Database Tutorials

Hello everyone… welcome to database tutorials. These are going to be very basic tutorials about using the database to create simple applications, hope you enjoy it. If you have any notes about it, please send them to **notes@mka-soft.com.** Finally if you find these tutorials are useful, it would be nice from you to send a small donation via PayPal to **donation@mka-soft.com**.

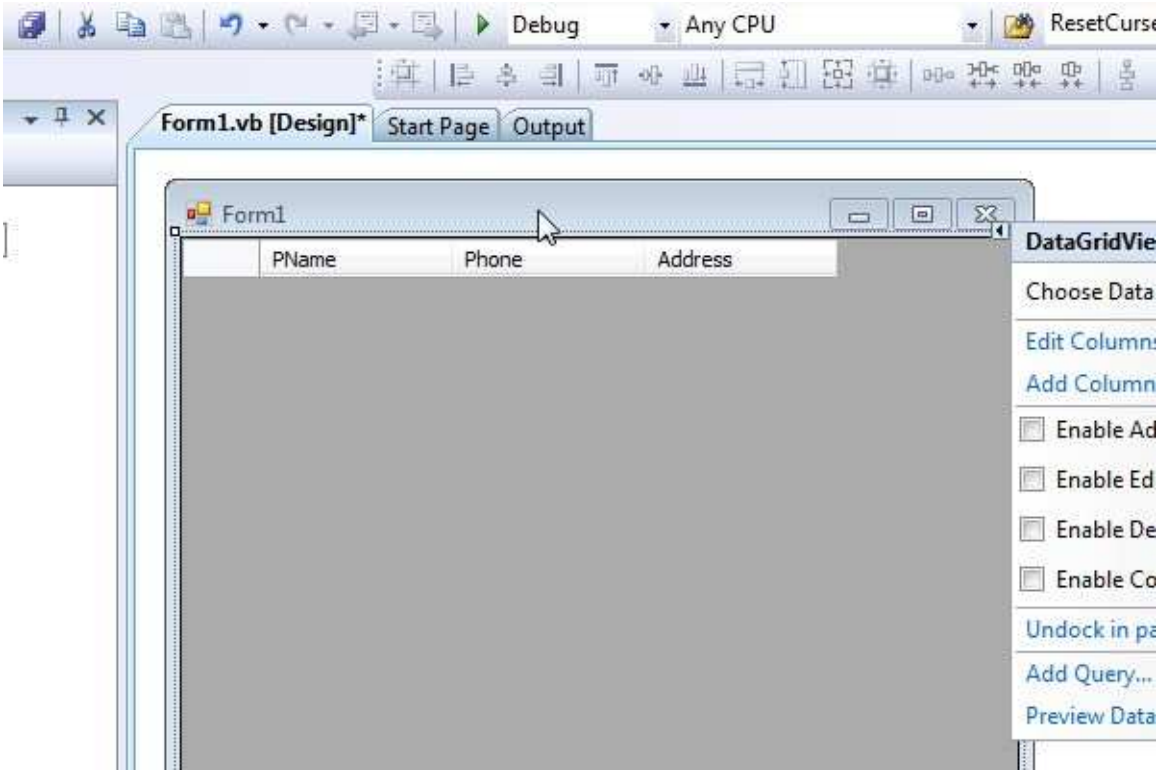
The work with this tutorial started on 2010-OCTOBER-05.

Query Adapter

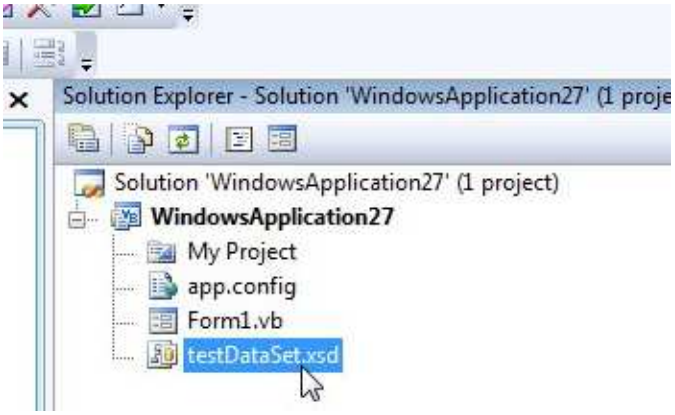
This tutorial is about queries and how you can perform insert, update or delete statements against the database in the form of a function. In this example we are going to use the following simple table:

This is a simple address book table. You can use any table you like. Next start new project, and add a datasource containing this table.

