Cognos 8 Report Studio

Introduction

This document introduces you to Cognos Report Studio. Through its web portal, the Cognos Connection, **Report** **Studio** lets you create and manage complex reports, define layouts and styles, and much more. It offers flexibility in calculating and in formatting report data. With Report Studio you can

* Author complex reports using your data.
* Save and reuse reports.
* Run reports in a variety of formats.
* Print reports.
* Create report templates.
* Manage reports.

Prerequisites

To use this training material effectively, you should be familiar with your department’s data. This training is designed to familiarize you with the Cognos Report Studio reporting tool; it is not designed to familiarize you with the underlying data in UD’s system. The training is based on data in a demonstration database.

**Important Note**

This training document was designed originally to be used in a class setting. Therefore, the exercises are meant to be followed in a sequence. If you have difficulty working through an exercise, try the first four exercises to familiarize yourself with the basics.

Prepare Your Browser to Use the Cognos Connection Web portal

Cognos 8 at UD works only on the Windows Operating System running Internet Explorer, version 6 or higher. To use Cognos 8, you must have cookies and JavaScript enabled. You must also enable ActiveX support. To do this:

1. In Internet Explorer, from the **Tools** menu, select **Internet Options**.
2. On the **Security** tab, click **Custom Level**.
3. In the **Security Settings** dialog box, scroll to the **ActiveX controls and plug-ins** settings and enable **Run ActiveX controls and plug-ins** and **Script ActiveX controls marked safe for scripting**.
4. Scroll to the **Scripting** settings and enable **Active scripting**.
5. Scroll to **Allow programmatic clipboard access** and click **Enable**.
6. Click **OK**.

Training Objectives

After you complete the exercises in this training material, you should be able to do the following:

* Open the COGNOS Connection web page.
* Open Report Studio.
* Create a report.
* Choose the package for the report.
* Choose one of Report Studio’s predefined templates (list, crosstab, chart, etc.) for the report.
* Add query items to the report.
* Save the report.
* Run the report.
* Recognize the types of reports.
* Change the appearance of reports.
* Create crosstab reports.
* Use charts.
* Filter, sort, and group data.
* Add prompts.
* Perform calculations.
* Create Drill-Through reports.
* Create reports from scratch.
* Add styling.
* Understand how reports are structured.
* Create a Master-Detail report.
* Use Query Explorer to Modify Aggregation Properties.
* Create a report template.

Table of Contents

[The Cognos Connection Web Site](#cogconnect) 5

Exercise 1—Open the Cognos Connection Web Site.

### [Open Report Studio](#open) 5

Exercise 2—Open Report Studio and Begin a New Report.

[The Report Studio Window](#window) 8

### [Report Terminology](#terminology) 9

### [Add Data to a Report](#add_data) 10

Exercise 3—Add Data to a Report and Save It.

### [Run the Report](#run) 13

Exercise 4—Validate and Run the Report.

## [Types of Reports](#types) 15

### [List Reports](#list) 16

[Grouped List Reports](#group) 16

Exercise 5—Create a Grouped List Report and Set the Group Span.

[Create Repeated Form Frames from a List](#repeated) 20

Exercise 6—Create Repeated Form Frames from a List.

[Crosstab Reports 23](#crosstab)

Exercise 7—Create a New Crosstab Report.

Exercise 8—Create a Crosstab Report from an Existing Report.

[Charts](#charts) 30

Exercise 9—View the Types of Report Studio Charts.

[Create a Chart](#createchart) 31

Exercise 10—Create a Column Chart.

[Manipulate Data in Reports](#manipulate) 37

[Filters](#filter) 37

Exercise 11—Add a Filter.  
 Exercise 12—Disable Filters.

[Filter on Details and Summaries](#filterdet) 43

Exercise 13—Filter on Details.

Exercise 14—Create a Summary Filter.

[Filter Crosstabs](#filtercrstbs) 53

Exercise 15—Filter a Crosstab Report.

[Prompts](#prompt) 58

Exercise 16—Add a Prompt.

Exercise 17—Use the “Build Prompt Page” Tool.

[Cascading Prompts](#cascade) 68

Exercise 18—Build a Cascading Prompt.

Exercise 19—Create a Single-Value Cascading Prompt.

Exercise 20—Create a Multiple-Value Cascading Prompt.

[Optional Prompts](#optional) 75

Exercise 21—Add an Optional Prompt.

[Drill Throughs](#drillthrough) 78

Exercise 22—Create a Target Report.

Exercise 23—Create a Parent Report with a Drill Through.

[Report Layouts](#layouts) 85

Exercise 24—Create a Report Layout.

Exercise 25—Create a Crosstab Report from Scratch.

[Advanced Techniques](#advanced) 94

Exercise 26—Change the Organization of a List Report.

Exercise 27—Add Styling at a Higher Level.

Exercise 28—Format a Crosstab Report.

[Report Studio Queries](#query) 103

Exercise 29 Use Query Explorer to Modify Aggregation Properties.

[Master-Detail Reports](#master) 109

Exercise 30—Create a Master-Detail Report.

Exercise 31—Add a Filter to a Master-Detail Report.

[Create a Template](#template) 114

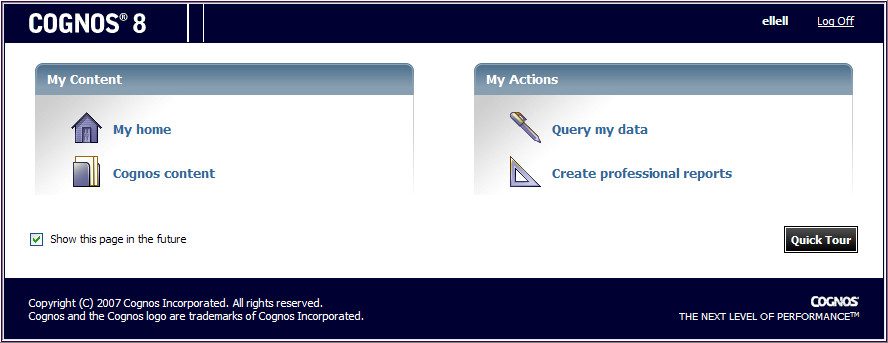
Exercise 32—Create a Report Template.

The Cognos Connection Web site

► Before you can use Report Studio, you must know how to open the **Cognos Connection web site**.

Exercise 1—Open the Cognos Connection Web Site

1. Open the Internet Explorer web browser.
2. To access the Cognos Connection web site, type the following URL in the browser’s **Address** field and then press **ENTER**:  
     
   [**https://cognos.udel.edu/cognos8/**](https://cognos.udel.edu/cognos8/)
3. Type your UDelNet ID in the appropriate field.
4. Type your **password** in the appropriate field.  
     
   You should see a window similar to the following:



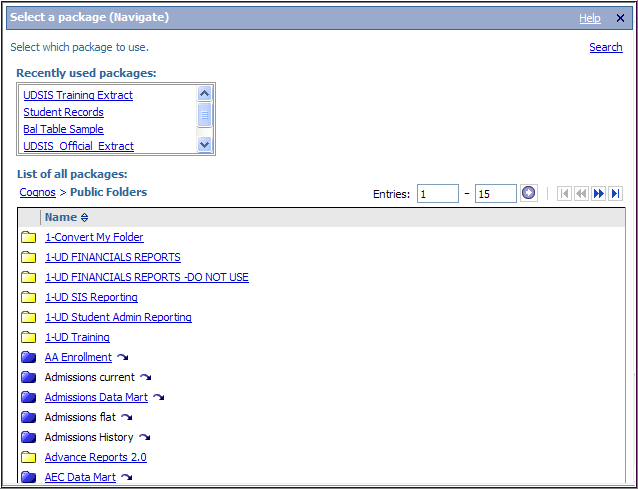
The Cognos Connection web site gives you access to the reporting tools in Report Studio. Report Studio allows you to author complex reports based on your business needs. Reports can contain multiple report objects: lists, charts, and crosstabs as well as images, logos, and other elements.

End of Exercise

Open Report Studio

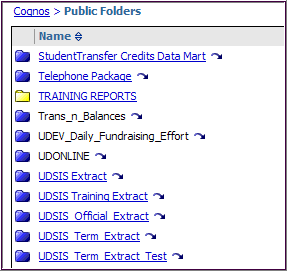
►In the following exercise, you will open **Report Studio** and begin to create a new report. It is also possible to open an existing report (this will be discussed later).

Exercise 2—Open Report Studio and Begin a New Report

1. On the Cognos Connection Web Site Welcome screen, click createprofrpts_icon **Create Professional Reports.**   
   You should see the **Select a package** window, similar to the following, which contains the packages you can use:  
     
   
2. Find and click **UDSIS Training** Extract (the listing is in alphabetical order).

**Note**: *After* you have used a package, it will be listed in this box and you can select it from here.

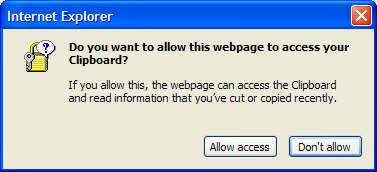
* + - If you don’t see this package listed, click the arrow to go to the end of the list.



Note: Before you can create a report, a UD Cognos administrator must create a **package** that contains the data you will work with.

A **package** is a group of related data elements and data tables (designated by blue folder icons.)

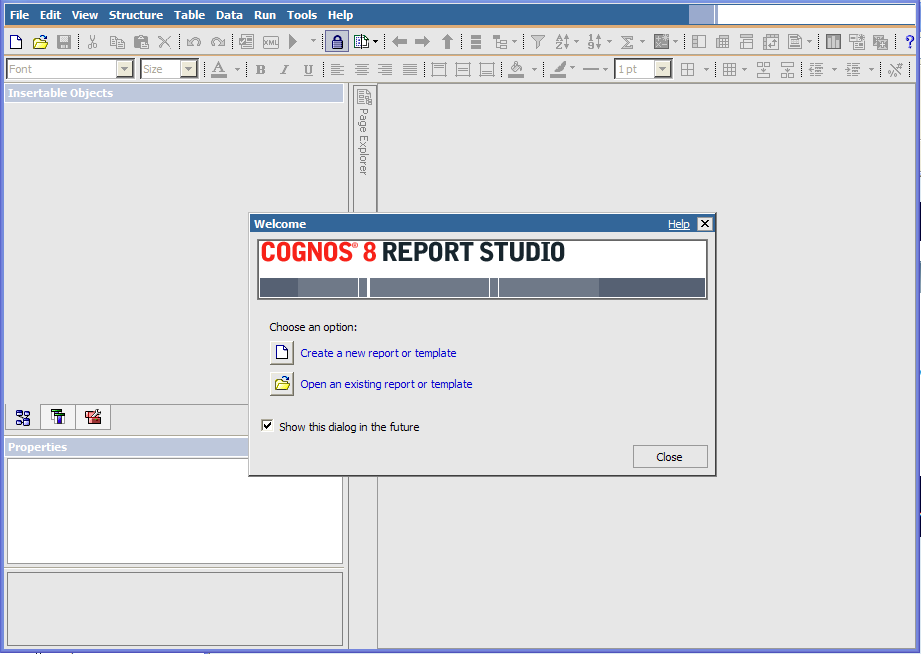
You will learn the name of the package that contains UD data from the UD Cognos administrator.

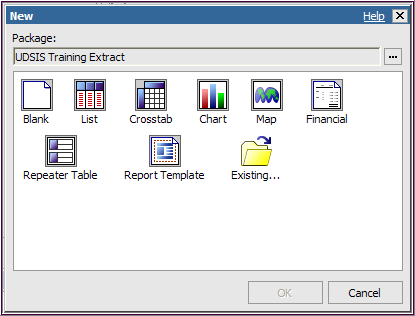


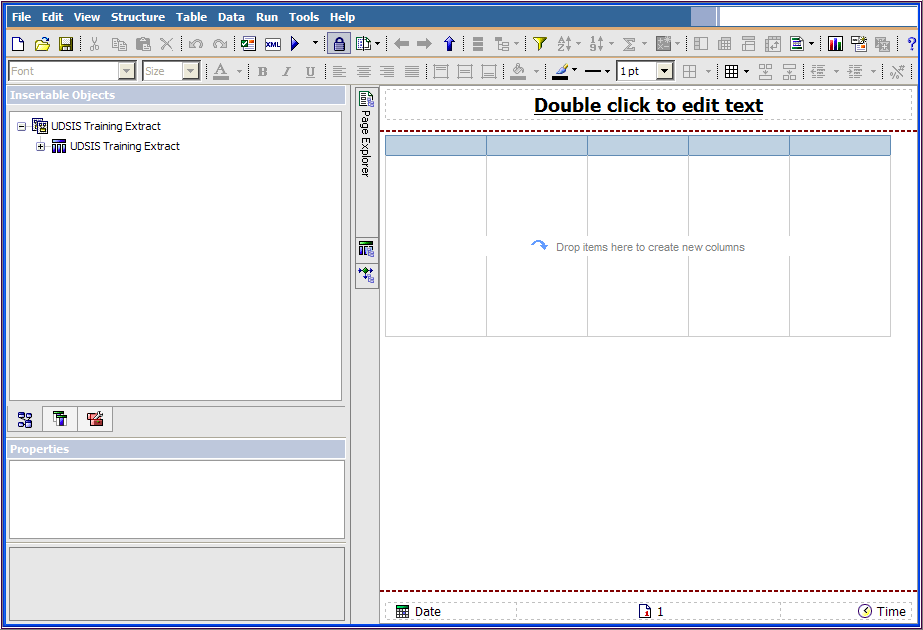
When the Report Studio opens, you may see a notice like this.

Click **Allow access**.

1. You will then see a window similar to the following:



1. In the **Welcome** box, click newrpt **Create a new report or template**.   
     
   This brings up a box with a list of layout objects you can use to create your report:  
     
   
2. Click **List** to select a list report and click **OK**.



You will see a window like this one.

Work Area

Insertable Objects Pane

Explorer Bar

Properties Pane

End of Exercise

The Report Studio Window

The Report Studio window contains an Insertable Objects pane, a Properties Pane, an Explorer Bar and a Work Area. A toolbar above the panes allows you to carry out many functions by clicking an icon; there is also a menu bar at the top of the window with a variety of Report Studio commands. Following is a description of the areas of the Report Studio window:

**Insertable Objects pane**

The **Insertable Objects** pane at the top left of the Report Studio window contains objects that you can add to your report. There are three tabs—indicated by icons—in this pane:

* The **Source sourceicon** tab contains data items you can add to your report from the package you are using.
* The **Data Items** dataicon tab describes the queries you are creating in your report.
* The **Toolbox** toolboxicon tab contains other objects you can add to your report like text, calculations, hyperlinks, images, and more.

**Properties Pane**

The **Properties** pane at the lower left of the Report Studio window lists properties you can apply to a given item in a report. You will work with the **Properties** pane later in this class.

**Explorer Bar**

The **Explorer Bar**, the vertical bar at the center of the Report Studio window, contains three buttons:

page_explorer query_exploere condition_exp

* The **Page Explorer** lets you navigate to a specific report page or prompt page.
* The **Query Explorer** lets you create or change report queries.
* The **Condition Explorer** lets you work with variables.

**Work Area**

Report Studio’s right pane is the **Work Area**, the space where you create your reports.

Report Terminology

Before you begin to use Report Studio, you should understand the terminology associated with its reports. Each report has two aspects:

* Layout
* Queries

The report **layout** defines your report’s formatting and appearance. Based on your needs, your report can contain objects such as lists, crosstabs, and charts. It can be formatted to include such features as color backgrounds, images, dates, and more. You also have control over how the data appears on multiple-page reports.

The **pages** in Report Studio contain the objects you include in your report. Each page must have a page body. It can also have a header and a footer.

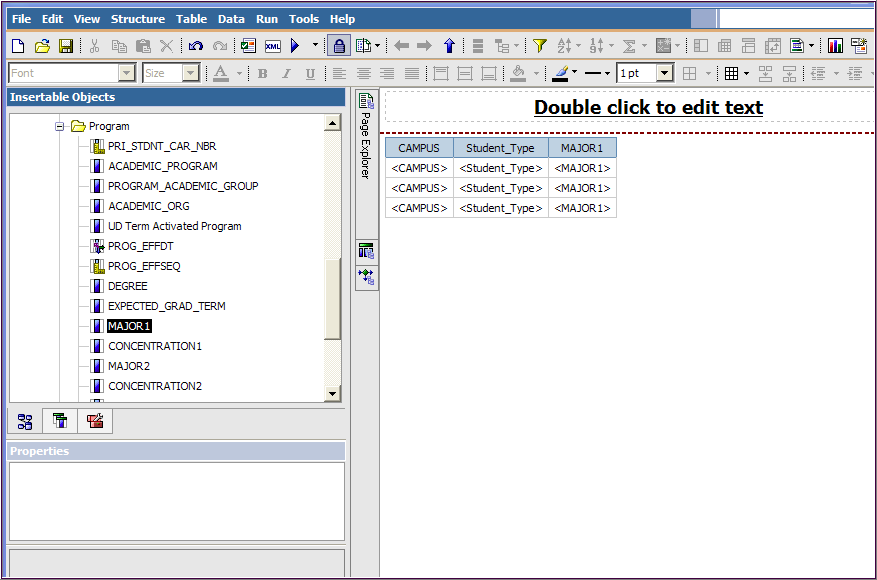
Report **queries** control the data items in your report. The simplest queries are created by adding report items from the package you are using. However, complex queries can contain filters, calculations, grouping and more. You can change the queries Report Studio creates as well as create custom queries.

Add Data to a Report

The query items you add to your report appear on the **Source tab** of the **Insertable Objects** pane in the Report Studio window. To insert a query item, you can either double-click the item or click the item and drag it into the report. You can use CTRL-click to insert multiple items; items will appear in the order in which you select them. A bold black bar in the work area indicates where you can place query items.

►In the following exercise, you will create a report that shows the majors available for every type of student at the University. To do this, you will first add data to your report and save it.

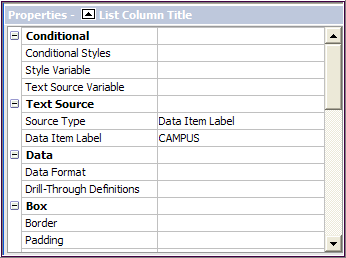
Exercise 3—Add Data to a Report and Save It

1. On the **Source** tab of your list report, click the plus sign to expand the **UDSIS Training Extract** item.  
     
   Category columns appear in the order in which you select them.
2. Click **CAMPUS**.
3. Hold down the **CTRL** key and click **Student\_Type**.
4. Continue to hold down the **CTRL** key and in the **Program** item, click **MAJOR1**.
5. Drag the selected items to the work area and release the mouse button when you see the bold black bar.  
     
   You will see a window like the one below:  
     
     
   Notice that no data appears in the report yet. You must run the report to see the data.

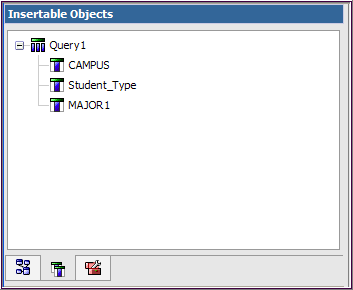
**Note**: There are two other ways to insert data into your report:

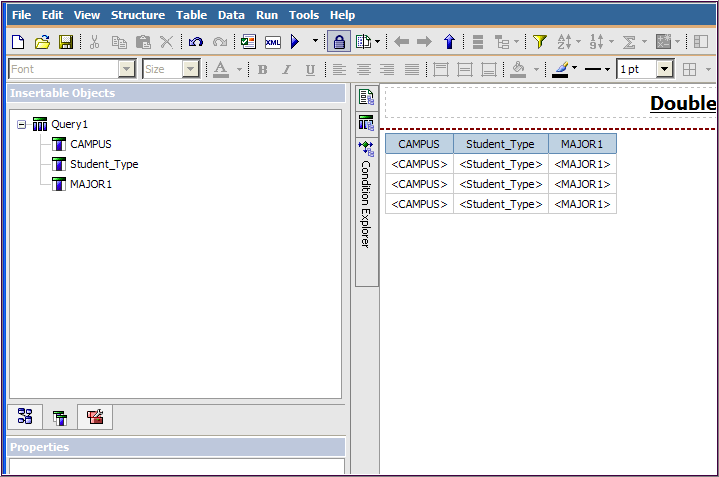
* Double-click each item to insert it into the report. Items are added to the right side of the report.
* Drag an item into the work area.

You can obtain information about your report’s structure and the items it contains by selecting some of the other tabs and features in the window:

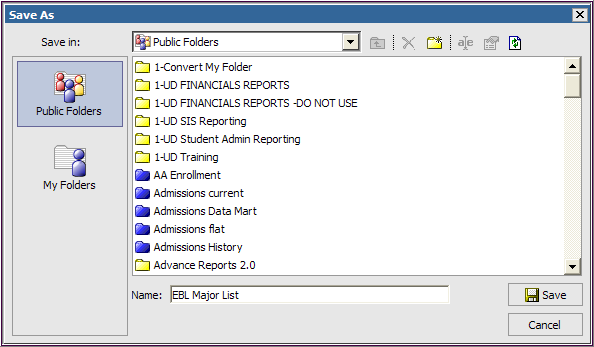
1. Click the *title* of the **CAMPUS** column.   
     
   This produces a list of properties like the one below in the **Properties** pane at the lower-left of the Report Studio window:   
     
     
     
   This is a partial list; scroll down to see the remaining properties available to apply to the **CAMPUS** column**.**

**Note**: When you select a property, you will see a description of what it does at the very bottom of the pane. If the description is not visible, go to the **View** menu, select **Panes** and then **Property Descriptions** to display it.

1. In the **Insertable Objects** pane, click the **Data Items dataicon** tab to see the structure of the query Report Studio has created from your items:  
     
   
2. Move the mouse pointer over each of the components of the **Explorer Bar** in the center of the window to see the type of information each provides.



Next, you will save your report.

1. On the **File** menu, click **Save As**. You will see a box like the one below:  
     
   
2. Click **My Folders** and in the **Name** box, type ***your initials* Major List**. Click **Save**.

End of Exercise

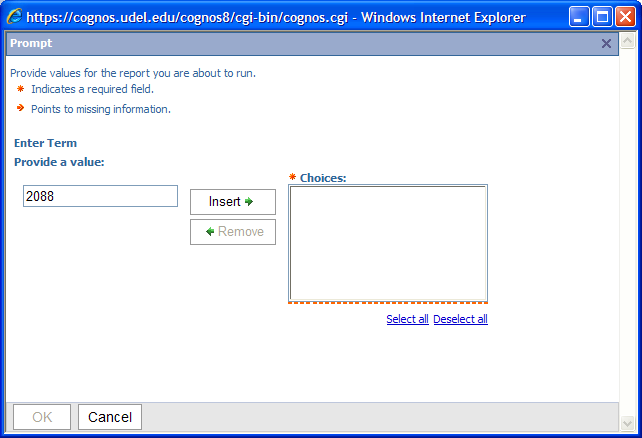
Run the Report

After you create a report in Report Studio, you must run it to see the actual data. Report Studio offers a tool to validate the report before you run it to make sure it contains no errors. This will be important when you develop complex reports with features such as calculations.

In the next exercise, you will validate the **Major List** report and then run it to see the data it contains.

Exercise 4—Validate and Run the Report

1. In the **Major List** report, click the **Validate Report** validate button in the toolbar (near the Run button).

You will see a prompt box like the one below that requires you to enter an academic term to continue:  
  


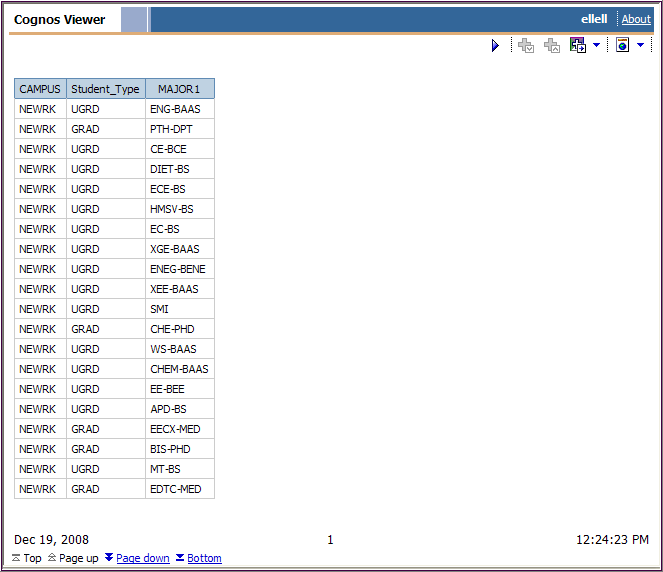
1. In the **Enter Term** box, type **2088**, click the **Insert  button**, and click **OK**.

You will receive a message that the report is being validated, followed by a box indicating whether the report specification is valid. Click **OK** to close the box.

Note: **2088** follows the naming convention in UDSIS for academic terms.

* The first three digits are taken from the first, third and last digits of the year.
* The last digit indicates the term: 1=Winter, 3=Spring, 5=Summer, 8=Fall.
* Examples: Fall 2008 = 2088 and Spring 2008 = 2083 and Fall 2007 = 2078.

1. On the toolbar, click the **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG button, which is **Run Report (HTML)**. Term = 2088.



Your results will appear in a separate Cognos Viewer window like this one.

Note that the window below shows a partial list; click Page down to see the remaining data.

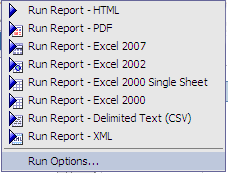
Close the **Cognos Viewer** Window.

Page down

End of Exercise

**Options for Running Reports**

In the previous exercise, you will have noticed eight options for running your report:



|  |  |
| --- | --- |
| **Run Report – HTML** | Produces a report in HTML format. If you run your report in HTML, you can click the **Run Options** command and type in the **Maximum Rows** box a number for the maximum number of rows you want to see on each report page. |
| **Run Report - PDF** | Use this option when you want to print your report or save a permanent copy. **Note**: Adobe Acrobat Reader must be installed on your system for you to run your report in PDF format. If you run your report in PDF, you can click the **Run Options** command to select the output format (PDF), the paper size, paper orientation, and language for the report. |
| **Run Report – Excel 2007** | Use this option to produce a report in Microsoft Excel 2007. This option produces a report in native Excel XML format. For limitations associated with this option, see the Report Studio Help. |
| **Run Report – Excel 2002** | Use the Excel 2002 option to produce a report that you can view in Microsoft Excel versions earlier than 2007. For limitations associated with this option, see the Report Studio Help. |
| **Run Report - Excel 2000 Single Sheet** | Use the Excel 2000 single sheet option to produce a report on one sheet that you can view in Microsoft Excel versions lower than 2002. |
| **Run Report - Excel 2000** | Use the Excel 2000 option to produce a report that you can view in Microsoft Excel versions 2000 and later. |
| **Run Report (CSV)** | Use the CSV (comma separated values) option if you want to save your results to be opened in an application like Microsoft Excel. |
| **Run Report (XML)** | Use the XML (Extensible Markup Language) option to see an XML representation of the queries, prompts, layouts, and styles in your report. |

**Note**: You cannot run a report in XML or CSV format if it contains more than one query unless the other queries are used as prompts (prompts will be discussed later in this class). **View Tabular Data** on the **Run** menu allows you to see only the tabular data (for example, to check that your calculations are correct) before you select one of the **Run** options.

Types of Reports

This document discusses three types of Report Studio reports:

* **List Report**A list report is a representation of your data in rows and columns and is useful for showing detailed database information. The report you created for **Major List** beginning in Exercise 2 is a list report. You can manipulate list report data in various ways to obtain the information you need.
* **Crosstab Report**You can create a crosstab report to show information in summary form. The report still has rows and columns, but the intersection of the rows and columns shows a summary of   
  information.
* **Charts**  
    
  You can create a chart to show your information in graphical form. There are several types of charts you can use in Report Studio. These will be explained later in this class.

Report Studio allows you to combine multiple types of reports in one report.

