**Complex Report in Cognos**

**Join – GL Dept Detail Tree – Repeater – Expressions – Master/Detail**

We will create a report that returns non-college “17” Purposes with Ending Fiscal Balances not equal to zero for a given Fiscal Year and Period, along with the unit and administrative owner and the approvers on each code.

This report:

* Uses the GL Department Detail Tree to display the units that “own” each Purpose code with an expression that lists the specific tree “levels’ to be included
* Has three queries with one join
* Has a Repeater for the Purpose approves that is added to the List as a Master Detail relationship
1. Open Report Studio using **UD Financial Data Mart** (in FDM packages)
2. Click **Create a new report or template**
3. Double-click the **List** icon 
4. Click **Query Explorer** on the Explorer Bar (click **Yes** on the pop-up)



Query Explorer

1. Click **Queries**



1. From **Toolbox**, add three additional **Queries **
2. Rename them in **Properties**, **Miscellaneous/Name**:
	1. List Report
	2. Balance Data
	3. Fin Row Sec Data
	4. Approver Repeater
3. Save the report in My Folder and name it **Complex Report tree data**

**Balance Data query**

1. Open the **Balance Data** query; add these 9 fields to the Data Items pane:

|  |  |  |
| --- | --- | --- |
| Query Subject  | Folder  | Field Name |
| Balances |  | CHARTFIELD1 |
| Chart of Accounts | Purpose | PURPOSE\_DESCR |
| Balances |  | AVAILABLE\_BALANCE |
| Balances |  | UOD\_END\_FISC\_BAL |
| Balances | Dates | FISCAL\_YEAR |
| Balances | Dates | ACCOUNTING\_PERIOD |
| GL Department Detail Tree |  | LEVEL03\_DESCR |
| GL Department Detail Tree |  | LEVEL04\_DESCR |
| Chart of Accounts | Purpose | SELFSUPP\_PURPOSE |

1. Create 3 new Data Items
2. From the **Toolbox**, drag & drop a **Data Item**  under the **SELFSUPP\_PURPOSE** field
	1. In the Data Items Expression window enter:



* 1. Validate  the expression and click OK
	2. Go to **Properties** and change the **Name** to **End Fiscal Balance**
1. Get another **Data Item**  and drop it under *End Fiscal Balance* field
	1. In the Data Items Expression window enter:



* 1. Validate  the expression and click OK
	2. Go to **Properties** and change the **Name** to **Max Acctg Period**
1. Get another **Data Item**  and drop it under *Max Acctg Period* field
	1. In the Data Items Expression window enter:



* 1. Validate  the expression and click OK
	2. Go to **Properties** and change the **Name** to **Max Fiscal Year**
1. Add 2 pre-written prompts to the **Detail Filters** pane (from the **Source** tab)
	1. Fiscal Year
	2. Accounting Period



1. Add the following 4 filters by clicking & dragging the appropriate **Data Item** to the **Detail Filters** pane. This will open the Expression window

Claudia, substitute: 11 for 17

(Remember to **Validate**  each one).

* 1. [FISCAL\_YEAR]= [Max Fiscal Year]
	2. [CHARTFIELD1] like '\_\_\_\_17\_\_\_\_' ( \_ is a wildcard and placeholder)
	3. [PURPOSE\_DESCR] not like '(D)%' (% is a wildcard)
	4. ([UD Financial Data Mart].[GL Department Detail Tree].[LEVEL04\_DESCR] in (' ', '1743 HOLDINGS LLC', 'ASST PROV STU SVCS & REGISTRAR', 'ATHLETICS PLACEHOLDER', 'COMMUNIC/MARKETING PLACEHOLDER', 'DEPUTY PROVOST', 'DEVELOPMENT AND ALUMNI REL', 'EXEC V/P OTHER', 'GRADUATE & PROFESSIONAL EDUC', 'LIBRARIES PLACEHOLDER', 'OFC OF EXEC VICE PRESIDENT', 'OFFICE OF THE PROVOST', 'RESEARCH OFFICE', 'UNIV MUSEUM PLACEHOLDER', 'UNIVERSITY WIDE', 'VICE PRES & GENERAL COUNSEL', 'VICE PRES & UNIV SECRETARY', 'VICE PRESIDENT ADMINISTRATION', 'VICE PRESIDENT FOR FINANCE', 'VICE PRESIDENT INFO TECH', 'VICE PRESIDENT STUDENT LIFE', 'ASSOC PROV ENROLLMENT SVCS') or [UD Financial Data Mart].[Balances].[CHARTFIELD1] in ('CMET175121', 'CPCO17S000', 'HNES175112', 'MAST175177', 'HNSC17S511', 'HNES17S000'))

