

Visual Basic 2005 Express and Databases – the easy way

The Visual Basic 2005 Express Edition doesn't have the Data Form Wizard. But there is still an easy way to create a project that accesses a database. 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 (The location of the download page can be found at the start of this book.) Once you have saved the database to your own computer, you can begin.

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, and scroll through each entry.

What we're going to be doing is to use a Wizard to create a programme 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:

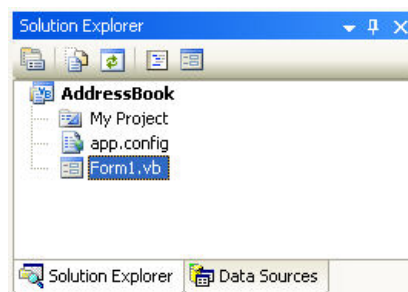
By clicking the buttons at the top, you can scroll through the database in the image above.

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

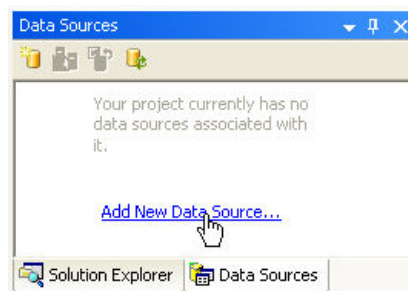
Click **File > New Project** from the menu bar

Select **Windows Application**, and then give it the Name **AddressBook**. Click OK

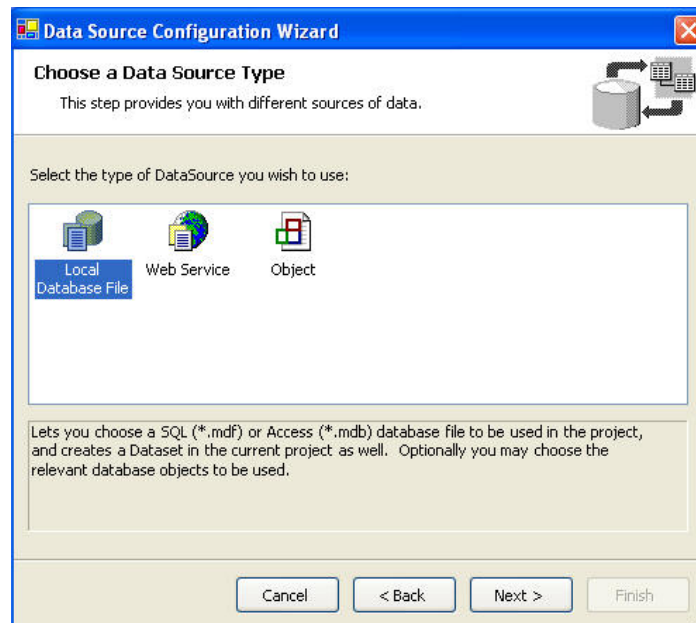
Locate the **Solution Explorer** on the right hand side (If you can't see it, click **View > Solution Explorer** from the menu bar. Or press Ctrl + R on your keyboard.) You should see this:



We need to select a Data Source. So click on Data Sources at the bottom of the Solution Explorer:



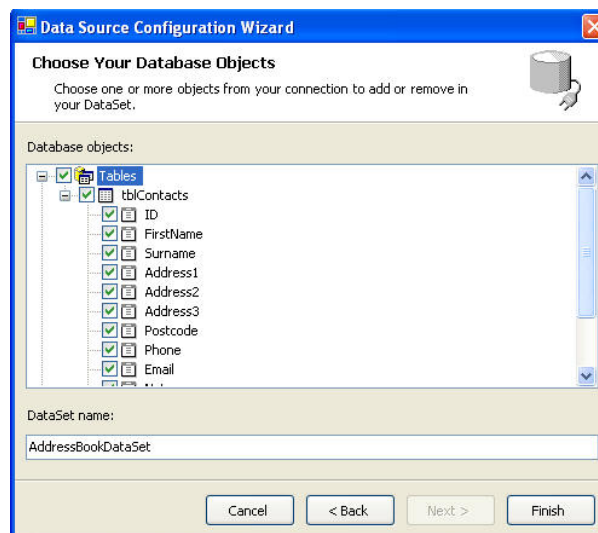
To Add a New Data Source, click on the link. When you do, you'll see a screen welcoming you to the Data Source Configuration Wizard, Just click Next, to get to the screen below:



You want to connect to a Local database file. So select this option, and click Next.

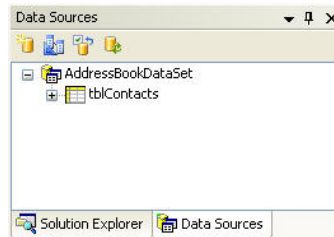
In the next step, you have to tell the Wizard where your database is. So click the Browse button, and navigate to where on your computer you downloaded the Access Database called AddressBook.mdb. Then click **Next**.

The Wizard will then take a look at your database, and display all your tables, fields and objects. If you downloaded our database, you Wizard should look something like this:

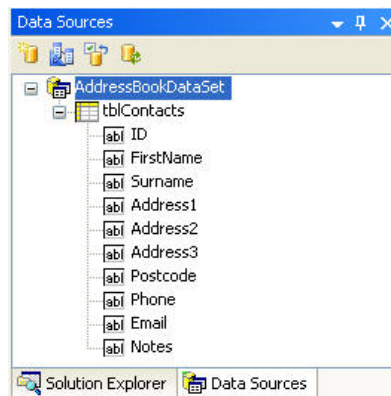


Click the Tables box, and all of the other items will have ticks in them. Notice the DataSet Name: AddressBookDataSet. You'll learn just what a DataSet is in a later section. For now, just click the **Finish** button.

