Introduction

Functions in Cognos help you create and customize data items.
Inserting and Using Functions

This section illustrates the ways to insert and use functions in Cognos.

Creating a Data Item Using a Function

You can create new data items by using functions. This section demonstrates creating such a function.

- Open the **Query Explorer**
- Select the **Toolbox Tab**
- Insert a **Data Item** into the **Data Items Pane**
- The **Data Item Expression** window will open
- Select the **Functions Tab**
- Open the folder that contains the function you want to use
- Locate the function
- Double-click the function to insert it into the **Expression Definition Pane**
- Open the **Data Items** tab
- Click inside the **Expression Definition** pane after the open parenthesis “(“
- Double-click on the **Data Item** (in this example it is FULL_NAME_FMIL)
- Click inside the **Expression Definition** pane at the end
- Type and close parenthesis “)”
- Click the **OK** button
- Highlight the data item you created (in this example it defaulted to Data Item1)
- Click inside the Name field in the Properties Pane
- Enter the new name
- Press the Enter Key
Navigate back to the report by selecting the Page Explorer.

Select the Data Items Tab.

Insert the Data Item you created that contains the function.
System Functions

System functions are functions that only require the use of that specific function to create a new data item.

- Open the Query Explorer
- Select the Toolbox Tab
- Insert a Data Item into the Data Items Pane
The Data Item Expression window will open

Select the Functions Tab

Open the folder that contains the function you want to use

Locate the function

Double-click the function to insert it into the Expression Definition Pane
Cognos - Functions

- Highlight the data item you created (in this example it defaulted to Data Item1)
- Click inside the **Name** field in the **Properties Pane**
- Enter the new name
- Press the **Enter Key**

- Navigate back to the report by selecting the **Page Explorer**
- Select the **Data Items Tab**
- Insert the Data Item you created that contains the function
### Functions Definitions

<table>
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<tr>
<th>Function</th>
<th>Description</th>
<th>Format/Example</th>
<th>Location/Folder</th>
</tr>
</thead>
<tbody>
<tr>
<td>• case (simple)</td>
<td>Simple – field defined base on specified field1 values.</td>
<td>WhichEmail_Case</td>
<td>Constructs</td>
</tr>
<tr>
<td>• case (search)</td>
<td>Search – field defined based on specified ‘when’ field1 conditions</td>
<td>case&lt;br&gt;when [Person Supplemental].[Person Detail].[EMAIL_PREFERRED] = 'U'&lt;br&gt;then 'University'&lt;br&gt;when [Person Supplemental].[Person Detail].[EMAIL_PREFERRED] = 'P'&lt;br&gt;then 'Personal'&lt;br&gt;else 'Unknown'&lt;br&gt;end</td>
<td></td>
</tr>
<tr>
<td>• concat</td>
<td></td>
<td></td>
<td>Combines field1 through fieldx together. May also include constants (‘abc’ or ‘-’)</td>
</tr>
<tr>
<td>• current_date</td>
<td>Returns current date</td>
<td>Today_current_date</td>
<td>Common Functions</td>
</tr>
<tr>
<td>• decode</td>
<td>Evaluates field1 and converts each ‘expression’ to the ‘replaced with’ value that follows.</td>
<td>WhichEmail_Decode&lt;br&gt;decode&lt;br&gt;(([Person Supplemental].[Person Detail].[EMAIL_PREFERRED],’U’,’University’,’H’,’Home’,’P’,’Personal’))</td>
<td>Vendor Specific Functions – Oracle</td>
</tr>
<tr>
<td>• instr</td>
<td>Returns the position of the nth (normally 1) occurrence of a specified character within field1</td>
<td>FlashlineUser&lt;br&gt;substr([EMAIL_PREFERRED_ADDRESS],1,instr([EMAIL_PREFERRED_ADDRESS],’@’,1)-1)</td>
<td>Vendor Specific Functions – Oracle</td>
</tr>
<tr>
<td>• length</td>
<td>Returns the length of field1</td>
<td>LengthOfName</td>
<td>Vendor Specific Functions – Oracle</td>
</tr>
</tbody>
</table>
### Cognos - Functions

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<thead>
<tr>
<th>Function</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>length</td>
<td>Calculates the length of a string</td>
<td><code>length([FULL_NAME_FMIL])</code></td>
</tr>
<tr>
<td>nvl</td>
<td>If field1 is null, replaces the null with whatever you like</td>
<td><code>EMAIL_PREFERRED_ADDRESS nvl([Person Supplemental].[Person Detail].[EMAIL_PREFERRED_ADDRESS], 'No Email')</code></td>
</tr>
<tr>
<td>substr</td>
<td>Returns only part of field1 you specify</td>
<td><code>fname substr([FULL_NAME_FMIL], 1, instr([FULL_NAME_FMIL],' ',1)-1)</code></td>
</tr>
<tr>
<td>{sysdate}</td>
<td>Returns current date and time at report runtime</td>
<td><code>{sysdate}</code></td>
</tr>
<tr>
<td>to_char</td>
<td>Most commonly used to convert date to a character format</td>
<td><code>Today_MMDDYYYY to_char({sysdate},'MMDDYYYY')</code></td>
</tr>
<tr>
<td>upper</td>
<td>Converts field1 to uppercase</td>
<td><code>UpperName upper([FULL_NAME_FMIL])</code></td>
</tr>
</tbody>
</table>