# List Reports

**Grouped List Reports**

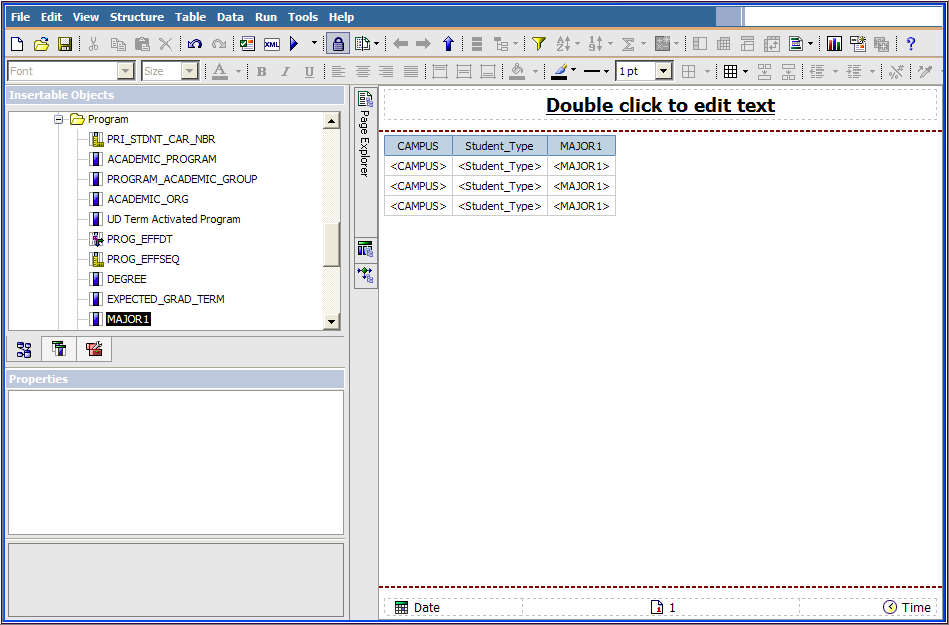
In the previous exercises, you created a list report. You may have noticed duplicate values in the **Major List** report you just created. For example, campus names appear multiple times, once for each student and major. You can manipulate the report to sort the data and to hide duplicate values through a process called **grouping**. Report Studio also allows you to control when values are displayed through a process called setting the **group span**.

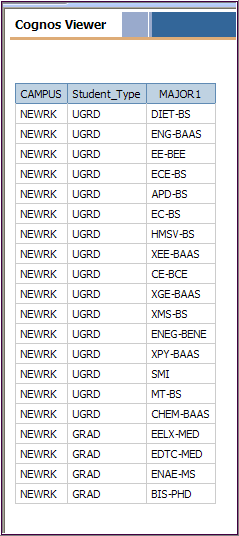
In the following exercise, you will create a new list report. You will then group two of the report items and set the group span so that you see certain data when the data changes in a related column.

Exercise 5—Create a Grouped List Report and Set the Group Span

1. On the Report Studio toolbar, click the **New** newrpt button to create a new report. If you are asked if you want to save the previous report, click **Yes**.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign.
4. Add the following fields to the work area:

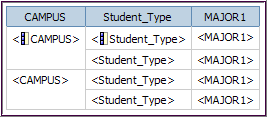
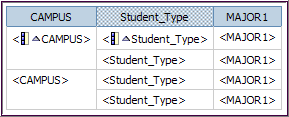
* **CAMPUS**
* **Student\_Type**
* **MAJOR1** (in the **Program** folder)

1. You will see a window like the one below:  
     
   
2. On the toolbar, click the **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG button—**Run Report (HTML)**, and enter Term 2088 in the prompt.

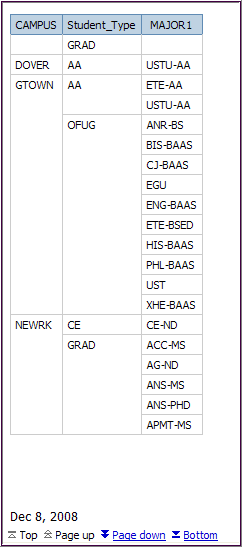


Notice that there are many duplicate values in the report. You can eliminate duplicates by grouping values.

Close the **Cognos Viewer** window.

1. To eliminate duplicate values:  
   1. In the **Report Studio** window, click the *title* of the **CAMPUS** column.
   2. Hold down the **SHIFT** key and click the *title* of the **Student\_Type** column to select both columns.
   3. On the toolbar, click the **Group/Ungroup**  button.  
        
      Grouping adds a “group” symbol to the selected columns to indicate that each column is grouped. Your report columns now look like the ones below:  
        
        
        
      You can also sort the columns in ascending or descending order. To do this:
2. Click the *title* of the **CAMPUS** column then on the toolbar, click the Sort sortbut button. Select **Sort Ascending** from the menu that appears.
3. Repeat this process for the **Student\_Type** column. Your report columns now look like those below:  
     
   
4. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Term = 2088) to see the effect of grouping and sorting the columns.

Your results will appear in a separate **Cognos Viewer** window like the one below.



Note that the window shows a partial list; click **Page down** to see the remaining data.

Close the **Cognos Viewer** window.

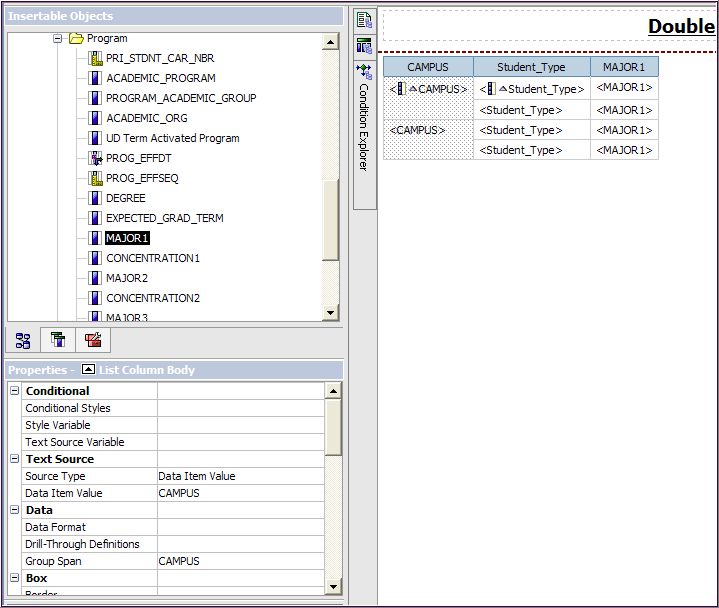
Page down

Now each student type appears only once for each campus.

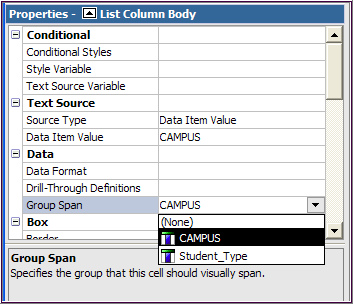
Notice there is an unaffiliated listing for "GRAD" for 2088 at the beginning of the report. It occurs in 2008 but may not be true for other terms. You will be able to filter out information like this later.

►Suppose you decide that, since each campus has multiple student types, you would like to have the campus name appear each time the student type changes. Report Studio lets you set the **group span** to do this.

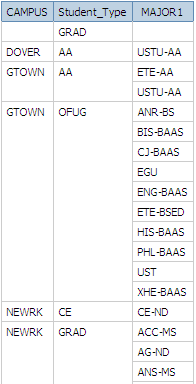
1. In the Report Studio window, click the **CAMPUS** *column*. (The column becomes shaded.)

  
  
Now the properties you can apply to the column appear in the **Properties** pane.

1. In the **Properties** pane, under the **Data** heading:
2. Click **Group Span**
3. From the pull-down menu, select **Student\_Type**:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088). Your results should look like those below.



Notice that now, each time the student type changes, the campus name appears beside it.

1. Close the **Cognos Viewer** window.
2. On the **Report Studio** window **File** menu, click **Save As**.
3. In the Save As **Name** box, type ***your initials* Grouped Campus**. Click **Save**.

End of Exercise

**Create Repeated Form Frames from a List**

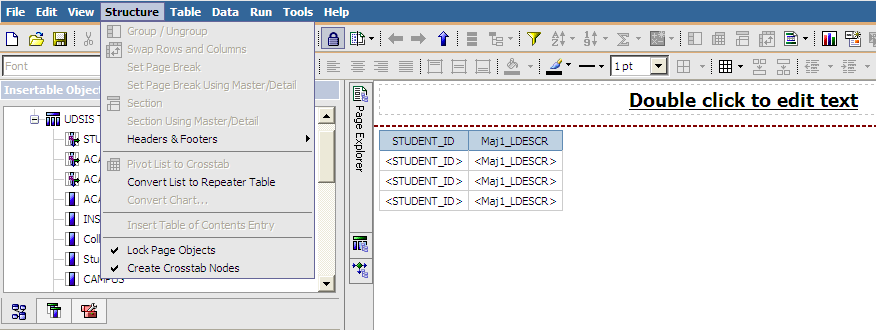
► Repeated Form Frames are used mainly for printing labels or name tags.

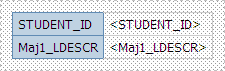
You can use a list report to create repeated form frames for data. For example, you might want to create frames across and down the report page listing every student ID and the major associated with it. To do this, you first create a list report.   
  
In the following exercise, you will create a list report and convert it to a repeater (creates a single form frame). You will then set properties for the frame to create multiple frames on each page.

Exercise 6—Create Repeated Form Frames from a List

1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report. If you are asked if you want to save the previous report, click **Yes**.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training Extract** item by clicking the plus sign.
4. Add the following fields to the work area:

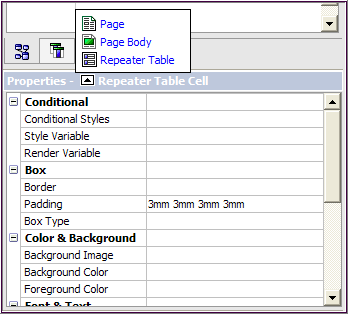
* **STUDENT\_ID**
* **Maj1\_LDESCR**. (in the **Descriptions** folder)



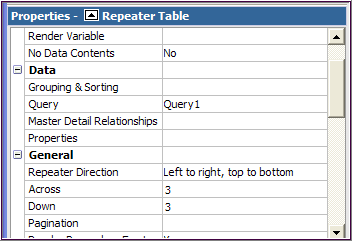
* + In the **Structure** menu, click **Convert List to Repeater Table**. Your report will now contain one form frame that looks like the one below:  
      
    

Click in this area; the entire box will become shaded.

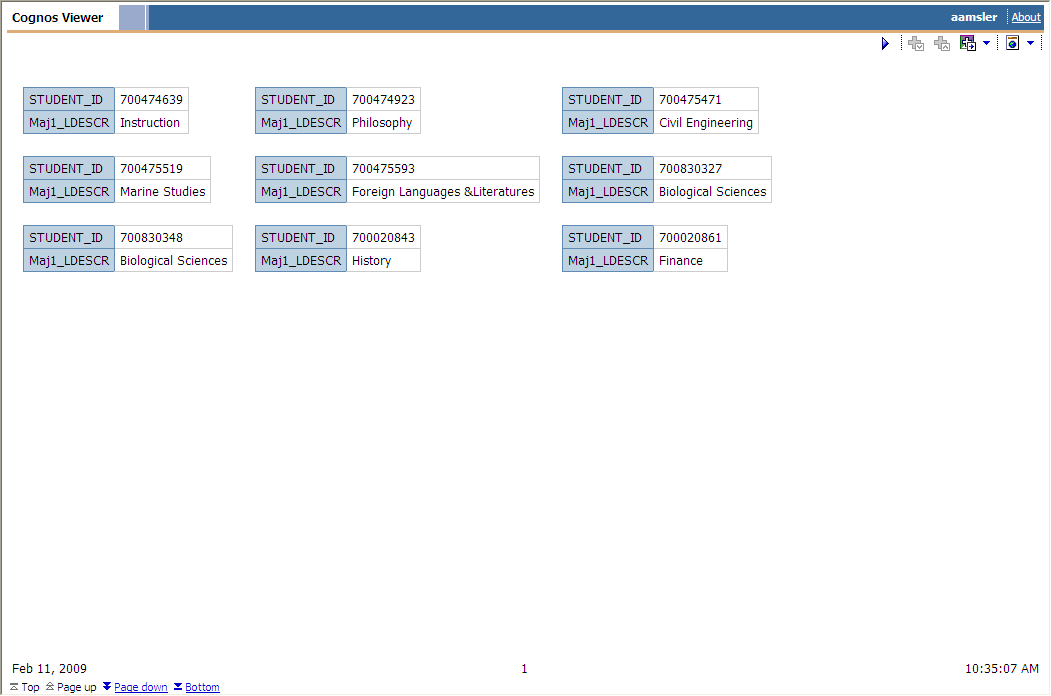
1. To set the number of form frames to appear on each report page, click anywhere in the background of the frame you have created.
2. Go to the **Properties** pane.
3. At the top center of the **Properties** pane, click the **Select** **Ancestor** ancestor button
4. Select **Repeater Table**.



1. Under **General** in the **Properties** pane:
2. Highlight the number beside **Across** and type **3**.
3. Press ENTER.
4. Highlight the number beside **Down** and type **3**.
5. Press ENTER.



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088).

You should see a **Cognos Viewer** window like the one below with 9 frames per page. Click **Page down** to see the remaining pages.  
  


1. Close the **Cognos Viewer** window.
2. On the Report Studio **File** menu, click **Save As**.
3. In the Save As **Name** box, type ***your initials* Repeater List**. Click **Save**.

End of Exercise

Crosstab Reports

A crosstab report shows information in summary form. The report still has rows and columns, but the intersection of the rows and columns shows a summary of quantitative information. You can create crosstab reports in two ways:

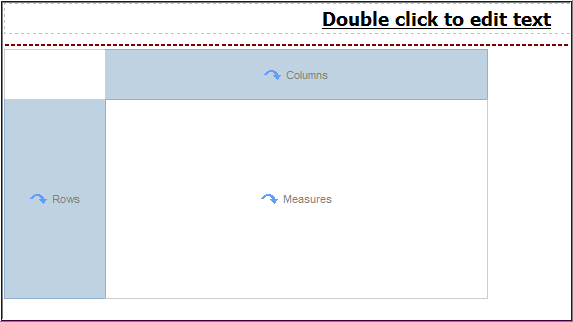
* Create a new Report Studio report, selecting Crosstab from the **New** box.
* Open an existing List report and use the **Pivot** button to change it into a crosstab.

Crosstab reports can contain nested data to make it easy to compare or increase the information you see.

In the following exercise, you will create a new crosstab report.

Exercise 7—Create a New Crosstab Report

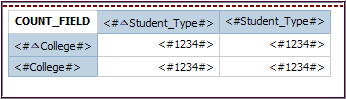
1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report. If you are asked if you want to save the previous report, click **Yes**.
2. In the **New** box, select **Crosstab crosstabicon** and click **OK**. You will see a window work area like the one below:



1. On the **Source** tab, expand the **UDSIS Training Extract** item by clicking on the plus sign.

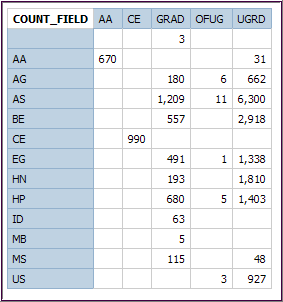
**Note**: You must drag each field to the work area separately in a Crosstab report.

1. Click **Student\_Type** and drag it to the **Columns** section of the work area.
2. When you see the **Columns** area flash black, release the mouse button.
3. Click the *title* of the **Student\_Type** column and click the Sort sortbut button. Select **Sort Ascending**.
4. Click **College** and drag it to the **Rows** section of the work area.
5. When you see the **Rows** area flash black, release the mouse button.
6. Click the ***title*** of the **College** row and click the Sort sortbut button. Select **Sort Ascending**.
7. Click **COUNT-FIELD (**in the Statistics folder) and drag it to the **Measures** section of the work area.
8. When you see the **Measures** area flash black, release the mouse button.  
     
   Your work area should look like the one below:



**Note**: If you want to create an Excel-like crosstab, you must be sure that the data field you want Report Studio to recognize as a fact (quantitative data) is dropped into the report as a **measure**. Otherwise, it will not be treated correctly.

1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088). You will see a report like the one below.

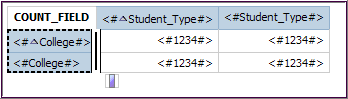


The intersection of the rows and columns shows the number of types of students in each college.

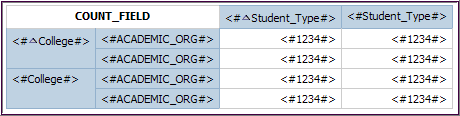
Close the **Cognos Viewer** window.

►Suppose you want your crosstab report to show the academic load for each type of student listed by department in each college. You can nest information by dragging additional items into the report rows or columns.

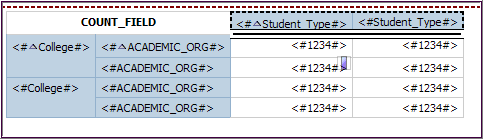
1. In the **Program** folder, click **ACADEMIC\_ORG** and drag it to the right of **College** in the **Rows** section of the work area.   
   1. When you see the bold black bar, release the mouse button.



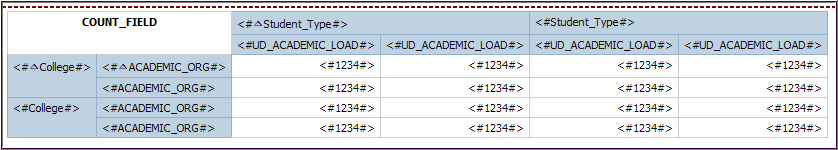
* 1. The work area should look this afterward:



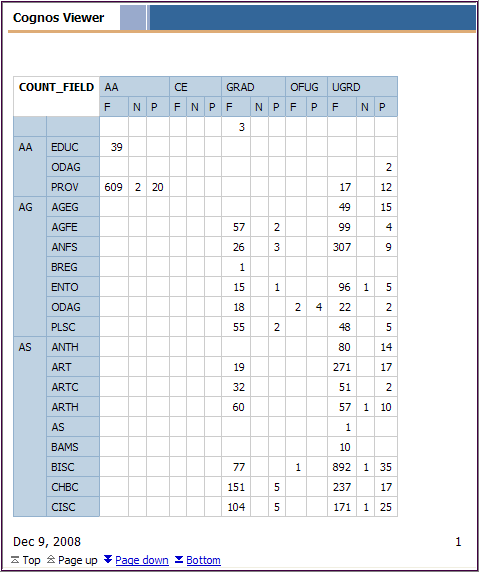
1. Click the *title* of the **ACADEMIC\_ORG** row and click the Sort sortbut button. Select **Sort Ascending**.
2. Click **UD\_ACADEMIC\_LOAD** (under **UDSIS Training Extract)**
   1. Drag it *under* the **Student\_Type** item in the **Columns** section of the work area.
   2. When you see the bold black bar, release the mouse button.



* 1. The work area should look this afterward:



1. Click the *title* of the **UD\_ACADEMIC\_LOAD** item and click the Sort sortbut button. Select **Sort Ascending** from the Sort menu.
2. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088). Your **Cognos Viewer** window should now look like the one below.

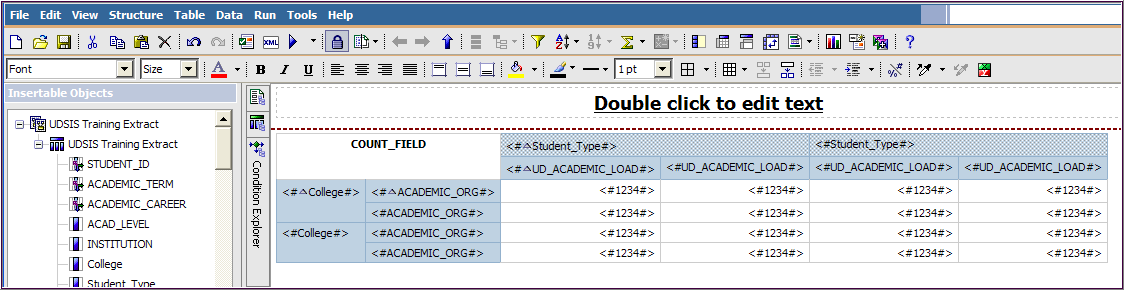


Click **Page down** to see the rest of the information.

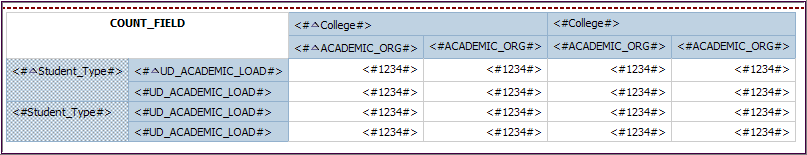
Close the **Cognos Viewer** window.

►At times, a crosstab report may be easier to read if you swap the rows and columns.

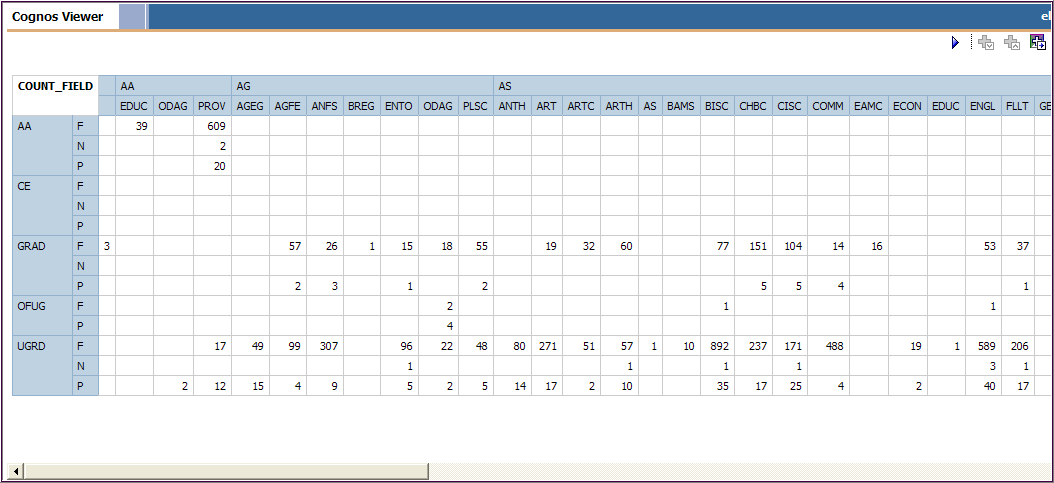
1. In the **Report Studio** window, click the **Student\_Type** column *title*.
2. On the toolbar, click the **Swap Rows** **and** **Columns** swap button.



1. The work area should look like this one:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088) and compare it with the one shown in step 17 above.



This report is extremely wide; note. the scroll bar at the bottom.

1. Close the **Cognos Viewer** window

1. On the **Report Studio** window **File** menu, click **Save As**.
2. In the Save As Name box, type ***your initials*** **Nested Crosstab**. Click **Save**.

**Note**: You will not perform all these steps for every crosstab report. The steps you select depend upon your individual needs.

End of Exercise

In the previous exercise, you created a new crosstab report using a Report Studio template.

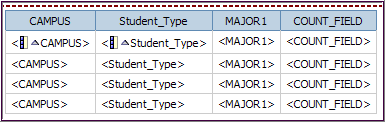
You can also create a crosstab report using an existing list report. There are two ways to do this:

1. Open an existing report from *within* Report Studio, or
2. From Cognos Connection, click the Public Folders tab.
   * Select **UDSIS Training Extract**, and search for your report.
   * Once you have located the report you want to edit, click the **More…** link at the far right of the line it is on.
   * Select **Edit with Report Studio**.

In the following exercise, you will create a crosstab report based on the **Grouped Campus** report you created earlier. You will open the report in Report Studio and make a few changes before you create the crosstab.

Exercise 8—Create a Crosstab Report from an Existing Report

1. In **Report Studio**, click **Open** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML169523a.PNG in the tool bar. If you are asked if you want to save the previous report, click **Yes**.
2. In the **Open** dialogbox, find the report named ***your initials* Grouped Campus**. Click the report to select it and click **Open**. (Hint: you may need to change **Public Folders** to **My Folders** with the drop-down.)
3. To add a measure to the report (every crosstab must have at least one measure), expand the **Statistics** item and double-click **COUNT\_FIELD**.   
     
   A **COUNT\_FIELD** column appears after the last report column.



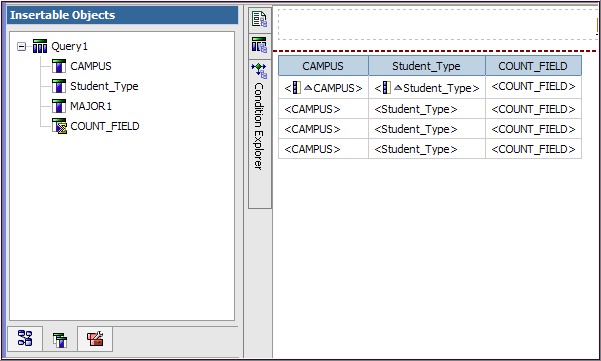
Suppose that to make the report more succinct, you decide to remove the **MAJOR1** column before you create the crosstab. You can remove Report Studio information either permanently by clicking the **Delete** delete button or temporarily by clicking the **Cut** cut button.

**Note about Delete vs. Cut:**

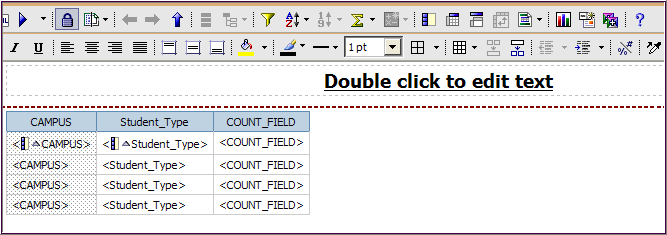
**Delete** removes the data item from the report layout and the query. If you delete a data item, it will no longer appear on the **Data** **Items** tab. To add it back, go to the **Source** tab.

**Cut** removes the data item from the report layout but retains it in the query that Cognos uses to retrieve data from the source. To add it back, go to the **Data Items** tab.

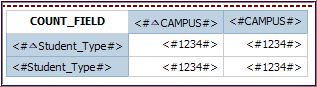
1. Click the title of the **MAJOR1** *column* to select it then click the Cut cut button on the Tool Bar.  
     
   (Notice the **MAJOR1** column is removed. However, it still remains available on the **Data Items** tab of the **Insertable Objects** pane.)
2. Click the **Data Items** tab on the **Insertable Objects** pane to see the structure of the query Report Studio is building. Note that the **MAJOR1** item is still in the query.   
     
   ► If you wanted to add it back into your report, you would drag it to the position you wanted it to occupy.



1. Click the *title* of the **CAMPUS** column (this is the item you want to appear in the columns section of your crosstab).
2. On the tool bar, click the **Pivot List to Crosstab** pivot_to_crosstab button then run the report.

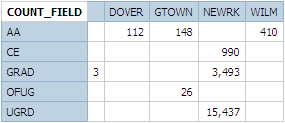


1. The work area should look like this:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088)

Your **Cognos Viewer** report will look like the one below:



1. Close the **Cognos Viewer** window.
2. On the **Report Studio** window **File** menu, click **Save As**.
3. In the Save As Name box, type ***your initials* List to Crosstab**. Click **Save**.

End of Exercise

**Charts**

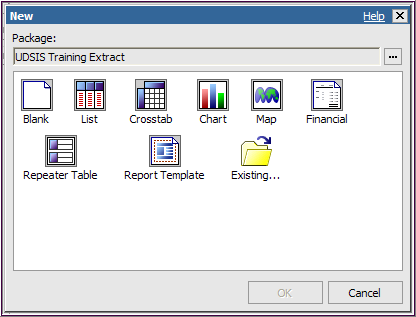
Charts allow you to present your information graphically. Report Studio offers 12 types of charts with multiple configurations for each type. To see the chart types, you can open the **New** report box in Report Studio and select **Chart**.

