

## CREATING A DATA REPORT IN VISUAL BASIC 6 (VB6)

- Once you have gone to all the trouble of developing and managing a database, it is nice to have the ability to obtain printed or displayed information from your data. The process of obtaining such information is known as creating a data report.
- There are two steps to creating a data report. First, we need to create a **Data Environment**. This is designed within Visual Basic and is used to tell the data report what is in the database. Second, we create the **Data Report** itself. This, too, is done within **Visual Basic**. The **Data Environment** and **Data Report** files then become part of the **Visual Basic** project developed as a database management system.
- The **Visual Basic 6.0** data report capabilities are vast and using them is a detailed process. The use of these capabilities is best demonstrated by example. We will look at the rudiments of report creation by building a tabular report for our phone database.

### EXAMPLE – PHONE DIRECTORY – BUILDING A DATA REPORT

We will build a data report that lists all the names and phone numbers in our phone database. We will do this by first creating a **Data Environment**, then a **Data Report**. We will then reopen the phone database management project and add data reporting capabilities.

### CREATING A DATA ENVIRONMENT

1. Start a new **Standard EXE** project.
2. On the Project menu, click **Add Data Environment**. If this item is not on the menu, click **Components**. Click the **Designers** tab, and choose **Data Environment** and click **OK** to add the designer to your menu.
3. We need to point to our database. In the **Data Environment** window, right-click the **Connection1** tab and select **Properties**. In the **Data Link Properties** dialog box, choose **Microsoft Jet 3.51 OLE DB Provider**. Click **Next** to get to the **Connection** tab. Click the **ellipsis** button. Find your phone database (**.mdb**) file. Click **OK** to close the dialog box.
4. We now tell the **Data Environment** what is in our database. Right-click the **Connection1** tab and click **Rename**. Change the name of the tab to Phone. Right-click this newly named tab and click **Add Command** to create a **Command1** tab. Right-click this tab and choose **Properties**. Assign the following properties:

*Command Name – PhoneList*

*Connection – Phone*

*DataBase Object – Table*

*ObjectName – PhoneList*

5. Click **OK**. All this was needed just to connect the environment to our database.

6. Display the properties window and give the data environment a name property of denPhone.

Click **File** and **Save denPhone** As. Save the environment in an appropriate folder.

We will eventually add this file to our phone database management system. At this point, my data environment window looks like this (*I expanded the PhoneList tab by clicking the + sign*):



## CREATING A DATA REPORT

Once the **Data Environment** has been created, we can create a **Data Report**. We will drag things out of the **Data Environment** onto a form created for the **Data Report**, so make sure your **Data Environment** window is still available.

1. On the **Project** menu, click **Add Data Report** and one will be added to your project. If this item is not on the menu, click **Components**. Click the **Designers** tab, and choose **Data Report** and click **OK** to add the designer to your menu.

2. Set the following properties for the report:

*Name – rptPhone*

*Caption – Phone Directory*

*DataSource – denPhone (your phone data environment – choose, don't type)*

*DataMember – PhoneList (the table name – choose don't type)*

3. Right-click the **Data Report** and click **Retrieve Structure**. This establishes a report format based on the **Data Environment**.

4. Note there are five sections to the data report: a **Report Header**, a **Page Header**, a **Detailsection**, a **Page Footer**, and a **Report Footer**. The headers and footers contain information you want printed in the report and on each page. To place information in one of these regions, right-click the selected region, click **Add Control**, then choose the control you wish to place. These controls are called data report controls and properties are established just like you do for usual controls. Try adding some headers.

5. The Detail section is used to layout the information you want printed for each record in your database. We will place two field listings (**Name**, **Phone**) there. Click on the **Name** tab in the **Data Environment** window and drag it to the Detail section of the **Data Report**. Two items should appear: a text box **Name** and a text box **Name (PhoneList)**. The first text box is heading information.

Move this text box into the **Page Header** section. The second text box is the actual value for **Name** from the **PhoneList** table. Line this text box up under the **Name** header. Now, drag the **Phone** tab from the **Data Environment** to the **Data Report**.

Adjust the text boxes in the same manner. Our data report will have page headers **Name** and **Phone**. Under these headers, these fields for each record in our database will be displayed. When done, the form should look something like this:



In this form, I've resized the labels a bit and added a **Report Header**. Also, make sure you close up the **Detail** section to a single line. Any space left in this section will be inserted after each entry.

6. Click **File** and Save **rptPhone** As. Save the environment in an appropriate folder. We will now reopen our phone database manager and attach this and the data environment to that project and add capabilities to display the report.

## ACCESSING THE DATA REPORT

1. Reopen the phone directory project. Add a command button named **cmdReport** and give it a Caption of **Show Report**. (There may be two tabs in your toolbox, one named **General** and one named **DataReport**. Make sure you select from the **General** tools.)

2. We will now add the data environment and data report files to the project. Click the Project menu item, then click **Add File**. Choose **denPhone** and click **OK**. Also add **rptPhone**. Look at your **Project Window**. Those files should be listed under **Designers**.

3. Use this code in **cmdReport\_Click**:

```
Private Sub cmdReport_Click()

    rptPhone.Show

End Sub
```

4. This uses the **Show** method to display the data report.

5. Save the application and run it. Click the **Show Report** button and this should appear:



You now have a printable copy of the phone directory. Just click the **Printer** icon. Notice the relationship with this displayed report and the sections available in the **Data Report** designer.