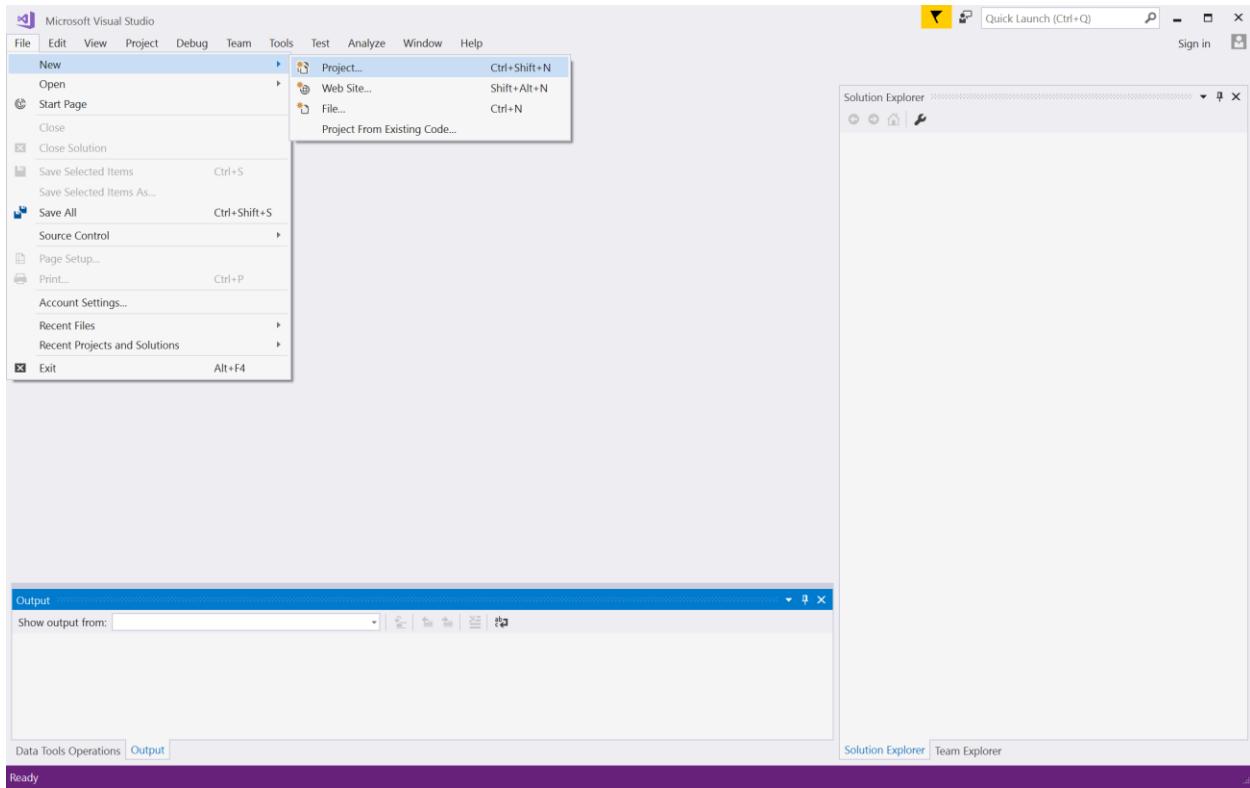
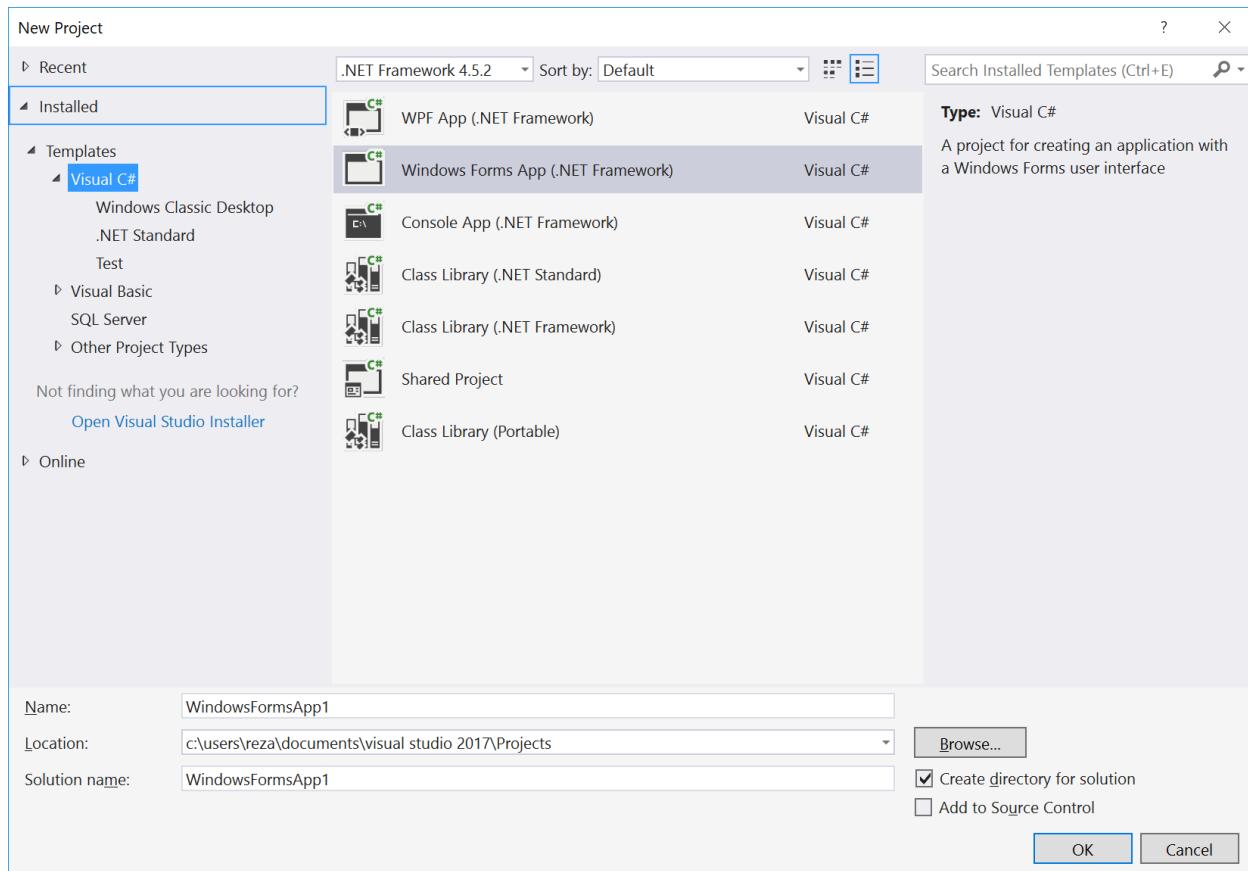
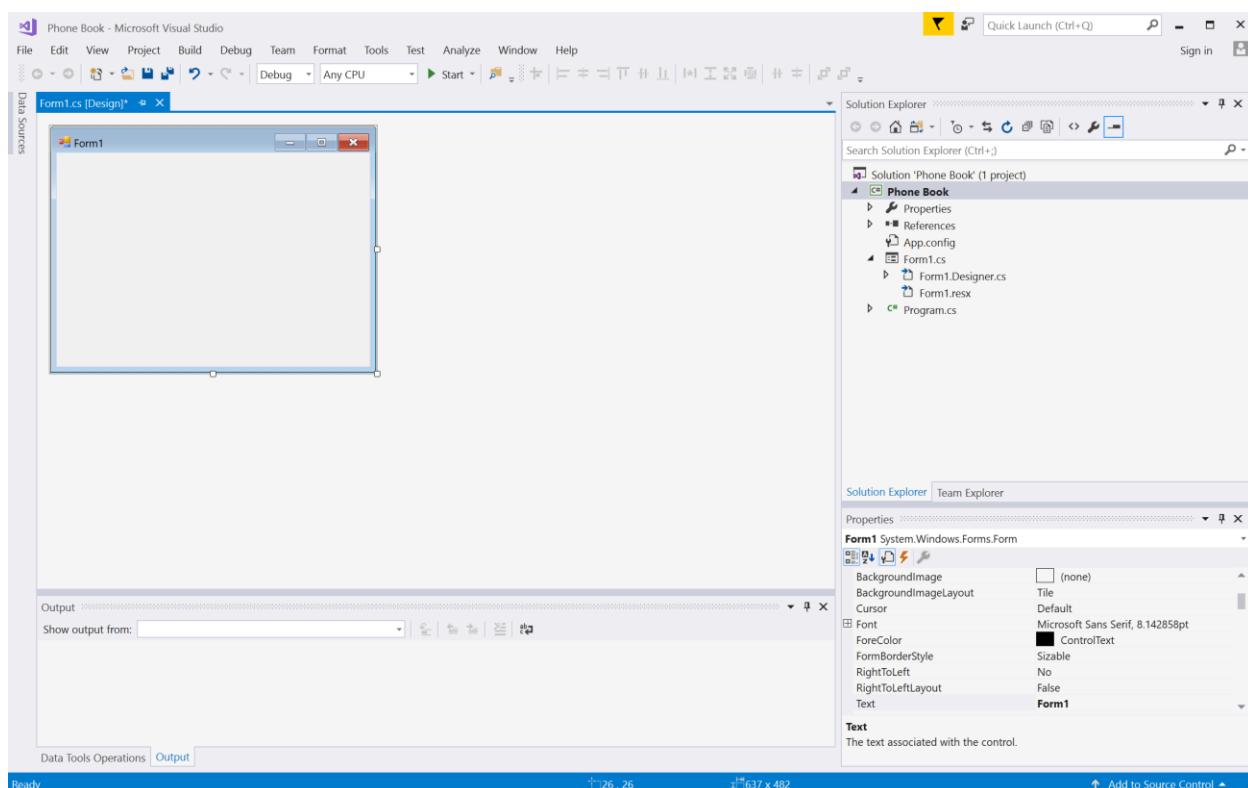
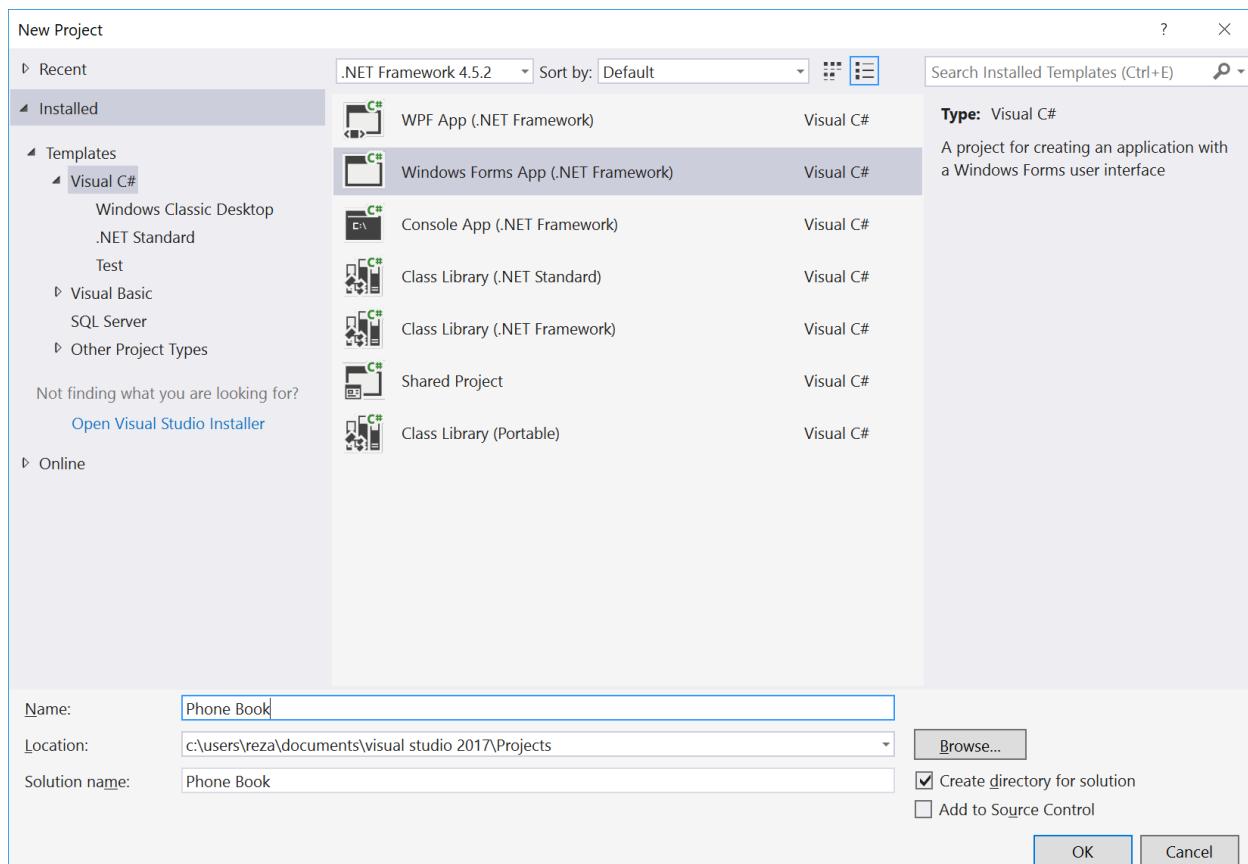
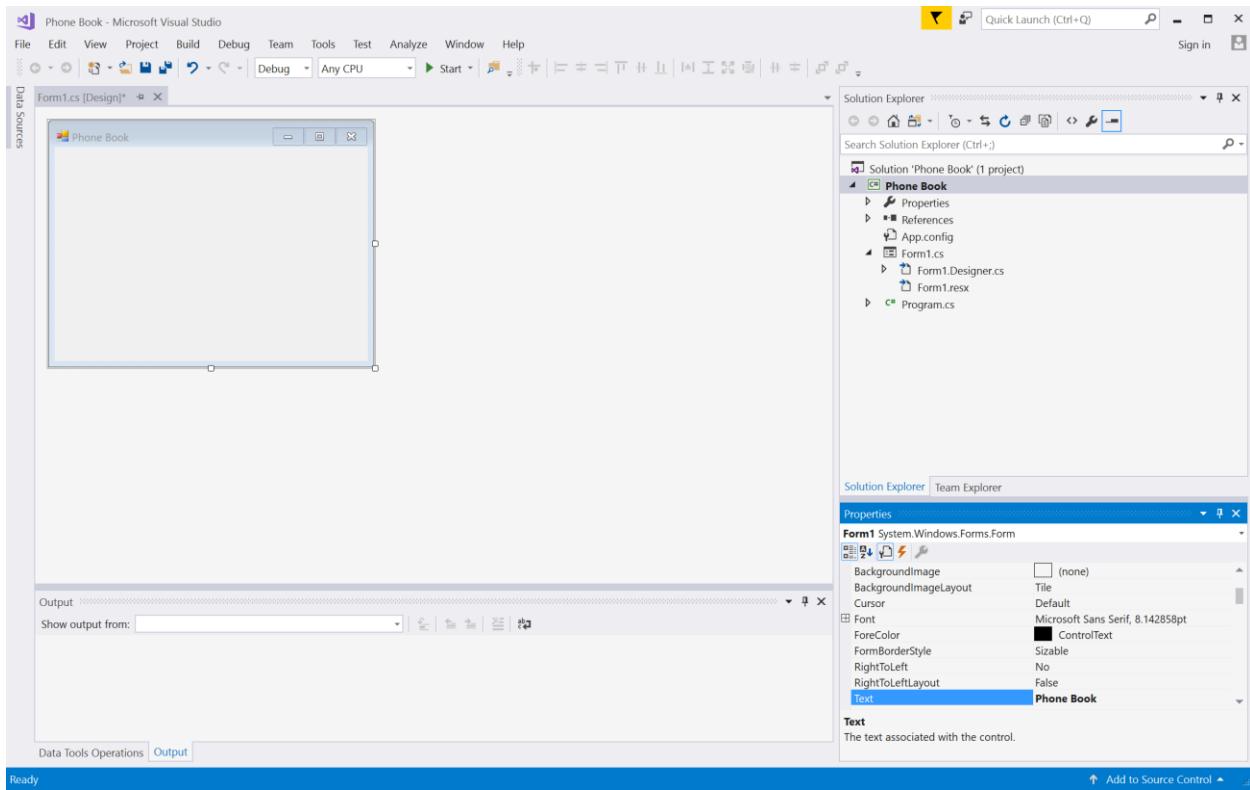


Create a new project in Visual Studio and change the name of the form to Phone Book as shown:

