BCS 450 C# Lab – WPF and SQL Express Server DB (Insert)

Overview

You will create a database using SQL Server Express local DB and you will create a front-end WPF application to manipulate that database. You will use ADO.NET to access the database. This application will display data from the database and allow users to add data to the database.

The database will store first name, last name, email address, and password. The password needs to be securely stored in the database. The WPF control used to input the password should not show the password as it is being typed.

Part 1 – Create the project in Visual Studio

Create a WPF application in Visual Studio. Name the project Lab-SQLServer-Users. Add a reference to the System.Configuration library (check slides for how to do this).

Part 2 – Create an SQL Server Database

Create a new Microsoft SQL Server database from within Visual Studio (check the slides for how to do this). Name the database **AdminDB**. There only needs to be one table named Users in the AdminDB database. Choose Use Windows Authentication for logging on to the server

Users Table Schema

Field	**Data Type**
First	Text
Last	Text
Email	Text
Password	Text

Note: Remove the Id field that automatically comes with the table. It is easiest to remove the Id field after first adding other fields. Use the T-SQL window on the bottom to remove the Id field (just delete the line for the Id field).

Part 3 – Add Data to the Database

Add some rows of data to the database. Check slides for how to do this.

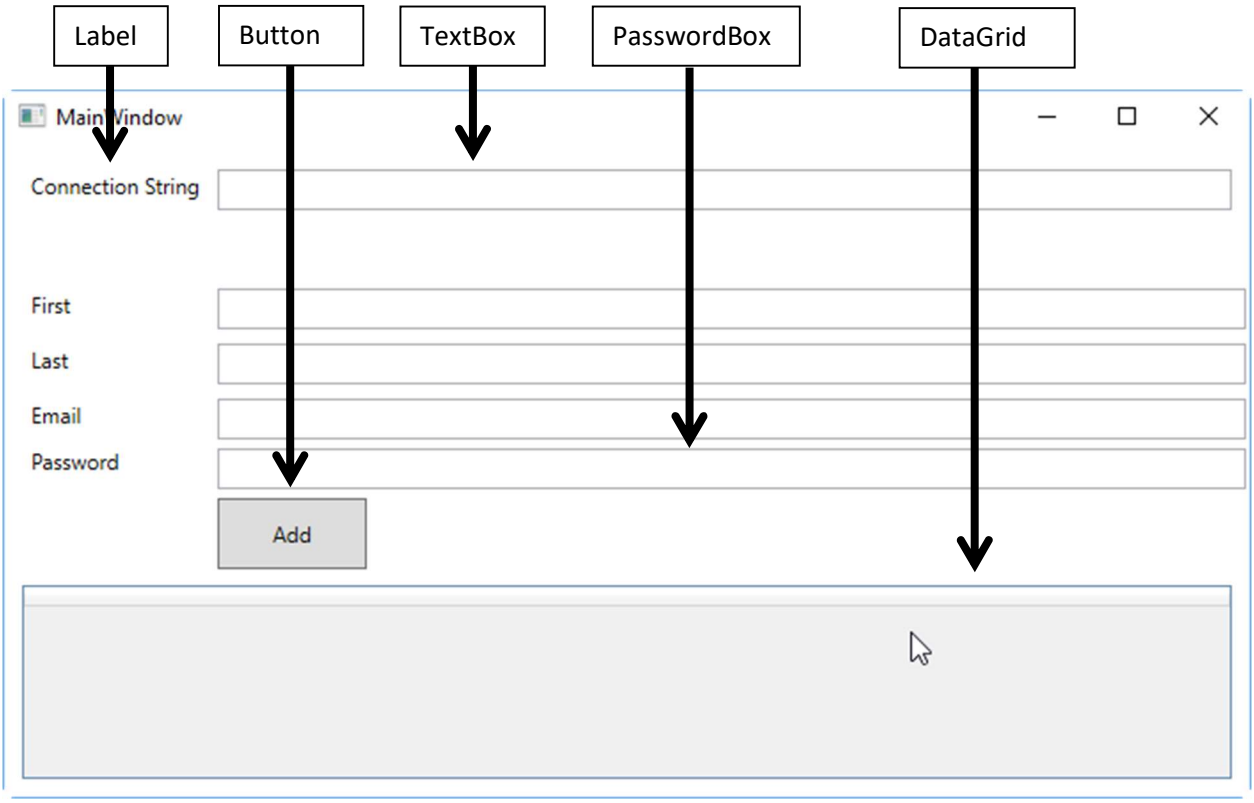
Part 6 – Connection String

Use the connection string listed below. You can hard code it into your program.

