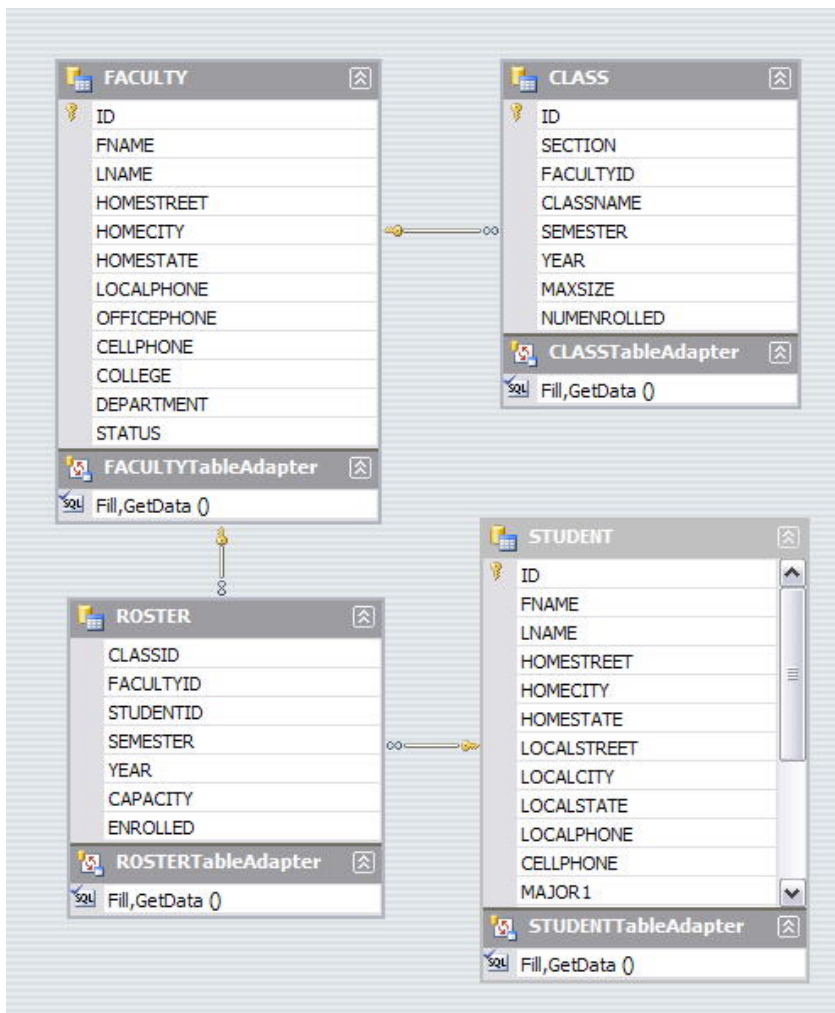


## Chapter 14 and 15 continued

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### *The sample database*

The sample database we are working with was made up as a simple schema for demonstration purposes, if we were to use this for let's say IUP data we would need many more bits of information and a more complex set of constraint and keys.



I built this using SQL Server Management Express.

Difficult if not impossible to create a composite key in the express version, this schema is very simple.

Can have: Multiple rosters for a professor

Multiple classes for a professor

Multiple Students in a Roster

**When you get a job, 99.999999% of the time you are not going to go get every single row from a table, its too much data and the better your applications perform along with the fewer bugs you produce are what is going to get you the most respect hence the most money and best projects.**

***Parameterized Query***

**Today in and in chapter 14 we demonstrate a parameterized query. A parameterized query goes and gets specific data for you.**

**So, let us pick some random info we may need:**

**1) Give me all the professors that are associate professors or better yet let me pick the type of professor to go get**

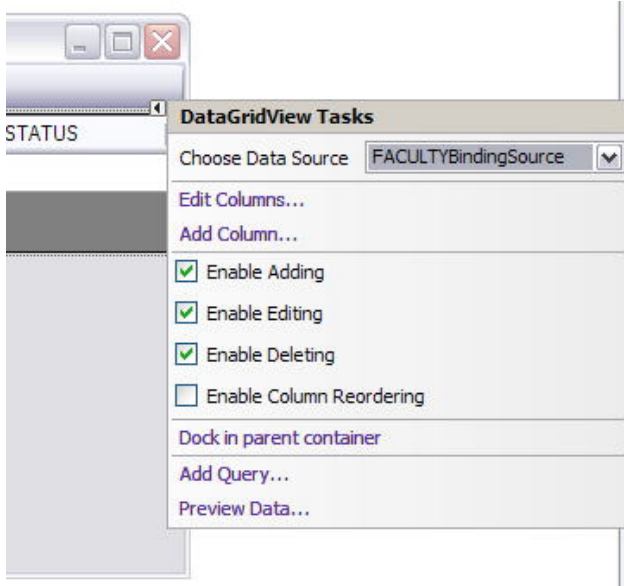
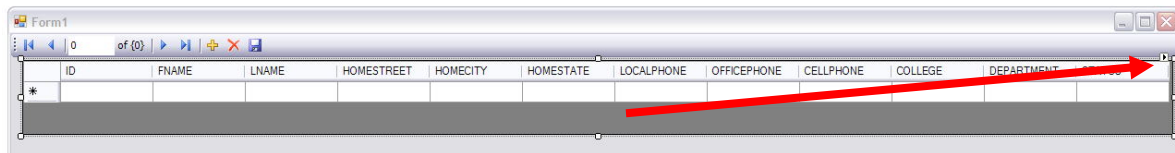
**So the query would be:**

```
SELECT FNAME,LNAME
FROM dbo.FACULTY
WHERE STATUS=@STATUS
```