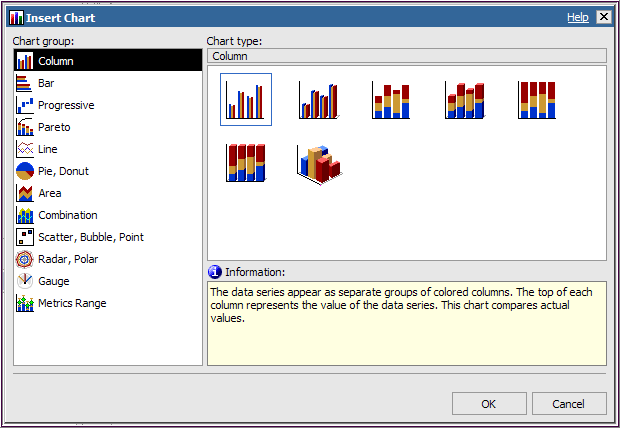
Besides being able to create many different types of charts based on Report Studio templates, you can alter the appearance of a chart by changing its properties to include background images, and foreground and background colors. You can also change chart labels and titles.

In the following exercise, you will view the types of charts available in Report Studio and learn how to choose the one most suited to your purposes.

Exercise 9—View the Types of Report Studio Charts

1. On the Report Studio toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **Chart** and click **OK**.



1. You will see a window like the one below:  
     
   
2. Click some of the chart types in the **Chart group** pane.  
     
   For each item you select, you will see all the configurations available for that particular chart type in the **Chart type** pane.
3. Click some of the chart configurations in the **Chart type** pane.  
     
   When you select a configuration, you will see the type of chart configuration immediately under **Chart type**. At the same time, you will see an explanation of how the chart will appear and what it is used for.

End of Exercise

# Create a Chart

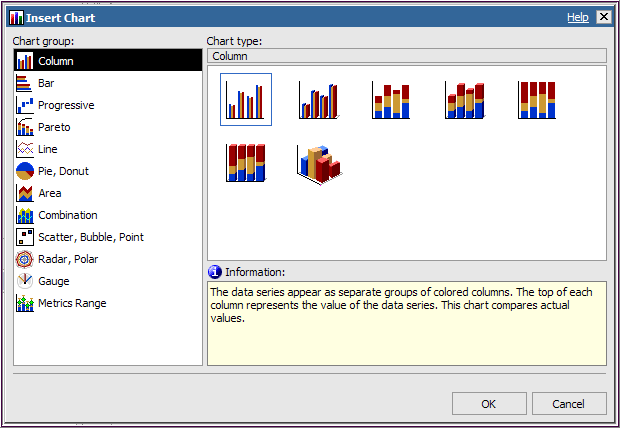
When you create a chart in Report Studio, you add data to three drop zones. Drag items into the zones where you want them to appear. The zones are:

* **Default Measure**: The numbers that will be plotted on the Y axis (vertical).   
  (Examples: counts, dollar amounts)
* **Category**: The values that appear on the X axis (horizontal) against which each data series is plotted. (UDSIS: academic career, major, and UD Financials: Purposes, Account categories)
* **Series**: A group of related data points. The data series appear in the chart’s legend, with each series having a different color or pattern.   
  (Examples: terms, fiscal years or accounting periods)

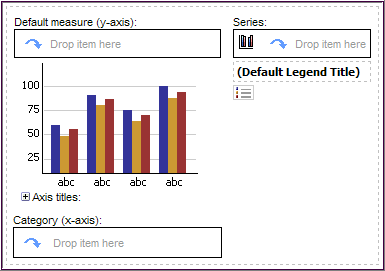
In the following exercise, you will create a column chart and change some of its properties. The chart will show enrollment by academic level for terms 2078 and 2088.

Exercise 10—Create a Column Chart

1. In the **Insert Chart** box that you opened in the previous exercise, click the icon for the **Column** chart and click **OK**.



1. You will see a work area like the one below:

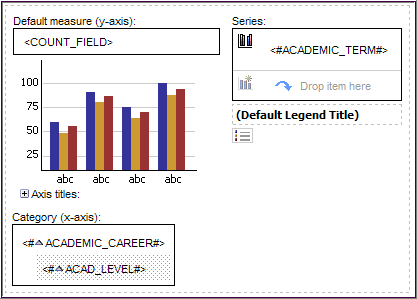


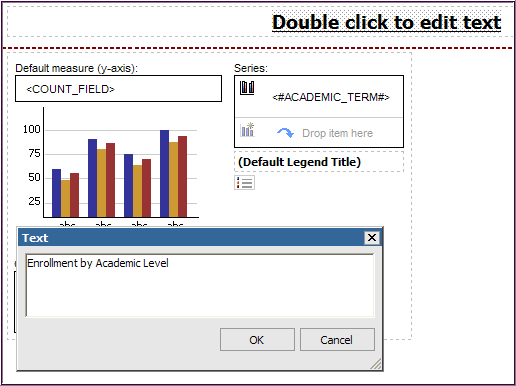
Note the three drop zones and where the data will appear on the chart.

Add fields to the work area:

1. On the **Source** tab, expand the **UDSIS Training Extract** item by clicking the plus sign.
2. In the **Statistics** folder, click **COUNT\_FIELD** and drag the selection to the **Default** **Measure** drop zone of the chart.
3. Click **ACADEMIC\_CAREER** and drag the selection to the **Category** drop zone of the chart.
4. Click the **ACADEMIC\_CAREER** item and click the **Sort** sortbut button. Select **Sort Ascending**.
5. Click **ACAD\_LEVEL** and drag the selection *below* **ACADEMIC\_CAREER** in the **Category** drop zone of the chart.  
     
   When you see a bold, black bar, release the mouse button.
6. Click the **ACAD\_LEVEL** item and click the Sort sortbut button. Select **Sort Ascending**.
7. Click **ACADEMIC\_TERM** and drag the selection to the **Series** drop zone of the chart.

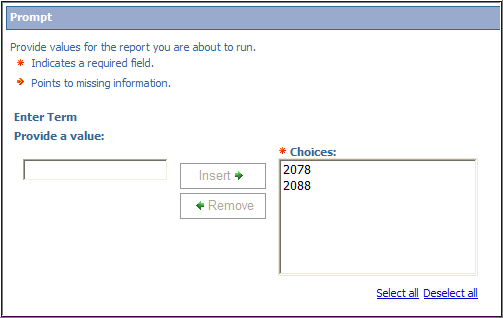
Your work area should look like the one below:



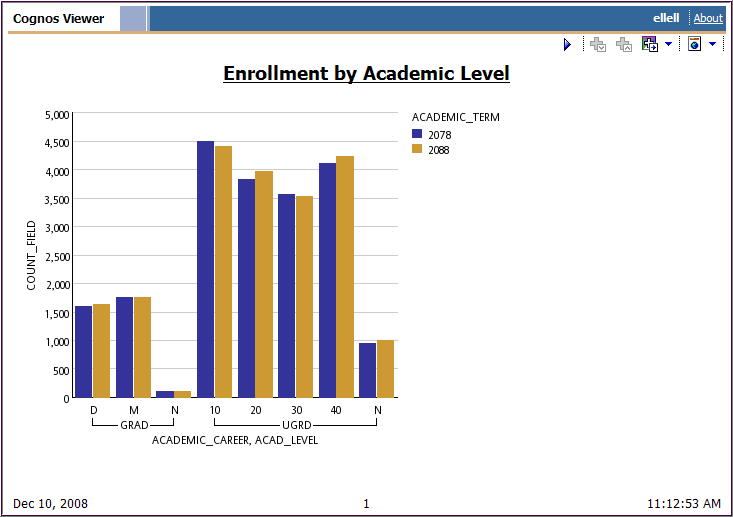
1. To give the report a title, double-click just above the report columns on the words that say **Double click to edit text**. In the text box that appears, type: **Enrollment by Academic Level** and click **OK**.  
     
   

**Note**: This is the way to add a title to *any* Report Studio report.

1. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report to see the chart you have created.
2. In the Prompt box, type **2078** and click the **Insert button**, then type **2088** and click the **Insert button**. Click **OK**.



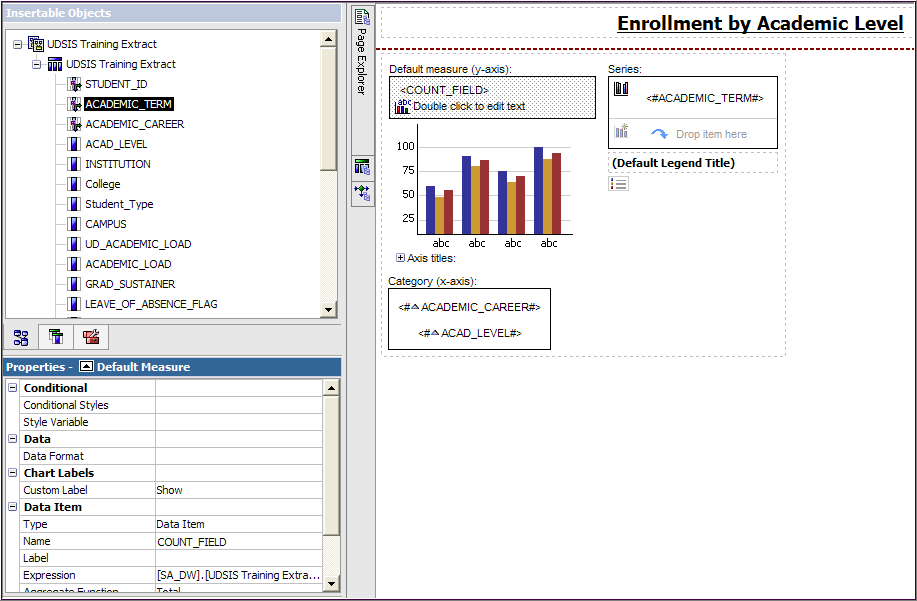
Note that **Report Studio** has added labels for the axes and legend as well as the date, page number, and time at the bottom of the page:



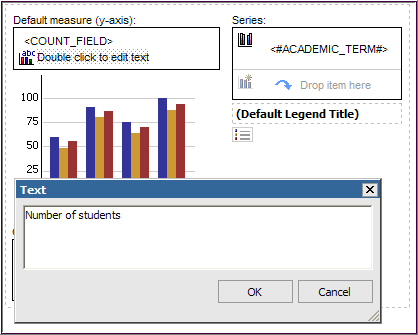
1. Close the **Cognos Viewer** window.

►You can change chart labels to make them more meaningful. To do this:

1. In the **Report Studio** window, click the **Measure** drop zone (it now reads **COUNT\_FIELD**). Note the properties you can apply to the **COUNT\_FIELD** item.
2. In the **Properties** pane, click the **Custom Label** property then from the pull-down menu, select **Show**. Notice that there is a new area for editing text in the **Default Measure** box.



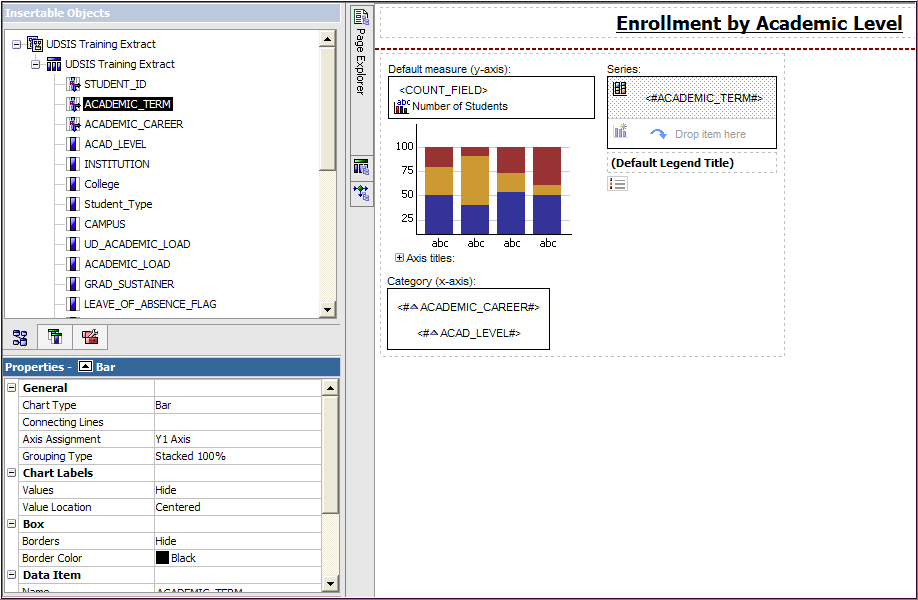
1. Double-click where indicated to edit the text.
2. In the **Text** box, type **Number of students** and click **OK**.



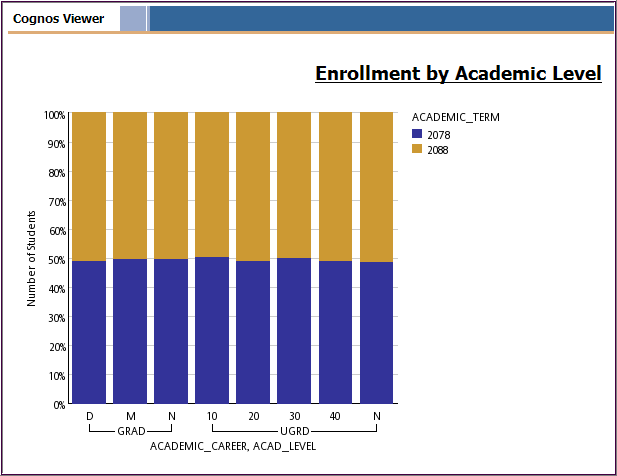
1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Terms = 2078 and 2088) to see the title change on the Y axis.
2. On the **File** menu, click **Save As**.
3. In the Save As **Name** box, type ***your initials* Enrollment Chart**. Click **Save**.

►If you decide another chart type would better represent your data, you can change types from within the chart window.

1. Click the **Series** icon on the chart to highlight it.



1. In the **Properties** pane, under **General**, click **Grouping Type**.
2. From the pull-down menu, select **Stacked 100%**.
3. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Terms = 2078 and 2088) to see how the chart looks now. (Compare it to the one on page 34.)



Close the **Cognos Viewer** window.

Save the report if you want to keep these changes.

End of Exercise

**Manipulate Data in a Report**

You can manipulate Report Studio data in many ways to produce a report that shows only the information relevant to your audience’s needs. Some of the changes you can make are:

* Add a filter to produce a subset of results.
* Sort and group data to produce custom reports.
* Format data to change the appearance of numbers, currency, dates, and times.
* Perform calculations using your data.

# Filters

To produce a report that shows a subset of your data, you can add a filter to a report item.

Suppose you produce a report that shows the number of students in graduate-level programs at the University. You might want your results to show only the number of Masters-level students in each major, excluding all other data. The following exercise will show you how to create this report.

Exercise 11—Add a Filter

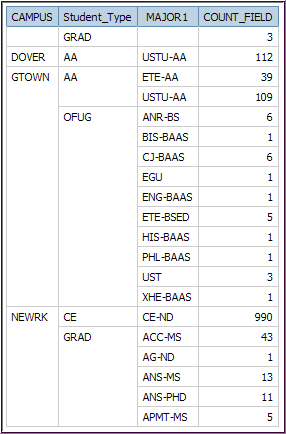
1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report. If you are asked if you want to save the previous report, click **No**.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign
4. Add the following fields to your report:

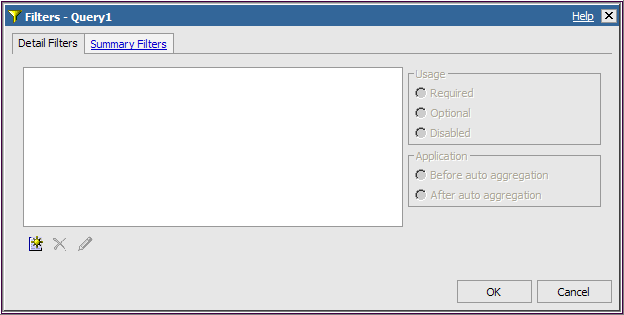
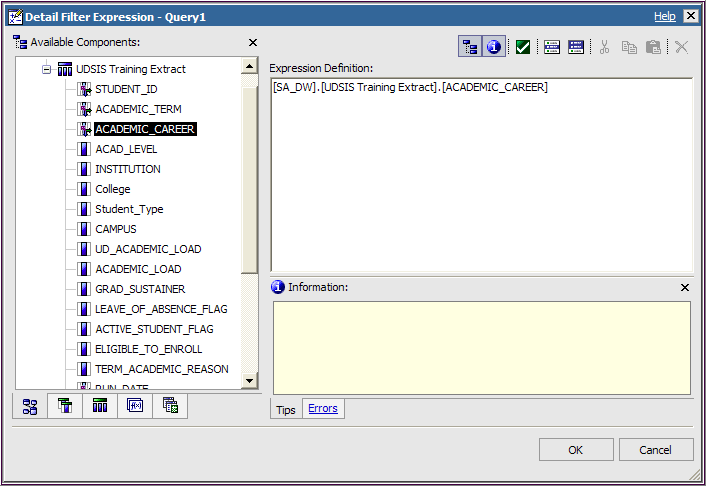
* **CAMPUS**
* **Student\_Type**
* **MAJOR1** (in the **Program** folder)
* **COUNT\_FIELD (**in the **Statistics** folder)

1. Click the *title* of the **CAMPUS** column and click the Sort sortbut button. Select **Sort Ascending**.
2. Click the *title* of the **Student\_Type** column and click the Sort sortbut button. Select **Sort Ascending**.
3. Group two fields to remove duplicate values:
   1. Click the *title* of the **CAMPUS** item,
   2. Hold down the SHIFT key and click the *title* of **Student\_Type**.
   3. Click the **Group/Ungroup** grpbut button on the toolbar.   
        
      Your list will look like the one below:



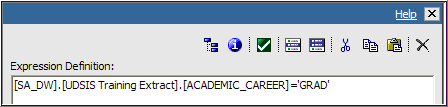
1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088) to view the data.



1. Close the **Cognos Viewer** window.
2. Click the *title* of **COUNT\_FIELD** then click the **Filters** filter button on the toolbar. You will see a **Filters** window like the one below.   
     
   
3. To create a filter, click the **Add**  button. You will see a **Detail Filter Expression** window like the one below:  
     
   
4. In the **Available Components** pane, expand the UDSIS Training Extract tab by clicking the plus sign and double-click ACADEMIC\_CAREER.  
     
   **[SA\_DW].[UDSIS Training Extract].[ACADEMIC\_CAREER]** will now appear in the Expression Definition pane.

**Note**: You can also type the entire expression directly into the **Expression Definition** pane. If you are typing a year, it must be in the format YYYY-MM-DD.

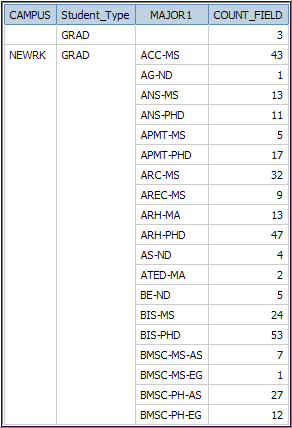
1. Click in the **Expression Definition** pane just *after* [**ACADEMIC\_CAREER]** and type **=’GRAD’** – your expression should look like this:



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. (When the Prompt window appears, Term = 2088.)
2. You will see the validation results in the **Information pane**.
   1. If you see **No Errors**, click OK.
   2. If you get an error, correct your expression.



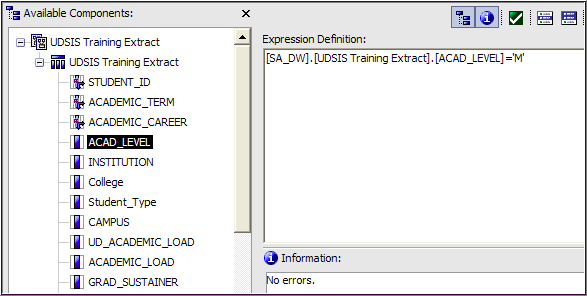
1. This returns you to the **Filters** window.
2. Click **OK** again.
3. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088) to see the effect of the filter you have added. The report now shows all graduate programs at the University with students enrolled in them:



Close the **Cognos Viewer** window.

►Suppose you want to see only programs with Masters-level students in them. You can add more filters to your report to do this.

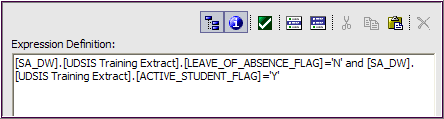
1. Click the *title* of the **COUNT\_FIELD** item then click the **Filters** filter button on the toolbar.
2. In the Filters window, click the **Add**  button.
3. In the **Available Components** pane, expand the **UDSIS Training Extract** tab by clicking the plus sign and double-click **ACAD\_LEVEL**.  
     
   **[SA\_DW].[UDSIS Training Extract].[ACAD\_LEVEL]** will now appear in the **Expression Definition** pane.
4. Click in the **Expression Definition** pane just *after* [**ACAD\_LEVEL]** and type **=’M’**
5. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression.



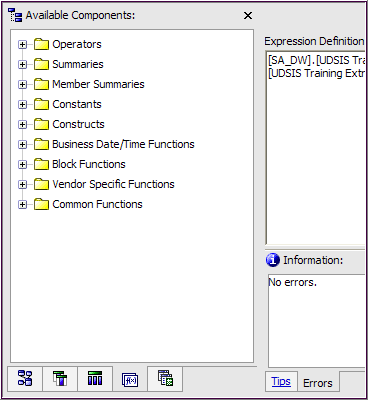
1. If you get “No Errors,” click **OK**. This returns you to the **Filters** window.

1. Click the **Add**  button.
2. In the **Available Components** pane, expand the **UDSIS Training Extract** tab by clicking the plus sign and double-click **LEAVE\_OF\_ABSENCE\_FLAG**.  
     
   **[SA\_DW].[UDSIS Training Extract].[LEAVE\_OF\_ABSENCE\_FLAG]** will now appear in the **Expression Definition** pane.
3. Now we’ll add another expression with the operator ‘**and**’:  
   1. Click just after **[LEAVE\_OF\_ABSENCE\_FLAG]** and type **='N'**
   2. Move one space and type: **and**
   3. Move one space and, under the **UDSIS Training** item, double-click **ACTIVE\_STUDENT\_FLAG** to add this field
   4. Click just after **[ACTIVE\_STUDENT\_FLAG]** and type **='Y'**

Your expression should look like the one below:



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. Then click **OK**. This returns you to the **Filters** window. Click **OK** again.

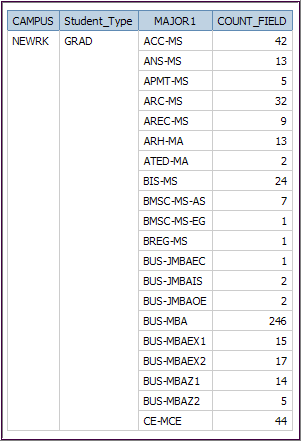


**Note:** Alternatively, you can use the **Functions** tab to build your expressions. It contains numerous operators and specialized functions.

Operators, such as “and” can be found in the **Operators** folder.

1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088). You will see a **Cognos Viewer** window like the one below. Page down in the window to see all of the data.

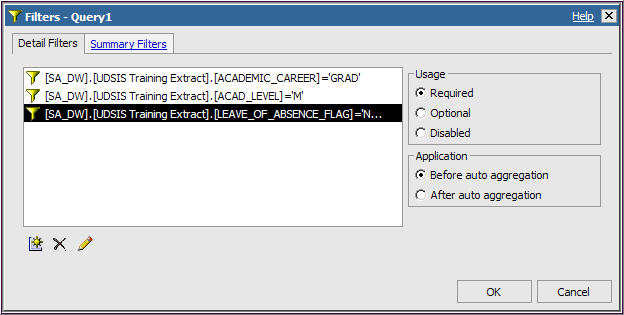
The report now reflects the new filter; only Masters-level students for each major are included in the report.



Close the **Cognos Viewer** window.

1. On the Report Studio **File** menu, click **Save As**.
2. In the Save As **Name** box, type ***your initials* Add a Filter**. Click **Save**.

End of Exercise

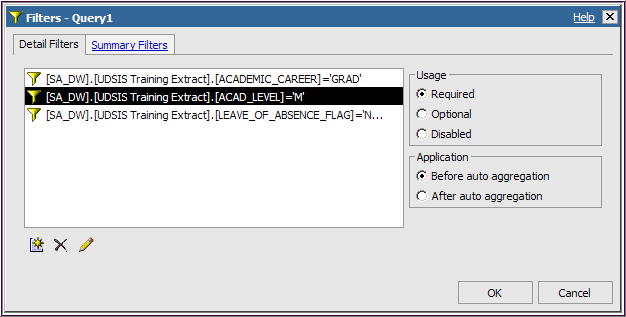


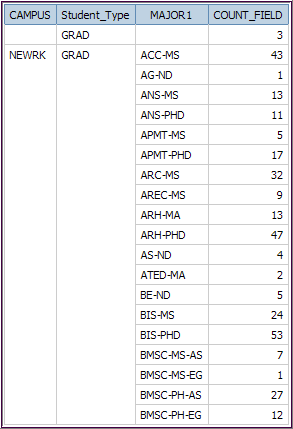
**Note**: To edit a filter, click the Report Studio column that has been filtered then click the Filter icon. In the Filters box, click the filter and then click the Edit edit icon.

After you create a report with filters, it is possible to customize it by disabling filters you've added. This allows you to keep all the filters and to use them selectively. In the following exercise, you will disable some of the filters you created in the ***your initials* Add a Filter** report.

Exercise 12—Disable Filters

This exercise continues with the report (***your initials* Add a Filter)** from Exercise 11. If needed, open the file with the Open  button; it should be in **My Folders.**

1. Click the **Filters** filter button on the toolbar. You will see a window that looks like the one below:  
     
   
2. Highlight the second filter and in the **Usage** pane, click **Disabled**.
3. Highlight the third filter and in the **Usage** pane, click **Disabled**. Click **OK**.
4. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report to see the effect of disabling the filters. The report now shows all graduate programs at the University with students enrolled in them. Close the **Cognos Viewer**.



End of Exercise

# 

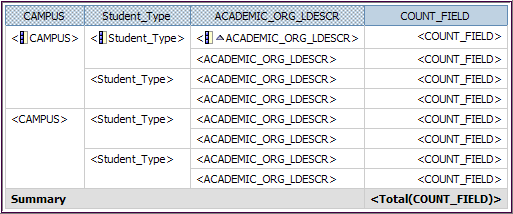
# Filter on Details and Summaries

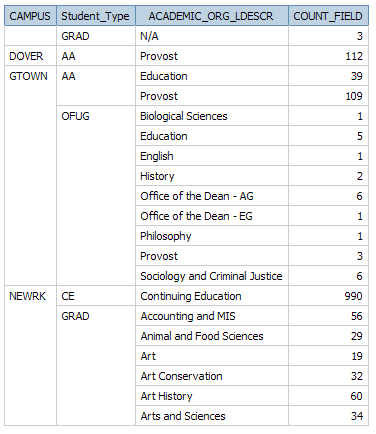
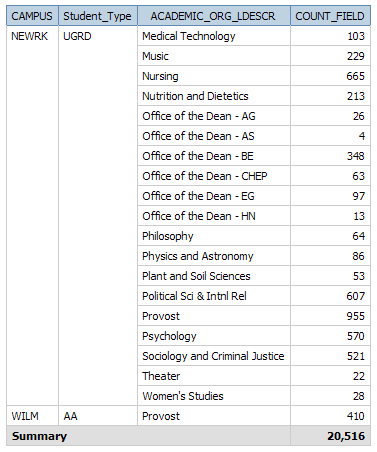
You can filter reports in several ways. In the following exercise, you will create a report, total the data, and filter first on detail data and then on the summary data.

