For this tutorial, we're going to create a simple Address Book project. The names and addresses will come from a Microsoft Access database. Download the database before starting these lessons. Once you have saved the database to your own computer, you can begin.

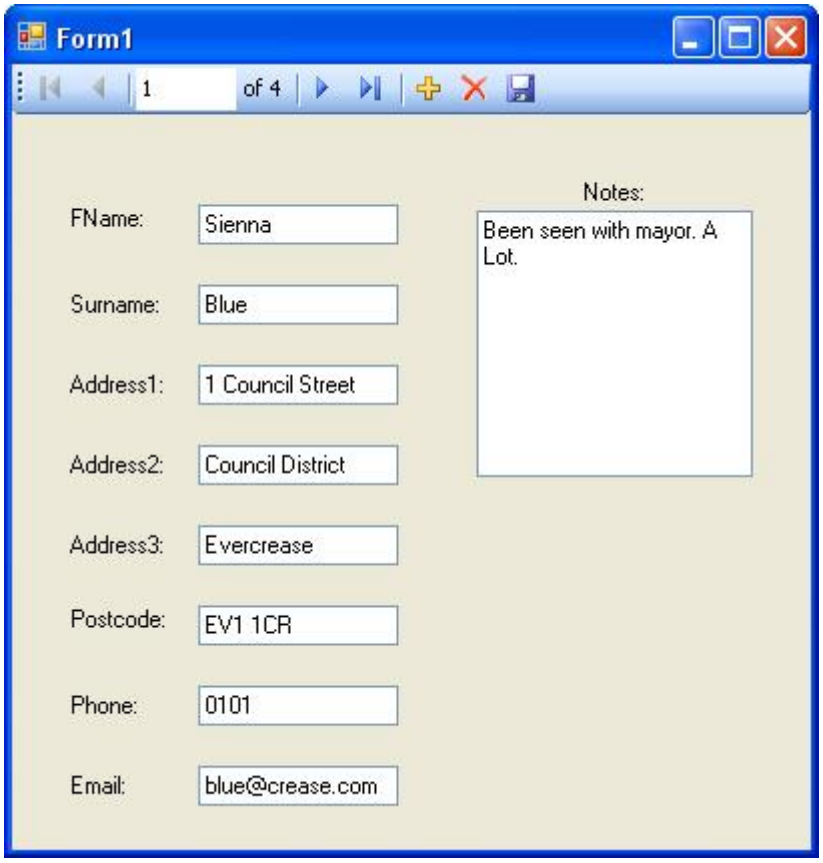
Download AddressBook.zip and get the database

VB.Net allows you many ways to connect to a database or a data source. The technology used to interact with a database or data source is called ADO.NET. The ADO parts stands for Active Data Objects which, admittedly, doesn't explain much. But just like System was a Base Class (leader of a hierarchy, if you like), so is ADO. Forming the foundation of the ADO Base Class are five other major objects:

Connection
Command
DataReader
DataSet
DataAdapter

We'll see just what these objects are, and how to use them, in a later section. But we can make a start on the ADO.NET trail by creating a simple Address Book project. All we'll do is see how to use ADO to open up the database you downloaded, and scroll through each entry.

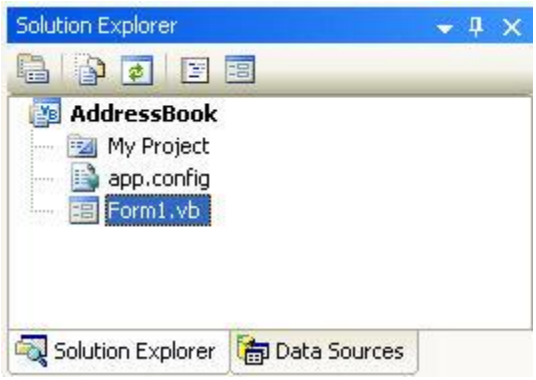
What we're going to be doing is to use a Wizard to create a program that reads the database and allows us to scroll through it. The wizard will do most of the work for us, and create the controls that allow users to move through the database. The Form we create will look like this when it's finished:



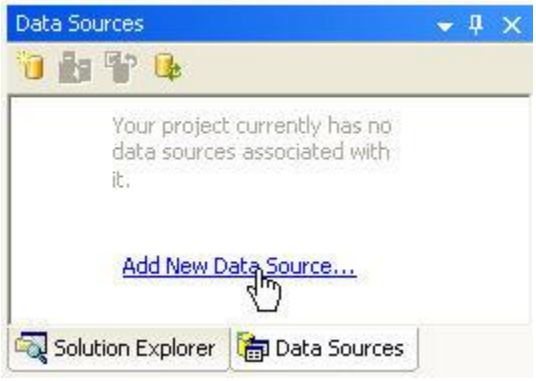
By clicking the buttons at the top, you can scroll through the database in the image above. We'll make a start in the next part.