Hint – Copy this expression from a report with the same name in **Public Folders**/**Ellen Training** /**Reports for Class**. Go to the Balance Data query and double-click the Detail Filter. Highlight the text, copy it and go back to your report and paste in the expression window. Validate!

For Linda only, add this Detail Filter instead of item **d**.:

([UD Financial Data Mart].[GL Department Detail Tree].[LEVEL04\_DESCR]

= ‘AGRICULTURE & NATURAL RESOURCES’

1. Add a temporary filter to verify the query’s data is good
	1. Drag [CHARTFIELD1] to the Detail Filters; add this Expression:

Claudia, substitute: ‘**REGI110000’**

Linda, substitute: ‘**AGCM175111’**

 [CHARTFIELD1] in ('CMET175121', 'CPCO17S000', 'GRAD175117')

* 1. In the menu, click **Run**/**View Tabular Data**
	2. After you get good data, disable the temporary filter
		1. Go to Properties/General/Usage
		2. Change Required to **Disabled**

**Fin Row Sec Data query**

1. From **Query Explorer**, open the **Fin Row Sec Data** query; add all 9 fields\* to the Data Items pane:

|  |  |  |
| --- | --- | --- |
| Query Subject  | Folder  | Field Name |
| FIN Row Security |  | Header Tbl View OPRID |
| FIN Row Security |  | Header Tbl APPROVAL\_OPRID |
| FIN Row Security |  | Header Tbl Approve All Access |
| FIN Row Security |  | Header Tbl View All Access |
| FIN Row Security |  | Row Level OPRID |
| FIN Row Security |  | Row Level Approver/Viewer Flag |
| FIN Row Security |  | Row Level CHARTFIELD1 |
| FIN Row Security |  | Operator ID |
| FIN Row Security |  | Operator ID Descr [name] |

\* Hint: Add all the fields at once by clicking on  FIN Row Security and dragging it to the Data Items pane.

1. Add one Detail Filter:
	1. [Row Level Approver/Viewer Flag] = 'Y'
2. Add one temporary Detail Filter to verify the query’s data is good
	1. [Row Level CHARTFIELD1] = 'BUDG110000'
	2. In the menu, click **Run**/**View Tabular Data**
	3. After you get good data, disable the temporary filter
		1. Go to **Properties/General/Usage**
		2. Change **Required** to **Disabled**

**Approver Repeater query**

1. From Query Explorer, open **Approver Repeater** query and *again* add all 9 fields by clicking on  FIN Row Security and dragging it to the Data Items pane
2. Add two Detail Filters:
	1. [Row Level Approver/Viewer Flag] = 'Y'
	2. [Row Level OPRID]<>'Approve\_All'
3. Add one temporary **Detail Filter**
	1. [Row Level CHARTFIELD1] = 'BUDG110000'
	2. In the menu, click **Run**/**View Tabular Data**
	3. After you get good data, disable the temporary filter
		1. Go to **Properties/General/Usage**
		2. Change **Required** to **Disabled**

**Query Join**

1. Create the Join:
2. Click **Query Explorer** and click **Queries**
3. From **Toolbox**, drag & drop a  **Join** next to the **List Report** query
4. Drag the **Balance Data** query to the top spot
5. Drag the **Fin Row Sec Data** query to the bottom spot
6. Double-click the **Join**
7. Click **New Link**
8. Make the link between **Chartfield1** and **Row Level CHARTFIELD1**
9. The Cardinality is **0..n = 1..n** and **c**lick **OK**