Exercise 13—Filter on Details

1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report. If you are asked if you want to save the previous report, click **No**.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and add the following fields to the work area:  
   * **CAMPUS**
   * **Student\_Type**
   * **ACADEMIC\_ORG\_LDESCR** (in the **Descriptions** folder)
   * **COUNT\_FIELD** (in the **Statistics** folder)
4. Add a line for the total of all students:
   1. Click the *title* of the **COUNT\_FIELD** item
   2. On the toolbar, click the **Aggregate** aggregate button’s down-arrow
   3. Click **Total**.
5. Click the *title* of the **ACADEMIC\_ORG\_LDESCR** column and click the Sort sortbut button. Select **Sort Ascending**.
6. To get rid of duplicate values:
   1. Click the *title* of the **CAMPUS** item.
   2. Hold down the SHIFT key and click the *titles* of the **Student\_Type** and **ACADEMIC\_ORG\_LDESCR** items.
   3. Click the **Group/Ungroup**  button on the toolbar to group the items.

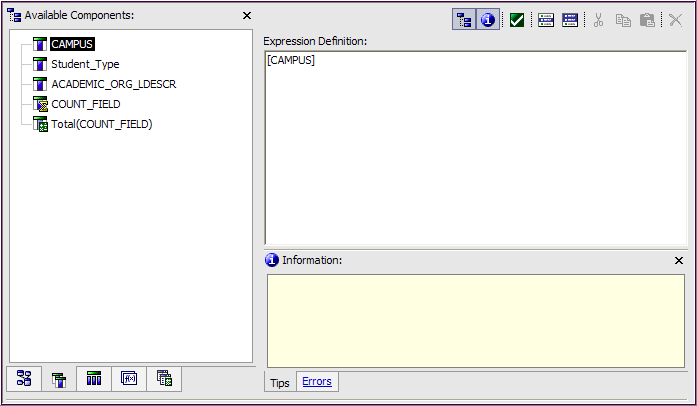
Your work area should look like the one below:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088) and notice the data in the aggregate report. The total of all students appears at the bottom of the report. Page down to see all of the data (below are the first and last pages of the report):  
     
    
2. Close the **Cognos Viewer** window.

►Suppose you want your report to show only the number of undergraduates for each academic organization on the Newark campus. You can create filters to show only this data.

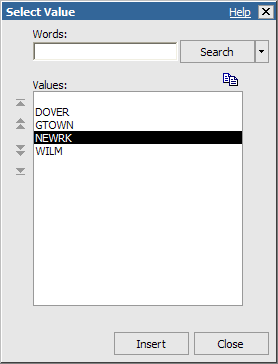
1. Click the *title* of the **COUNT\_FIELD** column and, on the toolbar, click the **Filters** filter button.
2. In the **Filters** window, click the **Add**  button.
3. Under the **Available Components** pane, click the **Data Items** dataicon icon and double-click **CAMPUS**.   
     
   **[CAMPUS]** will now appear in the **Expression Definition** pane.



1. In the **Expression Definition** pane, click just after **[CAMPUS]** and type **='NEWRK'**

**HINT:** If you don't know the values for **CAMPUS** (or any other data item), use the **Select Value**  button:

* After you double-click **CAMPUS**, type **=**
* Click the **Select Value** select value button (next to the Validate button)
* You will see the **Select Value** box.
* Double-click a value to add it to the expression definition.



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression; check for errors in the **Information** pane. Then click **OK**. This returns you to the **Filters** window.
2. To add a filter for **Student\_Type**, click the **Add**  button.
3. Under the Available Components pane, click the **Data Items** dataicon icon and double-click **Student\_Type**.  
     
   **[Student\_Type]** will now appear in the **Expression Definition** pane.

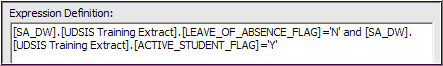
**Note**: When you create a filter, select items that are already in your report from the **Data Items** tab. Select items that are not in your report from the **Source** tab.

1. In the **Expression Definition** pane, click just after **[Student\_Type]** and type **='UGRD'** (Or use the Select Value  button.) Your expression should look like this one:



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression; check for errors in the **Information** pane. Then click **OK**. This returns you to the **Filters** window.
2. Click the **Add**  button.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and double-click **LEAVE\_OF\_ABSENCE\_FLAG**.
4. Add another field to the expression:
   1. Click just after **[LEAVE\_OF\_ABSENCE\_FLAG]** and type **='N'**.
   2. Move one space and type **and**.
   3. Move one space and, under the **UDSIS Training** item, double-click **ACTIVE\_STUDENT\_FLAG**.
   4. Click just *after* **[ACTIVE\_STUDENT\_FLAG]** and type **='Y'**.

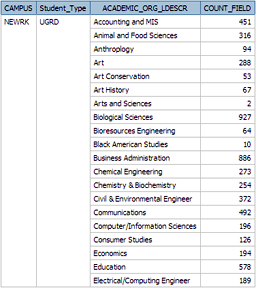
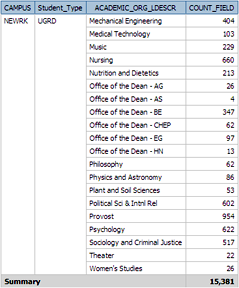
The complete expression should look like the following:



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. Then click **OK**. This returns you to the **Filters** window. Click **OK** again.

**Note**: Values in expressions must be in single quotes. If you accidentally use double quotes, you will get an ugly error in the Information pane when validating.

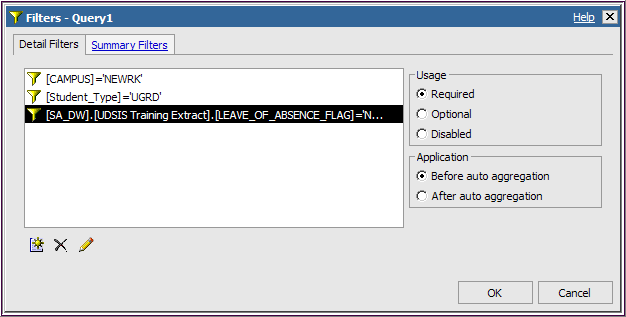
Examples: ‘N’ and ‘NEWRK’ are correctly written with single quotes.

1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report. You will see a **Cognos Viewer** window like the one below that now shows only numbers for undergraduates on the Newark campus. Page down in the window to see all of the data.  
     
    

This shows the first and last pages of the report.

1. Close the **Cognos Viewer** window.
2. In the **Report Studio** window, click the **Filters** button then click one of the filters you created.

Note that in the **Application** box, **Before auto aggregation** is selected:

  
This means that you filtered on the *details* in the report—the data in the rows— before the aggregation was applied. **Cancel** the **Filters** window.

[The next exercise will, in contrast, show the effect of a filter with **After auto aggregation** selected.]

1. On the Report Studio **File** menu, click **Save As.**
2. In the Save As **Name** box, type ***your initials* Filtered Details.** Click **Save**.

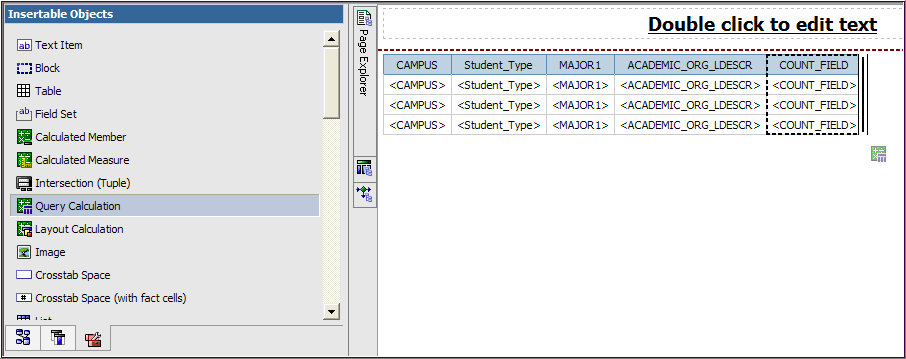
End of Exercise

**Note**: You will apply only the filters you need in your reports. The varying types of filters used in this exercise illustrate the possibilities for applying filters and demonstrate that multiple filters can be used in a single report.

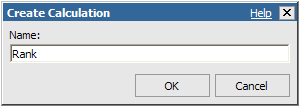
In the following exercise, you will add a filter to the report you just created to produce a summary filter.

Exercise 14—Create a Summary Filter

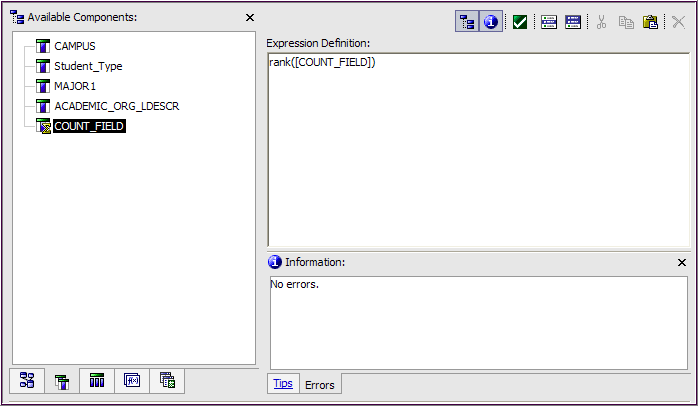
1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report. If you are asked if you want to save the previous report, click **No**.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and add the following fields to the work area:  
   * **CAMPUS**
   * **Student\_Type**
   * **MAJOR1** (in the **Program** folder)
   * **ACADEMIC\_ORG\_LDESCR** (in the **Descriptions** folder)
   * **COUNT\_FIELD** (in the **Statistics** folder)
4. Next, you'll add one more item to the report—a calculation that you define yourself.
5. In the **Insertable Objects pane**, click the **Toolbox** toolboxicon tab icon and drag **Query Calculation** to the report. Drop it after **COUNT\_FIELD** when you see the black bar.



1. In the **Create Calculation** box, type **Rank**
2. Click **OK**.

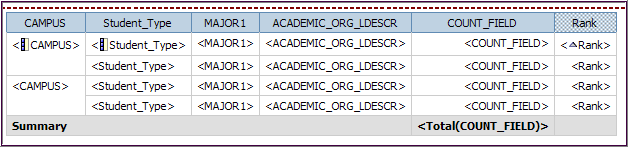


1. This brings up the **Data Item Expression** box so that you can define the calculation.
2. In the **Expression Definition** pane, type: **rank()**
3. On the **Available Components** **Data Items** tab, click **[COUNT\_FIELD]** and drag it within the parentheses.

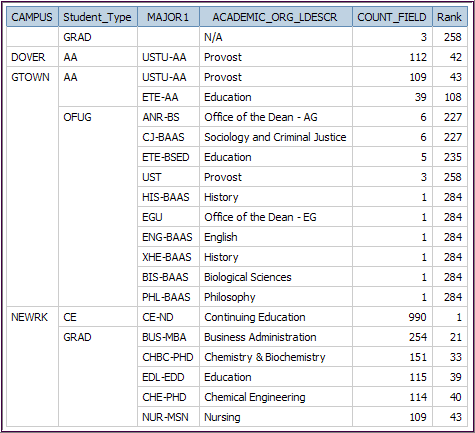


1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression and click **OK**.
2. Back in the work area, you’ll add a summary for the total of all students:
3. Click the **COUNT\_FIELD** *column*
4. On the toolbar, click the **Aggregate**  button’s down-arrow.
5. Click **Total**.
6. To get rid of duplicate values:
   1. Click the *title* of the **CAMPUS** item.
   2. Hold down the SHIFT key and click the *title* of the **Student\_Type** item.
   3. Click the **Group/Ungroup**  button on the toolbar to group the items.
7. Click the ***title*** of the **Rank** item and click the Sort sortbut button. Select **Sort Ascending**.

Your work area should look like this one:



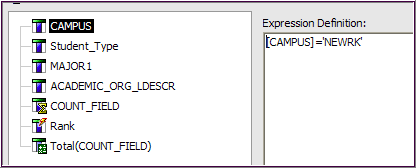
1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088) to see the kinds of information it produces.



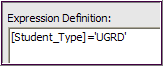
1. Close the **Cognos Viewer** window.

►Suppose you want your report to show a summary of the 20 most popular undergraduate academic programs on the Newark campus. You can create filters to show this information.

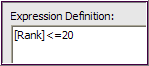
1. Click the *title* of the **COUNT\_FIELD** column and, on the toolbar, click the **Filters** filter button.
2. Click the **Add**  button.
3. Under the **Available Components** pane:   
   1. Click the **Data Items** dataicon tab
   2. Double-click **CAMPUS**.
4. In the **Expression Definition** pane, click just after **[CAMPUS]** and type **='NEWRK'** or use the **Select Value select value** button (See Hint on page 46) to select a value. Your Expression should look like this one:



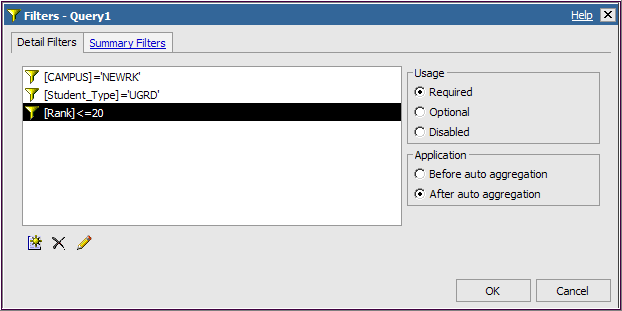
1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. Then click **OK**. This returns you to the **Filters** window.
2. Click the **Add**  button.
3. Under the Available Components pane, click the **Data Items** dataicon icon and double-click **Student\_Type**.
4. In the **Expression Definition** pane, click just *after* **[Student\_Type]** and type **='UGRD'**



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. Then click **OK**. This returns you to the **Filters** window.
2. Click the **Add**  button.
3. Under the Available Components pane, click the Data Items icon dataicon and double-click **Rank**.
4. In the **Expression Definition** pane, click just after **[Rank]** and type **<=20**.

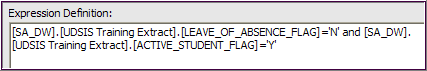


1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. Then click **OK**. This returns you to the **Filters** window.
2. With **[Rank]=<20** highlighted in the Application box of the **Detail** **Filters** window pane:  
   1. Click **After auto aggregation**
   2. Click **OK**

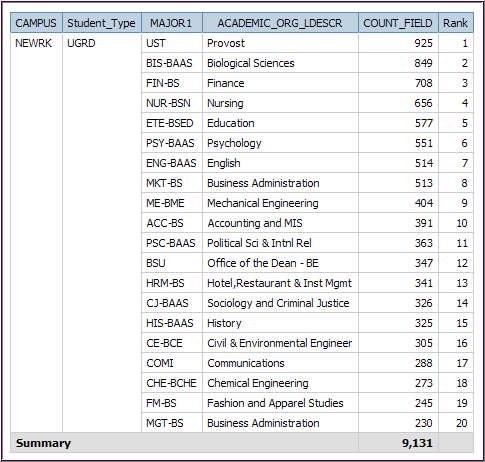


1. Back at the work area, you’ll add another filter to include only active students in the report.  
   1. Click the *title* of the **COUNT\_FIELD** column
   2. On the toolbar, click the **Filters** filter button.
2. Click the **Add**  button.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign.  
   1. Double-click **LEAVE\_OF\_ABSENCE\_FLAG**.
   2. Click just after **[LEAVE\_OF\_ABSENCE\_FLAG]** and type **='N'**.
   3. Move one space and type: **and**.
   4. Move one space and, under the **UDSIS Training** item, double-click **ACTIVE\_STUDENT\_FLAG**.
   5. Click just after **[ACTIVE\_STUDENT\_FLAG]** and type **='Y'**.

Your expression should look like the following:



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. Then click **OK**. This returns you to the **Filters** window. Click **OK** again.
2. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088). The filter for **Rank** is being applied to the data *after* the aggregation:



Close the **Cognos Viewer** window.

1. In the Save As **Name** box, type: ***your initials* Summary Filter.** Click **Save**.

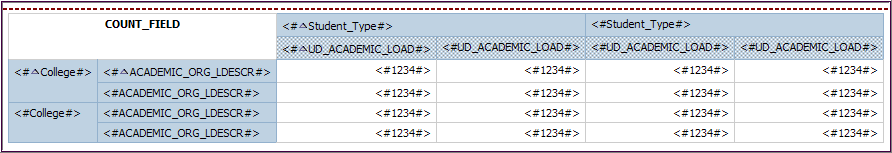
End of Exercise

# Filter Crosstabs

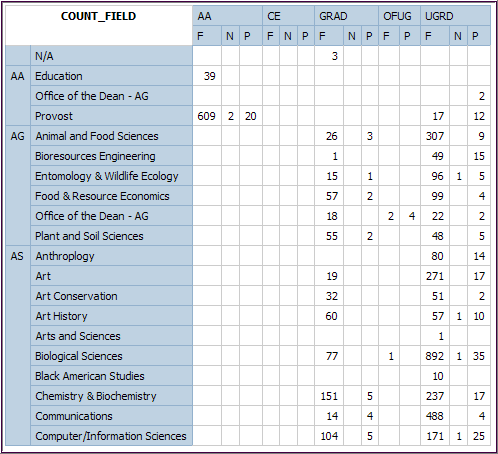
You can filter crosstab reports using all the methods we have discussed for filtering list reports. In the following exercise, you will create a crosstab report and filter it in several ways to see subsets of the data you are using.

Exercise 15—Filter a Crosstab Report

1. On the **Report Studio** window toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **Crosstab** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training Extract** item by clicking on the plus sign.
4. Click **Student\_Type** and drag the selection to the **Columns** section of the work area. When you see the **Columns** area flash black, release the mouse button.
5. Click the *title* of the **Student\_Type** column and click the Sort sortbut button. Select **Sort Ascending** from the Sort menu.
6. Click **College** and drag the selection to the **Rows** section of the work area. When you see the **Rows** area flash black, release the mouse button.
7. Click the *title* of the **College** row and click the Sort sortbut button. Select **Sort Ascending** from the Sort menu.
8. Click **COUNT-FIELD** (in the **Statistics** folder) and drag the selection to the **Measures** section of the work area. When you see the **Measures** area flash black, release the mouse button.
9. Click **ACADEMIC\_ORG\_LDESCR (i**n the **Descriptions** folder) and drag the selection to the right of **College** in the **Rows** section of the work area. When you see the bold black bar, release the mouse button.
10. Click the *title* of the **ACADEMIC\_ORG\_LDESCR** row and click the Sort sortbut button. Select **Sort Ascending** from the Sort menu.
11. Under the **UDSIS Training Extract** item, click **UD\_ACADEMIC\_LOAD** and drag the selection under the **Student\_Type** item in the **Columns** section of the work area. When you see the bold black bar, release the mouse button.
12. Click the *title* of the **UD\_ACADEMIC\_LOAD** item and click the Sort sortbut button. Select **Sort Ascending** from the Sort menu.  
      
    Your work area should look like the one below:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report to see the data available to you.



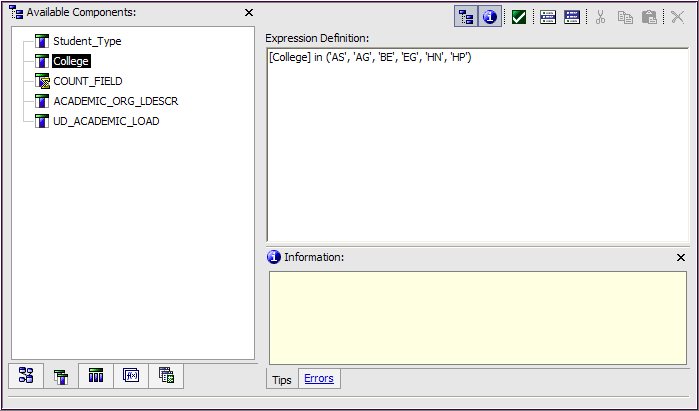
Close the **Cognos Viewer** window.

►Suppose you want to filter your report to see only data for students in specific colleges. To do this:

1. Click the *title* of the **COUNT\_FIELD** column and, on the toolbar, click the **Filters** filter button. In the **Filters** window, click the **Add**  button and create the following filter (See Hint on page 56.):

**[COLLEGE] in (‘AS’,'AG',’BE','EG','HN','HP')**

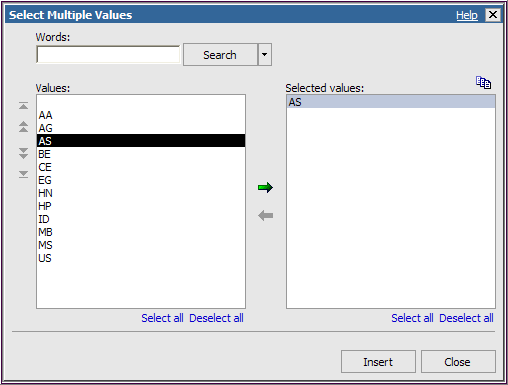
**Note**: Each item within the parentheses must be enclosed in single quotes, and items are separated by commas. Also, there can be no spaces between items in parentheses.



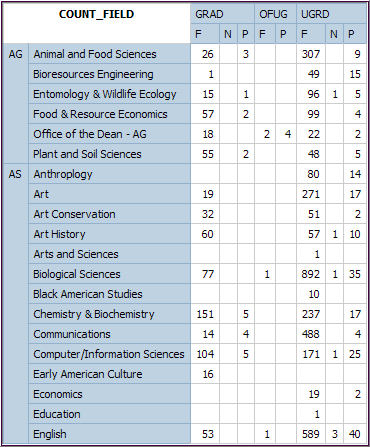
See: HINT on next page about using **Select Multiple Values** button to build this expression.

**HINT:** If you don't know the values for **College** (or any other data item), use the **Select Multiple Values** selectmultiplevalues button:

* After you double-click **College**, type **=**
* Click the **Select Multiple Values** selectmultiplevalues button (near the **Validate** button).
* You may be prompted to enter a term (Term = 2088).
* You will see the **Select Multiple Values** box.
* Double-click each Value to add it to the Selected Values box.
* When you are done adding values, click the **Insert** button to add them to your expression.



1. Click the **Validate** validfilter button then click **OK**. This returns you to the **Filters** window. Click **OK** again and then run the report.
2. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088). You should see a report like the one below:

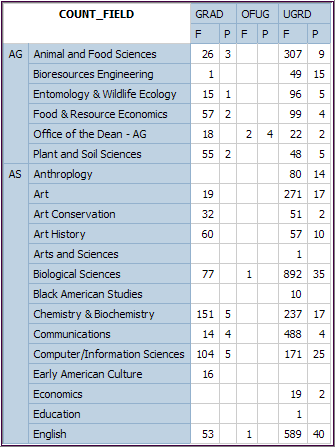


**Page down** to see all of the data.

Close the **Cognos Viewer** window.

► Suppose you want to show data for only full and part-time students. You can add a filter to do this:

1. Click the title of the **COUNT\_FIELD** column and, on the toolbar, click the **Filters** filter button. In the **Filters** window, click the **Add**  button and create the following filter:  
     
   **[UD\_ACADEMIC\_LOAD]**<>**'N'** (This function will only retrieve values that are *not* equal to "N".)
2. Click the **Validate** validfilter button then click **OK**. This returns you to the **Filters** window. Click **OK**.
3. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088).



You should see a report like this one.

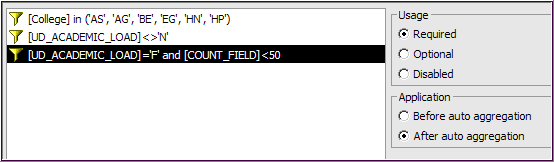
It shows only the items defined in your filter (students with loads *not* equal to none, in other words loads that are full or part time)

**Page down** to see all of the data.

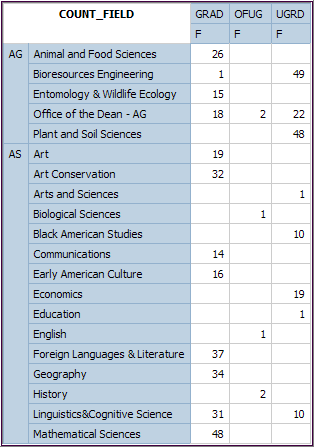
Close the **Cognos Viewer** window.

► Suppose you want to refine your report even more to show only full-time students in programs with fewer than 50 students. You can add a filter to do this:

1. Click the title of the **COUNT\_FIELD** column and, on the toolbar, click the **Filters** filter button.
2. In the **Filters** window, click the **Add**  button and create the following filter:  
     
   **[UD\_ACADEMIC\_LOAD]=’F’ and [COUNT\_FIELD]<50**
3. Click the **Validate** validfilter button then click **OK**. This returns you to the **Filters** window.
4. In the **Filters** window, click **After auto aggregation** and click **OK**.



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088). You should see a report like the one below:



Compare this report to the one on the previous page.

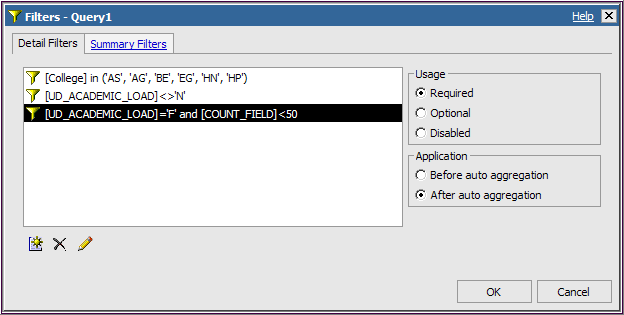
Notice the difference in the numbers of full-time students, where programs with more than 50 students have been removed from the report.

Close the **Cognos Viewer** window.

1. In the Save As **Name** box, type ***your initials* Crosstab Filter**. Click **Save**.

**Recap about the filters used in this report:**

* The first two were run before auto aggregation, and the third was run after auto aggregation.
* In the third filter, the expression used the “and” operator to combine the filters to create one filter.
* You can include multiple filters (both before and after aggregation) in any report.



End of Exercise

# Prompts

You can give people who will be running your report the ability to customize the information by adding prompts. Prompts have 3 elements:

* **Parameters**—the choices you give people
* **Prompt controls**—the prompt page where people make their choices. In Report Studio, people do this in the **Cognos Viewer** window.
* **Parameter values**—the results of the choices people make.

In Report Studio, you can build prompts in a couple of ways.

1. The simplest way is to have Report Studio build the prompt for you. Anytime you add a particular parameter to a Report Studio filter, it will prompt the user for information.
2. Report Studio also offers a **Build Prompt Page** tool that creates a default prompt page based on the report items you select. You can customize this report or create your own custom prompt pages.

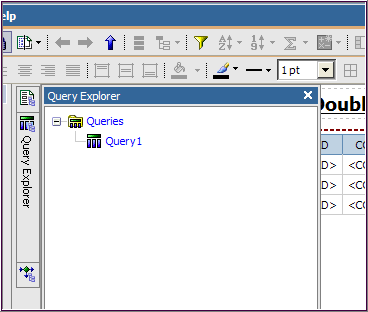
In the following exercise, you will create a report that shows the number of full-time equivalent students for a term. And you will then add a prompt that allows users to select specific a Campus (the first method).

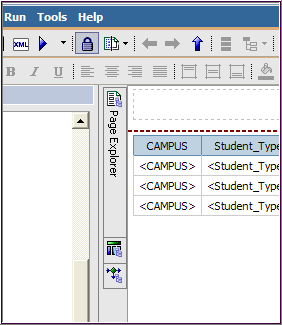
Exercise 16—Add a Prompt

1. On the **Report Studio** window toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item; add the following fields to the work area:
   * **CAMPUS**
   * **Student\_Type**
   * **UD\_ACADEMIC\_LOAD**
   * **COUNT\_FIELD** (in the **Statistics** folder)

Next, you will add a calculation to your report to find out the number of full-time equivalent majors.