Let's make a start on our Database project. So, once you have your VB software open, do the following:

- Click **File > New Project** from the menu bar
- Select **Windows Application**, and then give it the **Name** MyAddressBook. Click OK
- Locate the **Solution Explorer** on the right hand side (If you can't see it, click **View > Solution Explorer** from the menu bar, or **View > Other Windows > Solution Explorer** in version 2010.)



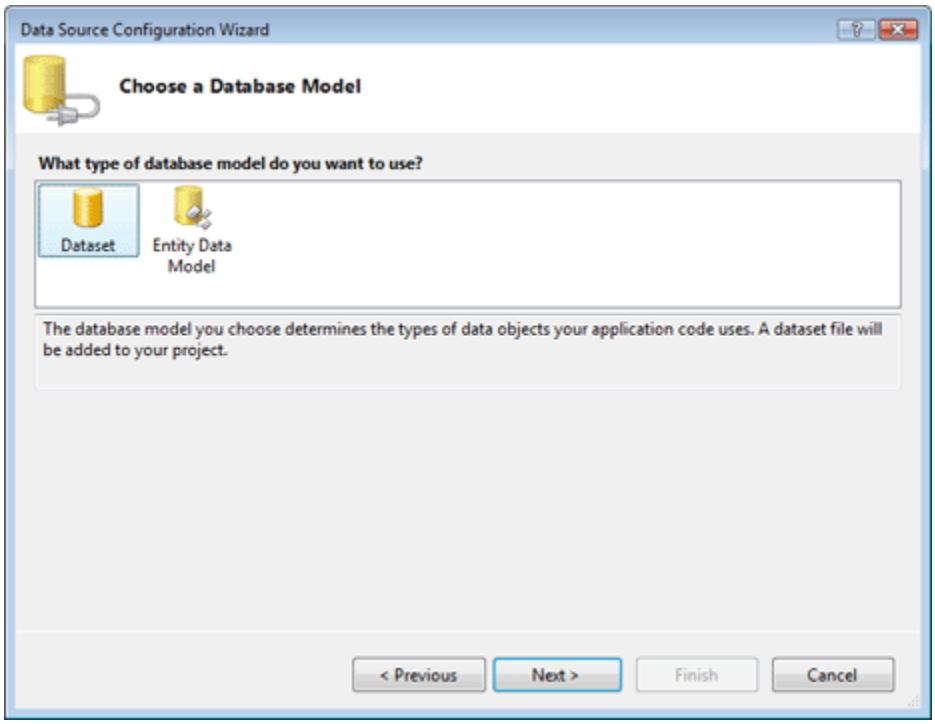
- We need to select a Data Source. So click on **Data Sources** at the bottom of the Solution Explorer. You may have to go to view and see other windows



If you have VB NET 2013 then the Data Source tab is on the left, just below the Toolbox:

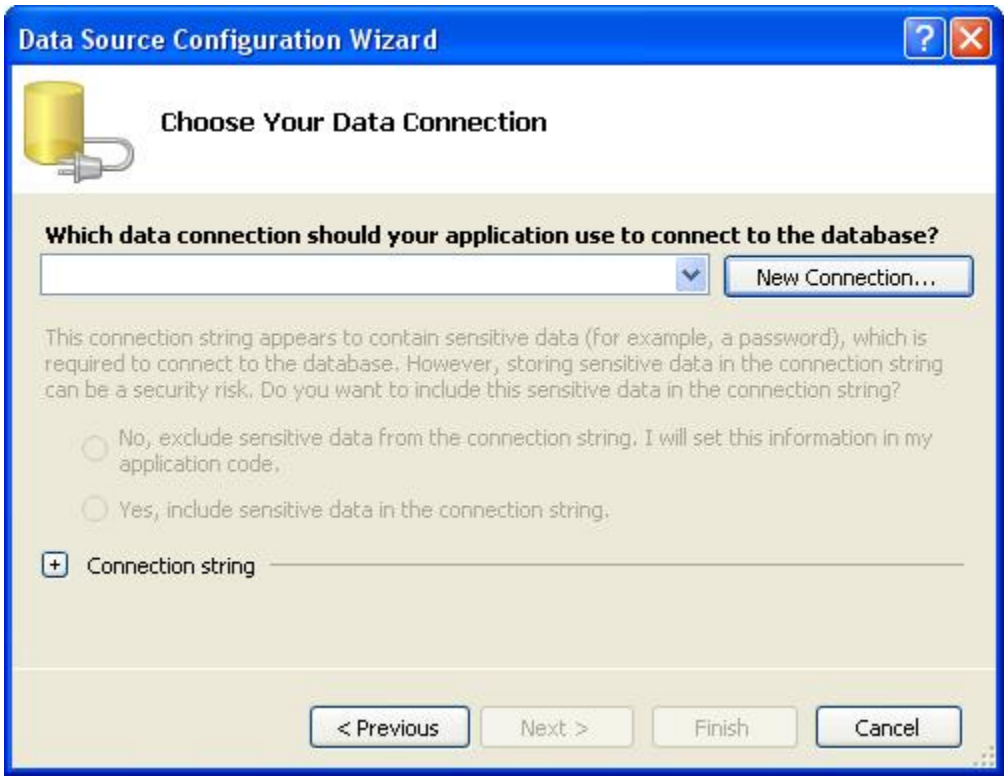
To Add a New Data Source, click on the link. When you do, you'll see a screen welcoming you to the Data Source Configuration Wizard, Just click Next, to get to the screen below:

You want to connect to a Database. So select this option, and click Next. In version 2010 of VBN NET, you'll see this screen appear (you won't see it if you have version 2008):

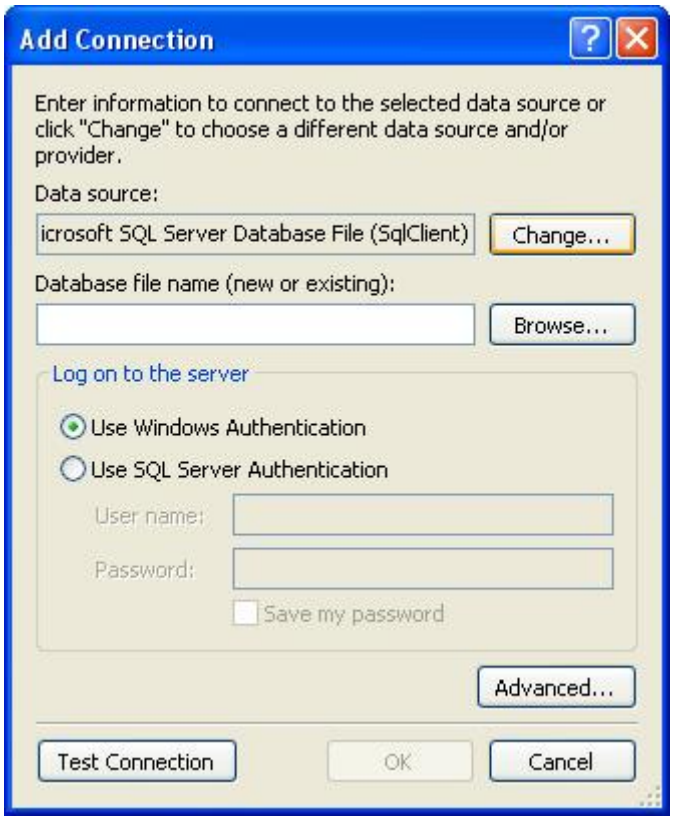


Select DataSet and click Next.