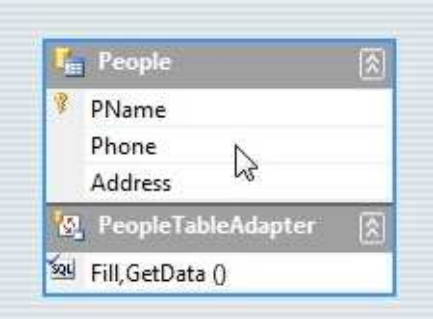
After that, create a DataGridView for this table, and remove navigation and ability to edit, remove or adding rows. Finally dock the control in parent container.



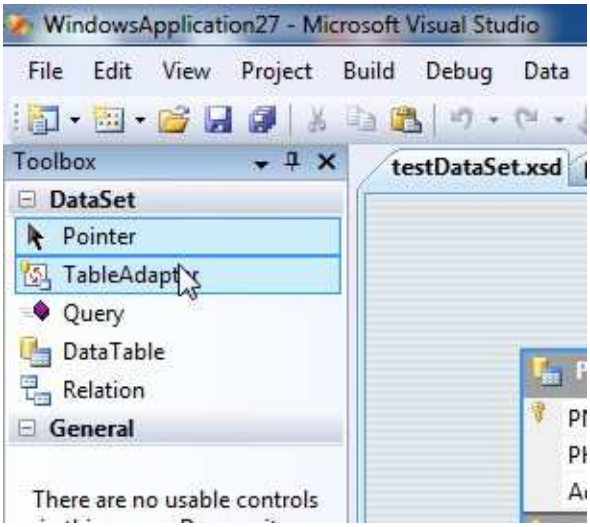
Next, we are going to create a function that performs addition of a rows into People table. To do that, first go to the DataSet that we are using. Go to the solution explorer.



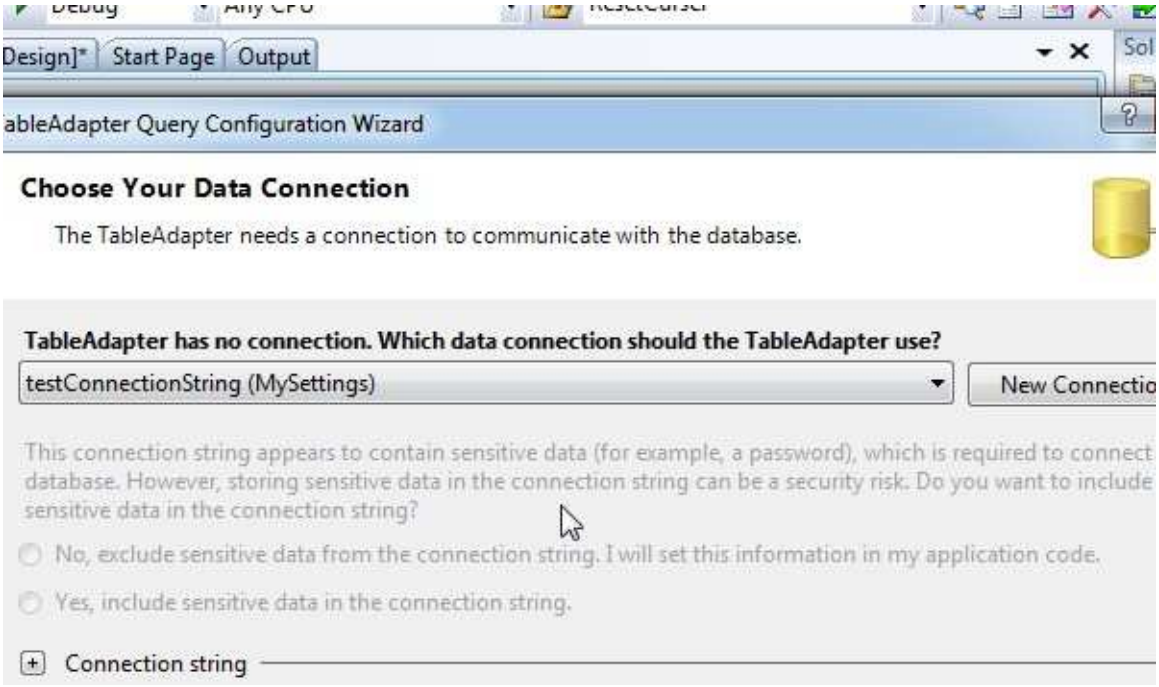
Double click that and you will be able to see the design of the table.