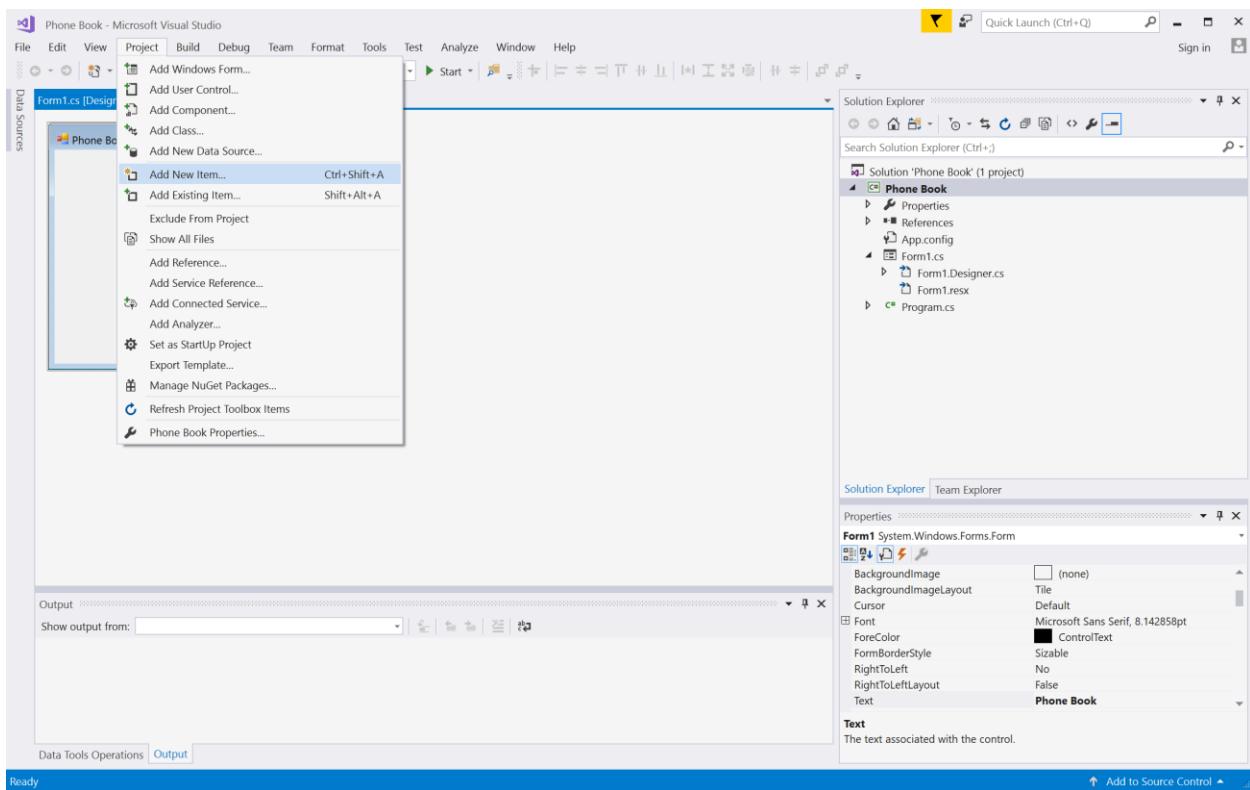


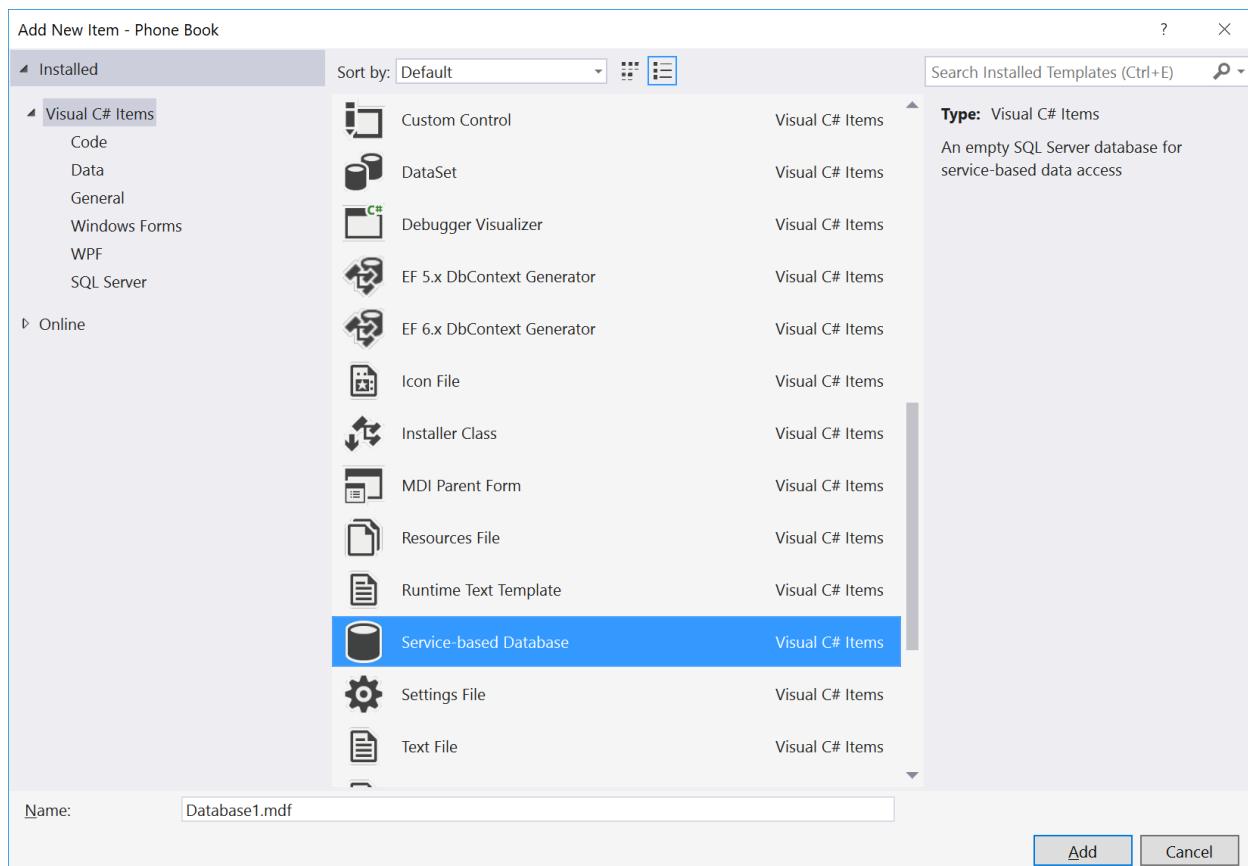


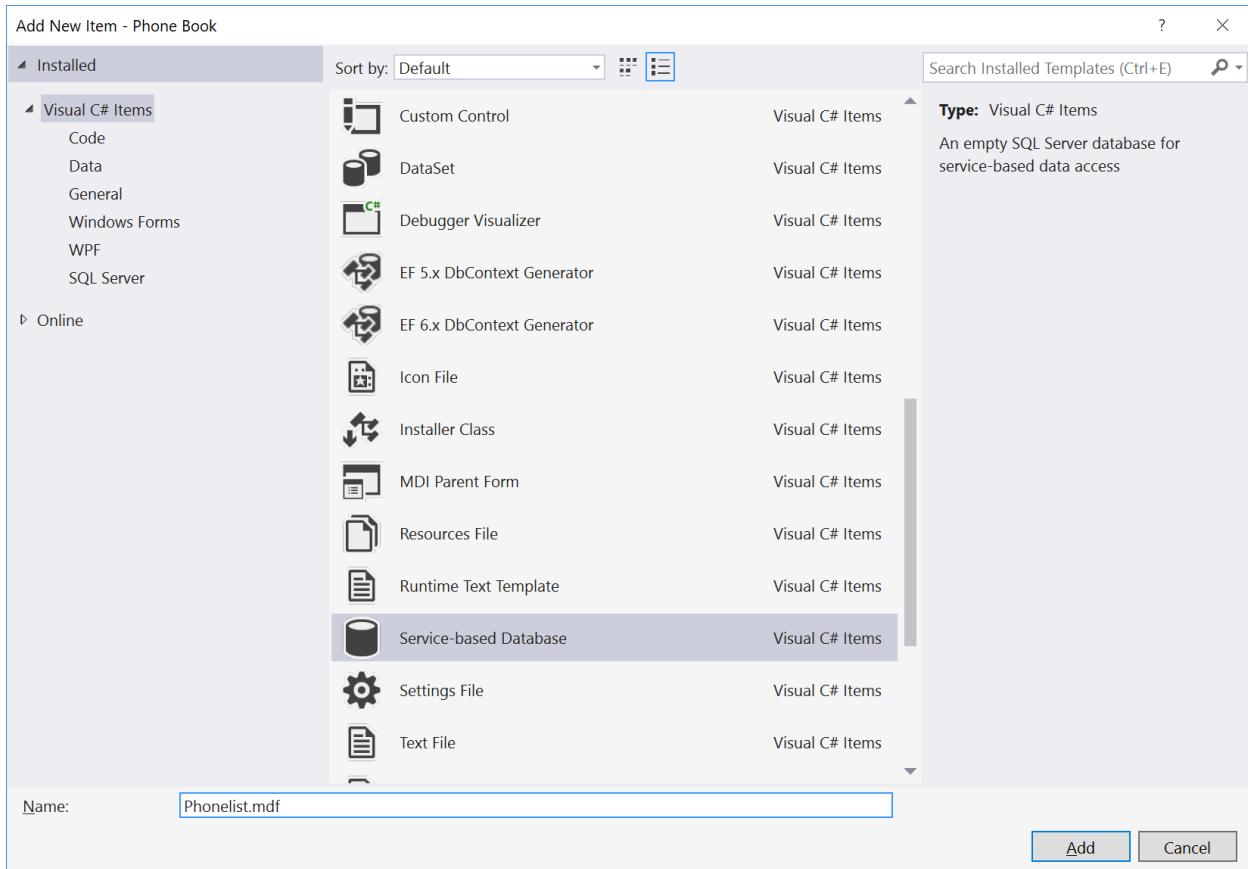




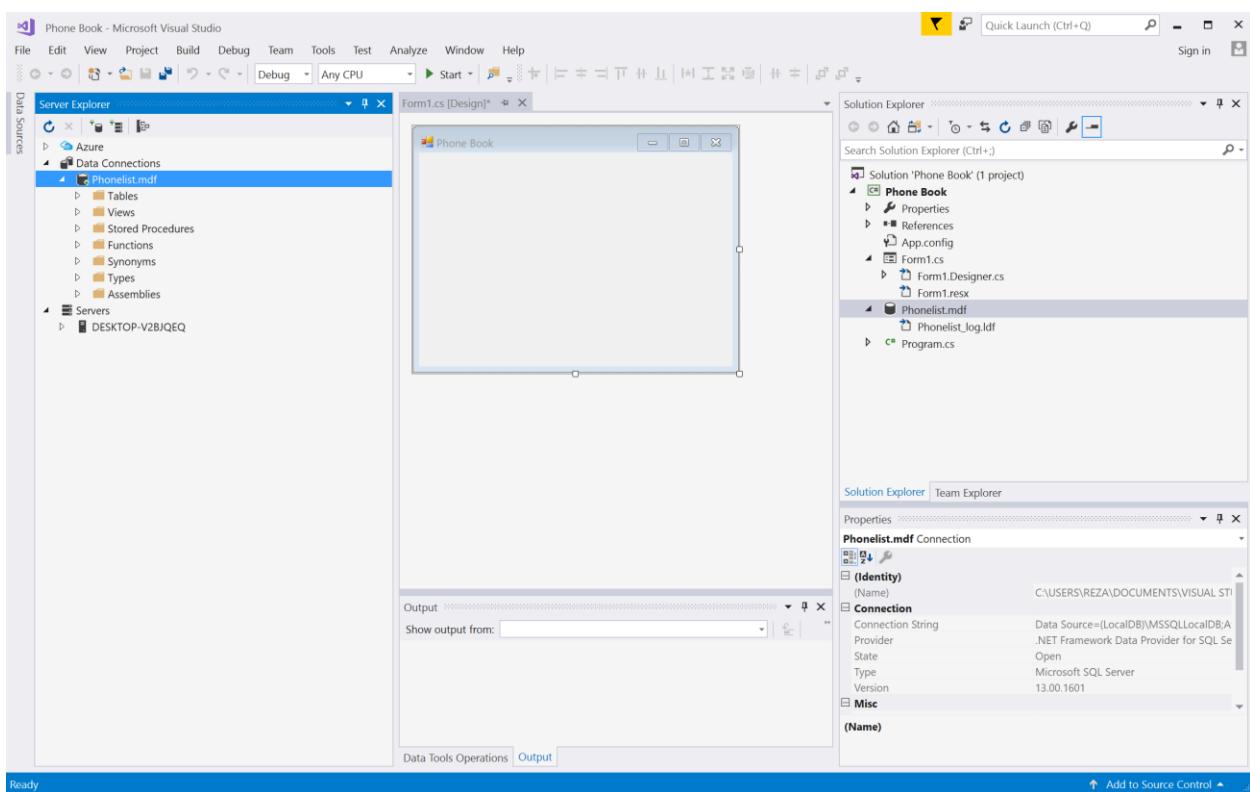
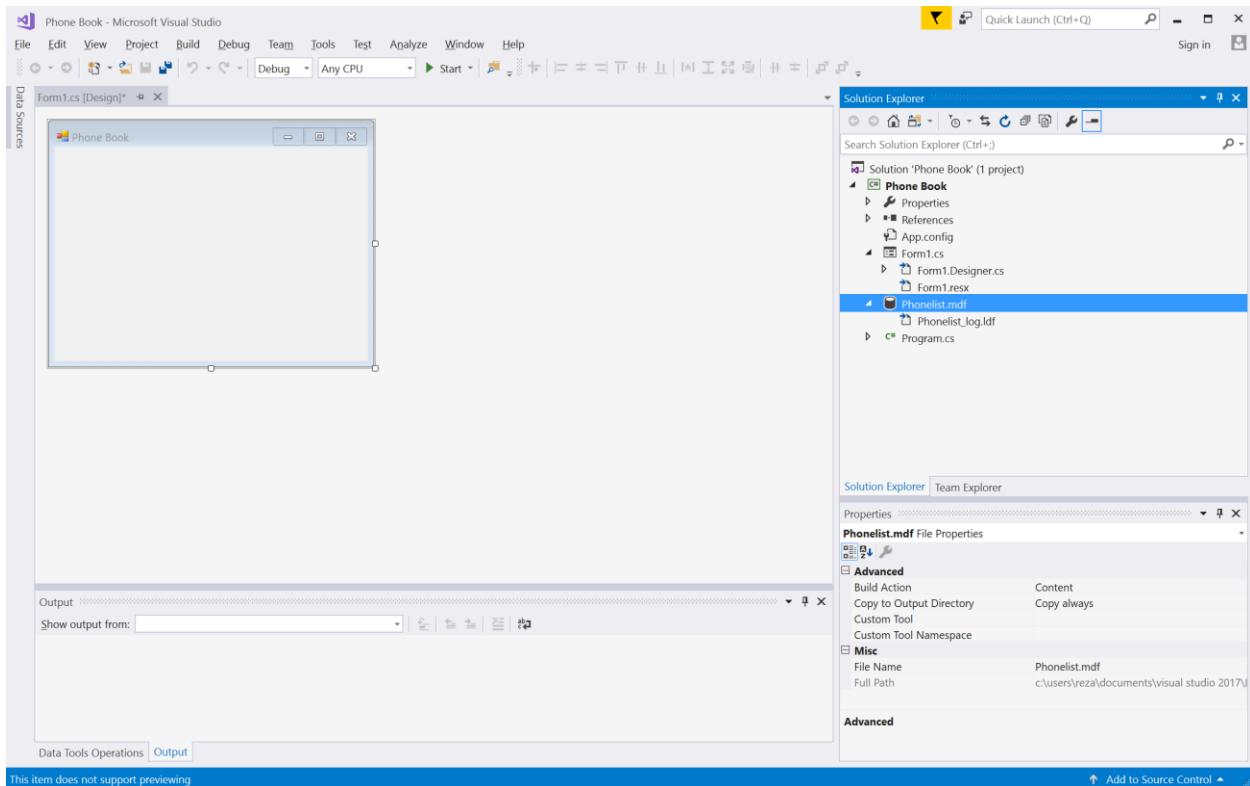
Then create a new database as shown in the following screen captures:



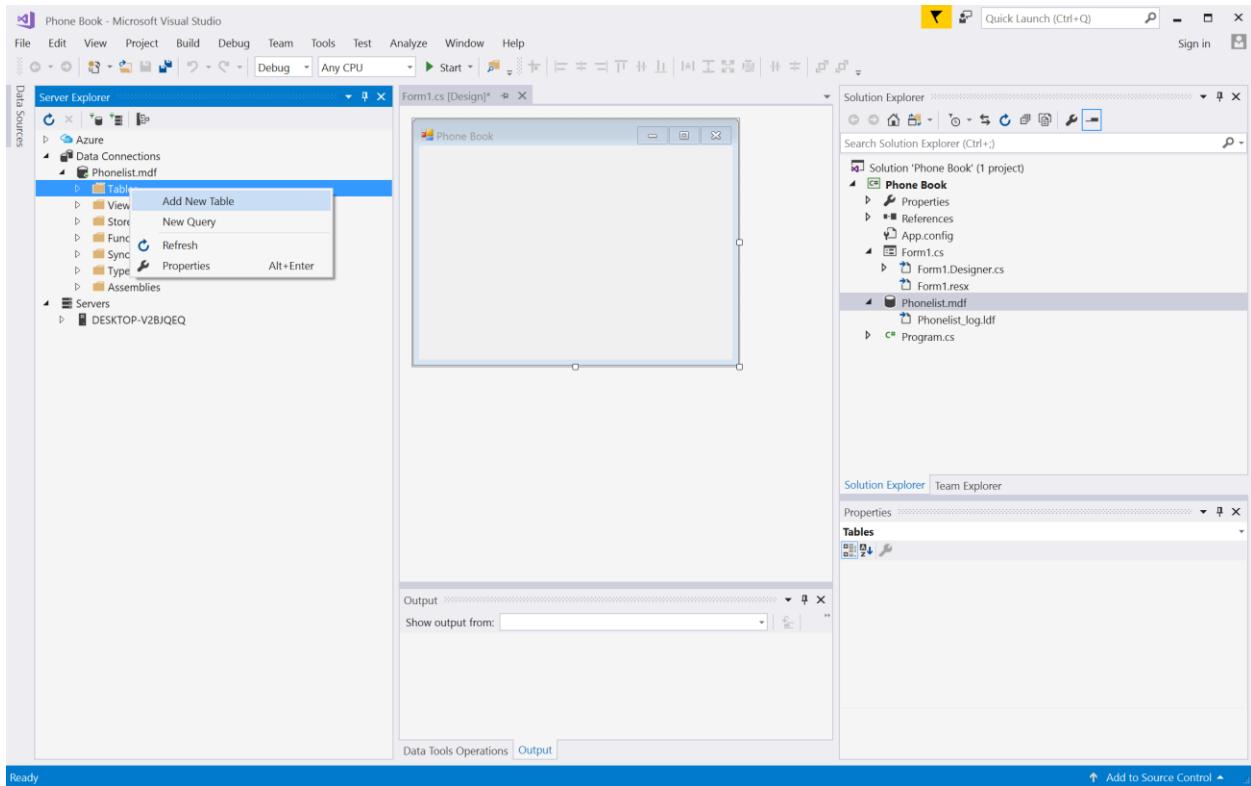




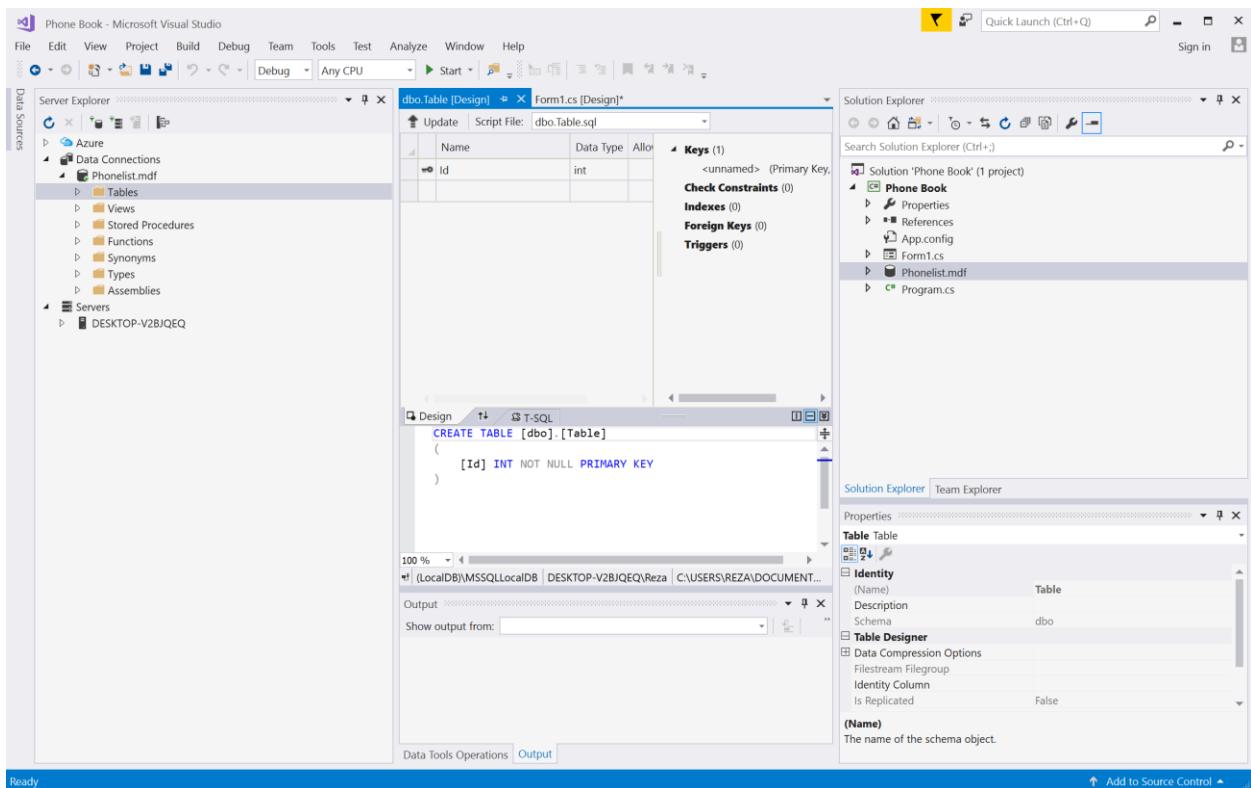
Click Add and in Solution Explorer notice that we now have an entry named “Phonelist.mdf”, double click on that to open the Server Explorer window at the left side of the screen:



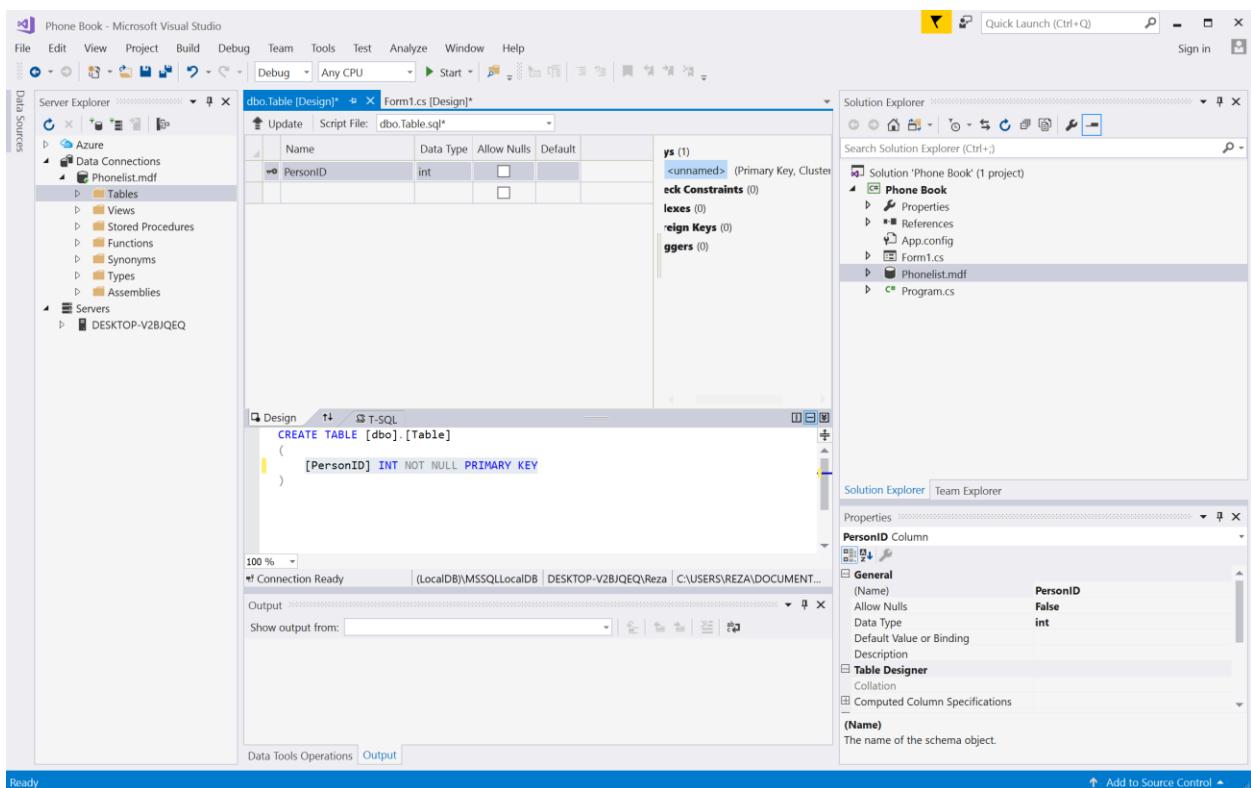
Right click on Tables and select Add new table:



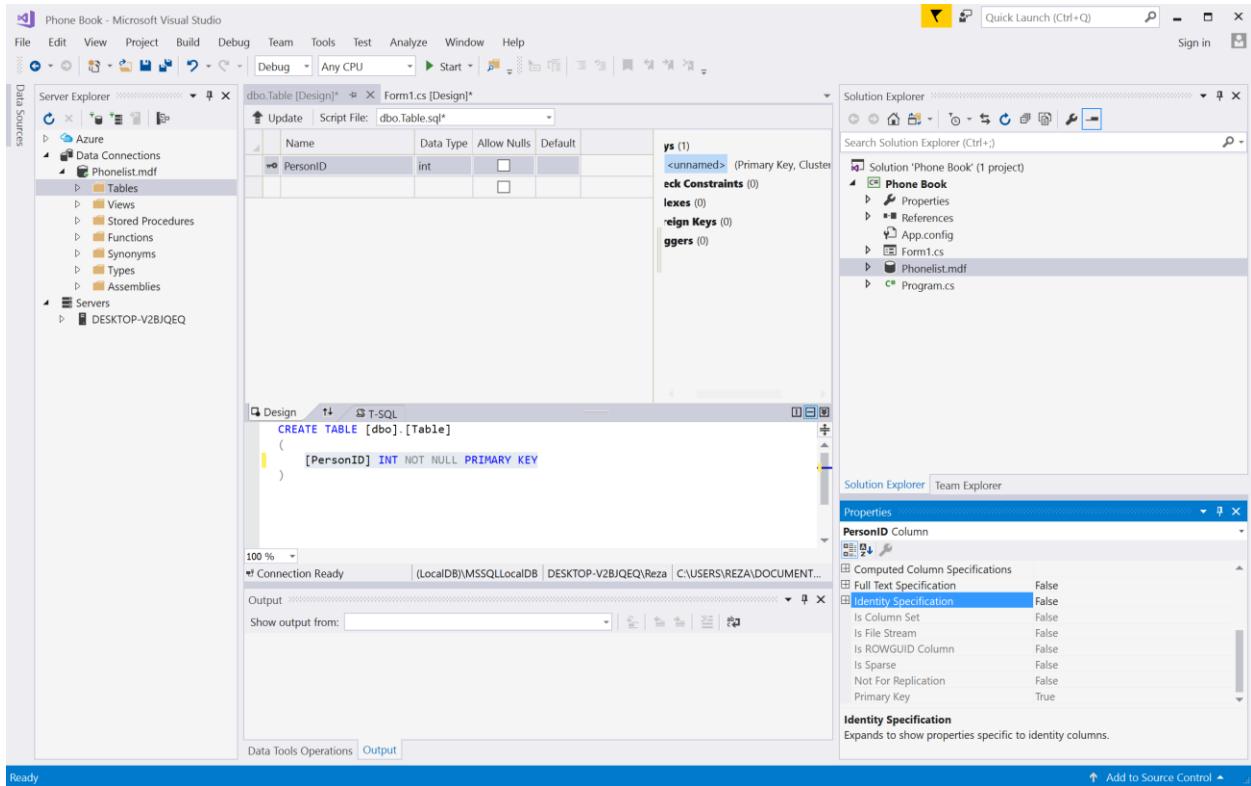
That will display the table designer tool at the centre of the screen that you can use to add columns to the table as shown:



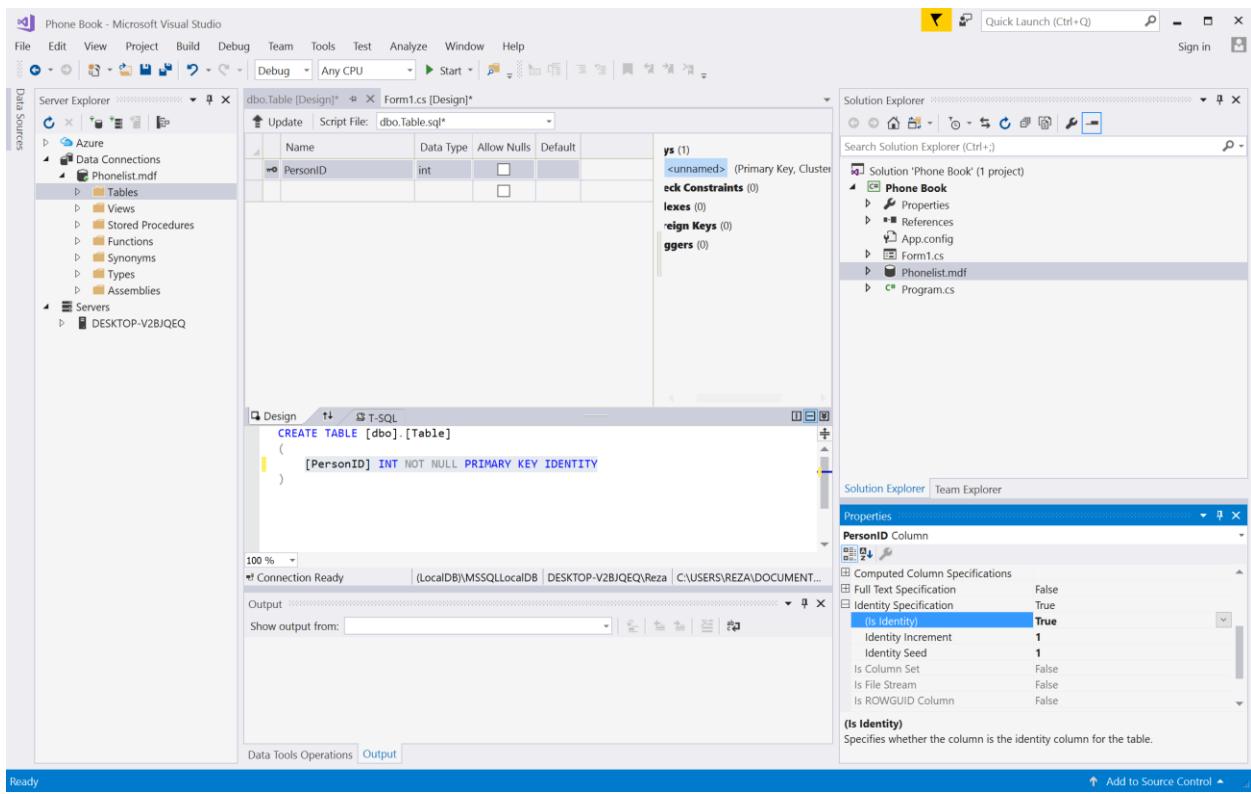
Click the Id column and change it to PersonID:



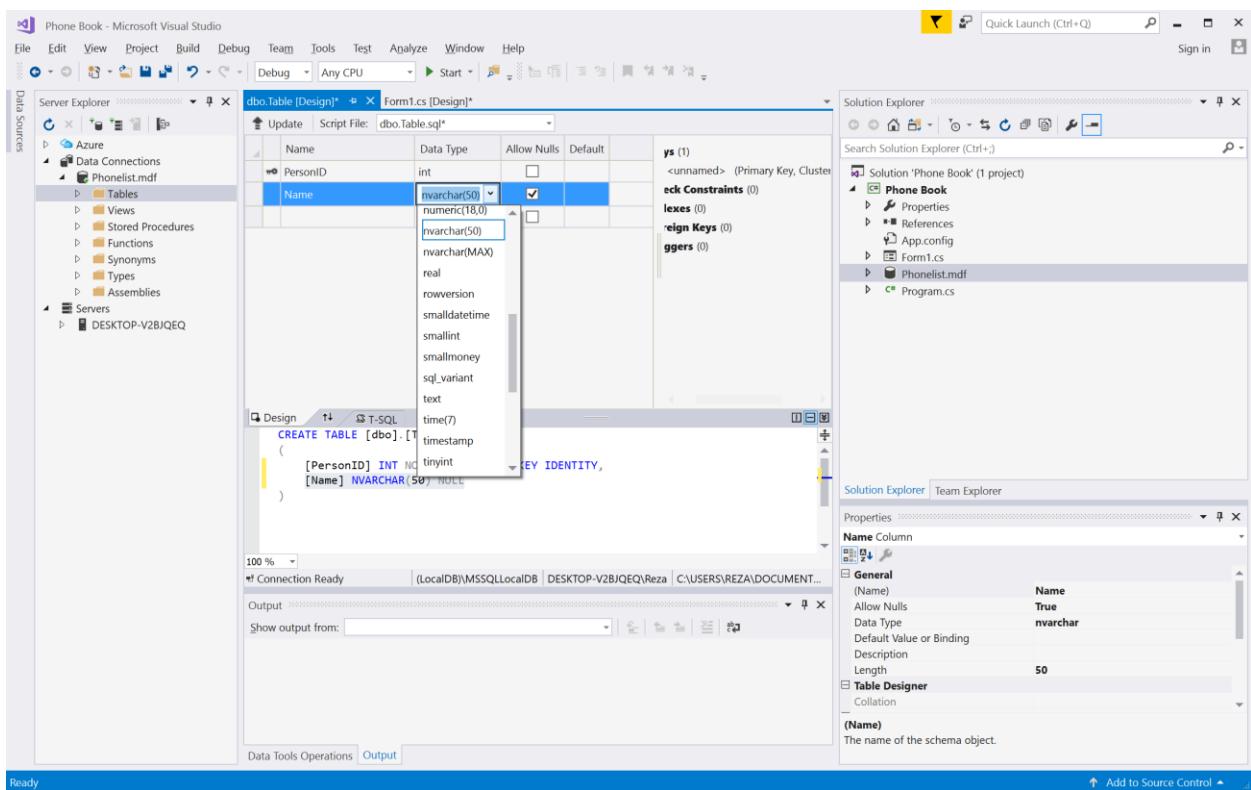
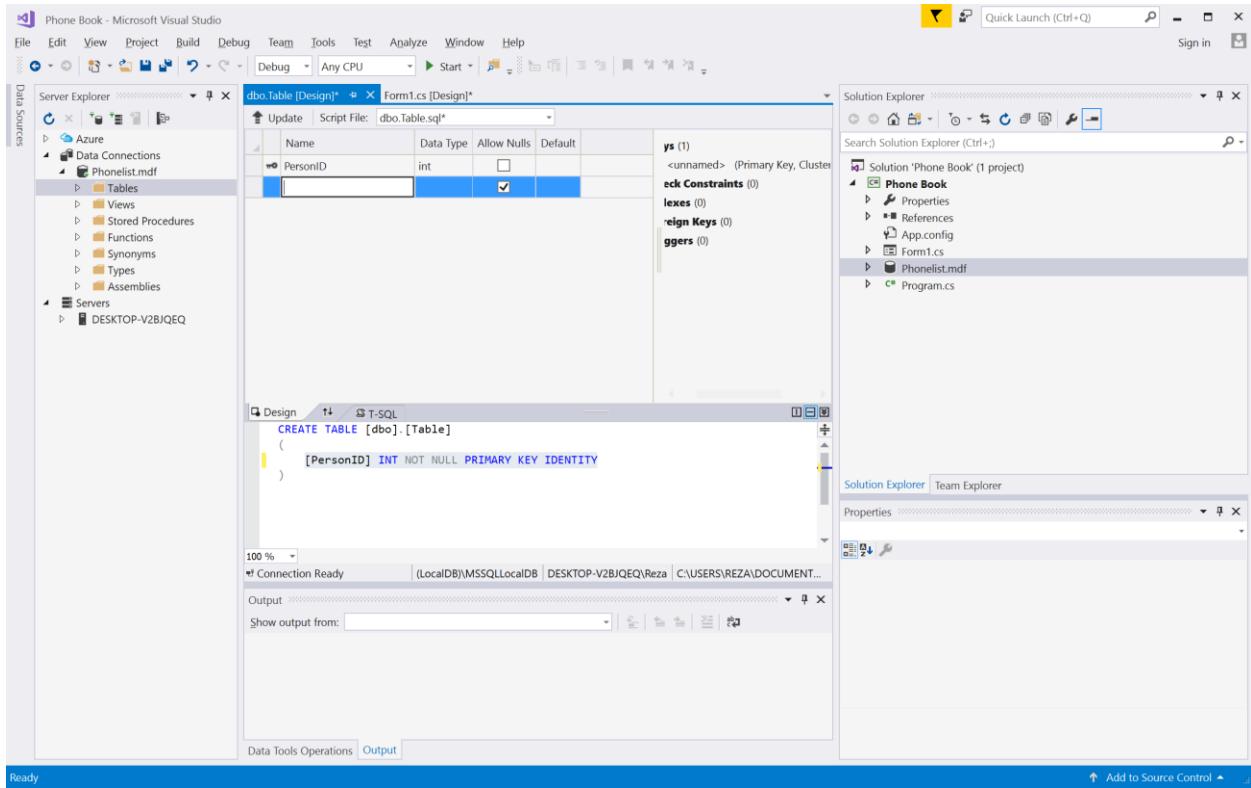
With PersonID selected in the Properties window double click on Identity Specification to make PersonID an identity column (we want this column to have a unique value for each record in the Database):



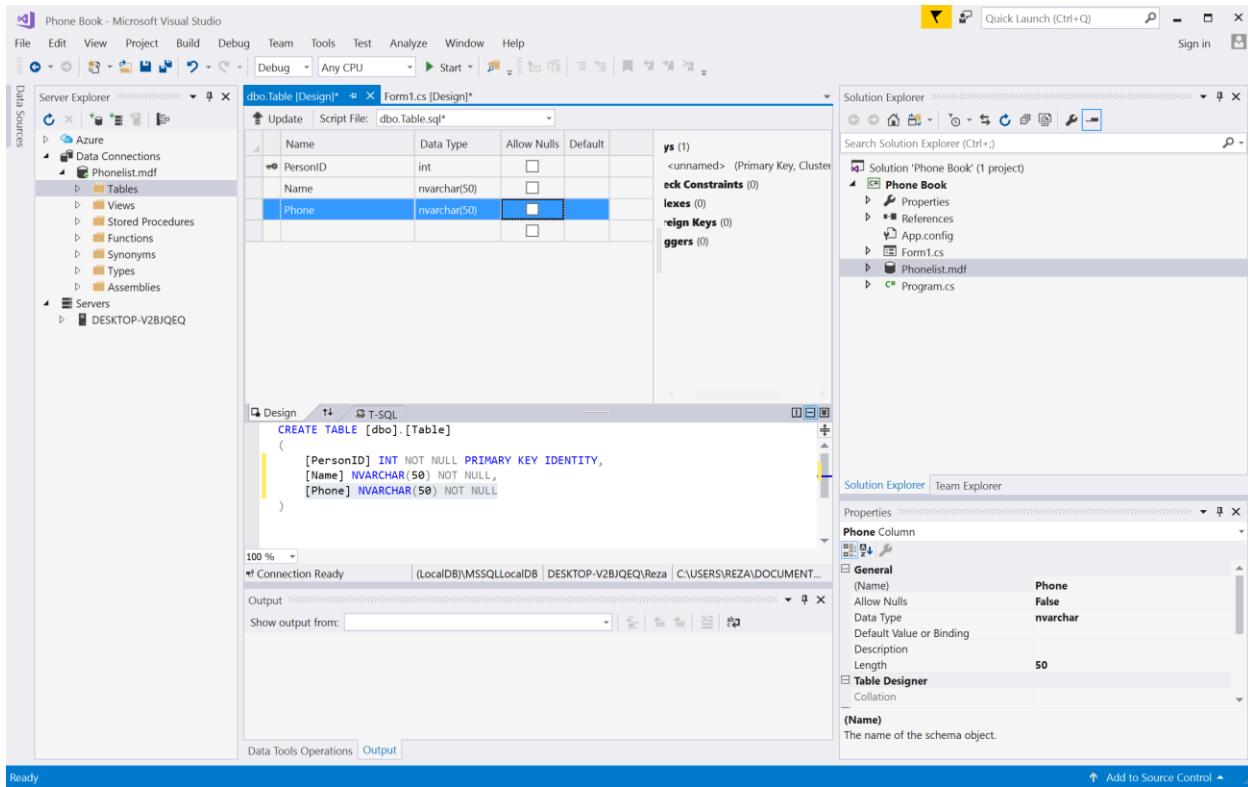
Change "(Is Identity)" from false to true as shown in the following screen capture:



Then add another column for name by clicking the next row, entering the “Name” and choosing its type as the following screen captures shows:

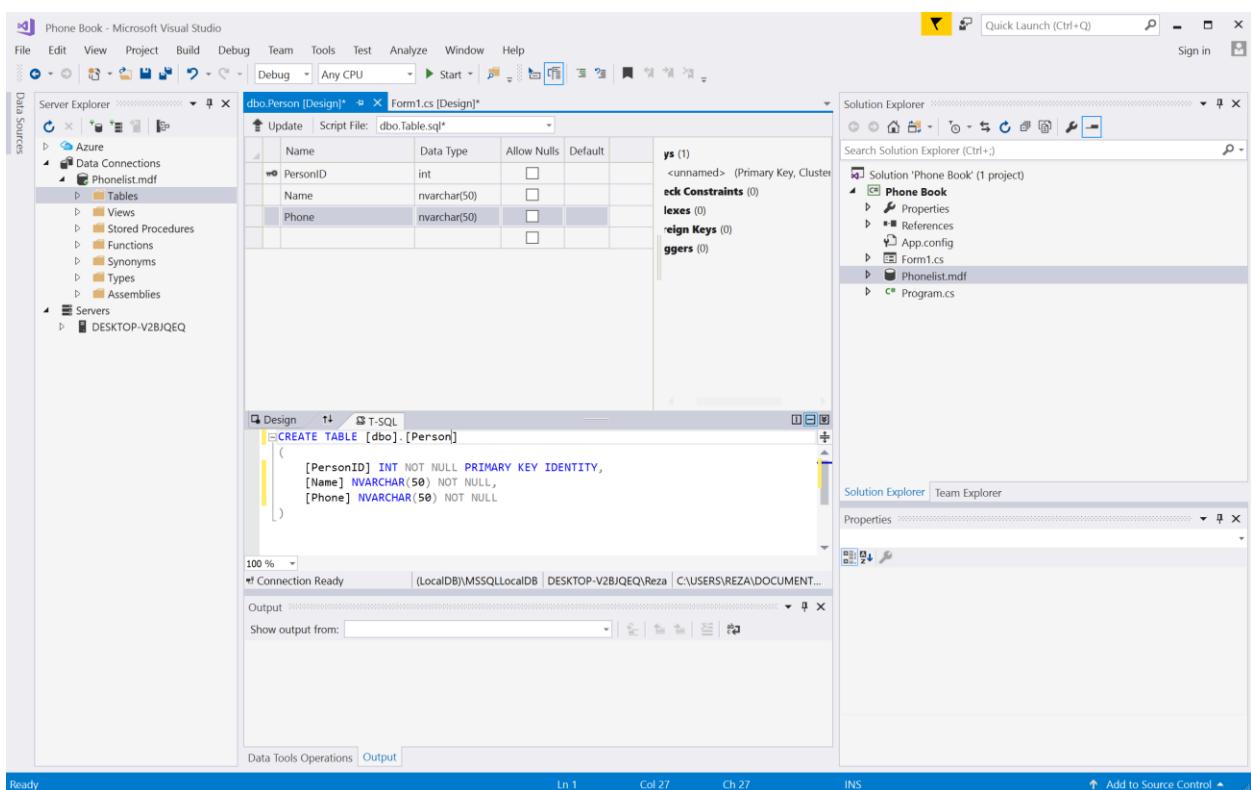
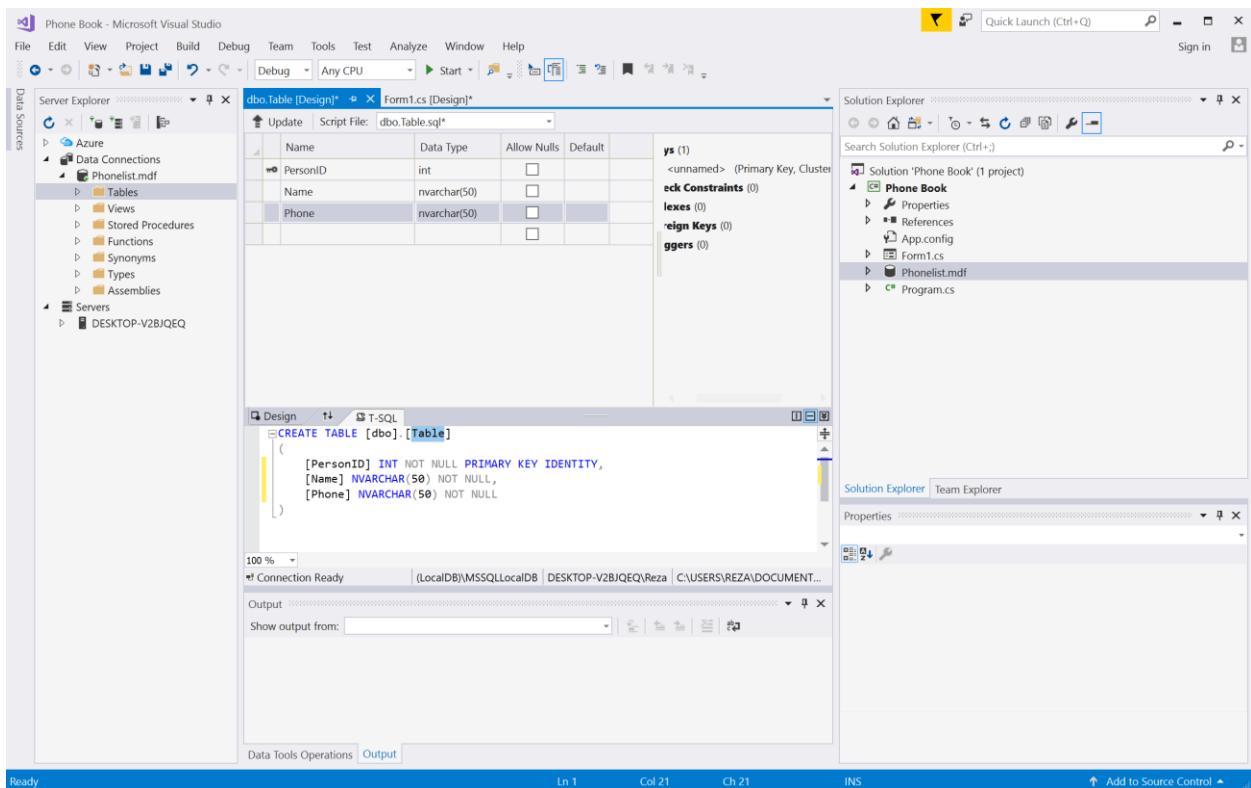


Then add another column for Phone with the same datatype as name. Make sure you clear the checkbox for Allow Nulls checkboxes:

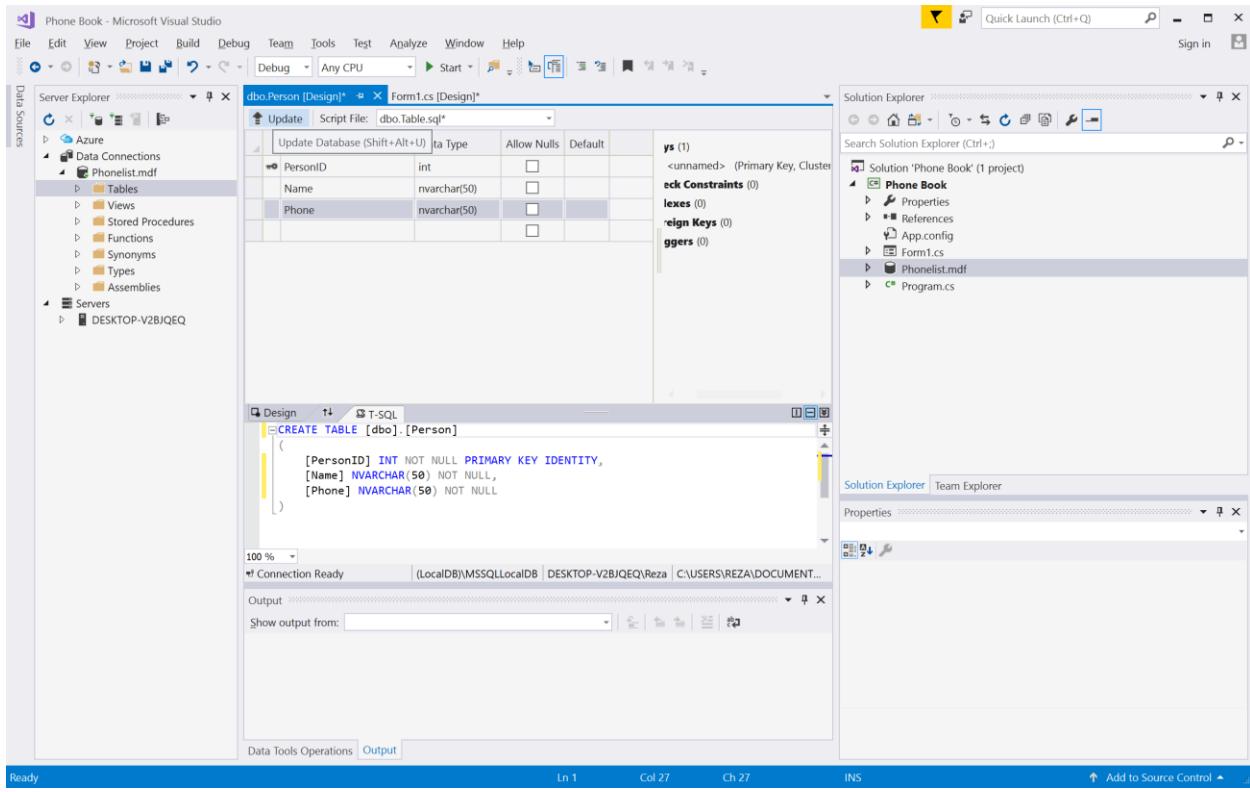


That completes the design of the table. The last step is to change the name of the table in the T-SQL pane as shown in the screen capture.

