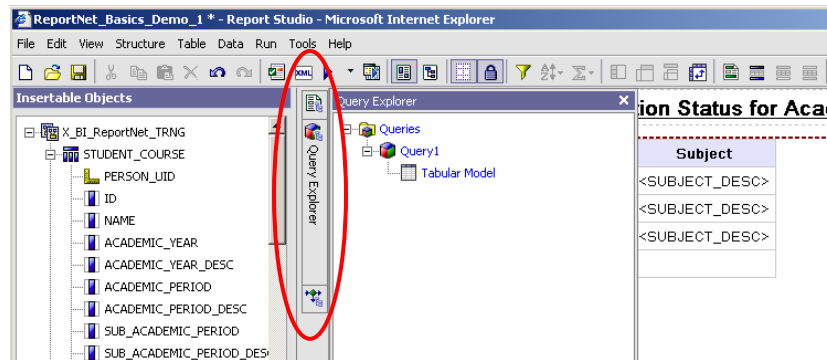


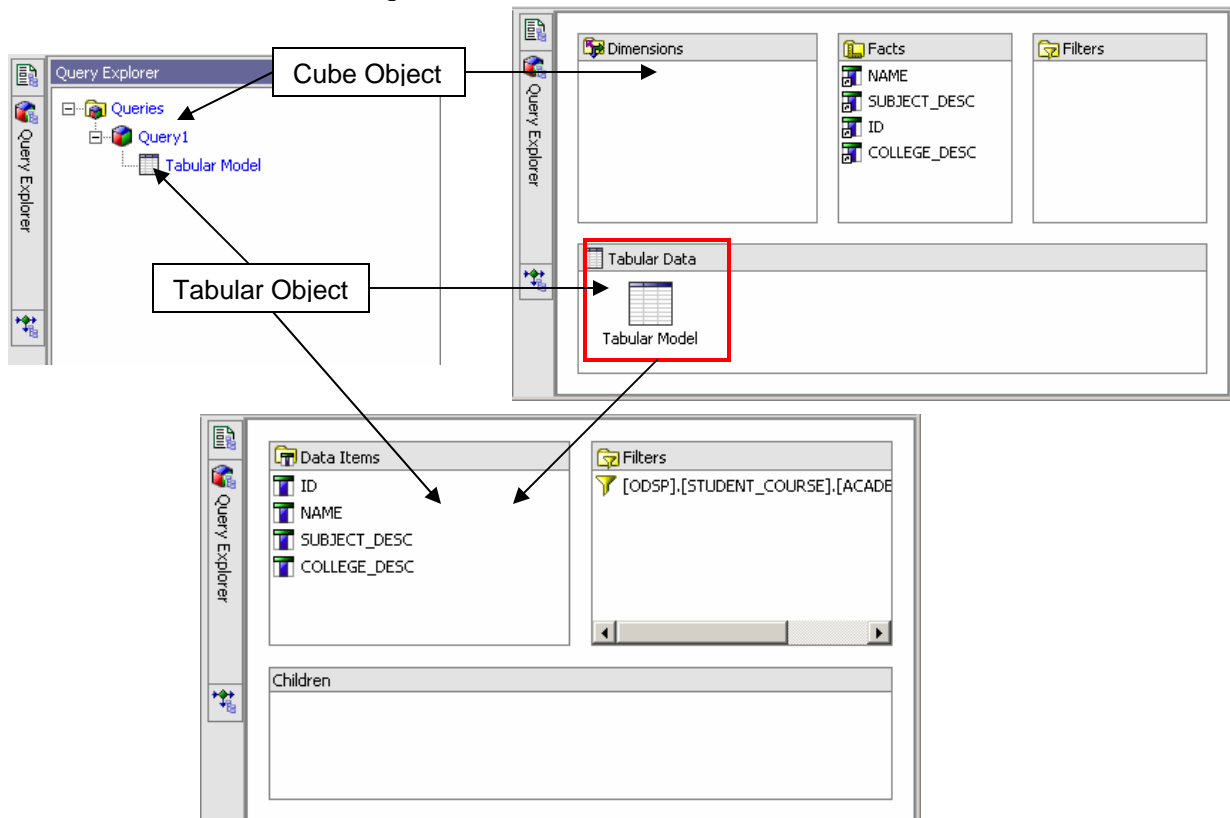
## Understanding Queries in Report Studio

As you create a new report in Report Studio, a query is being built in the background. Many times, you will never need to look at the query that has been generated. However, when a more complex query is needed or multiple queries are needed to develop a single report, editing of the query specification may need to take place.

To view a query, you use the Query Explorer. To access Query Explorer, either hover over or click on the cube icon on the explorer bar. This should expand the Query Explorer to allow the user to see each of the queries and their related tabular objects.

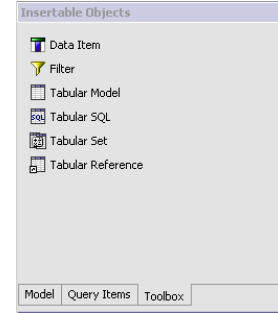


There are 2 basic parts to each query – the cube object and the tabular object. The *cube object* will control how the data is grouped and organized. The *tabular object* pulls in the data in its most basic form requested.

