used for a column name.

In the painter You can specify an alias for a table in the SQL Select painter if you convert the SQL statement for a DataWindow object to syntax. Select Design>Data Source to open the SQL Select painter, then select Design>Convert to Syntax. In the text window that displays, add the alias name to the FROM clause using the syntax:

FROM *tablename tablealiasname*

Examples

Suppose a DataWindow object has the following SQL Select syntax, with the alias "emp" for the table "employee":

```
SELECT "emp"."emp_id",
       "emp"."emp_fname",
       "emp"."emp_lname"
       "emp"."dept_id"
       "emp"."salary"
FROM "employee" "emp"
WHERE ( "emp"."salary" > 50000 )
```

Then the following statements would return the string "employee.emp_id" in *ls_name* and the string "emp.emp_id" in *ls_alias*:

```
[Visual Basic]
strName = dw1.Describe("emp_id.dbName")
strName = dw1.Describe("emp_id.dbAlias")
```

See also

dbName

dbName

Description

The name of the database column. The DataWindow server uses this value to construct the update syntax.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.dbName { = ' *dbcolumnname* ' }"

Parameter	Description
columnname	The name of the column for which you want the name of the corresponding database column
dbcolumnname	The name of the database column associated with *columnname*

Usage

DbName is the name of the database column in the format *tablename.columnname*. The value of dbName does not include the quotes that can be part of the SQL syntax.

In the painter The Syntax view in the SQL Select painter displays the database column names (they can be shown with quotes).

Examples

```
[Visual Basic]
dbcol = dw1.Describe("emp_id.dbName")
dw1.Modify("emp_id.dbName='emp_id'")
```

See also

dbAlias

dddw.*property*

Description

Properties that control the appearance and behavior of a column with the DropDownDataWindow edit style.

Applies to

Column controls

Syntax

DataWindow .NET dot notation:

((DDDW) *colname*.EditStyle).*property* [C#]
CType(*colname*.EditStyle, DDDW).*property* [Visual Basic]

Describe and Modify argument:

"*columnname*.dddw.*property* { = *value* }"

Parameter	Description
columnname	The name of a column that has the DropDownDataWindow edit style.
property	A property for the DropDownDataWindow column. Properties and their settings are listed in the table below.
value	The value to be assigned to the property. For dddw properties, *value* cannot be a DataWindow expression.

Property for dddw	Value
AllowEdit	Whether the user can type a value as well as choose from the DropDownDataWindow's list. Values are: Yes – Typing is allowed. No – (Default) Typing is not allowed. Call GetChild *after* setting dddw.AllowEdit to get a valid reference to the column's DropDownDataWindow.
AutoHScroll	Whether the DropDownDataWindow automatically scrolls horizontally when the user enters or deletes data. Values are: Yes – (Default) Scroll horizontally automatically. No – Do not scroll automatically.
AutoRetrieve	Whether the DropDownDataWindow data is retrieved when the parent DataWindow data is retrieved. Values are: Yes – (Default) Data is automatically retrieved. No – Data must be retrieved separately.

Property for dddw	Value
Case	The case of the text in the DropDownDataWindow. Values are: Any – Character of any case allowed. Upper – Characters converted to uppercase. Lower – Characters converted to lowercase. Call GetChild *after* setting dddw.Case to get a valid reference to the column's DropDownDataWindow.
DataColumn	A string whose value is the name of the data column in the associated DropDownDataWindow. *Value* is quoted. Call GetChild *after* setting dddw.DataColumn to get a valid reference to the column's DropDownDataWindow.
DisplayColumn	A string whose value is the name of the display column in the associated DropDownDataWindow. *Value* is quoted. Call GetChild *after* setting dddw.DisplayColumn to get a valid reference to the column's DropDownDataWindow.
HScrollBar	Whether a horizontal scroll bar displays in the DropDownDataWindow. Values are: Yes – Display a horizontal scroll bar. No – Do not display a horizontal scroll bar.
HSplitScroll	Whether the horizontal scroll bar is split. The user can adjust the split position. Values are: Yes – Split the horizontal scroll bar so the user can scroll the display and data columns separately. No – The horizontal scroll bar is not split.
Limit	An integer from 0 to 32767 specifying the maximum number of characters that can be entered in the DropDownDataWindow. Zero means unlimited.
Lines	An integer from 0 to 32767 specifying the number of lines (values) to display in the DropDownDataWindow. This property does not apply in Web pages because the browser controls how the DropDownDataWindow displays.
Name	A string whose value is the name of the DropDownDataWindow associated with the column. Call GetChild *after* setting dddw.Name to get a valid reference to the column's DropDownDataWindow.
NilIsNull	Whether to set the data value of the DropDownDataWindow to null when the user leaves the edit box blank. Values are: Yes – Make the Empty string null. No – Do not make the empty string null.

Property for dddw	Value
PercentWidth	An integer specifying the width of the drop-down portion of the DropDownDataWindow as a percentage of the column's width. For example, 300 sets the display width to three times the column width. Call GetChild *after* setting dddw.PercentWidth to get a valid reference to the column's DropDownDataWindow.
Required	Whether the column is required. Values are: Yes – Required. No – (Default) Not required.
ShowList	Whether the ListBox portion of the DropDownDataWindow displays when the column has focus. A down arrow does not display at the right end of the DropDownDataWindow when dddw.ShowList is yes. Values are: Yes – Display the list whenever the column has the focus. No – Do not display the list until the user selects the column.
UseAsBorder	Whether a down arrow displays at the right end of the DropDownDataWindow. Values are: Yes – Display the arrow. No – Do not display the arrow. Note that if ShowList is set to Yes, the column ignores the UseAsBorder property and the arrow never displays.
VScrollBar	Whether a vertical scroll bar displays in the DropDownDataWindow for long lists. Values are: Yes – Display a vertical scroll bar. No – Do not display a vertical scroll bar..

Usage

DropDownDataWindows and GetChild When you set some of the dddw properties, as noted in the table, references to the DropDownDataWindow become invalid. Call GetChild again after changing these properties to obtain a valid reference.

To retrieve a DropDownDataWindow when the AutoRetrieve property is set to False, you can access the object data as follows:

```
[Visual Basic]
dw1.GetChild ("dept_head_id", mgr_id)
mgr_id.SetTransaction (SQLCA)
mgr_id.Retrieve ( )
```

You can also pass a retrieval argument for the retrieve on the child DataWindow object.

Doing a reset to clear the data When a DropDownDataWindow is retrieved, its data is kept with its own Data Object. If you retrieve the DropDownDataWindow and then set the AutoRetrieve property on the parent to False, the data for the child is not cleared on a reset and re-retrieve of the parent.

To clear data from a DropDownDataWindow, you must call Reset on the child DataWindow object:

```
dw1.GetChild ("dept_head_id", mgr_id)
mgr_id.reset ( )
```

In the painter Select the control and set values in the Properties window, Behavior category, when EditStyle is DropDownDW.

In DataWindow .NET, you can use the DDDW class to set DropDownDW style properties using dot notation. See the description of the DDDW class in the online Help in Visual Studio .NET for a complete list of properties. Some properties have different names and are set differently. For example, the Case DataWindow object property is equivalent to the CharacterCasing property in DataWindow .NET, which uses an enumeration.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("emp_status.dddw.AllowEdit")
dw1.Modify("emp_status.dddw.Case='Any'")
dw1.Modify("emp_status.dddw.DataColumn='status_id'")
dw1.Modify("emp_status.dddw.Limit=30")
dw1.Modify("emp_status.dddw.Name='d_status'")
dw1.Modify("emp_status.dddw.PercentWidth=120")
```

```
[Visual Basic]
If TypeOf state.EditStyle Is DDDW Then
   CType(state.EditStyle, DDDW).AllowEdit = True
ElseIf
...
```

```
[C#]
if (state.EditStyle is DDDW)
{
   ((DDDW)state.EditStyle).AllowEdit = true;
}
else
....
```

ddlb.*property*

Description

Properties that control the appearance and behavior of a column with the DropDownListBox edit style.

Applies to

Column controls

Syntax

DataWindow .NET dot notation:

((DDLB) *colname*.EditStyle).*property* [C#]
CType(*colname*.EditStyle, DDLB).*property* [Visual Basic]

Describe and Modify argument:

"*columnname*.ddlb.*property* { = *value* }"

Parameter	Description
columnname	The name of a column that has the DropDownListBox edit style.
property	A property for the DropDownListBox column. Properties and their settings are listed in the table below.
value	The value to be assigned to the property. For ddlb properties, value cannot be a DataWindow expression.

Property for ddlb	Value
AllowEdit	Whether the user can type a value as well as choose from the DropDownListBox's list. Values are: Yes – Typing is allowed. No – (Default) Typing is not allowed.
AutoHScroll	Whether the DropDownListBox automatically scrolls horizontally when the user enters or deletes data. Values are: Yes – (Default) Scroll horizontally automatically. No – Do not scroll automatically.
Case	The case of the text in the DropDownListBox. Values are: Any – Character of any case allowed. Upper – Characters converted to uppercase. Lower – Characters converted to lowercase.
Limit	An integer from 0 – 32767 specifying the maximum number of characters that can be entered in the DropDownListBox. Zero means unlimited.

Property for ddlb	Value
NilIsNull	Whether to set the data value of the DropDownListBox to null when the user leaves the edit box blank. Values are: Yes – Make the empty string null. No – Do not make the empty string null.
Required	Whether the column is required. Values are: Yes – Required. No – (Default) Not required.
ShowList	Whether the ListBox portion of the DropDownListBox displays when the column has focus. A down arrow does not display at the right end of the DropDownListBox when ddlb.ShowList is yes. Values are: Yes – Display the list whenever the column has focus. No – Do not display the list until the user selects the column.
Sorted	Whether the list in the DropDownListBox is sorted. Values are: Yes – The list is sorted. No – The list is not sorted.
UseAsBorder	Whether a down arrow displays at the right end of the DropDownListBox. Values are: Yes – Display the arrow. No – Do not display the arrow. Note that if ShowList is set to Yes, the column ignores the UseAsBorder property and the arrow never displays.
VScrollBar	Whether a vertical scroll bar displays in the DropDownListBox for long lists. Values are: Yes – Display a vertical scroll bar. No – Do not display a vertical scroll bar.

Usage

In the painter Select the control and set the value in the Properties window, Behavior category, when EditStyle is DropDownListBox.

In DataWindow .NET, you can use the DDLB class to set DropDownListBox style properties using dot notation. See the description of the DDLB class in the online Help in Visual Studio .NET for a complete list of properties. Some properties have different names and are set differently. For example, the Case DataWindow object property is equivalent to the CharacterCasing property in DataWindow .NET, which uses an enumeration.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("emp_status.ddlb.AllowEdit")
dw1.Modify("emp_status.ddlb.Case='Any'")
dw1.Modify("emp_status.ddlb.Limit=30")
```

```
[Visual Basic]
If TypeOf status.EditStyle Is DDLB Then
   CType(status.EditStyle, DDLB).AllowEdit = True
ElseIf
...
```

```
[C#]
if (emp_status.EditStyle is DDLB)
{
   ((DDLB)emp_status.EditStyle).AllowEdit = true;
}
else
....
```

DefaultPicture

Description

Specifies whether a button displays a default picture for the button's action.

Applies to

Button controls

Syntax

Describe and Modify argument:

"*buttonname.*DefaultPicture { = ' *value* ' }"

Parameter	Description
buttonname	The name of the button to which you want to assign an action.
value	Whether the action's default picture is used. Values are: Yes – Use the default picture. No – Do not use the default picture.

Usage

Default pictures can be associated with all button action types. However, the only default pictures provided for use on a Web DataWindow are: InsertRow, PageFirst, PageLast, PageNext, PagePrior, Retrieve, and Update. These pictures are included as GIF files in the *DWACTION110.JAR* file in the *Sybase\DataWindow Designer 2.5* directory.

For the Web DataWindow, you must uncompress the *dwaction110.jar* file, deploy the individual GIF files to your Web site, and specify their location with the DataWindow HTMLGen.ResourceBase property that you can set in the JavaScript Generation category in the DataWindow's Property window.

You can add your own action pictures by setting the DefaultPicture property to False and setting the Filename property to the file name for the picture you want. You can use a URL instead of a complete path to qualify the file name, and you can leave off the URL server name, mapping prefix, and folder name if you set them in the HTMLGen.ResourceBase property.

A user-defined action does not have a default picture associated with it.

In the painter Select the control and set the value in the Properties window, Appearance category. When the DefaultPicture is not set, you can specify a picture file name in the FileName property. Button pictures can be BMP, GIF, or JPEG files.

Examples

```
[Visual Basic]
setting = dw1.Describe("b_name.DefaultPicture")
dw1.Modify("b_name.DefaultPicture ='No'")
```

See also

HTMLGen.property
DefaultPicture
Filename

Depth

Description

The depth of a 3D graph.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname.*Depth { = ' *depthpercent* ' }"

Parameter	Description
graphname	The graph control within the DataWindow for which you want to set the depth.
depthpercent	(*exp*) An integer whose value is the depth of the graph, specified as a percentage of the graph's width. *Depthpercent* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Depth")
dw1.Modify("graph_1.Depth='70'")
```

Detail_Bottom_Margin

Description: The size of the bottom margin of the DataWindow's detail area.

Applies to: Style keywords

Syntax: DataWindowSyntaxFromSql:

Style (Detail_Bottom_Margin = *value*)

Parameter	Description
value	An integer specifying the size of the bottom margin of the detail area in the units specified for the DataWindow.

Examples:

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'Style(...Detail_Bottom_Margin = 25 ...)')
```

Detail_Top_Margin

Description: The size of the top margin of the DataWindow's detail area.

Applies to: Style keywords

Syntax: DataWindowSyntaxFromSql:

Style (Detail_Top_Margin = *value*)

Parameter	Description
value	An integer specifying the size of the top margin of the detail area in the units specified for the DataWindow.

Examples:

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
   sqlstring, 'Style(...Detail_Top_Margin = 25 ...)')
```

Detail.*property*

See Bandname.property.

DispAttr.*fontproperty*

Description — Settings for the appearance of various text components of a graph.

Applies to — Properties of Graph controls, as noted throughout this discussion

Syntax — Describe and Modify argument:

"*graphname*.*property*.DispAttr.*fontproperty* { = *value* }"

Parameter	Description
graphname	The Graph control in a DataWindow for which you want to get or set font appearance values.
property	A text component of the graph, such as an *Axis* keyword (Category, Series, or Values), Legend, Pie, or Title, specifying the graph component whose appearance you want to get or set. These properties have their own entries. These values are listed in the following table. You can also set font properties for the label of an axis with the following syntax: "*graphname.axis*.LabelDispAttr.*fontproperty* { = *value* }"
fontproperty	A property that controls the appearance of text in the graph. Properties and their settings are listed in the table below.
value	The value to be assigned to *fontproperty*. *Value* can be a quoted DataWindow expression.

Property for DispAttr	Value
Alignment	(*exp*) The alignment of the text. Values are: 0 – Left 1 – Right 2 – Center
AutoSize	(*exp*) Whether the text element should be autosized according to the amount of text being displayed. Values are: 0 – Do not autosize 1 – Autosize
BackColor	(*exp*) A long value specifying the background color of the text.
DisplayExpression	An expression whose value is the label for the graph component. The default expression is the property containing the text for the graph component. The expression can include the text property and add other variable text.

Property for DispAttr	Value
Font.CharSet	(*exp*) An integer specifying the character set to be used. Values are: 0 – ANSI 1 – The default character set for the specified font 2 – Symbol 128 – Shift JIS 255 – OEM
Font.Escapement	(*exp*) An integer specifying the rotation for the baseline of the text in tenths of a degree. For example, a value of 450 rotates the text 45 degrees. 0 is horizontal.
Font.Face	(*exp*) A string specifying the name of the font face, such as Arial or Courier.
Font.Family	(*exp*) An integer specifying the font family (Windows uses both face and family to determine which font to use). Values are: 0 – AnyFont 1 – Roman 2 – Swiss 3 – Modern 4 – Script 5 – Decorative
Font.Height	(*exp*) An integer specifying the height of the text in the unit of measure for the DataWindow. To specify size in points, specify a negative number. Not available when AutoSize is checked.
Font.Italic	(*exp*) Whether the text should be italic. Values are: 0 – Not italic (default) 1 – Italic
Font.Orientation	Same as Escapement.
Font.Pitch	(*exp*) The pitch of the font. Values are: 0 – The default pitch for your system 1 – Fixed 2 – Variable
Font.Strikethrough	(*exp*) Whether the text should be crossed out. Values are: 0 – Not crossed out (default) 1 – Crossed out

Property for DispAttr	Value
Font.Underline	(*exp*) Whether the text should be underlined. Values are: 0 – Not underlined (default) 1 – Underlined
Font.Weight	(*exp*) An integer specifying the weight of the text, for example, 400 for normal or 700 for bold. Painter: Set indirectly using the Bold option.
Font.Width	(*exp*) An integer specifying the width of the font in the unit of measure specified for the DataWindow. Width is usually unspecified, which results in a default width based on the other properties.
Format	(*exp*) A string containing the display format for the text.
TextColor	(*exp*) A long specifying the color to be used for the text.

Usage

In the painter Select the control and set values in the Properties window, Text category. Settings apply to the selected item in the Text Object list box.

Examples

```
[Visual Basic]
setting = _
   dw1.Describe("Category.LabelDispAttr.Font.Face")

dw1.Modify("Category.LabelDispAttr.Font.Face='Arial'")
dw1.Modify("Title.DispAttr.DisplayExpression="
"'Title + ~"~n~" + Today()'")
```

DisplayType

Description

The way the OLE Object control displays the OLE object it contains. It can display an icon or an image of the object's contents. The image is reduced to fit inside the OLE container.

Both the icon and the image are provided by the OLE server. If the OLE server does not support a contents view, the DataWindow server displays an icon even if DisplayType is set to contents.

Applies to

OLE Object controls

Syntax

Describe and Modify argument:

"*olecontrolname*.DisplayType { = ' *type* ' }"

Parameter	Description
olecontrolname	The name of the OLE Object control for which you want to get or set the type of display.

Parameter	Description
type	A number specifying whether the user will see an icon or an image of the OLE object's contents. *Type* can be a quoted DataWindow expression. Values are: 0 – Icon 1 – Content

Usage

In the painter Select the control and set the value in the Properties window, Options category.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("ole_report.DisplayType")
dw1.Modify("ole_report.DisplayType='1'")
```

Edit.*property*

Description

Settings that affect the appearance and behavior of columns whose edit style is Edit.

Applies to

Column controls

Syntax

DataWindow .NET dot notation:

((SimpleEdit) *colname*.EditStyle).*property* [C#]
CType(*colname*.EditStyle, SimpleEdit).*property* [Visual Basic]

Describe and Modify argument:

"*columnname*.Edit.*property* { = *value* }"

DataWindowSyntaxFromSql:

Column (Edit.*property* = *value*)

Parameter	Description
columnname	The column with the Edit edit style for which you want to get or set property values. You can specify the column name or a pound sign (#) and the column number.
property	A property for the column's Edit style. Properties and their settings are listed in the table below. The table identifies the properties you can use with DataWindowSyntaxFromSql.
value	The value to be assigned to the property. For most Edit properties, you cannot specify a DataWindow expression. The exception is Edit.Format.

Property for Edit	Value
AutoHScroll	Whether the edit control scrolls horizontally automatically when data is entered or deleted. Values are: Yes – Scroll horizontally automatically. No – Do not scroll horizontally automatically. You can use AutoHScroll with DataWindowSyntaxFromSql. The setting applies to all the columns in the generated syntax.
AutoSelect	Whether to select the contents of the edit control automatically when it receives focus. Values are: Yes – Select automatically. No – Do not select automatically. You can use AutoSelect with DataWindowSyntaxFromSql. The setting applies to all the columns in the generated syntax.
AutoVScroll	Whether the edit box scrolls vertically automatically when data is entered or deleted. Values are: Yes – Scroll vertically automatically. No – Do not scroll vertically automatically. You can use AutoVScroll with DataWindowSyntaxFromSql. The setting applies to all the columns in the generated syntax.
Case	The case of the text in the edit control. Values are: Any – Character of any case allowed. Upper – Characters converted to uppercase. Lower – Characters converted to lowercase.
CodeTable	Whether the column has a code table. Values are: Yes – Code table defined. No – No code table defined.
DisplayOnly	Whether the column is display only. Values are: Yes – Do not allow the user to enter data; make the column display only. No – (Default) Allow the user to enter data. For conditional control over column editing, use the Protect property.

Property for Edit	Value
FocusRectangle	Whether a dotted rectangle (the focus rectangle) will surround the current row of the column when the column has focus. Values are: Yes – (Default) Display the focus rectangle. No – Do not display the focus rectangle. You can use FocusRectangle with DataWindowSyntaxFromSql. The setting applies to all the columns in the generated syntax.
Format	(*exp*) A string containing the display format of the edit control. The value for Format is quoted and can be a DataWindow expression.
HScrollBar	Whether a horizontal scroll bar displays in the edit control. Values are: Yes – Display the horizontal scroll bar. No – Do not display the horizontal scroll bar.
Limit	A number specifying the maximum number of characters (0 to 32,767) that the user can enter. 0 means unlimited.
Name	A string whose value is the name of the predefined edit style associated with the column. Named styles are defined in the Database painter and can be reused. Specifying a name that has not been previously defined associates the name with the column but does not define a new edit style.
NilIsNull	Whether to set the value of the edit control to null when the user leaves it blank. Values are: Yes – Make the Empty string null. No – Do not make the empty string null.
Password	Whether to assign secure display mode to the column. When the user enters characters, they display as asterisks (*). Values are: Yes – Assign secure display mode to the column. No – Do not assign secure-display mode to the column. If you change the Password property, you should also change the Format property to display the results you want (for example, *****).
Required	Whether the column is required. Values are: Yes – It is required. No – It is not required.
Style	(*Describe only*) Returns the edit style of the column. Painter: EditStyle option.

Property for Edit	Value
UseEllipsis	Whether an ellipsis (three dots) displays when a column with the Edit edit style contains character data that is too long for the display column in the DataWindow. The ellipsis does not display when the column has focus. Values are: Yes – Truncate the data and add an ellipsis. No – Truncate the data. Do not add an ellipsis. The property is ignored if you: • Set the Height.Autosize property. • Specify an expression for the Font.Escapement property to rotate the text. The UseEllipsis DataWindow object property is not supported in Web Forms applications.
ValidateCode	Whether the code table will be used to validate user-entered values. Values are: Yes – Use the code table. No – Do not use the code table.
VScrollBar	Whether a vertical scroll bar displays in the line edit. Values are: Yes – Display vertical scroll bars. No – Do not display vertical scroll bars.

Usage

In the painter Select the control and set values in the Properties window, Behavior category, when EditStyle is Edit.

In DataWindow .NET, you can use the SimpleEdit class to set Edit style properties using dot notation. See the description of the SimpleEdit class in the online Help in Visual Studio .NET for a complete list of properties. Some properties have different names and are set differently. For example, the Case DataWindow object property is equivalent to the CharacterCasing property in DataWindow .NET, which uses an enumeration.

Examples

```
[Visual Basic]
dw1.emp_name.Edit.Required = false

setting = dw1.Describe("emp_name.Edit.AutoHScroll")
dw1.Modify("emp_name.Edit.Required=no")

dw1.Modify("col1.Edit.UseEllipsis=Yes")
```

EditMask.*property*

Description

Settings that affect the appearance and behavior of columns with the EditMask edit style.

Applies to

Column controls

Syntax

DataWindow .NET dot notation:

((EditMask) *colname*.EditStyle).*property* [C#]
CType(*colname*.EditStyle, EditMask).*property* [Visual Basic]

Describe and Modify argument:

"*columnname*.EditMask.*property* { = *value* }"

Parameter	Description
columnname	The column with the EditMask edit style for which you want to get or set property values. You can specify the column name or a pound sign (#) and the column number.
property	A property for the column's EditMask style. Properties and their settings are listed in the table below.
value	The value to be assigned to the property. For EditMask properties, you cannot specify a DataWindow expression.

Property for EditMask	Value
AutoSkip	Whether the EditMask will automatically skip to the next field when the maximum number of characters has been entered. Values are: Yes – Skip automatically. No – Do not skip automatically.
CodeTable	Whether the column has a code table. Values are: Yes – Code table defined. No – No code table defined.

