

Using Expressions

Extending the capabilities of your reports



Overview

- Expression Examples
- Built-in Fields
- Aggregate Functions
- Variables

Expression Examples

- **Parameter Reference**

```
=Join(Parameters!BusinessType.Value, ", ")
```

- **Concatenation**

```
=Fields!SalesTerritoryGroup.Value + " Total"
```

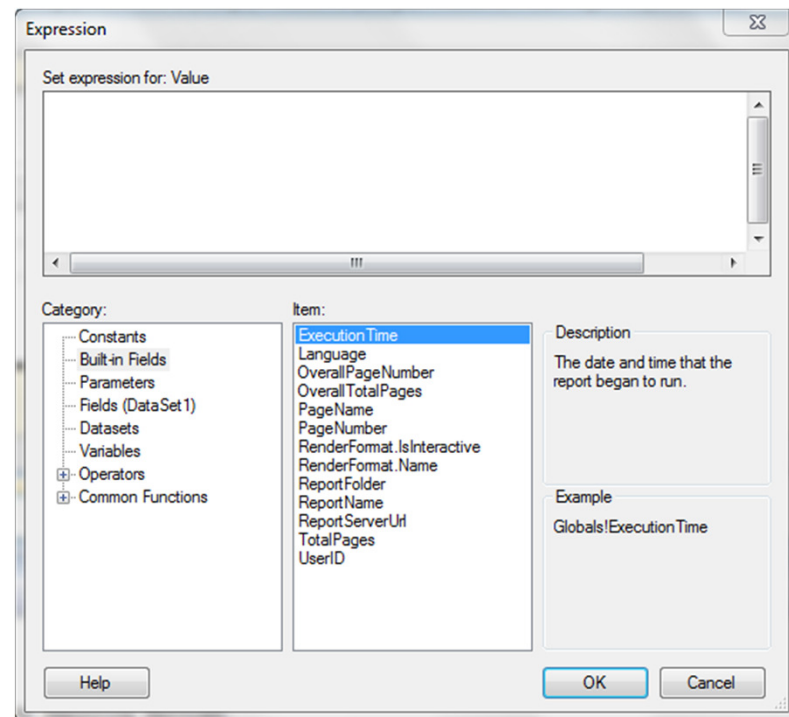
- **Conditional formatting**

```
=IIf(sum(Fields!SalesAmount.Value)<1000000,  
"Red", "Black")
```

Built-in Fields

- **Report header/footer**
 - Execution Time
 - Report Folder
 - Report Name
 - Report Server URL
- **Page numbering**
 - Overall Page Number
 - Overall Total Pages
 - Page Number
 - Total Pages
 - Page Name
- **Rendering**
 - Render Format IsInteractive
 - Render Format Name

- **User-specific**
 - Language
 - User ID



Aggregate Functions

Function	Calculation
Aggregate	Custom aggregation of non-null values defined by data provider
Avg	Average of non-null numerical values in scope
Count	Count of values in scope
CountDistinct	Count of distinct values in scope
CountRows	Count of rows in scope
First, Last	First or last value in scope
Min, Max	Lowest or highest value in scope
RunningValue	Current cumulative value of rows in scope
StDev (StDevP)	Standard deviation (or population standard deviation) of non-null values in scope
Sum	Sum of numerical values in scope
Var (VarP)	Variance (or population variance) of non-null values in scope

Scope Argument

- References a group, data region, or dataset
- Determines which detail rows to aggregate
- Usage
 - Optional in data region when calculation based on current scope
 - Required in free-standing textbox

=Sum(Fields!SalesAmount.Value, "Tablix1")

↑
Aggregate
function

↑
Expression

↑
Scope

Variables

- **Report variable**

- Sets a value on report execution which persists during report processing
- (Example) Ensures same results on each report page when paging forward and backward for expressions using functions like Now()

- **Group variable**

- Assigns a variable within a group scope for use by child groups
- Applies a unique value of current group to a calculation

Summary

- **Expression Examples**
 - Parameter label, concatenation, conditional formatting
- **Built-in Fields**
 - Report header and footer, page numbering, rendering, current user
- **Aggregate Functions**
 - Summarization and statistical analysis, scope
- **Variables**
 - Report, group

References

- **Expression Examples**
 - <http://msdn.microsoft.com/en-us/library/ms157328.aspx>
- **Understanding Expression Scope for Totals, Aggregates, and Built-in Collections**
 - <http://msdn.microsoft.com/en-us/library/dd255256.aspx>
- **Using Report and Group Variables Collection References in Expressions (Reporting Services)**
 - [http://msdn.microsoft.com/en-us/library/bb934256\(SQL.100\).aspx](http://msdn.microsoft.com/en-us/library/bb934256(SQL.100).aspx)