1. Save

**List Report query**

1. From Query Explorer, open the **List Report** query; add the following 14 fields:

|  |  |  |  |
| --- | --- | --- | --- |
| Query  | Field Name  | Change Name to: | Change Aggregate Properties |
| Balance Data  | CHARTFIELD1 | Purpose |  |
| Balance Data Hint: Select these 10 fields and drag them as a group to Data Items | PURPOSE\_DESCR | Purpose Description |  |
| Balance Data  | **AVAILABLE\_BALANCE** | Available Balance | **yes** |
| Balance Data  | **UOD\_END\_FISCAL\_BAL** |  | **yes** |
| Balance Data  | FISCAL\_YEAR |  |  |
| Balance Data  | ACCOUNTING\_PERIOD |  |  |
| Balance Data  | LEVEL03\_DESCR | Owner |  |
| Balance Data  | LEVEL04\_DESCR | Admin Unit |  |
| Balance Data  | SELFSUPP\_PURPOSE | Self Supporting |  |
| Balance Data  | **End Fiscal Balance** |  | **yes** |
| Fin Row Sec Data | Operator ID | User ID |  |
| Fin Row Sec Data | Row Level OPRID |  |  |
| Fin Row Sec Data | Row Level CHARTFIELD1 |  |  |
| Fin Row Sec Data | Operator ID Descr | Approvers |  |

1. Change the names of 8 fields as shown above in table
	1. Go to **Properties/Data Item**
	2. Change the **Name**
2. Change the aggregate settings for the *three* fields indicated in the table on the previous page:
	1. Go to **Properties/Data Item**
	2. **Aggregate Function** – change from Automatic to **None**
	3. **Rollup Aggregate Function** – change from Automatic to **None**
	4. Notice these 3 field icons have changed to 

****

1. Add the following **Detail Filter**:
	1. [End Fiscal Balance]<>0.00
2. Save
3. Open **Page Explorer** and click **Page 1** (the List will be empty)
4. From the **Data Items** tab, add the following 8 fields from the **Report List** query the List:
	* Purpose
	* Purpose Description
	* Owner
	* Admin Unit
	* Available Balance
	* UOD\_END\_FISCAL\_BAL
	* End Fiscal Balance
	* Self Supporting
5. From the **Toolbox**, drag & drop a **Repeater**  into the List after **Admin** **Unit**

****

1. Click the Repeater column where it says “Drop items here…”
	1. Go to **Properties/Data/Query**
	2. Change Query1 to **Approver Repeater**
2. Change column heading of Repeater to “Approvers”
	1. Clixk the Repeater column heading
	2. Go to **Properties/Text Source**
	3. **Text** – change to **Aprpovers**
3. Add the field that will repeat:
	1. Click the **Data Items** tab
	2. Scroll down to the **Approver Repeater** query
	3. Drag & drop **Operator ID Descr** into the Repeater where it says “Drop items here to create repeating items”
4. Make the Repeater more readable by adding space between the values
	1. From the **Toolbox**, drag & drop a **Text Item**  next to **<Operator ID Descr>**

 

* 1. Type [space] [space] [space] and click **OK**
1. Establish the Master-Detail relationship between the Repeater and the List
2. Click *within* the Repeater cell
3. Go to **Properties** (it should say **Text Item**)
4. Use the **Ancestor**  button to select **Repeater**
5. In the **Data** category click **Master Detail Relationships** and click the **Ellipses** 
6. Click **New Link**
7. Link **Purpose** to **Row Level CHARTFIELD1** and click **OK**

 ****

1. Save
2. Change the report header
3. Double-click the default title and type **University of Delaware**
4. From the **Toolbox**, drag & drop a **Table**  under the title
	* Make the Table 1 column and 3 rows
5. From the **Toolbox**, drag & drop a **Text Item**  into the top table cell
	* Type: **“17” Balance Reference List**
	* Increase **Font** size to **12pt**
6. Drag & drop another **Text Item**  into the middle table cell
	* Type: **Excludes Colleges**
7. Drag & drop a third **Text Item**  into the bottom table cell
	* Type **Fiscal Year**[space] [space]
8. From the Toolbox, drag & drop a **Layout Calculation**  next to **Fiscal Year**
	* In the Expression window, click the **Parameter** tab
	* Double-click the **Fiscal Year prompt**
	* Click **OK**
9. Drag & drop another **Text Item**  next to **<ParamDisplay>**
	* Type: **Period**[space] [space]
10. Drag & drop a **Layout Calculation ** next to **Period**
	* In the Expression window, click the **Parameter** tab
	* Double-click the **Accounting Period prompt**
	* Click **OK**
11. Save
12. Run the report