Property for EditMask	Value
DDCalendar	Whether a drop-down calendar control displays when a user clicks in a column with a Date or DateTime edit mask. Values are: Yes – Drop-down calendar control displays. No – (Default) Drop-down calendar control does not display. For Web DataWindows, to make sure that dates selected with the drop-down calendar option are displayed with the desired edit mask, you should specify that the Client Formatting option be included with the static JavaScript generated and deployed for the DataWindow. To conserve bandwidth, JavaScript for client formatting is not included by default. If you do not include script for client formatting, the drop-down calendar will use a default edit mask to display the column data based on the client machine's default localization settings.
DDCal_AlignRight	Whether the drop-down calendar is aligned with the right side of the column. Values are: Yes – Column is right aligned. No – (Default) Column is left aligned.
DDCal_BackColor	The background color of the drop-down calendar. The default is Window Background.
DDCal_TextColor	The color of text in the drop-down calendar. The default is Window Text.
DDCal_TitleBackColor	The background color of the title in the drop-down calendar. The default is Highlight.
DDCal_TitleTextColor	The color of text in the title of the drop-down calendar. The default is Highlight Text.
DDCal_TrailingTextColor	The color of trailing text (days in the previous and next months) in the drop-down calendar. The default is Disabled Text.
FocusRectangle	Whether a dotted rectangle (the focus rectangle) will surround the current row of the column when the column has focus. Values are: Yes – (Default) Display the focus rectangle. No – Do not display the focus rectangle.
Mask	A string containing the edit mask for the column.
ReadOnly	Whether the column is read-only. This property is valid only if EditMask.Spin is set to Yes. Values are: Yes – Do not allow the user to enter data; make the column read-only. No – (Default) Allow the user to enter data.
Required	Whether the column is required. Values are: Yes – It is required. No – It is not required.

Property for EditMask	Value
DDCalendar	Whether a drop-down calendar control displays when a user clicks in a column with a Date or DateTime edit mask. Values are: Yes – Drop-down calendar control displays. No – (Default) Drop-down calendar control does not display. For Web DataWindows, to make sure that dates selected with the drop-down calendar option are displayed with the desired edit mask, you should specify that the Client Formatting option be included with the static JavaScript generated and deployed for the DataWindow. To conserve bandwidth, JavaScript for client formatting is not included by default. If you do not include script for client formatting, the drop-down calendar will use a default edit mask to display the column data based on the client machine's default localization settings.
DDCal_AlignRight	Whether the drop-down calendar is aligned with the right side of the column. Values are: Yes – Column is right aligned. No – (Default) Column is left aligned.
DDCal_BackColor	The background color of the drop-down calendar. The default is Window Background.
DDCal_TextColor	The color of text in the drop-down calendar. The default is Window Text.
DDCal_TitleBackColor	The background color of the title in the drop-down calendar. The default is Highlight.
DDCal_TitleTextColor	The color of text in the title of the drop-down calendar. The default is Highlight Text.
DDCal_TrailingTextColor	The color of trailing text (days in the previous and next months) in the drop-down calendar. The default is Disabled Text.
FocusRectangle	Whether a dotted rectangle (the focus rectangle) will surround the current row of the column when the column has focus. Values are: Yes – (Default) Display the focus rectangle. No – Do not display the focus rectangle.
Mask	A string containing the edit mask for the column.
ReadOnly	Whether the column is read-only. This property is valid only if EditMask.Spin is set to Yes. Values are: Yes – Do not allow the user to enter data; make the column read-only. No – (Default) Allow the user to enter data.
Required	Whether the column is required. Values are: Yes – It is required. No – It is not required.

Property for EditMask	Value
Spin	Whether the user can scroll through a list of possible values for the column with a spin control. Values are: Yes – Display a spin control. No – (Default) Do not display a spin control. This setting has no effect in Web DataWindows.
SpinIncr	An integer indicating the amount to increment the spin control's values. The default for numeric values is 1; for dates, 1 year; and for time, 1 minute. Available for numeric, date, and time columns. For columns that are not numeric, date, or time, the spin control scrolls through values in an associated code table. If the EditMask.CodeTable property is No, the spin increment has no effect for these columns.
SpinRange	A string containing the maximum and minimum values for the column that will display in the spin control. The two values are separated by a tilde (~). This property is effective only if EditMaskSpin is True. Available for numeric, date, and time columns. Because the SpinRange string is within another quoted string, the tilde separator becomes four tildes in DataWindow .NET, which reduces to a single tilde when parsed. The format for the string is: "EditMask.SpinRange = ' *minval*~~~~*maxval* ' "
UseEllipsis	Whether an ellipsis (three dots) displays when a column with the EditMask edit style contains character data that is too long for the display column in the DataWindow. The ellipsis does not display when the column has focus. Values are: Yes – Truncate the data and add an ellipsis. No – Truncate the data. Do not add an ellipsis. The property is ignored if you: • Set the Height.Autosize property. • Specify an expression for the Font.Escapement property to rotate the text. The UseEllipsis DataWindow object property is not supported in Web Forms applications.
UseFormat	Whether a Format Display mask is used for a column's display. A Format Display mask is used only when the column does not have focus. Values are: Yes – Use a Format Display mask. No – (Default) Do not use a Format Display mask.

Usage

In the painter Select the control and set values in the Properties window, Behavior category, when Style is EditMask.

In DataWindow .NET, you can use the EditMask class to set EditMask style properties using dot notation. See the description of the EditMask class in the online Help in Visual Studio .NET for a complete list of properties. Some properties have different names and are set differently. For example, spin values are set differently.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_status.EditMask.Spin")
dw1.Modify("empBonus.EditMask.SpinIncr=1000")
dw1.Modify("empBonus.EditMask.SpinRange='0~~~~5000'")
```

```
[Visual Basic]
If TypeOf strtdt.EditStyle Is EditMask Then
   CType(strtdt.EditStyle, EditMask).Mask = _
      "yyyy-mm-dd"
   CType(strtdt.EditStyle, EditMask).Spin.Minimum _
      = "100"
   CType(strtdt.EditStyle, EditMask).Spin.Maximum _
      = "10000"
   CType(strtdt.EditStyle, EditMask).Spin.Increment _
      = 10
ElseIf
...
```

```
[C#]
if (strtdt.EditStyle is EditMask)
{
   ((EditMask)strtdt.EditStyle).Mask = "yyyy-mm-dd";
}
else
....
```

```
dw1.Modify("col1.EditMask.UseEllipsis=Yes")
```

Elevation

Description

The elevation in a 3D graph.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.Elevation { = ' *integer* ' }"

Parameter	Description
graphname	The name of the graph control in the DataWindow for which you want to get or set the elevation.
integer	(*exp*) An integer specifying the elevation of the graph. Elevation can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category, Elevation (enabled when a 3D graph type is selected).

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Elevation")
dw1.Modify("graph_1.Elevation=35")
dw1.Modify("graph_1.Elevation='10~tIf(...,20,30)'")
```

EllipseHeight

Description

The radius of the vertical part of the corners of a RoundRectangle.

Applies to

RoundRectangle controls

Syntax

Describe and Modify argument:

"*rrectname*.EllipseHeight { = ' *integer* ' }"

Parameter	Description
rrectname	The name of the RoundRectangle control in the DataWindow for which you want to get or set the ellipse height.
integer	(*exp*) An integer specifying the radius of the vertical part of the corners of a RoundRectangle in the DataWindow's unit of measure. EllipseHeight can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("rrect_1.EllipseHeight")
dw1.Modify("rrect_1.EllipseHeight=35")
dw1.Modify("rrect_1.EllipseHeight='10~tIf(...,20,30)'"
)
```

EllipseWidth

Description — The radius of the horizontal part of the corners of a RoundRectangle.

Applies to — RoundRectangle controls

Syntax — Describe and Modify argument:

"*rrectname*.EllipseWidth { = ' *integer* ' }"

Parameter	Description
rrectname	The name of the RoundRectangle control in the DataWindow for which you want to get or set the ellipse width.
integer	(*exp*) An integer specifying the radius of the horizontal part of the corners of a RoundRectangle in the DataWindow's unit of measure. EllipseWidth can be a quoted DataWindow expression.

Usage — **In the painter** Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("rrect_1.EllipseWidth")
dw1.Modify("rrect_1.EllipseWidth=35")
dw1.Modify("rrect_1.EllipseWidth='10~tIf(...,20,30)'")
```

Enabled

Description — Determines whether a control in a DataWindow is enabled.

Applies to — Button, InkPicture controls

Syntax — Describe and Modify argument:

"*buttonname.*Enabled { = ' *value* ' }"

Parameter	Description
buttonname	The name of the button that you want to enable or disable.
value	Whether the button is enabled. Values are: Yes – (Default) The button is enabled. No – The button is disabled.

Usage — **In the painter** Select the control and set the value in the Properties window, Behavior category.

When the Enabled check box is cleared, or the Enabled property is otherwise set to false, the button control is grayed and its actions are not performed.

Examples

```
setting = dw1.Describe("b_name.Enabled")
dw1.Modify("b_name.Enabled ='No'")
```

Export.PDF.Distill.CustomPostScript

Description

Setting that enables you to specify the PostScript printer driver settings used when data is exported to PDF using the Distill! method.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.PDF.Distill.CustomPostScript { = '*value* ' }"

Parameter	Description
value	(*exp*) Whether the printer specified in the DataWindow.Printer property is used when data is exported to PDF. Values are: • 1 – The printer specified in DataWindow.Printer is used for PDF export. • 0 – The default printer is used for PDF export (default).

Usage

The Distill! method performs a PostScript “print to file” before distilling to PDF. This property can be set to specify that you want to use a custom PostScript printer before you call the SaveAs method with PDF! as the SaveAsType or select File>Save Rows As with the file type PDF in the DataWindow painter.

Set this property if you want to use a PostScript printer driver for which you have set specific print options such as options for font and graphic handling. If this property is not set, a default PostScript printer driver specifically designed for distilling purposes is used.

This property has no effect if the Export.PDF.Method property is set to XSLFOP!.

In the In the Data Export category in the Properties window for the DataWindow object, select PDF from the Export list and Distill! from the Method list, and then select Distill Custom PostScript.

Examples

This example uses Modify to set the PDF export properties and specify a network printer:

```
[Visual Basic]
dw1.Modify("DataWindow.Export.PDF.Method = Distill!")
dw1.Modify("Printer = '\\print-server\pr-18' ")
dw1.Modify   _
("DataWindow.Export.PDF.Distill.CustomPostScript='1'")
```

See also

Export.PDF.Method

Export.PDF.Method

Description

Setting that determines whether data is exported to PDF from a DataWindow object by printing to a PostScript file and distilling to PDF, or by saving in XSL Formatting Objects (XSL-FO) format and processing to PDF.

The XSL-FO option is not supported in DataWindow .NET.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.PDF.Method { = '*value* ' }"

Parameter	Description
value	A string specifying a value of the PDFMethod enumerated datatype

See also

Export.PDF.Distill.CustomPostScript
Export.PDF.XSLFOP.Print

Export.PDF.XSLFOP.Print

Description

Setting that enables you to send a DataWindow object directly to a printer using platform-independent Java printing when using the XSL-FO method to export to PDF. This is an option of the Apache FOP processor.

This property is not supported in DataWindow .NET.

Applies to

DataWindow objects

Syntax

Describe argument:

"DataWindow.PDF.XSLFOP.Print { = '*value* ' }"

Parameter	Description
value	(*exp*) Whether the exported PDF is sent directly to the default printer. Values are: • Yes – The DataWindow object is exported to a PDF file and sent directly to a printer. • No – The DataWindow object is exported to a PDF file but is not printed (default).

See also Export.PDF.Method

Export.XHTML.TemplateCount

Description The number of XHTML export templates associated with a DataWindow object.

Applies to DataWindow objects

Syntax Describe argument:

"DataWindow.Export.XHTML.TemplateCount"

Usage This property is used to get a count of the XHTML export templates associated with a DataWindow object. It returns a long specifying the number of XHTML export templates previously saved in the DataWindow painter for the specified DataWindow object. The count is used with the DataWindow.Export.XHTML.Template[ ].Name property to enable an application to select an export template at runtime.

Examples The TemplateCount property gets the number of templates associated with a DataWindow object. You can use this number as the upper limit in a FOR loop that populates a drop-down list with the template names. The FOR loop uses the Template[ ].Name property.

```
Dim count As String
Dim templateName As String
Dim i As Long

count=wdw.Describe  _
   ("DataWindow.Export.XHTML.TemplateCount")

for i=1 to CLng(count)
  templateName = wdw.Describe  _
      ("DataWindow.Export.XHTML.Template[" _
         + Cstr(i) + "].Name")
```

```
    DDL1.Items.Add(New ListItem(templateName))
next
```

Before generating the XHTML, set the export template using the value in the drop-down list box:

```
wdw.SetProperty  _
   ("DataWindow.Export.XHTML.UseTemplate", _
     DDL1.SelectedValue())
```

See also

Export.XHTML.Template[ ].Name
Export.XHTML.UseTemplate

Export.XHTML.Template[ ].Name

Description

The name of an XHTML export template associated with a DataWindow object.

Applies to

DataWindow objects

Syntax

Describe argument:

"DataWindow.Export.XHTML.Template[*num*]Name"

Parameter	Description
num	(*exp*) A long specifying the index of the export template

Usage

This property returns the names of the XHTML export templates associated with a DataWindow object by index. The index can range from 1 to the value of the DataWindow.Export.XHTML.TemplateCount property. The order reflects the serialized storage order of all templates, which is a read-only setting. These properties, with DataWindow.Export.XHTML.UseTemplate, enable an application to select an export template dynamically at runtime.

Examples

See Export.XHTML.TemplateCount.

See also

Export.XHTML.TemplateCount
Export.XHTML.UseTemplate

Export.XHTML.UseTemplate

Description

Setting that optionally controls the logical structure of the XHTML generated by a DataWindow object from a DataWindow data expression.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.XHTML.UseTemplate { = '*value* ' }"

Parameter	Description
value	(*exp*) A string specifying the name of an XHTML export template previously saved in the DataWindow painter for the specified DataWindow object

Usage

This property uses a template defined in the DataWindow painter to specify the logical structure and attribute overrides that the DataWindow server should use to generate XHTML from a DataWindow object. It is designed to be used with the data expression for the DataWindow object, and should be set before a data expression statement.

In the painter In the Data Export category in the Properties window for the DataWindow object, select XHTML from the Export list and select a template from the Use Template list.

Examples

This example stores the name of the export template used in dw1 in the string ls_template. If no template is selected in dw1, an empty string is returned.

```
[Visual Basic]
ls_template_name =
dw1.Describe("DataWindow.Export.XHTML.UseTemplate")
```

This example sets the name of the current XHTML export template used in dw1 to t_report. If t_report does not exist, the current template is not changed.

```
dw1.Modify("DataWindow.Export.XHTML.UseTemplate =
't_report' ")
```

See also

Export.XHTML.TemplateCount
Export.XHTML.Template[ ].Name

Export.XML.HeadGroups

Description

Setting that causes elements, attributes, and all other items above the Detail Start element in an XML export template for a group DataWindow to be iterated for each group in the exported XML.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.XML.HeadGroups { = '*value* ' }"

Parameter	Description
value	(*exp*) Whether the contents of the header section in an export template iterate in the generated XML. Values are: • Yes – The header section is repeated for each group (default). • No – The header section is not repeated.

Usage

This property must be set for group DataWindow objects if you want elements and other items added to the header section of an XML export template to be repeated before each group in the exported XML. For DataWindow objects with multiple groups, each XML fragment in the header section between a Group Header element and the next Group Header element or Detail Start element is iterated.

In the painter In the Data Export category in the Properties window for the DataWindow object, select XML from the Export list and select Iterate header for Groups.

Examples

```
[Visual Basic]
dw1.Modify("DataWindow.Export.XML.HeadGroups = 'No' ")
```

Export.XML.IncludeWhitespace

Description

Setting that determines whether the XML document is formatted by inserting whitespace characters (carriage returns, linefeeds, tabs, and spacebar spaces).

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.XML.IncludeWhitespace { = '*value* ' }"

Parameter	Description
value	(*exp*) Whether the generated XML is formatted with whitespace characters. Values are: • Yes – Whitespace characters are inserted. • No – Whitespace characters are not inserted (default).

Usage

This property should be set before you export a DataWindow object if you want to view or verify the exported XML using a text editor.

In the painter In the Data Export category in the Properties window for the DataWindow object, select XML from the Export list and select Include Whitespace.

Examples

```
[Visual Basic]
dw1.Modify("DataWindow.Export.XML.IncludeWhitespace =
'Yes' ")
```

Export.XML.MetaDataType

Description

Setting that controls the type of metadata generated with the XML exported from a DataWindow object using the SaveAs method or a .Data.XML expression.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.XML.MetaDataType { = '*value* ' }"

Parameter	Description
value	(*exp*) A string specifying a value of the Export.XML.MetaDataType enumerated datatype

Usage

This property must be set to specify the type of metadata generated before you call the SaveAs method with XML! as the SaveAsType to save data as an XML document, or use the .Data.XML expression to save data as an XML string. The metadata is saved into the exported XML itself or into an associated file, depending on the value of the Export.XML.SaveMetaData property.

The Export.XML.MetaDataType property is an enumerated datatype that can hold the following values:

Enumerated value	Numeric value	Meaning
XMLNone!	0	Metadata (XML Schema or DTD) is not generated when XML is exported
XMLSchema!	1	XML Schema is generated when XML is exported
XMLDTD!	2	DTD is generated when XML is exported

In the painter In the Data Export category in the Properties window for the DataWindow object, select XML from the Export list and select a value from the Meta Data Type list.

Examples

These statements export the contents of dw1 to the file *c:\myxml.xml* using the XML export template called t_schema, and generate an external XML schema file at *c:\myxml.xsd*:

```
[Visual Basic]
dw1.Modify("DataWindow.Export.XML.UseTemplate =
't_schema'")
dw1.Modify("DataWindow.Export.XML.MetaDataType = 1")
dw1.Modify("DataWindow.Export.XML.SaveMetaData = 1")
dw1.SaveAs("c:\myxml.xml", XML!, false)
```

See also

Export.XML.SaveMetaData

Export.XML.SaveMetaData

Description

Setting that controls the storage format for the metadata generated with the XML exported from a DataWindow object using the SaveAs method or a .Data.XML expression.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.XML.SaveMetaData { = '*value* ' }"

Parameter	Description
value	(*exp*) A string specifying a value of the Export.XML.SaveMetaData enumerated datatype

Usage

This property must be set to specify how to store the generated metadata before you call the SaveAs method with XML! as the SaveAsType to save data as an XML document, or use the .Data.XML expression to save data as an XML string. The metadata can be saved into the exported XML document or string or into an associated file.

Note
If Export.XML.MetaDataType is set to XMLNone!, the value of the Export.XML.SaveMetaData property is not used.

The Export.XML.SaveMetaData property is an enumerated datatype that can hold the following values:

Enumerated value	Numeric value	Meaning
MetaDataInternal!	0	The metadata is saved into the generated XML document or string. To save metadata using the .Data.XML expression syntax, you must use this value.
MetaDataExternal!	1	With the SaveAs method, metadata is saved as an external file with the same name as the XML document but with the extension *.xsd* (for XMLSchema! type) or *.dtd* (for XMLDTD! type). A reference to the name of the metadata file is included in the output XML document. With .Data.XML, no metadata is generated in the XML string.

In the painter In the Data Export category in the Properties window for the DataWindow object, select XML from the Export list and select a value from the Save Meta Data list.

Examples

```
[Visual Basic]
dw1.Modify("DataWindow.Export.XML.SaveMetaData =
   MetaDataExternal!")
```

See also

Export.XML.MetaDataType

Export.XML.TemplateCount

Description — The number of XML export templates associated with a DataWindow object.

Applies to — DataWindow objects

Syntax — Describe argument:

```
"DataWindow.Export.XML.TemplateCount"
```

Usage — This property is used to get a count of the XML export templates associated with a DataWindow object. It returns a long specifying the number of XML export templates previously saved in the DataWindow painter for the specified DataWindow object. The count is used with the DataWindow.Export.XML.Template[ ].Name property to enable an application to select an export template at runtime.

See also — Export.XML.Template[ ].Name
Export.XML.UseTemplate

Export.XML.Template[ ].Name

Description — The name of an XML export template associated with a DataWindow object.

Applies to — DataWindow objects

Syntax — Describe argument:

```
"DataWindow.Export.XML.Template[num ]Name"
```

Parameter	Description
num	(*exp*) A long specifying the index of the export template

Usage — This property is used to get the names of the XML export templates associated with a DataWindow object. It returns a string specifying the name of an export template previously saved in the DataWindow painter for the specified DataWindow object. The property is used with the DataWindow.Export.XML.TemplateCount property to enable an application to select an export template at runtime.

Examples — See Export.XML.TemplateCount.

See also — Export.XML.TemplateCount
Export.XML.UseTemplate

Export.XML.UseTemplate

Description

Setting that optionally controls the logical structure of the XML exported from a DataWindow object using the SaveAs method or the .Data.XML property.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Export.XML.UseTemplate { = '*value* ' }"

Parameter	Description
value	(*exp*) A string specifying the name of an export template previously saved in the DataWindow painter for the specified DataWindow object

Usage

This property should be set to specify the logical structure of the XML generated before you call the SaveAs method with XML! as the SaveAsType to save data as an XML document, or use the .Data.XML expression to save data as an XML string.

In the painter In the Data Export category in the Properties window for the DataWindow object, select XML from the Export list and select a template from the Use Template list.

Examples

This example stores the name of the export template used in dw1 in the string ls_template. If no template is selected in dw1, an empty string is returned.

```
[Visual Basic]
ls_template_name =
dw1.Describe("DataWindow.Export.XML.UseTemplate")
```

This example sets the name of the current XML export template used in dw1 to t_report. If t_report does not exist, the current template is not changed.

```
dw1.Modify("DataWindow.Export.XML.UseTemplate =
't_report' ")
```

See also

Export.XML.MetaDataType
Export.XML.SaveMetaData

Expression

Description

The expression for a computed field control in the DataWindow. The expression is made up of calculations and DataWindow expression functions. The DataWindow evaluates the expression to get the value it will display in the computed field.

Applies to

Computed field controls

Syntax

Describe and Modify argument:

"*computename*.Expression { = '*string* ' }"

Parameter	Description
computename	The name of the computed field control in the DataWindow for which you want to get or set the expression
string	A string whose value is the expression for the computed field

Usage

In the painter Select the control and set the value in the Properties window, General category. The button displays the Modify Expression dialog, which provides help in specifying the expression. The Verify button tests the expression.

Examples

```
[Visual Basic]
setting = dw1.Describe("comp_1.Expression")
dw1.Modify("comp_1.Expression='avg(salary for all)'")
```

Filename

Description

The file name containing the image for a Picture or Button control in the DataWindow. If no image is specified for a Button control, only text is used for the button label.

Applies to

Picture and Button controls

Syntax

Describe and Modify argument:

"*controlname*.Filename { = ' *filestring* ' }"

Parameter	Description
controlname	The name of the Picture or Button control in the DataWindow for which you want to get or set the image file name.

Parameter	Description
filestring	(*exp*) A string containing the name of the file that contains the image. *Filestring* can be a quoted DataWindow expression. Button pictures can be BMP, GIF, or JPEG files. You can use a URL instead of a full path name, and if you set the HTMLGen.ResourceBase property to the URL address, you need to specify only a relative file name for this string. If you include the name of the file containing the image in the executable for the application, the DataWindow server will always use that image; you cannot use Modify to change the image.

Usage

In the painter Select the control and set the value in the Properties window, Appearance category.

Examples

Example for a Picture control:

```
[Visual Basic]
setting = dw1.Describe("bitmap_1.Filename")
dw1.Modify("bitmap_1.Filename='exclaim.bmp'")
```

Example for a Button control:

```
[Visual Basic]
ls_data = dw1.Describe("b_name.FileName")
dw1.Modify("b_name.FileName = 'logo.jpg'")
```

See also

DefaultPicture

FirstRowOnPage

Description

The first row currently visible in the DataWindow.

