Tutorial on How to
Load images in Crystal Reports dynamically
Using Visual Basic 6 and Access 2000

By Aeric Poon

Introduction

This tutorial will show you how to create a Visual Basic 6 project which will generate a report using Seagate Crystal Reports 8.5 Developer Edition. You will save the path of the image files in a MS Access database where it is protected by password. This project will use an external Crystal Report file and will be previewed using Crystal Viewer control.

Get Ready

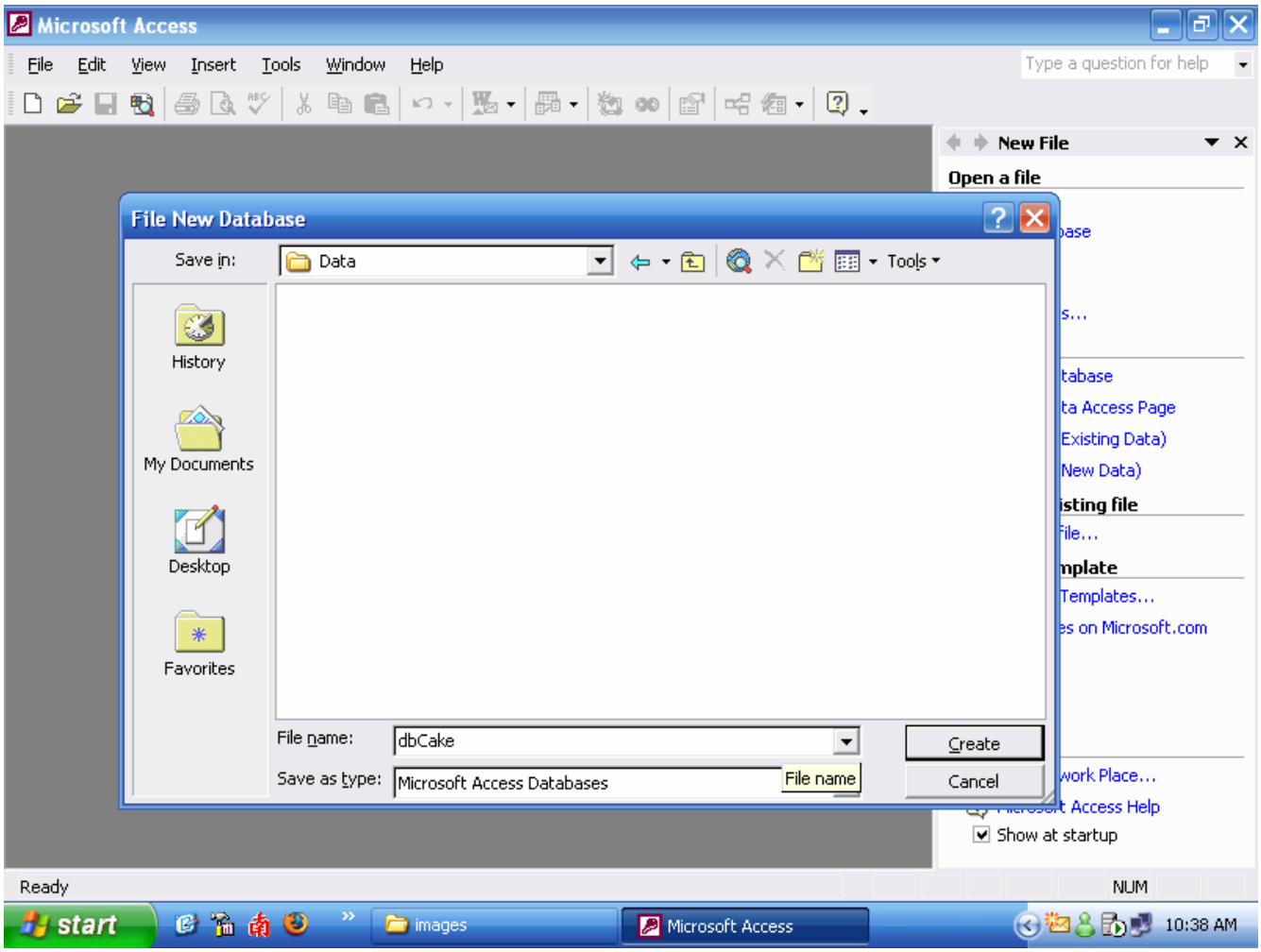
In this tutorial, I will use some small images I get from forwarded email. I created a folder name **Tutorial** where all the files will be store inside this folder. I also created some images with different type like bmp, jpg, gif, png and tif which will be stored inside a folder name **Cake**.

Contents

Step 1

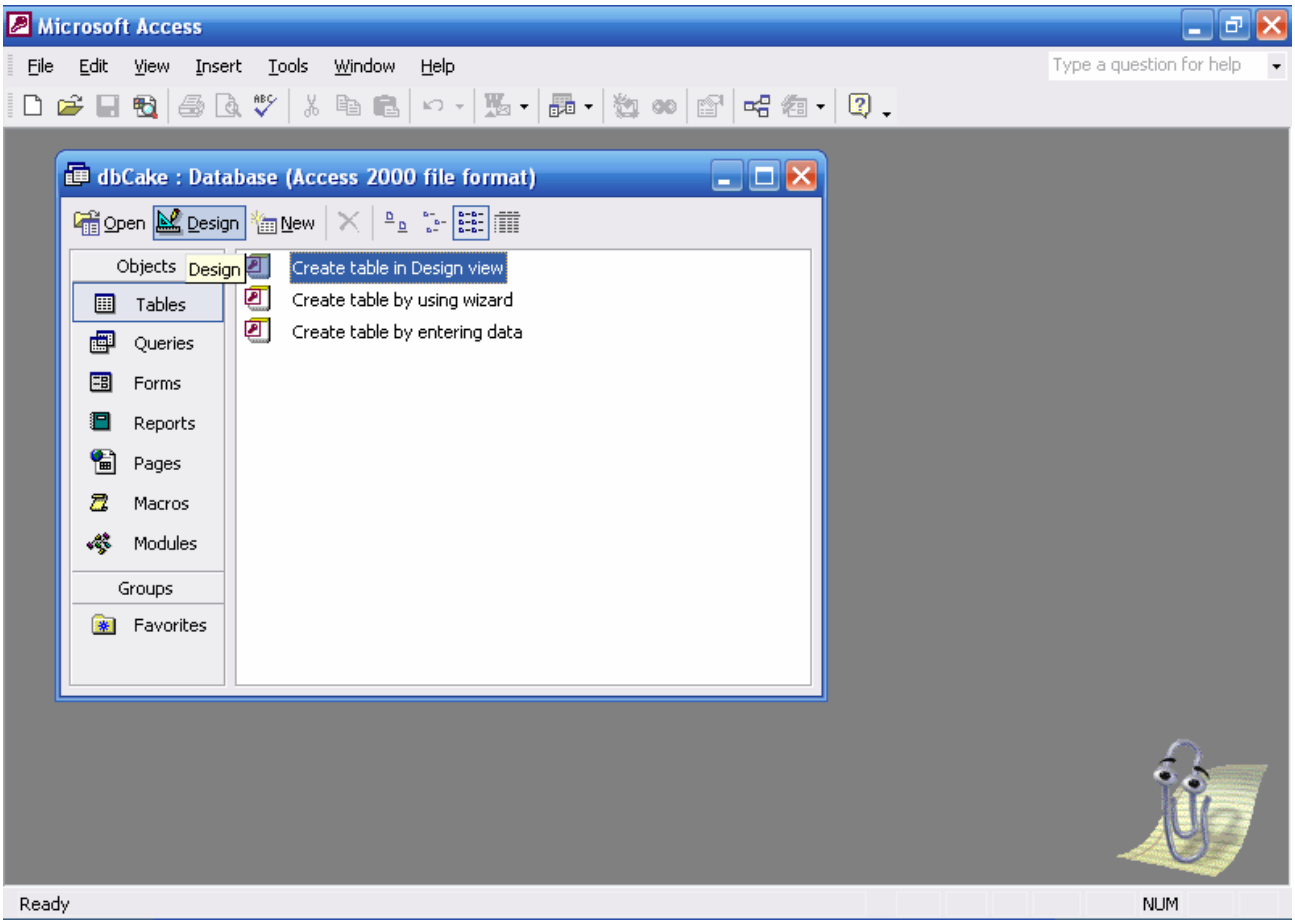
Create a Database file using MS Access

Run MS Access to create a blank database. Create a folder name **Data**. In the **File New Database** dialogue box, type the name **dbCake** (dbCake.mdb) and click on **Create** to save this file inside folder **Data**.

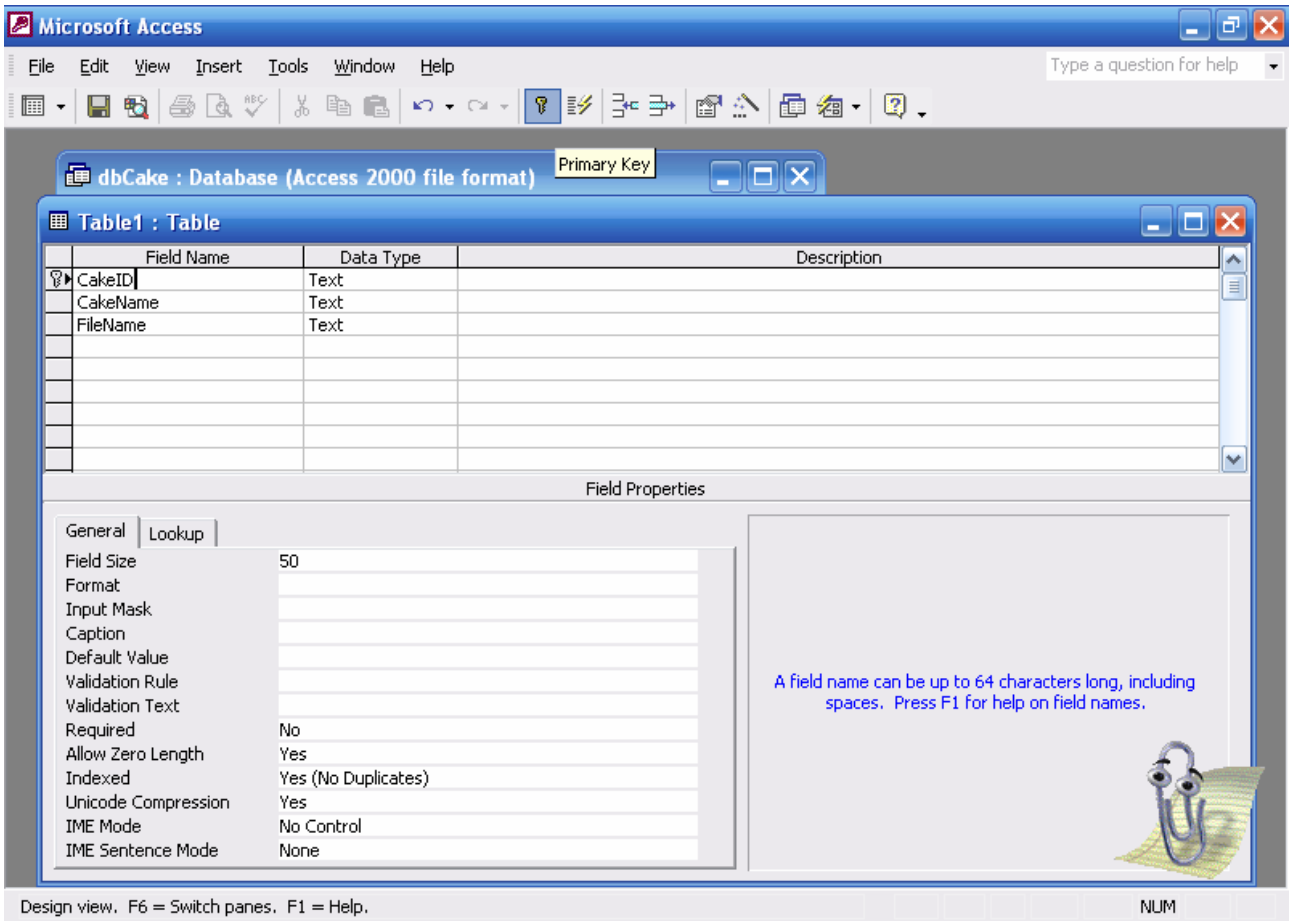


You have now created a database file.

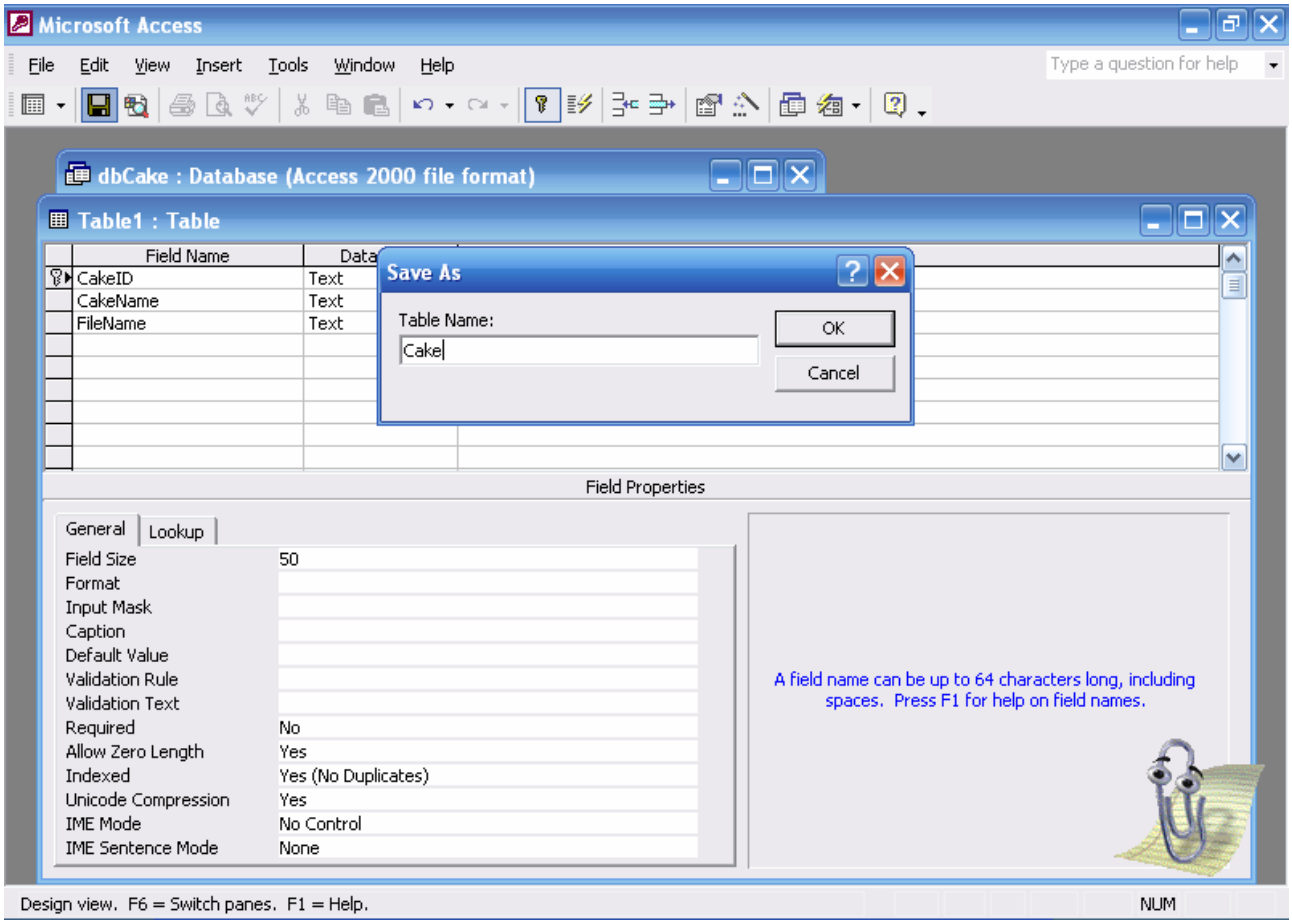
Click on **Create table in Design view**. Click the **Design** button to create a new table.



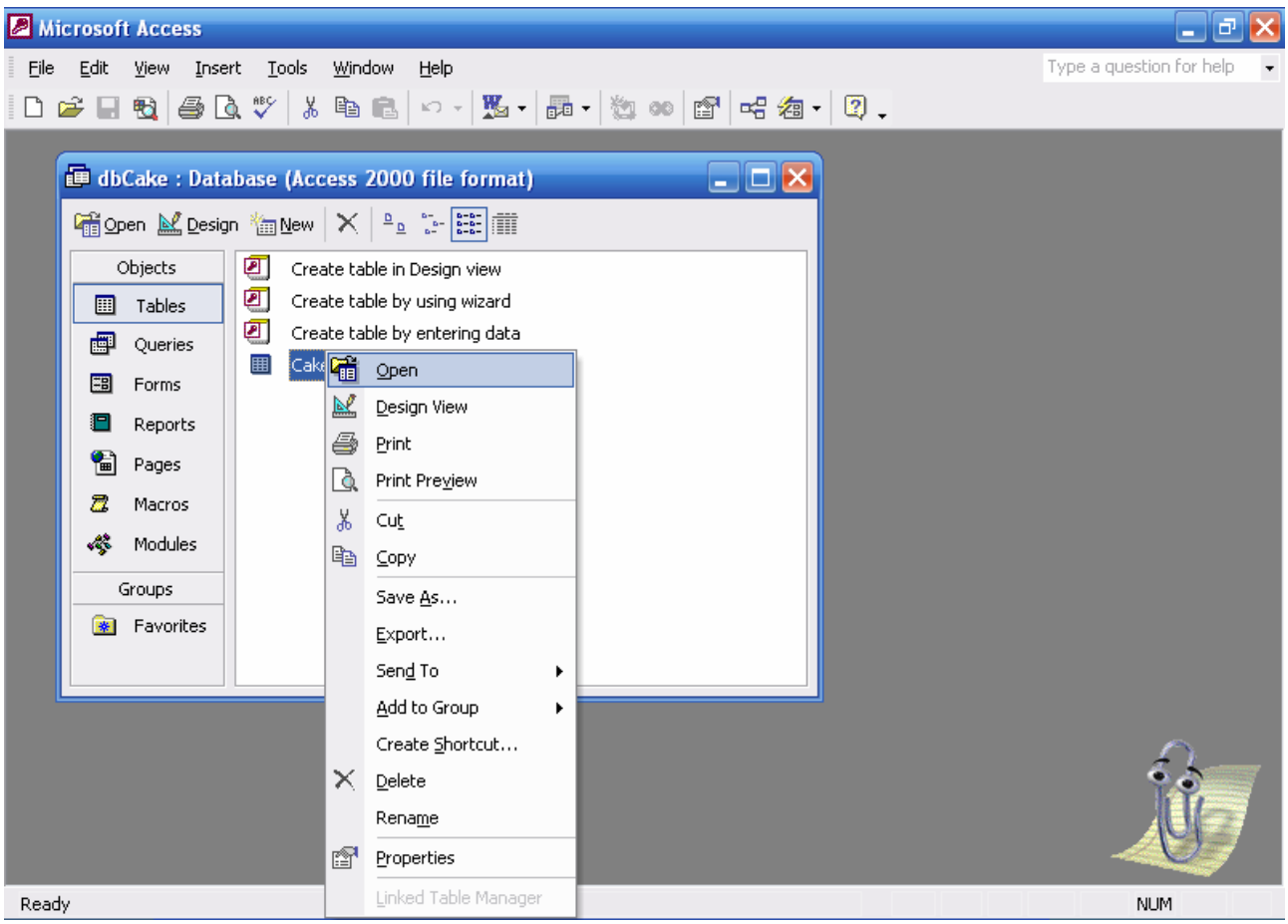
Create the following fields in the new table:
CakeID (Text), CakeName (Text), FileName (Text)
Set focus at CakeID and then click the **Primary Key** button to make this field as Primary Key.