This is the design of the table in the database. Don't modify it. Next go to the Tool box and drag and drop a query into an empty space.

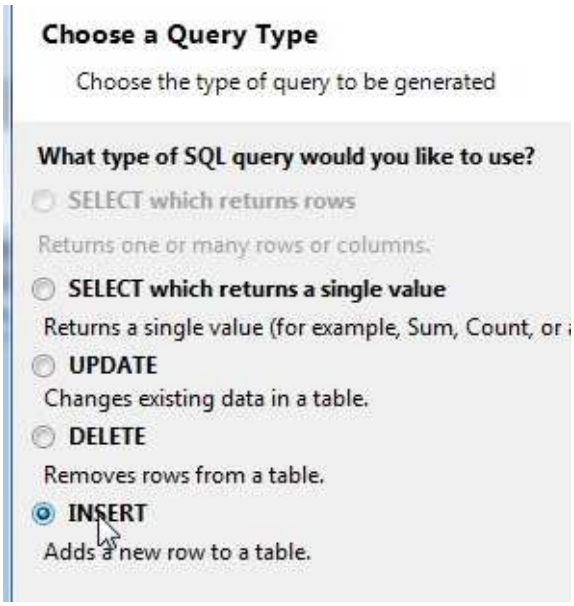


As soon as you do that you will see the wizard. Select the connection of the database (already selected).