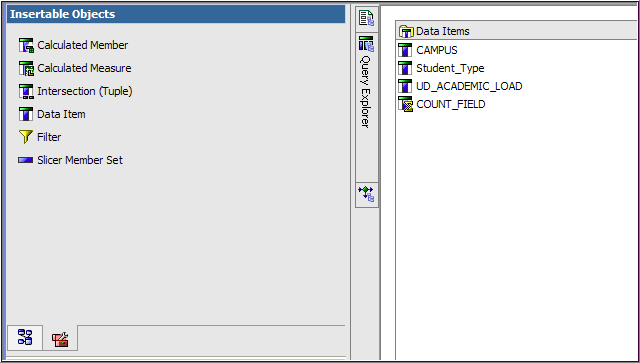
1. Use the **Query Explorer** **bar** to create two new data items. Then you will create a data item named "LOAD" which will narrow the **Student\_Type** choices to full or part-time
   1. In the *center* of the **Report Studio** window, move the mouse pointer over the **Query Explorer** icon to open it, and click Query **Query1**.





Query Explorer

1. In the Insertable Objects pane, click the **Toolbox**   tab.
2. Drag data-item **Data Item** to **Data Items** pane.
3. This brings up the **Data Item Expression** box.

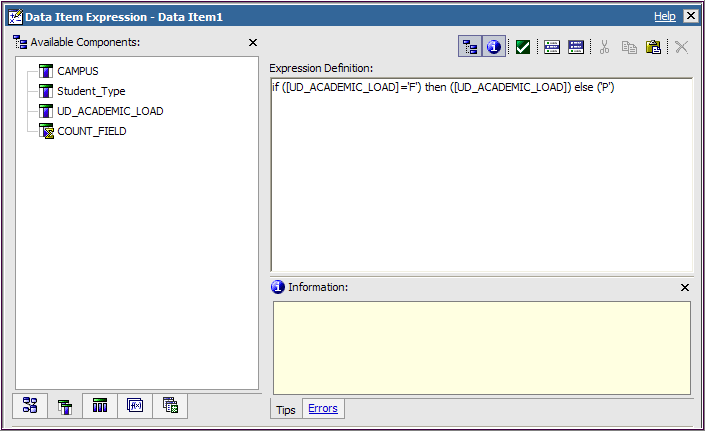


*Drag*

Toolbox

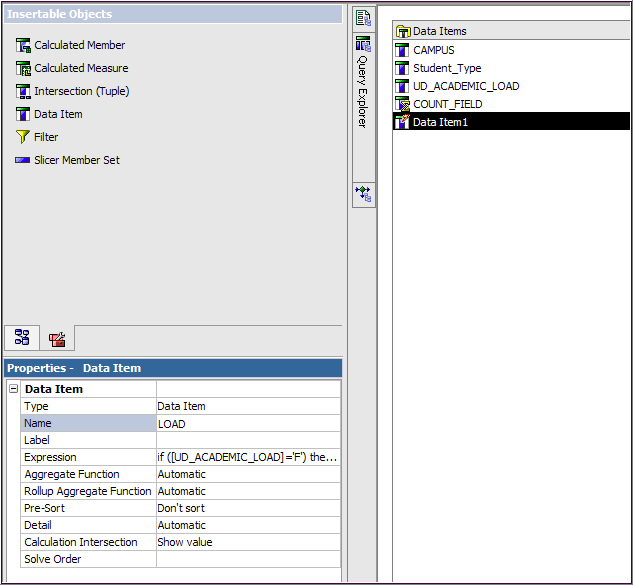
1. This will launch the **Data Item** **Expression** window**.** In the **Expression** **Definition** pane, drag items from the **Data Items** tab and type other elements to create the following definition:   
     
   **if([UD\_ACADEMIC\_LOAD]='F')then([UD\_ACADEMIC\_LOAD])else('P')**

**Note:** Parentheses are very important in” if-then-else” statements. Be careful not to exclude them or put them in the wrong spot.



Data Items

1. Click the **Validate** validfilter button. If you get “No errors,” click **OK**.
2. With **Data Item 1** highlighted in the **Data Items** pane:
3. Click **Name** in the **Properties** pane
4. Type **LOAD** in the box (replacing the words “Data Item 1”)
5. Press the ENTER key.

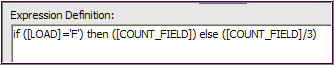


This name will also change to LOAD.

Note: The **LOAD** item you added is part of your query but will not be an item in the report itself.

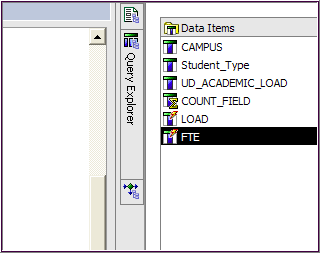
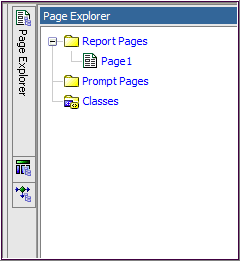
Next, you will add a data item for full-time equivalent majors that you will name **FTE**.

1. In the Insertable Objects pane (Hint: see step 5 above):
2. Click the **Toolbox** toolboxicon tab.
3. Drag data-item **Data Item** to **Data Items** pane.
4. This brings up the **Data Item Expression** box.
5. In the **Expression Definition** pane, drag items from the **Data Items** tab and type other statements to create the following definition:   
     
   **if ([LOAD]='F') then ([COUNT\_FIELD]) else ([COUNT\_FIELD]/3)**



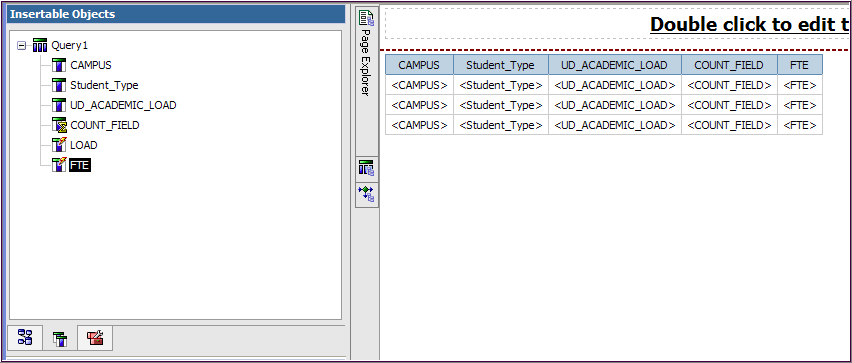
This expression will count each full-time (F) student as 1 FTE and all other students (part-time) as 1/3 of an FTE.

1. Click the **Validate** validfilter button. If you get “No errors,” click **OK**.
2. With **Data Item 1** highlighted in the **Data Items** pane:
3. Click **Name** in the **Properties** pane.
4. Type **FTE** in the box (replacing the words “Data Item 1”) .
5. Press the ENTER key.
6. In the center of the **Report Studio** window, move the mouse pointer over the **Page Explorer** bar to open it. Click page-explorer **Page 1** to return to your report work area.

Page Explorer

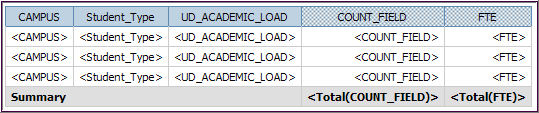
1. In Insertable Objects, click the **Data Items** tab dataicon
2. Double-click **FTE** to add it to your report



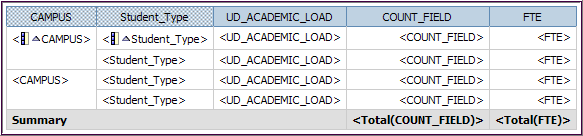
Data Items tab

1. Add a summary for the totals of all students and of FTEs:   
   1. Select the **COUNT\_FIELD** and **FTE** columns (Click with the SHIFT key to select both).
   2. On the toolbar, click the **Aggregate**  button’s down-arrow.
   3. Click **Total**.

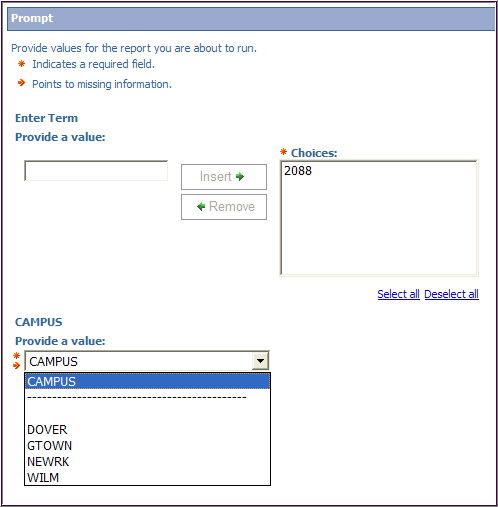
Your work area should look like this one:



**The following three steps** (17 through 19) simply provide some order to your report by sorting and grouping (to remove duplicate values).

1. Click the *title* of the **CAMPUS** column and click the Sort sortbut button. Select **Sort Ascending**.
2. Click the *title* of the **Student\_Type** column and click the Sort sortbut button. Select **Sort Ascending**.
3. Click the *titles* of the **CAMPUS** and **Student\_Type** columns then click the **Group/Ungroup** grpbut button to remove duplicate values. Your work area should look like this one:  
     
     
     
   You will also create some filters so that the report will show the data you want.
4. Click the *title* of the **COUNT\_FIELD** column and click the **Filters** filter button.
5. In the **Filters** window, click the **Add ** button.
6. Create a prompt that requires the viewer of the report to select a campus from a drop-down list.
7. Under the **Available Components** pane, click the **Data Items** dataicon icon.
8. Double-click **CAMPUS**.



1. [CAMPUS] will now appear in the Expression Definition pane.
2. Click just after **[CAMPUS]** and type: **=?Enter Campus?**
3. Click the **Validate** validfilter button
4. Follow the prompts to ensure that there are “No errors” in the expression.

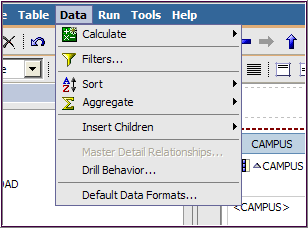
Click **OK**. This returns you to the **Filters** window.

Notice the 2nd prompt for **CAMPUS.** You created this expression in step 22 above.

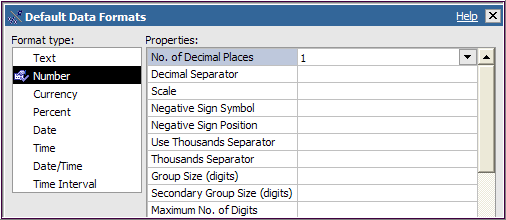
1. In the Filters window, click the **Add**  button and use your knowledge of filters to create the following filter for your report. (For detailed instructions go to page 53, steps 31-34.)  
     
   **[SA\_DW].[UDSIS Training Extract].[LEAVE\_OF\_ABSENCE\_FLAG]='N' and [SA\_DW].[UDSIS Training Extract].[ACTIVE\_STUDENT\_FLAG]='Y'**
2. Click **Add**  button again and create this filter:

**[UD\_ACADMEIC\_LOAD]<>'N'**

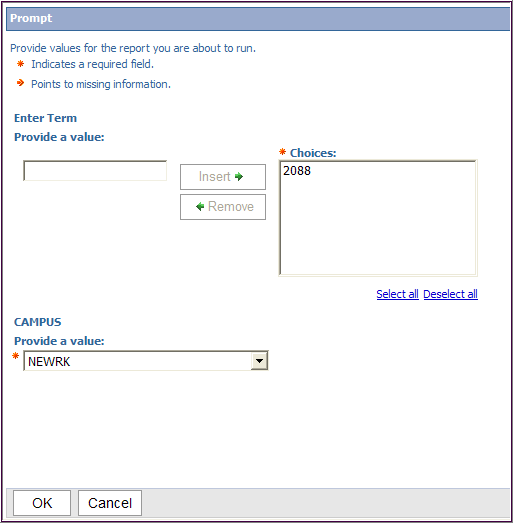
1. Click the **Validate** validfilter button. If you get “No errors,” click **OK** and **OK** again.
2. Change the format of the **FTE** item so that it shows only one decimal point:  
   1. Click the *title* of the **FTE** column
   2. From the **Data** menu, select **Default Data Formats**



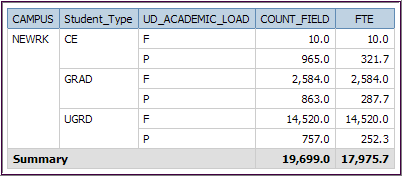
* 1. In the **Default Data Formats** box, click **Number** and click **No. of Decimal Places**
  2. From the drop-down menu, select **1** and click **OK**.



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report.
2. Choose a term and a campus from the **Prompt** page. (Term = 2088 and Campus = NEWRK)



1. Your report should look similar to the one below.



Notice the COUNT\_FIELD is divided by 3 to calculate the **FTE for *part-time*** **students (P)**.

(The expression in item 10 on page 60 created this calculation.)

1. Close the Cognos Viewer window.
2. On the Report Studio **File** menu, click **Save As.**
3. In the Save As **Name** box, type ***your initials* Add a Prompt.** Click **Save**.

End of Exercise

The previous exercise demonstrated the simplest form of a Report Studio **prompt**—adding a filter with a parameter. This will automatically generate a prompt page in the **Cognos Viewer**.

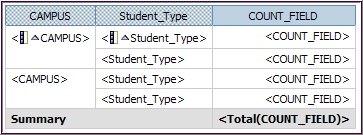


In the next exercise, you will use the “Build Prompt Page” tool to create a more complex prompt. Once again, Report Studio will build the prompt for you. The report will show the total number of students on specific campuses.

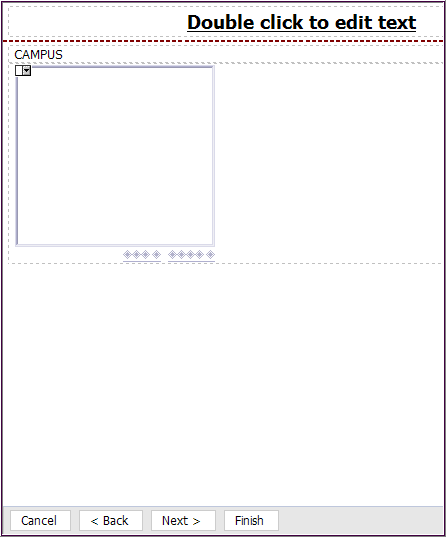
Exercise 17—Use the “Build Prompt Page” tool

1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item and add the following fields to the work area:  
   * **CAMPUS**
   * **Student\_Type**
   * **COUNT\_FIELD** (in the **Statistics** folder)
4. Add a line for the total of all students.
5. Click the *title* of the **COUNT\_FIELD** item.
6. On the toolbar, click the **Aggregate**  button’s down-arrow
7. Click **Total**.
8. Click the *title* of the **CAMPUS** column and click the Sort sortbut button. Select **Sort Ascending**.
9. Click the *title* of the **Student\_Type** column and click the Sort sortbut button. Select **Sort Ascending**.
10. Remove duplicate values:
11. Click the *title* of the **CAMPUS** item, hold down the SHIFT key and click the *title* of the **Student\_Type** column.
12. Click the **Group/Ungroup**  button on the toolbar

Your work area should look like this:

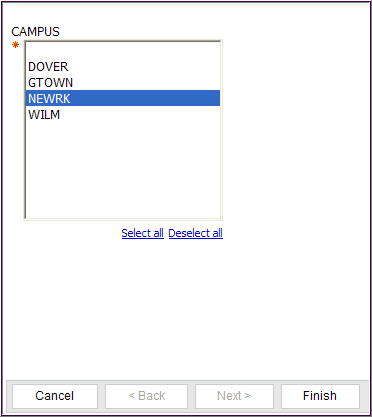


Next you will add filters to the report:

1. Click the *title* of the **COUNT\_FIELD** column and click the **Filters** filter button.
2. In the **Filters** window, click the **Add**  button.
3. Use your knowledge of creating filters to add the following filters to your report (For detailed instructions go to page 53, steps 31-34.):  
     
   **[SA\_DW].[UDSIS Training Extract].[LEAVE\_OF\_ABSENCE\_FLAG]='N' and [SA\_DW].[UDSIS Training Extract].[ACTIVE\_STUDENT\_FLAG]='Y'**
4. In the **Report Studio** window, click the *title* of the **CAMPUS** column.  
   * Click the **Build Prompt Page** bldprmtpg button. (It’s in the upper right of the toolbar.)
   * Based on the report item you selected, **Report Studio** builds a prompt page.
   * Yours should look like the one below:  
       
     

The prompt page includes buttons at the bottom (**Cancel**, **Back**, **Next**, **Finish**) that your users will click after they select values for their reports.

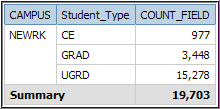
1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088)
2. Another prompt window appears that looks like the one below:



Click on **NEWRK** to select it.

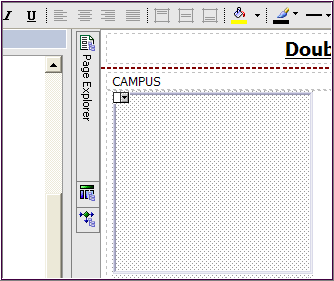
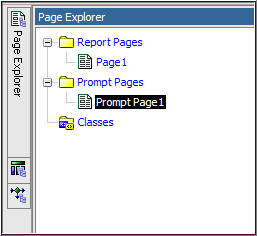
Click **Finish**.

The report will show the number of students on the Newark campus for the term 2088:



Close the **Cognos Viewer** window.

*(Run the report to see results for other campuses if you like.)*

1. In the **Report Studio** window, the **Prompt Page** should still be showing.
2. Click inside the **Campus** prompt box.
3. The **Properties** pane shows the properties available for customizing the **Campus** prompt.
4. Click the **Page Explorer** bar. You will see a panel with the structure of your report:  
     
      
     
   Note that it contains folders for **Report Pages** and **Prompt Pages**. You can move from page to page within the **Page Explorer**.

**Page 1** is where you will find the work area with your data items.

1. Click **Page 1** under **Report Pages**.
2. Click the **Filters** button on the toolbar. You will see the filter **Report Studio** has created for the prompt. Click **OK** to close the **Filters** window.
3. On the **Report Studio** window **File** menu, click **Save As**.
4. In the Save As **Name** box, type ***your initials* Build Prompt Page**. Click **Save**.

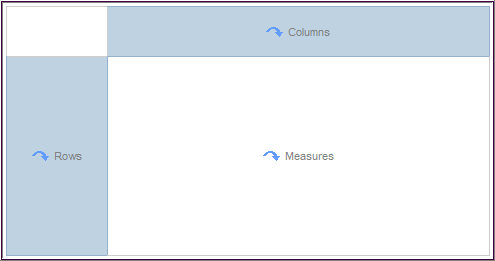
End of Exercise

# Cascading Prompts

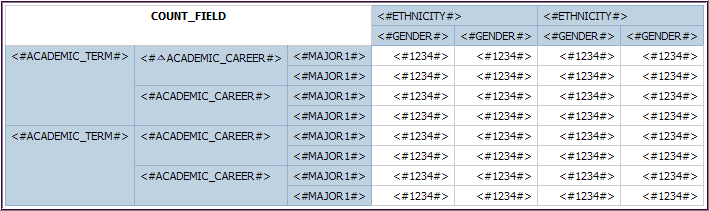
When you create a Cascading Prompt, your report uses values from a previous prompt to filter values in a succeeding prompt.

For example, if your report contains a cascading prompt for **ETHNICITY** and **GENDER**, when you select an item in the **ETHNICITY** prompt box, the selections for gender will appear in the next (**GENDER**) box.   
  
In the next exercise, you will create a cascading prompt for **ETHNICITY** and **GENDER**. Your report will show a head count for a particular ethnicity and gender in each major in the term you choose.

Exercise 18—Build a Cascading Prompt

1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report. If you are asked if you want to save the previous report, click **Yes**.
2. In the **New** box, select **Crosstab crosstabicon** and click **OK**. You will see a window work area like the one below:  
     
   
3. On the **Source** tab, expand the **UDSIS Training Extract** item and add the following fields to the work area:
   * **ETHNICITY** (in the **Demographics** folder)—drag to the **Columns** area.
   * **ACADEMIC\_TERM**—drag to the **Rows** area.
   * **COUNT\_FIELD** (in the **Statistics** folder) —drag to the **Measures** area.
   * **ACADEMIC\_CAREER**—drag to the **Rows** area to the *right* of ACADEMIC\_TERM.
     + Hint—when you see the vertical bold black line, release the mouse.
   * **MAJOR1** (in the **Program** folder) —drag to the **Rows** area to the *right* of ACADEMIC\_CAREER.
     + Hint—when you see the short vertical bold black line, release the mouse.
   * **GENDER** (in the **Demographics** folder) —drag to the **Columns** area *under* ETHNICITY.
     + Hint—when you see the horizontal bold black line, release the mouse.
4. Click the **Title** of the **ACADEMIC\_CAREER** row and click the Sort sortbut button. Select **Sort Ascending**.

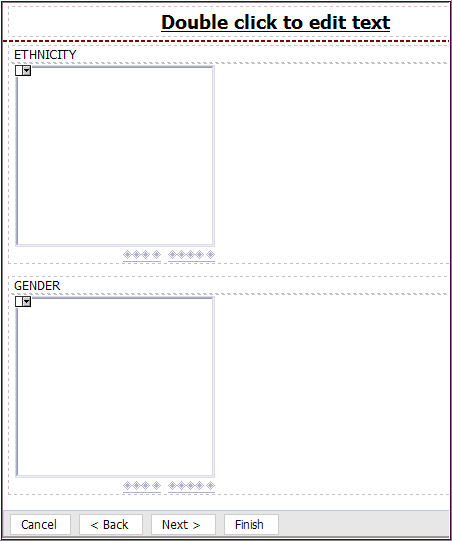
Your work area should look like this one:



1. Use your knowledge of creating filters to add the following filters to your report. (For detailed instructions go to page 53, steps 31-34.)  
     
   **[SA\_DW].[UDSIS Training Extract].[LEAVE\_OF\_ABSENCE\_FLAG]='N' and [SA\_DW].[UDSIS Training Extract].[ACTIVE\_STUDENT\_FLAG]='Y'**  
   [**SA\_DW].[UDSIS Training Extract].[INTERNATIONAL\_STUDENT\_FLAG]='N'**  
    (The INTERNATIONAL\_STUDENT\_FLAG item can be found under **Demographics**.)

**Hint:** You can copy & paste expressions from other places into your filters, such as from other Cognos reports or from a Word document. You could keep a Word document with your frequently-used expressions to save time and avoid keying errors. Note that every Cognos package will need to have its own set of expressions.

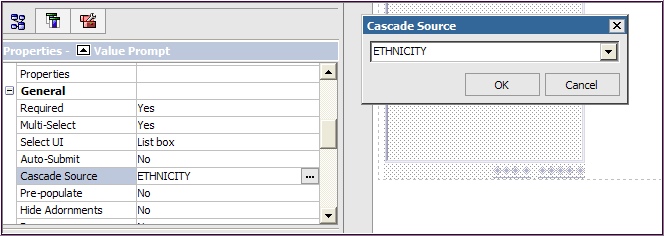
1. Change the **COUNT\_FIELD** label to something more meaningful.  
   A. Click the **COUNT\_FIELD** *title*.  
   B. In the **Properties** pane under **Data Item**, click in the box next to **Label** and type   
   **Unduplicated Head Count**.   
   C. Press **ENTER** key to change the title.
2. In the **Report Studio** window, click the **ETHNICITY** column. Hold down the CTRL key and click the **GENDER** column.
3. On the toolbar, click the **Build Prompt Page** bldprmtpg button.



Based on the report items you selected, **Report Studio** will build a prompt page that looks like the one below:

This time, the prompt page contains two text boxes, based on the items you selected. You will next create the cascading prompt.

1. Starting at the bottom of the prompt page, click inside the **GENDER** prompt box.
2. In the **Properties** pane, under **General**, click **Cascade Source**.
3. Click the **Ellipsis**  button and, in the **Cascade Source** box that appears, use the pull-down arrow to select **ETHNICITY**. Click **OK**.



1. Next, click inside the **ETHNICITY** prompt box.
2. In the **Properties** pane, under **General**, click **Cascade Source**.
3. Click the **Ellipsis ** button and, in the **Cascade Source** box that appears, use the pull-down arrow to select **Enter term**. Click **OK**.
4. Because there are two ways to treat cascading prompt reports, you will now save the report you have created as two separate files so that you can try each way:
5. Click the **Save** button, in the Save As **Name** box, type ***your initials* Cascading Prompt Multiple**. Click **Save**.
6. Click the **Save** button, in the Save As **Name** box, type ***your initials* Cascading Prompt Single**. Click **Save**.

End of Exercise

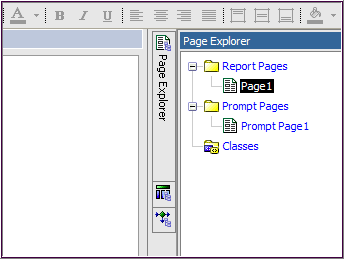
**Note**: When you create a cascading prompt report, you will be using either a single-value or a multiple-value cascading prompt. You will combine the steps in exercises 18 and 19 (single-value prompt) or exercises 18 and 20 (multiple-value prompt) to produce the report. The steps are separated here. By using the same report items for each exercise; you can compare the two types of cascading reports.

In the following exercise, you will change the properties in your **Cascading Prompt Single** reportso that the user can get information for one ethnicity at a time. This report should still be open on your screen.

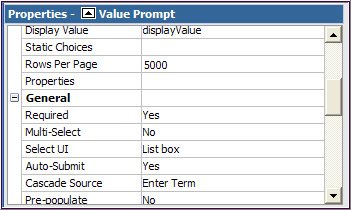
Exercise 19—Create a Single-Value Cascading Prompt

Open the report, ***your initials* Cascading Prompt Single,** if it is not already open. (On the toolbar, click  and go to My Folders.)

1. If the Prompt page is not open, click the **Page Explorer** and then **Prompt Page 1**



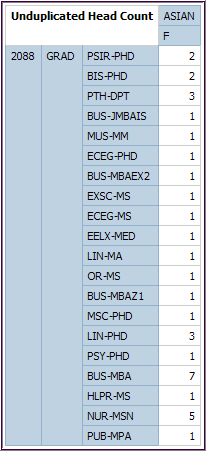
1. Click inside the **Ethnicity** prompt box.



4. In the **Properties** pane, under **General**:

* 1. Click **Multi-Select**
  2. Select **No**
  3. Click **Auto-Submit**
  4. Select **Yes**.  
       
     1. Next click inside the **Gender** prompt box.
     2. In the **Properties** pane, under **General** (see step 4 above):
  5. Click **Multi-Select** then, using the pull-down arrow, select **No**.
  6. Click **Auto-Submit** then, using the pull-down arrow, select **Yes**.

1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088)
2. After the **Term** prompt window, you will get another prompt window.  
   1. You only see values in the **ETHNICITY** prompt box.
   2. Select **ASIAN** for Ethnicity
   3. When you click an ethnicity, choices appear in the **GENDER**. This is the cascading nature of the prompt.
   4. Select **F** for Gender
3. Click the **Finish** button. Your report will look like the one below



This report shows the headcounts for female Asian students.

1. Close the **Cognos Viewer** window.
2. On the Report Studio window toolbar, click the **Save** save button to save the report.

End of Exercise

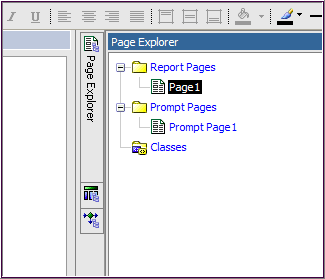
You can also create a cascading prompt that will re-prompt you to select the next set of values once you have selected one set. You will create a **multiple-value** prompt in the following exercise.

Exercise 20—Create a Multiple-Value Cascading Prompt

1. On the **Report Studio** toolbar, click **Open ** andgo to My Folders.
2. In the **Open** box, scroll down and open the ***your initials* Cascading Prompt Multiple** report.