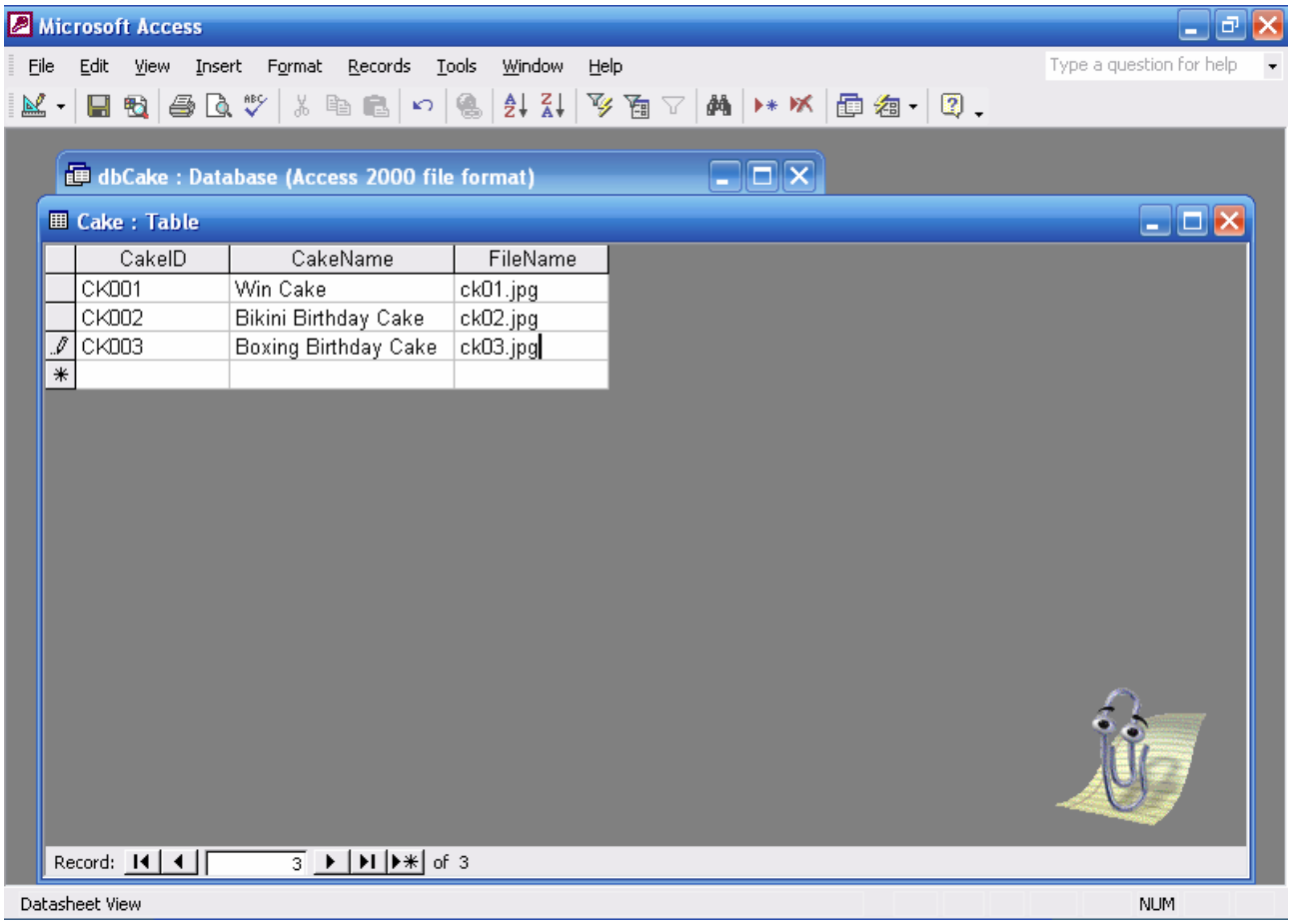
Close the Table window or click **Save** button. Save this table name as **Cake**.



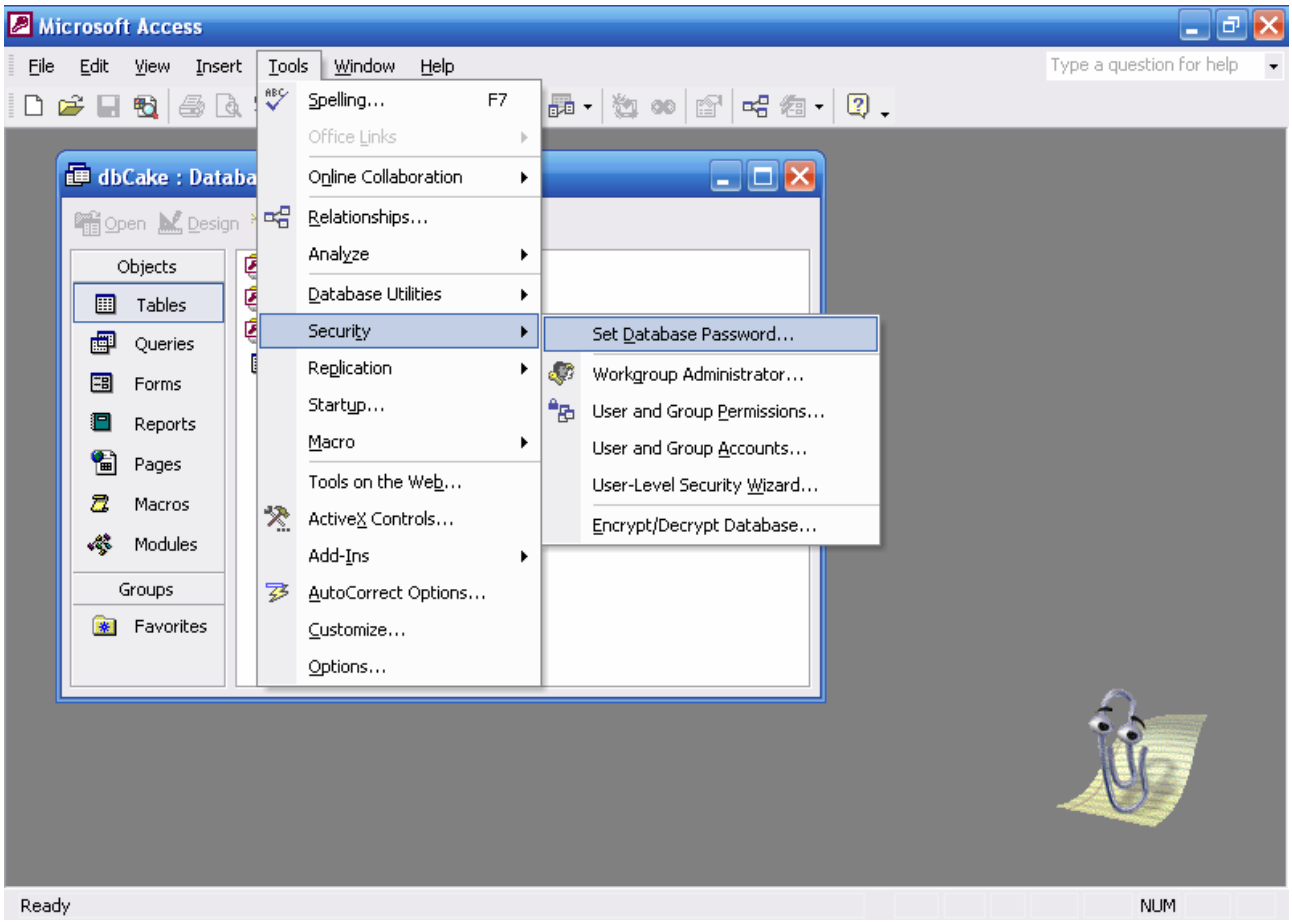
Right click and **Open** table Cake.



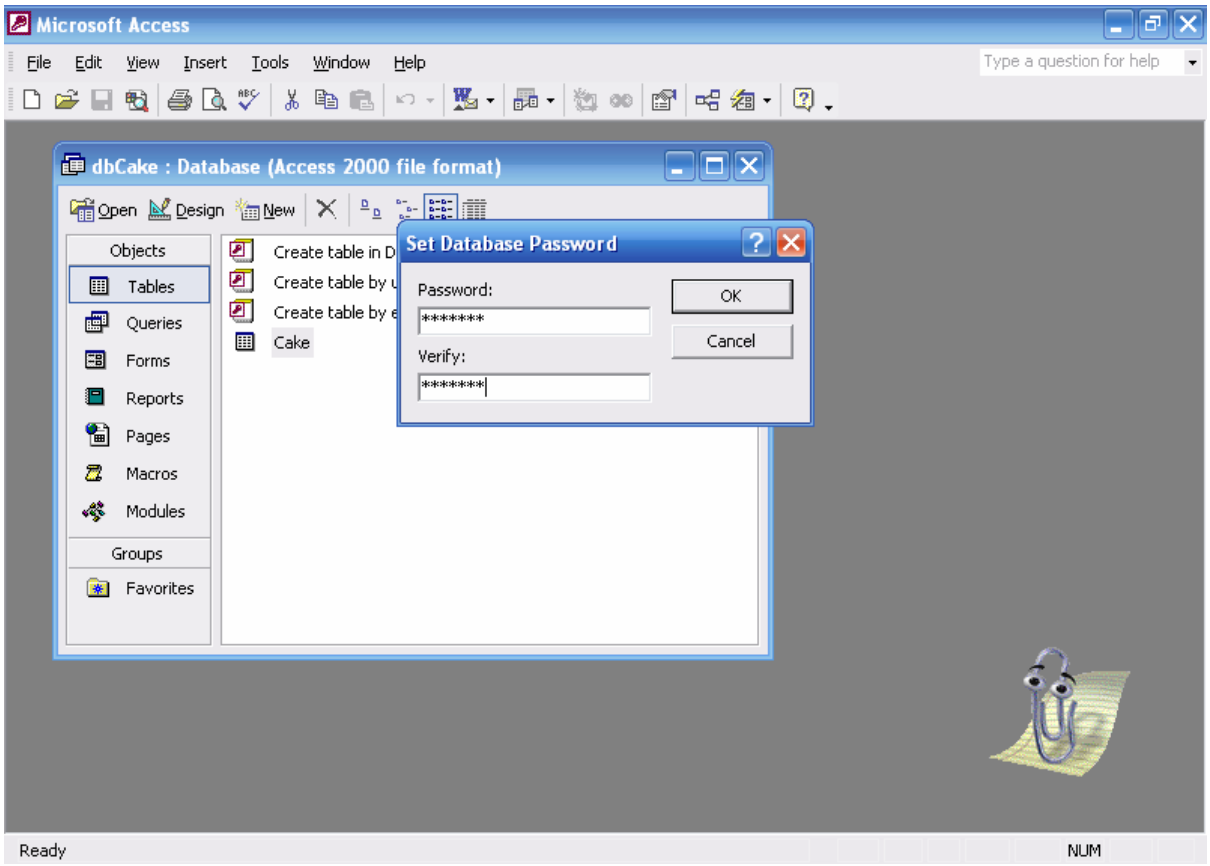
Insert some records in the table Cake. **Save** and **Close** the table **Cake**.



Set a Database Password. For this tutorial, I set the password as **yuMMy20**.



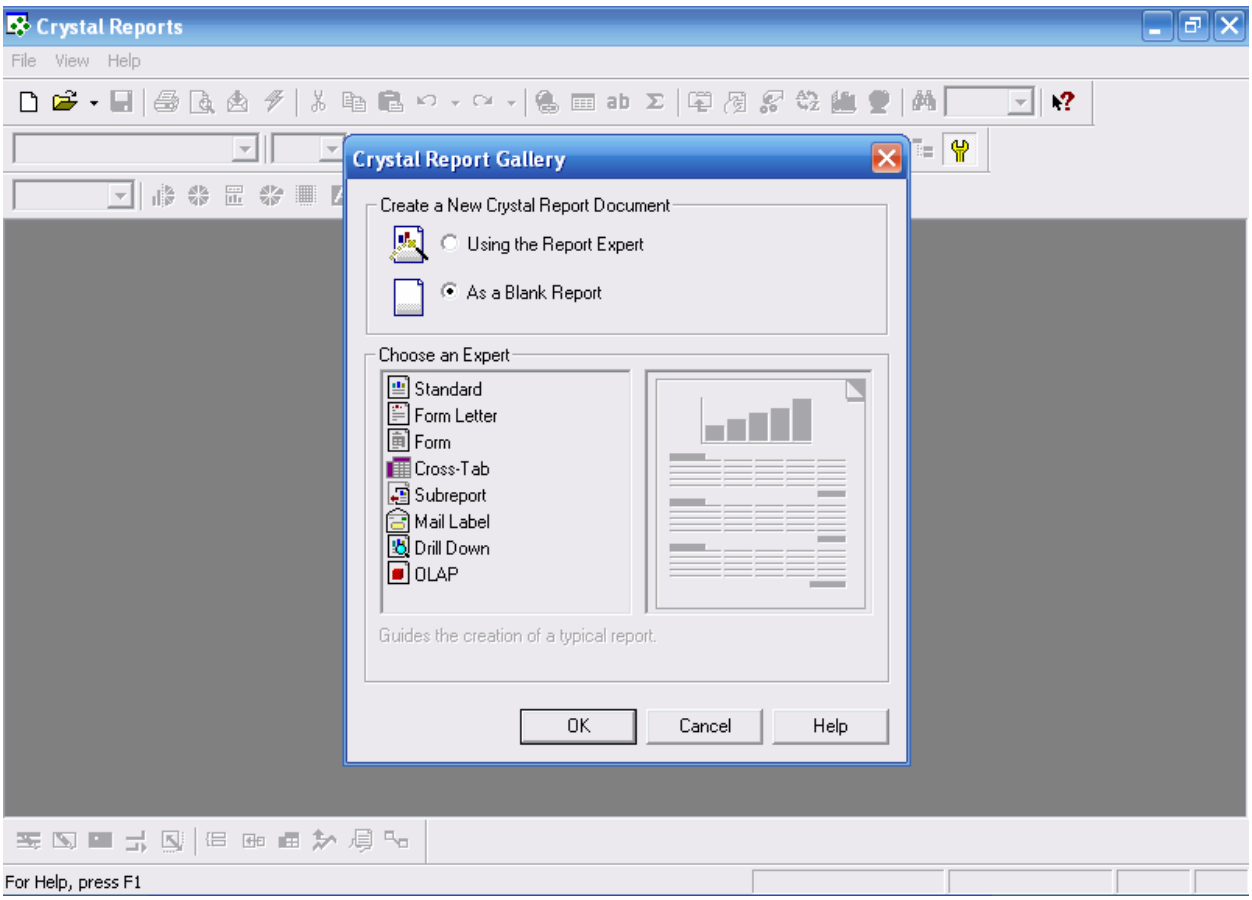
Click **OK** and Close this file. Now you have a database file ready.



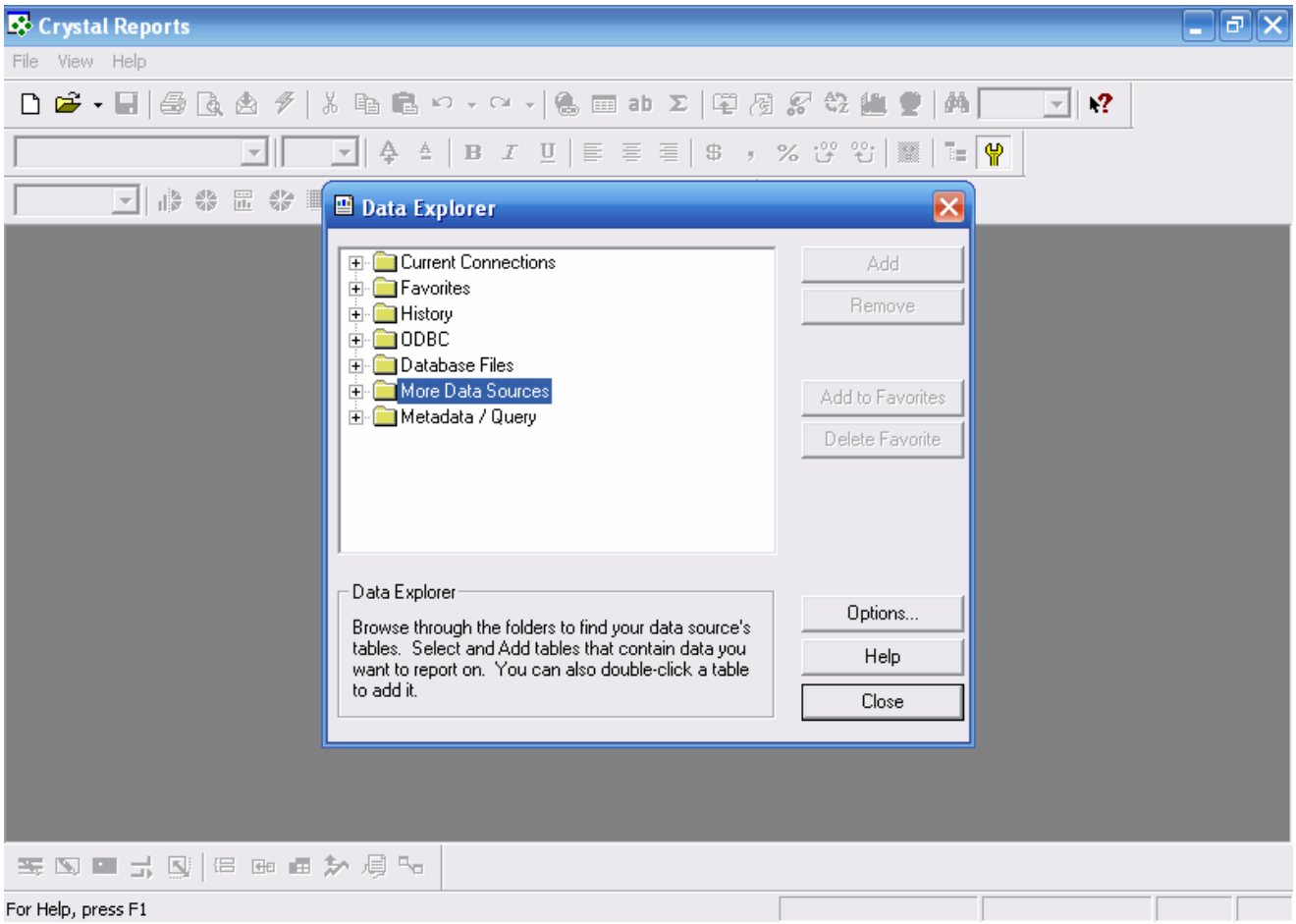
Step 2

Create a Crystal Reports file

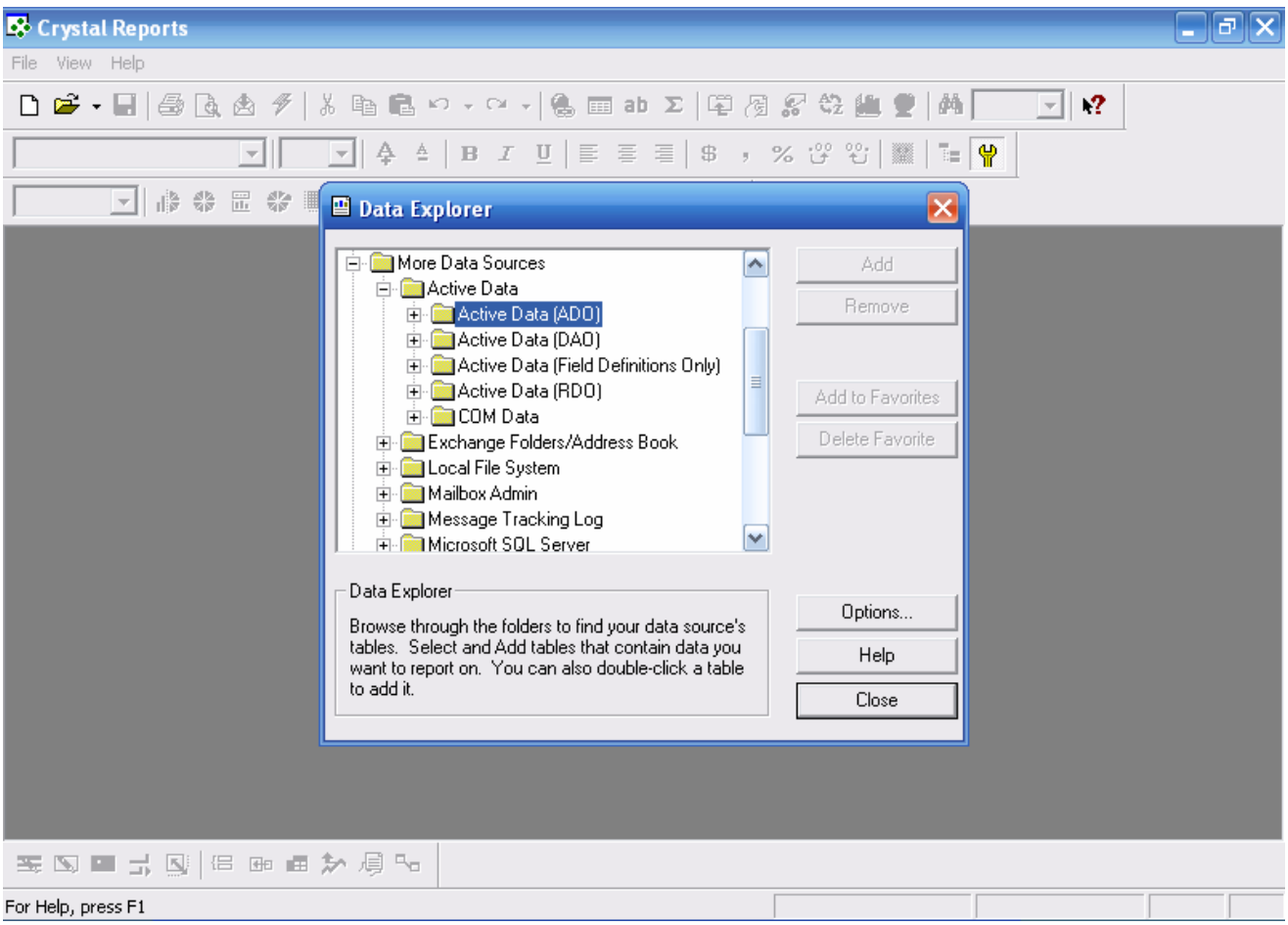
Run Crystal Reports 8.5 Developer. Click on **As a Blank Report** radio button in the **Crystal Report Gallery** dialogue box and click **OK**.