Applies to

DataWindows

Syntax

DataWindow .NET dot notation:

dw_control.FirstRowOnPage

Describe argument:

"DataWindow.FirstRowOnPage"

Examples

```
[Visual Basic]
Dim First As Integer
First = dw1.FirstRowOnPage

setting = dw1.Describe("DataWindow.FirstRowOnPage")
```

Font.Bias

Description

The way fonts are manipulated in the DataWindow at runtime.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Font.Bias { = *biasvalue* }"

Parameter	Description
biasvalue	An integer indicating how the fonts will be manipulated at execution. *Biasvalue* cannot be a DataWindow expression. Values are: 0 – As display fonts 1 – As printer fonts 2 – Neutral; no manipulation will take place

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Font.Bias")
dw1.Modify("DataWindow.Font.Bias=1")
```

Font.*property*

Description

Settings that control the appearance of fonts within a DataWindow, except for graphs, which have their own settings (see DispAttr).

Applies to

Button, Column, Computed Field, GroupBox, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Font.*property* { = ' *value* ' }"

DataWindowSyntaxFromSql:

Column(Font.*property* = *value*)

Text(Font.*property* = *value*)

Parameter	Description
controlname	The name of a column, computed field, or text control for which you want to get or set font properties. For a column, you can specify the column name or a pound sign (#) followed by the column number. When you generate DataWindow syntax with DataWindowSyntaxFromSql, the Font settings apply to all columns or all text controls.

Parameter	Description
property	A property of the text. The properties and their values are listed in the table below.
value	The value to be assigned to the property. *Value* can be a quoted DataWindow expression.

Property for Font	Value
CharSet	(*exp*) An integer specifying the character set to be used. (Not supported in DataWindow Designer.) Values are: 0 – ANSI 1 – The default character set for the specified font 2 – Symbol 128 – Shift JIS 255 – OEM
Escapement	(*exp*) An integer specifying the rotation for the baseline of the text in tenths of a degree. For example, a value of 450 rotates the text 45 degrees. 0 is horizontal.
Face	(*exp*) A string specifying the name of the font face, such as Arial or Courier.
Family	(*exp*) An integer specifying the font family (Windows uses both face and family to determine which font to use). (Not supported in DataWindow Designer.) Values are: 0 – AnyFont 1 – Roman 2 – Swiss 3 – Modern 4 – Script 5 – Decorative
Height	(*exp*) An integer specifying the height of the text in the unit measure for the DataWindow. To specify size in points, specify a negative number.
Italic	(*exp*) Whether the text should be italic. The default is no.
Pitch	(*exp*) The pitch of the font. (Not supported in DataWindow Designer.) Values are: 0 – The default pitch for your system 1 – Fixed 2 – Variable
Strikethrough	(*exp*) Whether the text should be crossed out. The default is no.
Underline	(*exp*) Whether the text should be underlined. The default is no.
Weight	(*exp*) An integer specifying the weight of the text; for example, 400 for normal or 700 for bold. Painter: Set indirectly using the Bold option.

Property for Font	Value
Width	(*exp*) An integer specifying the average character width of the font in the unit of measure specified for the DataWindow. Width is usually unspecified, which results in a default width based on the other properties. Painter: Set indirectly using the font selection.

Usage

In the painter Select the control and set the value using the Properties window, Font category:

Examples

```
[Visual Basic]
dw1.Describe("emp_name_t.Font.Face")
dw1.Modify("emp_name_t.Font.Face='Arial'")
```

Footer.*property*

See Bandname.property.

Format

Description

The display format for a column.

You can use the GetFormat and SetFormat methods instead of Describe and Modify to get and change a column's display format. The advantage to using Modify is the ability to specify an expression.

Applies to

Column and Computed Field controls

Syntax

Describe and Modify argument:

"*controlname*.Format { = ' *value* ' }"

Parameter	Description
controlname	The name of the column or computed field for which you want to get or set the display format.
value	(*exp*) A string specifying the display format. See the *User's Guide* for information on constructing display formats. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Behavior category.

If you want to add text to a numeric display format and use a color attribute, you must include the escape character (\) before each literal in the mask. For example:

```
[red]\D\e\p\t\: ###
```

Examples

```
[Visual Basic]
setting = dw1.Describe("phone.Format")
dw1.Modify(  _
"phone.Format='[red](@@@)@@@-@@@@;~~~'None~~~''")
```

GraphType

Description

The type of graph, such as bar, pie, column, and so on.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.GraphType { = ' *typeinteger* ' }"

Parameter	Description
graphname	The graph control for which you want to get or change the type.
typeinteger	(*exp*) An integer identifying the type of graph in the DataWindow object. *Typeinteger* can be a quoted DataWindow expression. Values are: 1 – Area 2 – Bar 3 – Bar3D 4 – Bar3DObj 5 – BarStacked 6 – BarStacked3DObj 7 – Col 8 – Col3D 9 – Col3DObj 10 – ColStacked 11 – ColStacked3DObj 12 – Line 13 – Pie 14 – Scatter 15 – Area3D 16 – Line3D 17 – Pie3D

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.GraphType")
dw1.Modify("graph_1.GraphType=17")
```

Grid.ColumnMove

Description

Whether the user can rearrange columns by dragging.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Grid.ColumnMove { = *value* } "

Parameter	Description
value	Whether the user can rearrange columns. Values are: Yes – The user can drag columns. No – The user cannot drag columns.

Usage

In the painter Select the DataWindow object by deselecting all controls; then set the value in the Properties window, General category (available when the presentation style is Grid, Crosstab, or TreeView with the Grid Style option selected).

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Grid.ColumnMove")
dw1.Modify("DataWindow.Grid.ColumnMove=No")
```

Grid.Lines

Description

The way grid lines display and print in a DataWindow whose presentation style is Grid, Crosstab, or TreeView.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Grid.Lines { = *value* }"

Parameter	Description
value	An integer specifying whether grid lines are displayed on the screen and printed. Values are: 0 – Yes, grid lines are displayed and printed. 1 – No, grid lines are not displayed and printed. 2 – Grid lines are displayed, but not printed. 3 – Grid lines are printed, but not displayed.

Usage

In the painter Select the DataWindow object by deselecting all controls; then set the value in the Properties window, General category (available when the presentation style is Grid, Crosstab, or TreeView with the Grid Style option selected).

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Grid.Lines")
dw1.Modify("DataWindow.Grid.Lines=2")
```

GroupBy

Description

A comma-separated list of the columns or expressions that control the grouping of the data transferred from the DataWindow to the OLE object. When there is more than one grouping column, the first one is the primary group and the columns that follow are nested groups.

Applies to

OLE Object controls

Syntax

Describe and Modify argument:

"*olecontrolname*.GroupBy { = ' *columnlist* ' }"

Parameter	Description
olecontrolname	The name of the OLE Object control for which you want to get or set the grouping columns.
columnlist	(*exp*) A list of the columns or expressions that control the grouping. If there is more than one, separate them with commas. *Columnlist* can be a quoted DataWindow expression.

Usage

Target and Range also affect the data that is transferred to the OLE object.

In the painter Select the control and set the value in the Properties window, Data category.

Examples

```
[Visual Basic]
dw1.Modify("  _
    ole_report.GroupBy='emp_state, emp_office'")
dw1.Modify("ole_report.GroupBy='year'")
```

Header_Bottom_Margin

Description
The size of the bottom margin of the DataWindow's header area. Header_Bottom_Margin is meaningful only when type is Grid or Tabular.

Applies to
Style keywords

Syntax
DataWindowSyntaxFromSql:

Style (Header_Bottom_Margin = *value*)

Parameter	Description
value	An integer specifying the size of the bottom margin of the header area in the units specified for the DataWindow. The bottom margin is the distance between the bottom of the header area and the last line of the header.

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'Style(...Header_Bottom_Margin = 25 ...)')
```

Header_Top_Margin

Description
The size of the top margin of the DataWindow's header area. Header_Top_Margin is meaningful only when type is Grid or Tabular.

Applies to
Style keywords

Syntax
DataWindowSyntaxFromSql:

Style (Header_Top_Margin = *value*)

Parameter	Description
value	An integer specifying the size of the top margin of the header area in the units specified for the DataWindow. The top margin is the distance between the top of the header area and the first line of the header.

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'Style(...Header_Top_Margin = 500 ...)')
```

Header.*property*

See Bandname.property.

Header.#.*property*

See Bandname.property.

Height

Description: The height of a control in the DataWindow.

Applies to: Button, Column, Computed Field, Graph, GroupBox, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax: Describe and Modify argument:

"*controlname*.Height { = ' *value* ' }"

Parameter	Description
controlname	The control within the DataWindow whose height you want to get or set.
value	(*exp*) An integer specifying the height of the control in the unit of measure specified for the DataWindow. *Value* can be a quoted DataWindow expression.

Usage: **In the painter** Select the control and set the value in the Properties window, Layout category.

Examples:

```
[Visual Basic]
setting = dw1.Describe("empname.Height")
dw1.Modify("empname.Height=50")
```

Height.AutoSize

Description: Whether the control's width should be held constant and its height adjusted so that all the data is visible. This property is for use with read-only controls and printed reports. It should not be used with data entry fields or controls.

Applies to: Column, Computed Field, Report, and Text controls

Syntax: Describe and Modify argument:

"*controlname*.Height.AutoSize { = *value* }"

Parameter	Description
controlname	The control for which you want to get or set the AutoSize property.

Parameter	Description
value	Whether the width or height of the control will be adjusted to display all the data. The height is limited to what can fit on the page. Values are: No – Use the height defined in the painter. Yes – Calculate the height so that all the data is visible.

Usage

In the painter Select the control and set the value in the Properties window, Layout category.

Minimum height The height of the column, computed field, or text will never be less than the minimum height (the height selected in the painter).

When the band has Autosize Height set to true, you should avoid using the RowHeight DataWindow expression function to set the height of any element in the row. Doing so can result in a logical inconsistency between the height of the row and the height of the element. For more information, see the RowHeight function description.

Examples

```
[Visual Basic]
setting = dw1.Describe("empname.Height.AutoSize")
dw1.Modify("empname.Height.AutoSize=Yes")
```

See also

Bandname.property

Help.*property*

Description

Settings for customizing the Help topics associated with DataWindow dialog boxes.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Help.*property* { = *value* }"

Parameter	Description
property	A property for specifying DataWindow Help. Help properties and their settings are listed in the table below. The File property must have a valid file name before the rest of the Help property settings can become valid.
value	The value to be assigned to the property. For Help properties, *value* cannot be a DataWindow expression.

Property for Help	Value
Command	An integer specifying the type of Help command that is specified in the following TypeID properties. Values are: 0 – Index 1 – TopicID 2 – Search keyword
File	A string containing the fully qualified name of the compiled Help file (for example, *C:\proj\MYHELP.HLP*). When this property has a value, Help buttons display on the DataWindow dialog boxes at runtime.
TypeID	A string specifying the default Help command to be used when a Help topic is not specified for the dialog using one of the following eight dialog-specific properties listed in this table.
TypeID. ImportFile	A string specifying the Help topic for the Import File dialog box, which might display when the ImportFile method is called in code.
TypeID.Retrieve. Argument	A string specifying the Help topic for the Retrieval Arguments dialog box, which displays when retrieval arguments expected by the DataWindow's SELECT statement are not specified for the Retrieve method in code.
TypeID.Retrieve. Criteria	A string specifying the Help topic for the Prompt for Criteria dialog box, which displays when the Criteria properties have been turned on for at least one column and the Retrieve method is called in code.
TypeID.SaveAs	A string specifying the Help topic for the Save As dialog box, which might display when the SaveAs method is called in code.
TypeID. SetCrosstab	A string specifying the Help topic for the Crosstab Definition dialog box, which might display when the CrosstabDialog method is called in code.
TypeID.SetFilter	A string specifying the Help topic for the Set Filter dialog box, which might display when the SetFilter and Filter methods are called in code.
TypeID.SetSort	A string specifying the Help topic for the Set Sort dialog box, which might display when the SetSort and Sort methods are called in code.
TypeID. SetSortExpr	A string specifying the Help topic for the Modify Expression dialog, which displays when the user double-clicks on a column in the Set Sort dialog.

Usage

In the painter Can be set only in code, not in the painter.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Help.Command")
dw1.Modify("DataWindow.Help.File='myhelp.hlp'")
dw1.Modify("DataWindow.Help.Command=1")
dw1.Modify( "DataWindow.Help.TypeID.SetFilter =
'filter_topic'")
dw1.Modify("DataWindow.Help.TypeID.Retrieve.Criteria =
'criteria_topic'")
```

HideGrayLine

Description

Shows or hides a gray line to indicate that a fixed page has been crossed when scrolling in a DataWindow with group headers.

Applies to

DataWindow control

Syntax

Describe and Modify argument:

"DataWindow.HideGrayLine { = ‘ *value* ‘ }"

Parameter	Description
value	(*exp*) Whether a gray line displays in the Preview view and at runtime. Values are: Yes – The gray line is hidden. No – The gray line displays (default). *Value* can be a quoted DataWindow expression.

Usage

This property can be set in the open event for the window in which the DataWindow displays. Note that you cannot suppress the display of repeating group headers.

In the painter Select the DataWindow object by deselecting all controls; then set the value in the Properties window, General category. This option is enabled only for DataWindows with group headers.

HideSnaked

Description

Whether the control appears only once per page when you print the DataWindow using the newspaper columns format.

Applies to

Button, Column, Computed Field, Graph, GroupBox, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.HideSnaked { = ' *value* ' }"

Parameter	Description
controlname	The name of the control for which you want to get or set the HideSnaked setting.
value	(*exp*) Whether the control appears once or multiple times in the printed output when the output has multiple columns (like a newspaper). Values are: 1 – The control will appear only once on a page. 0 – The control will appear in each column on a page. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Appearance category.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.HideSnaked")
dw1.Modify("text_title.HideSnaked=1")
```

Horizontal_Spread

Description

The space between columns in the detail area of the DataWindow object. Horizontal_Spread is meaningful *only* when type is Grid or Tabular.

Applies to

Style keywords

Syntax

DataWindowSyntaxFromSql:

Style (Horizontal_Spread = *value*)

Parameter	Description
value	An integer specifying the space between columns in the detail area of the DataWindow object area in the units specified for the DataWindow

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'Style(...Horizontal_Spread = 25 ...)')
```

HorizontalScrollMaximum

Description
The maximum width of the scroll box of the DataWindow's horizontal scroll bar. This value is set by the DataWindow server based on the layout of the DataWindow object and the size of the DataWindow control. Use HorizontalScrollMaximum with HorizontalScrollPosition to synchronize horizontal scrolling in multiple DataWindow objects.

Applies to
DataWindows

Syntax
Describe argument:

"DataWindow.HorizontalScrollMaximum"

Examples

```
[Visual Basic]
setting =
dw1.Describe("DataWindow.HorizontalScrollMaximum")
```

HorizontalScrollMaximum2

Description
The maximum width of the second scroll box when the horizontal scroll bar is split (HorizontalScrollSplit is greater than 0). This value is set by the DataWindow server based on the content of the DataWindow. Use HorizontalScrollMaximum2 with HorizontalScrollPosition2 to synchronize horizontal scrolling in multiple DataWindow objects.

Applies to
DataWindows

Syntax
Describe argument:

"DataWindow.HorizontalScrollMaximum2"

Examples

```
[Visual Basic]
setting =
dw1.Describe("DataWindow.HorizontalScrollMaximum2")
```

HorizontalScrollPosition

Description
The position of the scroll box in the horizontal scroll bar. Use HorizontalScrollMaximum with HorizontalScrollPosition to synchronize horizontal scrolling in multiple DataWindow objects.

Applies to
DataWindows

Syntax
Describe and Modify argument:

"DataWindow.HorizontalScrollPosition { = *scrollvalue* }"

Parameter	Description
scrollvalue	An integer specifying the position of the scroll box in the horizontal scroll bar of the DataWindow

Examples

```
[Visual Basic]
Dim smax1, smax2, spos1, modstring As String
Dim pos2 As Integer
smax1 = dw1.Describe( _
"DataWindow.HorizontalScrollMaximum")
spos1 = dw1.Describe( _
"DataWindow.HorizontalScrollPosition")
smax2 = dw_2.Describe( _
"DataWindow.HorizontalScrollMaximum")
pos2 = CInt(spos1) * CInt(smax2) / CInt(smax1)
modstring = "DataWindow.HorizontalScrollPosition=" _
+ Str(pos2)
dw1.Modify(modstring)
```

HorizontalScrollPosition2

Description

The position of the scroll box in the second portion of the horizontal scroll bar when the scroll bar is split (HorizontalScrollSplit is greater than 0). Use HorizontalScrollMaximum2 with HorizontalScrollPosition2 to synchronize horizontal scrolling in multiple DataWindow objects.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.HorizontalScrollPosition2 { = *scrollvalue* }"

Parameter	Description
scrollvalue	An integer specifying the position of the scroll box in the second portion of a split horizontal scroll bar of the DataWindow

Examples

```
[Visual Basic]
spos = dw1.Describe( _
"DataWindow.HorizontalScrollPosition2")
dw1.Modify( _
"DataWindow.HorizontalScrollPosition2=200")
```

HorizontalScrollSplit

Description

The position of the split in the DataWindow's horizontal scroll bar. If HorizontalScrollSplit is zero, the scroll bar is not split.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.HorizontalScrollSplit { = *splitdistance* }"

Parameter	Description
splitdistance	An integer indicating where the split will occur in the horizontal scroll bar in a DataWindow object in the unit of measure specified for the DataWindow object

Examples

```
[Visual Basic]
str = dw1.Describe("DataWindow.HorizontalScrollSplit")
dw1.Modify("DataWindow.HorizontalScrollSplit=250")
```

HTextAlign

Description

The way text in a button is horizontally aligned.

Applies to

Button controls

Syntax

Describe and Modify argument:

"*buttonname.*HTextAlign { = ' *value* ' }"

Parameter	Description
buttonname	The name of the button for which you want to align text.
value	An integer indicating how the button text is horizontally aligned. Values are: 0 – Center 1 – Left 2 – Right

Usage

In the painter Select the control and set the value in the Properties window, Appearance category.

Examples

```
[Visual Basic]
setting = dw1.Describe("b_name.HTextAlign")
dw1.Modify("b_name.HTextAlign ='1'")
```

HTML.*property*

Description

Settings for adding user-defined HTML syntax and hyperlinks to controls in a Web DataWindow.

Applies to

Column, Computed Field, Picture, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.HTML.*property* { = ' *value* ' }"

Parameter	Description
controlname	The name of the control whose HTML properties you want to get or set.
property	A property for generating HTML syntax and hyperlinks in a Web DataWindow. Properties and their values are listed in the table below.
value	The value to be assigned to the property. *Value* can be a quoted DataWindow expression only where noted.

Property for HTML	Value
AppendedHTML	HTML you want to append to the generated syntax for the rendering of a DataWindow control before the closing bracket of the HTML element for that control.
Link	(*exp*) A URL that is the target of a link (HTML anchor element) generated for each data item in the column or for the specified control. The text or user-visible part of the link will be the data value in the column, the value of the computed field, the text in the Text control, or the image of a Picture control. The URL can include parameters. Other properties, such as LinkArgs, can cause additional parameters to be added when the HTML is generated.
LinkArgs	A string in the form: *argname=*'*exp*'{ | *argname* = '*exp*' } ... *Argname* is a page parameter to be passed to the server. *Exp* is a DataWindow expression whose value is a string. It is evaluated and converted using URL encoding and included in the *linkargs* string. The evaluated LinkArgs string is appended to the HTML.Link property when HTML is generated to produce a hyperlink for each data item in a column or other DataWindow control.

Property for HTML	Value
LinkTarget	(*exp*) The name of a target frame or window for the hyperlink (HTML A element) specified in the Link property. The target is included using the TARGET attribute. You can use the LinkTarget property to direct the new page to a detail window or frame in a master/detail page design. If LinkTarget is null or an empty string (""), then no TARGET attribute is generated.
ValueIsHTML (does not apply to Picture controls)	(*exp*) A boolean that, if true, allows the control contents (data value in a read-only column, the value of a computed field that is not calculated on the client, or the text in a Text control) to be generated as HTML. For XHTML, the control contents must be well-formed XHTML.

Usage

The Link properties are typically used to create master/detail Web pages where a link on a data item jumps to a detail DataWindow for that item. LinkArgs is used to pass a retrieval argument identifying the particular item.

The AppendedHTML property is used to specify attributes and event actions to add to the HTML rendered for Web DataWindow controls.

The HTML generator does not validate the HTML you append to or include in controls in DataWindow objects. If the HTML is invalid, the DataWindow might not display correctly. You must also be careful not to append an event name that is already generated for the control as a coded client-side event.

In the painter Select the control and set the value in the Properties window, HTML category.

Examples

```
[Visual Basic]
// EMPID and PAGE are page parameters for the
// page server's session object
dw1.SetProperty("empid.HTML.Link", "empform.html")
dw1.SetProperty("empid.HTML.LinkArgs", "EMPID =
'empid'")
dw1.SetProperty("empid.HTML.LinkTarget", "detail_win")
dw1.SetProperty("empid.HTML.ValueIsHTML", "true")
dw1.SetProperty("helpicon.HTML.Link", "help.html")
dw1.SetProperty("helpicon.LinkArgs", "PAGE =
'empform'")
```