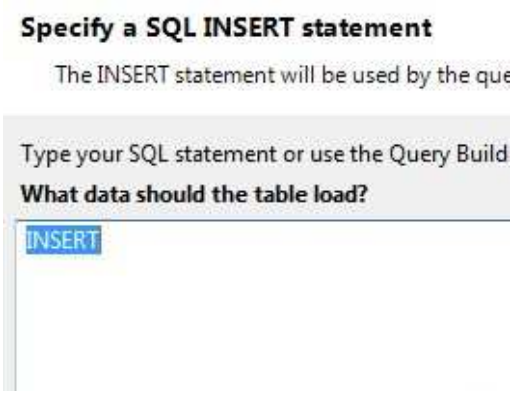


Press next

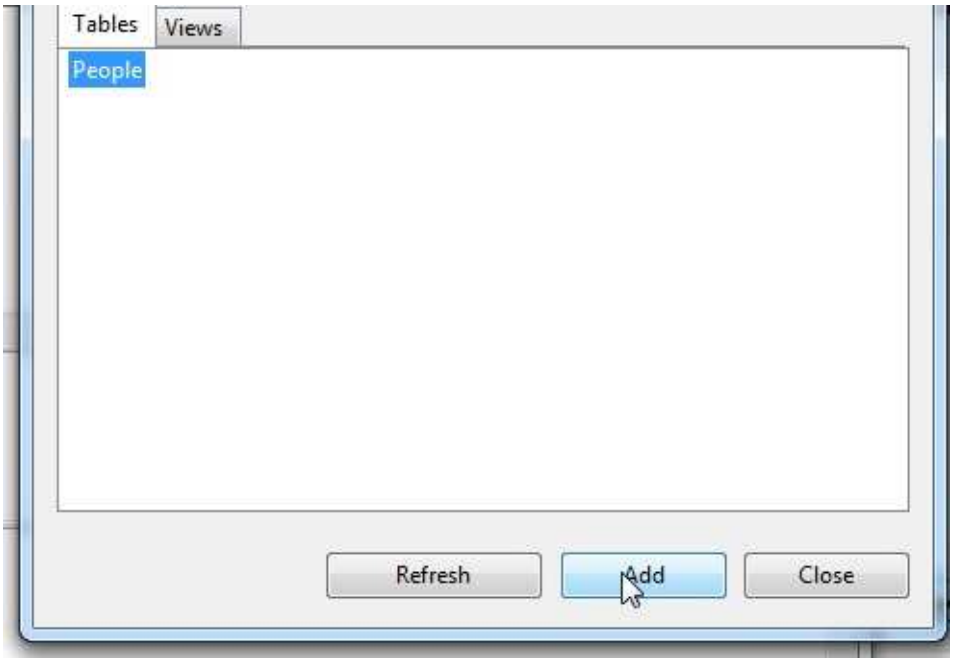
Press next



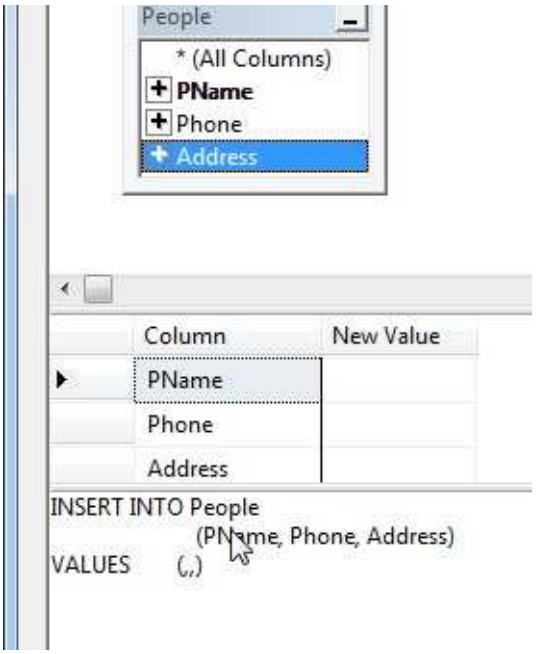
Here you can specify which type of select statement to use. Since we want to add records, select Insert. Press next



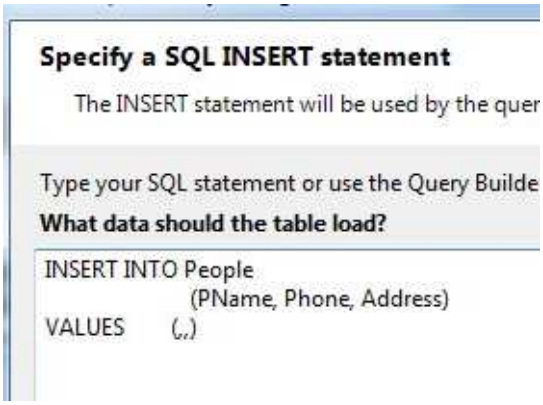
Here you specify the sql statement that will insert values to the database. For the example, we will use the wizard instead of writing the SQL statement. To do so, remove all existing text and click query builder.



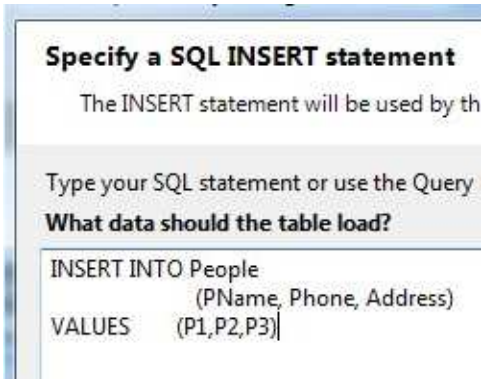
Select the table you want to work on, and click add



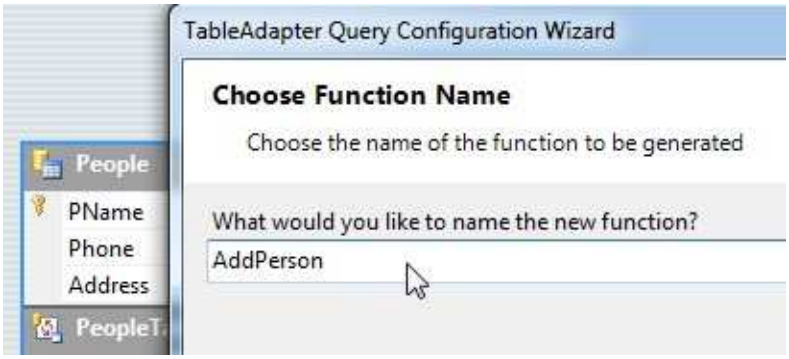
Next select the columns you want the insert statement to put values into. Close the wizard.



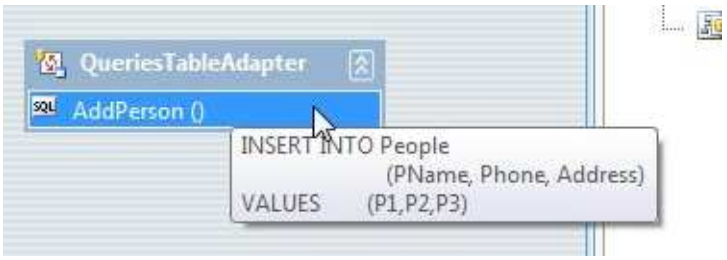
Now you get this statement. Don't press next, the sql statement is still not complete. What you should do is put parameters in the insert statement.