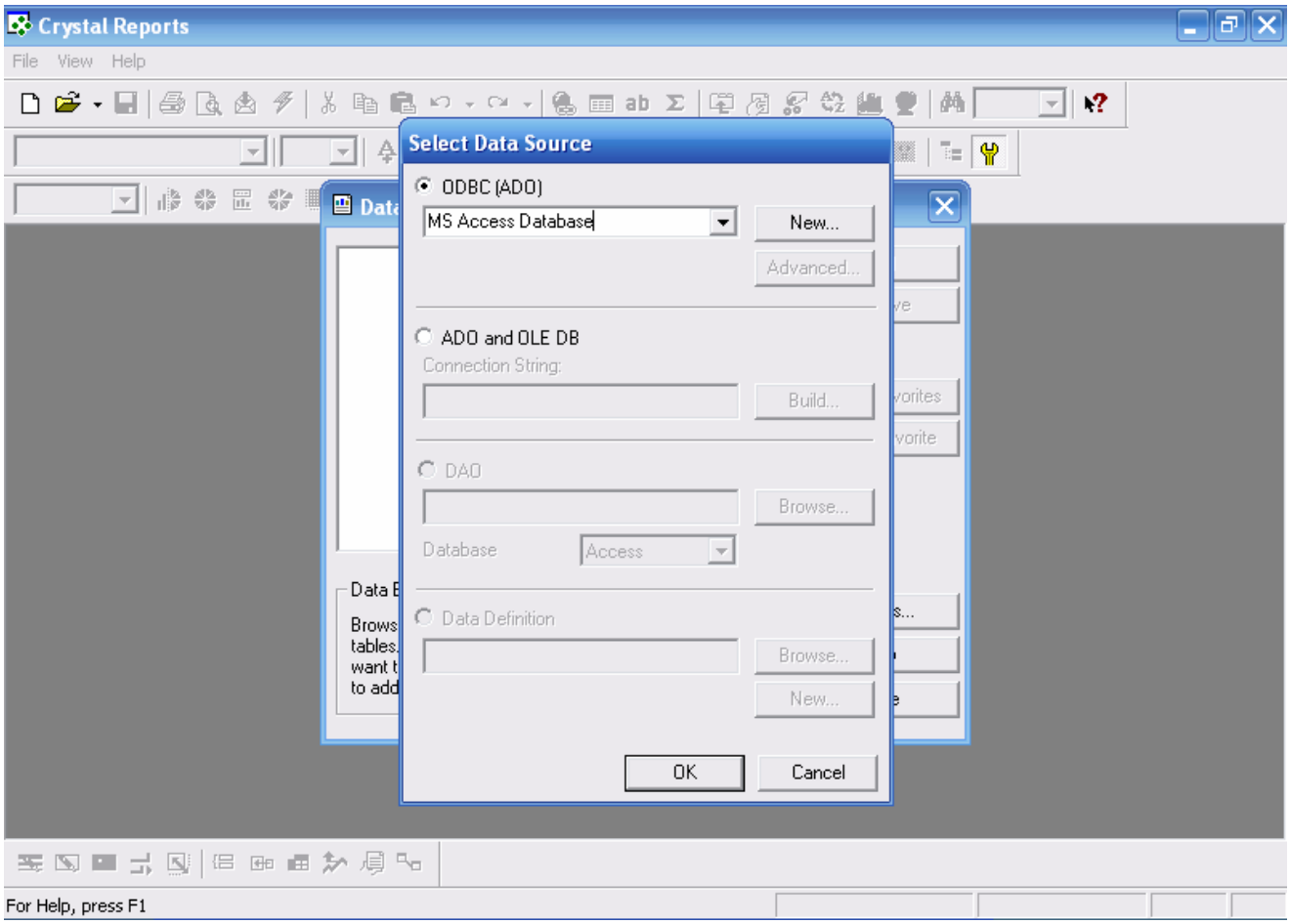
You will see a **Data Explorer** dialogue box. Click on the plus sign of **More Data Sources**.



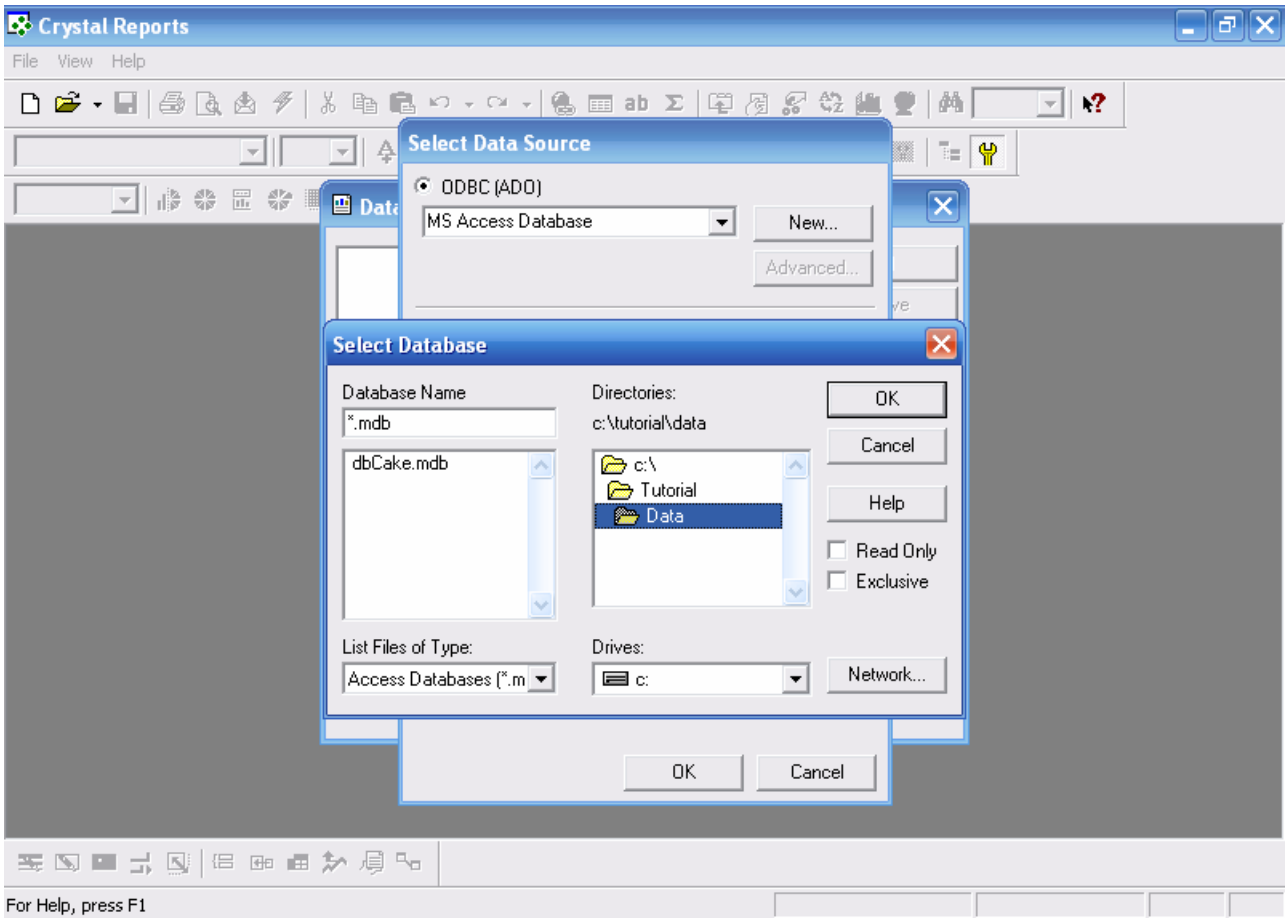
Click on the plus sign of **Active Data** and then click on **Active Data (ADO)**.



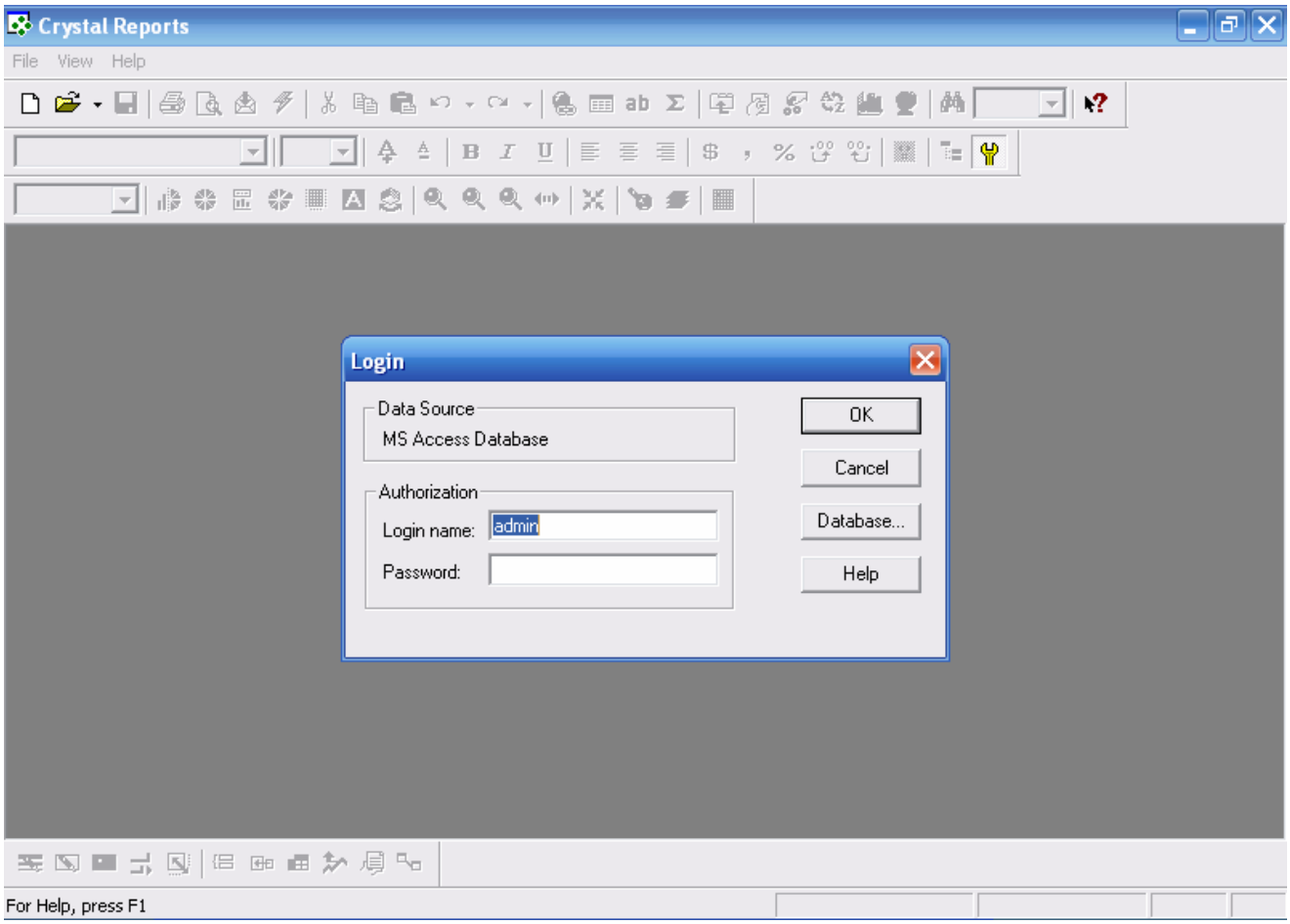
You will see a **Select Data Source** dialogue box. Choose **MS Access Database** from the dropdown list and click **OK**.



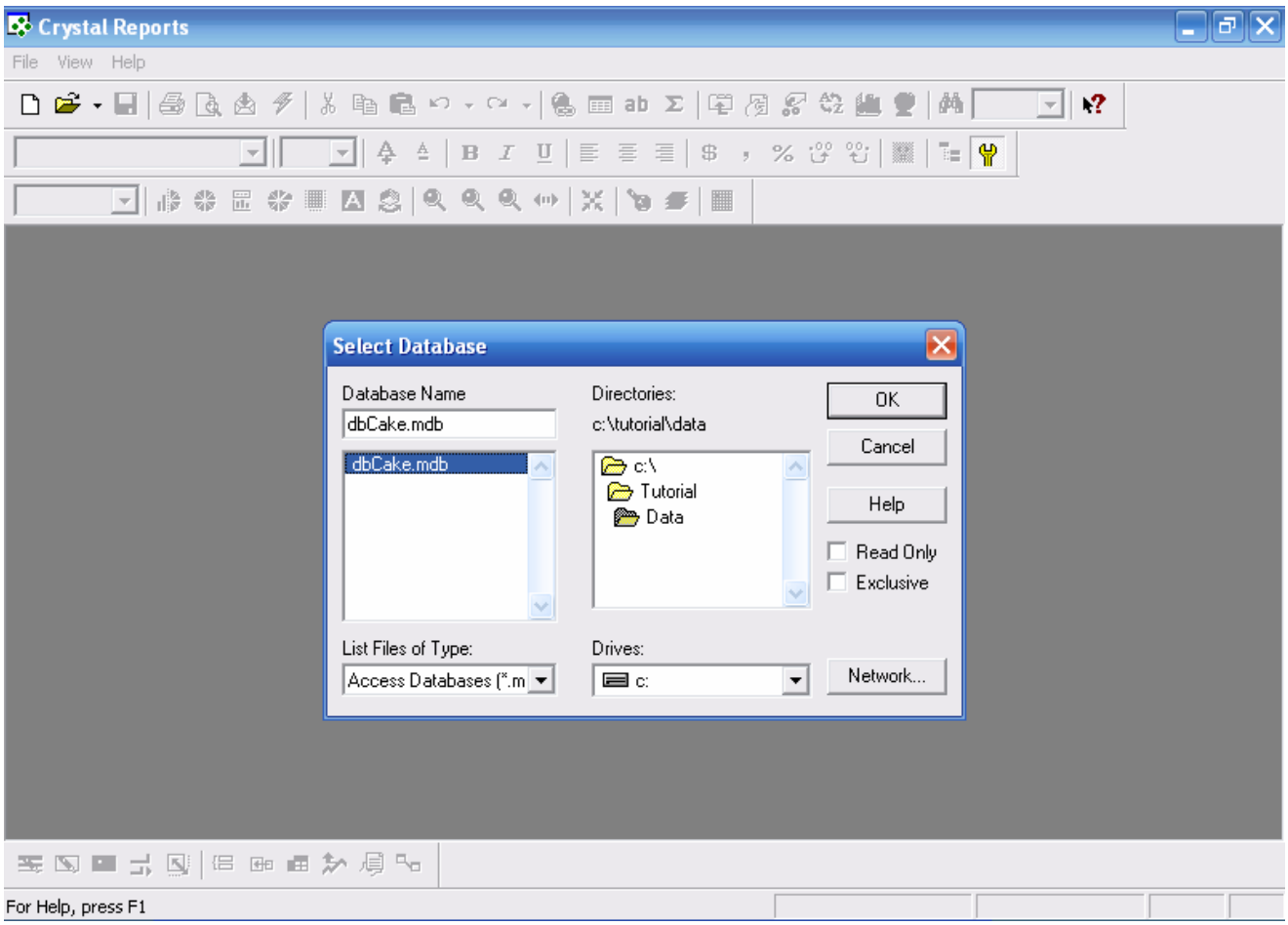
Browse for the **Data** folder where we store the database file, click dbCake.mdb and then click **OK**.



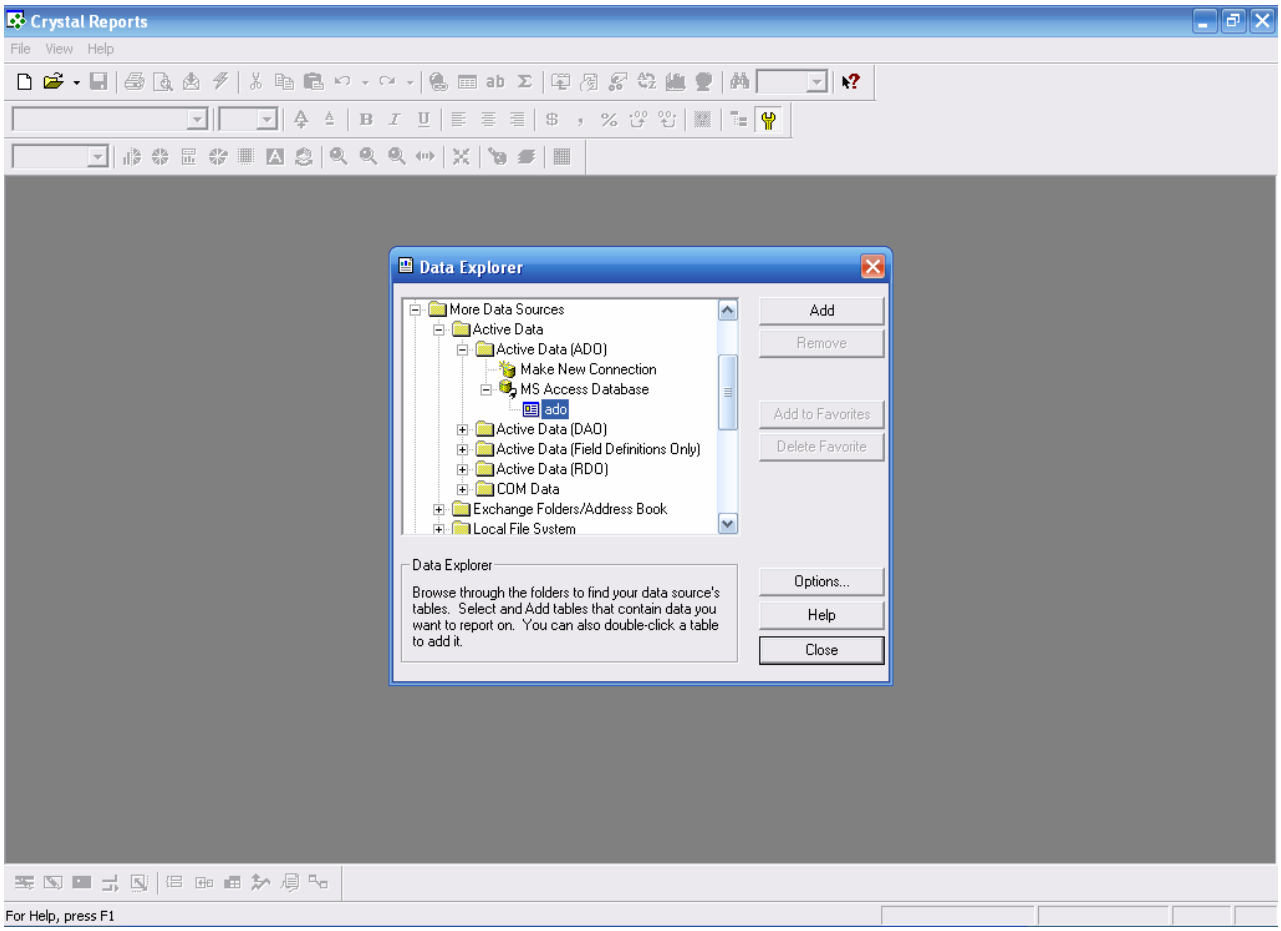
A Login dialogue will pop out. Enter yuMMy20 for the password and click **OK**.