```
[Visual Basic]
setting = dw1.Describe("DataWindow.HTML.Link")
dw1.Modify("empid.HTML.Link = 'empform.html'")
```

HTMLDW

Description

Specifies whether HTML generated for the DataWindow object provides updates and interactivity.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.HTMLDW { = ' *value* ' }"

Parameter	Description
value	The value to be assigned to the property. *Value* can be a quoted DataWindow expression. Values are: • Yes – DataWindow HTML generation uses the HTMLGen properties. • No – DataWindow HTML generation is a read-only. table as described for the Data.HTMLTable property.

Usage

When HTMLDW is set to Yes, the generated HTML supports data entry and takes advantage of browser features that enable user interaction when used with a page server (as described for the Data.HTML property). The generated HTML can be used to produce a page that displays a subset of retrieved rows and can include JavaScript code requesting additional pages with other subsets of the retrieved rows.

DataWindow features that will not be rendered into HTML include:

- Graph presentation styles and controls.
- Client-side expressions that include aggregate functions. Aggregate functions cannot be evaluated in the browser. Instead, they will be evaluated on the server and the resulting value included in the HTML.
- Resizable and movable controls.
- Sliding of controls to fill empty space.
- Autosizing of height or width.
- EditMasks for column data entry.

In the painter Select the DataWindow object by deselecting all controls; then set the HTMLDW property in the General category in the Properties window.

HTMLGen.*property*

Description — Settings that control the level of features incorporated into HTML generated for the DataWindow.

Applies to — DataWindow objects

Syntax — Describe and Modify argument:

"DataWindow.HTMLGen.*property* { = ' *value* ' }"

Parameter	Description
property	A property that controls how HTML is generated for a DataWindow. Properties and their values are listed in the table below.
value	The value to be assigned to the property. *Value* can be a quoted DataWindow expression where noted.

Property for HTMLGen	Value
Browser	(*exp*) A string identifying the browser in which you want to display the generated HTML. The value should match the browser identifier part of the text string that the browser specifies in the HTTP header it sends to the server. This property is usually set dynamically on the server according to the HTTP header returned from the client. Recognized strings are listed in “Browser recognition” on page 270.
ClientComputedFields	(*exp*) Whether computed fields that reference column data are translated into JavaScript and computed in the client browser. Values are: • Yes – (Default) Computed fields are translated to JavaScript where possible. • No – Computed fields are always calculated on the server. Regardless of this setting, if the computed field includes aggregation functions, the computed field is calculated on the server. For more information about this and the following properties, see “Client properties” on page 271
ClientEvents	(*exp*) Whether JavaScript code to trigger events is included in the generated HTML. Values are: • Yes – (Default) JavaScript for triggering events is generated. • No – JavaScript for events is not generated.
ClientFormatting	(*exp*) Whether display formats are applied to data items that do not have focus. JavaScript for formatting the data is translated from display formats specified in the DataWindow painter. If you want to use regional settings, such as a period as a date separator and a comma as a decimal separator, you must set ClientFormatting to Yes. Values are: • Yes – (Default) Display formats are applied to data. • No – Display formats are not used.

Property for HTMLGen	Value
ClientScriptable	(*exp*) Whether client-side JavaScript can interact with the control. Values are: • Yes – Client-side JavaScript can call methods of the control. • No – (Default) Client-side JavaScript cannot call methods. This option adds approximately 20K to the size of the generated HTML.
ClientValidation	(*exp*) Whether JavaScript code to perform validation of user-entered data is included in the generated HTML. The validation code is translated from validation expressions specified in the DataWindow painter. Values are: • Yes – (Default) Validation expressions are generated. • No – Validation expressions are not generated.
CommonJSFile	(*exp*) Cache file name for common JavaScript functions required by Web DataWindows at runtime. If you set this property, the file is downloaded to the browser client once per session for use by all Web DataWindows. You can prefix the file name to a URL, or you can use the URL that you set with the HTMLGen.ResourceBase property. See "JavaScript caching" on page 271.
DateJSFile	(*exp*) Cache file name for common Web DataWindow functions that use a date format. If you set this property, the file is downloaded to the browser client once per session for use by all Web DataWindows. You can prefix the file name with a URL, or you can use the URL that you set with the HTMLGen.ResourceBase property. See "JavaScript caching" on page 271.
EncodeSelfLinkArgs	(*exp*) A switch to disable HTML 4 encoding of the evaluated HTMLGen.SelfLinkArgs expressions that are generated as hidden fields. The standard encoding limits character replacement to: *"*, *&*, *<*, and *>*. Disabling the standard encoding allows you to encode additional characters, but you must encode the argument expressions yourself. Values are: • Yes – (Default) Encoding performed by the DataWindow server. • No – Encoding not performed.
GenerateDDDWFrames	(*exp*) Specifies whether drop-down DataWindows are generated using inline frames (iFrames). The use of iFrames enhances the display so that the drop-down DataWindow displays in a Web application as it would in a Windows application. Using iFrames increases the volume of markup generated. Values are: • Yes – (Default) Drop-down DataWindows are generated in formatted div elements over an iFrame. • No – Drop-down DataWindows are generated in HTML select elements. The use of the GenerateDDDWFrames option for drop-down DataWindows is supported only in the Internet Explorer browser. In other browsers, the HTML select element is always used.

Property for HTMLGen	Value
GenerateJavaScript	(*exp*) Specifies whether to generate JavaScript if the browser is not recognized. Keep in mind that without JavaScript, updating of data is not available. Navigation links are still supported. Values are: • Yes – (Default) JavaScript is generated even if the browser is not recognized. The resulting JavaScript is portable and does not use browser-specific features. • No – JavaScript is not generated unless the browser is recognized
HTMLVersion	(*exp*) The version of HTML to generate. Values are: • 3.2 – (Default) The HTML will include style sheets, but no absolute positioning or regular expressions. • 4.0 – The HTML will include style sheets, absolute positioning, and regular expressions. If the browser is recognized, this property is ignored and browser-specific HTML is generated.
NetscapeLayers	(*exp*) Formats the Web DataWindow for Netscape 4.0 or later using absolute positioning (in a manner similar to the formatting for Internet Explorer). See "NetscapeLayers property" on page 272.
NumberJSFile	(*exp*) Cache file name for common Web DataWindow functions that use a number format. If you set this property, the file is downloaded to the browser client once per session for use by all Web DataWindows. You can prefix the file name with a URL, or you can use the URL that you set with the HTMLGen.ResourceBase property. See "JavaScript caching" on page 271.
ObjectName	(*exp*) A string specifying a name used in generated code for the Web DataWindow client control, page parameters, and client-side events. You must specify a unique object name when there will be more than one Web DataWindow on a Web page so that names will not conflict.
PageSize	(*exp*) The number of rows of data to include in a generated Web page. If the Web page does not include all available rows, you can include button controls to navigate to the rest of the data. To include all available rows in the page, specify 0 for PageSize. If the HTMLDW property is set to Yes, PageSize is used. If it is set to No, PageSize is ignored and all rows in the result set are generated in a single page.

Property for HTMLGen	Value
PagingMethod	A value of the WebPagingMethod enumerated variable that determines how paging is handled. Values are: PostBack! (0) – (default) The control posts back to the server to perform paging operations. Callback! (1) – The control calls a service on the client to perform paging operations. XMLClientSide! (2) – The control retrieves the entire XML result set and performs paging operations on the client. This option is only available when the XML rendering format is used, and it cannot be used with the page navigation bar. See "PagingMethod" on page 271.
ResourceBase	(*exp*) The URL for included JavaScript files. If you set this property, you do not need to include a URL in the values for these other HTMLGen properties: CommonJSFile, DateJSFile, NumberJSFile, and StringJSFile.
SelfLink	(*exp*) A string specifying the URL for the current page. It cannot include parameters. Parameters specified in SelfLinkArgs can be added when HTML is generated. SelfLink is used to generate URLs for navigation buttons that obtain additional rows from the result set and for other buttons that reload the page, such as Update and Retrieve.
SelfLinkArgs	A string in the form: *argname='exp'*{ | *argname = 'exp'* } ... *Argname* is a page parameter to be passed to the server. *Exp* is a DataWindow expression whose value is a string. The DataWindow in the server component evaluates it, converts it using URL encoding, and includes it in the SelfLinkArgs string. The evaluated SelfLinkArgs expressions are included in the generated HTML as hidden fields. The arguments supply information that the server needs to render additional pages of the result set, such as retrieval arguments.
StringJSFile	(*exp*) Cache file name for common Web DataWindow functions that use a string format. If you set this property, the file is downloaded to the browser client once per session for use by all Web DataWindows. You can prefix the file name with a URL, or you can use the URL that you set with the HTMLGen.ResourceBase property. See "JavaScript caching" on page 271.
TabIndexBase	(*exp*) Sets the starting tab order number for a Web DataWindow. This property is useful for a Web page with multiple Web DataWindows when you can tab between columns of the DataWindows. Setting this property has no effect on page functionality when the page is viewed in a browser that does not support the tab index attribute. The maximum tab index allowed for a page is 32767. See "TabIndexBase property" on page 272.

Property for HTMLGen	Value
UserJSFile	(*exp*) Cache file name for user-defined Web DataWindow functions. If you set this property, the file is downloaded to the browser client once per session for use by all Web DataWindows. You can prefix the file name to a URL, or you can use the URL that you set with the HTMLGen.ResourceBase property. See "JavaScript caching" on page 271.

Usage

Most of these properties are considered only when the HTMLDW property is set to Yes.

Browser recognition The Browser and HTMLVersion properties are always considered when HTML is generated, regardless of the HTMLDW setting.

Browser identification strings are sent by the client to the server in the HTTP header. The server component can assign the HTTP_USER_AGENT value from the HTTP header to the Browser property. If the string specifies a browser that the DataWindow engine supports, the DataWindow will generate HTML optimized for that browser. Browser-specific HTML is generated only for Microsoft Internet Explorer and Netscape browsers.

If the browser is not recognized or not specified, then the generated HTML will use the HTMLVersion and GenerateJavaScript properties to decide what features to include. DataWindow HTML generation recognizes these browsers:

Browser	HTTP header string	HTML features used
Netscape	Mozilla/1.x (	No style sheets, no absolute positioning, no JavaScript.
	Mozilla/2.x (Mozilla/3.x (	JavaScript. No style sheets, no absolute positioning, no regular expressions.
	Mozilla/4.x (	Style sheets, JavaScript, regular expressions. No absolute positioning.
Microsoft Internet Explorer	Mozilla/1.22 (compatible; MSIE 2.x;	No style sheets, no absolute positioning, no tab order, no JavaScript.
	Mozilla/2.0 (compatible; MSIE 3.x;	Style sheets, tab order, JavaScript. No absolute positioning, no regular expressions.
	Mozilla/4.0 (compatible; MSIE 4.x, Mozilla/4.0 (compatible; MSIE 5.x; Mozilla/4.0 (compatible; MSIE 6.x;	Style sheets, absolute positioning, tab order, regular expressions.
Opera	Mozilla/3.0 (compatible; Opera 3.x;	JavaScript, regular expressions. No style sheets, no absolute positioning.

Client properties The ClientEvents, ClientFormatting, ClientValidation, ClientComputedFields, and ClientScriptable properties control the amount of JavaScript that is generated for the Web DataWindow, which impacts the size of the page that is downloaded to the browser. You can reduce the size of the generated HTML by setting one or more of the properties to No.

In DataWindow .NET, you can set these properties in the Properties window in your .Visual Studio. If you change the default setting in the Properties window, the value you set in the DataWindow painter is overridden.

JavaScript caching You can also reduce the size of the generated HTML by setting up cache files for common Web DataWindow client-side methods.

With JavaScript caching, you improve performance after the first Web DataWindow page is generated—as long as the browser on the client computer is configured to use cached files. With caching enabled, the browser loads the JS files from the Web server into its cache, and these become available for all the Web DataWindow pages in your application. There is no performance gain if the browser does not find the JS files in its cache since, in this case, it reloads the files from the Web server.

In DataWindow .NET, you can specify the names and locations of cached JavaScript files using the JavaScriptConfigurations property. This property allows you to cache JavaScript for XML and XHTML as well as HTML Web DataWindows.

PagingMethod The PagingMethod property determines whether the control uses the client-side script callback mechanism introduced in the .NET Framework 2.0 to execute server-side code without posting and refreshing the current page.

The default is to post back to the server (PostBack!).

The Callback! option uses script callbacks to retrieve the next page of XML data. It corresponds to the Microsoft GridView control's EnableSortingAndPagingCallback property, but applies only to paging. Client-side sorting is handled by another mechanism.

For the XML rendering format, the design of the Callback! option requires that a reusable XSLT stylesheet be generated so that the browser can cache it. The benefit from this requirement is that only the XML data for the next requested page need be returned by the callback. This XML data is always trivial in size (about a 1 to 20 ratio), resulting in significant bandwidth savings. This is unlike other implementations, where the entire presentation is always regenerated and downloaded again from every callback.

The generated XSLT stylesheet is not reusable, and therefore cannot be cached by the browser, if the DataWindow layout is inconsistent page-to-page, or it does not contain a complete first page of data. In these scenarios, the Callback! option defers to PostBack! until a stylesheet can be generated that is reusable, and can therefore be cached in the browser.

The XMLClientSide! option is only available with the XML rendering format. It retrieves the entire XML result set and uses XSLT re-transformation of the cached stylesheet to perform paging on the client. This option can currently be used only if the presentation style is uniform from page to page. For example, it cannot handle a summary band on the last page. This option cannot be used with a page navigation bar.

When PagingMethod is set to XMLClientSide!, InsertRow, AppendRow, and DeleteRow actions do not require a postback or callback to the server. However, computed fields in the DataWindow that are dependent on the RowCount method are not refreshed until an action such as Update or Retrieve forces a postback to the server.

NetscapeLayers property Even if you set the NetscapeLayers property to true, certain functionality in a Netscape browser using absolute positioning might not be identical to the functionality available with Internet Explorer. For example, you cannot tab between DataWindow columns using a Netscape browser on an NT machine (although you can do this using a Netscape browser on a Solaris machine).

TabIndexBase property If you add Web DataWindows to a page that already has a Web DataWindow on it, you can set the TabIndexBase property for each Web DataWindow you add.

For a page with two Web DataWindows, setting the tab index base for the second DataWindow to a number greater than the tab index for the last column of the first DataWindow allows the user (using an Internet Explorer browser) to tab through all the columns of the first DataWindow before tabbing to the second DataWindow. Otherwise, pressing the Tab key could cause the cursor and focus to jump from one DataWindow to another instead of tabbing to the next column in the DataWindow that initially had focus.

In the painter Select the DataWindow object by deselecting all controls; then set the values in the Properties window, Web Generation category or JavaScript Generation category. Select HTML/XHTML from the WebDW or JSGen list to display the properties.

Examples

```
[Visual Basic]
setting = dw1.Describe
       ("DataWindow.HTMLGen.Browser")

dw1.Modify("DataWindow.HTMLGen.ClientValidation =
'no'")

dw1.Modify("DataWindow.HTMLGen.PublishPath=
   'C:\Inetpub\wwwroot\MyWebApp\generatedfiles'")
dw1.Modify("DataWindow.HTMLGen.ResourceBase=
   '/MyWebApp/generatedfiles'")
```

This statement sets the XMLGen.Paging property so that the complete result set is downloaded to the client and paging takes place on the client:

```
[Visual Basic]
dw1.Modify("DataWindow.HTMLGen.PagingMethod=XMLClientS
ide!")
```

HTMLTable.*property*

Description

Settings for the display of DataWindow data when displayed in HTML table format. These settings simplify the transfer of data from a database to an HTML page. They are particularly useful when used to create HTML pages dynamically.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.HTMLTable.*property* { = ' *value* ' }"

Parameter	Description
property	A property for a DataWindow to be displayed in HTML table format. Properties and their values are listed in the table below.
value	The value to be assigned to the property. *Value* can be a quoted DataWindow expression.

Property for HTMLTable	Value
Border	(*exp*) Border attribute for the HTMLTable element. The default is 1 (line around the table).
CellPadding	(*exp*) CellPadding attribute for the HTMLTable element. The default is 0.
CellSpacing	(*exp*) CellSpacing attribute for the HTMLTable element. The default is 0.

Property for HTMLTable	Value
GenerateCSS	(*exp*) Controls whether the DataWindow HTMLTable property's Table element contains border, cellpadding, cellspacing, nowrap, and width attributes. Also controls whether elements within the table contain CLASS references that control style sheet use. The default is no.
NoWrap	(*exp*) NoWrap attribute for the HTMLTable element. The default is to include this attribute.
StyleSheet	(*exp*) HTML cascading style sheet generated for the DataWindow.
Width	Width attribute for the HTMLTable element. The default is 0.

Usage

In the painter Set the value using the Properties window, HTML Table category.

Examples

```
[Visual Basic]
setting = dw1.Describe
       ("DataWindow.HTMLTable.StyleSheet")

dw1.Modify("DataWindow.HTMLTable.NoWrap = 'yes'")
```

ID

Description

The number of the column or TableBlob.

Applies to

Column and TableBlob controls

Syntax

Describe and Modify argument:

"*controlname*.ID"

Parameter	Description
controlname	The name of the column or TableBlob for which you want the ID number

Examples

```
[Visual Basic]
setting = dw1.Describe("empname.ID")
```

Identity

Description

Whether the database is to supply the value of the column in a newly inserted row. If so, the column is not updatable; the column is excluded from the INSERT statement.

Not all DBMSs support the identity property. For more information see the documentation for your DBMS.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.Identity { = ' *value* ' }"

Parameter	Description
columnname	A string containing the name of the column for which you want to get or set the identity property.
value	A string indicating whether a column's value in a newly inserted row is supplied by the DBMS: Yes – The DBMS will supply the value of the column in a newly inserted row; the column is not updatable. No – The column is updatable.

Examples

```
[Visual Basic]
dw1.Modify("empid.Identity='yes'")
```

Import.XML.Trace

Description

Setting that determines whether import trace information is written to a log file.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Import.XML.Trace { = ' *value* ' }"

Parameter	Description
value	Whether trace information is written to a log file. Values are: • Yes – Trace information is written to a log file. • No – Trace information is not written to a log file (default).

Usage

If you want to collect trace information, this property should be set before you call the ImportClipboard, ImportFile, or ImportString method to import data from an XML document. The trace information is appended to the file you specify using the Import.XML.TraceFile property. If no trace file is specified, trace information is appended to a file named *pbxmltrc.log* in the current directory.

In the painter In the Data Import category in the Properties window for the DataWindow object, select XML from the Import list, set XML Trace to True and supply a trace file name.

Examples

This example specifies that trace information should be written to a file called *xmltrace.log* in the *C:\temp* directory.

```
[Visual Basic]
dw1.Modify("DataWindow.Import.XML.Trace = 'yes' ")
dw1.Modify("DataWindow.Import.XML.TraceFile =
   'C:\temp\xmltrace.log' ")
```

See also

Import.XML.TraceFile

Import.XML.TraceFile

Description

Specifies the name and location of an import trace file.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Import.XML.TraceFile { = ' *value* ' }"

Parameter	Description
value	A string whose value is the name of the trace output file. If the file does not exist, it is created.

Usage

If you want to collect trace information, the Import.XML.Trace property should be set before you call the ImportClipboard, ImportFile, or ImportString method to import data from an XML document. The trace information is appended to the file you specify using the Import.XML.TraceFile property. If no trace file is specified, trace information is appended to a file named *pbxmltrc.log* in the current directory.

In the painter In the Data Import category in the Properties window for the DataWindow object, select XML from the Import list, set XML Trace to True and supply a trace file name.

See also

Import.XML.Trace

Import.XML.UseTemplate

Description

Setting that optionally controls the logical structure of the XML imported from an XML file into a DataWindow object using the ImportFile method.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.Import.XML.UseTemplate { = ' *value* ' }"

Parameter	Description
value	(*exp*) A string specifying the name of an import template previously saved in the DataWindow painter for the specified DataWindow object

Usage

This property should be set to specify the logical structure of the XML imported before you call the ImportFile method to import data from an XML document. An import template is not required if the XML document from which data is imported corresponds to the DataWindow column definition.

If an export template for a DataWindow object exists, it can be used as an import template. Only the mapping of column names to element attribute names is used for import. The order of elements within the template is not significant, because import values are located by name match and nesting depth within the XML document. All other information in the template, such as controls and comments, is ignored.

In the painter In the Data Import category in the Properties window for the DataWindow object, select XML from the Import list and select a template from the UseTemplate list.

Examples

This example sets the name of the current XML import template used in dw1 to t_import_report. If t_import_report does not exist, the current template is not changed.

```
[Visual Basic]
dw1.Modify("DataWindow.Import.XML.UseTemplate =
't_import_report' ")
```

See also

Export.XML.UseTemplate

Initial

Description

The initial value of the column in a newly inserted row.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.Initial { = ' *initialvalue* ' }"

Parameter	Description
columnname	A string containing the name of the column for which you want to get or set the initial property.

Parameter	Description
initialvalue	A string containing the initial value of the column. Special values include: Empty – A string of length 0 Null – No value Spaces – All blanks Today – Current date, time, or date and time

Examples

```
[Visual Basic]
setting = dw1.Describe("empname.Initial")
dw1.Modify("empname.Initial='empty'")
dw1.Modify("empstatus.Initial='A'")
```

Ink.*property*

Description

Properties that control the attributes of ink in an InkPicture control or a column with the InkEdit edit style.

Applies to

Column and InkPicture controls

Syntax

Describe and Modify argument:

"*inkpicname*.Ink.*property* { = *value* }"

"*columnname*.Ink.*property* { = *value* }"

Parameter	Description
inkpicname	The name of an InkPicture control.
columnname	The name of a column that has the InkEdit edit style.
property	A property for the InkPicture control or InkEdit column. Properties and their settings are listed in the table below.
value	The value to be assigned to the property.

Property for Ink	Value
AntiAliased	A drawing attribute that specifies whether the foreground and background colors along the edge of the drawn ink are blended (antialiased) to make the stroke smoother and sharper. Values are: true – The ink stroke appears smoother and sharper (default) false – The ink stroke is not antialiased
Color	A drawing attribute that specifies the current ink color. The default color is black.
Height	A drawing attribute that specifies the height of the side of the rectangular pen tip in HIMETRIC units (1 HIMETRIC unit = .01mm). The default is 1.

Property for Ink	Value
IgnorePressure	A drawing attribute that specifies whether the drawn ink gets wider as the pressure of the pen tip on the tablet surface increases. Values are: true – Pressure from the pen tip is ignored false – The width of the ink increases with the pressure of the pen tip (default)
Pentip	A drawing attribute that specifies whether the pen tip is round or rectangular. Values are: Ball (0) – The pen tip is round (default) Rectangle (1) – The pen tip is rectangular
Transparency	A drawing attribute that specifies the transparency of drawn ink. The range of values is from 0 for totally opaque (the default) to 255 for totally transparent.
Width	A drawing attribute that specifies the width of the side of the rectangular pen tip in HIMETRIC units (1 HIMETRIC unit = .01mm). The default is 53.

Usage

In the painter Select the control and set values in the Properties window, Ink or InkPicture category.

Examples

```
[Visual Basic]
li_color = dw1.Describe("emp_status.Ink.Color")
```

See also

InkEdit.property
InkPic.property

InkEdit.*property*

Description

Properties that control the behavior of a column with the InkEdit edit style.

Applies to

Column controls

Syntax

DataWindow .NET dot notation:

((InkEdit) *colname*.EditStyle).*property* [C#]
CType(*colname*.EditStyle, InkEdit).*property* [Visual Basic]

Describe and Modify argument:

"*columnname*.InkEdit.*property* { = *value* }"

Parameter	Description
columnname	The name of a column that has the InkEdit edit style.
property	A property for the InkEdit column. Properties and their settings are listed in the table below.
value	The value to be assigned to the property.

Property for InkEdit	Value
AutoSelect	Whether to select the contents of the edit control automatically when it receives focus. Values are: Yes – Select automatically (default). No – Do not select automatically. You can use AutoSelect with DataWindowSyntaxFromSql. The setting applies to all the columns in the generated syntax.
DisplayOnly	Specifies whether the text is display-only and cannot be changed by the user. Values are: true – Text cannot be changed by user. false – Text can be changed by user (default).
Factoid	Specifies a context for ink recognition. Set this property if the input data is of a known type, such as a date or Web address, to constrain the search for a recognition result. Possible values include digit, e-mail, Web, date, time, number, currency, percent, and telephone. For a list of values, see the table that follows.
FocusRectangle	Whether a dotted rectangle (the focus rectangle) will surround the current row of the column when the column has focus. Values are: Yes – (Default) Display the focus rectangle. No – Do not display the focus rectangle (default). You can use FocusRectangle with DataWindowSyntaxFromSql. The setting applies to all the columns in the generated syntax.
HScrollbar	Whether a horizontal scroll bar displays in the edit control. Values are: Yes – Display the horizontal scroll bar. No – Do not display the horizontal scroll bar (default).
InkMode	Specifies whether ink collection is enabled and whether ink only or ink and gestures are collected. Values are: InkDisabled (0) – Ink collection is disabled. CollectInkOnly (1) – Only ink is collected. CollectInkAndGestures (2) – Ink and gestures are collected (default).
Limit	A number specifying the maximum number of characters (0 to 32,767) that the user can enter. 0 means unlimited.
NilIsNull	Whether to set the data value of the InkEdit to null when the user leaves the edit box blank. Values are: Yes – Make the Empty string null. No – Do not make the empty string null (default).
RecognitionTimer	Specifies the time period in milliseconds between the last ink stroke and the start of text recognition. The default is 2000 (two seconds).
Required	Whether the column is required. Values are: Yes – Required. No – (Default) Not required.

Property for InkEdit	Value
UseMouseForInput	Specifies whether the mouse can be used for input on a Tablet PC. Values are: true – The mouse can be used for input false – The mouse cannot be used for input (default)
VScrollbar	Whether a vertical scroll bar displays in the edit control. Values are: Yes – Display a vertical scroll bar. No – Do not display a vertical scroll bar (default).

Usage

The following values for Factoid are available. After the Default and None factoids, the drop-down list in the Properties view displays factoids for special formats in alphabetical order, followed by single-character factoids and Asian-language factoids. You can set multiple factoids by separating them with the pipe (|) character.

Factoid	Description
Default	Returns recognizer to the default setting. For Western languages, the default setting includes the user and system dictionaries, various punctuation marks, and the Web and Number factoids. For Eastern languages, the default setting includes all characters supported by the recognizer.
None	Disables all factoids, dictionaries, and the language model.
Currency	Currency in pounds, dollars, euros, and yen.
Date	Dates written in English; for example 8/19/2005, Aug 19, 2005, or Friday, August 19, 2005.
E-mail	E-mail addresses.
Filename	Windows file name paths. The name cannot include the following characters: / : " < > |
Number	Numeric values, including ordinals, decimals, separators, common suffixes, and mathematical symbols. This factoid includes the Currency and Time factoids.
Percent	A number followed by the percent symbol.
Postal Code	Postal codes as written in English, for example 01730 or CT17 9PW.
System Dictionary	Words in the system dictionary only.
Telephone	Telephone numbers as written in English, for example (555) 555 5555 or +44 1234 123456.
Time	Times as written in English, for example 15:05 or 3:05 pm.
Web	Various URL formats.
Word List	Words on the word list associated with the recognizer context only.
Digit	A single digit (0-9).

Factoid	Description
One Char	A single ANSI character.
Upper Char	A single uppercase character.

In addition, the following Asian-language factoids are available:

Bopomofo	Kanji Common
Hangul Common	Katakana
Hiragana	Korean Common
Jamo	Simplified Chinese Common
Japanese Common	Traditional Chinese Common

In the painter Select the control and set values in the Properties window, Behavior category. The EditStyle on the Edit category must be set to InkEdit.

In DataWindow .NET, you can use the InkEdit class to set InkEdit Edit style properties using dot notation. See the description of the InkEdit class in the online Help in Visual Studio .NET for a complete list of properties.

Examples