The default name of the table is “Table” and we want to change it to “Person”.



To make all the changes you have made so far to take effect, you need to click the “Update” button at the top as the screen capture shows:



Preview Database Updates

?

X

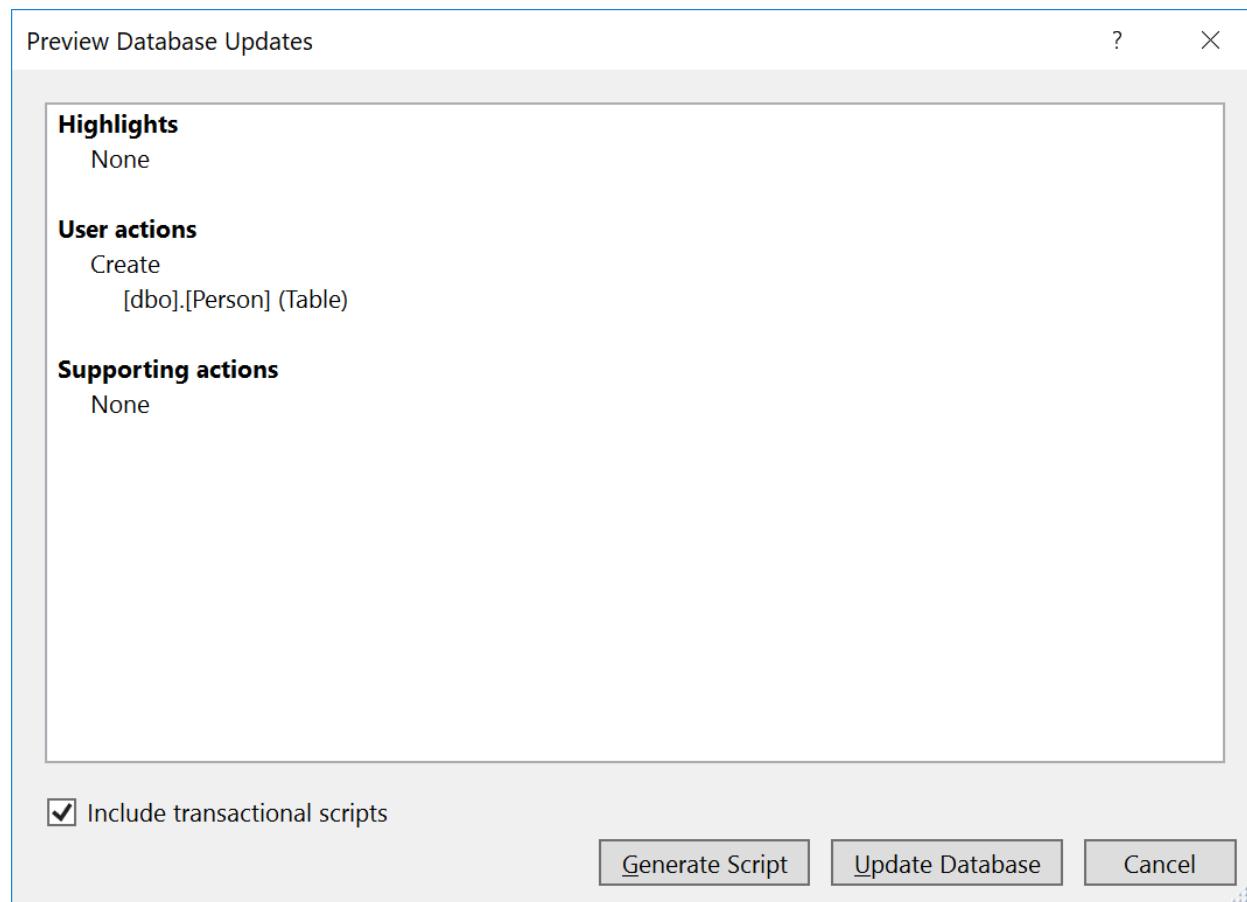
Preparing update script...

Include transactional scripts

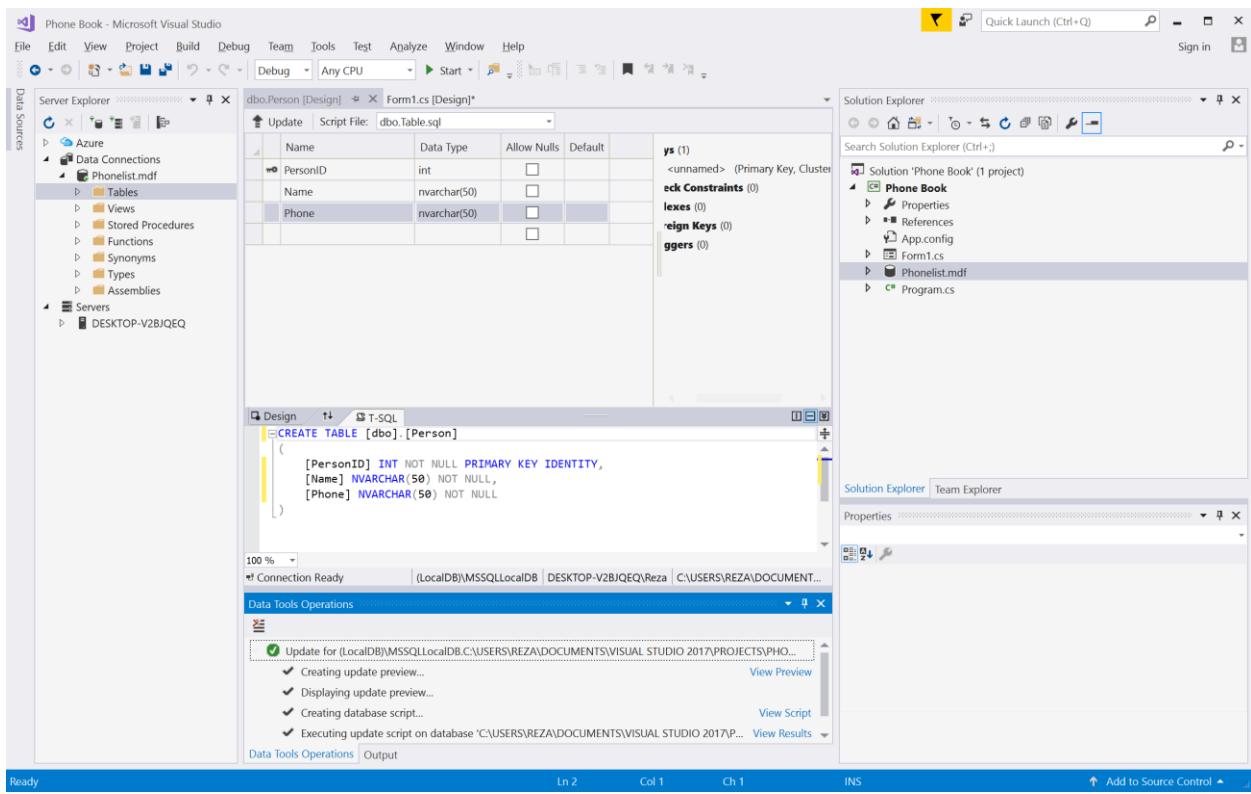
Generate Script

Update Database

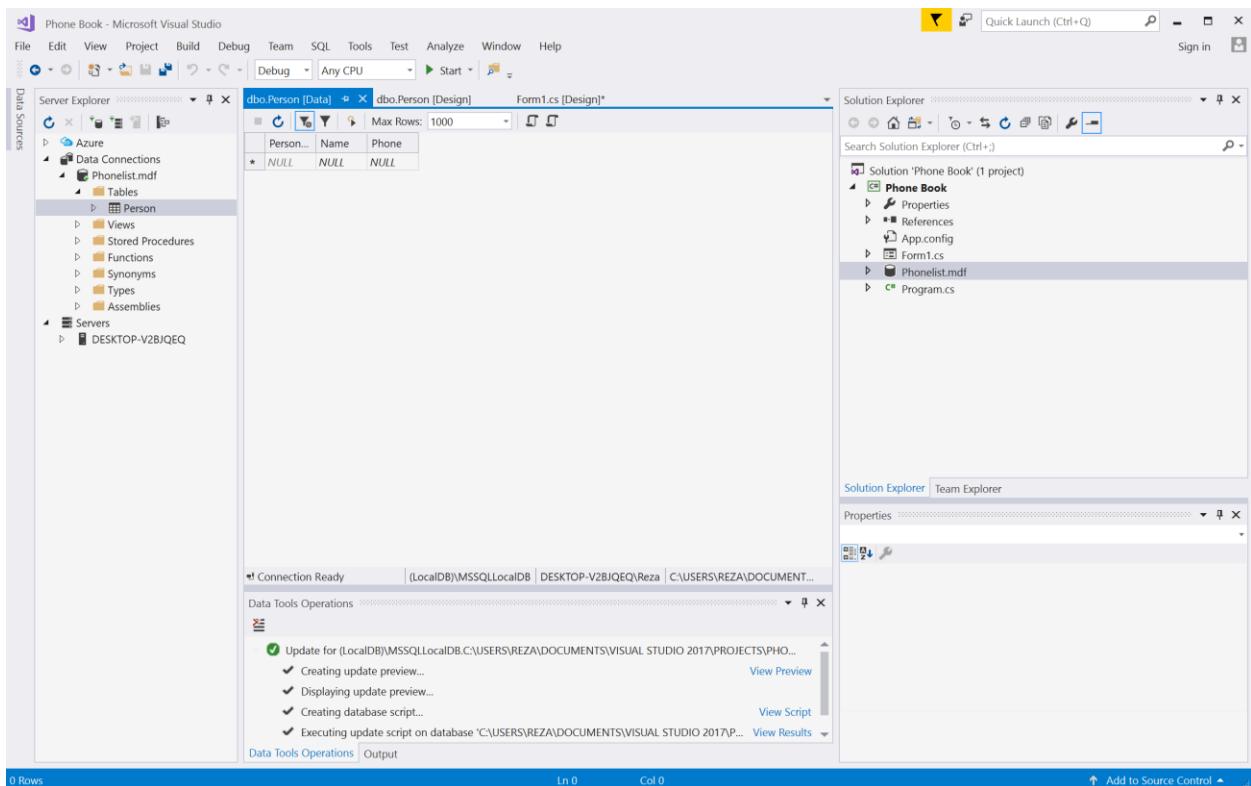
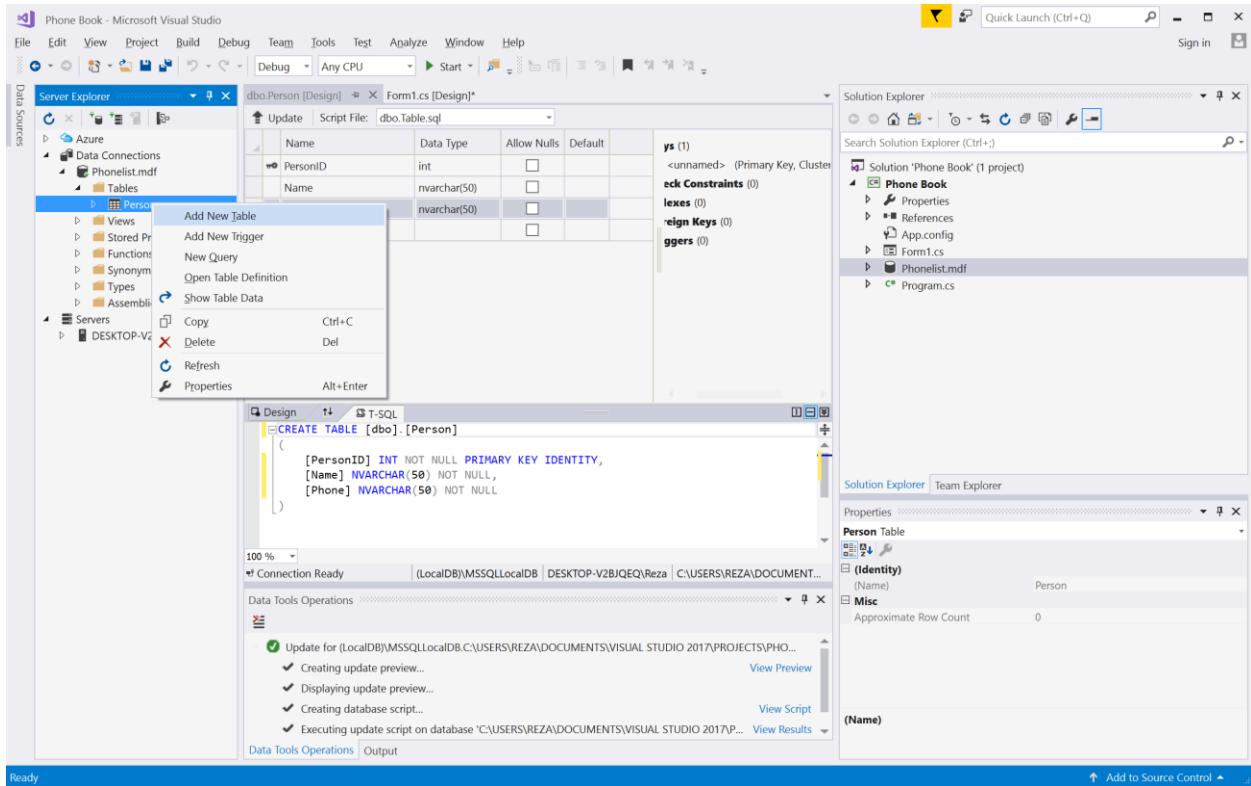
Cancel



Click the Update Database button, in the next window the green check mark indicates everything is okay:

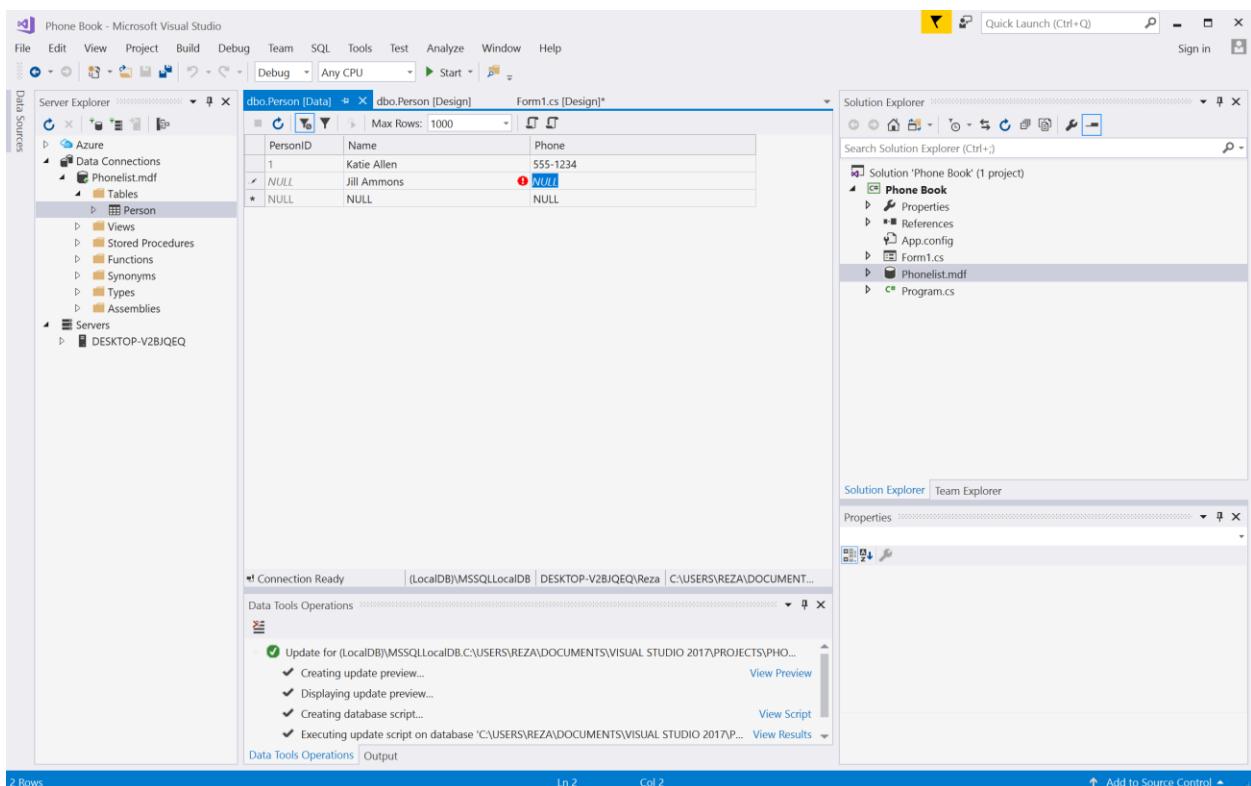
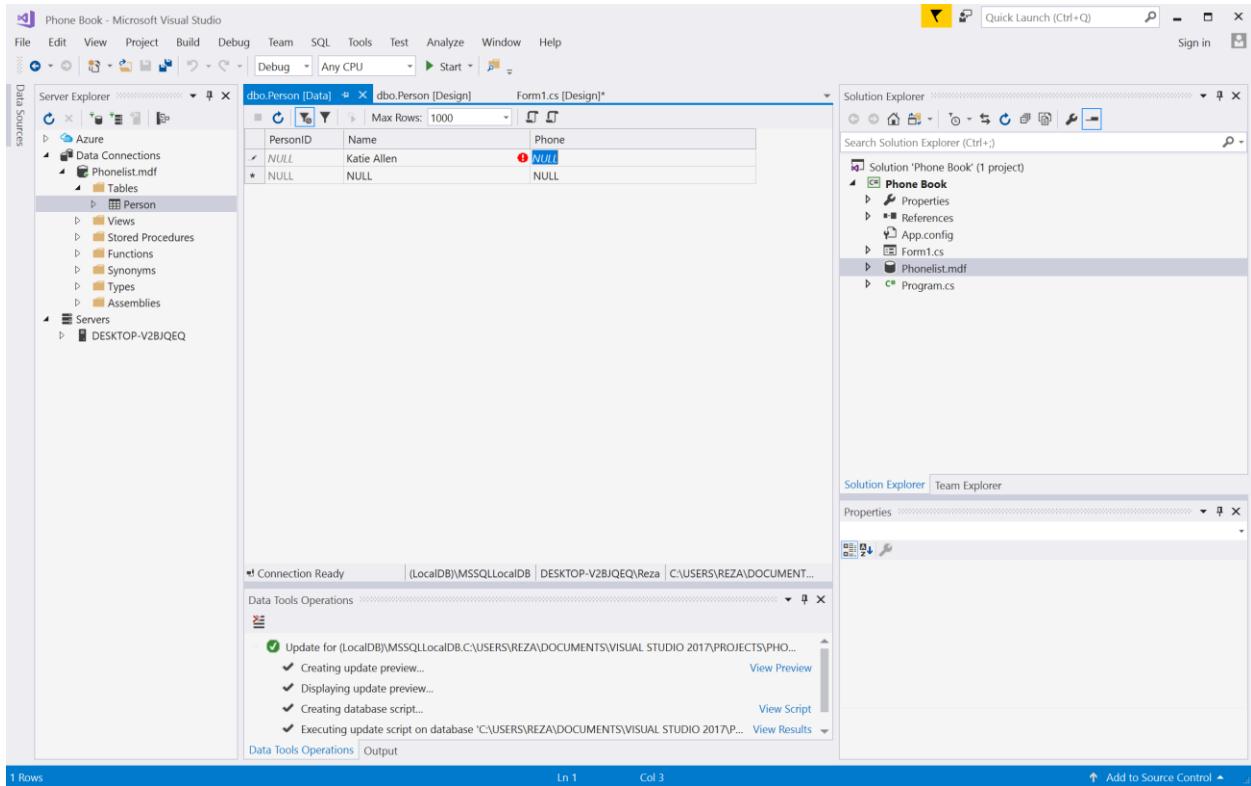