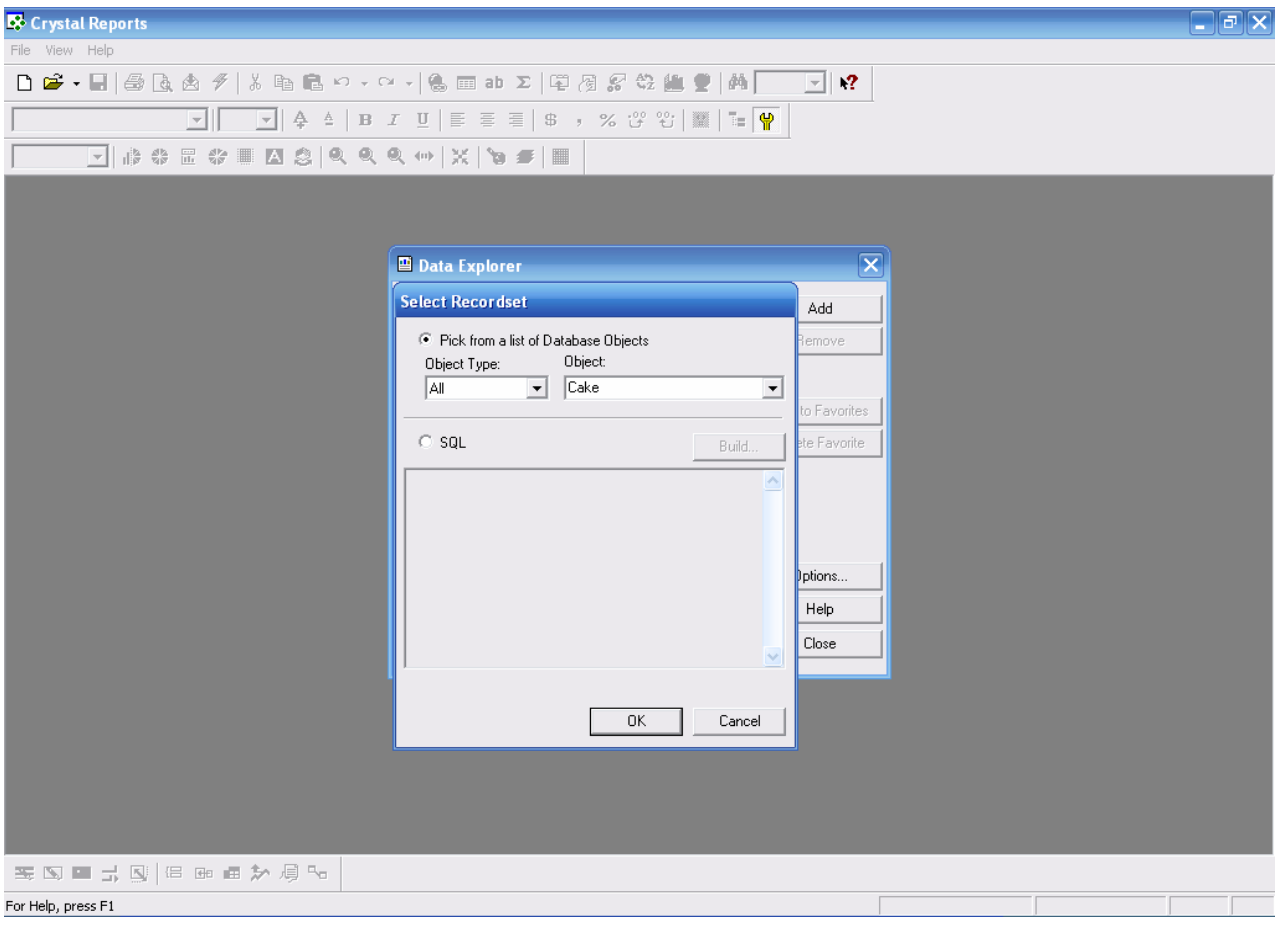
Then you will be asking to choose the database again. Click on dbCake.mdb and click **OK**.



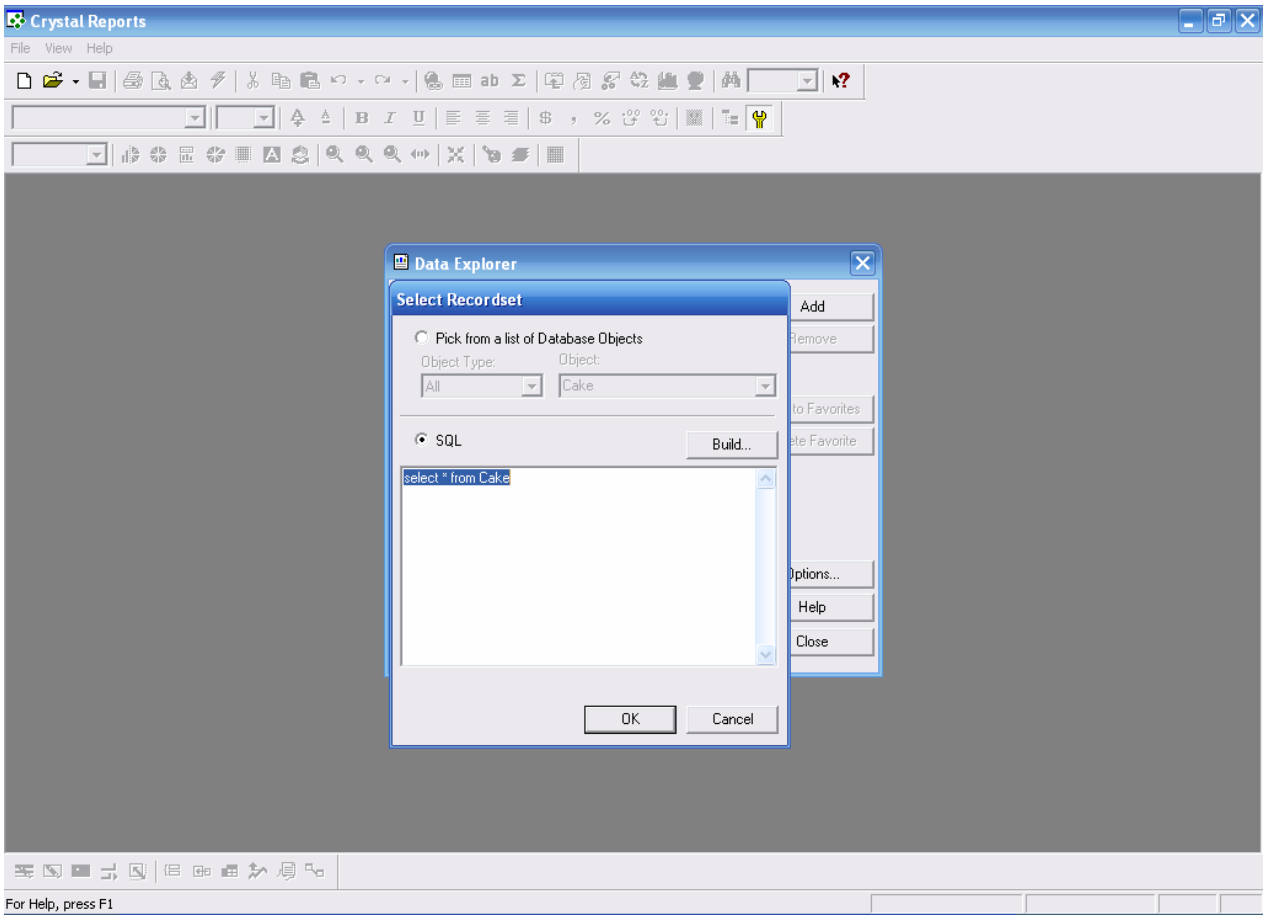
You will be brought back to Data Explorer and you will notice there is an icon for ado. We have successfully connected the Report with the database. Click on **Add** button.



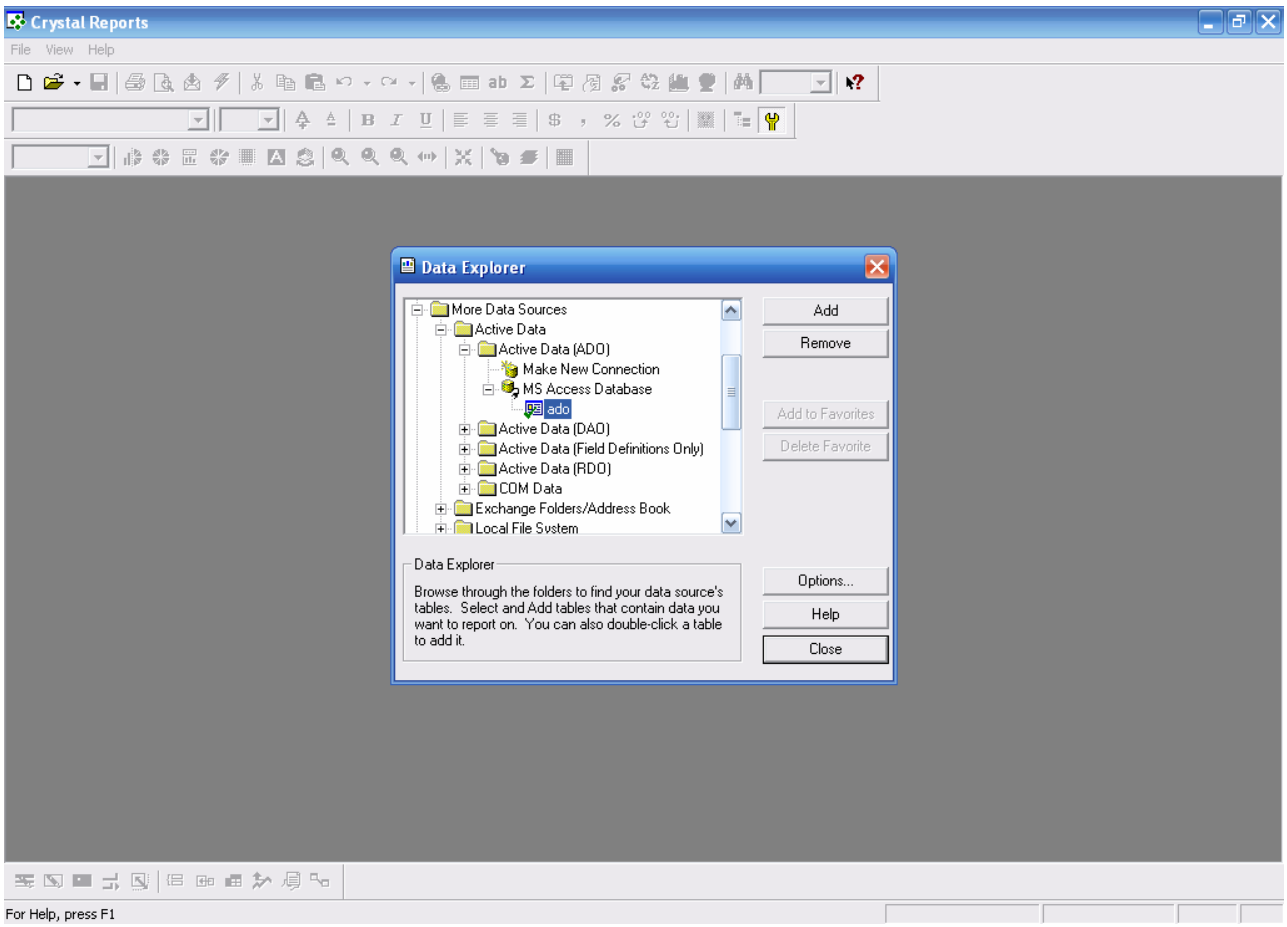
You will see a **Select Recordset** dialogue box.



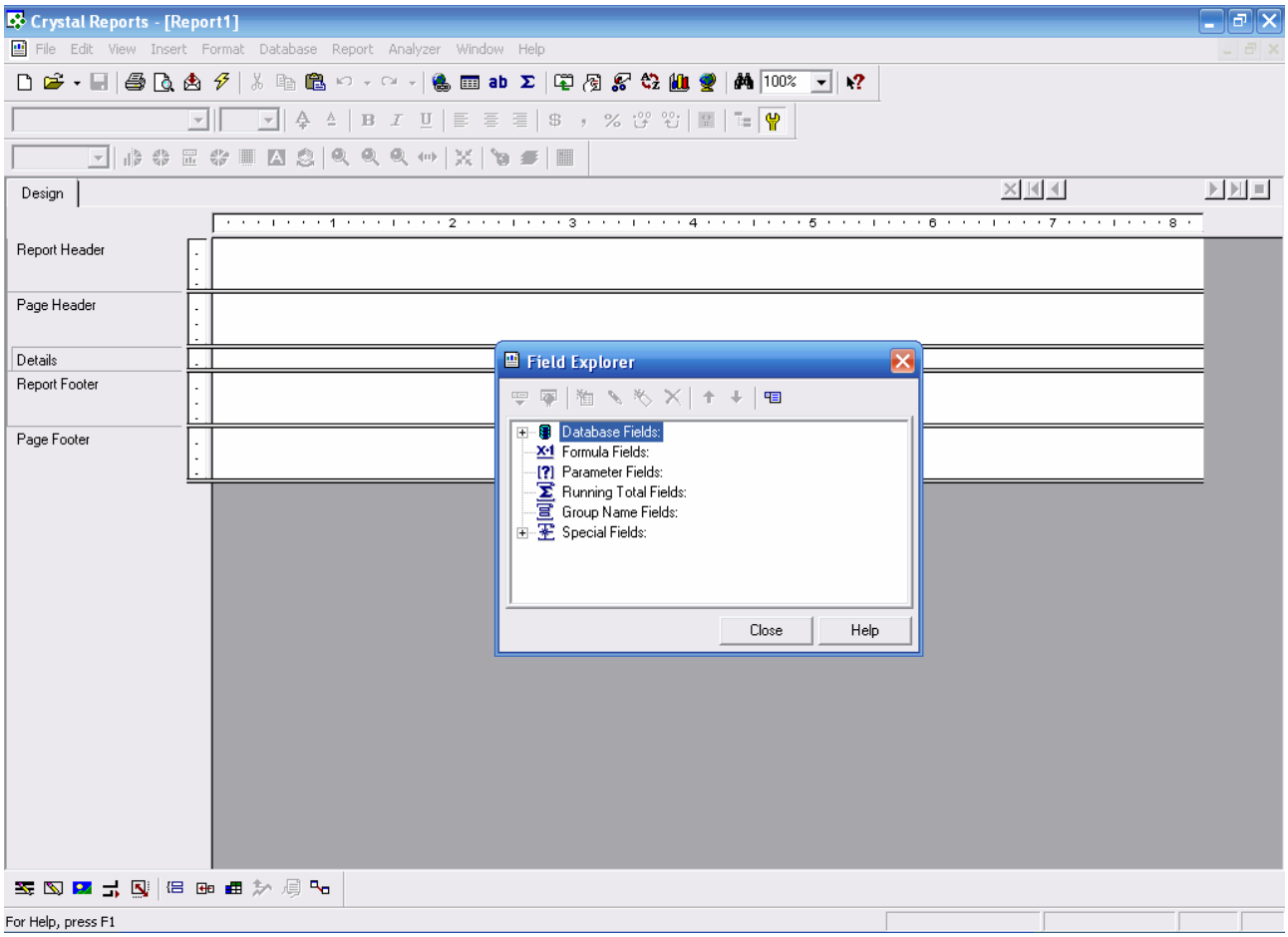
Click on **SQL** radio button so you can change the query if you want to do so. This is useful if you have WHERE keyword in the SQL statement to filter the records.



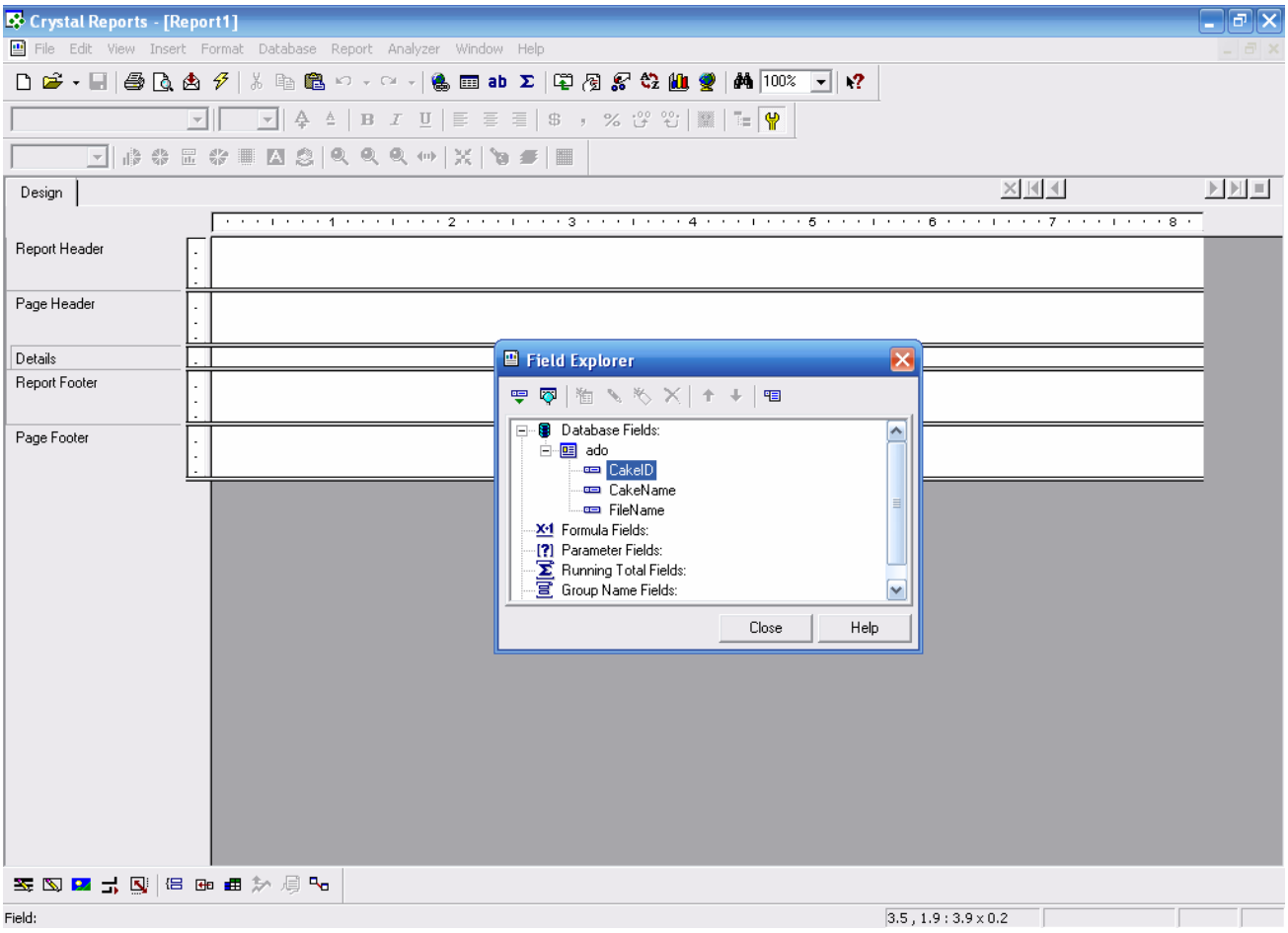
After you have modified your SQL query, click on **OK**. Now you can see there is a green tick at the ado icon in Data Explorer. Click **Close**.