```
[Visual Basic]
str = dw1.Describe("emp_bd.InkEdit.Factoid")
dw1.Modify("emp_bd.InkEdit.Factoid=EMAIL")
```

```
[Visual Basic]
If TypeOf empBnfts.EditStyle Is InkEdit Then
   CType(empBnfts.EditStyle, InkEdit).LeftText = True
ElseIf
...
```

```
[C#]
if (empBnfts.EditStyle is InkEdit)
{
   ((InkEdit)empBnfts.InkEdit).LeftText = true;
}
else
....
```

See also Ink.property

InkPic.*property*

Description Properties that control the behavior of ink in an InkPicture control.

Applies to InkPicture controls

Syntax

Describe and Modify argument:

"*inkpicname*.InkPic.*property* { = *value* }"

Parameter	Description
inkpicname	The name of an InkPicture control.
property	A property for the InkPicture control. Properties and their settings are listed in the table below.
value	The value to be assigned to the property.

Property for InkPic	Value
AutoErase	Specifies whether the auto erase feature available on some styluses is turned on. Values are: true – AutoErase is turned on. false – AutoErase is turned off (default).
BackColor	Specifies the numeric value of the background color: -2 to 16,777,215. For more information about color, see the RGB function.
CollectionMode	Specifies whether ink only, gestures only, or ink and gestures are collected. Values are: InkOnly (0) – Only ink is collected (default). GestureOnly (1) – Only gestures are collected. InkAndGesture (2) – Ink and gestures are collected.
DynamicRendering	Specifies whether the ink is rendered (displayed in the control) as it is drawn. The default is true.
EditMode	Specifies whether the editing mode of the control is set for drawing, deleting, or selecting ink. Values are: InkMode (0) – Ink is drawn (default). DeleteMode (1) – Ink is deleted. SelectMode (2) – Ink is selected.
EraserMode	Specifies whether ink is removed by stroke or point. Values are: StrokeErase (0) – The entire ink stroke under the stylus is removed (default). PointErase (1) – Only the ink under the stylus is removed.
EraserWidth	Specifies the width of the eraser pen tip in HIMETRIC units (1 HIMETRIC unit = .01mm). The default is 212. This property applies when EditMode is set to DeleteMode and EraserMode is set to PointErase.
HighContrastInk	Specifies whether ink is rendered in a single color when the system is in high contrast mode and draws the selection rectangle and handles in high contrast. Values are: true – Ink is rendered in a single color in high contrast mode (default). false – Ink is not rendered in a single color in high contrast mode.
InkEnabled	Specifies whether the InkPicture control collects pen input. Values are: true – The control collects pen input (default). false – The control does not collect pen input and no pen-related events fire.

Property for InkPic	Value
MarginX	Specifies the x-axis margin around the control in PowerBuilder units. The default value is 0.
MarginY	Specifies the y-axis margin around the control in PowerBuilder units. The default value is 0.
PictureSizeMode	Specifies how the picture is displayed in the control. Values are: Center Image (1) – The picture is centered in the control. Normal (2) – The picture is displayed in the upper-left corner of the control and any part of the picture that does not fit in the control is clipped (default). Stretch (3) – The picture is stretched to fill the control.

Usage

In the painter Select the control and set values in the Properties window, InkPicture category.

Examples

```
[Visual Basic]
li_color = dw1.Describe("inkpic1.InkPic.BackColor")
```

See also

Ink.property

Invert

Description

The way the colors in a Picture control are displayed, either inverted or normal.

Applies to

Picture controls

Syntax

Describe and Modify argument:

"*bitmapname*.Invert { = ' *number* ' }"

Parameter	Description
bitmapname	The name of the Picture control in the DataWindow for which you want to invert the colors.
number	(*exp*) A boolean number indicating whether the colors of the picture will display inverted. Values are: 0 – (Default) No; do not invert the picture's colors. 1 – Yes; display the picture with colors inverted. *Number* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Appearance category.

Examples

```
[Visual Basic]
setting = dw1.Describe("bitmap_1.Invert")
dw1.Modify(  _
"bitmap_1.Invert='0~tIf(empstatus=~~~'A~~~',0,1)'")
```

JSGen.*property*

Description

Settings that specify the physical path to which generated JavaScript is published and the URL indicating the location of the generated JavaScript.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.JSGen.*property* { = ' *value* ' }"

Parameter	Description
property	One of the following: • PublishPath • ResourceBase
value	(*exp*) PublishPath – A string that specifies the physical path of the Web site folder to which the DataWindow server publishes the generated JavaScript. (*exp*) ResourceBase – A string that specifies the URL of the generated JavaScript for performing client-side XSLT transformation and instantiation of client-side data.

Usage

The PublishPath folder must correspond to the URL specified in the ResourceBase property. At runtime, after the DataWindow server generates JavaScript to the PublishPath folder, it includes it in the final XHTML page by referencing it with the value of the ResourceBase property in a <script> element.

In the painter In the JavaScript Generation category in the Properties window for the DataWindow object, select XHTML from the JSGen list and specify the ResourceBase and Publish Path locations.

In DataWindow .NET In DataWindow .NET, you can specify the physical directory in which dynamically created files, such as *.css*, *.js*, *.xml*, and *.xslt* files, and URL references are stored, using the XmlConfigurations.UrlPath property. If you specify a value for XmlConfigurations.UrlPath, it overrides the values set for PublishPath and ResourceBase set in the DataWindow painter.

If you want to specify different paths for each of the different file types or if you want to specify a full path, set the properties in the DataWindow painter and leave the XmlConfigurations.UrlPath property empty in DataWindow .NET.

If you do not set these properties in the DataWindow painter or in DataWindow .NET, the files are saved in the current Web application's path.

Examples

These statements set the JSGen.ResourceBase and JSGen.PublishPath properties:

```
[Visual Basic]
dw1.Modify("DataWindow.JSGen.PublishPath=
   'C:\Inetpub\wwwroot\MyWebApp\generatedfiles'")
dw1.Modify("DataWindow.JSGen.ResourceBase=
   '/MyWebApp/generatedfiles'")
```

Key

Description

Whether the column is part of the database table's primary key.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.Key { = *value* }"

Parameter	Description
columnname	The column for which you want to get or set primary key status.
value	Whether the column is part of the primary key. Values are: Yes – The column is part of the primary key No – The column is not part of the key

Usage

In the painter Set the value using the Rows menu, Update Properties.

Examples

```
[Visual Basic]
setting = dw1.Describe("empid.Key")
dw1.Modify("empid.Key=Yes")
```

KeyClause

Description

An expression to be used as the key clause when retrieving the blob.

Applies to

TableBlob controls

Syntax

Describe and Modify argument:

"*tblobname*.KeyClause { = ' *keyclause* ' }"

Parameter	Description
tblobname	The name of the TableBlob for which you want to specify a key clause.

Parameter	Description
keyclause	(*exp*) A string that will be built into a key clause using the substitutions provided. The key clause can be any valid WHERE clause. *Keyclause* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Definition category.

Examples

With the following setting, the value of key_col will be put in col2 when the DataWindow server constructs the WHERE clause for the SELECTBLOB statement:

```
[Visual Basic]
dw1.Modify(blob_1.KeyClause='Key_col = :col2'")
```

Label.*property*

Description

Settings for a DataWindow whose presentation style is Label.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Label.*property* { = *value* }"

DataWindowSyntaxFromSql:

DataWindow(Label.*property* = *value*)

Parameter	Description
property	A property for the Label presentation style. Properties and their settings are listed in the table below.
value	The value to be assigned to the property. For Label properties, *value* cannot be a DataWindow expression.

Property for Label	Value
Columns	An integer indicating the number of columns of labels on a sheet. Painter: Label group, Labels Across option.
Columns.Spacing	An integer indicating the space between columns of labels in the units specified for the DataWindow object. Painter: Arrangement group, Between Columns option.
Ellipse_Height	An integer specifying the radius of the vertical part of the label in the unit of measure specified for the DataWindow object. Painter: Not set in painter.

Property for Label	Value
Ellipse_Width	An integer radius of the horizontal part of the label in the unit of measure specified for the DataWindow object. Painter: Not set in painter.
Height	An integer specifying the height of a label in the units specified for the DataWindow object. Painter: Label group, Height option.
Name	A string containing the name of a label. Painter: Predefined Label option.
Rows	An integer indicating the number of rows of labels on a sheet. Painter: Label group, Labels Down option.
Rows.Spacing	An integer indicating the space between rows of labels on a sheet in the units specified for the DataWindow object. Painter: Arrangement group, Between Rows option.
Shape	A string specifying the shape of a label. Values are: Rectangle RoundRectangle Oval Painter: Not set in painter.
Sheet	(*Describe only*) Whether the paper is sheet fed or continuous. Values are: Yes – Sheet fed No – Continuous Painter: Arrangement group, Paper option.
TopDown	(*Describe only*) Whether the labels will be printed from the top to the bottom or across the page. Values are: No – Print labels across the page. Yes – Print labels from top to bottom. Painter: Arrangement group, Arrange option.
Width	An integer specifying the width of a label in the units specified for the DataWindow object. Painter: Label group, Width option.

Usage

In the painter Select the DataWindow object by deselecting all controls; then set the value in the Properties window, General category (when presentation style is Label).

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Label.Sheet")
dw1.Modify("DataWindow.Label.Width=250")
dw1.Modify("DataWindow.Label.Height=150")
dw1.Modify("DataWindow.Label.Columns=2")
dw1.Modify("DataWindow.Label.Width=250")
dw1.Modify("DataWindow.Label.Name='Address1'")
```

LabelDispAttr.*fontproperty*

See DispAttr.fontproperty.

LastRowOnPage

Description: The last row currently visible in the DataWindow.

Applies to: DataWindows

Syntax: DataWindow .NET dot notation:

dw_control.LastRowOnPage

Describe argument:

"DataWindow.LastRowOnPage"

Examples

```
[C#]
int first, last;
first = dw1.FirstRowOnPage;
last = dw1.LastRowOnPage;
```

```
[Visual Basic]
setting = dw1.Describe("DataWindow.LastRowOnPage")
```

Left_Margin

Description: The size of the left margin of the DataWindow object.

Applies to: Style keywords

Syntax: DataWindowSyntaxFromSql:

Style (Left_Margin = *value*)

Parameter	Description
value	An integer specifying the size of the left margin in the units specified for the DataWindow

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'Style( ... LeftMargin = 500 ... )')
```

Legend

Description

The location of the legend in a Graph control in a DataWindow.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.Legend { = ' *value* ' }"

Parameter	Description
graphname	The name of the graph control for which you want to specify the location of the legend.
value	(*exp*) A number indicating the location of the legend of a graph. Values are: 0 – None 1 – Left 2 – Right 3 – Top 4 – Bottom *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category (applicable when the graph has more than one series).

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Legend")
dw1.Modify("graph_1.Legend=2")
dw1.Modify("graph_1.Legend='2~tIf(dept_id=200,0,2)'")
```

Legend.DispAttr.*fontproperty*

See DispAttr.fontproperty.

Level

Description: The grouping level.

Level is used in DataWindow syntax only for the Create method.

Applies to: Group keywords

Syntax: Group (BY(*colnum1*, *colnum2*, ...) ... Level = *n* ...)

LinkUpdateOptions

Description: When the OLE Object control is linked, the method for updating the link information. If the user tries to activate the OLE object and the DataWindow server cannot find the linked file, which breaks the link, LinkUpdateOptions controls whether the DataWindow server automatically displays a dialog box prompting the user to find the file. If you turn off the automatic dialog box, you can reestablish the link by calling the LinkTo or LinkUpdateDialog in code.

Applies to: OLE Object controls

Syntax: Describe and Modify argument:

"*olecontrolname*.LinkUpdateOptions { = ' *updatetype* ' }"

Parameter	Description
olecontrolname	The name of the OLE Object control for which you want to get or set the link update method.
updatetype	A number specifying how broken links will be reestablished. *Updatetype* can be a quoted DataWindow expression. Values are: • LinkUpdateAutomatic! • LinkUpdateManual!

Usage: **In the painter** Select the control and set the value in the Properties window, Options category.

Examples:

```
[Visual Basic]
ls_data = dw1.Describe("ole_report.LinkUpdateOptions")
dw1.Modify("ole_report.LinkUpdateOptions='0'")
```

Message.Title

Description

The title of the dialog box that displays when an error occurs.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Message.Title { = ' *titlestring* ' }"

DataWindowSyntaxFromSql:

DataWindow(Message.Title = ' *titlestring* ')

Parameter	Description
titlestring	A string containing the title for the title bar of the DataWindow dialog box that displays when an error occurs

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Message.Title")
dw1.Modify("DataWindow.Message.Title='Bad, Bad, Bad'")
```

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sql_syntax, "Style(...)
DataWindow(Message.Title='Sales Report' ...) ...")
```

Moveable

Description

Whether the specified control in the DataWindow can be moved at runtime. Moveable controls should be in the DataWindow's foreground.

Applies to

Button, Column, Computed Field, Graph, GroupBox, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Moveable { = *number* }"

Parameter	Description
controlname	The control within the DataWindow for which you want to get or set the Moveable property that governs whether the user can move the control
number	A boolean number specifying whether the control is moveable. Values are: 0 – False, the control is not moveable. 1 – True, the control is moveable.

Usage

In the painter Select the control and set the value in the Properties window, Layout category.

Examples

```
[Visual Basic]
setting = dw1.Describe("bitmap_1.Moveable")
dw1.Modify("bitmap_1.Moveable=1")
```

Name

Description

The name of the control.

Applies to

Button, Column, Computed Field, Graph, GroupBox, InkPicture, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe argument:

"*controlname*.Name"

Parameter	Description
controlname	The control for which you want the name. For columns, you can specify the column number preceded by #.

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("#4.Name")
```

Nest_Arguments

Description

The values for the retrieval arguments of a nested report. The number of values in the list should match the number of retrieval arguments defined for the nested report.

Applies to

Report controls

Syntax

Describe and Modify argument:

"*reportname*.Nest_Arguments { = *list* } "

Parameter	Description
reportname	The name of the nested report for which you want to supply retrieval argument values.

Parameter	Description
list	A list of values for the retrieval arguments of the nested report. The format for the list is: (("*arg1*") {,("*arg2*") {,("*arg3*") {,... } } })

Usage

The list is not a quoted string. It is surrounded by parentheses, and each argument value within the list is parenthesized, surrounded with double quotes, and separated by commas. If an argument is a literal string, use single quotes within the double quotes.

When changing the values for the retrieval arguments, you must supply values for all the retrieval arguments defined for the report. If you specify fewer or more arguments, an error will occur at runtime when the DataWindow retrieves its data.

To remove the report's retrieval arguments, specify empty parentheses. If no arguments are specified, the user is prompted for the values at runtime.

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("rpt_1.Nest_Arguments")
dw1.Modify("rpt_1.Nest_Arguments" "=((~"cust_id~"),
   (~"'Eastern'~"))")
dw1.Modify("rpt_1.Nest_Arguments=()")
```

Nested

Description

Whether the DataWindow contains nested DataWindows. Values returned are Yes or No.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Nested"

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Nested")
```

NewPage (Group keywords)

Description — Whether a change in the value of a group column causes a page break.

Applies to — Group keywords

Syntax — DataWindowSyntaxFromSql:

Group (*colnum1*, *colnum2* NewPage)

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sql_syntax, "Style(Type=Group) Group(#3 NewPage
ResetPageCount)")
```

NewPage (Report controls)

Description — Whether a nested report starts on a new page. NewPage applies only to reports in a composite DataWindow. Note that if the Trail_Footer property of the preceding report is set to No, the current report will be forced to begin on a new page regardless of the NewPage value.

Applies to — Report controls

Syntax — Describe and Modify argument:

"*reportname*.NewPage { = *value* } "

Parameter	Description
reportname	The name of the report control for which you want to get or set the NewPage property.
value	Whether the report begins a new page. Values are: Yes – Start the report on a new page. No – Do not start the report on a new page.

Usage — **In the painter** Select the Report control in the Composite presentation style and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
newpage_setting = dw1.Describe("rpt_1.NewPage")
dw1.Modify("rpt_1.NewPage=Yes")
```

NoUserPrompt

Description

Determines whether message boxes are displayed to the user during DataWindow processing.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.NoUserPrompt { = ' *value* ' }"

Parameter	Description
value	A string specifying whether any message box requiring user intervention displays during DataWindow processing. Values are: Yes – No message box displays. No – (Default) Message boxes display when invoked during DataWindow processing.

Usage

Set the NoUserPrompt property to yes if the DataWindow is to be used in a batch process or in an EAServer environment when there is no possibility of end-user intervention. Dialog boxes you can prevent from displaying include the Error, Print, Retrieve, CrossTab, Expression, SaveAs, Import, Query, Filter, and Sort dialog boxes.

Examples

```
[Visual Basic]
dw1.Modify("DataWindow.NoUserPrompt=no")
```

Objects

Description

A list of the controls in the DataWindow object. The names are returned as a tab-separated list.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Objects"

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Objects")
```

OLE.Client.*property*

Description

Settings that some OLE server applications use to identify the client's information. The property values can be used to construct the title of the server window.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.OLE.Client.*property* { = ' *value* ' }"

Parameter	Description
property	An OLE client property, as shown in the table below.
value	Values for the properties are shown in the table below. *Value* cannot be a DataWindow expression.

Property for OLE.Client	Value
Class	The client class for the DataWindow. The default is DataWindow.
Name	The client name for the DataWindow. The default is Untitled.

Usage

In the painter Select the control and set the value in the Properties window, Definition category.

Examples

```
[Visual Basic]
ls_data = dw1.Describe("DataWindow.OLE.Client.Class")
dw1.Modify("DataWindow.OLE.Client.Class = 'PB'")
```

OLEClass

Description

The name of the OLE class for the TableBlob control.

Applies to

TableBlob controls

Syntax

Describe and Modify argument:

"*tblobname*.OLEClass { = ' *oleclassname* ' }"

Parameter	Description
tblobname	The TableBlob column for which you want to get or set the class of server application.
oleclassname	(*exp*) A string specifying a class of an OLE server application installed on your system. *Oleclassname* is quoted and can be a DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Definition category.

Examples

```
[Visual Basic]
setting = dw1.Describe("blob_1.OLEClass")
dw1.Modify("blob_1.OLEClass='Word.Document'")
```

OverlapPercent

Description

The percentage of overlap for the data markers (such as bars or columns) in different series in a graph.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.OverlapPercent { = ' *integer* ' }"

Parameter	Description
graphname	The name of the graph control in the DataWindow object for which you want to get or set the percentage of overlap.
integer	(*exp*) An integer specifying the percent of the width of the data markers that will overlap. *Integer* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category (applicable when a series has been specified).

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.OverlapPercent")
dw1.Modify("graph_1.OverlapPercent=25")
```

Pen.*property*

Description: Settings for a line or the outline of a control.

Applies to: Line, Oval, Rectangle, and RoundRectangle controls

Syntax: Describe and Modify argument:

"*controlname*.Pen.*property* { = *value* }"

Parameter	Description
controlname	The name of the control whose Pen property you want to get or set.
property	A property that applies to the Pen characteristics of *controlname*, as listed in the table below.
value	The value of the property, as shown in the table below. *Value* can be a quoted DataWindow expression.

Property for Pen	Value
Color	(*exp*) A long specifying the color (the red, green, and blue values) to be used as the control's line color. Painter: Pen Color option.
Style	(*exp*) A number specifying the style of the line. Values are: 0 – Solid 1 – Dash 2 – Dotted 3 – Dash-dot pattern 4 – Dash-dot-dot pattern 5 – Null (no visible line) Painter: Pen Style option.
Width	(*exp*) A number specifying the width of the line in the unit of measure specified for the DataWindow. Painter: Pen Width option (not available when Style is a value other than Solid).

Usage: **In the painter** Select the control and set values in the Properties window, Appearance category.

Examples:

```
[Visual Basic]
setting = dw1.Describe("line_1.Pen.Width")
dw1.Modify("line_1.Pen.Width=10")
```

Perspective

Description — The distance from the front of the window at which the graph appears.

Applies to — Graph controls

Syntax — Describe and Modify argument:

"*graphname*.Perspective { = ' *integer* ' }"

Parameter	Description
graphname	The name of the graph control in the DataWindow object for which you want to get or set the perspective.
integer	(*exp*) An integer between 1 and 100 specifying how far away the graph appears. The larger the number, the greater the distance and the smaller the graph appears. *Integer* can be a quoted DataWindow expression.

Usage — **In the painter** Select the control and set the value in the Properties window, General category (available when a 3D graph type is selected).

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Perspective")

dw1.Modify("graph_1.Perspective=20")
```

Pie.DispAttr.*fontproperty*

See DispAttr.fontproperty.

PlotNullData

Description — Whether a continuous line is drawn between tics in a line graph when there is no data on the X and Y axes..

Applies to — Graph controls, Graph DataWindow objects

Syntax — Describe and Modify argument:

"*graphname*.PlotNullData { = ' *value* ' }"

Parameter	Description
graphname	The name of the graph control in the DataWindow object for which you want to get or set the perspective.

Parameter	Description
value	A boolean number indicating whether a continuous line is drawn between tics in a line graph when there is no data. Values are: 0 – (False) The line is broken when there is no data. 1 – (True) The line is continuous.

Usage

In the painter Set the value in the Properties window, General category (available when a line graph type is selected).

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.PlotNullData")

dw1.Modify("graph_1.PlotNullData=1")
```

Pointer

Description

The image to be used for the mouse pointer when the pointer is over the specified control. If you specify a pointer for the whole DataWindow, the DataWindow server uses that pointer except when the pointer is over a control that also has a Pointer setting.

Applies to

DataWindow, Button, Column, Computed Field, Graph, GroupBox, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Pointer { = ' *pointername* ' }"

Parameter	Description
controlname	The name of the control in the DataWindow for which you want to get or set the pointer. Specify DataWindow to specify the pointer for the whole DataWindow.
pointername	(*exp*) A string specifying a value of the Pointer enumerated datatype or the name of a cursor file (.*CUR*) to be used for the pointer. (See the SetPointer method for a list of Pointer values.) *Pointername* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Appearance category. For the DataWindow object itself, select the Pointer category.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Pointer")

dw1.Modify("graph_1.Pointer = 'Cross!'")

dw1.Modify("graph_1.Pointer = 'c:\pb040\mycurs.cur'")
```

Print.Preview.*property*

Description

Properties that control the print preview of a DataWindow.

Applies to

DataWindows

Syntax

DataWindow .NET dot notation:

dw_control.PrintProperties.*property*

Describe and Modify argument:

"DataWindow.Print.Preview.*property* { = *value* }"

DataWindowSyntaxFromSql:

DataWindow (Print.Preview.*property* = *value*)

Parameter	Description
property	A property for print preview. Properties and their settings are listed in the table below.
value	The value to be assigned to the property. *Value* cannot be a DataWindow expression.

Property for Print.Preview	Value
Buttons	Whether buttons display in print preview. Values are: Yes – Buttons are displayed. No – (Default) Buttons are not displayed. Painter: Display Buttons – Print Preview.
Outline	Whether a blue line displays to show the location of the margins. Values are: Yes – (Default) Margin outline is displayed. No – Margin outline is not displayed. Painter: Print Preview Shows Outline

Property for Print.Preview	Value
Rulers	Whether the rulers display when the DataWindow object displays in preview mode. Values are: Yes – Display the rulers. No – (Default) Do not display the rulers. You can view rulers in Preview mode in the DataWindow painter. With the Preview view selected, select File>Print Preview, then File>Print Preview Rulers. However, the setting is not used at runtime. To see rulers at runtime, set Print.Preview.Rulers in code..
Zoom	An integer indicating the zoom factor of the print preview. The default is 100%. You can view different zoom percentages in Preview mode in the DataWindow painter. With the Preview view selected, select File>Print Preview, then File>Print Preview Zoom. However, the setting is not used at runtime. To change the zoom factor at runtime, set Print.Preview.Zoom in code..

Usage

In the painter Select the DataWindow by deselecting all controls; then set values in the Properties window, Print Specifications category.

In DataWindow .NET, you can use the PrintProperties class to set print properties using dot notation. Note that the names of some properties of the PrintProperties class differ from the names of the DataWindow object property, and some take a different value.