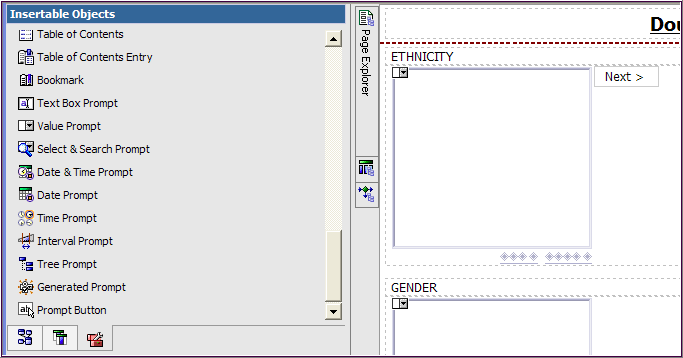
► You will insert a prompt button into your report that will let you move from prompt to prompt.

1. Click the **Page Explorer** tab in the center of the **Report Studio** window.



Click **Prompt Page 1**

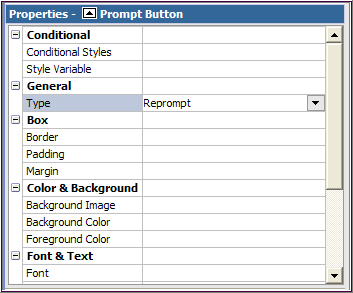
1. In the **Insertable Objects** pane, click the **Toolbox** tab.
2. Scroll down to the *end* and click **Prompt Button prompt button**.
3. Drag the **Prompt Button** to the *right* of the **ETHNICITY** prompt box.



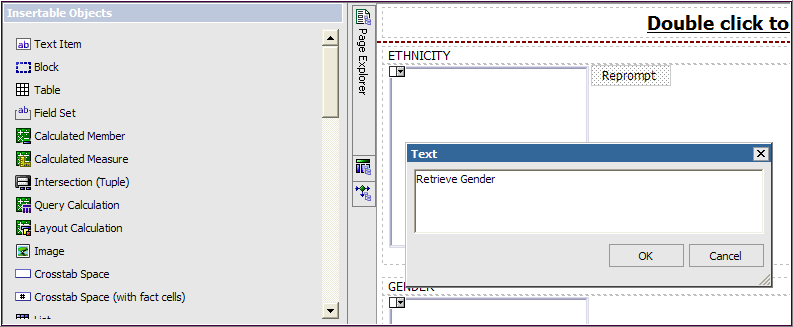
Toolbox tab

This “Next” prompt button will appear.

1. Click the **Prompt Button** that currently says “Next”.
2. Go to the **Properties** pane.
3. Under **General**, click **Type.**
4. Using the pull-down arrow, select **Reprompt**.



1. In the **Toolbox** tab, scroll to the top
2. Drag  *onto* the **Reprompt** button
3. Type **Retrieve Gender** in the **Text** box and click **OK**.

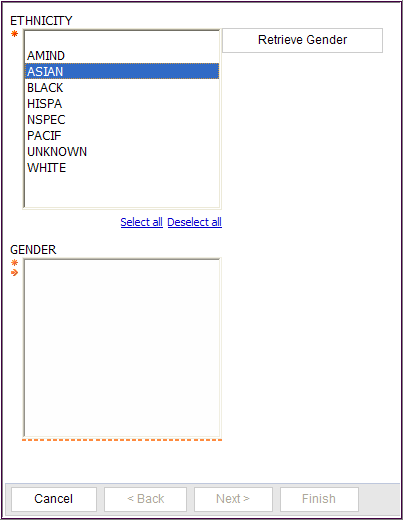
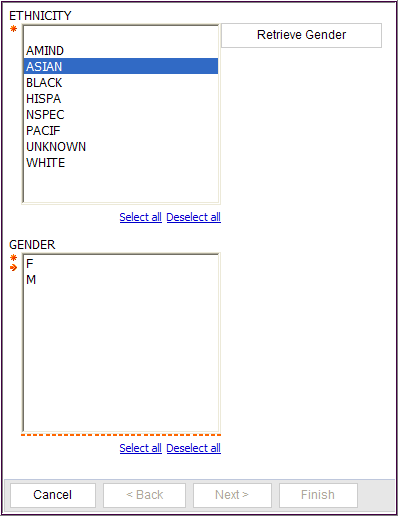


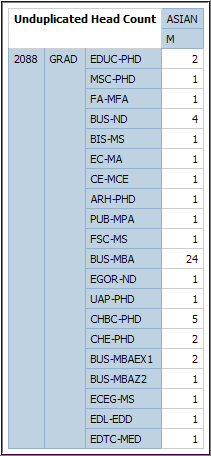
1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088).
2. You will see the **ETHNICITY** and **GENDER** prompt boxes.

(1) Select an Ethnicity or Select all .

(2) Click the **Retrieve Gender** button.   
(3) Gender values will appear in the **GENDER** prompt box, select one Gender or Select all

(4) Click the **Finish** button.



You will see a report that shows the number of students in each major for the term, ethnicity, and gender you have selected.

1. Close the **Cognos Viewer** window.
2. On the **Report Studio** window toolbar, click the **Save** save button to save the report.

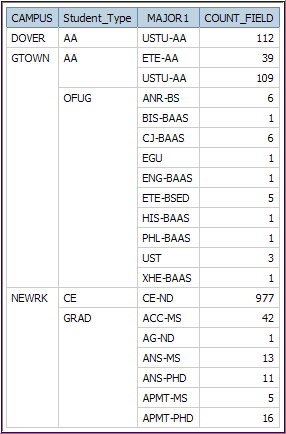
End of Exercise

# Optional Prompts

With an optional prompt, people running your report can choose whether or not to select specific information from prompt boxes you include in a report. The next exercise demonstrates the use of **optional prompts**.

Exercise 21—Add an Optional Prompt

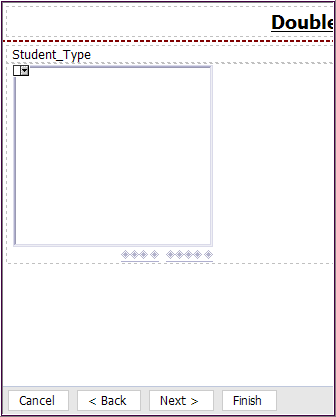
1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and add the following fields to the work area:
   * **CAMPUS**
   * **Student\_Type**
   * **MAJOR1** (in the **Program** folder)
   * **COUNT\_FIELD** (in the **Statistics** folder)
4. Click the ***title*** of the **CAMPUS** column and click the Sort sortbut button. Select **Sort Ascending**.
5. Click the *title* of the **Student\_Type** column and click the Sort sortbut button. Select **Sort Ascending**.
6. Click the *title* of the **MAJOR1** column and click the Sort sortbut button. Select **Sort Ascending**.
7. Remove duplicate values:
8. Click the *title* of the **CAMPUS** item
9. Hold down the SHIFT key and click the *title* of the **Student\_Type** column
10. Click the **Group/Ungroup**  button on the toolbar.
11. Use your knowledge of creating filters to add the following filter to your report. (For detailed instructions go to page 53, steps 31-34.)  
      
    **[SA\_DW].[UDSIS Training Extract].[LEAVE\_OF\_ABSENCE\_FLAG]='N' and [SA\_DW].[UDSIS Training Extract].[ACTIVE\_STUDENT\_FLAG]='Y'**
12. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088) to see the data available.



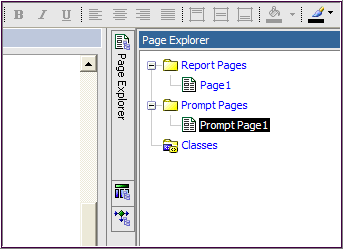
Close the **Cognos Viewer** window.

►You can add a prompt to see data for only certain student types.

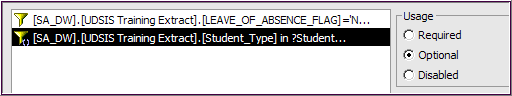
1. In the **Report Studio** window:
2. Click the *title* of the **Student\_Type** column
3. On the toolbar, click the **Build Prompt Page** bldprmtpg button.
4. Based on the item you select, **Report Studio** will build a prompt page like this:

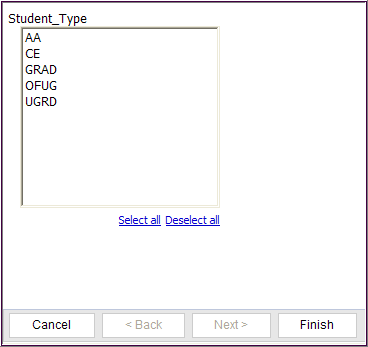


1. Go back to the work area:
2. Click the **Page Explorer** tab in the center of the **Report Studio** window.
3. Under **Report Pages**, click **Page 1** to open the report page.

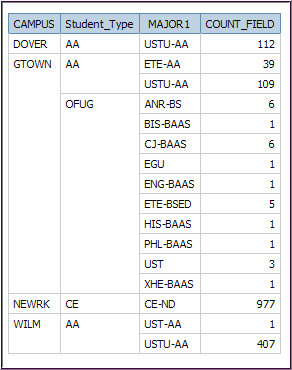


1. On the toolbar, click the **Filters** button and select the filter **Report Studio** has created for **Student\_Type**.
2. In the **Filters** window **Usage** box, click **Optional,** and then click **OK**.



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088)
2. The **Cognos Viewer** shows a prompt box that looks like the one below:  
     
    
3. Choose the student type or types you want your report to show:
4. Select one by clicking it
5. Select multiple values by holding down the CTRL key and clicking your choices
6. Select all values by clicking Select all
7. For this example, **AA**, **CE** and **OFUG** were selected.

1. Click **Finish** to run the report.



Close the **Cognos Viewer** window.

1. On the **Report Studio** window **File** menu, click **Save As**.
2. In the Save As **Name** box, type ***your initials* Optional Prompt.** Click **Save**.

End of Exercise

**Drill Through Reports**

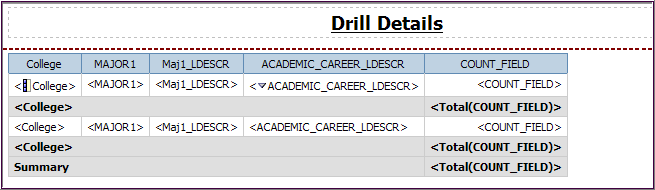
Report Studio allows you to drill through from one report to another report than contains related information. To create a drill through you must have a parent report and a target (child) report. In the target report, you create a filter with a parameter that relates to a column in the parent report. You must create the target report first.

In the next two exercises you will create a target report with detailed data concerning the number of students (full- or part-time) in each college and their majors. In the second (parent) report you will create a report with high level data about headcounts of students in each college. The drill-through you create in the parent report will allow you to see the related information about the number of majors in each college.

Exercise 22—Create a Target Report

1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and add the following fields to the work area:
   * **College**
   * **MAJOR1** (in the **Program** folder)
   * **Maj1\_LDESCR** (in the **Descriptions** folder)
   * **ACADEMIC\_CAREER\_LDESCR** (in the **Descriptions** folder)
   * **COUNT\_FIELD** (in the **Statistics** folder)
4. Click the ***title*** of the **College** column and click the Group/Ungroup  button on the toolbar
5. Click the *title* of the **ACADEMIC\_ CAREER \_LDESCR** column and click the **Sort** sortbut button. Select **Sort Descending**.
6. Add a line for the total of students in each major:
7. Click the *title* of the **COUNT\_FIELD** item
8. On the toolbar, click the **Aggregate**  button’s down-arrow and select **Total**
9. Give the report a title:
   * Double click the words **Double click to edit text**
   * In the text box, type: **Drill Details** andclick **OK**

Your work area should look like this:

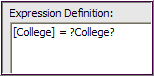


Next you will create a filter with a parameter to make this report the target for another report.

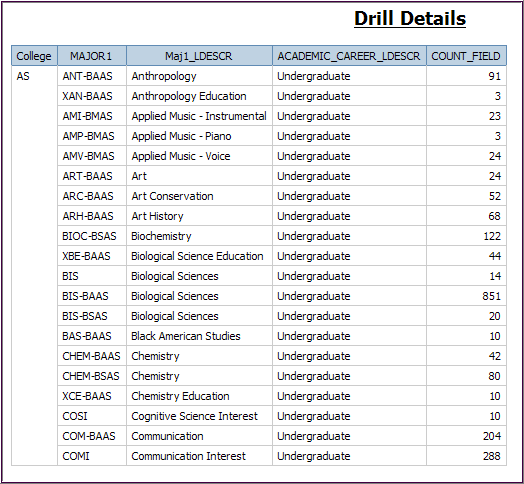
1. On the toolbar, click the **Filters** filter button.
2. In the **Filters** window, click the **Add**  button.
3. Click the **Available Components** tab, and double-click **College**
4. In the **Expression Definition** pane, following [College] type:

**= ?College?**

1. Your expression should look like the one below.



1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression.
2. Prompt page will appear. Term = 2088 and choose any college from the drop-down list
3. Click **OK**.
4. If there are no errors, click **OK** twice.
5. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088 and College = AS). The first page should look like this:



1. Close the **Cognos Viewer** window.
2. In the Save As **Name** box, type: ***your initials* Drill Target.** Click **Save**.

End of Exercise

Next, you will create a parent report with a drill through. The parent report will provide a column (College) that will drill through to the target report you just created.

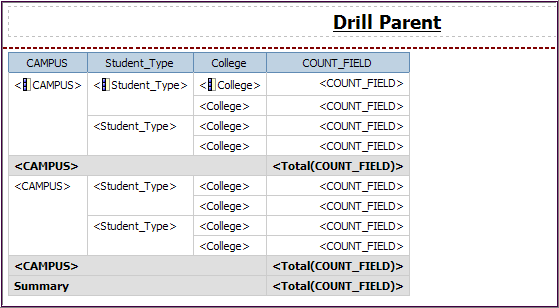
Exercise 23—Create a Parent Report with a Drill Through

1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and add the following fields to the work area:

* **CAMPUS**
* **Student\_Type**
* **College**
* **COUNT\_FIELD** (in the **Statistics** folder)

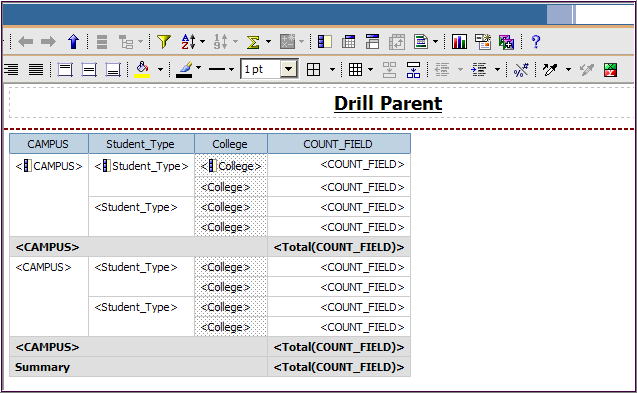
1. To get rid of duplicate values:
2. Click the *title* of the **CAMPUS** item
3. Hold down the SHIFT key and click the *titles* of the **Student\_Type** and **College** items.
4. Click the **Group/Ungroup**  button on the toolbar to group the items.
5. To get totals by campus and all students:
   1. Click the *title* of the **COUNT\_FIELD** column
   2. On the toolbar, click the **Aggregate**  button’s down-arrow and select **Total**
   3. The subtotal by **Student\_Type** is not needed, click **<Student\_Type>** in the body of the work area to select it and then click **Delete**
6. Give the report a title:
7. Double click the words **Double click to edit text**
8. In the text box, type: **Drill Parent** andclick **OK**

Your work area should look like this:

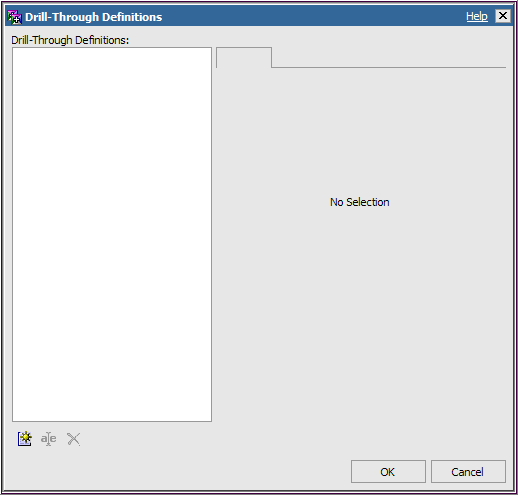


Next, you will use the **College** column as the drill through to get to the target report.

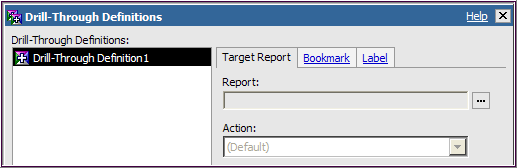
1. Click on the *column body* of the **College** item. It will be highlighted like this:



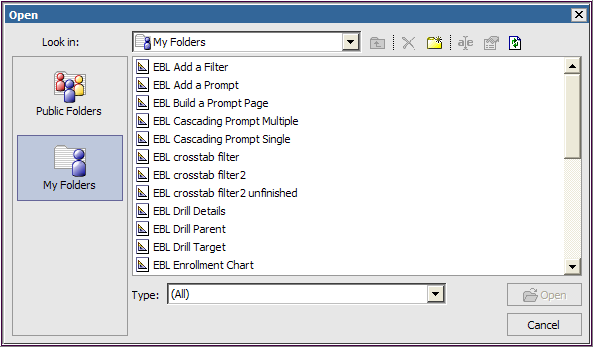
1. On the toolbar, click the **Drill-Through Definitions ** button
2. This opens the **Drill-Through Definitions** window. Click the **Add ** button.



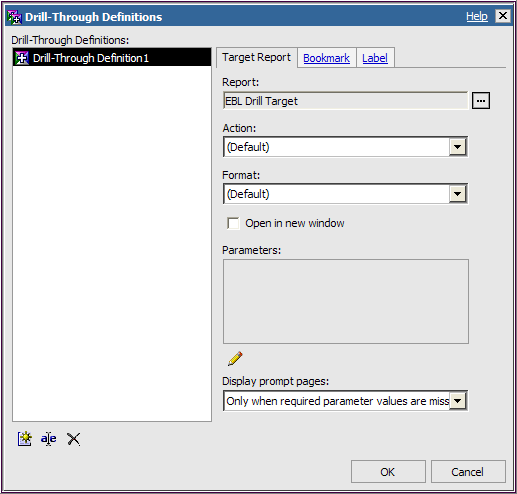
1. Click the **Ellipsis**  button next to the **Report** box.



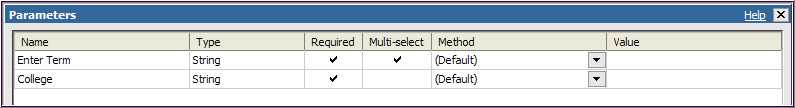
1. Navigate to the place you saved the target report and double-click on it. (It should be named: ***your initials* Drill Target**)



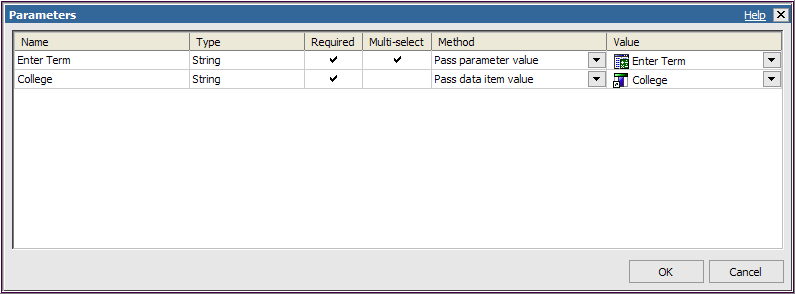
1. Under the **Parameters** box, click the **Edit**  button



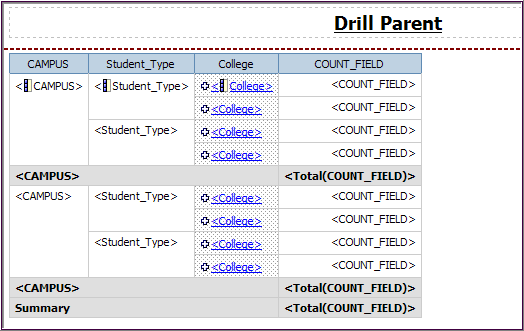
1. Report Studio displays the two parameters from the target report; one you created (College) and one that was embedded with the package data (Academic Term):



1. For the **Enter Term** parameter:
   1. Change Method to **Pass parameter value**
   2. Change Value to **Enter Term**
2. For the College parameter:
   1. Change Method to **Pass data item value**
   2. Change Value to **College**
3. Your parameters should look like the ones below. Click **OK**



1. Click **OK** again.
2. Your work area should look like this:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088).

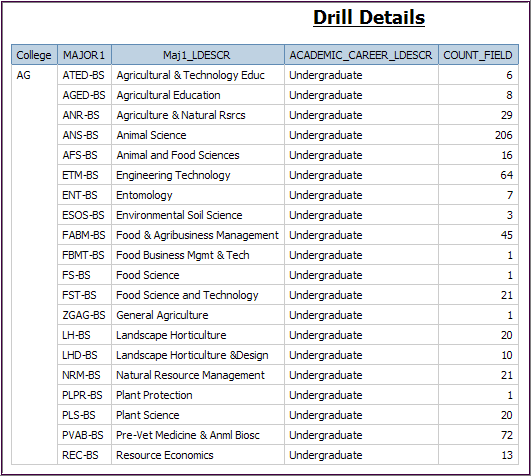


• Notice the values in the **College** column are all drill through links

• Click on one of the links to see what happens.

• In this example, click on **AG** in NEWRK, UGRAD.

• You now can see the related data from the target report.



* 1. Use your browser’s **Back** button to go back to the original report to drill through to another college.
  2. Close the **Cognos Viewer** window.
  3. Click the **Save** button, in **Name** box, type: ***your initials* Drill Parent.**

End of Exercise

**Report Layouts**

Report Studio allows you to lay out your own reports using one or any combination of report formats (list, chart, crosstab, etc.) that Cognos offers. You begin with a blank report and build the components based on your reporting requirements. First, you will set up a layout and then add the report components and formats that best suit your data.

The report has three components:

* + Page Header  
    The page header is optional. It contains information, such as a title or logo, which you want to appear at the top of every page of your report.
  + Page Body  
    The page body is required. It contains the data derived from your queries.
  + Page Footer  
    The page footer is optional. It contains information, such as the page number or date, which you want to appear at the bottom of every page of your report.

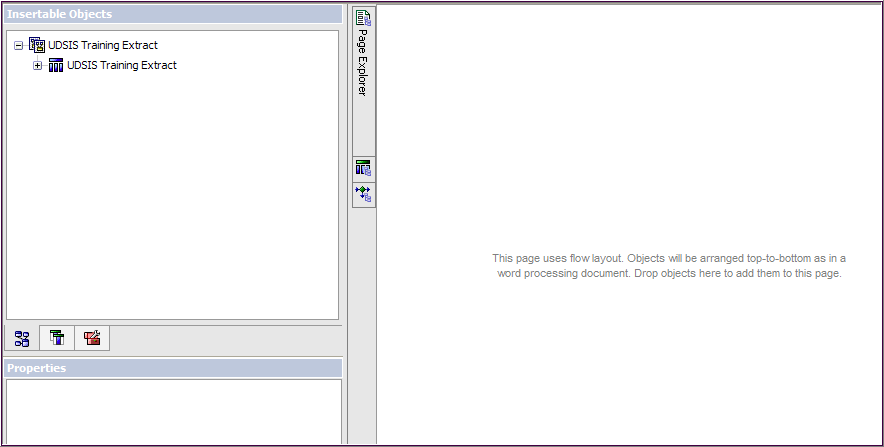
You will design your report using tables, much as you would in Word or a web page development package. Report Studio offers many table features you are familiar with such as including text, changing text characteristics (color, font, font size, etc.), changing background color, adding images, nesting objects and more.

In the following exercise, you will become familiar with using Report Studio’s table features to create a report that combines several types of report formats.

Exercise 24—Create a Report Layout

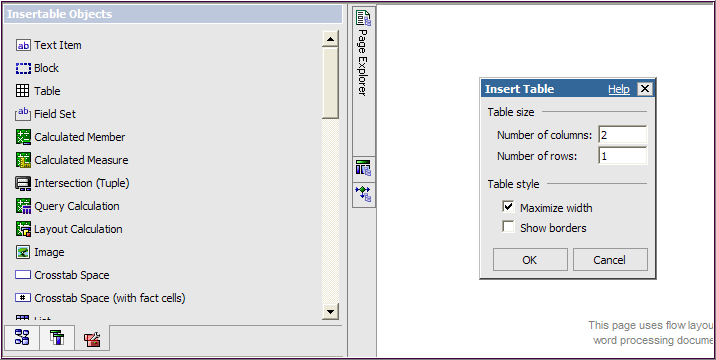
1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **Blank** and click **OK**.

Your blank work area will look like this:

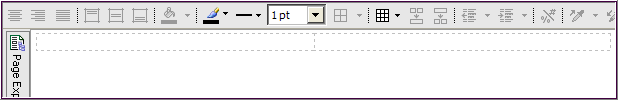




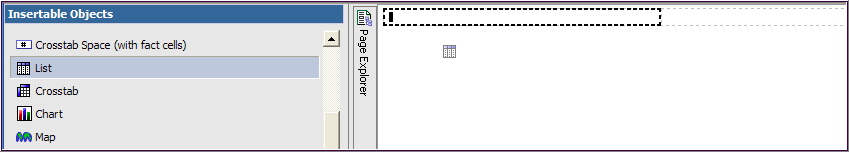
1. Add a table to the work area:
2. Click the **Toolbox** tab in the **Insertable Objects** area.
3. Click the **Table** item and drag it to the work area.
4. The **Insert Table** box will appear, accept the defaults as shown below. Click **OK.**

  
You will see one row with one table with two boxes (table cells) at the top of the work area.

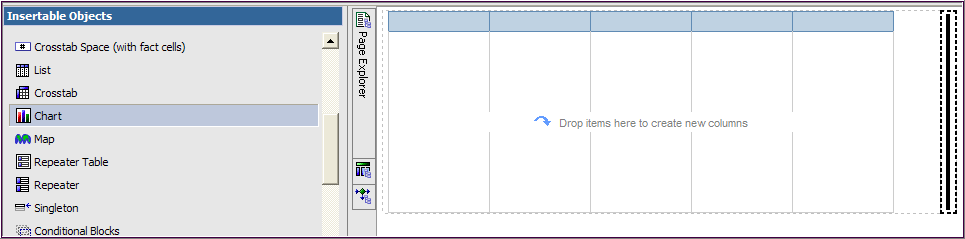
Toolbox tab



1. Again from the **Toolbox** tab, scroll down and click **List** and drag it to the left table cell. The work area will look like this when you are in the right place:



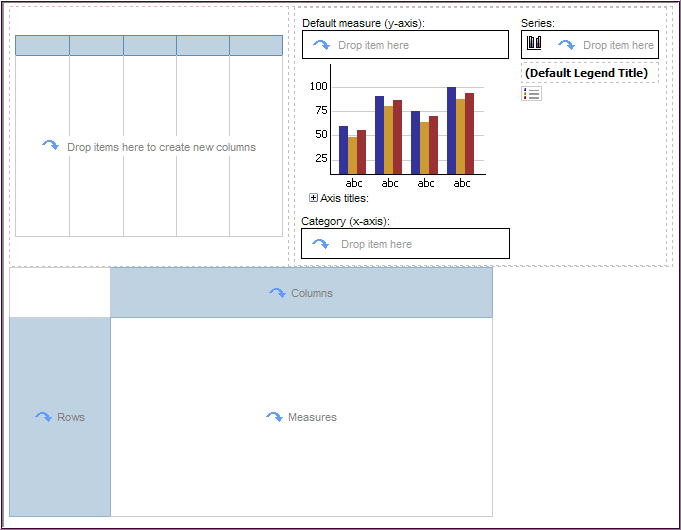
1. Also from the **Toolbox**, drag **Chart** to the *right* table cell. You are in the correct place when you see the solid black line.