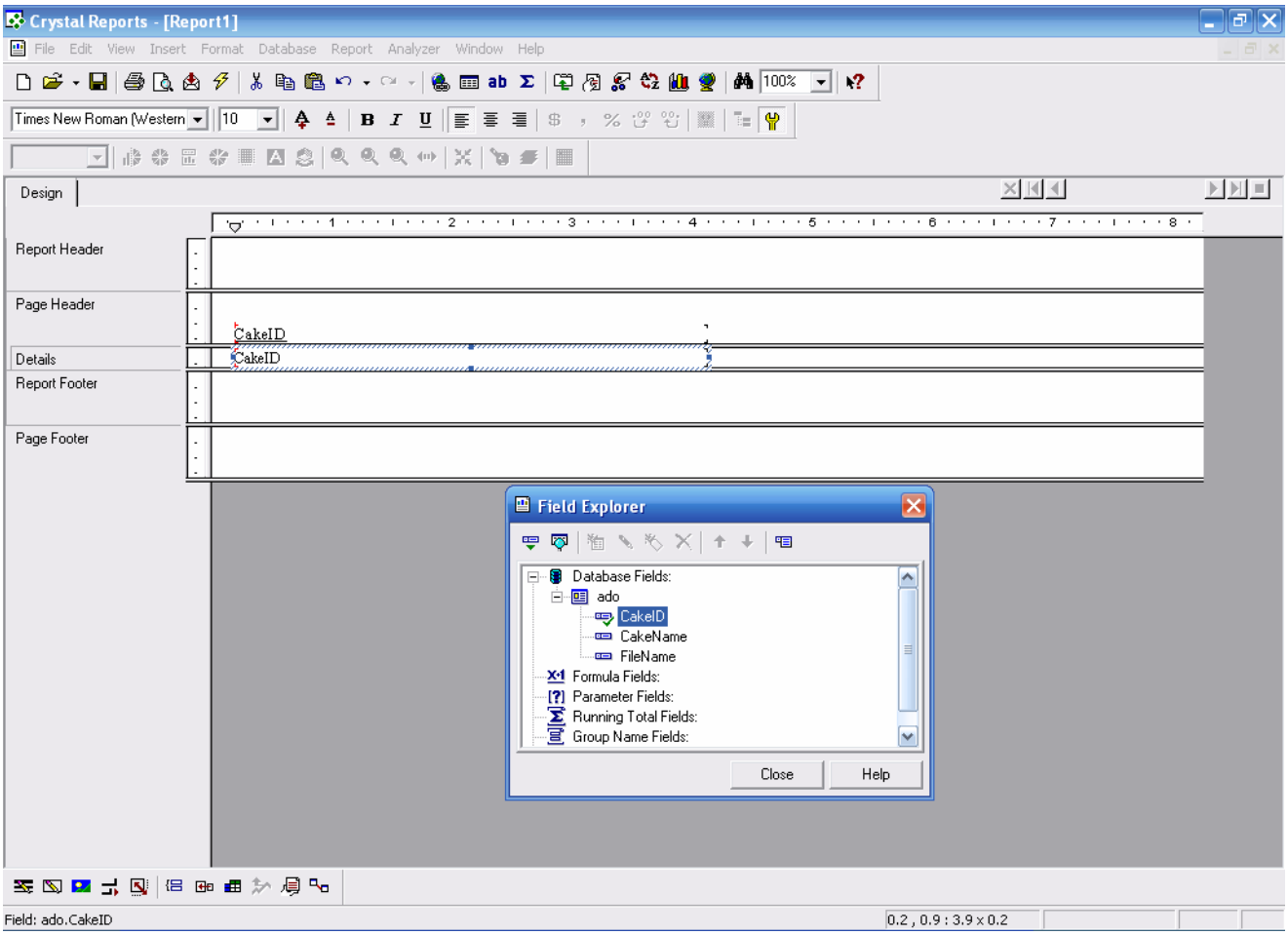
Now you will see a Field Explorer dialogue box. Click on the plus sign next to **Database Fields:**.



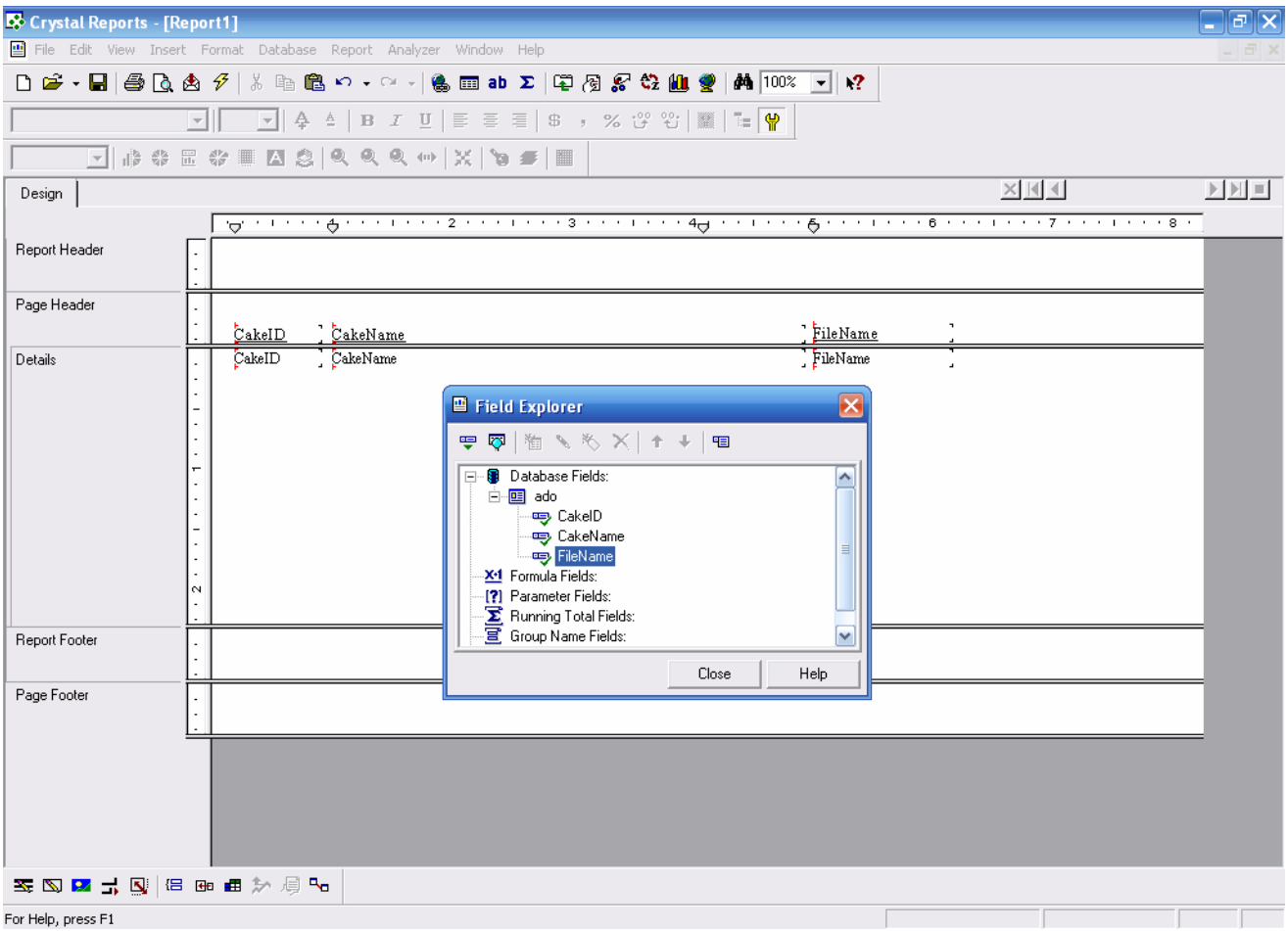
Click on the plus sign next to **ado** and you will see all the fields generated from the SQL query.



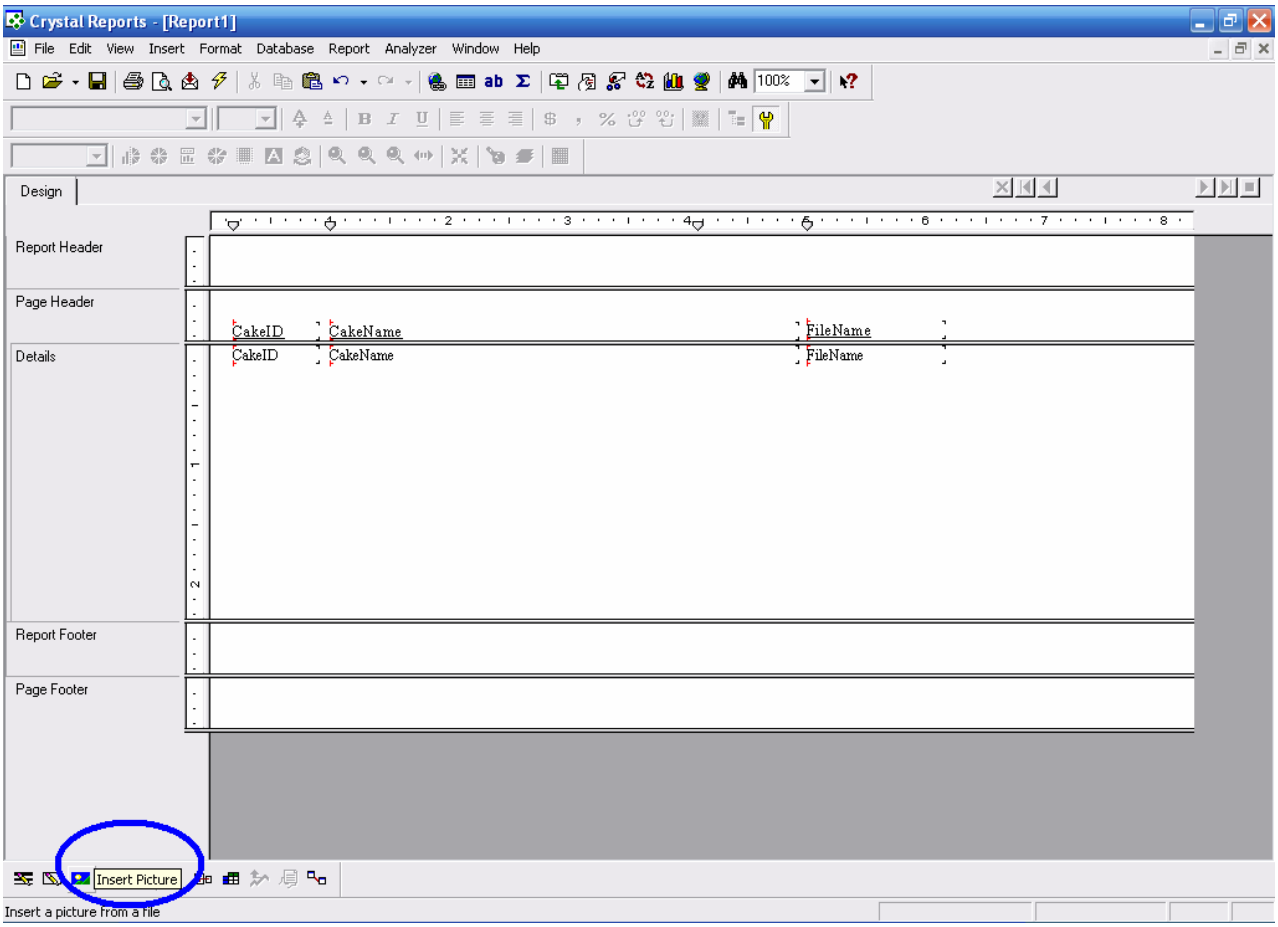
Drag and drop or click on the field and press Enter to insert the field to the report.



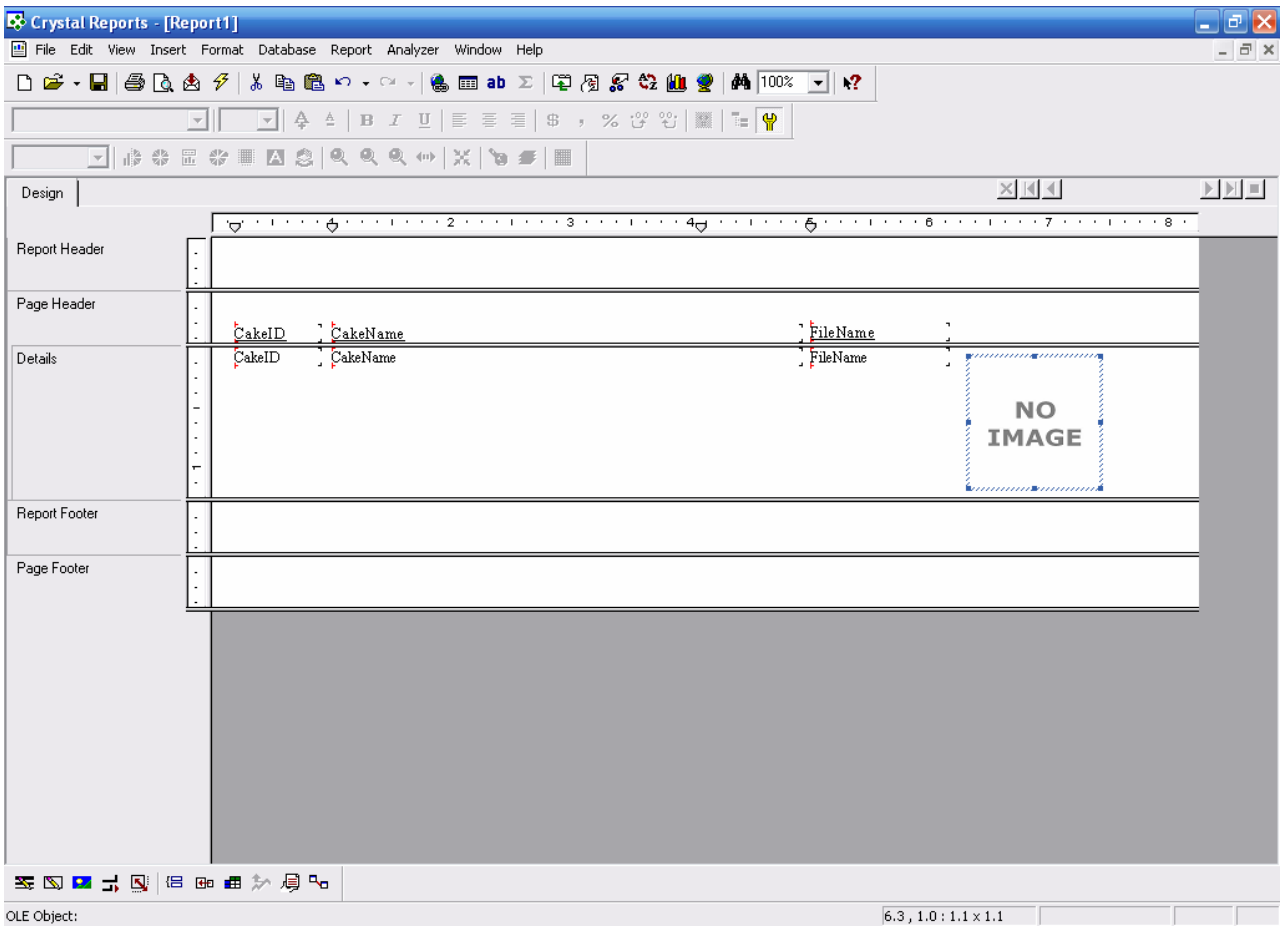
Add more fields to the report in Details section and resize the width as your preference.



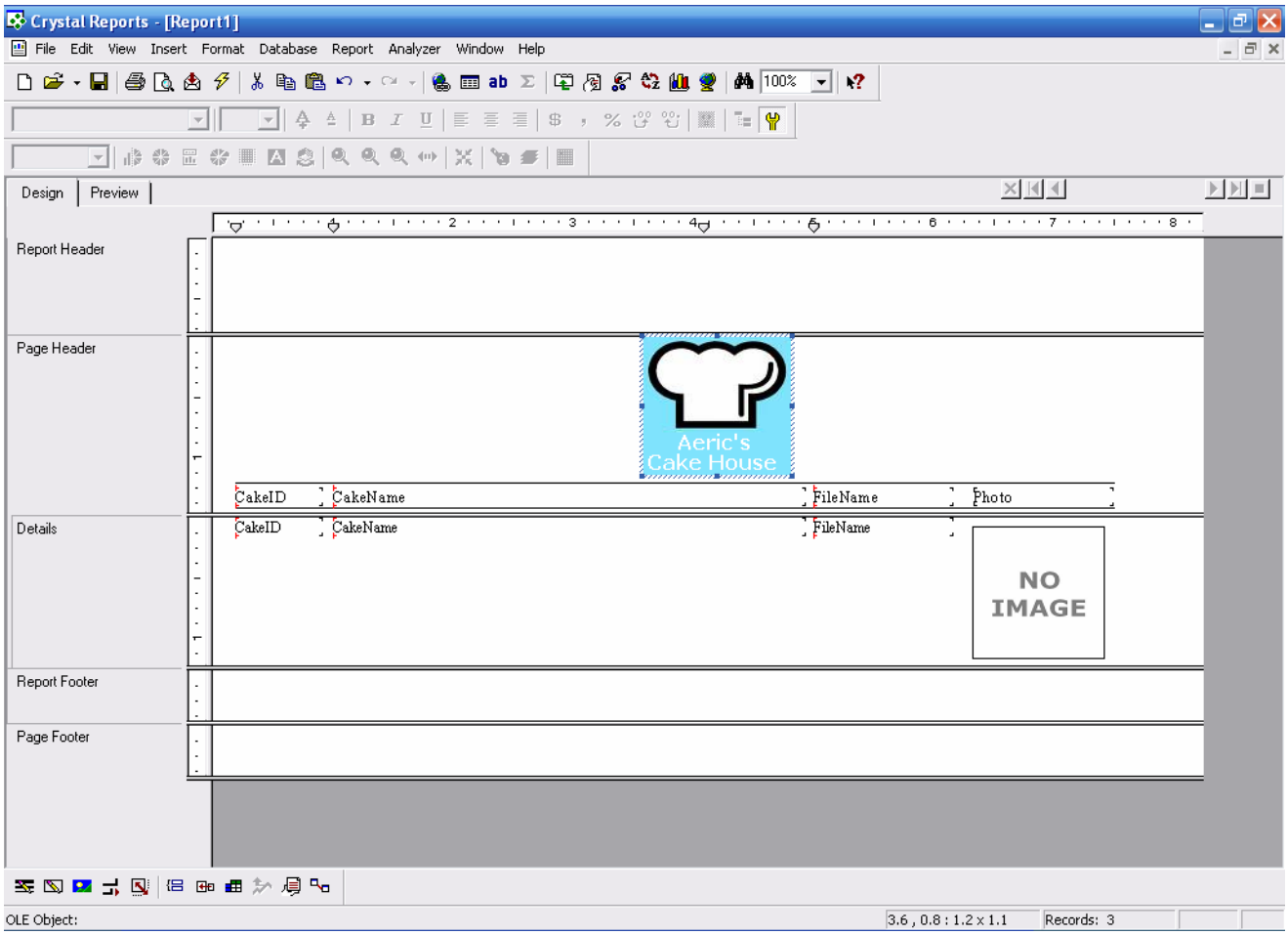
Click on **Insert Picture** icon to insert image file. If you couldn't find the tool, click on menu **View**, **Toolbars…** and check the **Supplementary Tools** checkbox.



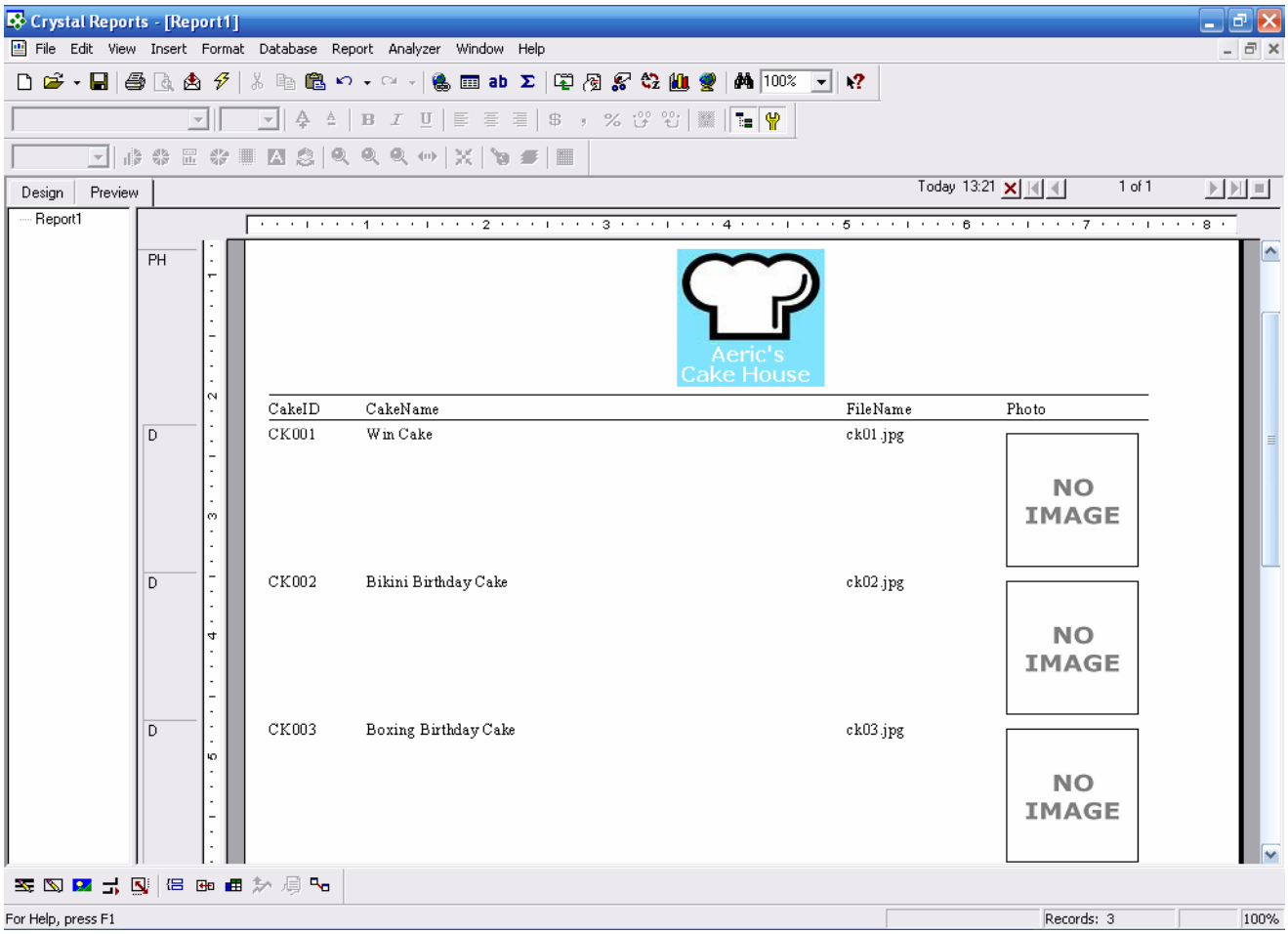
Browse for an image to insert. Resize it to fit your report. Format the appearance of the picture object like adding borders.