See the description of the PrintProperties class in the online Help in Visual Studio .NET for a complete list of Print.Preview properties.

Examples

```
[Visual Basic]
setting = dw1.Describe
       ("DataWindow.Print.Preview.Buttons")

dw1.Modify("DataWindow.Print.Preview.Buttons = 'Yes'")

dw1.PrintProperties.ShowPreviewButtons = 'Yes'

setting = dw1.Describe
       ("DataWindow.Print.Preview.Rulers")

dw1.Modify("DataWindow.Print.Preview.Rulers = 'Yes'")

dw1.PrintProperties.ShowPreviewRulers = 'Yes'
```

See also

Print.property

Print.*property*

Description

Properties that control the printing of a DataWindow.

Applies to

DataWindows

Syntax

DataWindow .NET dot notation:

dw_control.PrintProperties.*property*

Describe and Modify argument:

"DataWindow.Print.*property* { = *value* }"

DataWindowSyntaxFromSql:

DataWindow (Print.*property* = *value*)

Parameter	Description
property	A property for printing. Properties and their settings are listed in the table below.
value	The value to be assigned to the property. *Value* cannot be a DataWindow expression.

Property for Print	Value
Buttons	Whether buttons display on the printed output. Values are: Yes – Buttons are displayed. No – Buttons are not displayed.
CanUseDefault Printer	Whether a report can be printed on the default system printer if the printer specified by the PrinterName property is not valid.
ClipText	Whether the text of a static text field on a printed page is clipped to the dimensions of the text field when the text field has no visible border setting. Values are: Yes – The printed text does not overrun the text field. No – (Default) The entire text can overrun the text field. Text is automatically clipped for text fields with visible border settings even if this property is not set.
Collate	Whether printing is collated. Note that collating is usually slower since the print is repeated to produce collated sets. Values are: Yes – (Default) Collate the pages of the print job. No – Do not collate.

Property for Print	Value
Color	An integer indicating whether the printed output will be color or monochrome. Values are: 1 – Color 2 – Monochrome The user can specify the value in the system's Print dialog box if the printer driver supports it.
Columns	An integer specifying the number of newspaper-style columns the DataWindow will print on a page. For purposes of page fitting, the whole DataWindow is a single column. The default is 1.
Columns.Width	An integer specifying the width of the newspaper-style columns in the units specified for the DataWindow.
Copies	An integer indicating the number of copies to be printed. The user can also specify this value in the system's Print Setup dialog box if the printer driver supports it. If you use *both* the Print.Copies property and the Print Setup dialog box to indicate that multiple copies should be printed, the total number of copies printed is the product of the two values.
CustomPage.Length	A long indicating the desired length of a custom paper size for printing. Use this property in conjunction with Print.CustomPage.Width and with Paper.Size set to 256.
CustomPage.Width	A long indicating the desired width of a custom paper size for printing. Use this property in conjunction with Print.CustomPage.Length and with Paper.Size set to 256.
DocumentName	A string containing the name that will display in the print queue when the user sends the contents of the DataWindow object to the printer.
Duplex	An integer indicating duplex or double-sided printing for printers capable of duplex printing. Values are: 0 – Default 1 – Normal (nonduplex) printing 2 – Short-edge binding (the long edge of the page is horizontal) 3 – Long-edge binding (the long edge of the page is vertical) The user can specify the value in the system's Print dialog box if the printer driver supports it.
Filename	A string containing the name of the file to which you want to print the report. An empty string means send to the printer. Painter: Cannot be set in painter.
Margin.Bottom	An integer indicating the width of the bottom margin on the printed page in the units specified for the DataWindow. You can set Margin.Bottom when using DataWindowSyntaxFromSql to generate DataWindow syntax.

Property for Print	Value
Margin.Left	An integer indicating the width of the left margin on the printed page in the units specified for the DataWindow. You can set Margin.Left when using DataWindowSyntaxFromSql to generate DataWindow syntax.
Margin.Right	An integer indicating the width of the right margin on the printed page in the units specified for the DataWindow. You can set Margin.Right when using DataWindowSyntaxFromSql to generate DataWindow syntax.
Margin.Top	An integer indicating the width of the top margin on the printed page in the units specified for the DataWindow. You can set Margin.Top when using DataWindowSyntaxFromSql to generate DataWindow syntax.
Orientation	An integer indicating the print orientation. This property has no effect if the computer has no default printer. Values are: 0 – The default orientation for your printer 1 – Landscape 2 – Portrait
OverridePrintJob	Whether you want to override the print job print settings defined in the PrintOpen method with the print specifications of the DataWindow. Values are: Yes – Override the print job print settings. No – (Default) Do not override the print job print settings.
Page.Range	A string containing the numbers of the pages you want to print, separated by commas. You can also specify a range with a dash. For example, to print pages 1, 2, and 5 through 10, enter: "1,2, 5-10". The empty string means print all. The user can specify the value in the system's Print dialog box if the printer driver supports it.
Page.RangeInclude	An integer indicating what pages to print within the desired range. Values are: 0 – Print all. 1 – Print all even pages. 2 – Print all odd pages. The user can specify the value in the system's Print dialog box if the printer driver supports it.

Property for Print	Value
Paper.Size	An integer indicating the size of the paper used for the output: 0 – Default paper size for the printer 1 – Letter 8 1/2 x 11 in 2 – LetterSmall 8 1/2 x 11 in 3 – Tabloid 17 x 11 in 4 – Ledger 17 x 11 in 5 – Legal 8 1/2 x 14 in 6 – Statement 5 1/2 x 8 1/2 in 7 – Executive 7 1/4 x 10 1/2 in 8 – A3 297 x 420 mm 9 – A4 210 x 297 mm 10 – A4 Small 210 x 297 mm 11 – A5 148 x 210 mm 12 – B4 250 x 354 mm 13 – B5 182 x 257 mm 14 – Folio 8 1/2 x 13 in 15 – Quarto 215 x 275 mm 16 – 10x14 in 17 – 11x17 in 18 – Note 8 1/2 x 11 in 19 – Envelope #9 3 7/8 x 8 7/8 20 – Envelope #10 4 1/8 x 9 1/2 21 – Envelope #11 4 1/2 x 10 3/8 22 – Envelope #12 4 x 11 1/276 23 – Envelope #14 5 x 11 1/2 24 – C size sheet 25 – D size sheet 26 – E size sheet 27 – Envelope DL 110 x 220 mm 28 – Envelope C5 162 x 229 mm 29 – Envelope C3 324 x 458 mm 30 – Envelope C4 229 x 324 mm 31 – Envelope C6 114 x 162 mm 32 – Envelope C65 114 x 229 mm 33 – Envelope B4 250 x 353 mm 34 – Envelope B5 176 x 250 mm 35 – Envelope B6 176 x 125 mm 36 – Envelope 110 x 230 mm 37 – Envelope Monarch 3.875 x 7.5 in 38 – 6 3/4 Envelope 3 5/8 x 6 1/2 in 39 – US Std Fanfold 14 7/8 x 11 in 40 – German Std Fanfold 8 1/2 x 12 in 41 – German Legal Fanfold 8 1/2 x 13 in 255, 256 – User-defined paper size (see "Usage" below)

Property for Print	Value
Paper.Source	An integer indicating the bin that will be used as the paper source. The integer you use depends on the tray number used by the printer. (To determine the actual bin setting, you can query the printer with a utility that makes API calls to the printer driver.) Typical values are: 0 – Default 1 – Upper 2 – Lower 3 – Middle 4 – Manual 5 – Envelope 6 – Envelope manual 7 – Auto 8 – Tractor 9 – Smallfmt 10 – Largefmt 11 – Large capacity 14 – Cassette
Preview	Whether the DataWindow object is displayed in preview mode. Values are: Yes – Display in preview mode. No – (Default) Do not display in preview mode.
PrinterName	A string containing the name of the printer you want to use to print the DataWindow report. If the printer name is not specified or if the named printer cannot be found at runtime, print output can be directed to the default printer for the user's machine by setting the CanUseDefaultPrinter property. Otherwise, an error is returned.
Prompt	Whether a Printer Setup dialog displays before a job prints so the user can change the paper or other settings for the current printer. Values are: Yes – (Default) Display a Printer Setup dialog. No – Do not display a Printer Setup dialog. Choosing Cancel in the Printer Setup dialog dismisses the Setup dialog; it does not cancel printing. To allow the user to cancel printing, see the Print method. For DataStores, this property is ignored; a dialog is never displayed.

Property for Print	Value
Quality	An integer indicating the quality of the output. Values are: 0 – Default 1 – High 2 – Medium 3 – Low 4 – Draft The user can specify the value in the system's Print dialog box if the printer driver supports it.
Scale	An integer specifying the scale of the printed output as a percent. The scaling percentage is passed to the print driver. If you have problems with scaling, you might be using a driver that does not support scaling. The user can specify the value in the system's Print dialog box if the printer driver supports it. For more information, see your print driver documentation.

Usage

In the painter Select the DataWindow by deselecting all controls; then set values in the Properties window, Print Specifications category.

In DataWindow .NET, you can use the PrintProperties class to set print properties using dot notation. Note that the names of some properties of the PrintProperties class differ from the names of the DataWindow object property, and some take a different value. For example, the Color DataWindow object property takes an integer value, and the equivalent ColorOutput PrintProperties property takes a boolean value.

See the description of the PrintProperties class in the online Help in Visual Studio .NET for a complete list of properties.

To specify a user-defined paper size, set the Paper.Size property to 255 or 256, then set the Print.CustomPage.Length and Print.Custom.Page.Width properties to the desired size. With Paper.Size set to 255, Length and Width are in the units specified for the DataWindow on the General page in the Properties view. For example:

```
// DataWindow Units set to 1/1000 inch
dw1.Modify("DataWindow.Print.Paper.Size=255")
//9.875 inches long
dw1.Modify("DataWindow.Print.CustomPage.Length=9875")
//7.375 inches wide
dw1.Modify("DataWindow.Print.CustomPage.Width=7375")
```

With Paper.Size set to 256, Length and Width are in millimeters:

```
dw1.Modify("DataWindow.Print.Paper.Size=256")
//25.4 centimeters long
dw1.Modify("DataWindow.Print.CustomPage.Length=254")
//19.5 centimeters wide
dw1.Modify("DataWindow.Print.CustomPage.Width=195")
```

Examples

```
[Visual Basic]
dw1.PrintProperties.PaperSize = 3

strData = dw1.Describe("DataWindow.Print.Scale")

dw1.Modify("DataWindow.Print.Paper.Size = 3")

dw1.Modify("DataWindow.Print.Margin.Top=500")

dw1.PrintProperties.ShowButtons = 'Yes'

setting = dw1.Describe("DataWindow.Print.Buttons")

dw1.Modify("DataWindow.Print.Buttons = 'Yes'")
```

See also

Print.Preview.property

Printer

Description

The name of the printer for printing the DataWindow as specified in the system's printer selection dialog box.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Printer" { = *printername* }"

Parameter	Description
printername	Name of the printer you want to use for your DataWindow

Usage

The printer you select for a DataWindow does not affect the system default printer. To specify a network-connected printer, you must use a fully specified network printer name:

```
dw1.SetProperty("DataWindow.Printer", "\\svr\pr-6'")
```

If you specify a DataWindow printer, but the printer is not found, the DataWindow engine does not attempt to print to a default device.

Examples

The following example changes the DataWindow printer (but does not affect the system default printer device):

```
[Visual Basic]
dw1.Modify ('DataWindow.Printer="My LaserJet 3" ')
```

You can display the DataWindow printer with the following calls:

```
ls_dwprinter = dw1.Describe("DataWindow.Printer")
```

Processing

Description

The type of processing required to display the data in the selected presentation style.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Processing"

Return values are:

0 – (Default) Form, group, n-up, or tabular
1 – Grid
2 – Label
3 – Graph
4 – Crosstab
5 – Composite
8 – TreeView
9 – TreeView with Grid

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Processing")
```

Protect

Description

The protection setting of a column. The Protect property overrides tab order settings. When a column is protected, the user cannot edit it even if the column's tab order is greater than 0.

Applies to

A column

Syntax

Describe and Modify argument:

"*columnname*.Protect { = ' *integer* ' }"

Parameter	Description
columnname	The name of the column for which you want to get or set the protection.
integer	(exp) A boolean integer specifying whether the column is protected. Values are: 0 – False, the column is not protected. 1 – True, the column is protected. *Integer* can be a quoted DataWindow expression.

Usage

A user cannot change a column value if any one of these conditions is true:

- TabSequence is 0
- Edit.DisplayOnly is Yes when the column has the Edit edit style
- Protect is 1

Only the Protect property allows you to specify a conditional expression that protects some values in the column but not others.

In the painter Select the control and set the value in the Properties window, Behavior category (using a conditional expression).

Examples

```
setting = dw1.Describe("emp_stat.Protect")
dw1.Modify("emp_stat.Protect=1")
dw1.Modify("emp_stat.Protect='1~tIf(IsRowNew(),0,1)'")
```

QueryClear

Description

Removes the WHERE clause from a query. Note that the only valid setting is Yes.

Applies to

DataWindows

Syntax

Modify argument:

"DataWindow.QueryClear { = *value* }"

Parameter	Description
value	Remove the WHERE clause from a query. Yes is the only valid value.

Examples

```
dw1.Modify("DataWindow.QueryClear=yes")
```

QueryMode

Description

Whether the DataWindow is in query mode. In query mode, the user can specify the desired data by entering WHERE criteria in one or more columns.

DataWindow presentation styles
You cannot use QueryMode with DataWindow objects that use any of the following presentation styles: Label, Crosstab, and Graph.

Applies to

DataWindows

Syntax

DataWindow .NET dot notation:

dw_control.QueryMode

Describe and Modify argument:

"DataWindow.QueryMode { = *value* }"

Parameter	Description
value	Whether the DataWindow is in query mode. Values are: Yes – Query mode is enabled. No – Query mode is disabled. In DataWindow .NET, set the value of the DataWindowControl property to true or false.

Usage

After the user specifies retrieval criteria in query mode, subsequent calls to Retrieve can use the new criteria. To retrieve data based on user selection, change the query mode back to No and use AcceptText to accept the user's specification before the next call to Retrieve.

Setting QuerySort to Yes also puts the DataWindow into query mode, changing the QueryMode property's value to Yes.

Query mode and secondary DataWindows When you are sharing data, you cannot turn on query mode for a secondary DataWindow. Trying to set the QueryMode or QuerySort properties results in an error.

Buffer manipulation and query mode A DataWindow *cannot* be in query mode when you call the RowsCopy method.

Examples

```
[Visual Basic]
dw1.QueryMode = true

setting = dw1.Describe("DataWindow.QueryMode")

dw1.Modify("DataWindow.QueryMode=yes")
```

QuerySort

Description

Whether the result set is sorted when the DataWindow retrieves the data specified in query mode. When query sort is on, the user specifies sorting criteria in the first row of the query form.

DataWindow presentation styles
You cannot use QuerySort with DataWindow objects that use any of the following presentation styles: N-Up, Label, Crosstab, and Graph.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.QuerySort { = *value* }"

Parameter	Description
value	Whether the data retrieved from query mode specifications is sorted. Values are: Yes – Sorting is enabled. No – Sorting is disabled.

Usage

If the DataWindow is not already in query mode, setting QuerySort to Yes also sets QueryMode to Yes, putting the DataWindow in query mode.

When you set QuerySort to No, the DataWindow remains in query mode until you also set QueryMode to No.

Query mode and secondary DataWindows When you are sharing data, you cannot turn on query mode for a secondary DataWindow. Trying to set the QueryMode or QuerySort properties results in an error.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.QuerySort")
dw1.Modify("DataWindow.QuerySort=yes")
```

RadioButtons.*property*

Description

Properties that control the appearance and behavior of a column with the RadioButton edit style.

Applies to

Column controls

Syntax

DataWindow .NET dot notation:

((RadioButton) *colname*.EditStyle).*property* [C#]
CType(*colname*.EditStyle, RadioButton).*property* [Visual Basic]

Describe and Modify argument:

"*columnname*.RadioButtons.*property* { = *value* }"

Parameter	Description
columnname	The name of the column that has the RadioButton edit style.
property	A property for the RadioButton column. Properties and their settings are listed in the table below.
value	The value to be assigned to the property. For RadioButton properties, *value* cannot be a DataWindow expression.

Property for RadioButtons	Value
3D or ThreeD	Whether the radio buttons are 3D. Values are: Yes – Make the buttons 3D. No – Do not make the buttons 3D. When using dot notation, use the term ThreeD instead of 3D.
Columns	An integer constant specifying the number of columns of radio buttons.
LeftText	Whether the text labels for the radio buttons are on the left side. Values are: Yes – The text is on the left of the radio buttons. No – The text is on the right of the radio buttons.
Scale	Whether the circle is scaled to the size of the font. Scale has an effect only when 3D is No. Values are: Yes – Scale the circles. No – Do not scale the circles.

Usage

In the painter Select the control and set the value in the Properties window, Behavior category when EditStyle is RadioButtons.

In DataWindow .NET, you can use the RadioButton class to set RadioButton Edit style properties using dot notation. See the description of the RadioButton class in the online Help in Visual Studio .NET for property names.

Examples

```
[Visual Basic]
setting = dw1.Describe("empg.RadioButtons.LeftText")
dw1.Modify("emp_gender.RadioButtons.LeftText=no")
dw1.Modify("emp_gender.RadioButtons.3D=Yes")
dw1.Modify("emp_gender.RadioButtons.Columns=2")
```

```
[Visual Basic]
If TypeOf col6.EditStyle Is RadioButton Then
   CType(col6.EditStyle, RadioButton).LeftText = True
ElseIf
...

[C#]
if (empBnfts.EditStyle is RadioButton)
{
   ((RadioButton)empBnfts.EditStyle).LeftText = true;
}
else
....
```

Range

Description

The rows in the DataWindow used in the graph control. Range can be all rows, the rows on the current page, a group that you have defined for the DataWindow, or the current row (OLE Object controls only).

Applies to

Graph and OLE Object controls

Syntax

Describe argument:

"*controlname*.Range"

Parameter	Description
controlname	The name of the graph control within the DataWindow that will display the graphed rows or the name of the OLE Object control that holds an OLE object to which the specified range of rows will be transferred.

Usage

Possible values are:

-2 – The current row (OLE Object controls only)
-1 – The rows on a single page in the DataWindow object
0 – All the rows in the DataWindow object
n – The number of a group level in the DataWindow object

GroupBy and Target also affect the data that is transferred to the OLE object.

In the painter Select the control and set the value in the Properties window, Data category. For a Graph control, set the DataRows property.

Examples

```
[Visual Basic]
strRange = dw1.Describe("graph_salary.Range")

strRange = dw1.Describe("ole_report.Range")
```

ReadOnly

Description: Whether the DataWindow is read-only.

Applies to: DataWindows

Syntax: Describe and Modify argument:

"DataWindow.ReadOnly { = *value* }"

Parameter	Description
value	Whether the DataWindow is read-only. Values are: Yes – Make the DataWindow read-only. No – (Default) Do not make the DataWindow read-only.

Examples:

```
[Visual Basic]
setting = dw1.Describe("DataWindow.ReadOnly")

dw1.Modify("DataWindow.ReadOnly=Yes")
```

ReplaceTabWithSpace

Description: Whether tab characters embedded in the data for a DataWindow display as square boxes when the row is not the current row.

Applies to: DataWindows

Syntax: Describe and Modify argument:

"DataWindow.ReplaceTabWithSpace { = *value* }"

Parameter	Description
value	Whether tab characters embedded in the data for a DataWindow are replaced with spaces. Values are: Yes – Replace each tab character with four spaces. No – (Default) Do not replace tab characters.

Examples:

```
[Visual Basic]
str = dw1.Describe("DataWindow.ReplaceTabWithSpace")

dw1.Modify("DataWindow.ReplaceTabWithSpace=Yes")
```

Report

Description: Whether the DataWindow is a read-only report.

Applies to: Style keywords

Syntax: DataWindowSyntaxFromSql:

Style (Report = *value*)

Parameter	Description
value	Whether the DataWindow is a read-only report, similar to a DataWindow created in the Report painter. Values are: Yes – The DataWindow is a read-only report. No – The DataWindow is not read-only.

Examples:

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'Style(...Report = yes ...)')
```

ResetPageCount

Description: Specifies that a change in the value of the group column causes the page count to begin again at 0.

Applies to: Group keywords

Syntax: DataWindowSyntaxFromSql:

Group (*col1* {*col2* ...} ... ResetPageCount)

Examples:

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, "Style(Type=Group) Group(#3 NewPage
ResetPageCount)")
```

Resizeable

Description: Whether the user can resize the specified control.

Applies to: Button, Column, Computed Field, Graph, GroupBox, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Resizeable { = *value* }"

Parameter	Description
controlname	The control within the DataWindow whose Resizeable setting you want to get or set.
value	A boolean number indicating whether *controlname* can be resized. Values are: 0 – (False) The control cannot be resized. 1 – (True) The control can be resized.

Usage

In the painter Select the control and set the value in the Properties window, Layout category.

When you make the control resizable, set the Border property to the resizable border so the user knows it is resizable.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Resizeable")
dw1.Modify("graph_1.Resizeable=1")
dw1.Modify("bitmap_1.Resizeable=0")
```

Retrieve

Description

The SQL statement for the DataWindow.

Retrieve is set in DataWindow syntax only for the Create method.

Applies to

Table keywords

Syntax

Table (... Retrieve = *selectstatement* ...)

Retrieve.AsNeeded

Description

Whether rows will be retrieved only as needed from the database. After the application calls the Retrieve method to get enough rows to fill the visible portion of the DataWindow, additional rows are “needed” when the user scrolls down to view rows that have not been viewed yet.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Retrieve.AsNeeded { = ' *value* ' }"

Parameter	Description
value	Whether rows will be retrieved only as needed from the database. Values are: • Yes – Rows will be retrieved only as needed. • No – All rows will be retrieved when the Retrieve method is called.

Usage

In the painter Set the value using Rows>Retrieve Options>Rows As Needed.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Retrieve.AsNeeded")
dw1.Modify("DataWindow.Retrieve.AsNeeded=Yes")
```

RichText.*property*

Description

Properties for the DataWindow RichText presentation style (not in DataWindow .NET).

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.RichText.*property* { = *value* }"

Parameter	Description
property	A property for the DataWindow RichText presentation style. Properties and appropriate values are listed in the table below.
value	A value to be assigned to the property.

Rotation

Description

The degree of left-to-right rotation for the graph control within the DataWindow when the graph has a 3D type.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.Rotation = { ' *integer* ' }"

Parameter	Description
graphname	The name of the Graph control for which you want to get or set the rotation.
integer	(*exp*) The degree of rotation for the graph. Effective values range from -90 to 90. Integer can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category (enabled when a 3D graph type is selected).

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Rotation")
dw1.Modify("graph_1.Rotation=25")
dw1.Modify("graph_1.Rotation='1~tHour(Now())'")
```

Row.Resize

Description

Whether the user can use the mouse to change the height of the rows in the detail area of the DataWindow.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Row.Resize { = *value* } "

Parameter	Description
value	Whether the user can resize the rows in the detail area. Values are: • 1 – Yes, the user can resize the rows. • 0 – No, the user cannot resize the rows.

Usage

In the painter Select the DataWindow by deselecting all controls; then set the value in the Properties window, General category (available when the presentation style is Grid or Crosstab).

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Row.Resize")
dw1.Modify("DataWindow.Row.Resize=0")
```

Rows_Per_Detail

Description

The number of rows in the detail area of an n-up DataWindow object. This property should be 1 unless the Type property for the Style keyword is Tabular.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Rows_Per_Detail"

DataWindowSyntaxFromSql:

DataWindow (... Rows_Per_Detail = *n* ...)

Parameter	Description
n	A long specifying the number of rows in each column

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'DataWindow(...Rows_Per_Detail = 12 ...)')
```

Selected

Description

A list of selected controls within the DataWindow.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Selected = ' *list* ' "

Parameter	Description
list	A list of the controls you want to select. In the list you designate a group of controls by specifying a range of row numbers and a range of controls in the format: *startrow*/*endrow*/*startcontrol*/*endcontrol* To specify more than one group, separate each group with a semicolon: *startrow1*/*endrow1*/*startobj1*/*endobj1*;*startrow2*/*endrow2*/*startobj2*/*endobj2*;... Do not include spaces in the string. You must use column names, not column numbers.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Selected")
dw1.Modify("DataWindow.Selected="  _
"'1/10/emp_id/emp_name;12/23/salary/status'")
```

Selected.Data

Description
A list describing the selected data in the DataWindow. Each column's data is separated by a tab and each row is on a separate line.