1. The **Insert Chart** box will appear, you will select:
   * **Chart Group** = **Column**
   * **Chart Type** = **Column**
2. Staying with the **Toolbox**, drag **Crosstab** to the work area *below* the table. You are in the correct spot when you see the solid black line to the *right* of the Chart cell.

****

1. Your work area should look like this:

****

Remember, work area objects are placed top-to-bottom.

Notice that the table and the crosstab are two separate objects.

►**Now you will data to the three components, starting with the List.**

1. **LIST** - Click the **Source** tab, expand the **UDSIS Training** item and add the following fields to the **List** report in the work area. (Hint –Click the anywhere on the List first.)

* **CAMPUS**
* **Student\_Type**
* **College**
* **ACADEMIC\_TERM**
* **COUNT\_FIELD** (in the **Statistics** folder)

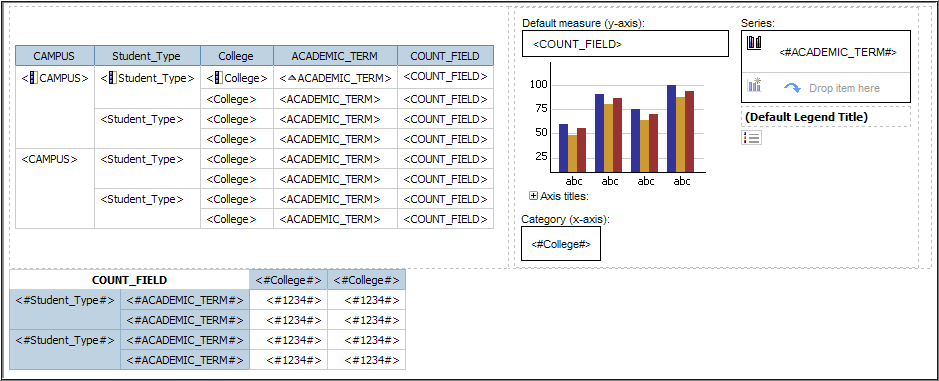
1. To get rid of duplicate values:
   1. Click the *title* of the **CAMPUS** item.
   2. Hold down the SHIFT key and click the *titles* of the **Student\_Type** and **College** items.
   3. Click the **Group/Ungroup**  button on the toolbar to group the items.
2. **CHART** - Continuing on the **Source** tab, add these data elements to the **Chart**:
   * Drag **COUNT\_FIELD** (in the **Statistics** folder) to the **Measures** drop zone.

* Drag **ACADEMIC\_TERM** to the **Series** drop zone.
  + Drag **College** to the **Category** drop zone.

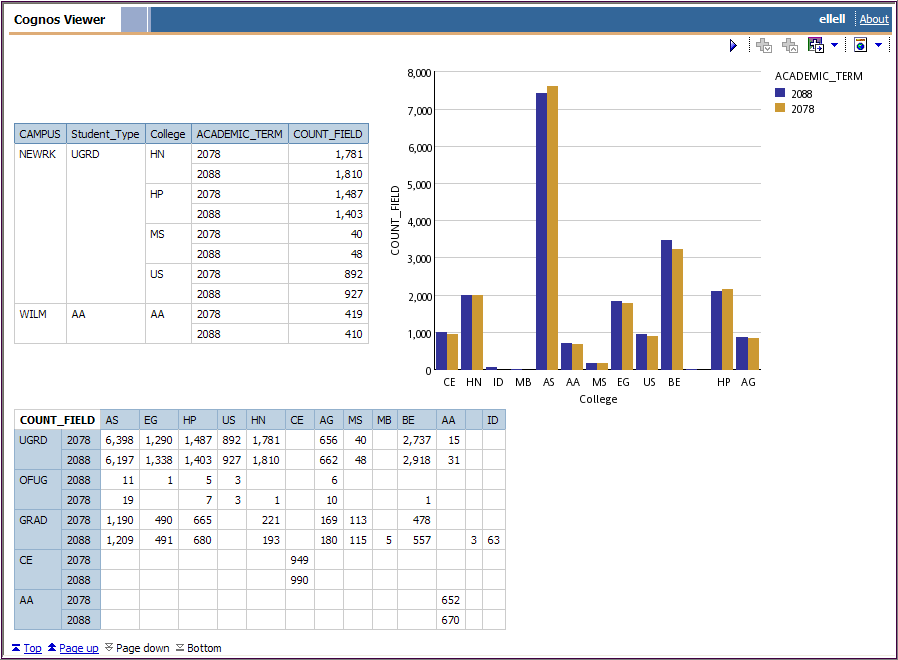
1. **CROSSTAB** - Add data items to the **Crosstab** from the **Source** tab:
   * Drag **COUNT\_FIELD** (in the **Statistics** folder) to the **Measures** section.

* Drag **Student\_Type** to the **Rows** section.
* Drag **ACADEMIC\_TERM** to the **Rows** section *to the right of* **Student\_Type**.
  + Drag **College** to the Columns section.

1. Your work area should look like this:



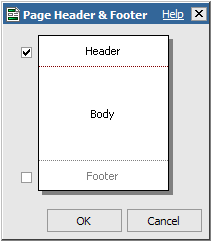
1. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report to see the multiple components you have created in one report.
2. In the Prompt box, type **2078** and click the **Insert button**, then type **2088** and click the **Insert button**. Click **OK**.
3. In **Cognos Viewer**, the Crosstab is at the end of the report, click to see all three components together on one page.
4. The ***last*** page of your report should look like this:



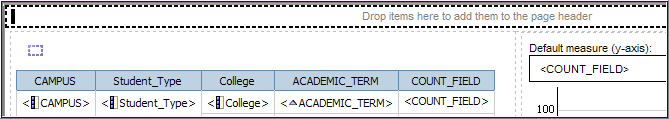
1. Close the **Cognos Viewer** window.

►**You will now add a page header to your report.**

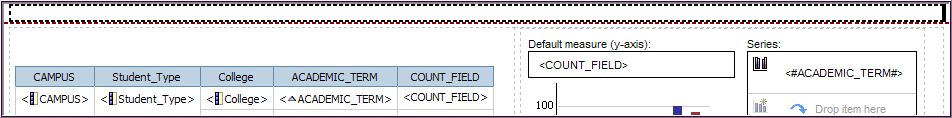
1. On the toolbar, click the **Headers & Footers**  button. Select **Page Header & Footer**.
   * Click the checkbox next to **Header**.
   * Click OK.



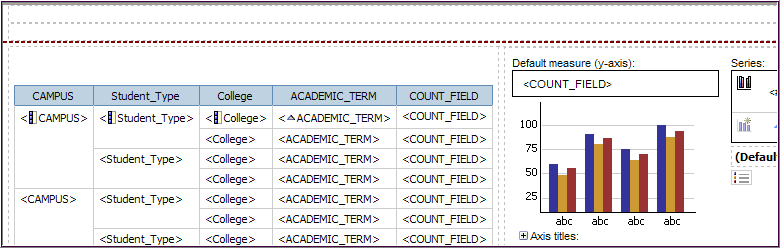
1. Next you will add two blocks to the page header. Blocks are rectangular containers that can hold other objects such as text, logos, or images.
2. Click the **Toolbox** tab in the **Insertable Objects** area
3. Drag **Block** into the page header, you’ll see a solid black line on the left side



1. Carefully drag another **Block** into the header to the far right of the first one, you will see a flashing solid black line:



Your work area will have two blocks in the header, one on top of the other:



1. Again on the **Toolbox** tab, drag **Text item** to the top **Block**
2. When the **Text** box appears, type: **Layout Report**
3. Click **OK**
4. Highlight the words **Layout Report** and then click the **Font**  button on the toolbar
5. Select **Green**
6. Click **OK**
7. Click the **Bold ** button
8. Center the words, **Layout Report**:
9. Click the **Block**, not the words
10. Click the **Center**  button
11. Drag another **Text item** from the **Toolbox**; this time drop it into the second Block in the header:
12. When the **Text** box appears, type: **List, Graph and Crosstab Reports**.
13. Use the toolbar buttons to format this text as you see fit (steps 22 – 23).
14. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Terms = 2078 and 2088)
15. In **Cognos Viewer**, the Crosstab is at the end of the report, click to see all three components together on one page.
16. The ***last*** page of your report should look like this:



1. Close the **Cognos Viewer** window.
2. Click the **Save** button, in **Name** box, type: ***your initials* Layout Report.** Click **Save**.

End of Exercise

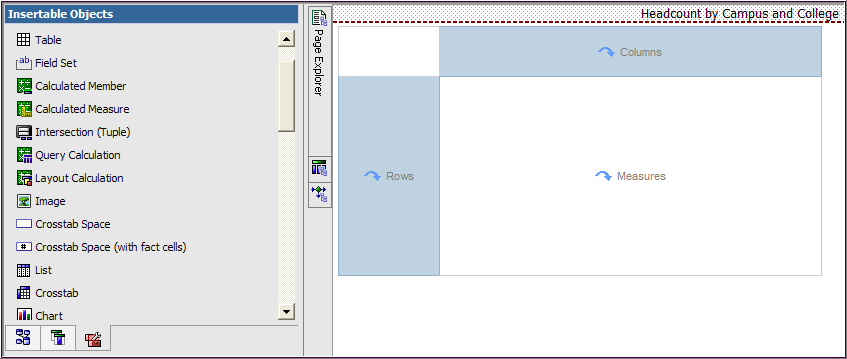
In **Exercise 24** you became familiar with the part of a Report Studio layout and learned to create a report using the layout elements. In the following exercise, you will use this knowledge to create a Crosstab report from scratch. Again, you will set up the layout before adding the data elements.

Exercise 25—Create a Crosstab Report from Scratch

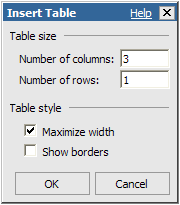
1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **Blank** and click **OK**.
3. On the toolbar, click the **Headers & Footers**  button. Select **Page Header & Footer**.
4. Click the checkboxes next to **Header** and **Footer.**
5. Click OK.

1. On the **Toolbox** tab, click **Text item** and drag it to the **Page Header**
2. In the **Text** box that appears, type: **Headcount by Campus and College.**
3. Click **OK.**
4. Add a crosstab frame to the body of the report:

* On the **Toolbox** tab, click **Crosstab** and drag it into the middle section.



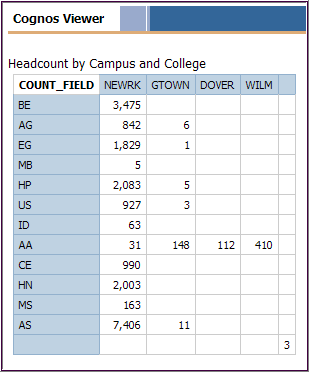
1. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and add the following fields to the work area:
2. Drag **CAMPUS** to **Columns.**
3. Drag **College** to **Rows.**
4. Drag **COUNT\_FIELD** (in the **Statistics** folder) to **Measures.**
5. Add **Footer** information to the report:
6. Click on the **Footer** to highlight it.
7. From the **Menu Bar -** click **Table**, click **Insert**, click **Table….**
8. In **Insert Table** box: columns = **3,** rows = **1**, **Maximum width** is checked ON.
9. Click **OK.**



1. From the **Toolbox** tab:
2. Drag **Date** to the left section of the **Footer.**
3. Drag **Page Number** to the middle section.
4. Drag **Time** to the right section.
5. The Footer should look like this:



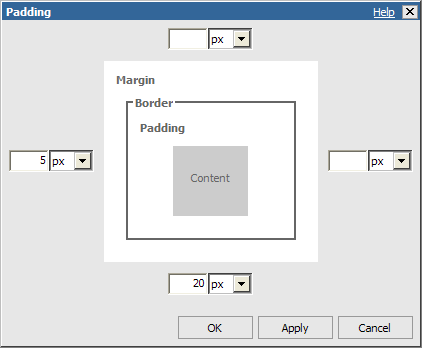
1. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088)



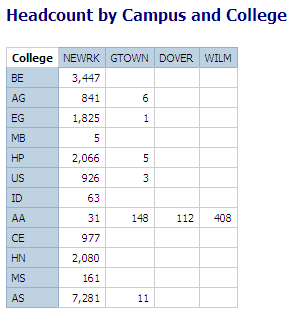
Notice how the report title is almost lost. It needs to be reformatted to stand out better.

Close the **Cognos Viewer** window.

1. In the work area, click the **Header** area (not the header text).
2. Go to the **Properties** pane:
   1. Under the **Box** category, double-click **Padding.**
   2. In the **Padding** box, make the left value **5 px** and the bottom value **20 px** (pixels).
   3. Click **OK.**



1. While the header is still highlighted, on the toolbar:
2. Click Font  and select **Navy.**
3. Click **Bold** .
4. Use the Drop-down to select **12 pt.**
5. For better readability, change the name of the cell above the College rows:
6. In the work area, click the upper left cell that says **COUNT\_FIELD.**
7. Go to the **Properties** pane.
8. Under **Text Source** category**,** click **Data Item Label.**
9. Use the dropdown arrow to select **College.**
10. **Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG** the report again (Term = 2088)



Notice the title is much more effective and the College column heading makes more sense.

Close the **Cognos Viewer** window.

1. Click the **Save** button, in **Name** box, type: ***your initials* Create Crosstab.** Click **Save**.

End of Exercise

**Advanced Techniques**

In Report Studio, you can work with reports so they look exactly as you want them to. You can add information to columns, move data from one column to another, and add images, background color and more. You will see some of these techniques in the following exercises.

In the next exercise, you will create list report that shows students by their majors, whether or not they are in the honors program, their genders, and concentration. You will change the report to consolidate all the information about the major in one column and all the information about the student in another.

Exercise 26—Change the Organization of a List Report

1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign and add the following fields to the work area:

* **MAJOR1** (in the **Program** folder)
* **Maj1\_LDESCR** (in the **Descriptions** folder)
* **STUDENT\_ID**
* **HONORS\_FLAG**
* **GENDER** (in the **Demographics** folder)
* **Conc1\_LDESCR** (in the **Descriptions** folder)

**Note**: This package, **UDSIS Training Extract**, does not include student names, only student IDs. This is a security measure to protect our students’ privacy. If you were writing this report “for real” you would include the student names.

1. Click the ***title*** of the **MAJOR1** column and click the Group/Ungroup  button on the toolbar
2. Create a prompt that requires the viewer of the report to select a college from a drop-down list:
3. Click the **Filters** filter button, click the **Add**  button
4. Under the **Available Components** pane, expand the **UDSIS Training Extract** tab by clicking the plus sign
5. Double-click **College**.
6. Click just after **[SA\_DW].[UDSIS Training Extract].[College]** and type:

**=?Enter College?**

Your expression should look like this:

****

1. Click the **Validate** validfilter button to ensure that there are no mistakes in the expression. Then click **OK**. This returns you to the **Filters** window.
2. Click the **Add**  button to add a filter to select only First Year students. The expression will be:

**[SA\_DW].[UDSIS Training Extract].[ACAD\_LEVEL] = '10'**

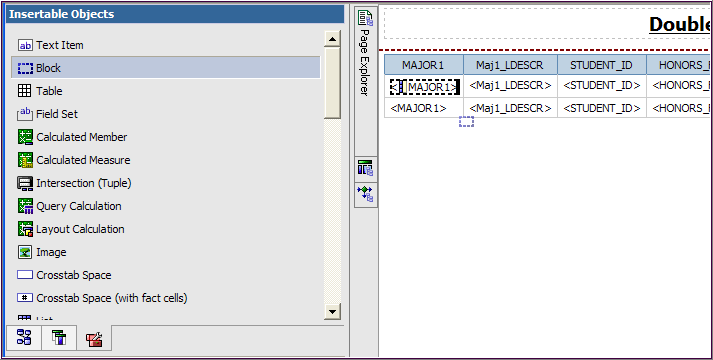
1. Click **Validate** validfilter button to ensure that there are no errors in the expression. Then click **OK** twice.

Next you will insert **Blocks** inside two of your existing columns.

1. On the **Report Studio** toolbar, click the **Unlock** unlock button.

**Note**: To insert an item into another object (like a list column), you must first unlock the item. The **Unlock** button is a toggle button—pressing it again will lock the columns. It is important to remember to LOCK your report when you are done, leaving it unlocked will cause unintended problems.

1. On the **Toolbox** tab, click **Block** and drag it into the **MAJOR1** column, just after the **<MAJOR1>** data item.
   * You should see a small blinking cursor immediately after the **MAJOR1** data item.

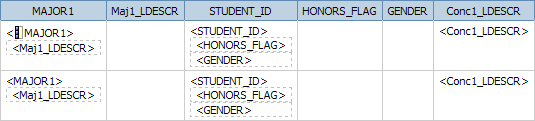


Your **MAJOR1** column should look like the one below:



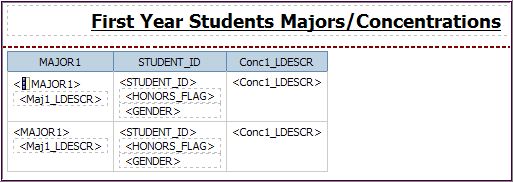
1. Click and drag the **Maj1\_LDESCR** *data item* (not the column title) into the block.
2. From the **Toolbox** tab, drag two blocks in the **STUDENT\_ID** column:
3. Click and drag the **HONORS\_FLAG** data item to the top block
4. Click and drag **GENDER** data item to the bottom block

Your work area should look like this:



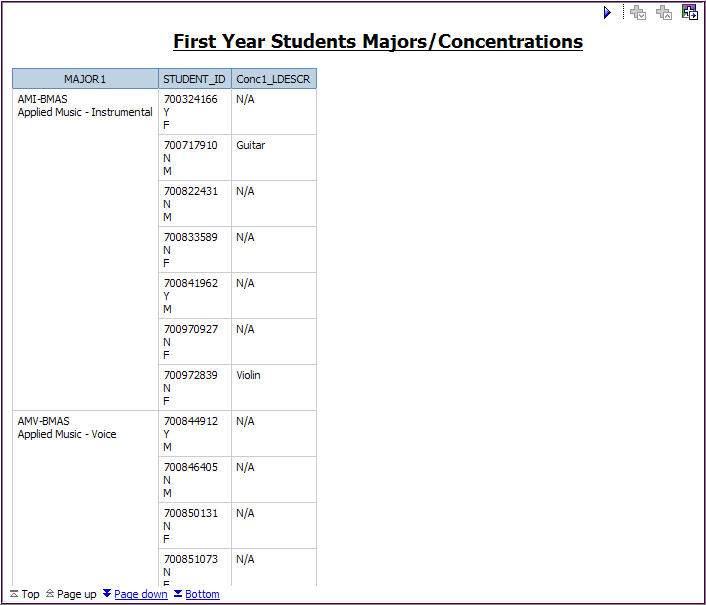
1. Click the **Lock**  button on the toolbar
2. Click one of the empty **Maj1\_LDESCR** cells (not the title cell).
   * Click the **Delete**  button. (The whole column disappears.)
3. Repeat this process for the **HONORS\_FLAG** and **GENDER** columns.
4. Change the title by double-clicking the words **Double click to edit text**
   * In the **Text** box, type: **First Year Students Major/Concentrations**

Now your work area should look like this:



1. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088 and College = AS).

Your report should look like this:

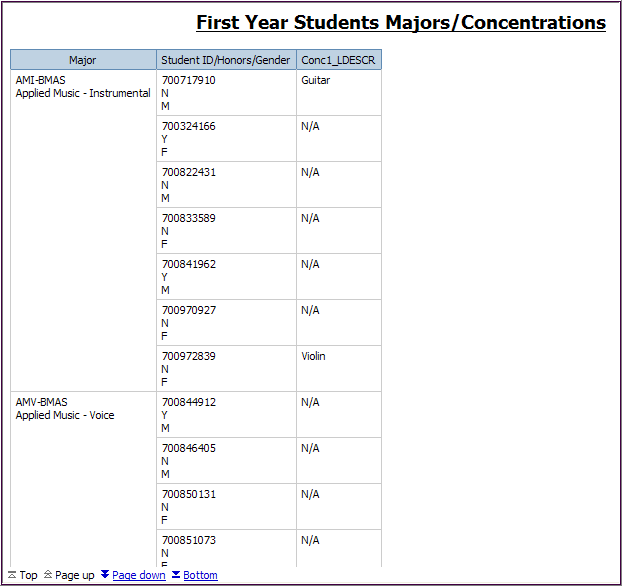


Click the **Run** button to view the report for a different college or term.

Notice the two data elements in the **MAJOR1** column and three in the **STUDENT\_ID** column.

1. Close the **Cognos Viewer** window.
2. The column headings are not particularly helpful, you’ll fix that next:
3. Click the **title** of **MAJOR1.**
4. Go to the **Properties** pane.
5. Under the **Text Source** category, click **Source Type**.
6. Using the drop-down arrow, select **Text**.
7. The column title now says “Double click to edit text” – double click it.
8. In the Text box type: **Major** and click **OK**.
9. Repeat this process for the other two column titles:
10. Change **STUDENT\_ID** to **Student ID/Honors/Gender**.
11. Change **Conc1\_LDESCR** to **Concentration**.
12. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088 and College = AS)

Your report should look like this:



1. Close the **Cognos Viewer** window.
2. Click the **Save** button, in **Name** box, type: ***your initials* Consolidated List.** Click **Save**.

End of Exercise

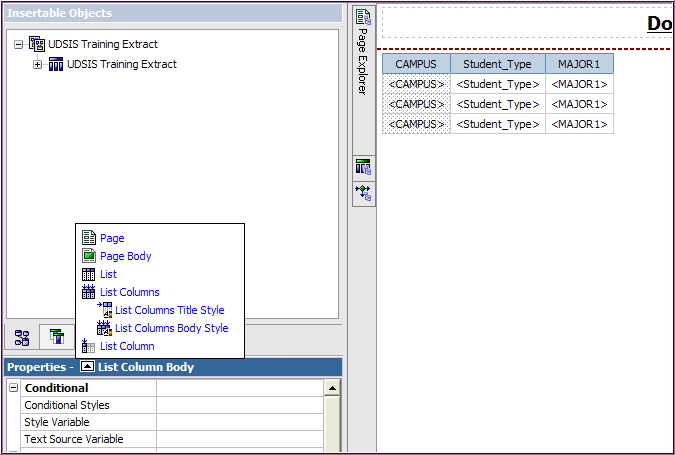
Another advanced technique allows you to add styling at a higher level than that of individual report items, column titles, etc. When you use this technique, the styling applies to all items of a given type (list, list or crosstab column, table, page, and so on). Moreover, when you add styling at a higher level, any new items added to your report will automatically have the style of the rest of the report.

Exercise 27—Add Styling at a Higher Level

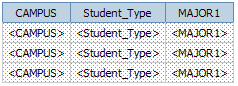
1. On the **Report Studio** menu bar, click **Open** to open an existing report:
2. In the **Open** box, click **My Folders**
3. Scroll down to find ***your initials* Major List**.
4. Click the report to select it and click **Open**.

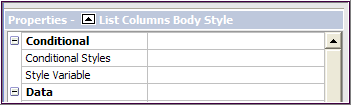
To add styling at a higher level, you must work with the ancestor (parent) of a particular item.

1. Click the **<Campus>** data item (not the column title) to select it.
2. Go to the **Properties** pane:
3. Click the **Ancestor** ancestor button beside the words **List Column Body**.
4. You will see a box like the one below.
5. Click **List Columns Body Style**.



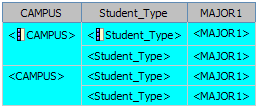
Notice that the words beside the **Ancestor** button now read **List Columns Body Style** and all the list columns are selected.



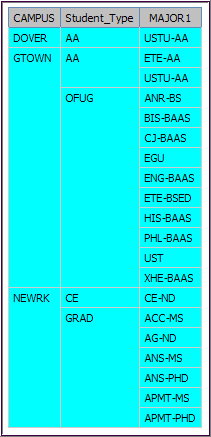


1. In the **Properties** pane, under **Color & Background**:
2. Double-click **Background Color**.
3. Click **Aqua** and click **OK**.
4. The background of all the list columns changes to Aqua.
5. Click any of the column *titles*, such as **CAMPUS**.
6. Go to the **Properties** pane.
7. Click the **Ancestor** ancestor button.
8. From the box that appears, click **List Columns Title Style**.
9. Under **Color & Background**, double-click **Background Color**.
10. Click **Silver** and click **OK**.
11. The background of all the list column titles changes to Silver.
12. Remove duplicate values:
13. Click the **CAMPUS** column *title*; hold down the **CTRL** key.
14. Click the **Student\_Type** column *title*.
15. Click the **Group/Ungroup**  button.

Your work area should look like this:



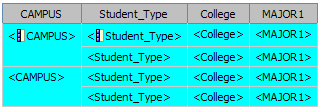
1. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088) to see that the styling applies to all the columns.



1. Close the **Cognos Viewer** window.

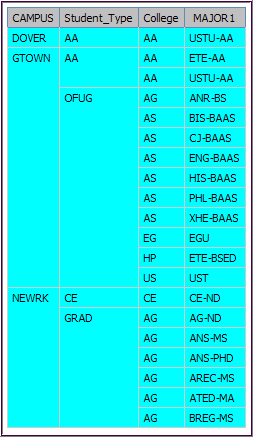
Next you will see the effect of adding a new list item to your report.

1. In the **Source** tab, expand the **UDSIS Training** item:
2. Click **College** and drag it between the **Student\_Type** and **MAJOR1** columns.
3. When you see the flashing black bar, release the mouse button.
4. Your work area will look like this:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Term = 2088).

The new item shares the styling of the other columns because styling was applied at a higher level.



1. On toolbar, click the **Save** save button to save the report.

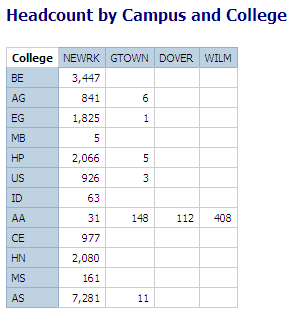
**Note**: You can use this method to change any styling feature (color, alignment, font, etc.) for any report.

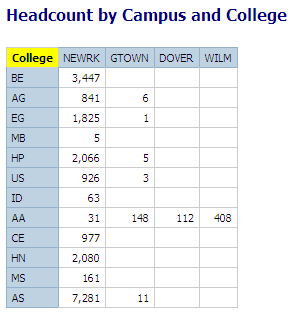
End of Exercise

Report Studio also allows you to add formatting and images to your reports. To illustrate this process, you will use the **Crosstab from Scratch** report you created earlier.

Exercise 28—Format a Crosstab Report

1. On the **Report Studio** menu bar, click **Open** to open an existing report:
2. In the **Open** box, click **My Folders**
3. Scroll down to find ***your initials* Crosstab from Scratch**.

At the top left of your report (at the intersection of the rows and columns) is a space into which you have typed “College.” You can change the background color of this cell or insert objects into it. For example, if your package contains an image, you can insert it into the cell.  
  


1. Click inside the white space then in the **Properties** pane under **Color & Background**, double-click **Background Color**.
2. Click the ellipses button and click Yellow. Click **OK**.
3. Run the report. The **Cognos Viewer** window should look like the one below:  
     
   
4. Click the **Save** button, in **Name** box, type: ***your initials* Format Crosstab.**
5. Click **Save**.

End of Exercise

Report Studio Queries

In order to work with Report Studio queries, you must first understand how the program handles data and structures its queries. Report Studio begins by building a **query** based on the type of report and data items you select for a report.