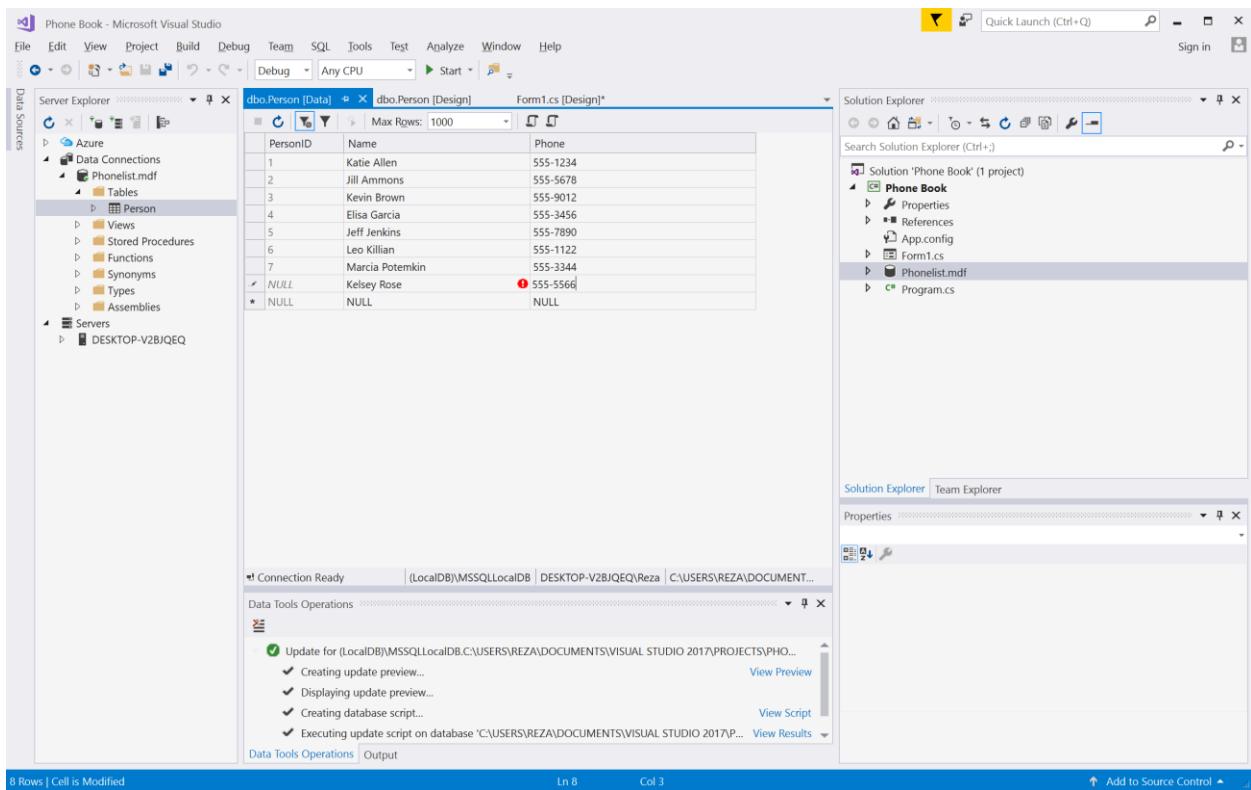
At this point we start to add entries to the database. In the Server Explorer Window expand the Tables and right click the Person table and choose show Table Data as the following screen captures show:



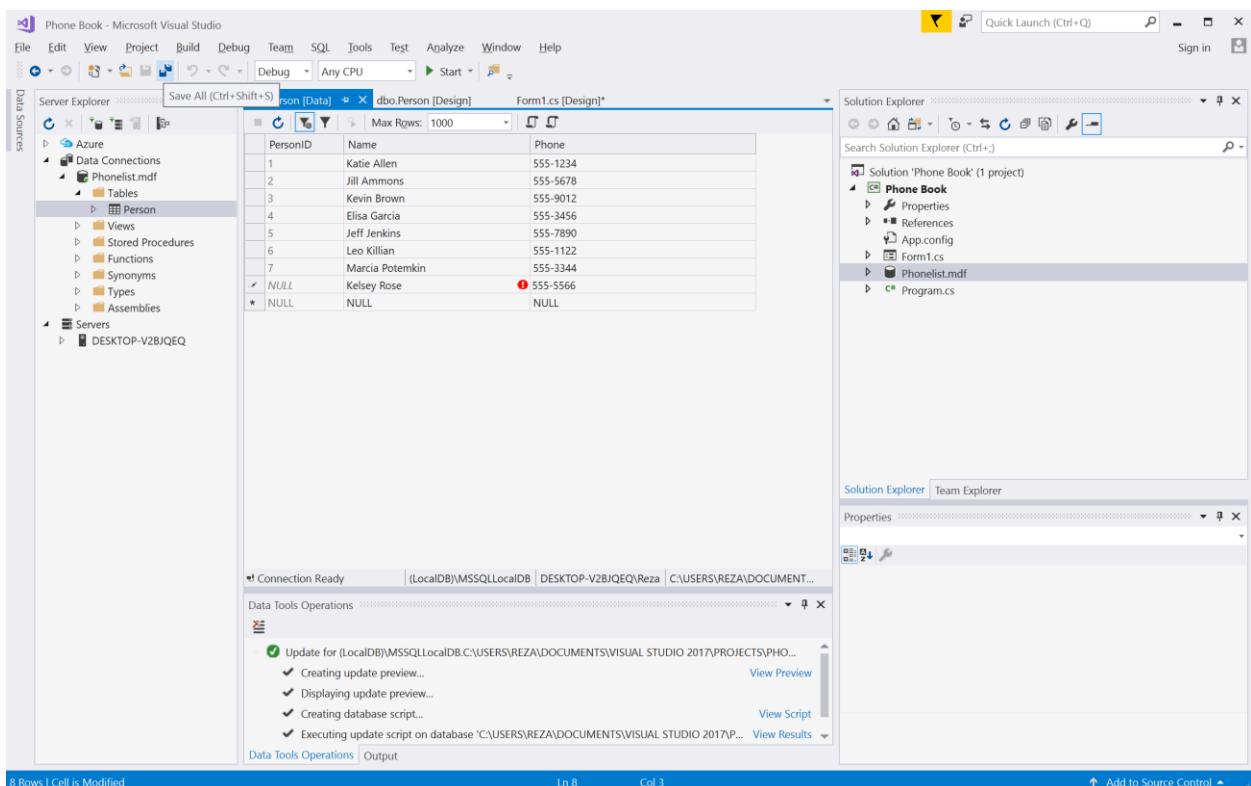
At this point you can add values to the table. Note that you can't enter any value for the PersonID and a value for PersonID is going to be added automatically once you go from one row to another. Use tab to go from one column to another. The red exclamation point appears when entering values for the columns but goes away when you are done entering all the values for a row. Create the table with the following values:

Katie Allen	555-1234
Jill Ammons	555-5678
Kevin Brown	555-9012
Elisa Garcia	555-3456
Jeff Jenkins	555-7890
Leo Killian	555-1122
Marcia Potemkin	555-3344
Kelsey Rose	555-5566





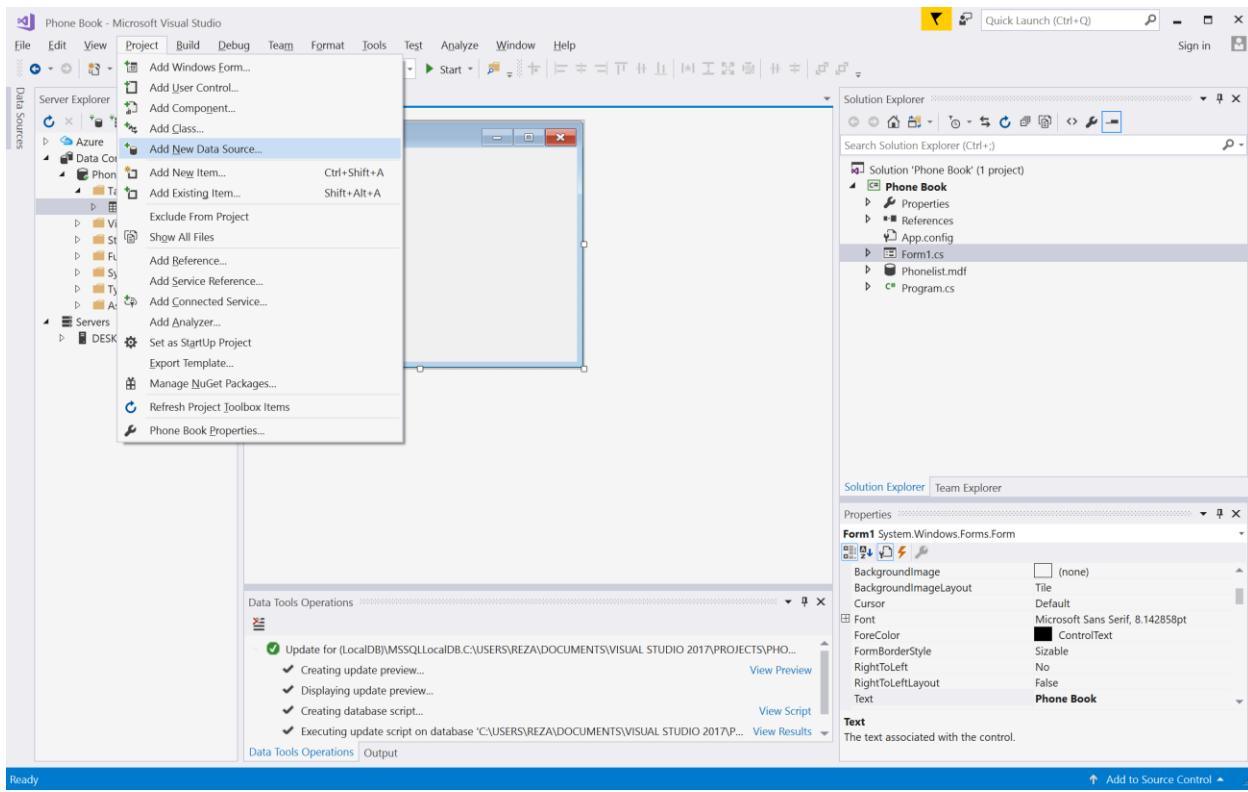
After entering all the values click the save all button in Visual Studio to save the changes:



At this point you can close the table and the table designer.

We will add the Phonelist database as a datasource to the application, we will create a dataset that is going to connect to the Person table and we will add a DataGridView control to the form and that DataGridView control will show us in a grid or in a spreadsheet style all the contents for the database and it allow us to interact with the database.

So the first step is to add Phonelist.mpd file as a datasource to the application as the following screen captures show:





Choose a Data Source Type



Database



Service



Object

Where will the application get data from?

Lets you connect to a database and choose the database objects for your application.

[< Previous](#)[Next >](#)[Finish](#)[Cancel](#)



Choose a Database Model

What type of database model do you want to use?



Dataset

The database model you choose determines the types of data objects your application code uses. A dataset file will be added to your project.

[< Previous](#)

[Next >](#)

[Finish](#)

[Cancel](#)



Choose Your Data Connection

Which data connection should your application use to connect to the database?

Phonelist.mdf

New Connection...

This connection string appears to contain sensitive data (for example, a password), which is required to connect to the database. However, storing sensitive data in the connection string can be a security risk. Do you want to include this sensitive data in the connection string?

- No, exclude sensitive data from the connection string. I will set this information in my application code.
- Yes, include sensitive data in the connection string.

[+] Connection string that you will save in the application (expand to see details) —————

< Previous

Next >

Finish

Cancel

**Save the Connection String to the Application Configuration File**

Storing connection strings in your application configuration file eases maintenance and deployment. To save the connection string in the application configuration file, enter a name in the box and then click Next.

Do you want to save the connection string to the application configuration file?

Yes, save the connection as:

PhonelistConnectionString

< Previous

Next >

Finish

Cancel

In the next window expand the Tables section and check the Person table, also change the suggested name of PhonelistDataset to PersonDataSet as shown in the following screen captures:

**Choose Your Database Objects**

Which database objects do you want in your dataset?

- Tables
- Person
 - PersonID
 - Name
 - Phone
- Views
- Stored Procedures
- Functions

DataSet name:

PhonelistDataSet

< [Previous](#)

[Next >](#)

[Finish](#)

[Cancel](#)



Choose Your Database Objects

Which database objects do you want in your dataset?