Applies to
DataWindows (Crosstab and Grid presentation styles only)

Syntax
Describe argument:

"DataWindow.Selected.Data"

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Selected.Data")
```

Selected.Mouse

Description
Whether the user can use the mouse to select columns.

Applies to
DataWindows

Syntax
Describe and Modify argument:

"DataWindow.Selected.Mouse { = *value* }"

Parameter	Description
value	Whether the user can use the mouse to select columns. Values are: • Yes – The mouse can be used. • No – The mouse cannot be used.

Usage
In the painter Select the DataWindow by deselecting all controls; then set the value in the Properties window, General category (available when the presentation style is Grid or Crosstab).

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Selected.Mouse")
dw1.Modify("DataWindow.Selected.Mouse = Yes")
```

Series

See Axis, Axis.property, and DispAttr.fontproperty.

ShadeColor

Description

The color used for shading the back edge of the series markers when the graph's type is 3D. ShadeColor has no effect unless Series.ShadeBackEdge is 1 (Yes). If ShadeBackEdge is 0, the axis plane is the same color as the background color of the graph.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.ShadeColor { = ' *long* ' }"

Parameter	Description
graphname	The Graph control in the DataWindow for which you want to shade color.
long	(*exp*) A long number converted to a string specifying the color of the shading for axes of a 3D graph. You can use the RGB function in a DataWindow expression to calculate the desired color value. *Long* can be a quoted DataWindow expression.

Usage

To set the shade color for individual series markers, such as bars or pie slices, use the method SetDataStyle.

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.ShadeColor")

dw1.Modify("graph_1.ShadeColor=16600000")

dw1.Modify("graph_1.ShadeColor=String(RGB(90,90,90)))

dw1.Modify("graph_1.ShadeColor='0~t If(salary>50000,
String(RGB(100,90,90)), String(RGB(90,90,100)) )'")
```

ShowBackColorOnXP

Description

Whether the background color that you select for a button displays on Windows XP.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.ShowBackColorOnXP{ = *value* }"

Parameter	Description
value	A boolean value that indicates whether the background color that you select for a button displays on Windows XP Values are: Yes – Display the background color. No – Do not display the background color (default).

Usage

The Background.Color property is not supported for buttons on Windows XP by default because the current XP theme controls the appearance of the button.

In the painter Set the Show Backcolor on XP property in the General category of the Properties window for the DataWindow object. The background color you selected will display in Preview mode.

Examples

```
dw1.Modify("DataWindow.ShowBackColorOnXP = yes")
```

ShowDefinition

Description

Whether the DataWindow definition will display. The DataWindow will display the column names instead of data.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.ShowDefinition { = ' *value* ' }"

Parameter	Description
value	(*exp*) Whether the column names will display. Values are: • Yes – Display the column names. • No – Do not display the data, if any. *Value* can be a quoted DataWindow expression.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.ShowDefinition")
dw1.Modify("DataWindow.ShowDefinition=Yes")
```

SizeToDisplay

Description

Whether the graph should be sized automatically to the display area.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.SizeToDisplay { = ' *value* ' }"

Parameter	Description
graphname	The graph control in the DataWindow for which you want to get or set adjustability.
value	(*exp*) A boolean number specifying whether to adjust the size of the graph to the display. Values are: • 0 – False, do not adjust the size of the graph. • 1 – True, adjust the size of the graph. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Appearance category.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.SizeToDisplay")
dw1.Modify("graph_1.SizeToDisplay=0")
```

SlideLeft

Description

Whether the control moves to the left when other controls to the left leave empty space available. This property is for use with read-only controls and printed reports. It should not be used with data entry fields or controls.

Applies to

Button, Column, Computed Field, Graph, GroupBox, Line, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.SlideLeft { = ' *value* ' }"

Parameter	Description
controlname	The name of the control for which you want to get or set the Slide setting.

Parameter	Description
value	(*exp*) Whether the control slides left when there is empty space to its left. Values are: • Yes – The control will slide left into available space. • No – The control will remain in position. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Layout category. This property is not supported in Web DataWindows.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.SlideLeft")
dw1.Modify("emp_lname.SlideLeft=yes")
```

SlideUp

Description

Whether the control moves up when other controls above it leave empty space available. This property is for use with read-only controls and printed reports. It should not be used with data entry fields or controls.

Applies to

Button, Column, Computed Field, Graph, GroupBox, Line, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.SlideUp { = ' *value* ' }"

Parameter	Description
controlname	The name of the control for which you want to get or set the Slide setting.
value	(*exp*) How the control slides up when there is empty space above it. Values are: • AllAbove – Slide the control up if all the controls in the row above it are empty. • DirectlyAbove – Slide the column or control up if the controls directly above it are empty. • No – The control will not slide up. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Layout category. This property is not supported in Web DataWindows.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.SlideUp")
dw1.Modify("emp_lname.SlideUp=no")
```

Sort

Description

Sort criteria for a newly created DataWindow. To specify sorting for existing DataWindows, see the SetSort and Sort methods.

Applies to

Table keywords in DataWindow syntax

Syntax

DataWindow syntax for Create method:

Table (... Sort = *stringexpression* ...)

Parameter	Description
stringexpression	A string whose value represents valid sort criteria. See the SetSort method for the format for sort criteria. If the criteria string is null, the DataWindow server prompts for a sort specification when it displays the DataWindow.

Spacing

Description

The gap between categories in a graph.

Applies to

Graph controls

Syntax

Describe and Modify argument:

"*graphname*.Spacing { = ' *integer* ' }"

Parameter	Description
graphname	The name of the graph control in the DataWindow for which you want to get or set the spacing.
integer	(*exp*) An integer specifying the gap between categories in the graph. You specify the value as a percentage of the width of the data marker. For example, in a bar graph, 100 is the width of one bar, 50 is half a bar, and so on. *Integer* can be a DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("graph_1.Spacing")
dw1.Modify("graph_1.Spacing=120")
```

Sparse

Description: The names of repeating columns that will be suppressed in the DataWindow.

Applies to: DataWindows

Syntax: Describe and Modify argument:

"DataWindow.Sparse { = ' *list* ' }"

Parameter	Description
list	(*exp*) A tab-separated list of column names to be suppressed. *List* can be a quoted DataWindow expression.

Create method (include at the end of the DataWindow syntax):

Sparse (names = "*col1*~t*col2*~t*col3 ...*")

Usage: **In the painter** Set the value using Rows>Suppress Repeating Values. This property is not supported in Web DataWindows.

Examples:

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Sparse")
dw1.Modify("DataWindow.Sparse='col1~tcol2'")
```

Storage

Description: The amount of virtual storage in bytes that has been allocated for the DataWindow object.

Applies to: DataWindows

Syntax: Describe argument:

"DataWindow.Storage"

Usage: **Canceling a query that uses too much storage** You can check this property in the script for the RetrieveRow event in the DataWindow control and cancel a query if it is consuming too much storage.

Examples:

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Storage")
```

StoragePageSize

Description: The default page size for DataWindow storage.

Applies to: DataWindows

Syntax

Describe and Modify argument:

"DataWindow.StoragePageSize { = ' *size* ' }"

Parameter	Description
size	Two values are provided to enable the DataWindow to use the available virtual memory most efficiently in the current environment: • LARGE (Recommended) • MEDIUM

Usage

Set this property to avoid out of memory errors when performing large retrieve, import, or RowsCopy operations. The property must be set *before* the operation is invoked.

Examples

```
[Visual Basic]
dw1.Modify("datawindow.storagepagesize='LARGE'")
```

Summary.*property*

See Bandname.property.

SuppressEventProcessing

Description

Whether the ButtonClicked or ButtonClicking event is fired for this particular button.

Applies to

Button controls

Syntax

Describe and Modify argument:

"*buttonname*.SuppressEventProcessing { = ' *value* ' }"

Parameter	Description
buttonname	The name of the button control for which you want to suppress event processing.
value	Whether event processing is to occur. Values are: Yes – The event should not be fired. No – The event should be fired (default).

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting =
dw1.Describe("b_name.SuppressEventProcessing")

dw1.Modify("b_name.SuppressEventProcessing ='No'")
```

Syntax

Description: The complete syntax for the DataWindow.

Applies to: DataWindows

Syntax: DataWindow .NET dot notation:

dw_control.Syntax

Describe argument:

"DataWindow.Syntax"

Examples

```
[C#]
String dwSyntax;
dwSyntax = dw1.Syntax;

[Visual Basic]
setting = dw1.Describe("DataWindow.Syntax")
```

Syntax.Data

Description: The data in the DataWindow object described in parse format (the format required by the DataWindow parser).

Applies to: DataWindows

Syntax: Describe argument:

"DataWindow.Syntax.Data"

Usage: Use this property with the Syntax property to obtain the description of the DataWindow object and the data. Using this information, you can create a syntax file that represents both the structure and data of a DataWindow at an instant in time. You can then use the syntax file as a DropDownDataWindow containing redefined data at a single location or to mail this as a text object.

Syntax.Modified

Description

Whether the DataWindow syntax has been modified by a function call or user intervention. Calling the Modify, SetSort, or SetFilter method or changing the size of the DataWindow grid automatically sets Syntax.Modified to Yes.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Syntax.Modified { = *value* }"

Parameter	Description
value	Whether the DataWindow syntax has been modified. Values are: • Yes – DataWindow syntax has been modified. • No – DataWindow has not been modified.

Usage

Use this property in Modify to set Syntax.Modified to No after you cause a change in the syntax that does not affect the user (such as setting preview on).

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Syntax.Modified")
dw1.Modify("DataWindow.Syntax.Modified=No")
```

Table (for Create)

Description

The section of the DataWindow syntax that specifies information about the DataWindow's database table, including the name of the update table.

Use Table in DataWindow syntax for the Create method.

Syntax

Does not apply.

Usage

Use this property to redefine a DataWindow result set. You can add a column, change the datatype of a column, or make other changes to the table section of your DataWindow involving properties that are not accessible through Modify calls.

Caution
When you use this property to redefine the result set, you must redefine the table section in its entirety.

You can call the GetItem and SetItem methods to access columns added using this property, but the columns do not display in the DataWindow unless you call Modify("create column(...)") to add them.

To redefine your table section:

1 Export your DataWindow object to a DOS file.

2 Copy only the table section into your script.

3 Modify the table section to meet your needs.

4 Put the new table definition into a string variable. Change existing double quotation marks (") in the string to single quotation marks (') and change the tilde quotation marks to tilde tilde single quotation marks (~~').

5 Call Modify. Modifying the table section of your DataWindow causes the DataWindow to be reset.

6 (Optionally) Call Modify to add the column to the DataWindow display.

Table (for InkPicture and TableBlobs)

Description

The name of the database table that contains the blob(s).

Applies to

InkPicture and TableBlob controls

Syntax

Describe and Modify argument:

"*controlname*.Table { = ' *tablename* ' }"

Parameter	Description
controlname	The name of the control in the DataWindow.
tablename	(*exp*) A string specifying the name of the table that contains the blob data. *Tablename* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Definition category. For InkPicture controls, the table contains a large binary column to store ink overlay data and a large binary column to hold a background image for the InkPicture control. For TableBlob controls, the table contains the large binary database object you want to insert into the DataWindow.

Examples

```
[Visual Basic]
setting = dw1.Describe("blob_1.Table")
dw1.Modify("blob_1.Table='emp_pictures'")
```

Table.*property*

Description

Properties for the DataWindow's DBMS connection.

You can also specify stored procedures for update activities. For information, see Table.*sqlaction*.*property*.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Table.*property* { = *value* }"

Parameter	Description
property	A property for the DataWindow's DBMS connection. Properties and appropriate values are listed in the table below.
value	The value to be assigned to the property.

Property for Table	Value
Arguments	(Read only) A string containing retrieval argument names and types for the DataWindow.
CrosstabData	A string containing a tab-separated list of the expressions used to calculate the values of columns in a crosstab DataWindow.
Data.Storage	A string indicating whether table data is to be kept in memory or offloaded to disk. Values are: • Memory (Default) – Table data is to be kept in memory. • Disk – Table data is to be offloaded to disk.
Delete.Argument	(Internal use only) A string containing arguments to pass to the delete method.
Delete.Method	(Internal use only) The name of the method.
Delete.Type	(Internal use only) Currently stored procedure is the only type implemented.
Filter	(*exp*) A string containing the filter for the DataWindow. Filters are expressions that can evaluate to true or false. The Table.Filter property filters the data before it is retrieved. To filter data already in the DataWindow's buffers, use the Filter property or the SetFilter and Filter methods. The filter string can be a quoted DataWindow expression. Painter: Rows>Filter.
GridColumns	(Read-only) The grid columns of a DataWindow.
Insert.Argument	(Internal use only) A string containing arguments to pass to the insert method.
Insert.Method	(Internal use only) The name of the method.
Insert.Type	(Internal use only) Currently stored procedure is the only type implemented.

Property for Table	Value
Procedure	A string that contains the number of the result set returned by the stored procedure to populate the DataWindow object. You can use this property only if your DBMS supports stored procedures. Use this property to change the stored procedure or to change the data source from a SELECT statement or script to a stored procedure (see the example). Painter: Set when Stored Procedure is selected as a data source.
Select	A string containing the SQL SELECT statement that is the data source for the DataWindow. Use this property to specify a new SELECT statement or change the data source from a stored procedure or Script to a SELECT statement. Table.Select has several advantages over the SetSqlSelect method: • It is faster. PowerBuilder does not validate the statement until retrieval. • You can change data source for the DataWindow. For example, you can change from a SELECT to a Stored Procedure. • You can use none or any of the arguments defined for the DataWindow object in the SELECT. You cannot use arguments that were not previously defined for the DataWindow object. Describe always tries to return a SQL SELECT statement. If the database is not connected and the property's value is a PBSELECT statement, Describe will convert it to a SQL SELECT statement if a SetTransaction method has been executed. If you are using describeless retrieval (the StaticBind database parameter is set to 1), you cannot use the Select property. Painter: Set when Select or Quick Select is selected as a data source.
Select.Attribute	(Read-only) A string containing the PBSELECT statement for the DataWindow.
Sort	(*exp*) A string containing the sort criteria for the DataWindow, for example, "1A,2D" (column 1 ascending, column 2 descending). The Table.Sort property sorts the data before it is retrieved. To sort data already in the DataWindow's buffers, use the SetSort and Sort methods. The value for Sort is quoted and can be a DataWindow expression. Painter: Rows>Sort.
SQLSelect	The most recently executed SELECT statement. Setting this has no effect. See Select in this table.
Update.Argument	(Internal use only) A string containing arguments to pass to the update method.
Update.Method	(Internal use only) The name of the method.
Update.Type	(Internal use only) Currently stored procedure is the only type implemented.

Property for Table	Value
UpdateKey InPlace	Whether the key column can be updated in place or the row has to be deleted and reinserted. This value determines the syntax the DataWindow server generates when a user modifies a key field: • Yes – Use the UPDATE statement when the key is changed so that the key is updated in place. • No – Use a DELETE and an INSERT statement when the key is changed. **Caution** When there are multiple rows in a DataWindow object and the user switches keys or rows, updating in place might fail due to DBMS duplicate restrictions. Painter: Rows>Update Properties, Key Modification.
UpdateTable	A string specifying the name of the database table used to build the Update syntax. Painter: Rows>Update Properties, Table to Update.
UpdateWhere	An integer indicating which columns will be included in the WHERE clause of the Update statement. The value of UpdateWhere can impact performance or cause lost data when more than one user accesses the same tables at the same time. Values are: • 0 – Key columns only (risk of overwriting another user's changes, but fast). • 1 – Key columns and all updatable columns (risk of preventing valid updates; slow because SELECT statement is longer). • 2 – Key and modified columns (allows more valid updates than 1 and is faster, but not as fast as 0). For more about the effects of this setting, see the discussion of the Specify Update Characteristics dialog box in the *User's Guide*. Painter: Rows>Update Properties, Where Clause for Update/Delete.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Table.Sort")

dw1.Modify("DataWindow.Table.Filter='salary>50000'")

dw_1.Modify (" DataWindow.Table.Procedure= _
    '1 Execute MyOwner MyProcName;1  _
    @NameOfProcArg=:NameOfDWArg,     _
    @NameOfProcArg=:NameOfDWArg...' ")

sqlvar = 'SELECT ... WHERE ...'
dw1.Modify("DataWindow.Table.Select='" + sqlvar + "'")
```

Table.*sqlaction.property*

Description

The way data is updated in the database. When the Update method is executed, it can send UPDATE, INSERT, and DELETE SQL statements to the DBMS. You can specify that a stored procedure be used instead of the default SQL statement for each type of data modification.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Table.*sqlaction*.*property* { = *value* }"

Parameter	Description
sqlaction	The SQL statement that would ordinarily be executed as part of a database update. Values are: • UPDATE • INSERT • DELETE
property	A property for *sqlaction.* Properties and appropriate values are listed in the table below.
value	The value to be assigned to the property.

Property for Table	Value
Arguments	A string specifying the arguments used in the stored procedure. The string takes this format: ("*argname*", *valuetype* { =("*valuesrc*" {, *datasrc*, *paramtype* }) *Argname* is the name of the stored procedure parameter. *Valuetype* is one of the keywords described below. *Datasrc* and *paramtype* apply to the COLUMN keyword. *Valuesrc* is the column, computed field, or expression that produces the value to be passed to the stored procedure.
Method	A string specifying the name of the stored procedure. The stored procedure is used only if the value of Type is SP.
Type	Specifies whether the database update is performed using a stored procedure. Values are: • SP – The update is performed using a stored procedure. • SQL – The update is performed using standard SQL syntax (default).

Keyword for valuetype	Description
COLUMN	The argument value will be taken from the table and column named in *valuesrc*. *Valuesrc* has the form: "*tablename*.*column*" For COLUMN, you must also specify whether the data is the new or original column value. Values for *datasrc* are: • **NEW** The new column value that is being sent to the database. • **ORIG** The value that the DataWindow originally read from the database. You can also specify the type of stored procedure parameter. Values for *paramtype* are: • **IN** (Default) An input parameter for the procedure. • **OUT** An output parameter for the procedure. The DataWindow will assign the resulting value to the current row and column (usually used for identity and timestamp columns). • **INOUT** An input and output parameter. A sample string for providing a column argument is: `("empid", COLUMN=("employee.empid", ORIG, IN))`
COMPUTE	The computed field named in *valuesrc* is the source of the value passed to the stored procedure. A sample string for providing a computed field argument is: `("newsalary", COMPUTE=("salary_calc"))`
EXPRESSION	The expression specified in *valuesrc* is evaluated and passed to the stored procedure. A sample string for providing an expression argument is: `("dept_name", EXPRESSION=("LookUpDisplay(dept_id)"))`
UNUSED	No value is passed to the stored procedure.

Usage

In the painter Set the values using Rows>Stored Procedure Update. Select the tab page for the SQL command you want to associate with a stored procedure.

In code If you enable a DataWindow object to use stored procedures to update the database when it is not already using stored procedures, you must change Type to SP first. Setting Type ensures that internal structures are built before you set Method and Arguments. If you do not change Type to SP, then setting Method or Arguments will fail.

When the values you specify in code are nested in a longer string, you must use the appropriate escape characters for quotation marks.

Examples

Each is all on one line:

```
[Visual Basic]
dw_x.Describe("DataWindow.Table.Delete.Method")

dw_x.Describe("DataWindow.Table.Delete.Arguments")

dw_x.Modify("DataWindow.Table.Delete.Type=SP")

dw_x.Modify("DataWindow.Table.Delete.Arguments=
       ((~"id~", COLUMN=(~"department.dept_id!~",
ORIG)))")

dw_x.Modify("DataWindow.Table.Delete.Method=
       ~"spname~"")
```

TabSequence

Description

The number assigned to the specified control in the DataWindow's tab order.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.TabSequence { = *number* }"

Parameter	Description
columnname	The name of the column whose tab order you want to get or set.
number	A number from 0 to 32000 specifying the position of the column in the tab order. A value of 0 takes the column out of the tab order and makes it read-only.

Usage

In the painter Set the value using Format>Tab Order.

Tab order changes have no effect in grid DataWindow objects
In a grid DataWindow object, the tab sequence is always left to right (except on right-to-left operating systems). Changing the tab value to any number other than 0 has no effect.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_name.TabSequence")
dw1.Modify("emp_name.TabSequence = 10")
```

Tag

Description

The tag value of the specified control. The tag value can be any text you see fit to use in your application.

Applies to

Button, Column, Computed Field, Graph, GroupBox, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Tag { = ' *string* ' }"

Parameter	Description
controlname	The name of a control in the DataWindow.
string	(*exp*) A string specifying the tag for *controlname*. *String* is quoted and can be a DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("blob_1.Tag")
dw1.Modify("graph_1.Tag = 'Graph of results'")
```

Target

Description

The columns and expressions whose data is transferred from the DataWindow to the OLE object.

Applies to

OLE Object controls

Syntax

Describe and Modify argument:

"*oleobjectname*.Target { = ' *columnlist* ' }"

Parameter	Description
oleobjectname	The name of the OLE Object control for which you want to get or set the data to be transferred.
columnlist	(*exp*) A list of the columns or expressions whose data is transferred to the OLE object. If there is more than one, separate them with commas. *Columnlist* can be a quoted DataWindow expression.

Usage

GroupBy and Range also affect the data that is transferred to the OLE object.

In the painter Select the control and set the value in the Properties window, Data category.

Examples

```
[Visual Basic]
setting = dw1.Describe("ole_1.Target")
dw1.Modify("ole_1.Target = 'lname, Len(companyname)'")
```

Template

Description: The name of a file that will be used to start the application in OLE.

Applies to: TableBlob controls

Syntax: Describe and Modify argument:

"*tblobname*.Template { = ' *string* ' }"

Parameter	Description
tblobname	The name of a TableBlob control in the DataWindow.
string	(*exp*) A string whose value is the file name of an application that is to be the OLE template. *String* is quoted and can be a DataWindow expression.

Usage: **In the painter** Select the control and set the value in the Properties window, Definition category.

Examples

```
[Visual Basic]
setting = dw1.Describe("blob_1.Template")
dw1.Modify("blob_1.Template='Excel.xls'")
```

Text

Description: The text of the specified control.

Applies to: Button, GroupBox, and Text controls

Syntax: Describe and Modify argument:

"*textname*.Text { = ' *string* ' }"

Parameter	Description
textname	The name of a control in the DataWindow.
string	(*exp*) A string specifying the text for *textname*. To specify an accelerator key in the text, include an ampersand before the desired letter. The letter will display underlined. *String* is quoted and can be a DataWindow expression.

Usage: **In the painter** Select the control and set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("text_1.Text")
dw1.Modify("text_1.Text='Employee &Name'")
```

Timer_Interval

Description

The number of milliseconds between the internal timer events. When you use time in a DataWindow, an internal timer event is triggered at the interval specified by Timer_Interval. This determines how often time fields are updated.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Timer_Interval { = *number* }"

DataWindowSyntaxFromSql:

DataWindow (Timer_Interval = *number*)

Parameter	Description
number	An integer specifying the interval between timer events in milliseconds. The default is 60,000 milliseconds or one minute. The maximum value is 65,535 milliseconds.

Usage

When a computed field uses Now as its expression value, it refreshes the displayed value every time the timer interval period elapses.