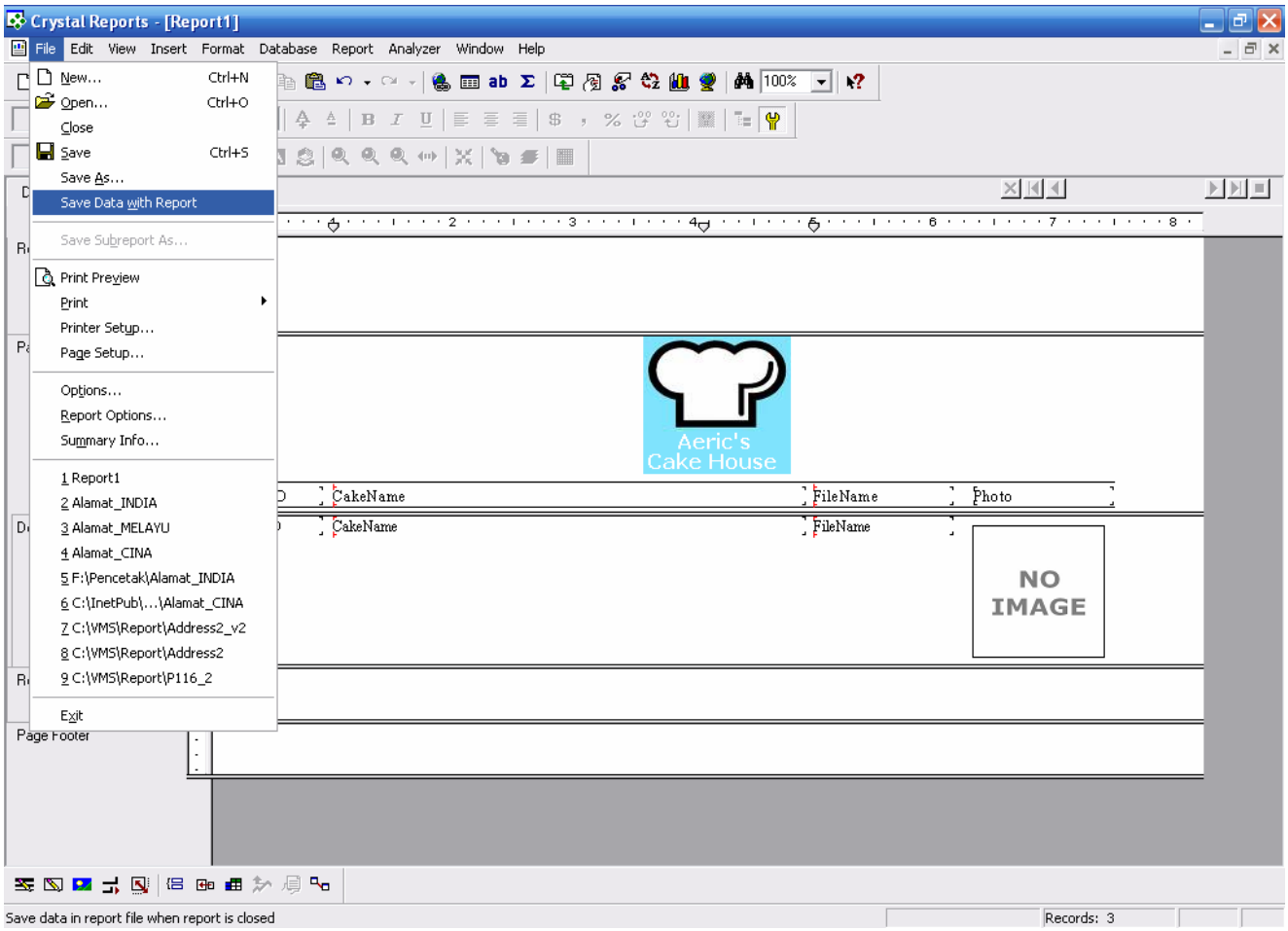
You can modify the report design by adding lines, box, labels for company title and address or put a logo.



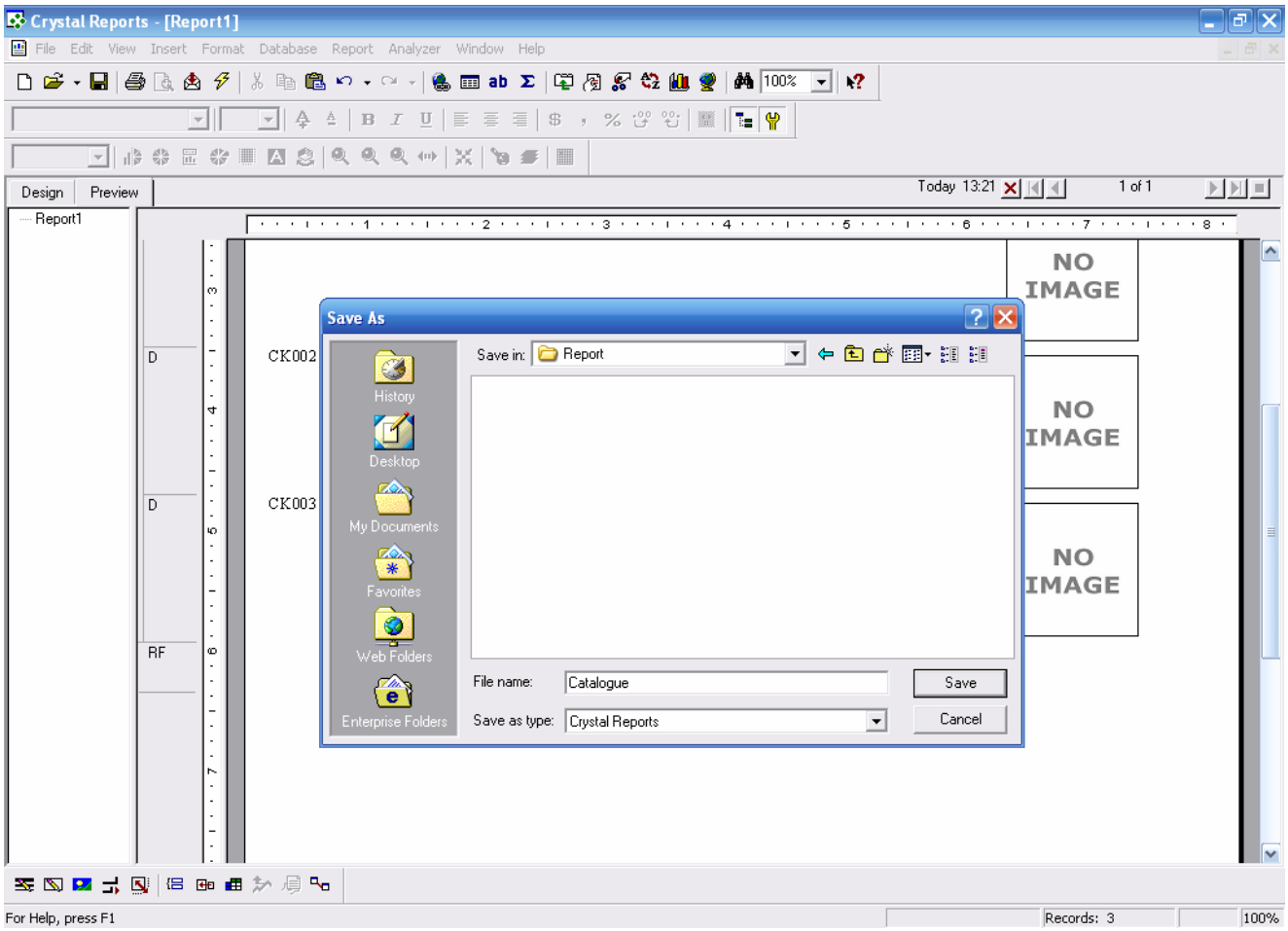
Click on **Preview** tab to show how the report will look like. In this stage, the picture is fixed.



Click on menu **File** and uncheck the **Save Data with Report** option.

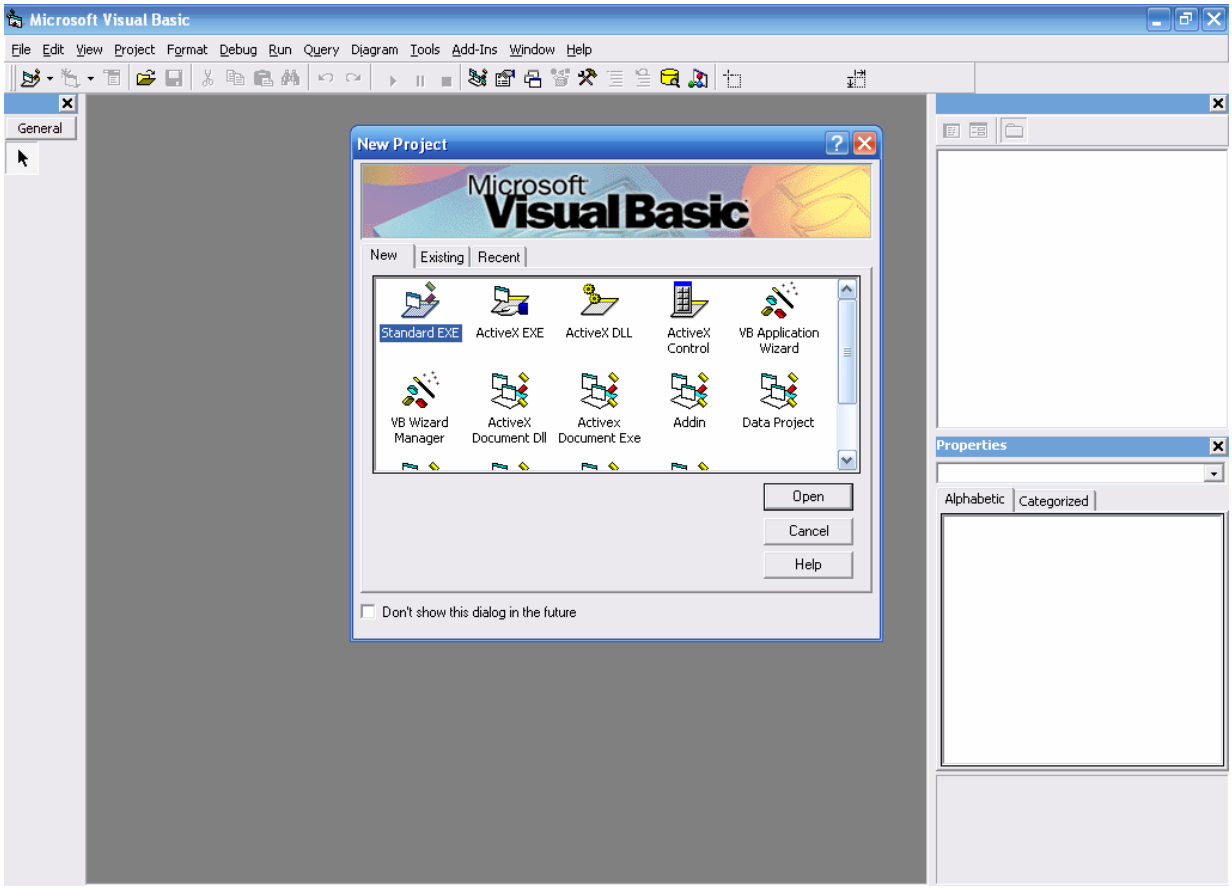


Save this report with filename **Catalogue** (Catalogue.rpt) inside folder **Report**.

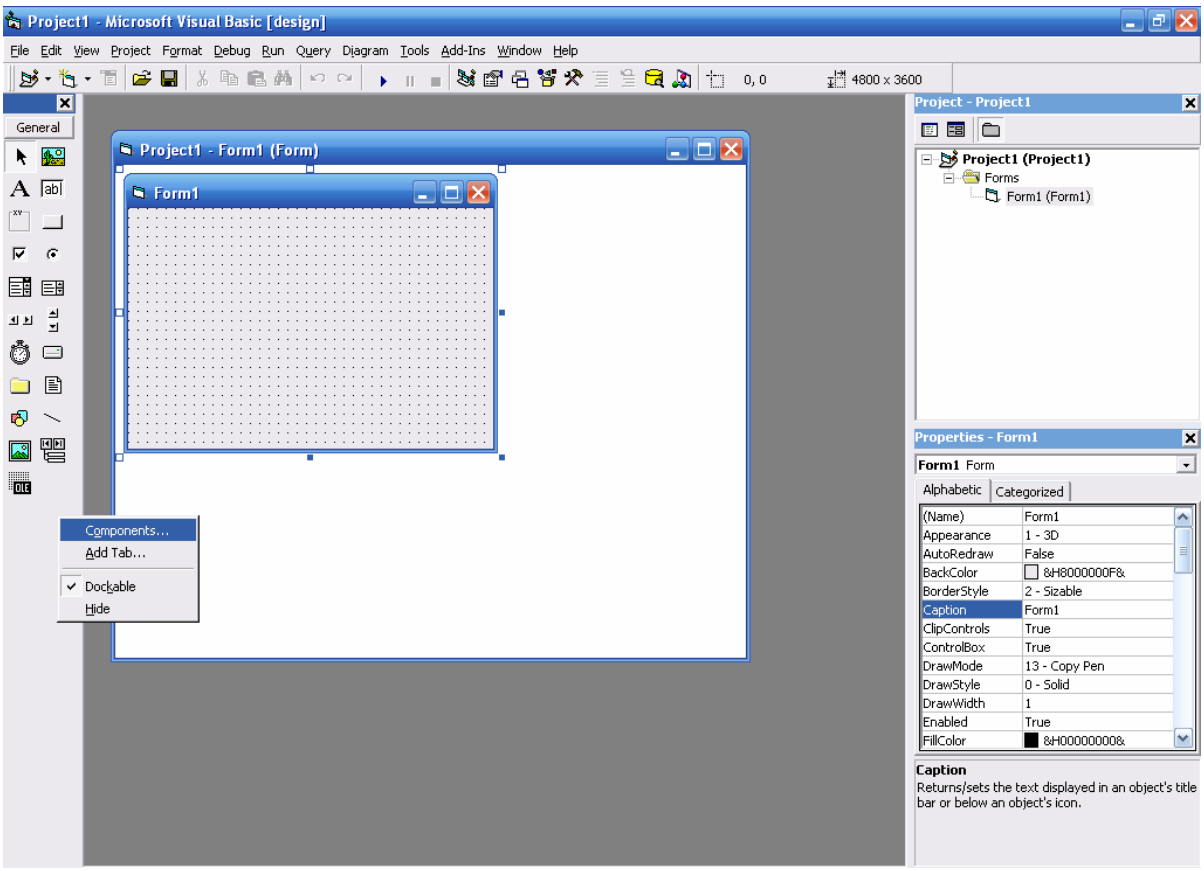


Step 3
Create a Visual Basic Project

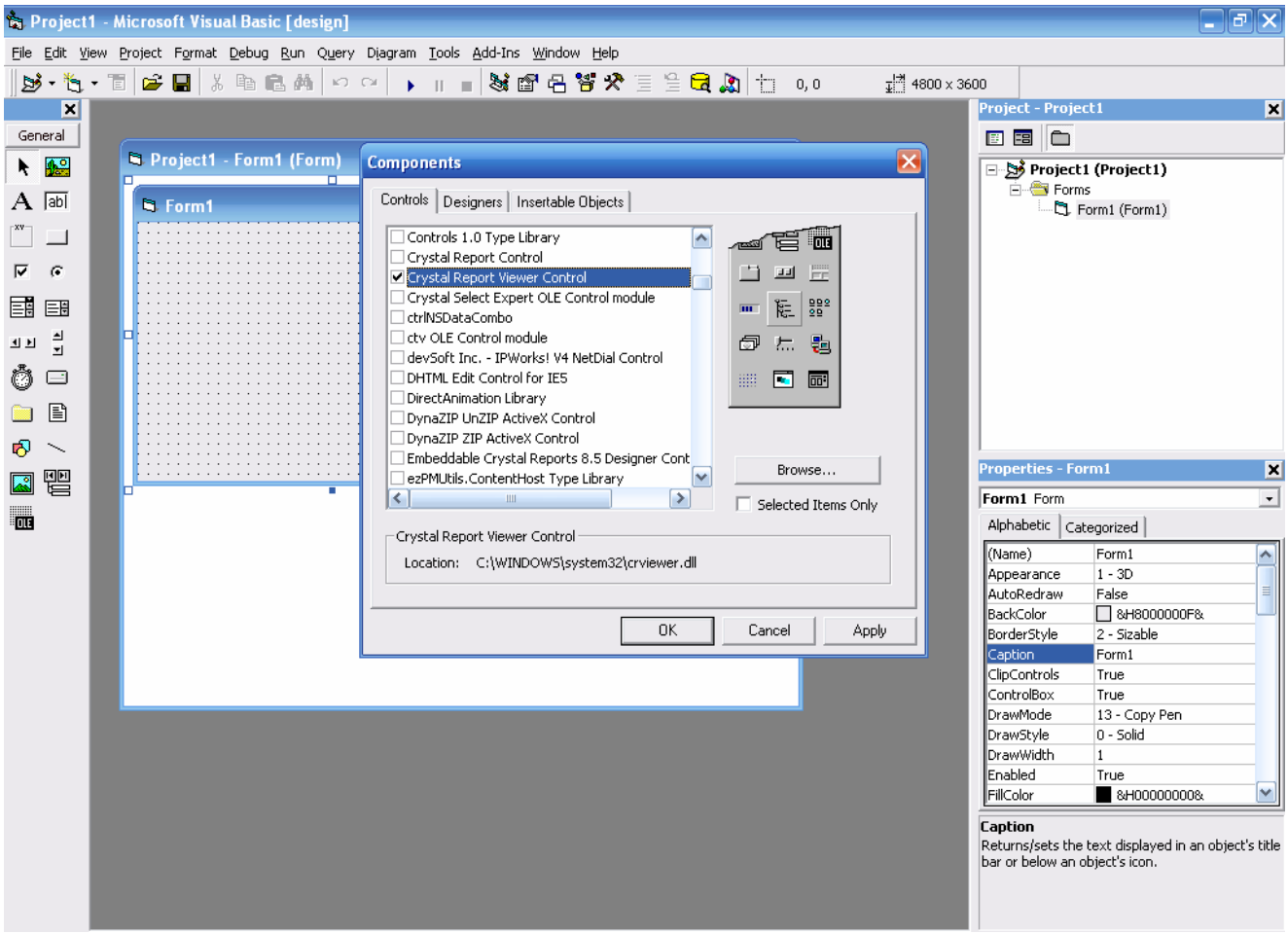
You have the database and report file ready. So, the final step is to create the front-end using MS Visual Basic 6. Create a new **Standard EXE** by clicking **Open**.



