

# Expression Samples

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## Basic Expressions

Scenario	Expression	Return Value Type
Use value from the <i>txt1</i> field from the query <i>DataTable1</i> that is used in <i>Form1</i> .	<code>{Form1}.Query("DataTable1")["txt1"]</code>	Text
Use value from imported data models.	<code>{Form1}.Query("ref:ns0/Form1")["Field1"]</code>	Integer
Retrieve workflow metadata, such as the workflow instance ID. This example returns the current workflow ID using the <i>Wf</i> syntax.	<code>Wf.workflowInstanceId</code>	Integer
Boolean expression, query if a numeric text box value is greater than 10, and the text box field type is <i>int</i> .	<code>{Form1}.Query("DataTable1")["Num1"] &gt; 10</code>	Boolean
Boolean expression, query if a combo selected item text equals a value.	<code>{Form1}.Query("DataTable1")["localization"] = "en-UK"</code>	Boolean
Use SQL statement.	<code>{SQL: select top 1 fldid from tblitems}</code>	N/A
Use activity properties. This example uses the " <i>CreatedAt</i> " attribute to return the date on which an activity was created.	<code>{Form1}.CreatedAt</code>	DateTime
Use an expression in a message field.	Dear User, Please note that the employee { <code>{Form1}.CreatedBy.DisplayName</code> }	Text
Use runtime values in forms. This example returns the user's display name.	<code>rt.CurrentUser.DisplayName</code>	Text

Scenario	Expression	Return Value Type
Access the properties of an attachment, regardless of where it is stored. <i>Available from V9.2</i>	<code>{Form1}.Query("UACT1").Include("AttachmentField")</code>	Text

## Intermediate Expressions

Scenario	Expression	Return Value Type
Check if an activity was created.	<code>{ActivityX}&lt;&gt;NULL</code>	Boolean
Get the number of times an activity was created in a workflow instance (only when the activity is not null).	<code>{ActivityX}.Scope().Count()</code>	Integer
Concatenate strings.	<code>{Form1}.Query("DataTable1")["txt1"] + {Form1}.Query("DataTable1")["txt2"]</code>	Text
Use a SQL expression with process values.	<code>ToInt32({SQL: select claimValue from claims where flddate = { {Form1}.Query("DataTable1")["RequestData"] } })</code>	According to casting. The default is String.
Check if all the tasks for an activity were completed.	<code>{Task1}.Tasks.All(IsCompleted)</code>	Boolean
Query response XML using XPath, and obtain x value from an XML.	<code>XPathSelectValue({Consumer1}.RequestXml,"//*[local-name()='x']")</code> <b>OR</b> <code>XPathSelectElement({Consumer1}.RequestXml,"//*[local-name()='x']").Value</code>  <b>In cases of collections:</b> <code>XPathSelectElements({Consumer1}.RequestXml,"//*[local-name()='x']").First().Value</code>	Text

