Expression Samples

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Starting with V10.0, Cora SeQuence has been renamed to Cora Orchestration.

Basic Expressions

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

Scenario	Expression	Return Value Type
Use runtime values in forms. This example returns the user's display name.	*rt.CurrentUser.DisplayName*	String
Access the properties of an attachment, regardless of where it is stored. *Available from V9.2*	*{Form1}.Query("UACT1").Include("AttachmentField")*	String
Retrieve the **full content** of the body of the email	*{ICM Email Listener}.Email.PreviewBodyHtml*	String
Retrieve only the HTML text **without** images, embedded images, or base64 images	*{ICM Email Listener}.Email.BodyHtml*	String
Check if a Task is already fetched, and if fetched, then retrieve all the details of the user who has fetched it. *Available from V10.2*	*{Task1}.FetchedBy*	Object For example: (PNMsoft.Sequence .Obs.UserView) Returns *Null* if task is not fetched.
Check if a value exists in a list of values. *Available from V10.4* **NOTE** ! operator is *not* supported with In and Not In operators.	*{Form1}.Query("query1")["Field1"] In ("value1", "value2", "value3")* *OR* *{Form1}.Query("query1")["Field1"] Not In ("value1", "value2", "value3")*	Boolean For example, the In expression returns True if value exists in the list, and returns False if value doesn't exist.
Retrieve the list of email Ids of the members in the specified group. *Available from V10.8*	*Join(UsersInGroup(rt, <group-id>).select(email),",")*	String

Scenario	Expression	Return Value Type
Retrieve the user objects in a specified group. *Available from V10.8*	*UsersInGroup(rt, <group-id>*	List of Objects For example: Use the Join(UsersInGroup(rt, <groupId>).select(email),",") expression to get a comma separated list of user email addresses in a specified group.

Intermediate Expressions

Scenario	Expression	Return Value Type
Check if an activity was created.	*{ActivityX}<>NULL*	Boolean
Get the number of times an activity was created in a workflow instance (only when the activity is not null).	*{ActivityX}.Scope().Count()*	Integer
Concatenate strings.	*{Form1}.Query("DataTable1")["txt1"] + {Form1}.Query("DataTable1")["txt2"]*	String
Use a SQL expression with process values.	*ToInt32({SQL: select claimValue from claims where flddate = { {Form1}.Query("DataTable1")["RequestData"] } })*	According to casting. The default is String.
Check if all the tasks for an activity were completed.	*{Task1}.Tasks.All(IsCompleted)*	Boolean

Scenario	Expression	Return Value Type
Query response XML using XPath, and obtain *x* value from an XML.	*XPathSelectValue({Consumer1}.RequestXml,"//*[local-name()='x']")* **OR** *XPathSelectElement({Consumer1}.RequestXml,"//*[local-name()='x']").Value* **In cases of collections**: *XPathSelectElements({Consumer1}.RequestXml,"//*[local-name()='x']").First().Value*	String
To access a multiple records form, use the reserved word "Row" following the index number of the row we want to access. *Row(0)* indicates the first row. *Row(x)* indicates a specific row.	*{form1}.Query("DataTable1").where(Field("txt1") = "John")* *{form1}.Query("DataTable1").Row(0).field("txt1")* *{form1}.Query("DataTable1").Row(3).field("txt1")* **To display the content of the last row**: *{form1}.Query("DataTable1").Last().field["txt1"]*	String
Use an IIF expression. This example returns text if this is the fifth iteration of an activity.	*IIF({Activity}.scope().count() =5, "This is the fifth iteration", "")*	String
Get advanced parameters from runtime. The first example returns the *headeritemKey* parameter in the current parameter *HttpHeader*. The second example returns the *ItemID* parameter in the current runtime query string.	*rt.httpRequest.Headers["headeritemKey"]* *rt.httpRequest.QueryString["ItemID"]*	Integer
Add a line break to an expression.	*<your first line> + string.Concat(Convert.ToChar(13),Convert.ToChar(10)) + <your second line>*	N/A
Verify that all recipients have approved a task.	*{ Task1 }.Tasks.Where(Query("DefaultView").field("approval")==true) .count()={ Task1}.Tasks.count()*	Boolean

Scenario	Expression	Return Value Type
Sum the column of a grid that is a numeric value.	*{Form1}.Query("GridItems").Sum(Field("Amount"))*	Integer
Execute a SQL statement that returns a scalar.	*{SQL: select fldEmpName from tblEmployees where fldEmployeeId = 724}*	Primitive
Calculate a date based on the working days of a configured calendar.	*CalendarDateAdd(rt, wf.CreatedBy.CalendarId, "dd", 10, Now())*	DateTime
Check if the email received is an autoreply. *Available from V10.4*	*{Email Listener}.IsAutoReply*	Boolean