**My random options for status are:**

**adjunct associate full retired**

**The smart tag**



**Each control has a smart tag, the red arrow points to the small smart tag icon.**

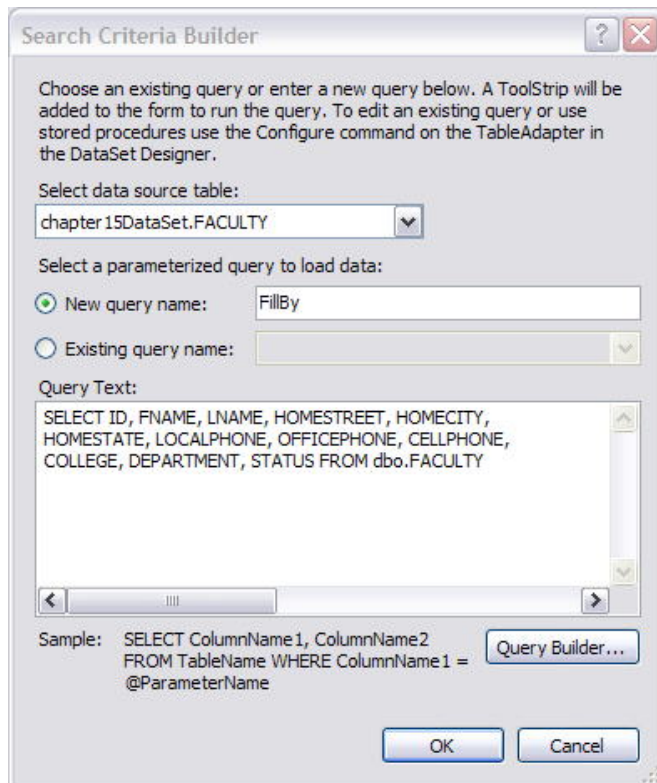
**clicking on the smart tag on any control in this case the datagridview control**

brings up the menu pictured to the left.

Notice Add Query towards the bottom.

### First Attempt Failed

My first try failed so read it but don't follow along in visual studio until after the next four pictures:

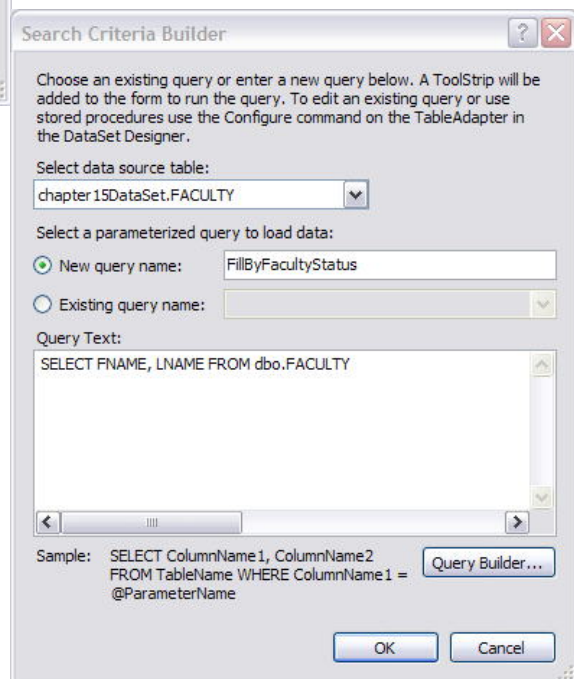


1) I chose Add Query

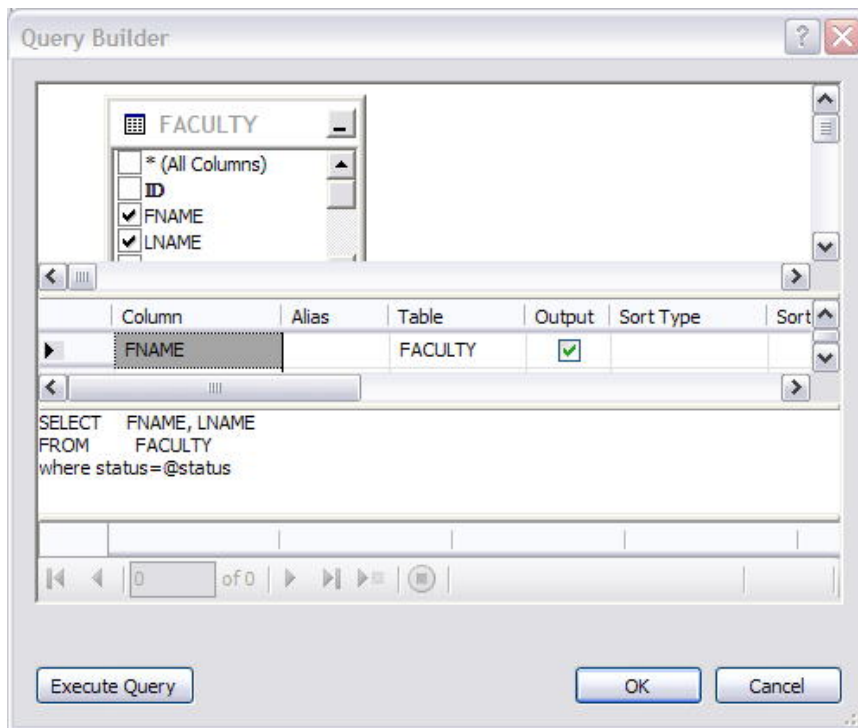
2) I immediately reduced the number of columns to the two I wanted in the result set. In the end this caused my query to not save but we will get to that at the end of this section.

There is no where clause at this point because I do not know the syntax yet

3) I then added to the query name to describe what I was trying to do and chose query builder to see what that button did hoping it would give me the proper syntax



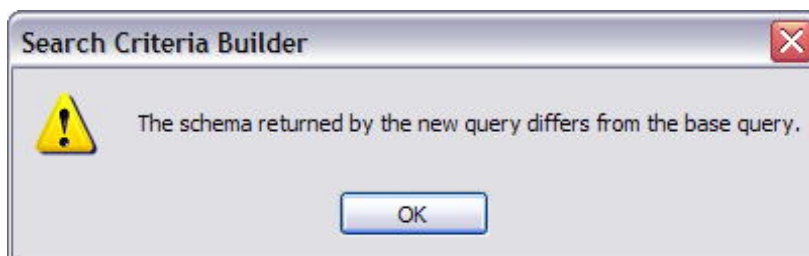
**4) After clicking the query builder button:**



**I tried a few examples and looked in the book to figure out the syntax: chapter 14 page 463**

**As soon as you save a query an additional toolbar is added to the form to add the parameter value when you debug your project.**

**If you choose execute query from the picture above a window appears to allow you to enter the value for the parameter. Results appear at the bottom of the query builder window, you may have to increase its size to see them when using the execute query button.**

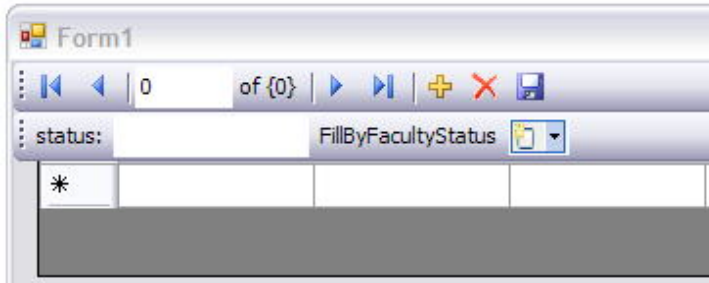


**5) when I press ok I see the following message**

**Because I changed the columns in the query I cannot save the new query using the wizard. I repeated the process above without changing the columns to see it work.**

**Fixing the failed attempt**

6) repeat process without changing columns and I see



A new toolbar is added allowing me to enter the required parameter for the query.

**Drawbacks:**

We need to know how too:

- Alter the toolbar so that if we add multiple queries we don't get a toolbar for each
- Alter the Load event handler to not fill the table when you start the program – once you execute a query there is no getting back to the original list of all rows
- Chapter 15 tells you how to fix many of the drawbacks in the automatically generated toolbars

*Instead of a DataGridView, let us try a Details view*

**Moving the Table Details to a form**

- 1) I added a new form Form2 to the project.
- 2) In order to get a details view onto a form you go to the data sources tab in your visual studio and click on the table you would like to show on your form.
- 3) As soon as you do this the form appears as in the image below:



You get a navigation bar and the label and textbox for all the columns in the table.

4) you can run this now but your Form2 will not show up.