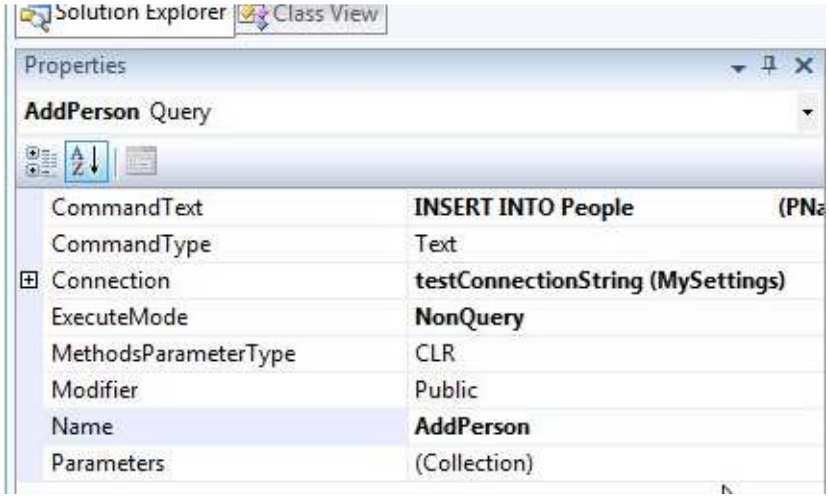
Press next



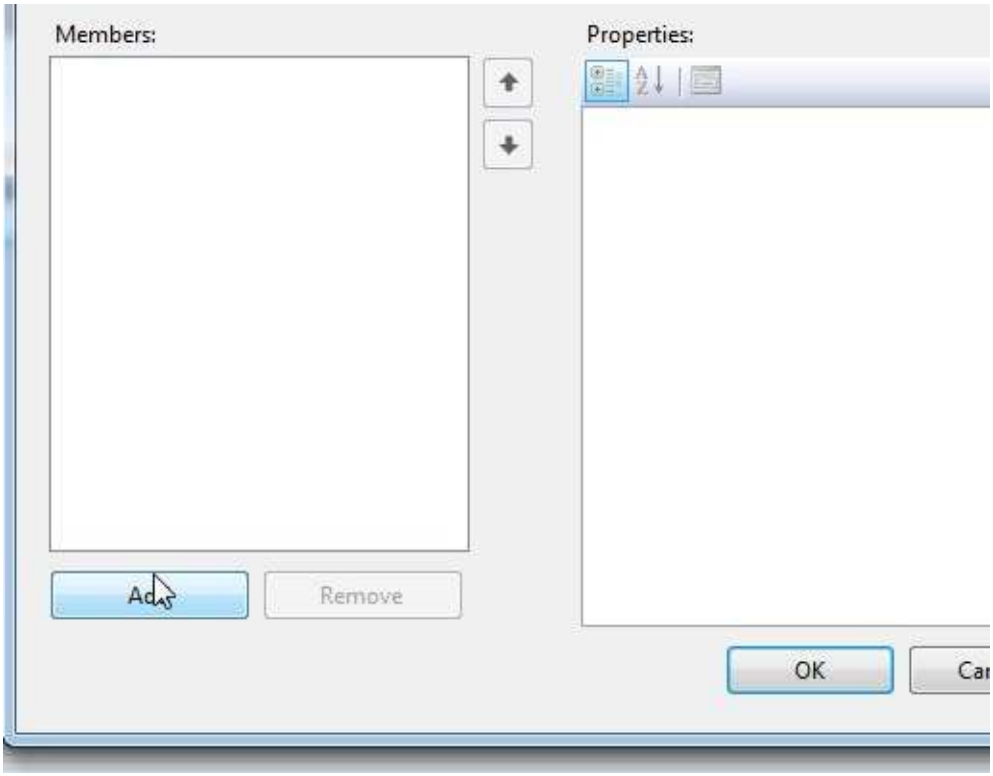
Here you should enter the name of the function, simply type a new name. In this case we call the function AddPerson. Press next then finish.