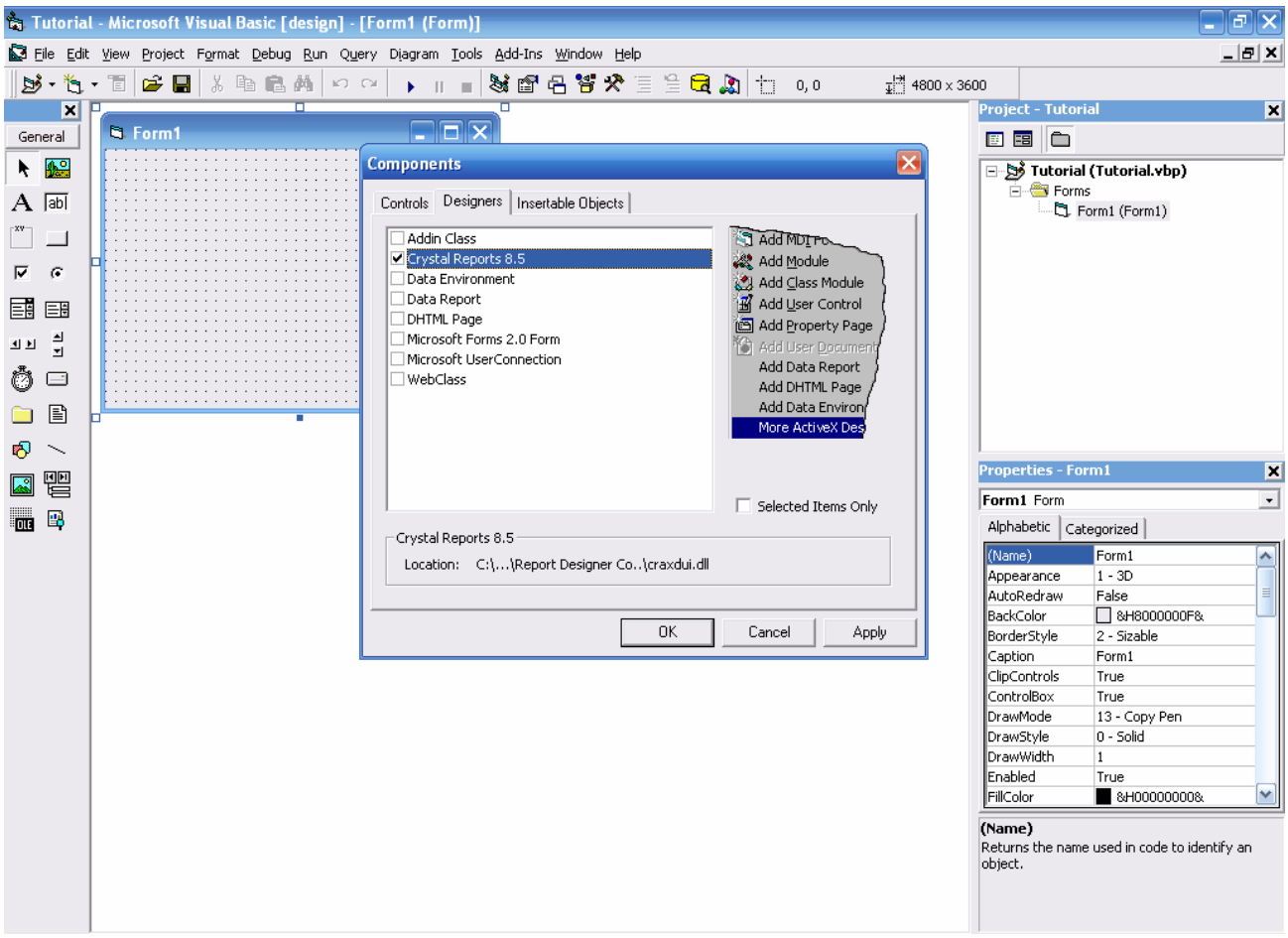
Right click the Toolbar and click on **Components…**



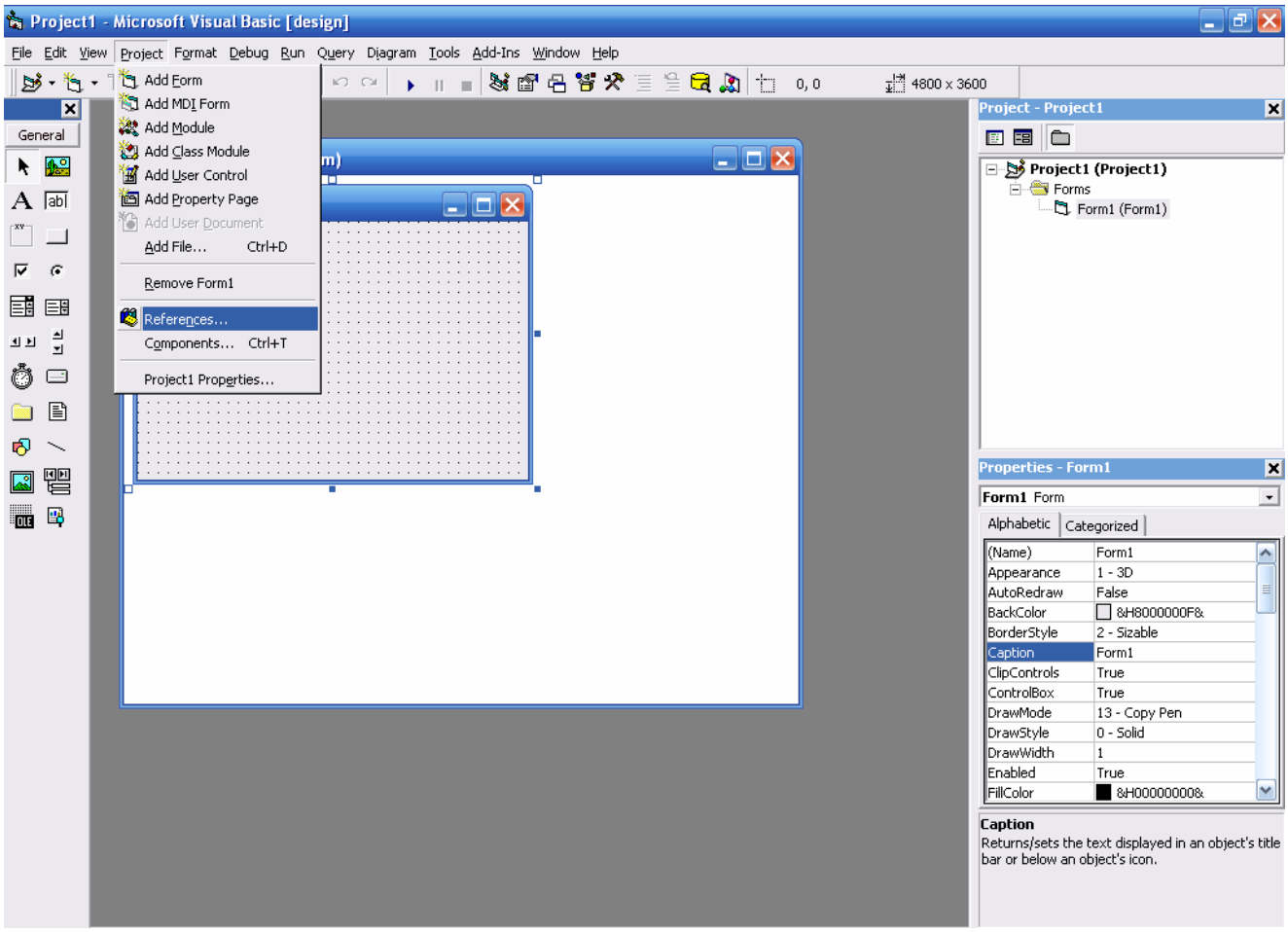
Scroll down to look for **Crystal Report Viewer Control**. Check the checkbox next to it.



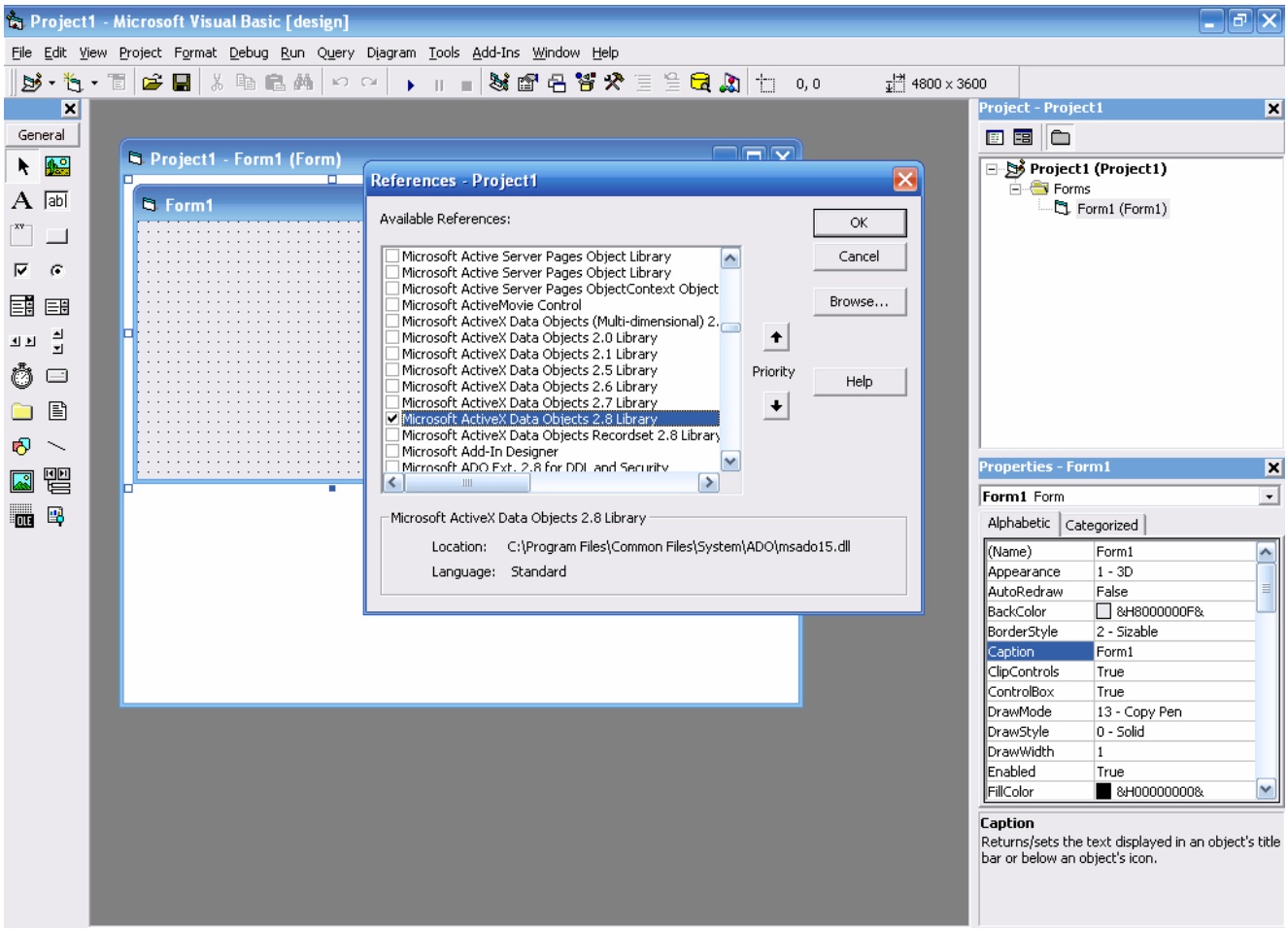
Click on **Designers** tab. Check on **Crystal Reports 8.5** and click **OK**.



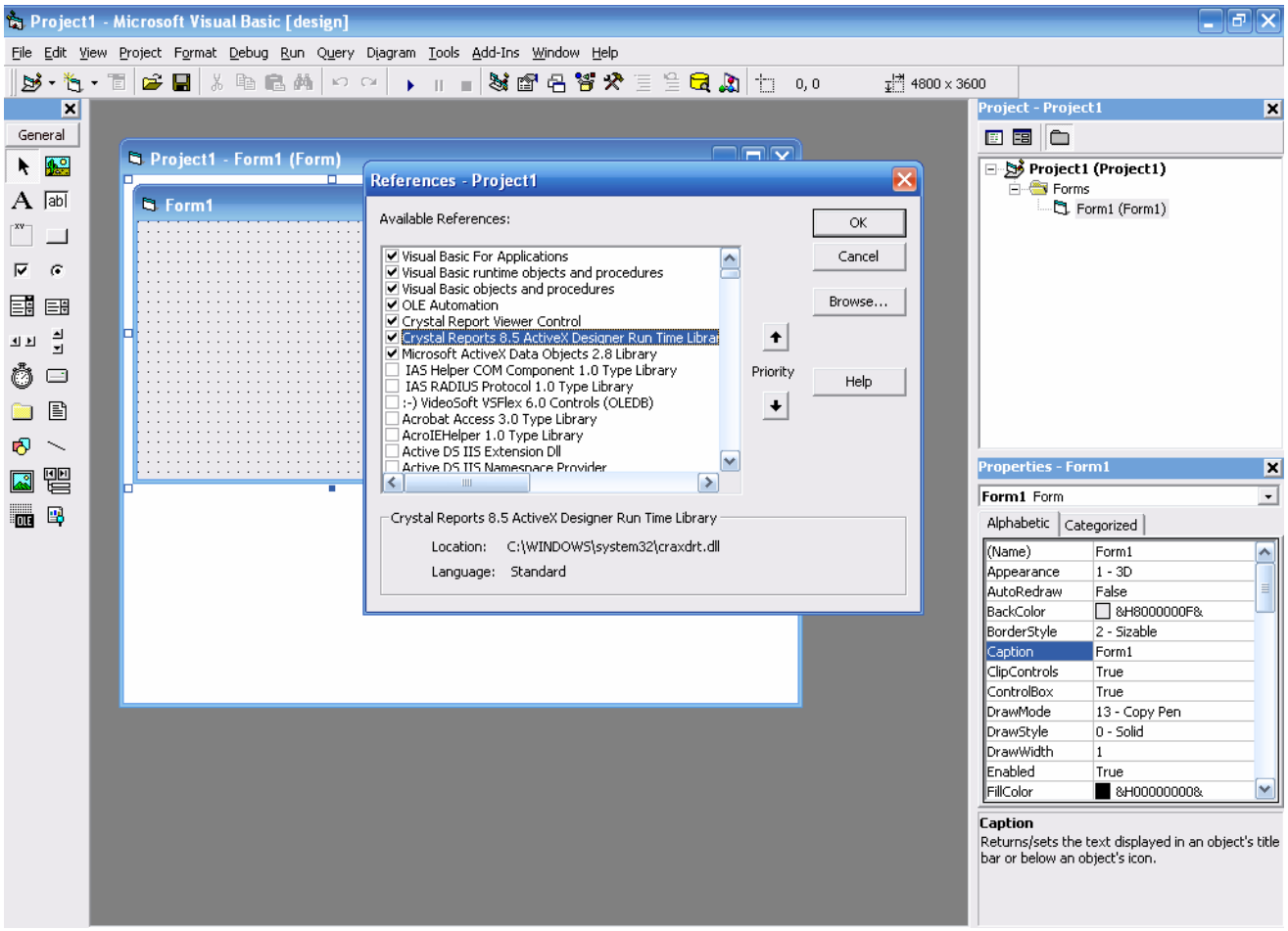
Click on menu **Project** and click **References…**



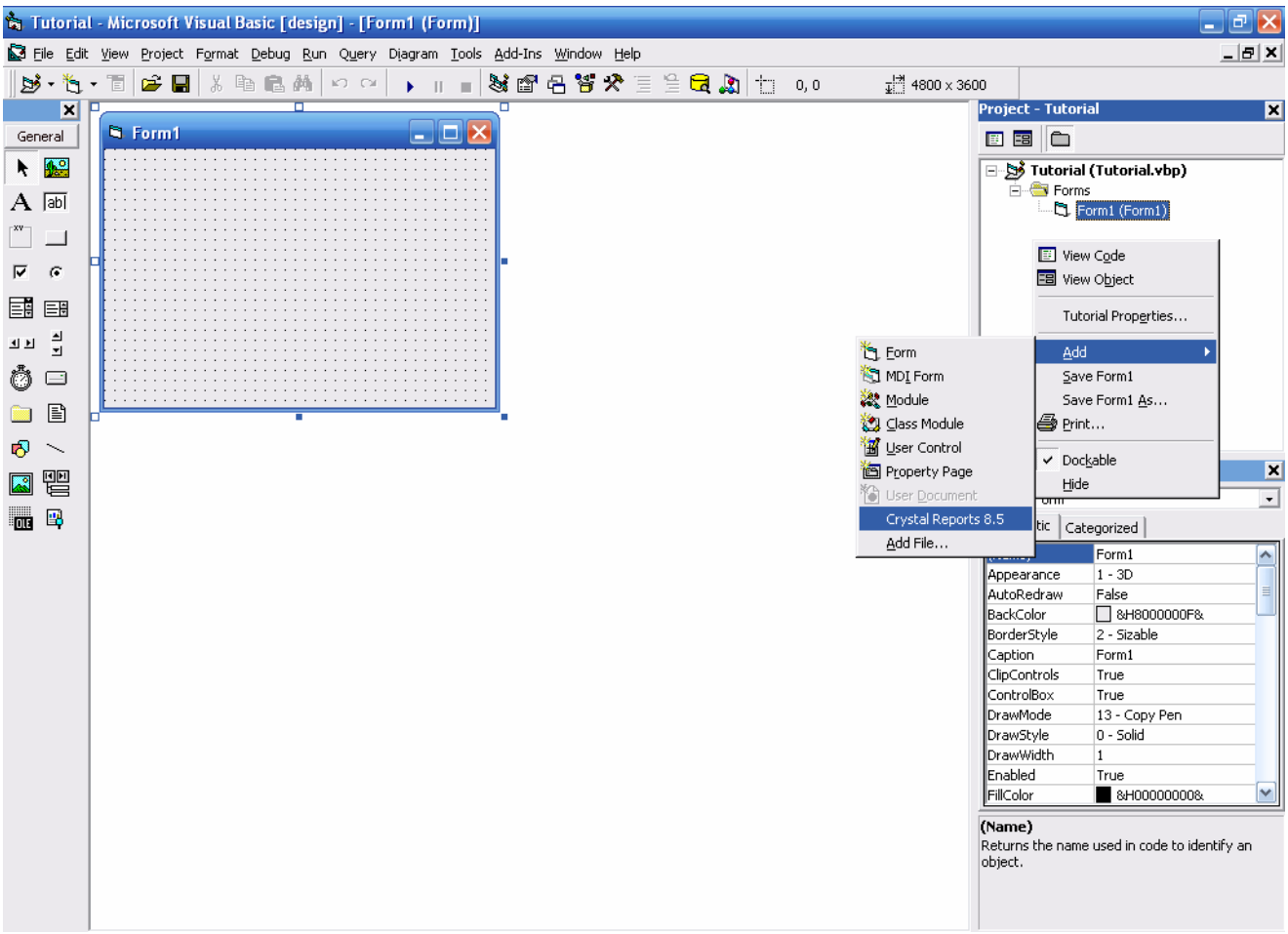
Look for **Microsoft ActiveX Data Objects 2.8 Library** (Latest version of ADO control). Check the checkbox next to it.



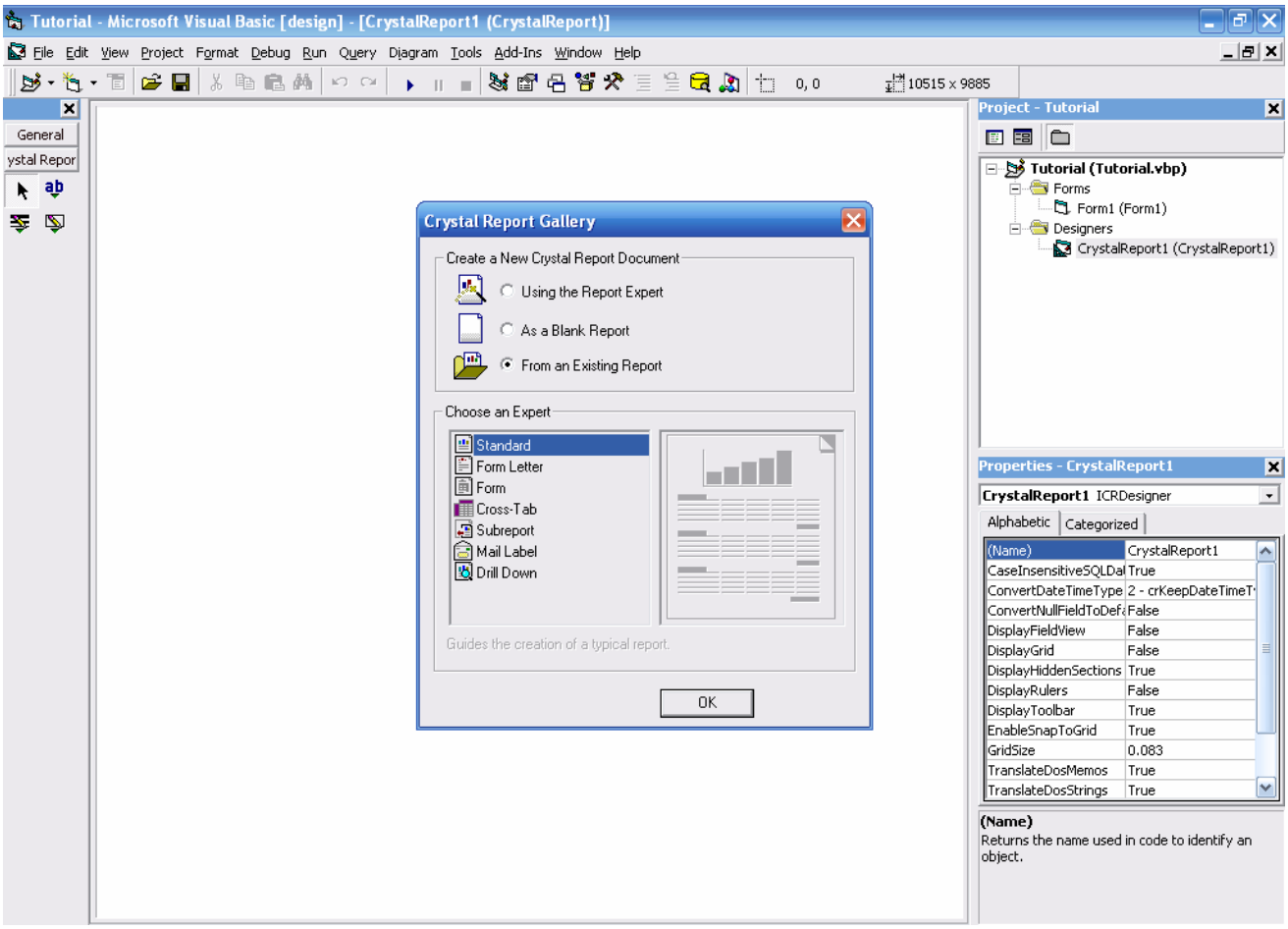
Add also the **Crystal Reports 8.5 ActiveX Designer Run Time Library** and click **OK**.



