Understanding Parameters and Prompts

Parameter/Prompt Basics and Prompt types

In Cognos Report Studio, we use parameters and prompts to provide dynamic limits on a query. Parameters are placeholders that require a value to determine what data to report on, and prompts ask the user to provide a value or values for the corresponding parameter. Prompts can also be used to control report displays or to sort data.

Here’s an example of a parameter, and the prompt associated with it. Parameters can be identified by the surrounding question marks:

Here’s the associated prompt on the prompt page:

![Prompt Page]

Please select an activity:

ACTIVITY_DESC

Finish

In this example, we set a parameter while filtering on Activity. When we run the report, the prompt page will appear, and we would select as many activities as we wanted to limit the report on.
There are eight different types of prompts that you can select from the Report Studio toolbox:

- **Text Box Prompt**: With a text box prompt, the user manually enters the values to limit on.

- **Value Prompt**: With a value prompt, the user selects values from a list. The list can be populated two ways. One is to query a data item in the data model, and the other is to provide a list of static choices.

  Example of using the activity prompt from above as a value prompt:
**Select & Search Prompt:** Using a select & search prompt lets users search for data values if they are unfamiliar with those values. With the options link, you can define how to search for values. Users can search as many times as they want, and can add items from different searches to complete the selection.

![Select & Search Prompt](image1)

**Date Prompt:** Use the date prompt when you want to limit on a certain date field.

![Date Prompt](image2)
**Time Prompt**: Use the time prompt to retrieve data based on a time selection.

**Date & Time prompt**: Use the date & time prompt to retrieve data based on a date and time selection.

**Interval Prompt**: The interval prompt is an advanced prompt control that allows you to enter time duration values.
**Generated Prompt:** Use the generated prompt if you are unsure of the best prompt to use. Report Studio will select an appropriate prompt type for you based on the query item. Using the activity example from above, when dragging a generated prompt to the prompt page, and then selecting the activity parameter, this will be what you see on the page:

```
?activity?
```

Once you run the report, this is the prompt Report Studio has chosen for you:

```
<table>
<thead>
<tr>
<th>ACTIVITY_DESC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Weekend participant</td>
</tr>
<tr>
<td>Orientation Transfer Leader</td>
</tr>
<tr>
<td>Summer Orient &amp; Regist Coord</td>
</tr>
<tr>
<td>Summer Orient &amp; Regist Leader</td>
</tr>
</tbody>
</table>
```

**Creating a Prompt Page**

Just as you need report pages to hold the different lists, crosstabs, charts, etc., you need a prompt page to hold your prompts. To create a prompt page, you need to go to the Page Explorer. To access the Page Explorer, hover over the icon that looks like a piece of paper on the explorer bar.

Click on ‘Prompt Pages’ and a Pages box appears. Click the new button, name the page, click OK on the Pages box, and your prompt page is created.
Creating Prompts and Parameterized Filters

As stated above, parameters are necessary for a prompt to limit on a field. When you create a prompt, you are actually doing two things: You are (1) creating the prompt and (2) creating a parameterized filter. Prompts are created by dragging a prompt onto your prompt page. You can create parameters in two different ways: Manually creating them in a filter, or creating them as you build a prompt on the prompt page.

To create a parameterized filter using a prompt on a prompt page, drag one of the different types of prompts on to the page. A prompt wizard box will appear:

![Prompt Wizard - Value Prompt]

Name your parameter, and click Next. This is where you will define the filter:

![Prompt Wizard - Value Prompt]

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If you have multiple queries that you’ve created, when you click next it will ask you which queries you would like to apply the filter to. Also, depending on the type of prompt, you will have the option of creating a new query with your prompt. In this case, as we are creating a value prompt, we will create a new query to bring back all the Academic Periods for the user to select from in the prompt.

Click Finish, and your parameterized filter is created.

To manually create a parameter in a filter, you would first create a filter on your report. When the filter expression editor appears, put question marks around the name of your parameter. For example:
Next create a prompt on your prompt page. A prompt wizard box will appear, and you will select ‘Use existing parameter’. From the drop down, select the parameter you created in the filer, in this case ‘Academic Year’.

![Prompt Wizard - Value Prompt](image)

From here, you would continue to create your prompt the same way as shown above, but the Create Filter step is omitted since you have already created the filter on the report.
Cascading Prompts

Cascading Prompts allow a user to use values selected from one prompt to filter values in another prompt. For example, a report contains the columns Nation and State/Province. It has prompts for these columns and specifies that State/Province is a cascading prompt that uses Nation as the cascading source. When users select a Nation, they see only the States/Provinces related to the selected Nation.

To recreate this example, first create a prompt as shown in the Creating Prompts and Parameterized Filters for Nation. Next, create another prompt for State/Province. Once you reach the Populate Control section of the wizard, there is a drop-down for ‘Cascading Source’:

Since we want to filter the State/Province prompt to only show States and/or Provinces that belong to the values from the Nation prompt, we want to use the Nation prompt as our Cascading Source:
Click Finish, and after adding some text and formatting, if we run the report, we have a prompt page that looks like this:

The State/Province prompt is empty because it is waiting for input from the Nation Prompt. The next step is to set the Nation prompt to submit in order to populate the State prompt. If you have the Nation prompt set to only select one value, this is achieved by setting the Auto-Submit property in the Properties window to ‘Yes’:
Now, when we run our report and select a Nation, the State/Province prompt is populated:

If you want to allow multiple values to be selected in the Nation prompt, you will need to add a Prompt Button, which is located in the Toolbox. Drag it next to the Nation prompt, select it, and in the Properties section, change the ‘Type’ to ‘Reprompt’. Make sure the Auto-Submit property on the Nation prompt is set to ‘No’. Run the report, select multiple Nation values of the United States and Canada, and select the Reprompt button. Our prompt page now looks like:

Hint: Use the CTRL key to select multiple values.

The State/Province prompt now contains all states and/or provinces from the United States and Canada.
**Miscellaneous Prompt Tips and Tricks**

- Value, date, time and date & time prompts each have different options of user interfaces. To change one of these prompts UI, click the prompt and change the ‘Select UI’ property in the Properties pane.

- When creating a prompt that is going to allow for multiple values, be sure to make the operator for the filter ‘in’. If you make the operator ‘=’, it will only allow for one value.

- If you inadvertently make a prompt required or not required and want to change it to the other way, it is not as simple as changing the ‘Required’ property in the Properties pane. You will need to go back to the parameterized filter and change the ‘Usage’ to the proper selection. This also applies if you want to change any part of the filter, such as changing the ‘=’ operator to ‘in’.