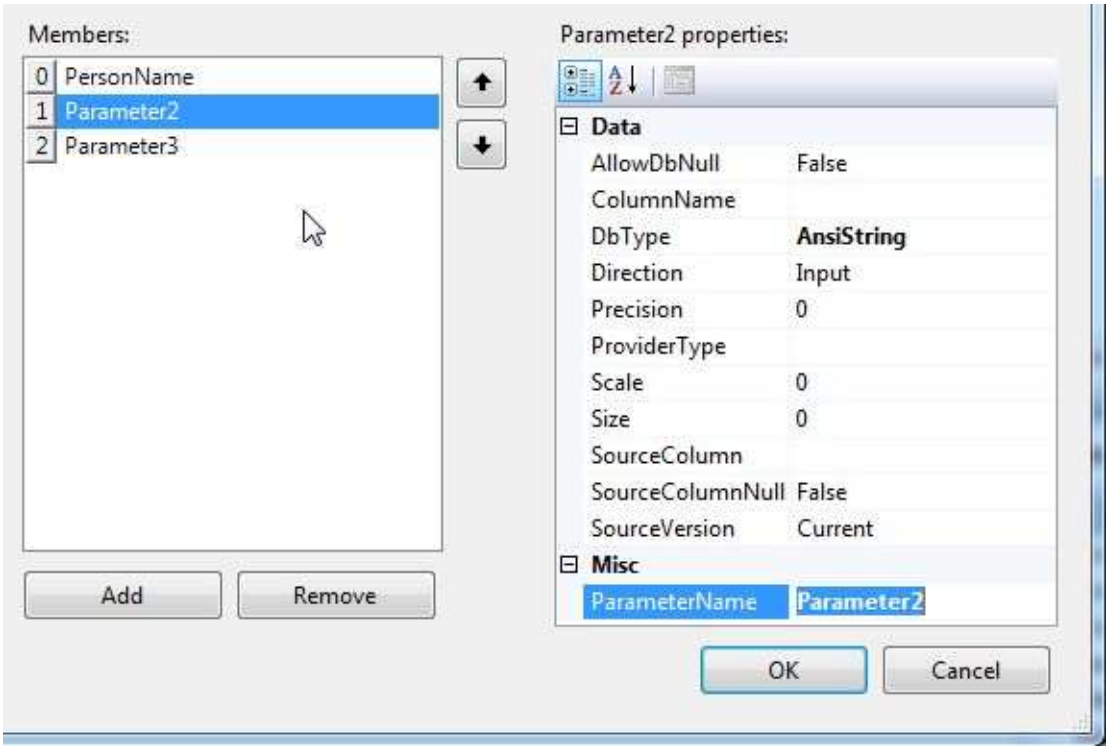
You should see the AddPerson function, go to the properties window