When you click Finish, the Wizard goes to work. When it's done, it looks as though not much has changed. But notice the Solution Explorer:

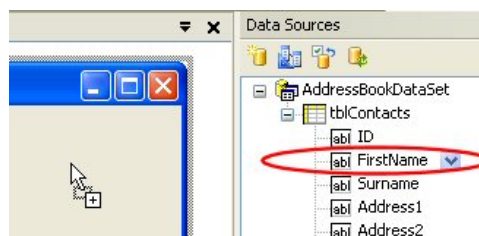


The Data Sources area of the Solution Explorer now displays information about your database. Click the plus symbol next to tblContacts:



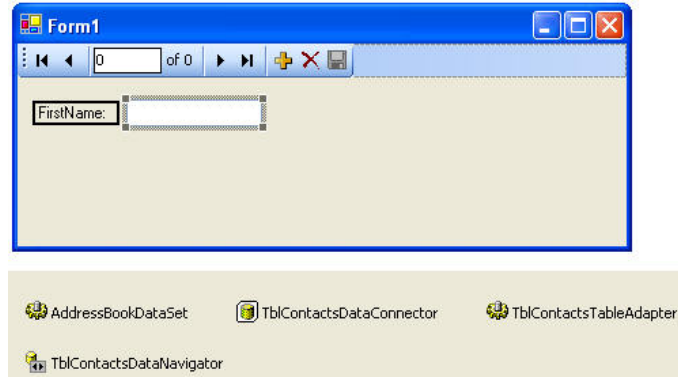
All the Fields in the Address Book database are now showing.

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:

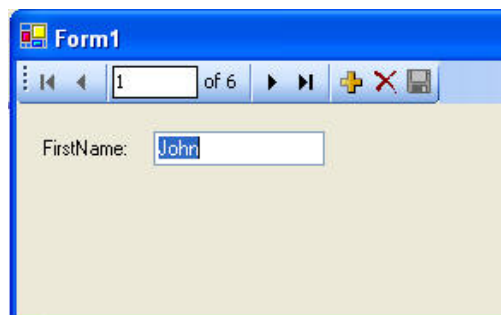


In the image above, the FirstName field is being dragged on the Form. Notice the mouse cursor has now changed.

When your Field is over the Form, let go of your left mouse button. A textbox and a label will be added. There's 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:

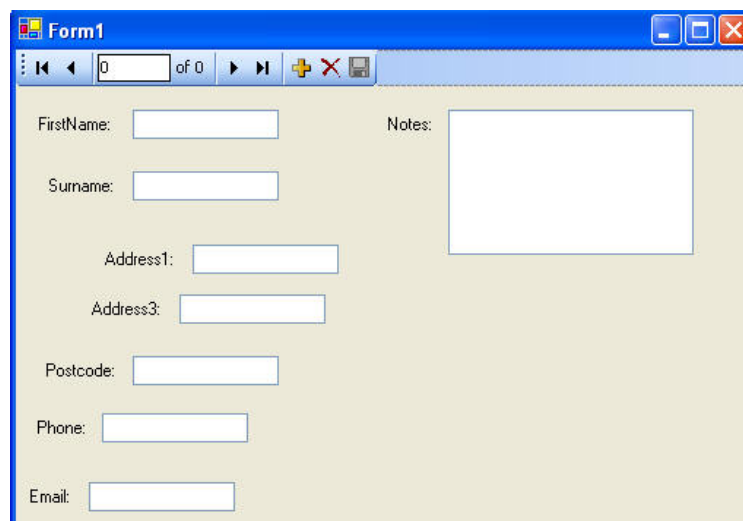


We'll explore the Objects in a later section. But notice the Navigation bar in blue. Run your programme by hitting the F5 key on your keyboard. You should see this:



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.

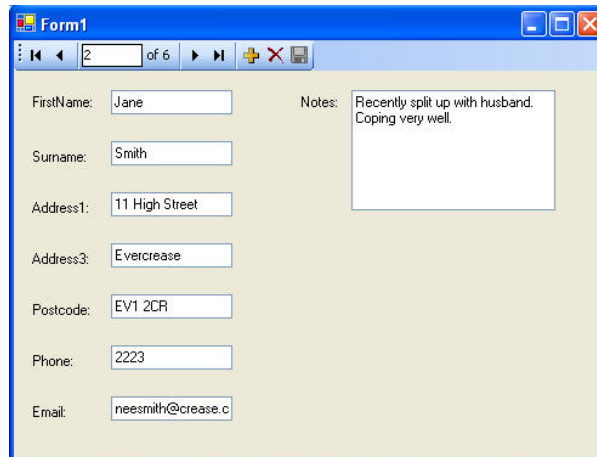
Drag and Drop more Fields to your form. But don't align them yet. We'll see an easy way to do this. But once you've dragged the fields to your form, it might look like this:



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 with your left mouse button
- Hold down the Ctrl key on your keyboard, and select a second Textbox
- With the Ctrl key still held down, click each Textbox 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 Equal**. The space between each textbox will then be the same

With your new controls added, and nicely aligned, press F5 to run your form. You might have something like this:



The screenshot shows a Microsoft Access form titled 'Form1'. At the top is a navigation bar with icons for back, forward, and other navigation functions. Below the navigation bar, the form displays a record for Jane Smith. The fields are as follows:

Field	Value
FirstName:	Jane
Surname:	Smith
Address1:	11 High Street
Address3:	Evercrease
Postcode:	EV1 2CR
Phone:	2223
Email:	neesmith@crease.c
Notes:	Recently split up with husband. Coping very well.

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.