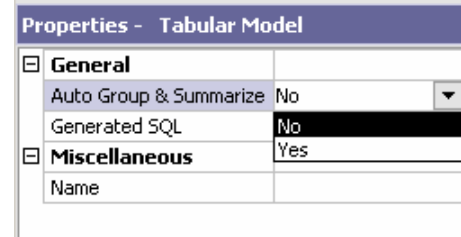


## Tabular Object

The tabular object will return data in a basic list format. In the Tabular Object, you can drag multiple types of objects in from the toolbox. Dragging in a Data item is the same as dragging in a calculation while you are in the report layout. Dragging in a Filter is the same as creating a Tabular Filter from the report layout.



There is an option to have Cognos automatically group and summarize the data. You will find this as a property of the tabular object. By setting this property to YES, Cognos will automatically summarize the data and consolidate rows. By setting it to NO, Cognos will return all rows with no consolidation or summarization.




You can see the results of turning this property on and off in the screen shots below. (Note: The Student Count calculation is a count distinct of Banner ID. That explains why you see redundant rows of the College\_Desc and Campus\_Desc all showing the same number of students when the property is set to NO. Cognos will show each row of data, regardless of whether or not you have the data fields in there that make those rows distinct. It is pulling in a row of data for each student.)

CAMPUS_DESC	COLLEGE_DESC	Student Count
Other	College of Arts & Sciences	41
Paris	College of Arts & Sciences	27
Chaska	College of Business	579
Chaska	School of Engineering	11
Greece		1
Greece	College of Business	38
London	College of Business	144
London	College of Arts & Sciences	144
Taiwan	College of Business	153
St Paul		226
St Paul	School of Divinity	401
St Paul	College of Business	5,860
St Paul	School of Education	390
St Paul	School of Engineering	687
St Paul	School of Social Work	677
St Paul	Grad Prog in Software Eng	1,787
St Paul	College of Arts & Sciences	11,754
Owatonna	College of Business	392
Owatonna	School of Education	22

**Summarized**  
(Auto Group & Summarize = YES)

CAMPUS_DESC	COLLEGE_DESC	Student Count
Edina - EXT	School of Education	1
Minneapolis	College of Business	1
St Paul	College of Business	1
St Paul	College of Arts & Sciences	1
Edina - EXT	School of Education	1
Minneapolis	College of Business	1
St Paul	College of Arts & Sciences	1
Minneapolis	College of Business	1
Minneapolis	School of Education	1
St Paul	College of Business	1
Minneapolis	School of Education	1
St Paul	School of Engineering	1
St Paul	College of Arts & Sciences	1
St Paul	College of Arts & Sciences	1
MFT - EXT	School of Education	1
St Paul	College of Business	1
St Paul	College of Arts & Sciences	1
St Paul	College of Arts & Sciences	1
St Paul	College of Arts & Sciences	1




**Un-summarized**  
(Auto Group & Summarize = NO)

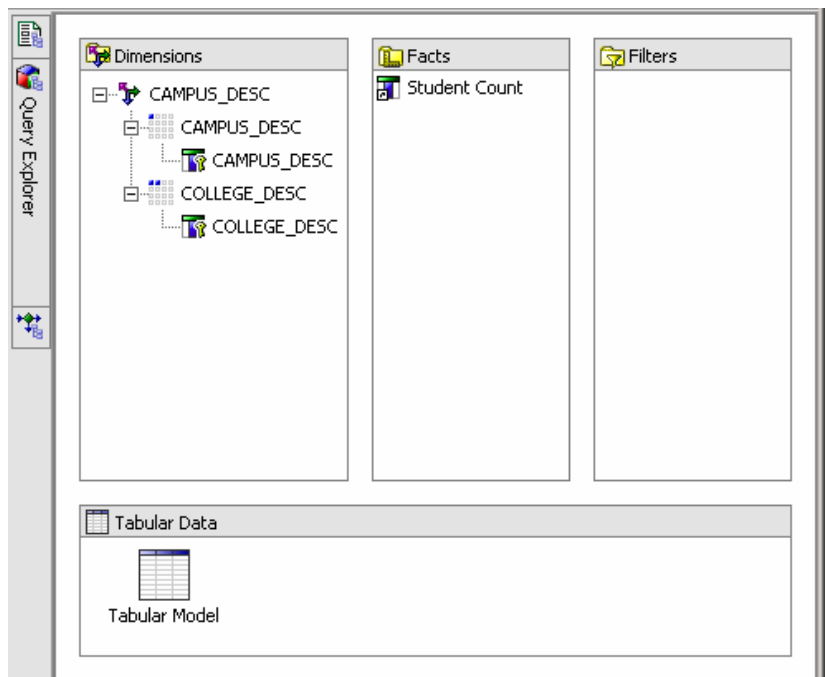
**Note:** The two tables above were produced by clicking on the View Tabular Data icon  on the toolbar. This will run just the tabular object within whatever query is currently active.