- Tables
- Person
 - PersonID
 - Name
 - Phone
- Views
- Stored Procedures
- Functions

DataSet name:

[< Previous](#)[Next >](#)[Finish](#)[Cancel](#)

**Choose Your Database Objects**Which database objects do you want in your dataset?

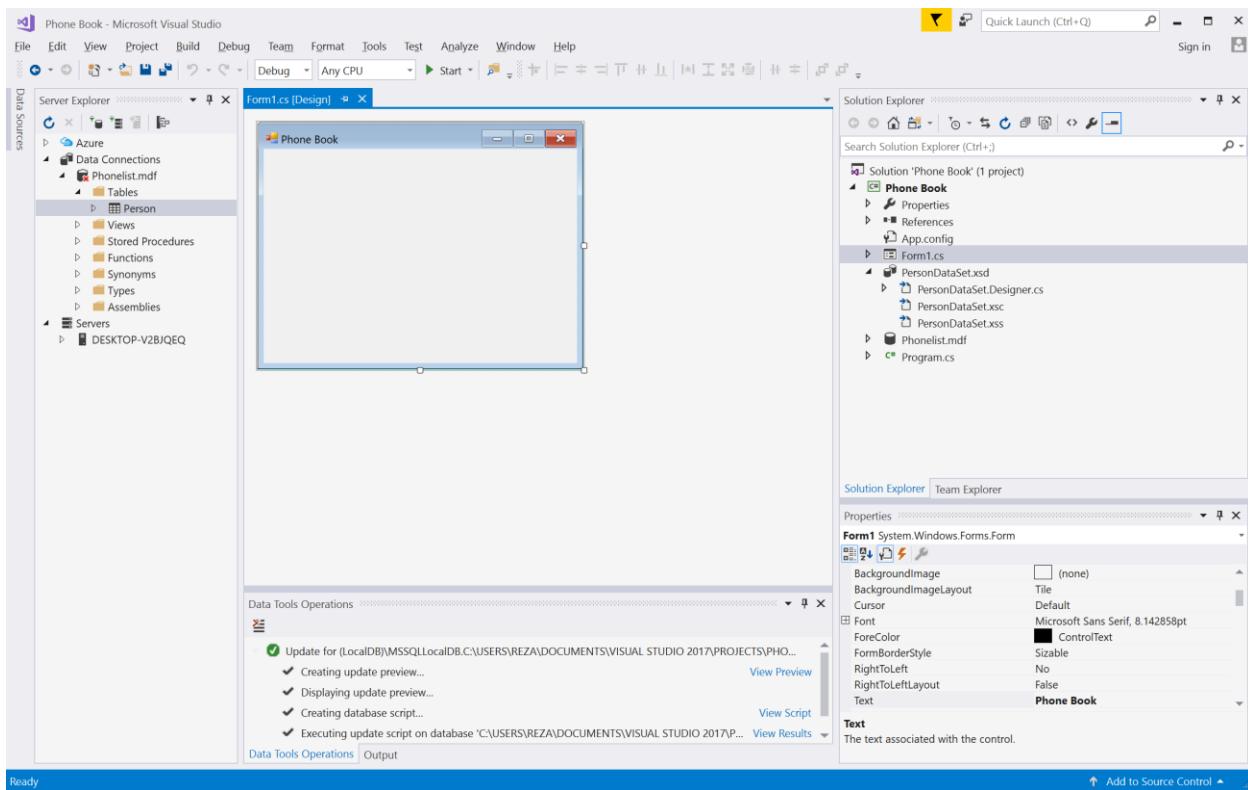
- Tables
- Person
 - PersonID
 - Name
 - Phone
- Views
- Stored Procedures
- Functions

DataSet name:

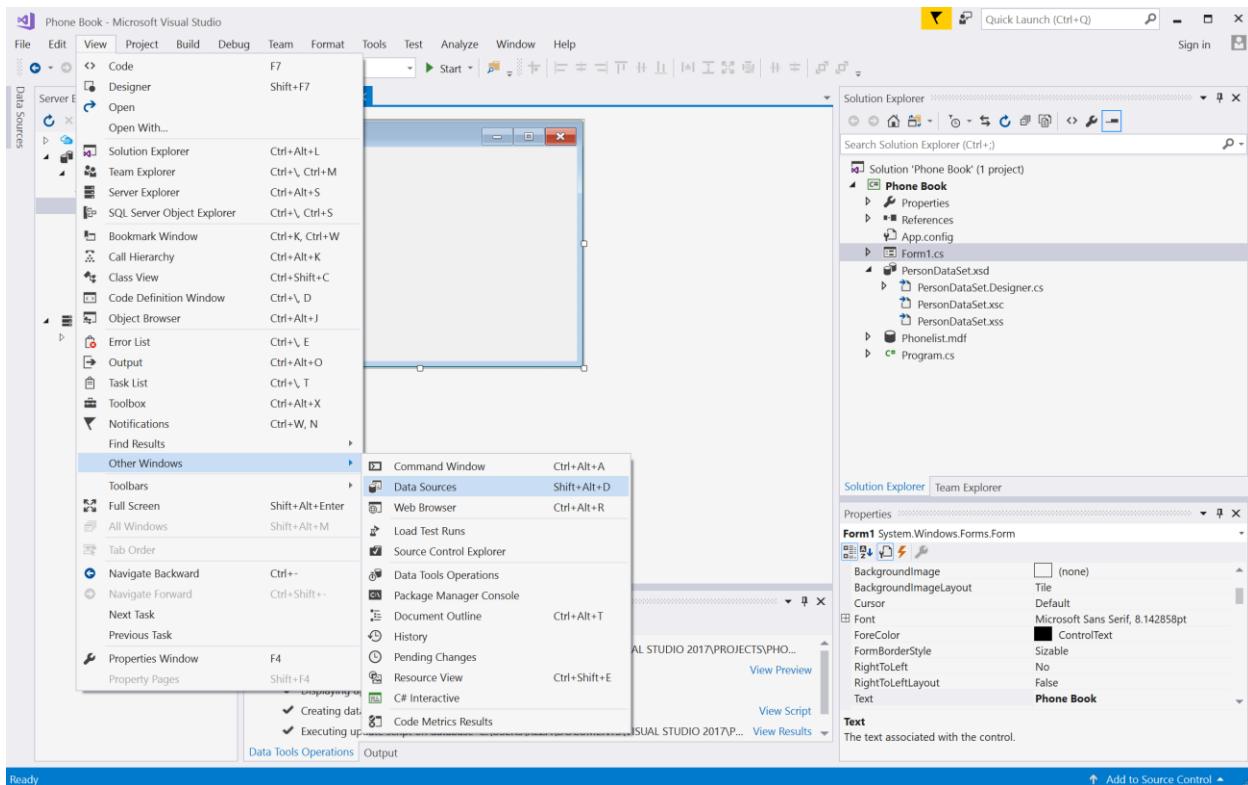
PersonDataSet

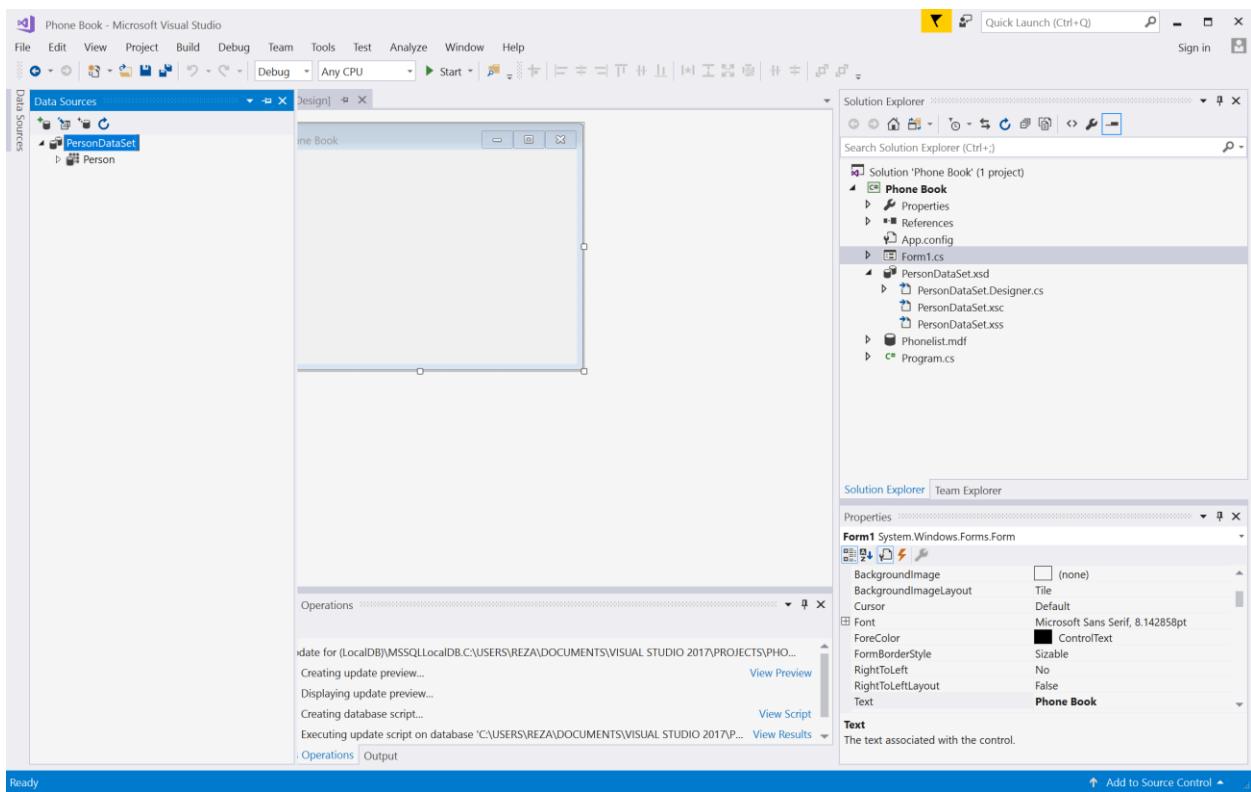
[< Previous](#)[Next >](#)[Finish](#)[Cancel](#)

Click Finish:

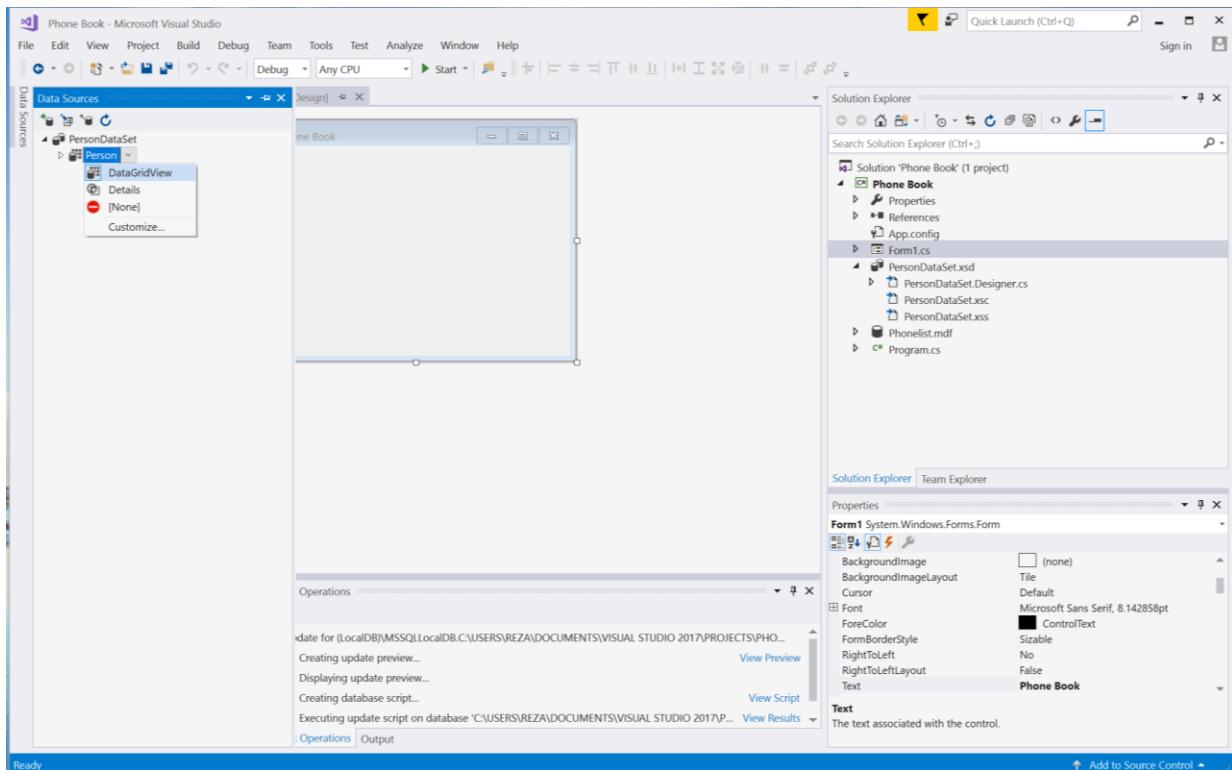
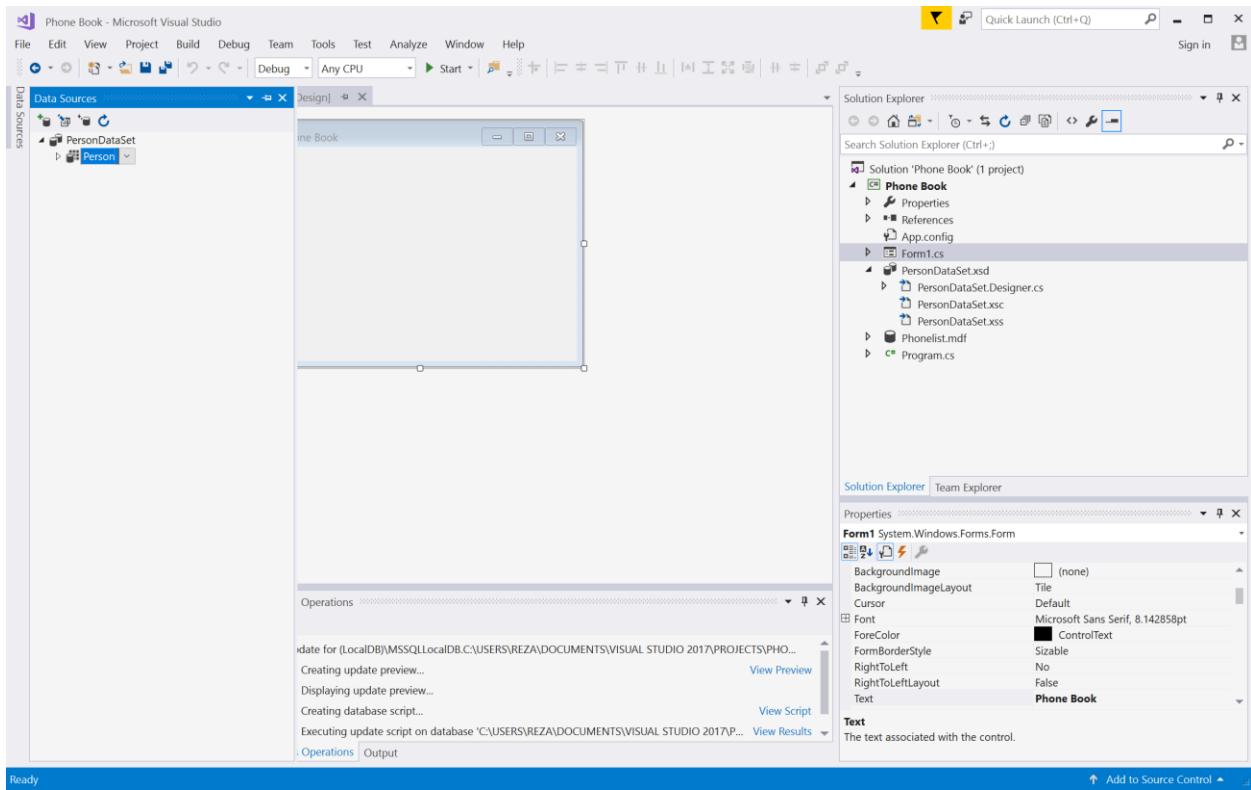


The next step is to open the data sources window that allows us to see all the data sources for the project:

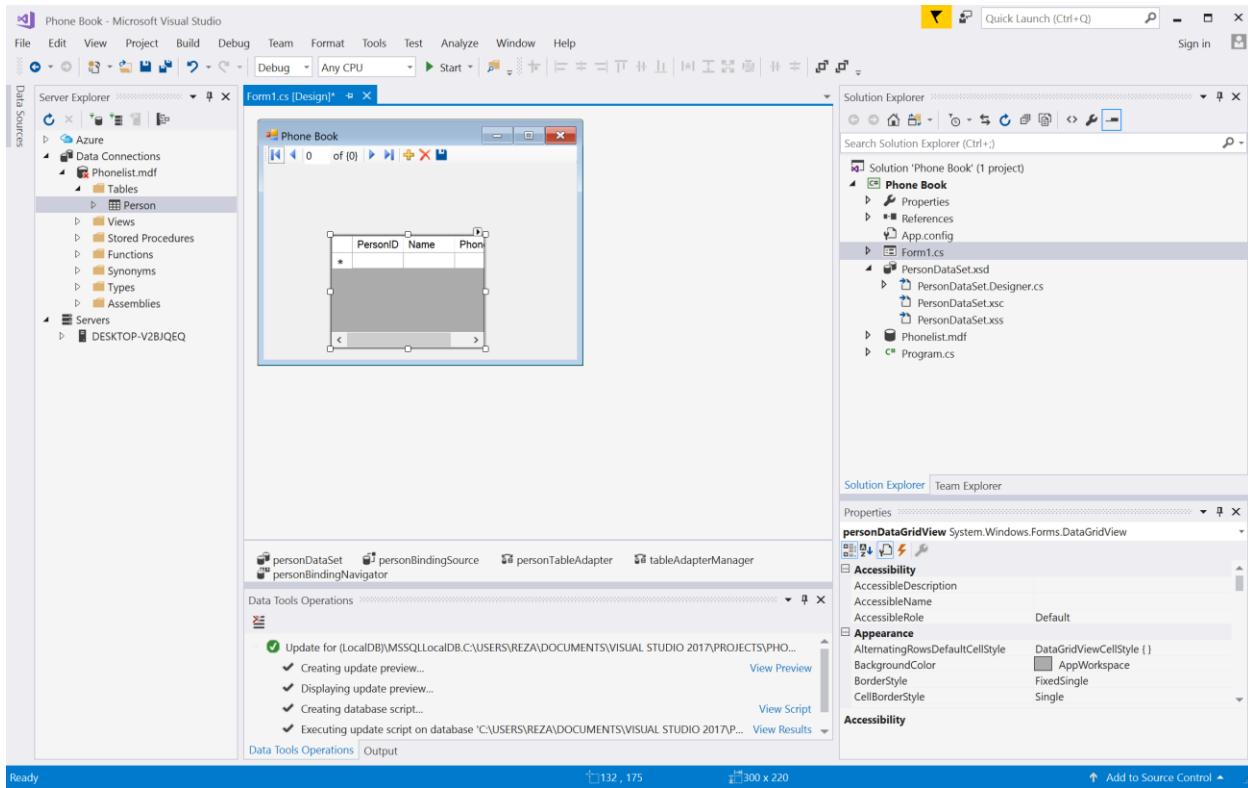




In the Data Sources window, you'll see the PersonDataSet and also the Person table that the dataset connects us to. Click on the person table and then click on the little down arrow and then select the DataGridView since we are going to add a DataGridView to our form.