Server: (LocalDB)\MSSQLLocalDB
Database: Lab-SQLServer-Users.
Trusted Connection: True

Part 7 – Window Setup

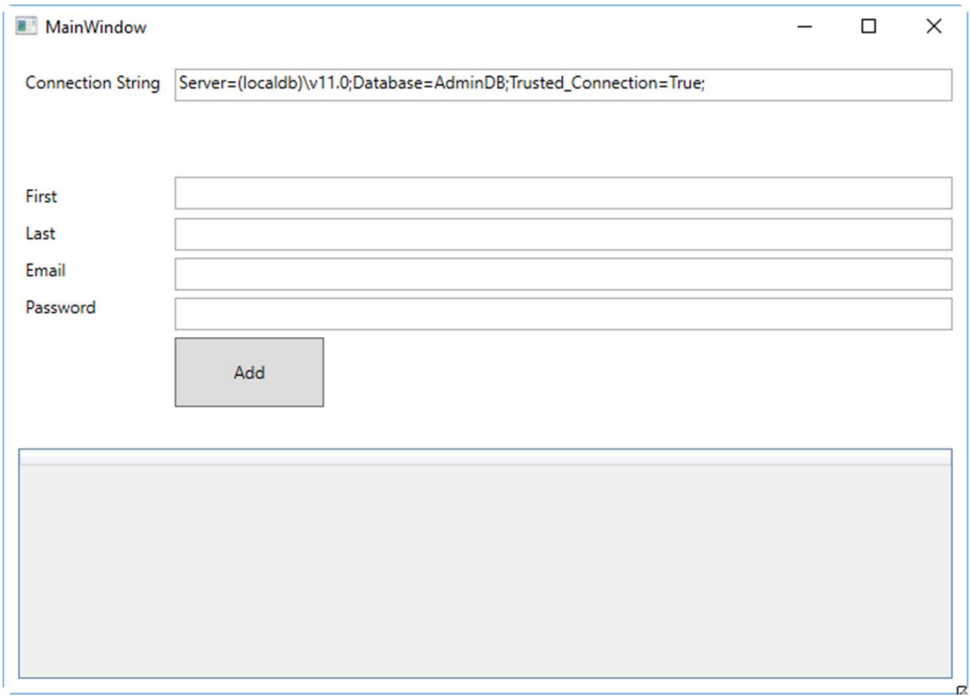
Create the following Window layout using WPF:



Note: The PasswordBox control does NOT have a Text property. You need to use the Password property instead to get the text.

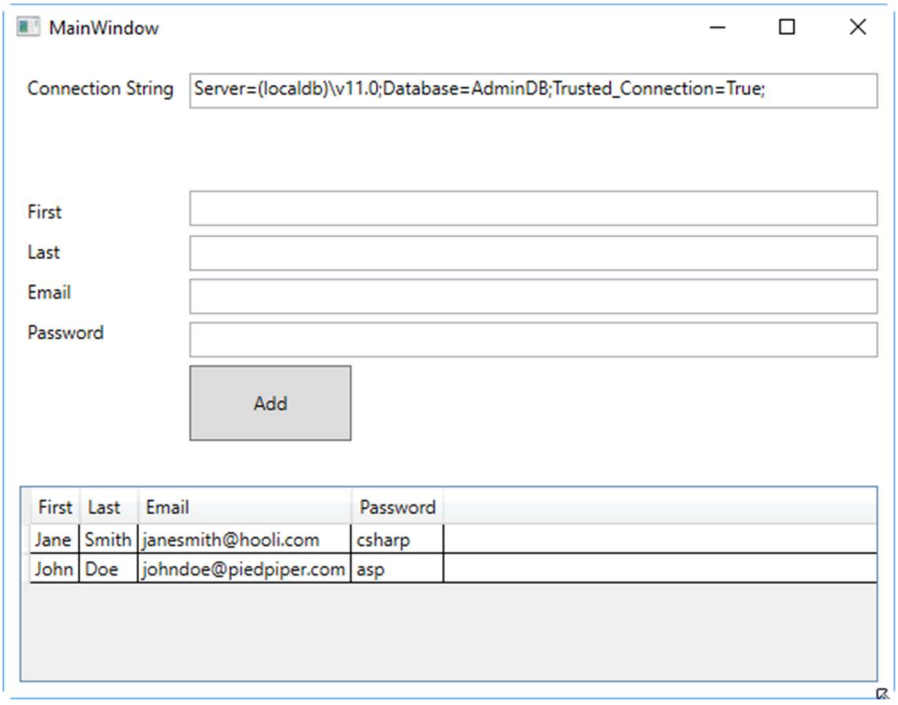
Part 8 – Show Connection String

Display the connection string in the connection string TextBox. Here is a sample screenshot:



Part 9 – Use ADO.NET to Load the DataGrid

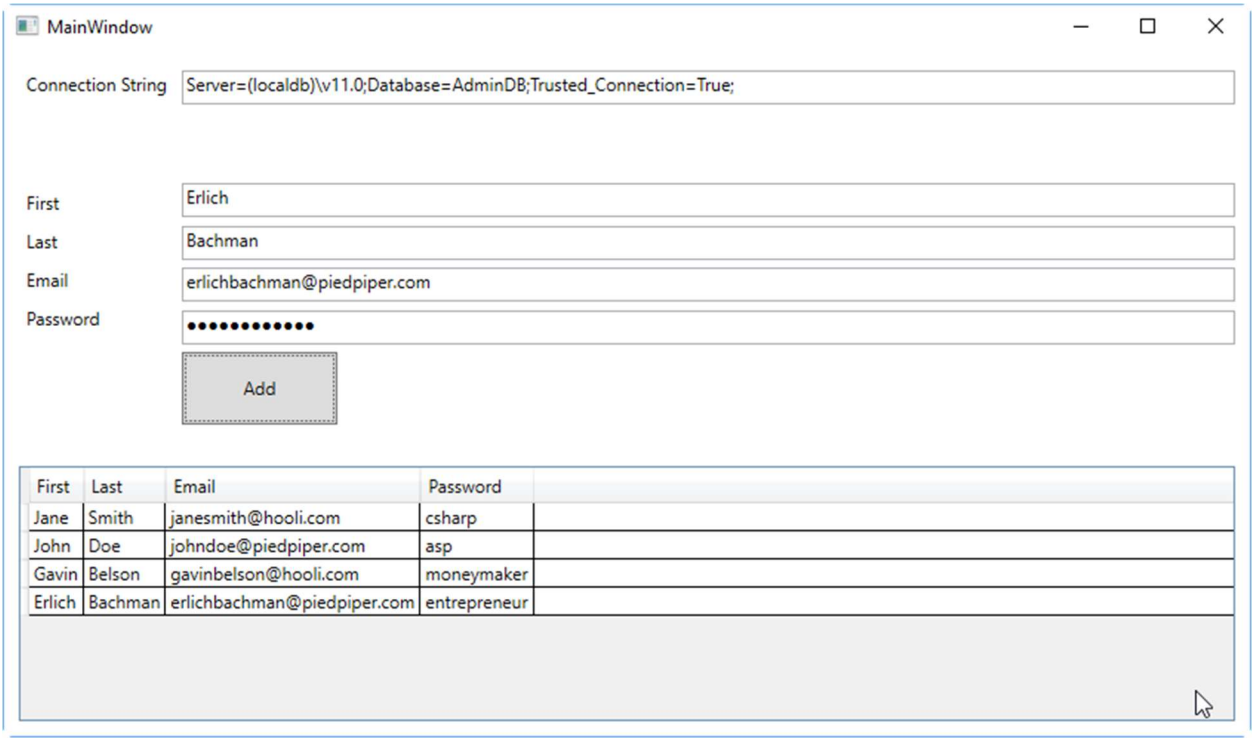
Add code to the Window Load method that will populate the DataGrid using ADO.NET. Check the slides for help with the ADO.NET code. Here is a screenshot:



Part 10 – Use ADO.NET to Insert Data into the Database

Add an event handler for the button that will add a new row of data to the database. The data for the new record should come from the first, last, email, and password TextBoxes. After inserting data into the database the new row should appear in the DataGrid. You can just reload the data from the database after doing the insert. Check the slides for help with the ADO.NET code.

Here is a screenshot:



Part 11 – Test the program

Run the program. Make sure data is properly read into the program. Make sure the connection string is correct. Insert data into the database and make sure the new data gets displayed in the DataGrid.

Part 12 – Updates

- Add code to clear the TextBoxes and the PasswordBox after adding the new record to the database.
- Add a button to that will open a dialog that will let the user indicate which directory the config.json file is located in. Update the code so that it uses whatever directory the user chooses.