In the painter Select the DataWindow by deselecting all controls; then set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Timer_Interval")
dw1.Modify("DataWindow.Timer_Interval=10000")
```

Title

Description: The title of the graph.

Applies to: Graph controls

Syntax: Describe and Modify argument:

"*graphname*.Title { = ' *titlestring* ' }"

Parameter	Description
graphname	In the DataWindow object, the name of the Graph control for which you want to get or set the title
titlestring	A string specifying the graph's title

Usage: **In the painter** Select the control and set the value in the Properties window, General category.

The default expression for the Title.DispAttr.DisplayExpression property is "title", which refers to the value of the Title property. The display expression can combine the fixed text of the Title property with other text, functions, and operators. If the expression for Title.DispAttr.DisplayExpression does not include the Title property, then the value of the Title property will be ignored.

For an example, see DispAttr.fontproperty.

Examples:

```
[Visual Basic]
setting = dw1.Describe("gr_1.Title")
dw1.Modify("gr_1.Title = 'Sales Graph'")
```

Title.DispAttr.*fontproperty*

See DispAttr.fontproperty.

Trail_Footer

Description: Whether the footer of a nested report is displayed at the end of the report or at the bottom of the page. Trail_Footer applies only to reports in a composite DataWindow. Setting Trail_Footer to No forces controls following the report onto a new page.

Applies to: Report controls

Syntax: Describe and Modify argument:

"*reportname*.Trail_Footer { = *value* }"

Parameter	Description
reportname	The name of the report control for which you want to get or set Trail_Footer.
value	Whether the report's footer trails the last line of the report or appears at the bottom of the page. Values are: Yes – The footer appears right after the last line of data in the report. No – The footer appears at the bottom of the page, forcing any data following the report onto the following page.

Examples

```
[Visual Basic]
setting = dw1.Describe("rpt_1.Trail_Footer")
dw1.Modify("rpt_1.Trail_Footer = Yes")
```

Trailer.#.*property*

See Bandname.property.

Tree.*property*

Description

Settings for a TreeView DataWindow.

Applies to

TreeView DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Tree.*property* { = *value* } "

DataWindow .NET dot notation:

dw_control.TreeViewProperties.*property*

Parameter	Description
property	A property that controls the appearance or behavior of the TreeView DataWindow. Properties and their settings are listed in the table below.
value	(*exp*) A string value for the file name of the tree node icon in the detail band. *Value* can be a quoted DataWindow expression.

Property for Tree	Value
DefaultExpandToLevel	A long value that is the default level of expansion for the TreeView DataWindow. For example, if the default level is 2, only data with a level less than or equal to 2 is expanded by default.The value must represent a valid level.
Indent	A long value in the units specified for the DataWindow that defines the position of the state icon. The state icon is a plus (+) or minus (-) sign that indicates whether the tree node is in a collapsed or expanded state. The icon's indent indicates the level of the node in the tree. The X position of the state icon is the X position of its parent plus *value*.
SelectNodeByMouse	A boolean value that indicates whether you can select a tree node by clicking the node with the mouse. Values are: Yes – You can select a tree node with a mouse-click (default). No – You cannot select a tree node with a mouse-click.
ShowConnectLines	A boolean value that indicates whether lines connecting parents and children display in the DataWindow object. This property is not supported by the Web DataWindow. If you want to show lines connecting rows in the detail band to their parent, you must also set ShowLeafNodeConnectLines. Values are: Yes – Display connecting lines (default). No – Do not display connecting lines.
ShowLeafNodeConnectLines	A boolean value that indicates whether lines connecting rows in the detail band to their parent display in the DataWindow object. This property is disabled if Show Lines box is not set. This property is not supported by the Web DataWindow. Values are: Yes – Display connecting lines (default). No – Do not display connecting lines.
ShowTreeNodeIcon	A boolean value that indicates whether tree node icons for level and detail bands display. If this property is not set, the Expanded and Collapsed Tree Node Icon Name properties in the General category for each TreeView level are disabled. Values are: No – Do not display tree node icons (default). Yes – Display tree node icons.
StateIconAlignMode	A long value that indicates how the state icon is aligned vertically with respect to the TreeView level band. Values are: 0 – Middle (default). 1 – Top. 2 – Bottom.

Usage

In the painter Select the control and set values in the Properties window, General category.

Examples

The following code gets and sets the Indent value:

```
indentVal = dw1.Object.DataWindow.Tree.indent
dw1.Object.DataWindow.Tree.indent = 80
```

The following examples manipulate the SelectNodeByMouse property:

```
if cbx_selectnodebymouse.checked then
   ls_selectnodebymouse='yes'
else
   ls_selectnodebymouse='no'
end if
ls_ret=dw1.modify("datawindow.tree.selectnodebymouse='
"+ls_selectnodebymouse+"'")
```

```
ls_selectnodebymouse=dw1.Describe("datawindow.tree.
selectnodebymouse")
if lower(ls_selectnodebymouse)='no' then
   cbx_selectnodebymouse.checked=false
else
   cbx_selectnodebymouse.checked=true
end if
```

```
dw1.modify("datawindow.tree.selectnodebymouse='yes'")
dw1.Describe("datawindow.tree.selectnodebymouse")
```

The following examples manipulate the show connecting lines properties:

```
bShowLines = dw1.TreeViewProperties.ShowConnectLines
dw1.TreeViewProperties.ShowConnectLines=true;
bShowLeafLines = dw1.TreeViewProperties.
ShowLeafNodeConnectLines;
dw1.TreeViewProperties.ShowLeafNodeConnectLines=true;
```

The following example gets the current value of the StateIconAlignMode property and sets it to be aligned at the top:

```
lAlign = dw1.TreeViewProperties.StateIconAlignMode;
//Align Top
dw1.TreeViewProperties.StateIconAlignMode = 1;
```

Tree.Leaf.TreeNodeIconName

Description
The file name of the tree node icon in the detail band.

Applies to
TreeView DataWindows

Syntax
Describe and Modify argument:

"DataWindow.Tree.Leaf.TreeNodeIconName { = *value* } "

DataWindow .NET dot notation:

dw_control.TreeViewProperties.TreeNodeIconName

Parameter	Description
value	(*exp*) A string value for the file name of the tree node icon in the detail band. *Value* can be a quoted DataWindow expression.

Usage
In the painter Select the detail band by clicking the gray divider for the band. Specify a file name and location in the TreeLeafTreeNodeIconName property in the General category in the Properties window. This property is disabled if Use Tree Node Icon is not set in the General category in the Properties window for the DataWindow.

In DataWindow .NET, this property cannot be set in code using dot notation.

For the TreeView Web DataWindow, the image file must be deployed to the Web site.

Tree.Level.#.*property*

Description
The file name of the icon for a TreeView node in a TreeView level band when the icon is in either the expanded or collapsed state. You set the icon file name separately for each TreeView level band.

Applies to
TreeView DataWindows

Syntax
Describe and Modify argument:

"DataWindow.Tree.Level.#.*property* { = *value* } "

Parameter	Description
#	The number of the level for which you want to specify an icon. The level number must exist.

Parameter	Description
property	A property that indicates whether the icon specified is for the expanded or collapsed state. Values are: • CollapsedTreeNodeIconName • ExpandedTreeNodeIconName
value	(*exp*) A string value that is the file name of the tree node icon in the selected TreeView level band. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the level by clicking the gray divider for the band. Specify a file name and location in the TreeLevelCollapsedTreeNodeIconName and TreeLevelExpandedTreeNodeIconName properties in the General category in the Properties window for the band. These properties are disabled if is not selected in the General category in the Properties window for the DataWindow.

You cannot set these properties using dot notation.

For a TreeView Web DataWindow, the image files must be deployed to the Web site.

Examples

The following example gets the name of the icon used when a level 1 node is collapsed:

```
ls_ico = dw_tview.Describe  &
 ("DataWindow.Tree.Level.1.CollapsedTreeNodeIconName")
```

Type

Description

The type of the control (for Describe) or the type of presentation style (for DataWindowSyntaxFromSql).

Syntax

Describe argument:

"*controlname*.Type"

Parameter	Description
controlname	The name of the control for which you want the type. Valid values are: datawindow bitmap (for Picture) button column compute (for Computed Field) graph groupbox line ellipse (for Oval) rectangle report roundrectangle tableblob text

DataWindowSyntaxFromSql:

Style (Type = *value*)

Parameter	Description
value	A keyword specifying the presentation style for the DataWindow object. Keywords are: (Default) Tabular Grid Form (for the Freeform style) Crosstab Graph Group Label Nested

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_name.Type")

DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring,'Style(... Type=grid ...)')
```

Units

Description

The unit of measure used to specify measurements in the DataWindow object. You set this in the DataWindow Style dialog box when you define the DataWindow object.

Applies to

DataWindows

Syntax

Describe argument:

"DataWindow.Units"

DataWindowSyntaxFromSql:

DataWindow (Units = *value*)

Parameter	Description
value	The type of units for measurements in the DataWindow. Values are: 0 – Normalized units 1 – Display pixels 2 – 1/1000 of a logical inch 3 – 1/1000 of a logical centimeter

Usage

Normalized units and display pixels are adjusted for printing.

In the painter Select the DataWindow by deselecting all controls; then set the value in the Properties window, General category.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Units")
```

Update

Description

Whether the specified column is updatable. Each updatable column is included in the SQL statement that the Update method sends to the database. All updatable columns should be in the same database table.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.Update { = *value* }"

Parameter	Description
columnname	The column for which you want to get or set the updatable status

Parameter	Description
value	Whether the column is updatable. Values are: Yes – Include the column in the SQL statement for updating the database. No – Do not include the column in the SQL statement.

Usage

In the painter Set the value using Rows>Update Properties, Updateable Columns option.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_name.Update")
dw1.Modify("emp_name.Update=No")
```

Validation

Description

The validation expression for the specified column. Validation expressions are expressions that evaluate to true or false. They provide checking of data that the user enters in the DataWindow.

To set the validation expression, you can also use the SetValidate method. To check the current validation expression, use the GetValidate method.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.Validation { = ' *validationstring* ' }"

Parameter	Description
columnname	The column for which you want to get or set the validation rule..
validationstring	(*exp*) A string containing the rule that will be used to validate data entered in the column. Validation rules are expressions that evaluate to true or false. *Validationstring* is quoted and can be a DataWindow expression.

Usage

In the painter Set the value using the Column Specifications view, Validation Expression option.

Use operators, functions, and columns to build an expression. Use Verify to test it.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_status.Validation")
```

ValidationMsg

Description

The message that the DataWindow server displays instead of the default message when an ItemError event occurs in the column.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.ValidationMsg { = ' *string* ' }"

Parameter	Description
columnname	The column for which you want to get or set the error message displayed when validation fails.
string	(*exp*) A string specifying the error message you want to set. *String* is quoted and can be a DataWindow expression.

Usage

In the painter Set the value using the Column Specifications view, Validation Message option.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_salary.ValidationMsg")

dw1.Modify("emp_salary.ValidationMsg = "  _
"'Salary must be between 10,000 and 100,000'")
```

Values (for columns)

Description

The values in the code table for the column.

Applies to

Column controls

Syntax

Describe and Modify argument:

"*columnname*.Values { = ' *string* ' }"

Parameter	Description
columnname	The column for which you want to specify the contents of the code table.
string	(*exp*) A string containing the code table values for the column. In the string, separate the display values and the actual values with a tab character, and separate multiple pairs of values with a slash using this format: "*displayval*~t*actualval*/*displayval*~t*actualval*/ ..." For example: `"red~t1/white~t2"` *String* is quoted and can be a DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Behavior category.

When EditStyle is DropDownListBox, click the Values browse button to fill in the Display Value and Data Value columns for the code table.

When Style is Edit or EditMask, set the CodeTable property and click the Values browse button to fill in the Display Value and Data Value columns for the code table.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_status.Values")

dw1.Modify("emp_status.Values =
'Active~tA/Part Time~tP/Terminated~tT'")
```

Values (for graphs)

See Axis, Axis.property, and DispAttr.fontproperty.

Vertical_Size

Description

The height of the columns in the detail area of the DataWindow object. Vertical_Size is meaningful only when Type is Form (meaning the Freeform style). When a column reaches the specified height, the DataWindow server starts a new column to the right of the current column. The space between columns is specified in the Vertical_Spread property.

Applies to

Style keywords

Syntax

DataWindowSyntaxFromSql:

Style (Vertical_Size = *value*)

Parameter	Description
value	An integer specifying the height of the columns in the detail area of the DataWindow object area in the units specified for the DataWindow

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring, 'Style(... Vertical_Size=1225...)')
```

Vertical_Spread

Description

The vertical space between columns in the detail area of the DataWindow object. Vertical_Spread is meaningful only when Type is Form (meaning the Freeform style). The Vertical_Size property determines when to start a new column.

Applies to

Style keywords

Syntax

DataWindowSyntaxFromSql:

```
Style ( Vertical_Spread = value )
```

Parameter	Description
value	An integer specifying the vertical space between columns in the detail area of the DataWindow object area in the units specified for the DataWindow

Examples

```
[Visual Basic]
DWSyntaxGenerator.DataWindowSyntaxFromSql(myTrans,
sqlstring,'Style(... Vertical_Spread=25...)')
```

VerticalScrollMaximum

Description

The maximum height of the scroll box of the DataWindow's vertical scroll bar. This value is set by the DataWindow server based on the content of the DataWindow. Use VerticalScrollMaximum with VerticalScrollPosition to synchronize vertical scrolling in multiple DataWindow objects. The value is a long.

Applies to

DataWindows

Syntax

Describe argument:

```
"DataWindow.VerticalScrollMaximum"
```

Examples

```
[Visual Basic]
setting =
dw1.Describe("DataWindow.VerticalScrollMaximum")
```

VerticalScrollPosition

Description

The position of the scroll box in the vertical scroll bar. Use VerticalScrollMaximum with VerticalScrollPosition to synchronize vertical scrolling in multiple DataWindow objects.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.VerticalScrollPosition { = *scrollvalue* }"

Parameter	Description
scrollvalue	A long specifying the position of the scroll box in the vertical scroll bar of the DataWindow

Visible

Description

Whether the specified control in the DataWindow is visible.

Applies to

Button, Column, Computed Field, Graph, GroupBox, Line, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.Visible { = ' *value* ' }"

Parameter	Description
controlname	The name of the control for which you want to get or set the Visible property.
value	(*exp*) Whether the specified control is visible. Values are: 0 – False; the control is not visible. 1 – True; the control is visible. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Visible category. The Visible property is not supported for column controls in DataWindow objects with the Label presentation style.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_status.Visible")

dw1.Modify("emp_status.Visible=0")

dw1.Modify("emp_stat.Visible='0~tIf(emp_cls=1,0,1)'")
```

VTextAlign

Description — The way text in a button is vertically aligned.

Applies to — Button controls

Syntax — Describe and Modify argument:

"*buttonname*.VTextAlign { = ' *value* ' }"

Parameter	Description
buttonname	The name of the button for which you want to align text.
value	An integer indicating how the button text is horizontally aligned. Values are: 0 – Center 1 – Top 2 – Bottom 3 – Multiline

Usage — **In the painter** Select the control and set the value in the Properties window, Appearance category.

Examples

```
[Visual Basic]
setting = dw1.Describe("b_name.VTextAlign")

dw1.Modify("b_name.VTextAlign ='0'")
```

Width

Description — The width of the specified control.

Applies to — Button, Column, Computed Field, Graph, GroupBox, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax — Describe and Modify argument:

"*controlname*.Width { = ' *value* ' }"

Parameter	Description
controlname	The name of the control for which you want to get or set the width.
value	(*exp*) The width of the *controlname* in the units specified for the DataWindow. *Value* can be a quoted DataWindow expression.

Usage — **In the painter** Select the control and set the value in the Properties window, Layout category.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_name.Width")

dw1.Modify("emp_name.Width=250")
```

X

Description

The distance of the specified control from the left edge of the DataWindow object.

Applies to

Button, Column, Computed Field, Graph, GroupBox, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax

Describe and Modify argument:

"*controlname*.X { = ' *value* ' }"

Parameter	Description
controlname	The name of the control for which you want to get or set the x coordinate.
value	(*exp*) An integer specifying the x coordinate of the control in the unit of measure specified for the DataWindow object. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Layout category.

Examples

```
[Visual Basic]
setting = dw1.Describe("emp_name.X")

dw1.Modify("emp_name.X=10")
```

X1, X2

Description

The distance of each end of the specified line from the left edge of the line's band.

Applies to

Line controls

Syntax

Describe and Modify argument:

"*controlname*.X1 { = ' *value* ' }"

"*controlname*.X2 { = ' *value* ' }"

Parameter	Description
controlname	The name of the line for which you want to get or set one of the x coordinates.
value	(*exp*) An integer specifying the x coordinate of the line in the unit of measure specified for the DataWindow object. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Layout category.

Examples

```
[Visual Basic]
setting = dw1.Describe("line_1.X1")

dw1.Modify("line_1.X1=10")
dw1.Modify("line_1.X2=1000")
```

XHTMLGen.Browser

Description

A string that identifies the browser in which XHTML generated within an XSLT style sheet is displayed.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.XHTMLGen.Browser { = ' *value* ' }"

Parameter	Description
value	(*exp*) A string identifying the browser in which you want to display the generated XHTML. The value should match the browser identifier part of the text string that the browser specifies in the HTTP header it sends to the server. This property is usually set dynamically on the server according to the HTTP header returned from the client. Recognized strings are listed in the Usage section below.

Usage

If the string specifies a browser that the DataWindow engine supports, the DataWindow generates an XSLT style sheet and JavaScript for XHTML transformation optimized for that browser. Browser-specific XSLT and JavaScript are generated only for Microsoft Internet Explorer 5.0 and later and Netscape 6.0 and later.

Browser identification strings are sent by the client to the server in the HTTP header. The server component can assign the HTTP_USER_AGENT value from the HTTP header to the Browser property.

The XML Web DataWindow generator recognizes these browsers:

Browser	HTTP header string
Microsoft Internet Explorer	Mozilla/4.0 (compatible; MSIE 5.0; Mozilla/4.0 (compatible; MSIE 5.5; Mozilla/4.0 (compatible; MSIE 6.x;
Netscape	Mozilla/5.0(

In the painter In the Web Generation category in the Properties window for the DataWindow object, select XHTML from the WebDW list and select a browser from the list.

XMLGen.*property*

Description

Settings that specify how XML is generated, whether client-side, postback, or callback paging is used, the physical path to which XML is published, and the URL referenced by the JavaScript that transforms the XML to XHTML.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.XMLGen.*property* { = *value* }"

Parameter	Description
property	One of the following: • Inline • PublishPath • ResourceBase
value	(*exp*) Inline – A boolean that specifies whether the XML generated for the XML Web DataWindow is generated inline to the XSLT transformation script. Values are: true – The XML is generated within the XSLT transformation script. false – (default) The XML is published to a separate document. (*exp*) PublishPath – A string that specifies the physical path of the Web site folder to which the DataWindow server publishes the generated XML document that contains the XML Web DataWindow content. (*exp*) ResourceBase – A string that specifies the URL of the generated XML document that contains the XML Web DataWindow content.

Usage

Inline The XML published on the Internet in your XML Web DataWindow could contain sensitive data, and this data might be exposed to Internet users when published to a separate document. For increased security, if the Inline property to set to true, the XML is generated "inline" to the XSLT transformation script in the page that renders the control. If only authenticated users have access to this script, the security of the XML is ensured. Setting this property should have no adverse side effects on the caching efficiency of the control.

PublishPath and ResourceBase The PublishPath folder must correspond to the URL specified in the ResourceBase property. At runtime, after the DataWindow server generates XML content to the PublishPath folder, client-side JavaScript in a generated page downloads it using a reference to the ResourceBase property. The JavaScript transforms the XML content to XHTML using the generated XSLT style sheet.

In the painter In the Web Generation category in the Properties window for the DataWindow object, select XML from the WebDW list and select the options you require.

In DataWindow .NET In DataWindow .NET, you can specify the physical directory in which dynamically created files, such as *.css*, *.js*, *.xml*, and *.xslt* files, and URL references are stored, using the XmlConfigurations.UrlPath property. If you specify a value for XmlConfigurations.UrlPath, it overrides the values set for PublishPath and ResourceBase set in the DataWindow painter.

If you want to specify a full path or different paths for each of the different file types, set the properties in the DataWindow painter and leave the XmlConfigurations.UrlPath property empty in DataWindow .NET.

If you do not set these properties in the DataWindow painter or in DataWindow .NET, the files are saved in the current Web application's path.

Examples

These statements set the XMLGen.ResourceBase and XMLGen.PublishPath properties:

```
[Visual Basic]
dw1.Modify("DataWindow.XMLGen.PublishPath=
   'C:\Inetpub\wwwroot\MyWebApp\generatedfiles'")
dw1.Modify("DataWindow.XMLGen.ResourceBase=
   '/MyWebApp/generatedfiles'")
```

This statement sets the XMLGen.Inline property so that XML is generated inline:

```
dw1.Modify("DataWindow.XMLGen.Inline='1'")
```

XSLTGen.*property*

Description

Settings that specify the physical path to which the generated XSLT style sheet is published and the URL referenced by the JavaScript that transforms the XML to XHTML.

Applies to

DataWindow objects

Syntax

Describe and Modify argument:

"DataWindow.XSLTGen.*property* { = ' *value* ' }"

Parameter	Description
property	One of the following: • PublishPath • ResourceBase
value	(*exp*) PublishPath – A string that specifies the physical path of the Web site folder to which the DataWindow server publishes the generated XSLT style sheet (*exp*) ResourceBase – A string that specifies the URL of the generated XSLT style sheet

Usage

The PublishPath folder must correspond to the URL specified in the ResourceBase property. At runtime, after the DataWindow server generates the XSLT style sheet to the PublishPath folder, client-side JavaScript in a generated page downloads it using a reference to the ResourceBase property. The JavaScript transforms the XML content to XHTML using the generated XSLT style sheet.

In the painter In the Web Generation category in the Properties window for the DataWindow object, select XSLT from the WebDW list and specify the ResourceBase and Publish Path locations.

In DataWindow .NET In DataWindow .NET, you can specify the physical directory in which dynamically created files, such as *.css*, *.js*, *.xml*, and *.xslt* files, and URL references are stored, using the XmlConfigurations.UrlPath property. If you specify a value for XmlConfigurations.UrlPath, it overrides the values set for PublishPath and ResourceBase set in the DataWindow painter.

If you want to specify a full path or different paths for each of the different file types, set the properties in the DataWindow painter and leave the XmlConfigurations.UrlPath property empty in DataWindow .NET.

If you do not set these properties in the DataWindow painter or in DataWindow .NET, the files are saved in the current Web application's path.

Examples

These statements set the XSLTGen.ResourceBase and XSLTGen.PublishPath properties:

```
[Visual Basic]
dw1.Modify("DataWindow.XSLTGen.PublishPath=
   'C:\Inetpub\wwwroot\MyWebApp\generatedfiles'")
dw1.Modify("DataWindow.XSLTGen.ResourceBase=
   '/MyWebApp/generatedfiles'")
```

Y

Description: The distance of the specified control from the top of the control's band.

Applies to: Button, Column, Computed Field, Graph, GroupBox, OLE, Oval, Picture, Rectangle, Report, RoundRectangle, TableBlob, and Text controls

Syntax: Describe and Modify argument:

"*controlname*.Y { = ' *value* ' }"

Parameter	Description
controlname	The name of the control for which you want to get or set the y coordinate.
value	(*exp*) An integer specifying the y coordinate of the control in the unit of measure specified for the DataWindow object. *Value* can be a quoted DataWindow expression.

Usage: **In the painter** Select the control and set the value in the Properties window, Layout category.

Examples:

```
[Visual Basic]
setting = dw1.Describe("emp_name.Y")
dw1.Modify("emp_name.Y=100")
```

Y1, Y2

Description: The distance of each end of the specified line from the top of the line's band.

Applies to: Line controls

Syntax: Describe and Modify argument:

"*controlname*.Y1 { = ' *value* ' }"
"*controlname*.Y2 { = ' *value* ' }"

Parameter	Description
controlname	The name of the line for which you want to get or set one of the y coordinates.

Parameter	Description
value	(*exp*) An integer specifying the y coordinate of the line in the unit of measure specified for the DataWindow object. *Value* can be a quoted DataWindow expression.

Usage

In the painter Select the control and set the value in the Properties window, Layout category.

Examples

```
[Visual Basic]
setting = dw1.Describe("line_1.Y1")
dw1.Modify("line_1.Y1=50")
dw1.Modify("line_1.Y2=50")
```

Zoom

Description

The scaling percentage of the DataWindow object.

Applies to

DataWindows

Syntax

Describe and Modify argument:

"DataWindow.Zoom { = *value* }"

Parameter	Description
value	An integer specifying the scaling percentage of the DataWindow object. The default is 100%.

Usage

In the painter To see the effect of different zoom factors in Preview mode, use Design>Zoom. The zoom factor you set in the painter is not used at runtime.

Limitation
The zoom property is not supported for the Graph DataWindow style.

Examples

```
[Visual Basic]
setting = dw1.Describe("DataWindow.Zoom")
dw1.Modify("DataWindow.Zoom=50")
```

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