5) add Form2.show() to the load sub routine of Form1 as an easy means of having both forms appear.

```

...
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
    'TODO: This line of code loads data into the 'Chapter15DataSet.STUDENT'
table. You can move, or remove it, as needed.
    Me.STUDENTTableAdapter.Fill(Me.Chapter15DataSet.STUDENT)
    'TODO: This line of code loads data into the 'Chapter15DataSet.FACULTY'
table. You can move, or remove it, as needed.
    Me.FACULTYTableAdapter.Fill(Me.Chapter15DataSet.FACULTY)

    Form2.Show()

End Sub
...

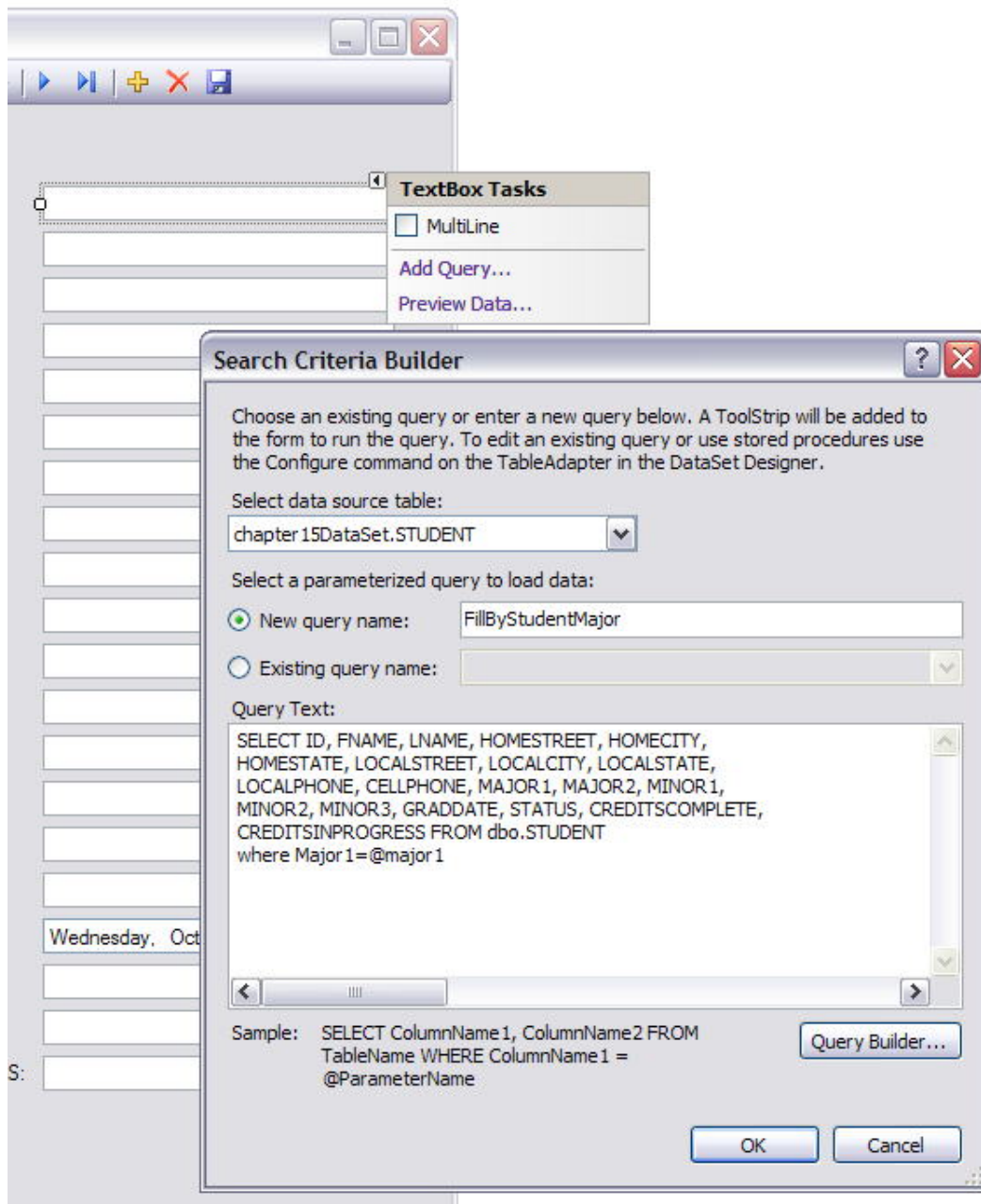
```

Debugging the project now shows both forms and allows you to navigate both tables with the navigation bar.

This time let us make up a query for the students table.

So, let us find all computer science majors from the students table.

All in one step this time because we did this already above.



**In the image above, we:**

- 1) Clicked on the ID textbox**
- 2) Clicked on it's smart tag**
- 3) Chose Add Query**
- 4) Changed the name of the query to match the task**
- 5) Added the where clause**
- 6) Clicked OK**

**Go to Chapter 14 slides page 54.**