## Cube Object

The cube object is where you will organize the data into dimensions, levels and facts. A *dimension* is a hierarchy of data. An example of a standard dimension is a Time dimension – year, quarter, month, and day. Each of these items (year, month, etc.) is a *level* within the time dimension. A *fact* item is any item that either you don't want to group into a dimension or an item that you want to summarize (dollars, counts, etc.)

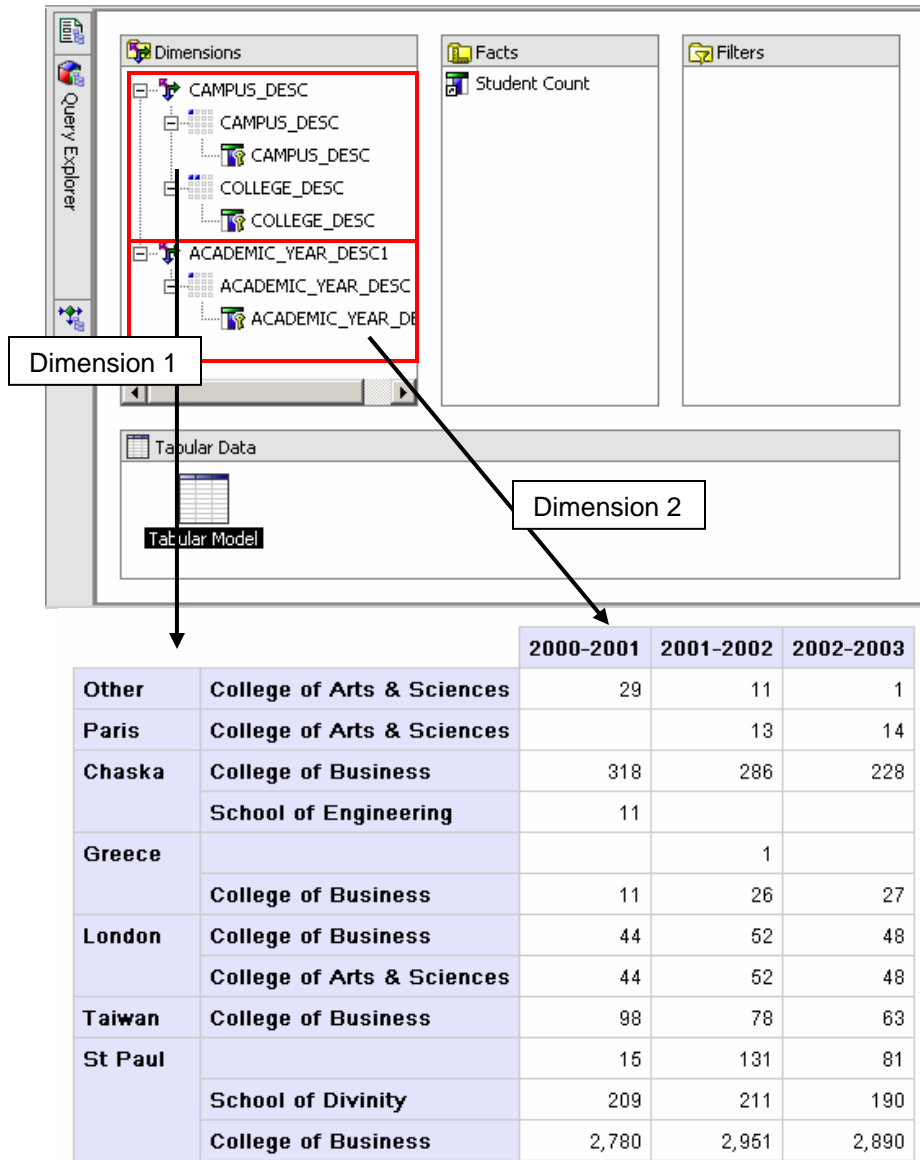
Each level represents something that is grouped in a report. The order of the levels will specify the grouping sequence in the report. The levels will also determine where aggregations (totals) can be done in a report object.

In this example, the data will be grouped first by CAMPUS\_DESC and then by COLLEGE\_DESC. This is the only dimension (hierarchy) in this query. Each dimension is designated by . CAMPUS\_DESC and COLLEGE\_DESC are the levels within this dimension. Each level is designated by . For each subsequent level within a dimension, another blue square will appear on the icon. ( is for the second level.) Student Count is our fact item – the item we want to summarize.



## One Dimension vs. Multiple Dimensions

The report object determines the number of dimensions required or allowed. If you insert a list, you can only have a one-dimensional query associated with the list. Crosstabs and charts are both multi-dimensional report objects.



If you attempt to add a list and a crosstab to the same report and base it off of the same query, you should get any error about the dimensionality of your query. Crosstabs and Charts may have any number of dimensions in their underlying queries. You can have four dimensions in a query and base your chart on two of them and base your crosstab on the other two dimensions.