Advanced Expressions

Scenario	Expression	Return Value Type
Create a JSON string from a JSON object, and apply the Camel Case style on key names. *Available from V10.7.1*	*JsonString("CamelCase, KeepNullValues", JsonValue(ToString("{""FirstName"":""John"", ""Age"":31, ""city"":null}")))*	String For example: { "firstName": "John", "age": 31, "city": null }
Extract the user readable text as a string from an HTML content. Remove all HTML elements, CSS and Script sections. Break lines are not retained. *Available from V10.6*	*StripHTML(<HTML-String>)*	String
Convert a JSON structure into key or value array. *Available from V10.6*	*JsonValue(ToString("{name:" + '"' +"John" + '"' +", age:31, city:" + '"' +"New York" + '"' +"}"))*	Array of JsonValue objects (key, value)
Get the value from a JSON structure by key. *Available from V10.6*	*JsonValue(ToString("{name:" + '"' +"John" + '"' +", age:31, city:" + '"' +"New York" + '"' +"}")).age.value*	Object

Scenario	Expression	Return Value Type
Create a JSON string from a JSON object, exclude the null values. *Available from V10.6*	*JsonString(JsonValue(ToString("{name:" + '"' +"John" + '"' +", age:31, city:null}")))*	Line string For example: {"name":"John","age":31}
Create a JSON string from a JSON object, exclude the null values, apply automatic indentation. *Available from V10.6*	*JsonString("Indented", JsonValue(ToString("{name:" + '"' +"John" + '"' +", age:31, city:null}")))*	String For example: { "name": "John", "age": 31}
Create a JSON string from a JSON object, keep the null values, apply automatic indentation. *Available from V10.6*	*JsonString("KeepNullValues,Indented", JsonValue(ToString("{name:" + '"' +"John" + '"' +", age:31, city:null}")))*	String For example: { "name": "John", "age": 31, "city": null}
Get values from the last iteration of a loop, and return an empty string if it is the first loop.	*IIF({Task1}=NULL, null, TryElse({Task1}.Scope().At({Task1}.Scope().Count()-1).Query("DefaultView")["txt1"],0))*	String
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.	*{MainForm}.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.	*{mainForm}.Query("GridItems").where(Field("chkSelected") = true).Count()*	Integer
Search the response for the first available user in the Web Service Consumer response.	*{Activity1}.ReturnValue.Where(STATUS = “available”).First()*	String
Add multiple attachments to a message from a grid.	*{Activity Name}.Query("Grid Name").Select(field("AttachmentFieldName"))*	Array of Attachments
Constructor invocation	*new Uri("http://pnmsoft.com")*	Uri object

Scenario	Expression	Return Value Type
Convert special characters to the escaped representation.	*Uri.UnescapeDataString(Uri.EscapeDataString("Test%%"))*	String
Array creation and initialization	*new String[] { "a", "b", "c"}*	Array of strings
Display an expression result in String format to two decimal places.	*ToSingle({Prepare and Submit Expense Claim}.Query("ref:FormViews/ExpenseLines").Select(Field("VAT")).Sum()).ToString("000.00")* *ToSingle({Form5}.Query("Form5")["Age"]).ToString("000.00")*	String
Find all user IDs of users that submitted a given task.	*Join({Task1}.Scope().SelectMany(Tasks).where(IsCompleted).Select(UpdatedBy.UserId),";")*	Array of user IDs
Return the last day of the current calendar year.	*ToDateTime({SQL: SELECT convert(varchar,DATEADD(yyyy, { SQL: SELECT DATEPART(yyyy, { Now() }) } - 1899, -1), 103) + ' 12:00 AM'})*	Date

Regex Expressions (Available from V10.7.1)

Scenario	Expression	Return Value Type
Indicates whether the specified regular expression finds a match in the specified input string.	*Regex.IsMatch(String, String)* *Regex.IsMatch(String, String, Regex.RegexOptions)*	Boolean For example: Regex.IsMatch("hello", "h.llo") --> expected result: true.
Searches the specified input string for the first occurrence of the specified regular expression.	*Regex.Match(String, String)* *Regex.Match(String, String, Regex.RegexOptions)*	Number
Searches an input string for all occurrences of a regular expression and returns all the matches.	*Regex.Matches(String, String)* *Regex.Matches(String, String, Regex.RegexOptions)*	Array of numbers

Scenario	Expression	Return Value Type
In a specified input string, replaces strings that match a regular expression pattern with a specified replacement string.	*Regex.Replace(String, String, String)* *Regex.Replace(String, String, String, Regex.RegexOptions)*	String For example: regex.Replace("hello world", "world", "there") --> result: "hello there"
Splits an input string into an array of substrings at the positions defined by a regular expression match.	*Regex.Split(String, String)* *Regex.Split(String, String, Regex.RegexOptions)*	Array of strings For example: regex.Split("apple,banana,orange", ",") --> ["apple", "banana", "orange"] Regex.split("apple,banana,orange\n,PEar", "e", ToInt32(regexoptions.ignorecase) | ToInt32(regexoptions.singleline)) --> ["appl", ",banana,oran g", "\n,P", "ar"]

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

<style>
.aa
{
color: green;
}
</style
	<style>
	.aa
	{ "{" }
	color: green;
	}
	</style