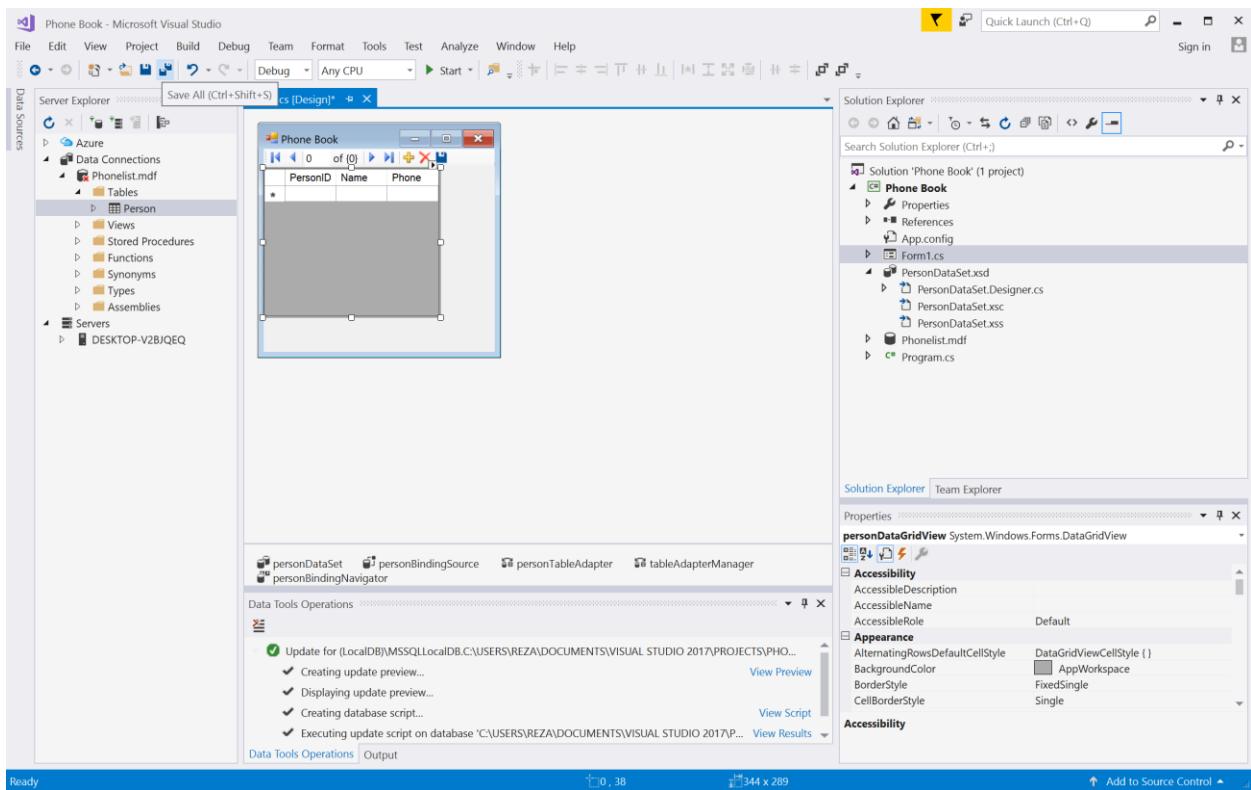
After selecting the DataGridView to add it to the form we simply click the Person table and drag to our form:



You can change the size of the DataGridView on the form. Notice the components that were created (above the Data Tools Operations Window) in the component tray.

Also notice the tool bar at the top of the DataGridView on the form.

At this point save and run the application:



The screenshot shows a Windows application window titled "Phone Book". The window has a standard title bar with minimize, maximize, and close buttons. Below the title bar is a toolbar with several icons: a back arrow, a forward arrow, a search icon, a person icon, a plus sign, a minus sign, and a save icon. The main area of the window is a grid table with the following data:

	PersonID	Name	Phone
▶	1	Katie Allen	555-1234
	2	Jill Ammons	555-5678
	3	Kevin Brown	555-9012
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	6	Leo Killian	555-1122

You can see all the database values are shown here. If you want to change the value of a field, you simply select it and change it.

Phone Book

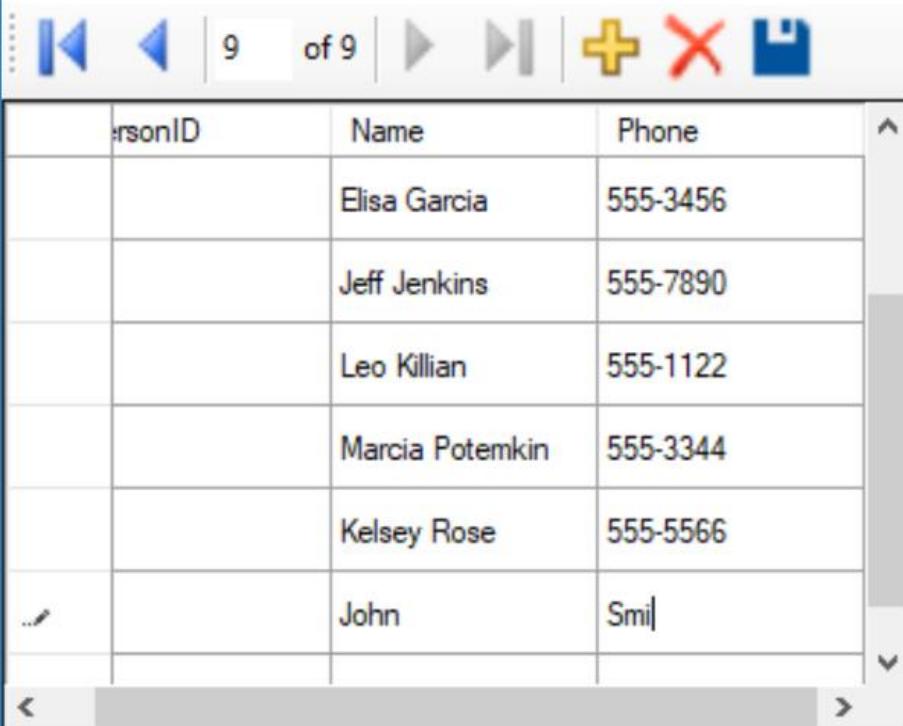


	PersonID	Name	Phone
...	1	Katie Allen	111-
	2	Jill Ammons	555-5678
	3	Kevin Brown	555-9012
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	6	Leo Killian	555-1122

	PersonID	Name	Phone
...	1	Katie Allen	111-2222
	2	Jill Ammons	555-5678
	3	Kevin Brown	555-9012
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	6	Leo Killian	555-1122

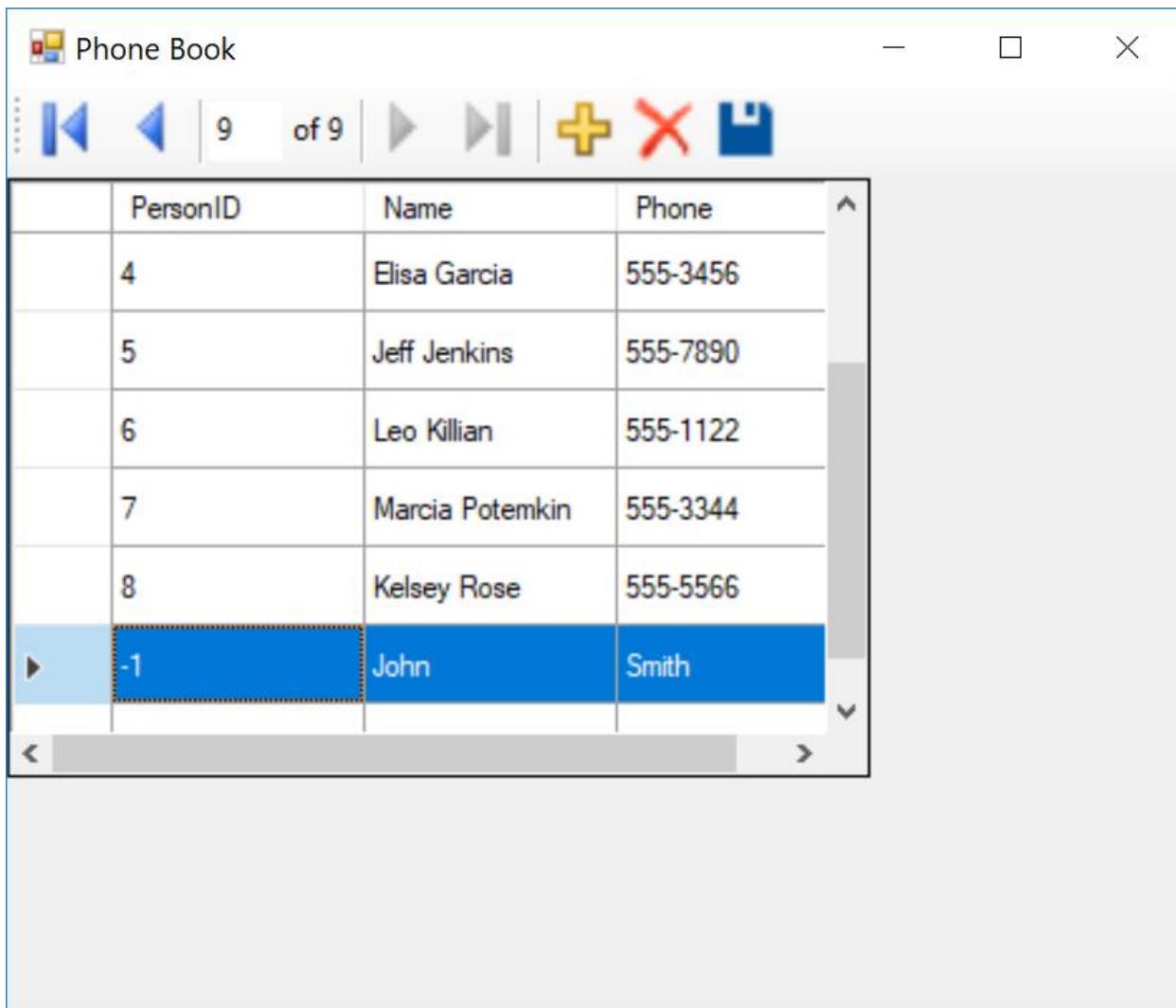
You can add a record to the database by clicking the + sign and add the new record:

Phone Book



The screenshot shows a Windows application window titled "Phone Book". The window has a standard title bar with minimize, maximize, and close buttons. Below the title bar is a toolbar with icons for back, forward, search, and other operations. The main area is a data grid showing a list of contacts. The columns are labeled "PersonID", "Name", and "Phone". The data grid contains the following rows:

PersonID	Name	Phone
	Elisa Garcia	555-3456
	Jeff Jenkins	555-7890
	Leo Killian	555-1122
	Marcia Potemkin	555-3344
	Kelsey Rose	555-5566
...	John	Smil



The screenshot shows a Windows application window titled "Phone Book". The window has a standard title bar with minimize, maximize, and close buttons. Below the title bar is a toolbar with icons for back, forward, search, and other functions. The main area is a data grid with the following columns: PersonID, Name, and Phone. The data grid contains the following rows:

	PersonID	Name	Phone
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	6	Leo Killian	555-1122
	7	Marcia Potemkin	555-3344
	8	Kelsey Rose	555-5566
▶	-1	John	Smith

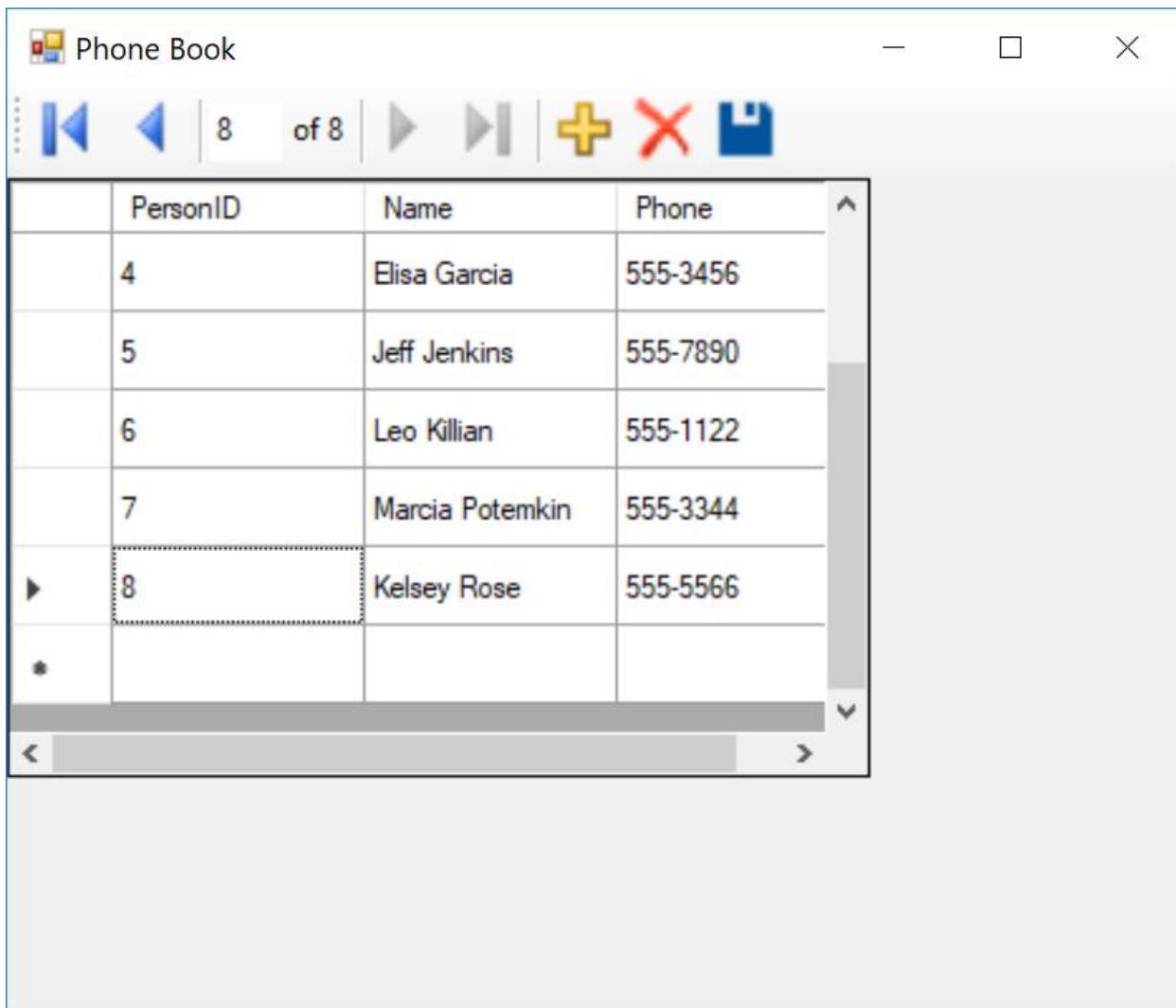
You can delete a record by selecting it and clicking the Delete button (red cross) at the top menu bar:

Phone Book

9 of 9

Delete

	PersonID	Name	Phone
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	6	Leo Killian	555-1122
	7	Marcia Potemkin	555-3344
	8	Kelsey Rose	555-5566
▶	-1	John	Smith



The screenshot shows a Windows application window titled "Phone Book". The window has a standard title bar with minimize, maximize, and close buttons. Below the title bar is a toolbar with icons for back, forward, search, and other operations. The main area is a table with four columns: "PersonID", "Name", and "Phone", plus an empty header row. The data rows are as follows:

	PersonID	Name	Phone
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	6	Leo Killian	555-1122
	7	Marcia Potemkin	555-3344
▶	8	Kelsey Rose	555-5566
*			

You click the name of a column to sort the table based on that column so to sort the table based on PersonID you click on PersonID or to sort the data based on Name you click Name:

Phone Book



	PersonID	Name	Phone
	1	Katie Allen	111-2222
	2	Jill Ammons	555-5678
	3	Kevin Brown	555-9012
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	6	Leo Killian	555-1122

Phone Book



	PersonID	Name	Phone
	4	Elisa Garcia	555-3456
	5	Jeff Jenkins	555-7890
	2	Jill Ammons	555-5678
	1	Katie Allen	111-2222
	8	Kelsey Rose	555-5566
	3	Kevin Brown	555-9012