Scenario	Expression	Return Value Type
<p>To access a multiple records form, use the reserved word "Row" following the index number of the row we want to access.</p> <p>Row(0) indicates the first row.</p> <p>Row(x) indicates a specific row.</p>	<pre>{form1}.Query("DataTable1").where(Field("txt1") = "John")</pre> <pre>{form1}.Query("DataTable1").Row(0).field("txt1")</pre> <pre>{form1}.Query("DataTable1").Row(3).field("txt1")</pre> <p><b>To display the content of the last row:</b></p> <pre>{form1}.Query("DataTable1").Last().field["txt1"]</pre>	Text
<p>Use an IIF expression. This example returns text if this is the fifth iteration of an activity.</p>	<pre>IIF({Activity}.scope().count() =5, "This is the fifth iteration", "")</pre>	Text
<p>Get advanced parameters from runtime.</p> <p>The first example returns the <i>headeritemKey</i> parameter in the current parameter <i>HTTPHeader</i>.</p> <p>The second example returns the <i>ItemID</i> parameter in the current runtime query string.</p>	<pre>rt.httpRequest.Headers["headeritemKey"]</pre> <pre>rt.httpRequest.QueryString["ItemID"]</pre>	Integer
<p>Add a line break to an expression.</p>	<pre>&lt;your first line&gt; + string.Concat(Convert.ToChar(13),Convert.ToChar(10)) + &lt;your second line&gt;</pre>	N/A
<p>Verify that all recipients have approved a task.</p>	<pre>{ Task1 }.Tasks.Where(Query("DefaultView").field("approval")==true).count()= { Task1}.Tasks.count()</pre>	Boolean
<p>Sum the column of a grid that is a numeric value.</p>	<pre>{Form1}.Query("GridItems").Sum(Field("Amount"))</pre>	Integer
<p>Execute a SQL statement that returns a scalar.</p>	<pre>{SQL: select fldEmpName from tblEmployees where fldEmployeeId = 724}</pre>	Primitive
<p>Calculate a date based on the working days of a configured calendar.</p>	<pre>CalendarDateAdd(rt, wf.CreatedBy.CalendarId, "dd", 10, Now())</pre>	DateTime

## Advanced Expressions

Scenario	Expression	Return Value Type
Get values from the last iteration of a loop, and return an empty string if it is the first loop.	<i>IIF</i> ({Task1}=NULL, null, <i>TryElse</i> ({Task1}.Scope().At({Task1}.Scope().Count()-1).Query("DefaultView")["txt1"],0))	Text
When you loop on a form with a grid and want to take only one row value at a time, and only if the row is check box is selected.	<i>MainForm</i> .Query("GridItems").where(Field("chkSelectedTender") = true).Select(Field("fldid")).At({Activity2}.Scope().Count()-1)	Depends on the field content
Count the number of rows in a grid form that meet a certain condition.	<i>mainForm</i> .Query("GridItems").where(Field("chkSelected") = true).Count()	Integer
Search the response for the first available user in the Web Service Consumer response.	<i>Activity1</i> .ReturnValue.Where(STATUS = "available").First()	Text
Add multiple attachments to a message from a grid.	<i>Activity Name</i> .Query("Grid Name").Select(field("AttachmentFieldName"))	Array of Attachments
Constructor invocation	<i>new Uri</i> ("http://pnmsoft.com")	Uri object
Convert special characters to the escaped representation.	<i>Uri.UnescapeDataString</i> ( <i>Uri.EscapeDataString</i> ("Test%"))	String
Array creation and initialization	<i>new String</i> [] { "a", "b", "c" }	Array of strings
Display an expression result in String format to two decimal places.	<i>ToSingle</i> ({Prepare and Submit Expense Claim}.Query("ref:FormViews/ExpenseLines").Select(Field("VAT")).Sum()).ToString("000.00") <i>ToSingle</i> ({Form5}.Query("Form5")["Age"]).ToString("000.00")	String
Find all user IDs of users that submitted a given task.	<i>Join</i> ({Task1}.Scope().SelectMany(Tasks).where(IsCompleted).Select(UpdatedBy.UserId),";")	Array of user IDs
Return the last day of the current calendar year.	<i>ToDateTime</i> ({SQL: SELECT convert(varchar,DATEADD(yyyy, { SQL: SELECT DATEPART(yyyy, { Now() }) } - 1899, -1), 103) + ' 12:00 AM'})	Date

## Code Editor Limitation

Inline styles: Because Cora SeQuence identifies `{` as part of an expression, to create a valid HTML code for inline styles, you need to add an additional tag to your code— `"{"}`.

For example, see below how to set up a style that applies the color green to your text:

Regular HTML	HTML with workaround
<pre>&lt;style&gt; .aa {   color: green; } &lt;/style&gt;</pre>	<pre>&lt;style&gt; .aa { "{" }   color: green; } &lt;/style&gt;</pre>