Introduction to Expressions

Exploring the interface for expressions

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Overview

- **Expression Usage**
- **Placeholders**
- **Global Collections**
- **Expression Editor**

Expression Usage

- **What is an expression?**
  - Object and property reference
  - Calculation using Visual Basic .NET syntax

- **How can you use expressions?**
  - Dynamic connection strings
  - Dynamic datasets
  - Calculated fields
  - Textbox values ⎤
  - Parameters ⎦ *Most commonly used*
  - Filters

Placeholders

Collection	Placeholder	Expression
Fields	[SalesAmount]	=Fields!SalesAmount.Value
	[SUM(SalesAmount)]	=Sum(Fields!SalesAmount.Value)
Parameters	[@BusinessType]	=Parameters!BusinessType.Value
Globals	[&PageNumber]	=Globals!PageNumber
Complex expression	<<Expr>>	="Calendar Year " + CStr(Fields!CalendarYear.Value)

Standard Collection Syntax

- Collection!ObjectName.Property
- Collection!ObjectName("Property")
- Collection("ObjectName").Property
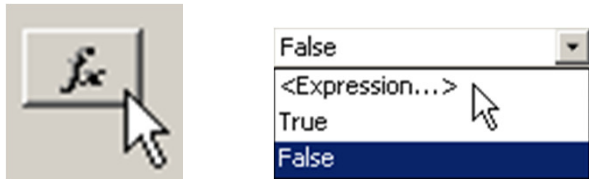- Collection!Member
- Collection.Member
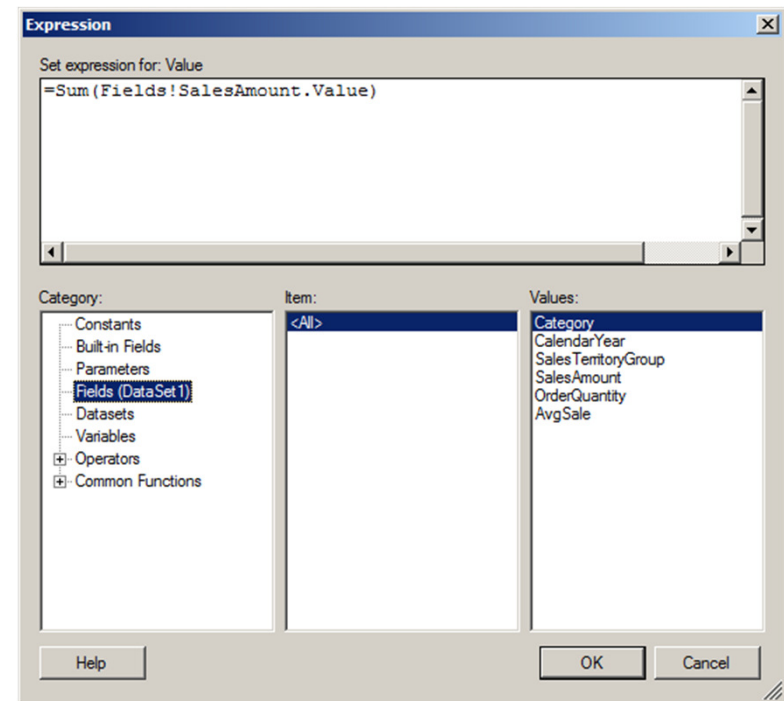- Collection("Member")

```
User("Language")
```

Global Collections

Collection	Description	Example
DataSets	Datasets referenced by report	`=DataSets!DataSet1.CommandText`
DataSources	Data sources associated with report	`=DataSources!AdventureWorks.DataSourceReference`
Fields	Fields contained in a dataset	`=Fields!SalesAmount.Value`
Globals	Built-in global fields	`=Globals!ExecutionTime`
Parameters	Report parameters	`=Parameters!Year.Label`
Report Items	Textboxes in report	`=ReportItems!SalesAmount.Value`
User	User-specific fields	`=User!UserID`
Variables	Report and group-level variables	`=Variables!TaxRate.Value`

Expression Editor

- **Access from dialog box button or in properties list of values**

- **Edit expression manually
  or use lists to construct expression**

- **Use category to display lists of
  valid values**

  - Constants

  - Global collections

  - Operators

  - Common functions

Summary

- **Expression Usage**
  - Connection strings, datasets, calculated fields, textboxes, parameters, filters
- **Placeholders**
  - Fields, parameters, built-in fields
- **Global Collections**
  - Datasets, DataSources, Fields, Globals, Parameters, ReportItems, User, Variables
- **Expression Editor**
  - Graphical interface for building expressions and accessing expression help

References

- **Visual Basic Run-Time Library Members**
  - http://msdn.microsoft.com/en-us/library/c157t28f(VS.80).aspx
- **Using Built-in Collections in Expressions**
  - http://msdn.microsoft.com/en-us/library/ms157274.aspx

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