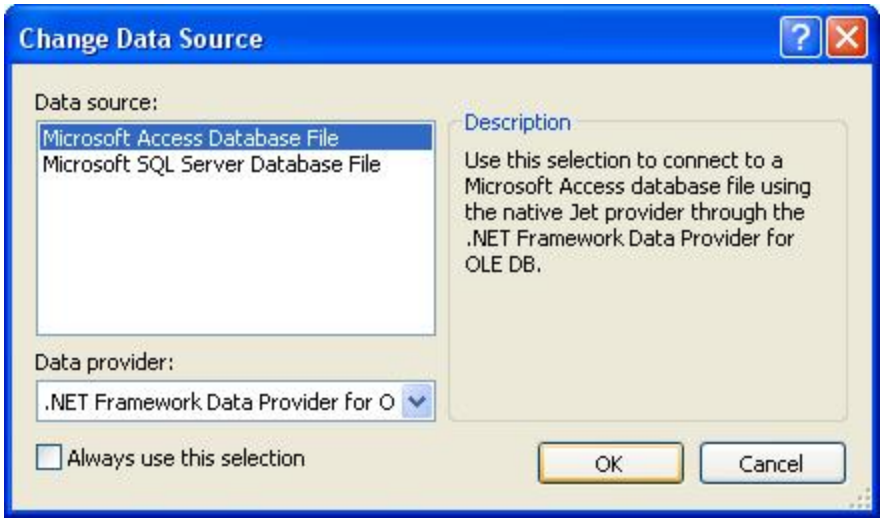
In both versions 2008 and 2010, you'll then see this screen:



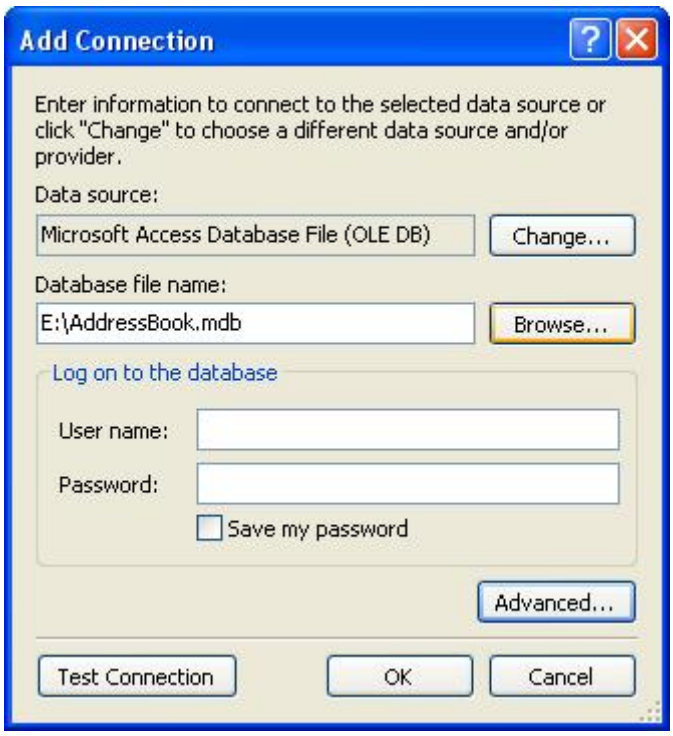
Click the **New Connection** button and another dialogue box pops up:



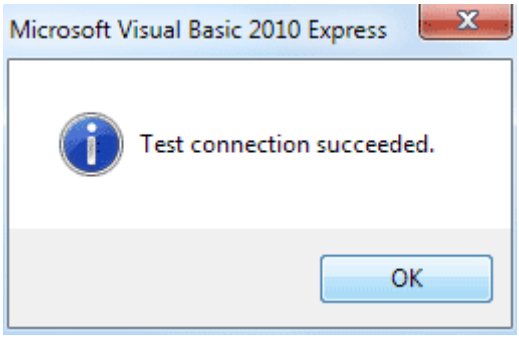
Click the **Change** button, because we want to connect to an Access database. (The default is for a SQL Server database.) When you click **Change**, you'll see this:



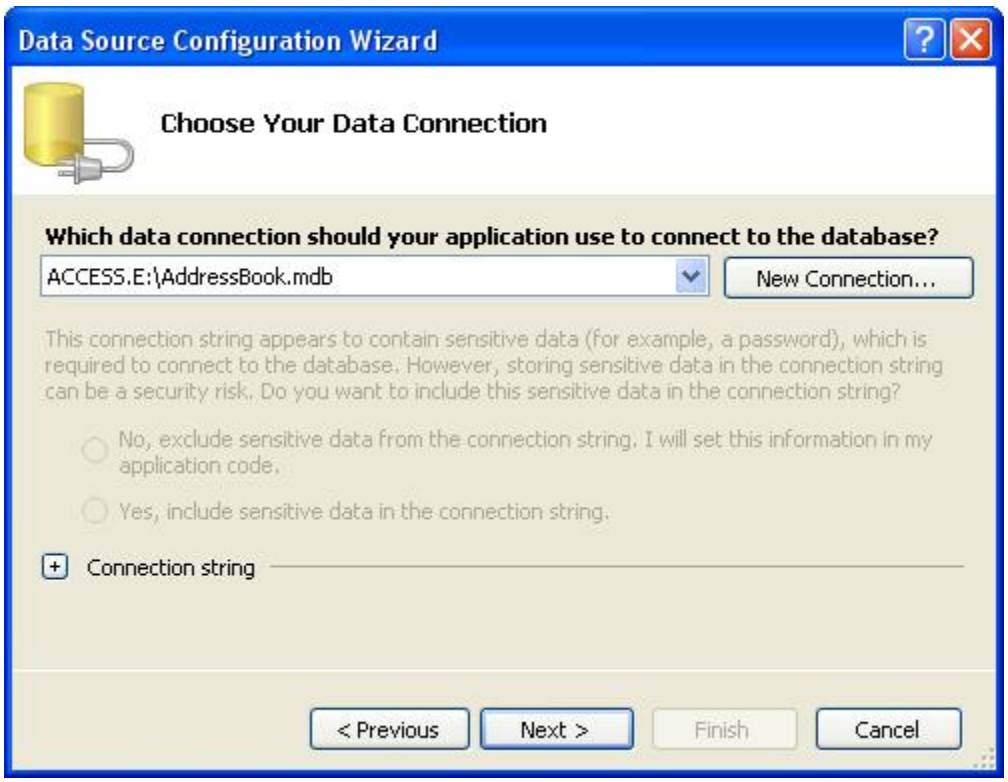
Select **Microsoft Access Database File**, then click OK. The previous dialogue box will then look like this:



Click the **Browse** button and navigate to where on your computer you downloaded our Access Database called AddressBook.mdb. Click **Test Connection** to see if everything is OK, and you'll hopefully see this:

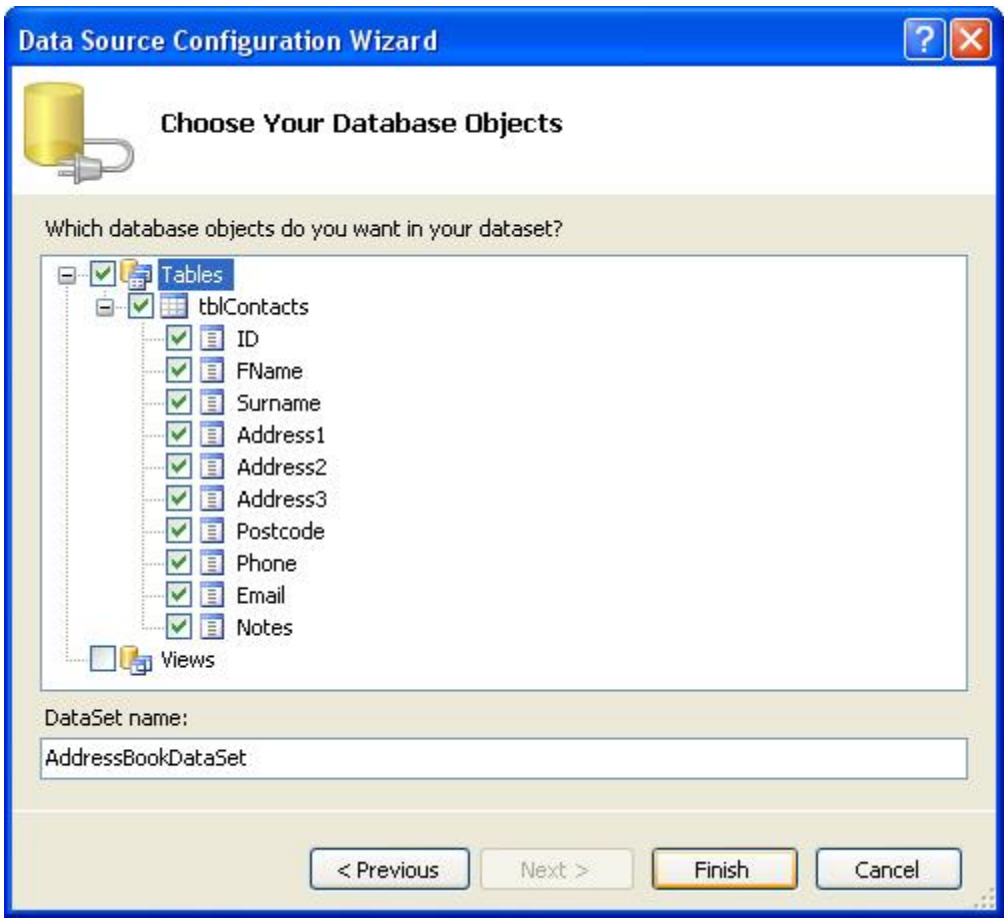


Click the OK button, then click the OK button on the Add Connection dialogue box as well. You will be returned to the Data Source Configuration Wizard, which should now look like this:



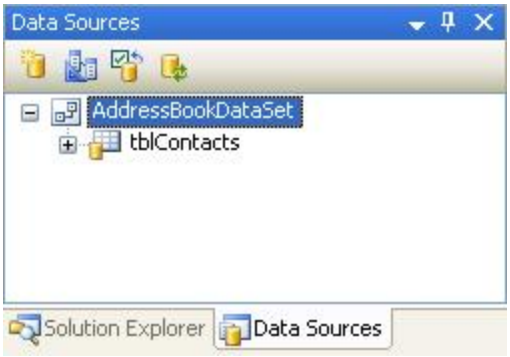
Click Next to move to the next step of the Wizard. You may see a message box appear, however. Click No on the message box to stop VB copying the database each time it runs. You should then see this:

Make sure there's a tick in the box for "Save the connection", and then click Next:

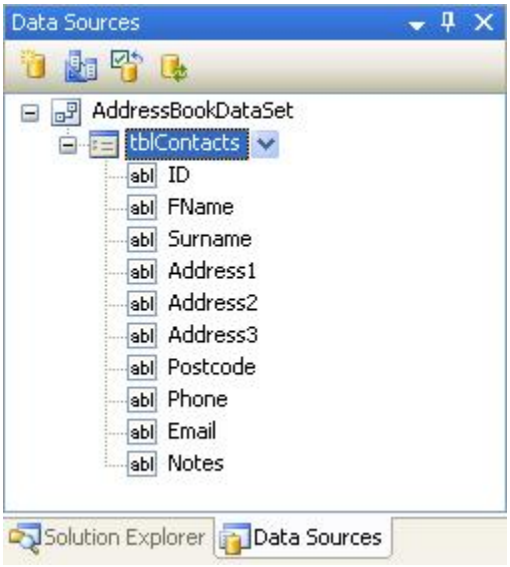


Here, you can select which tables and fields you want. Tick the **Tables** box to include them all. You can give your DataSet a name, if you prefer. Click Finish and you're done.

When you are returned to your form, you should notice the Solution Explorer has added your new Data Source:

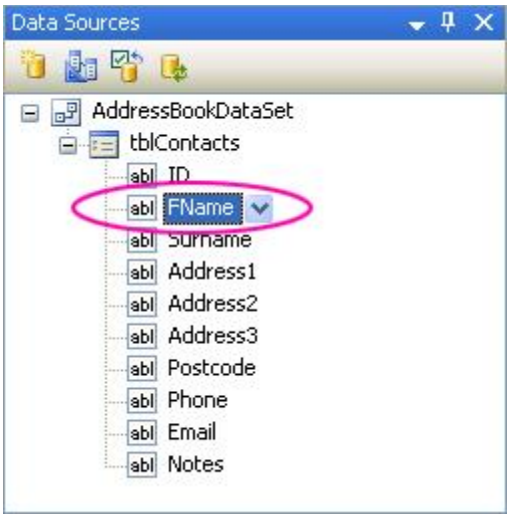


The Data Sources area of the Solution Explorer now displays information about your database. Click the plus symbol (an arrow in VB NET 2010) next to **tblContacts**:



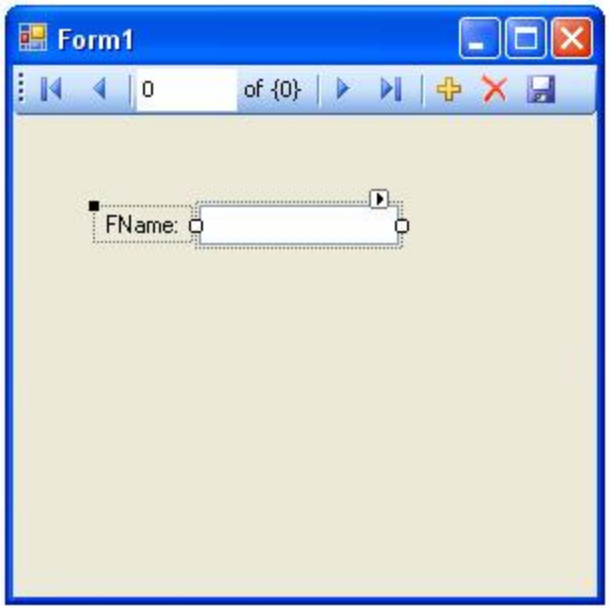
All the Fields in the Address Book database are now showing.

To add a Field to your Form, click on one in the list. Hold down your left mouse button, and drag it over to your form:

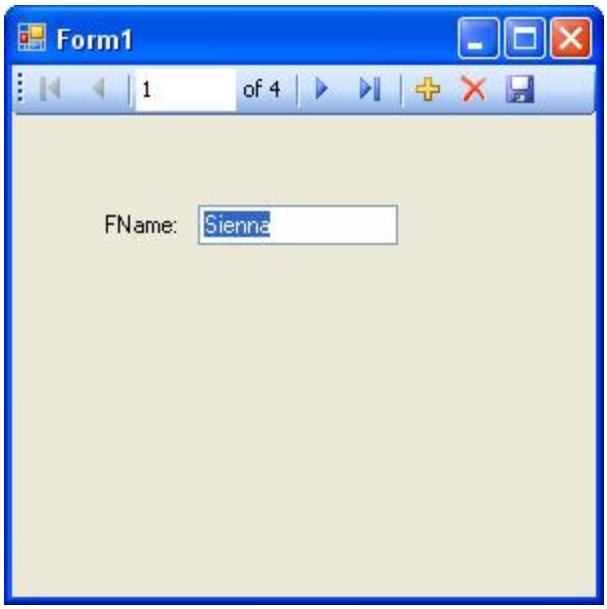


In the image above, the **FName** field is being dragged on the Form. Your mouse cursor will change shape.

When your Field is over the Form, let go of your left mouse button. A textbox and a label will be added. There are two other things to notice: a navigation bar appears at the top of the form, and a lot of strange objects have appeared in the object area at the bottom:

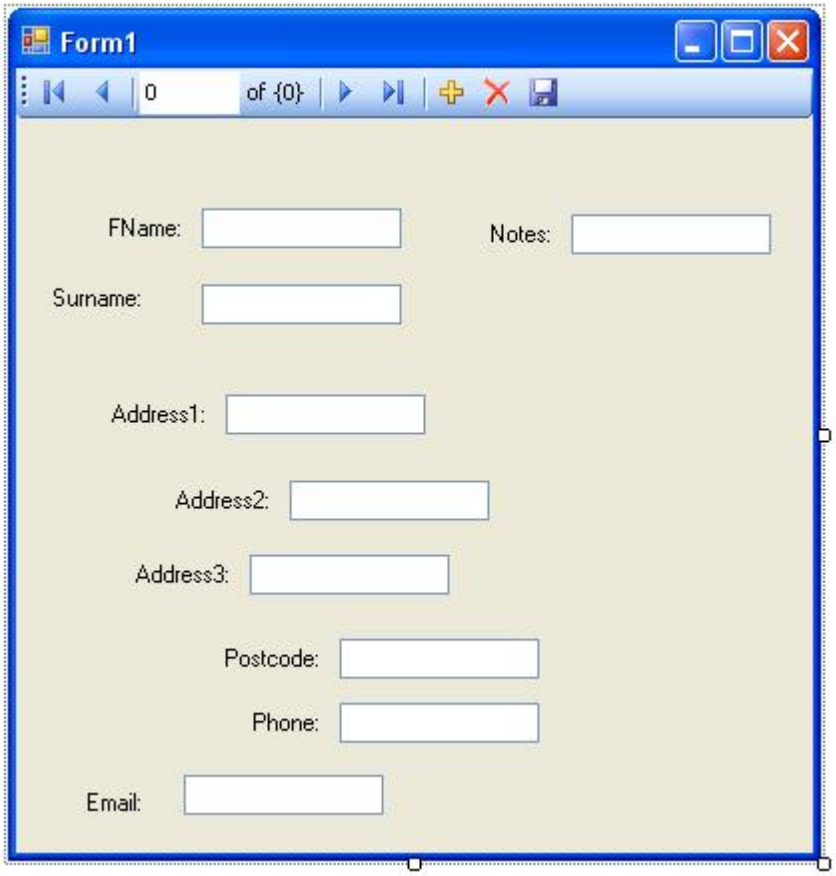


We'll explore the Objects in a later section. But notice the Navigation bar in blue. Run your programme by hitting the F5 key on your keyboard. You should see this:



Click the Navigation arrows to scroll through the database. When you've played around with the controls, stop the form from running, and return to Design View.

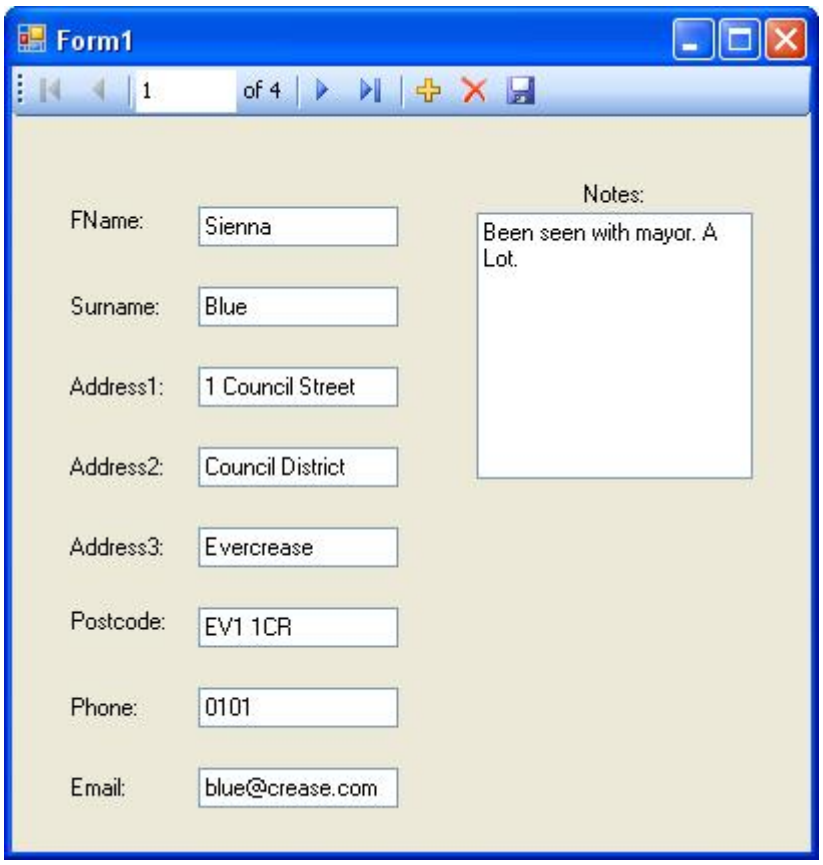
Drag and Drop more Fields to your form. But don't align them yet. We'll see an easy way to do this. But once you've dragged the fields to your form, it might look like this:



I'm sure you'll agree - that's a very untidy form. But there's a very easy way to align all your controls. Try this:

- Click on a Textbox and its label with your left mouse button
- Hold down the Ctrl key on your keyboard, and select a second Textbox and label
- With the Ctrl key still held down, click each Textbox and label in turn
- When all Textbox are selected, click on the **Format** menu at the top
- From the Format menu select **Align > Lefts**. The left edges of the Textboxes will align themselves
- From the Format menu select **Vertical Spacing > Make Equa**l. The space between each textbox will then be the same

With your new controls added, and nicely aligned, press F5 to run your form. For the Notes Textbox, set the MultiLine property to True. Your form might then be something like this:



Click the Navigation icons to move backwards and forwards through your database.

In the next part, you'll move away from the Wizards and learn how to add your own programming code to open up and manipulate databases.

In this next section, we'll take a look at the objects that you can use to open and read data from a Database. We'll stick with our Access database, the AddressBook.mdb one, and recreate what the Wizard has done. That way, you'll see for yourself just what is going on behind the scenes.