Click the parameters

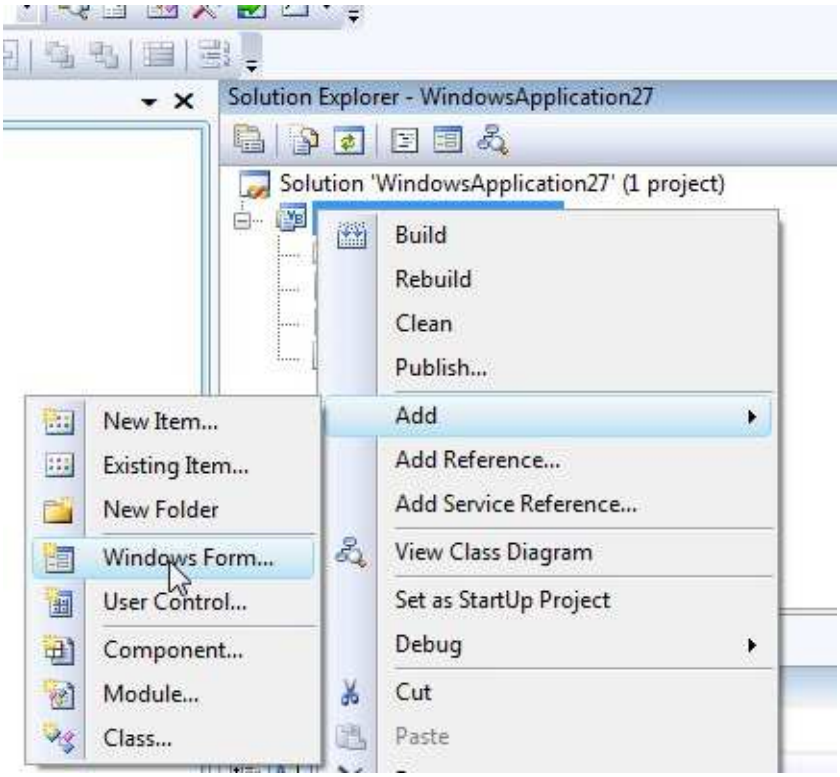


A dialog appears which will help you add parameters. Add three parameters

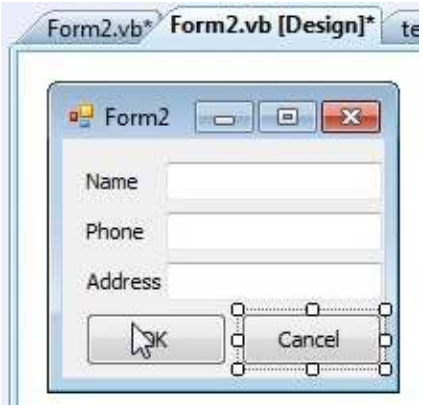


Next change the name of parameters to be meaningful. First parameter will be PersonName, second will be PersonPhone, and the last will be PersonAddress. The parameters will be mapped according to the order of columns in the Insert statement previously generated by the wizard. After than click ok.

Now you see the query has parameters. We are ready to use it. So we are going to create a form that will allow us to fill three values (name, phone, and address).



Right click the project, and add a windows form.



Add labels and text boxes and buttons to be similar to what you have in the picture.

For the cancel button, add the following code:

```
Me.Close()
```

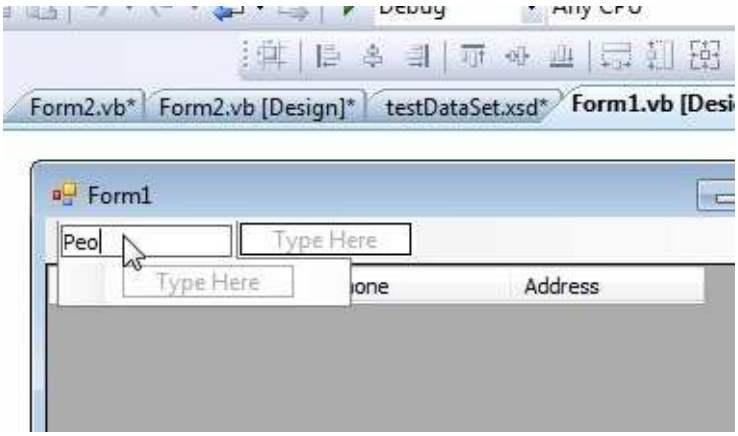
The ok button needs the following code:

```
Dim QA = New WindowsApplication27.testDataSetTableAdapters.QueriesTableAdapter

    QA.AddPerson(TextBox1.Text, TextBox2.Text, TextBox3.Text)
Me.Close()
```

The QA here represents a query adapter object. So you need to create a new object. As for the data type, you start from your project name (WindowsApplication27 in this example), then to the table adapters (testDataSetTableAdapters) and finally to the QuieriesTableAdapter.

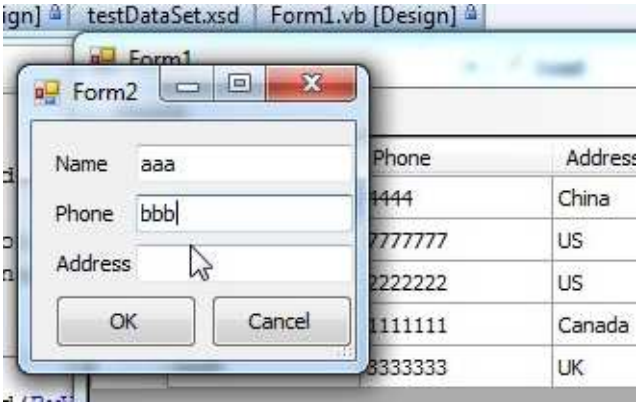
The line QA.AddPerson will allow you to perform the insert statement against the database. Next go to the main window, and add a menu strip



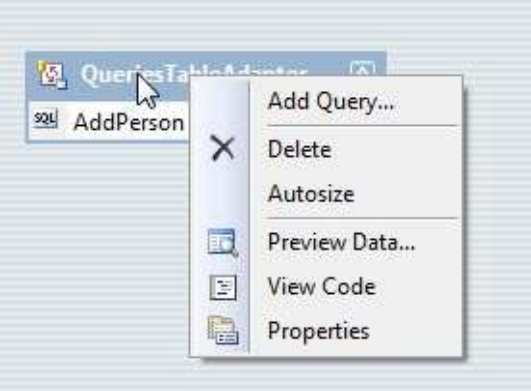
Add main menu People, and Add submenu. Next add the following code the menu code:

```
Form2.ShowDialog()
Me.PeopleTableAdapter.Fill(Me.TestDataSet.People)
```