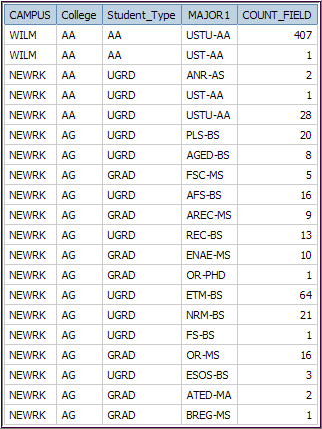
The second aspect of the query is the **Query definition**. It consists of dimensions, facts, and filters. Dimensions group aspects of your information and contain hierarchical levels. For instance, when you group data in a report, data is placed into a hierarchy of levels. You are, in effect, creating a *dimension*. Filters eliminate groups of rows from the tabular structure before aggregates are computed.

Exercise 29—Using Query Explorer to Modify Aggregation Properties

1. On the **Report Studio** toolbar, click the **New** newrpt button.
2. In the **New** box, select **List** and click **OK**.
3. On the **Source** tab, expand the **UDSIS Training** item by clicking the plus sign
4. Add the following fields to your report:
   * **CAMPUS**

* **Student\_Type**
* **College**
* **MAJOR1** (in the **Program** folder
* **COUNT\_FIELD (**in the **Statistics** folder)

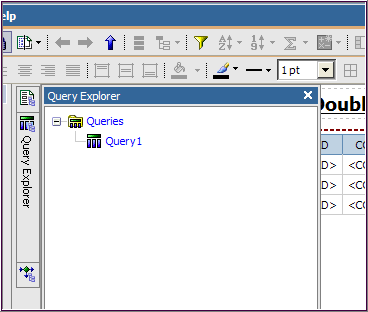
1. Click the *title* of the **CAMPUS** column and click the Sort sortbut button. Select **Sort Descending**.
2. Click the *title* of the **Student\_Type** column and click the Sort sortbut button. Select **Sort Ascending**.
3. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088).

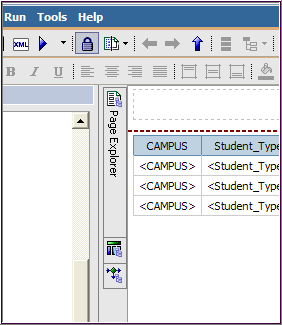


Notice that each row of the report has been totaled against the campus, college, and student type.

Close the **Cognos Viewer** window.

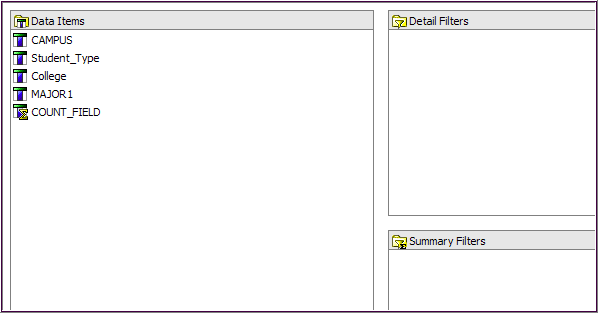
1. In the *center* of the **Report Studio** window, move the mouse pointer over the **Query Explorer** icon to open it, and click Query **Query1**.





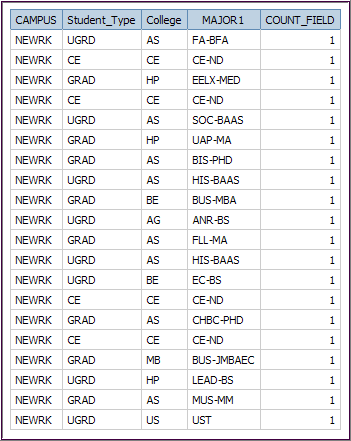
Query Explorer

1. The page has 4 frames:
   * Data Items
   * Detailed Filters
   * Summary Filters
   * Slicer
2. If you examine the list in **Data Items**, you will notice that **COUNT\_FIELD** has an Aggregate symbol over its icon:



It is the **Auto Group & Summarize** property that determines whether the Query items are grouped and aggregated. If the property is set to **No**, you will get details (not summaries) in your report.

1. Go to the **Properties** pane for the **Query:**
2. Under **Data**, click **Auto Group & Summarize**
3. Change the setting to **No**
4. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Term = 2088).

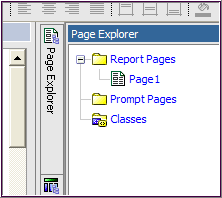


You are looking at individual detail rows from the database, since the grouping and aggregation have been turned off.

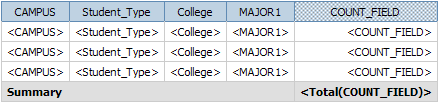
Clearly, this is *not* a desirable result.

Close the **Cognos Viewer** window.

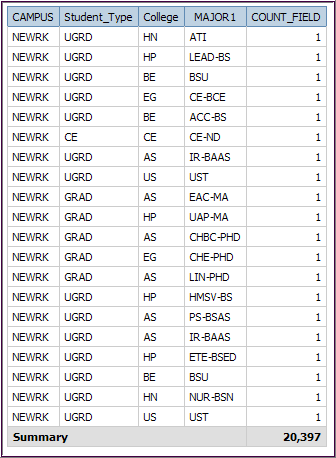
1. In the **Report Studio** window:
2. Move your mouse pointer over the **Page Explorer** bar at the center of the page.
3. Click **Page 1** to return to your report page.



1. Click the *title* of the **COUNT\_FIELD** column.
2. On the toolbar, click the **Aggregate** aggregate button’s down-arrow.
3. Click **Total**  
   Your work area shows a single total at the end of the list:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Term = 2088).
2. In the **Cognos Viewer** window, click the **** link to go to the end of the report.

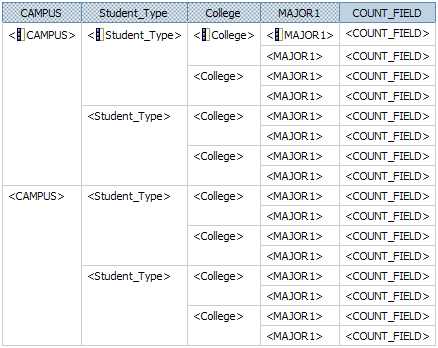


Notice that there is a single total for the detail lines in the report—there is still no grouping because **Auto Group & Summarize** is set to **No**.

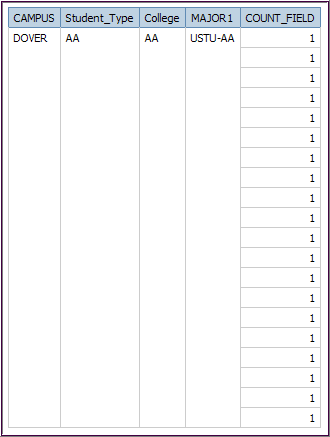
Close the **Cognos Viewer** window.

1. On the **Report Studio** toolbar, click the **Undo** **undo** button to remove the total from **COUNT\_FIELD**.
   * Alternatively, click on **<Total(COUNT\_FIELD)>** in the work area and click delete.
2. Next we’ll group the other columns to see how this affects the report:
3. Click the *title* of the **CAMPUS** column.
4. Hold down the **CTRL** key and click the *titles* of **Student\_Type**, **College** and **MAJOR1**.
5. On the toolbar, click the **Group/Ungroup**  button.

Your work area should look like the one below:



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Term = 2088).
2. The report should look like the one below:



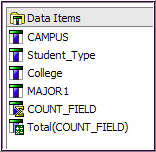
This looks something like a grouped report, but since **Auto Group & Summarize** is set to **No**, we still see data for the detail rows in the report.

Click thelink a few times to see how the report is structured.

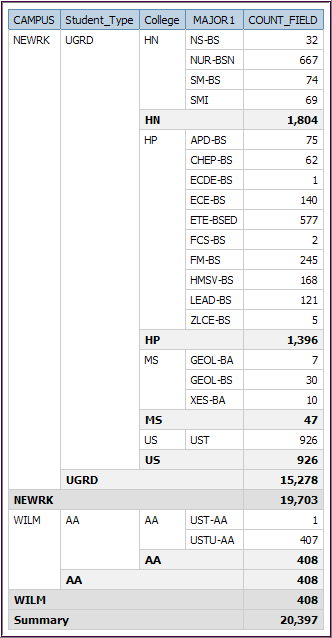
Click the **** link to go to the end of the report. You will see that there is no aggregation (total) on the last line.

Close the **Cognos Viewer** window.

1. Click the *title* of the **COUNT\_FIELD** column then click the **Aggregate** aggregate button. Click **Total**.
2. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Term = 2088).   
   * Click the  link to go to the end of the report.
   * Now there are group totals and the total for the whole report, but they are still against the un-aggregated data (detail rows).
3. In the **Report Studio,** go to the **Query Explorer** bar (as in step 8 above).
   * Click  **Query1**
4. In the **Properties** pane, under **Data**:
   * Click **Auto Group & Summarize** to change the setting to **Yes**.
   * The **Data Items** will look like the one below. Note the two items for **COUNT\_FIELD.**



1. Run C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report again (Term = 2088).
2. Now the groups are summarized because **Auto Group & Summarize** is set to **Yes**.



Click thelink a few times to see how the **Yes** setting affects the report. You will see that the rows are summarized and each level is totaled.

Click the **** link to go to the end of the report. You will see that there is a total on the last line (Summary).

Close the **Cognos Viewer** window.

1. On the **Report Studio** file menu, click **Save As**.
2. In the Save As **Name** box, type ***your initials*** **Working with Aggregates**. Click **Save**.

End of Exercise

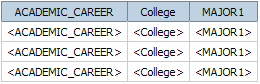
Master-Detail Reports

In the following exercise, you will create a master report that contains information on academic career (undergrad, grad, etc.), the college each student belongs to, and the student's major. You will then create a report inside the master report that includes details for each major, including the student ID, the academic load, and grad\_sustainer. You will link the two reports to create a single report. You will add filters to find only grad students in the BE college.

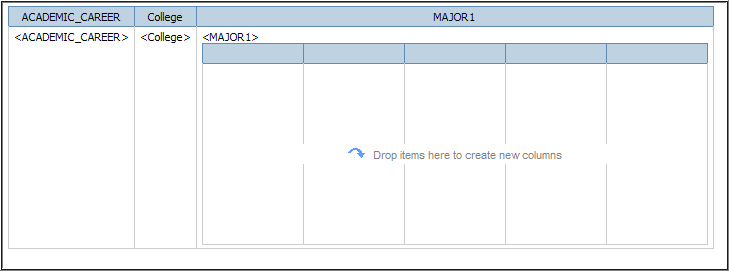
Exercise 30—Create a Master-Detail Report

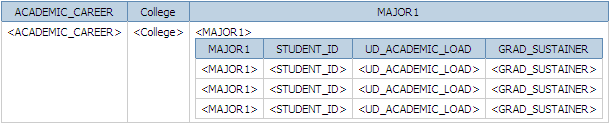
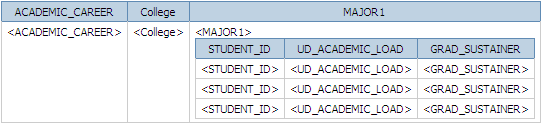
1. On the **Report Studio** toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **Blank** and click **OK**.
3. On the Report Studio **View** menu, select **Visual Aids** and verify that **Show** **Boundary Lines** is checked. If it is not, click to check it.
4. On the **Insertable Objects** pane **Toolbox** tab, click **List** and drag it into the work area. You will see the familiar list report frame in the left table cell.
5. On the **Source** tab, expand the **UDSIS Training** item, and add the following to the work area:  
     
   **• ACADEMIC\_CAREER**  
   **• College**  
   **• MAJOR1** (in the **Program** file)
6. Use your knowledge of creating filters to add the following filters to your report:  
     
   [SA\_DW].[UDSIS Training Extract].[LEAVE\_OF\_ABSENCE\_FLAG]='N' [SA\_DW].[UDSIS Training Extract].[ ACTIVE\_STUDENT\_FLAG]='Y'

[SA\_DW].[UDSIS Training Extract].[ ACADEMIC\_CAREER]='GRAD'

[SA\_DW].[UDSIS Training Extract].[College]='BE'  
  
Your report should look like the one below:  
  
  
  
You will next create a second query inside the first one.

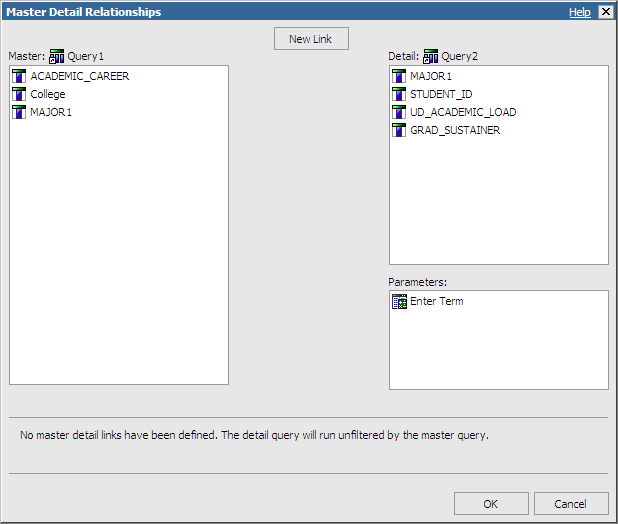
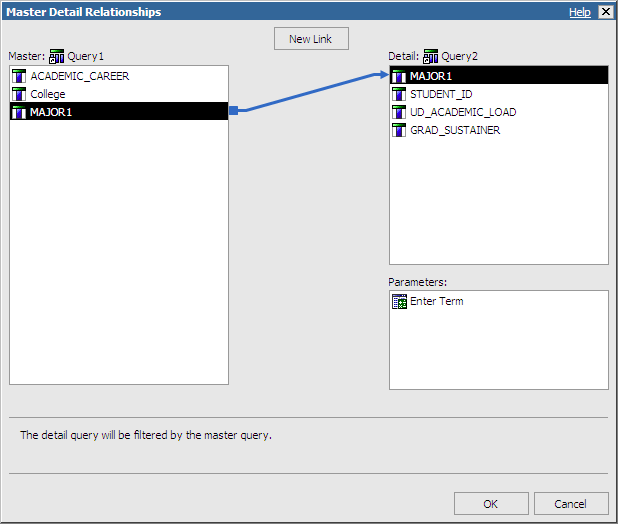
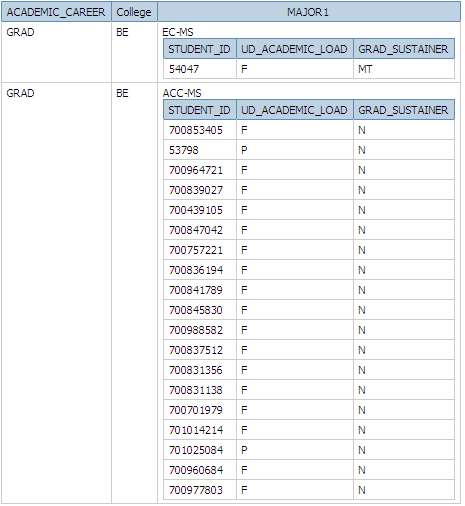
1. On the **Report Studio** toolbar, click the **Unlock** unlock button.
2. On the **Toolbox** tab, click **List.** Drag it to the **MAJOR1** column and drop it just after the first **MAJOR1** data item (**<MAJOR1>**) when you see the small flashing black line.

Your work area should look like the one below:  
  
  
  
You will next add items to the list you have just created.

1. Click on the new list until the columns are all gray.
2. On the **Source** tab, double-click the following items to add them to the new list:  
   • **MAJOR1** (in the **Program** file)  
   • **STUDENT\_ID**  
   **• UD\_ACADEMIC\_LOAD**  
   **• GRAD\_SUSTAINER**  
     
   Your work area should look like the one below:  
     
   
3. On the **Report Studio** toolbar, click the L**ock**  button.
4. In the second query, click the MAJOR1 column and click cut**Cut**. Now your work area looks like the one below:  
     
   

Note: Using **Cut** keeps the item in the report query but removes it from view. Now **MAJOR1** will be listed once with the details underneath. Here is why this works: You may remember that if you cut an item in Report Studio, it remains in the Query (Query2). Thus, the data—although hidden—is still available to maintain the link between the **Master** and **Detail** queries. Even if you save and reopen the report, the item remains in the query and you can drag it back into the report at any time.

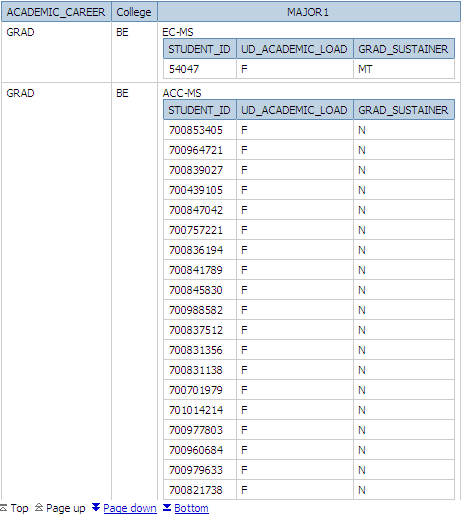
You will now link the two reports in a master-detail relationship.

1. Click the *title* of one of the items in the second query and from the Report Studio **Data** menu, click **Master Detail Relationships**. You will see a box like the one below:  
     
   
2. Click the newlink **New Link** button. You will see a blue arrow between the **Query1** and the **Query2** panes.
3. In Query1, click the **MAJOR1** item. The arrow now connects **MAJOR1** in both queries:  
     
   
4. Click **OK**.
5. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report (Term = 2088).   
     
   The **Cognos Viewer** window should look like the one below:   
     
     
     
   The Master-Detail report shows the MAJOR1 information combined with details for each graduate student in BE.
6. On the **Report Studio** window **File** menu, click **Save As**.
7. In the Save As **Name** box, type ***your initials* Master-Detail**. Click **Save**.

End of Exercise

You can also add other filters to Master-Detail reports. Suppose, for example, that you wanted to eliminate all the part-time students from your report. You can create a filter so that you will see only the information for full-time students. In the next exercise, you will add a filter to a Master-Detail report. Make sure that the Master-Detail report is still open.

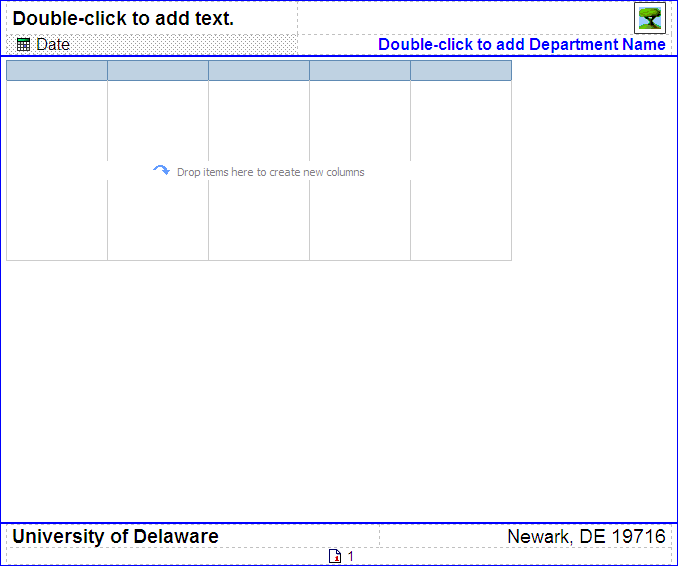
Exercise 31—Add a Filter to a Master-Detail Report

1. Using the same report from the previous exercise, click **Save As** in the **File** menu item.
2. In the Save As **Name** box, type ***your initials* Order Master-Detail Filtered**. Click **Save**.  
     
   You will add the filter to the **Detail** report (Query2).
3. In Query2, click the heading **UD\_ACADEMIC LOAD**.
4. Click the **Filters** filter icon. This opens a **Filters-Query2** box in which you can add an expression for the filter. You will create a filter to eliminate part-time students from your report.
5. Use your knowledge of creating filters to add the following filter to your report:  
     
   **[SA\_DW].[UDSIS Training Extract].[UD\_ACADEMIC\_LOAD]='F'**
6. Click the **Validate** validfilter button to validate the expression. When the **Information** area reads “No Errors,” click **OK**.
7. **Run** C:\DOCUME~1\ellell\LOCALS~1\Temp\SNAGHTML142782f.PNG the report. It will look like the one below:  
     
     
     
   Now you will see only full-time grad students. The part-time students have been filtered out
8. On the **Report Studio** menu, click **Save** to save the report.

End of Exercise

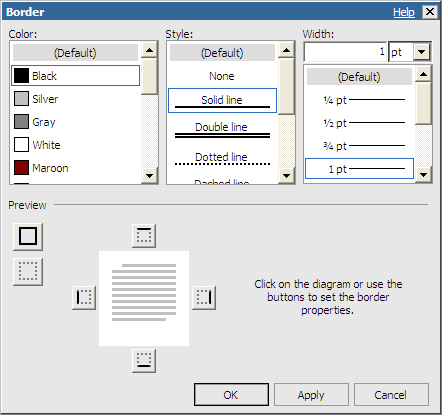
Create a Template

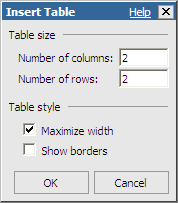
You can create a report template to be used for reports specific to your department. To do this, start with a blank report and add the components you want every report to have but do not add data from the model to the report. Save the report. When you want to use the template, open it, select **Save As** from the **File** menu, and name the new report.

In the next exercise, you will create a report template. When you finish, your template will look like the one below:  
  


Exercise 32—Create a Report Template

1. On the Report Studio toolbar, click the **New** newrpt button to create a new report.
2. In the **New** box, select **Blank** and click **OK**.
3. On the **Report Studio** menu, click arrow next to the **Headers & Footers** headfoot button and select **Page Header & Footer**.
4. Click the boxes next to **Header** and **Footer** and click **OK**.
5. Click inside the **Page Header** area
6. In the **Properties** pane, under the **Box** category, double-click **Border**.

You will see a box like the one below:  
  


1. Make these settings:
   1. **Color** to **Blue**
   2. **Style** to **Solid Line**
   3. **Width** to **2px** (use the drp-down under the Width box to select **px** and type **2** next to **px**).
   4. Click the bottom border on the diagram
   5. Click **OK**.
2. On the **Insertable Objects Toolbox** tab:
   1. Click the **Table** item and drag it into the **Page Header** area.
   2. You will see a box like the one below:  
        
      
3. In the **Insert Table** box:
   1. Type **2** for the **Number of columns** and **2** for the **Number of rows**
   2. Make sure the **Maximize width** box is checked.
   3. Click **OK**
4. On the **Insertable Objects Toolbox** tab:
   1. Click the **Text** **Item** and drag it into the top-left table cell.
   2. In the **Text** box, type **Double-click to add text**.
   3. Click **OK**.
5. Highlight the text you just added and go to the **Properties** pane:
   1. Under the **Font & Text** category, double-click **Font**.
   2. Set the **Family** to **Arial,** the **Size** to **14pt** and the **Weight** to **Bold**.
   3. Click **OK**.
6. On the **Insertable Objects Toolbox** tab, click the **Date** item and drag it into the bottom left table cell.
7. Highlight the **Date** item and go to the **Properties** pane:
   1. Under the **Font & Text** category, double-click **Font**.
   2. Set the **Family** to **Arial** and the **Size** to **12pt**.
   3. Click **OK**.
8. On the **Insertable Objects Toolbox** tab, click the **Image** item and drag it into the top-right table cell.
9. Click the **Image** item you just added and go to the **Properties** pane:
   1. Under the **URL Source** category, double-click **URL**.
   2. Use the **Browse...** button to set the **Image URL** to (Note: your package must include an image file for you to be able to do this step.).
   3. Click **OK**.
10. Click the background of the top-right table cell and go to the **Properties** pane:
    1. Under the **Font & Text** category, click **Horizontal Alignment**.
    2. Using the pull-down arrow, select **Right** for the alignment.
11. On the **Insertable Objects Toolbox** tab:
    1. Click the **Text** **Item** and drag it into the bottom-right table cell.
    2. In the **Text** box, type **Double-click to add Department name**.
    3. Click **OK**.
12. Highlight the text you just added and go to the **Properties** pane:
    1. Under the **Font & Text** category, double-click **Font**.
    2. Set the **Family** to **Arial**, the **Size** to **12pt** and the **Weight** to **Bold**.
    3. Click **OK**
13. Staying in the **Properties** pane:
    1. Under the **Color & Background** category, double-click **Foreground Color.**
    2. Click **Blue**.
    3. Click **OK**.
14. Click the background of the bottom-right table cell go to the **Properties** pane:
    1. Under the **Font & Text** category, click **Horizontal Alignment**.
    2. Using the pull-down arrow, select **Right** for the alignment.

This completes the **Page Header**. Your header will look like the one below:



Next, you will add a list frame to the **Page Body**.

1. On the **Insertable Objects Toolbox** tab, click the **List** item and drag it into the page body. You will see the familiar **List** box.

Next, you will create the **Page Footer**.

1. Click inside the **Page Footer** area and go to the **Properties** pane:
   1. Under the Box category, double-click **Border**.
   2. Set the **Color** to **Blue**.
   3. **Style** to **Solid Line**.
   4. **Width** to **2px** (use the pull-down arrow under the Width box to select **px** and type **2** next to **px**).
   5. Click the top border of the diagram.
   6. Click **OK**.
2. On the **Insertable Objects Toolbox** tab:
   1. Click the **Table** item and drag it into the **Page Footer** area.
   2. In the **Insert Table** box, type **2** for **columns** and **2** for **rows**.
   3. Make sure the **Maximize width** box is checked.
   4. Click **OK**.
3. On the **Insertable Objects Toolbox** tab:
   1. Click the **Text** **Item** and drag it into the top-left table cell
   2. In the **Text** box, type **University of Delaware**
   3. Click **OK**
4. Highlight the text you just added and go to the **Properties** pane:
   1. Under the **Font & Text** category, double-click **Font**.
   2. Set the **Family** to **Arial**, the **Size** to **14pt** and the **Weight** to **Bold**.
   3. Click **OK**
5. On the **Insertable Objects Toolbox** tab:
   1. Click the **Text** **Item** and drag it into the top-right table cell
   2. In the **Text** box, type **Newark, DE 19716**
   3. Click **OK**
6. Highlight the text you just added and go to the **Properties** pane:
   1. Under the **Font & Text** category, double-click **Font**.
   2. Set the **Family** to **Arial**, the **Size** to **14pt**.
   3. Click **OK**.
7. Click the *background* of the top-right table cell and go to the **Properties** pane:
   1. Under the **Font & Text** category, click **Horizontal Alignment**.
   2. Using the pull-down arrow, select **Right** for the alignment.
8. Click the bottom-left table cell then SHIFT-click the bottom right table cell. From the **Report Studio Table** menu, select **Merge Cells**   .
9. On the **Insertable Objects Toolbox** tab, click the **Page Number** item and drag it into the bottom table cell.
10. Highlight the **Page Number** item and go to the **Properties** pane:
    1. Under the **Font & Text** category, double-click **Font**.
    2. Set the **Family** to **Arial** and the **Size** to **10pt**.
    3. Click **OK**.
11. Click the background of the bottom table cell and go to the **Properties** pane:
    1. Under the **Font & Text** category, click **Horizontal Alignment**.
    2. Using the pull-down arrow, select **Center** for the alignment.
12. Click the background of any area in your report template. On the **Properties** pane, click the **Ancestor** ancestor button and click **Page**.
13. In the **Page Properties** pane:
    1. Under the Box category, double-click **Border**.
    2. Set the **Color** to **Blue**.
    3. **Style** to **Solid Line**.
    4. **Width** to **1px**.
    5. Click all 4 borders of the diagram.
    6. Click **OK**.
14. This completes the **Page Footer**. Your footer will look like the one below:



1. On the **Report Studio** window **File** menu, click **Save As**.
2. In the Save As **Name** box, type ***your initials* Template**. Click **Save**.

End of Exercise

You have now created a template that can be used to create other reports. When you want to use the template, open it and choose **Save As** from the Report Studio **File** menu. Give the report a new name to preserve the template.