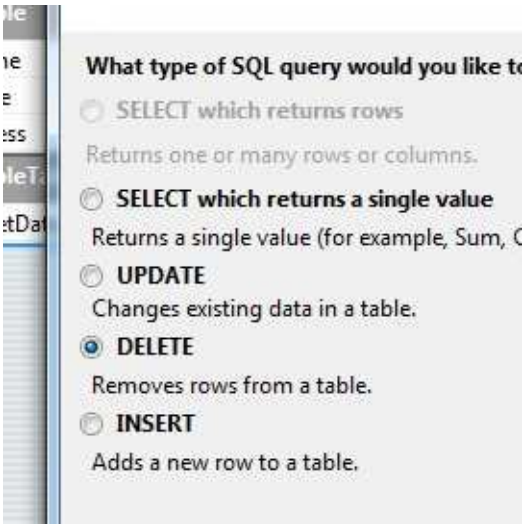
Try running the code, and you will find that you can add data into the table.



Next in a similar way we add another method to remove a record.



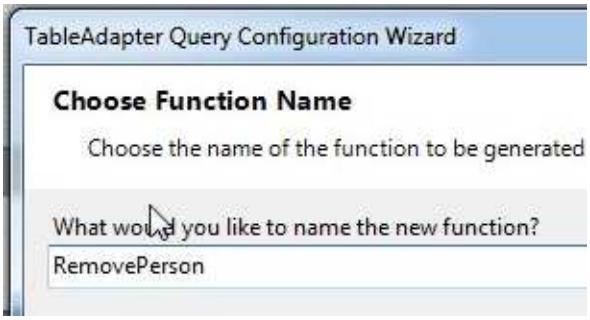
Select Add Query



Select Delete, for its code, just write:

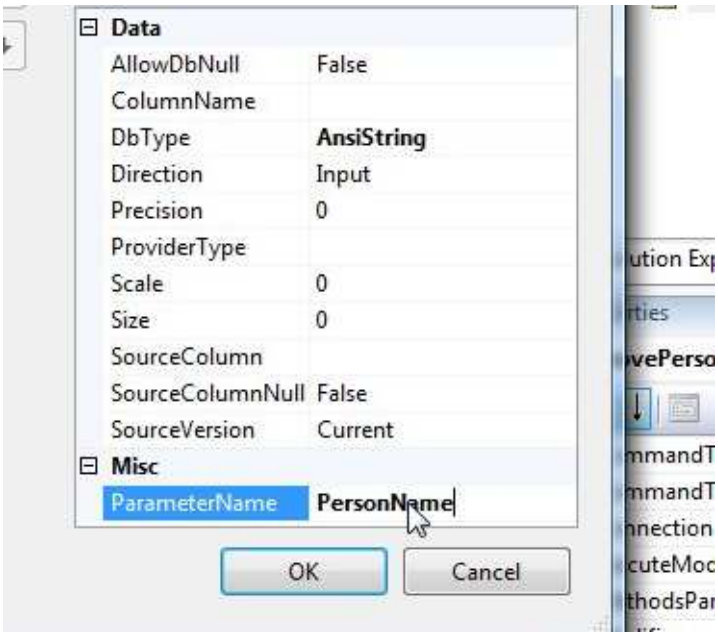
Delete from People where PName=P1

You can use the wizard to achieve the same thing.



Name this function RemovePerson

Also create a parameter and call it PersonName



Now you are ready to use the function. On the main form, add a menu entry to remove a record, and in the handler add the following code:

```
Dim NME As String
NME = PeopleDataGridView.SelectedRows(0).Cells(0).Value

Dim QA = New WindowsApplication27.testDataSetTableAdapters.QueriesTableAdapter
QA.RemovePerson(NME)

Me.PeopleTableAdapter.Fill(Me.TestDataSet.People)
```

First two lines gets the name of the person selected in the datagridview

The next lines removes the person, and the final line updates the display.

Try the code and experiment removing records.

Similarly you can add another function to – for example – get the number of records in the table. This is a quick example to working with query adapters and performing queries against the database. However this example does not have enough code to perform validation, or have a professional look. Check out the video on the site to see how to add these.

So this will be all for today. If you have questions or notes, send them to notes@mka-soft.com.

Thank you.

mkaatr