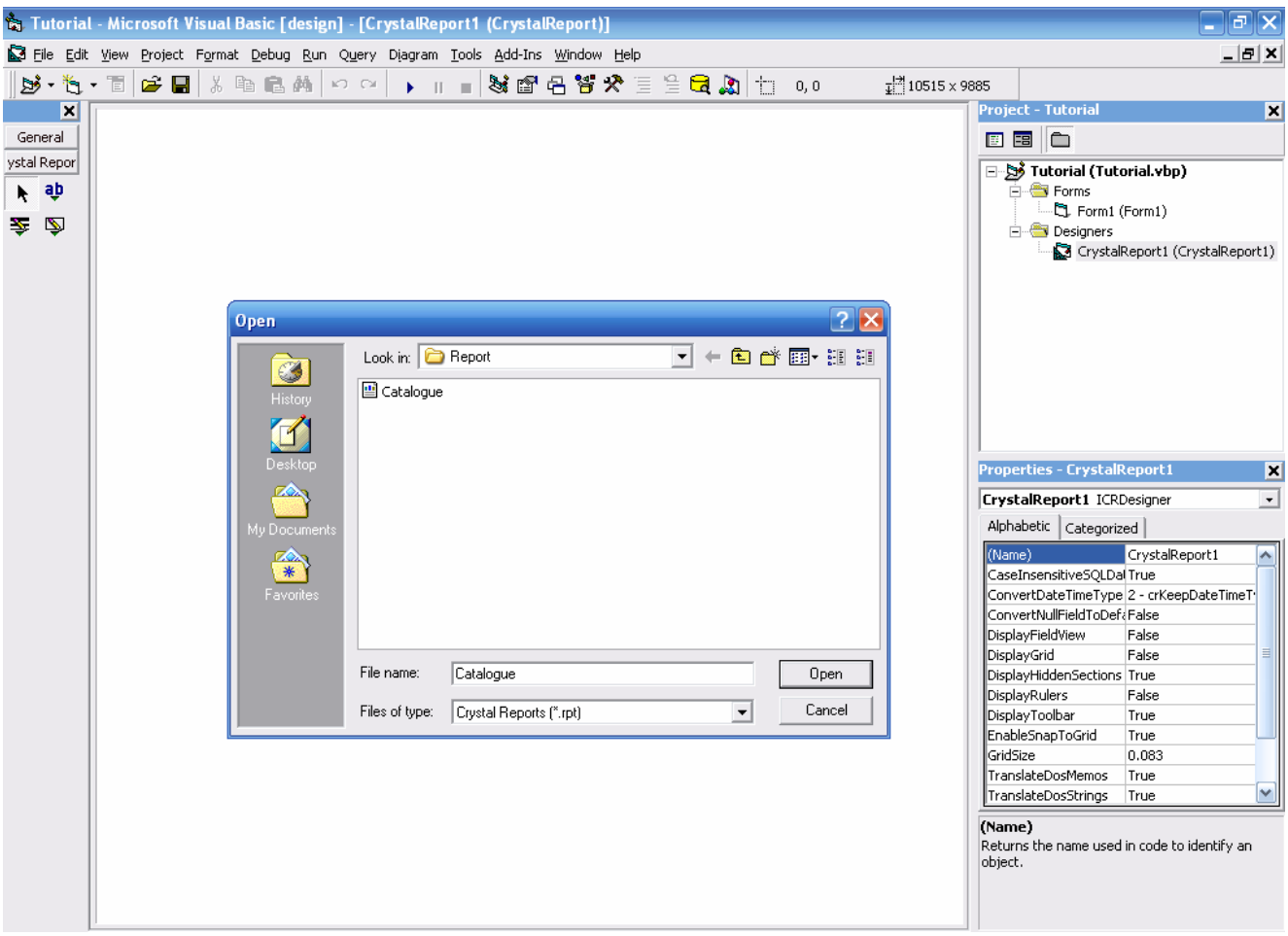
Right click the **Project Explorer**, click **Add** and then click on **Crystal Reports 8.5**



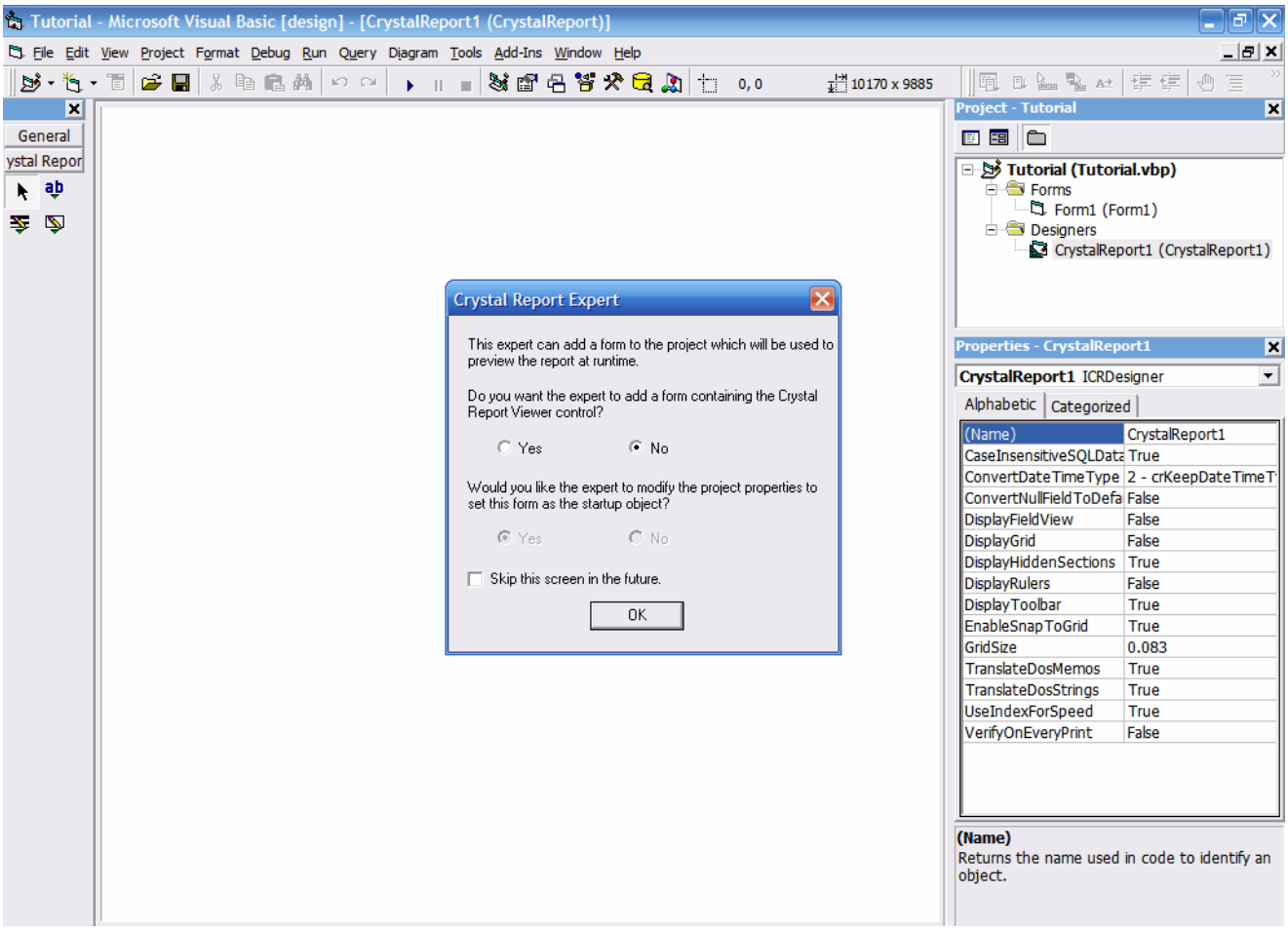
Click on the **From an Existing Report** radio button and click **OK**.



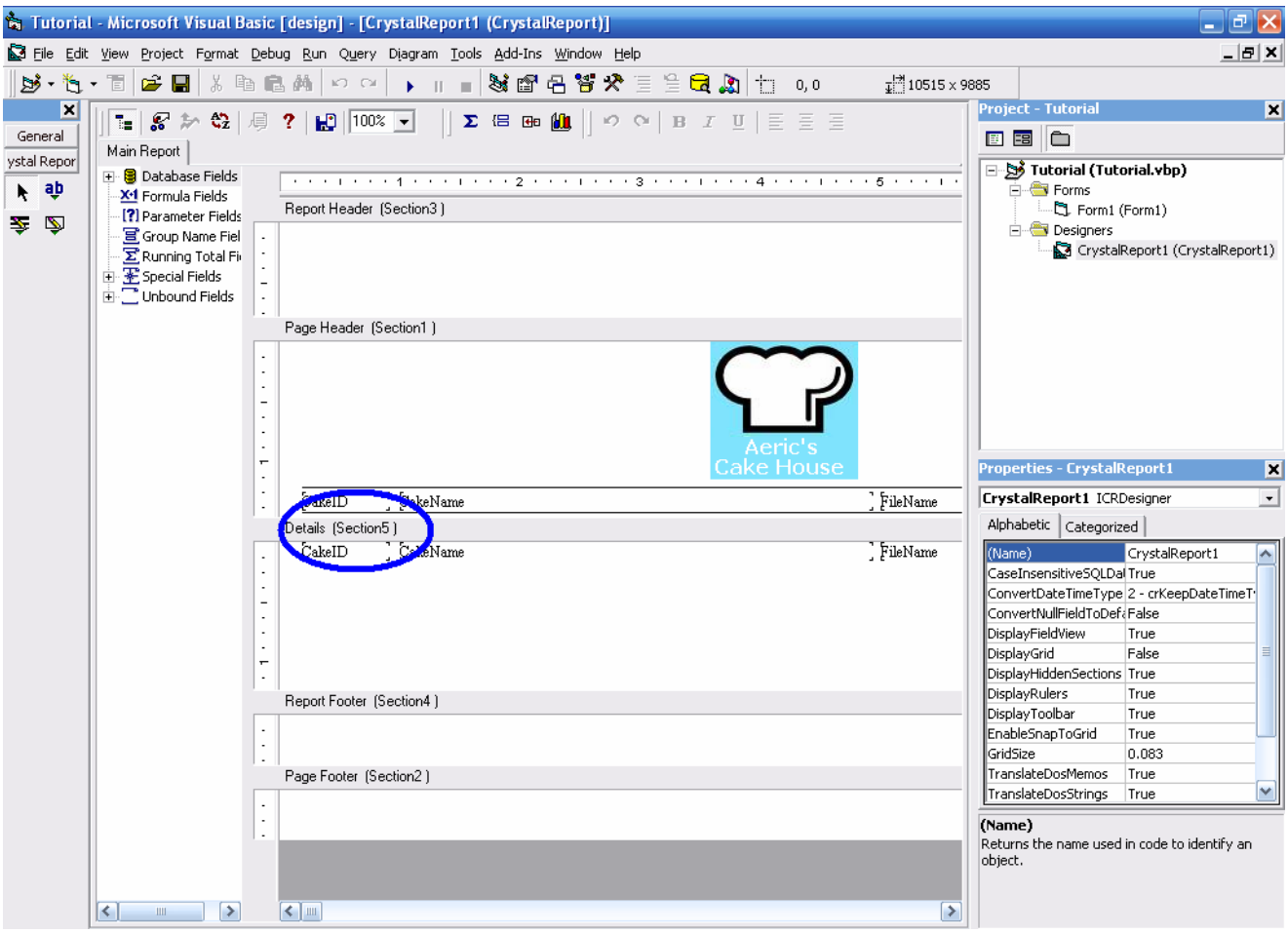
Browse for the report file we have designed just now and click **Open**.



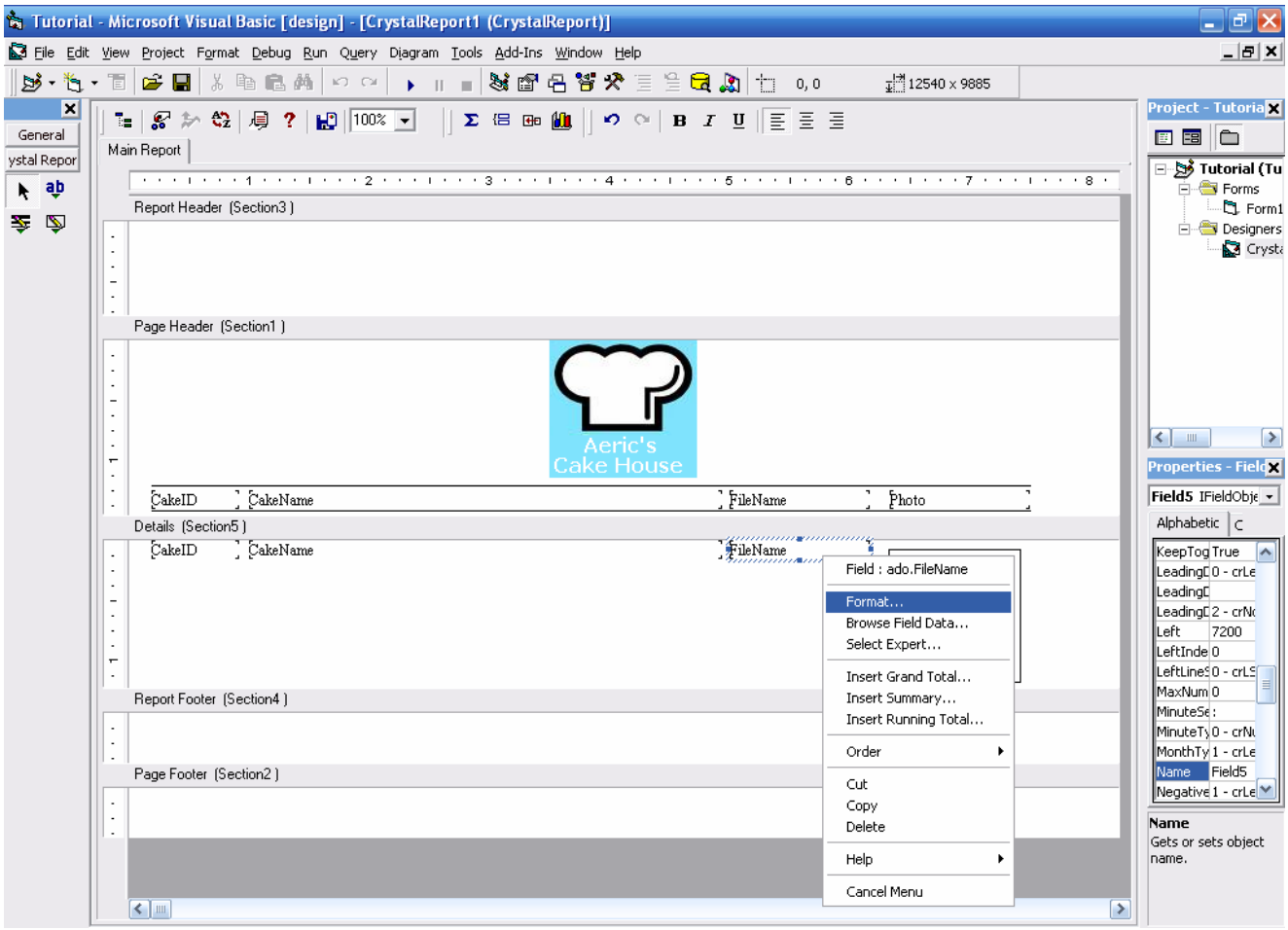
On the **Crystal Report Expert** dialogue box, click **No** radio button for the upper option.



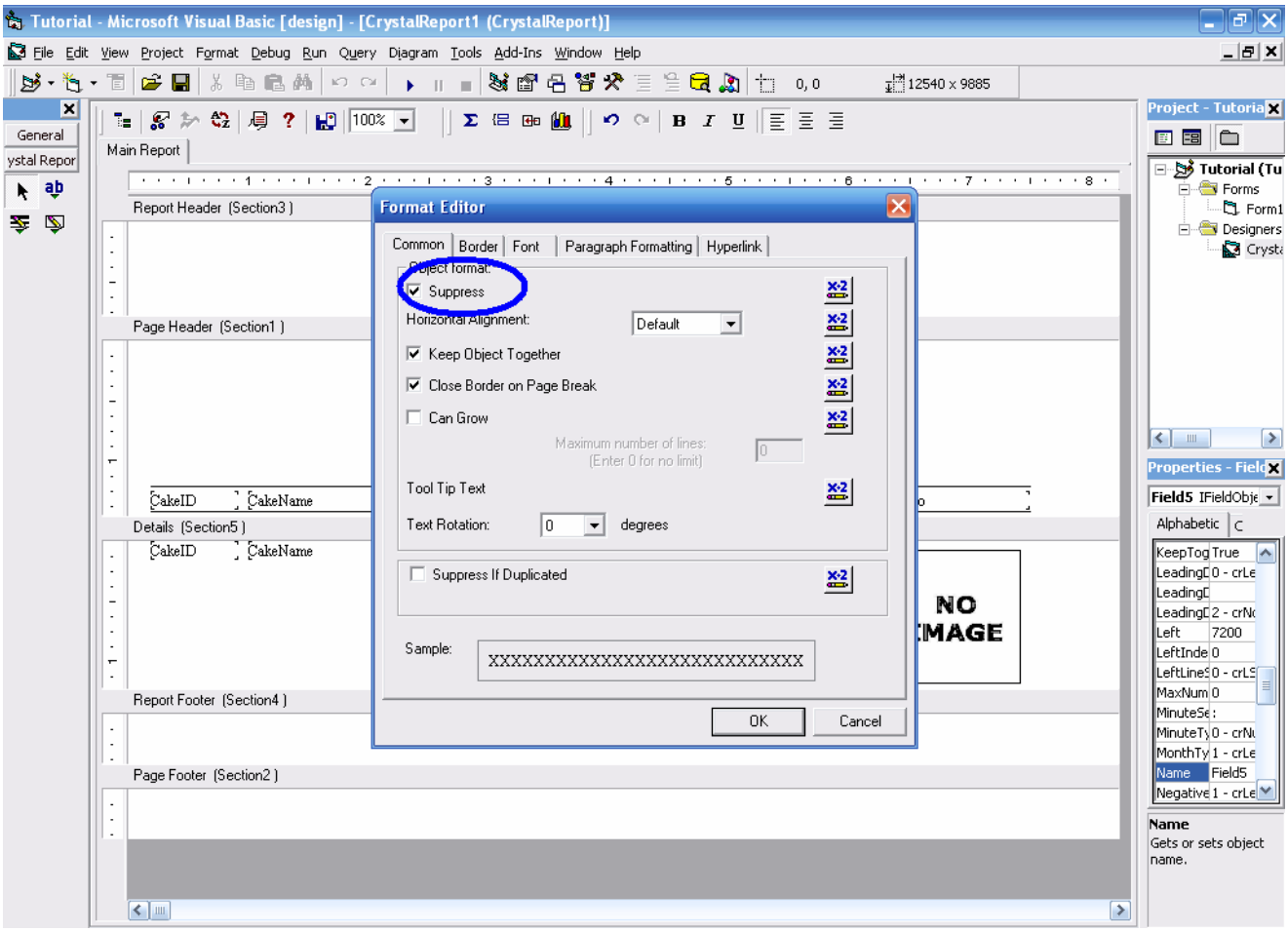
You can notice that **Details** section is named Section5 in bracket. You can change the name of the section if you like.



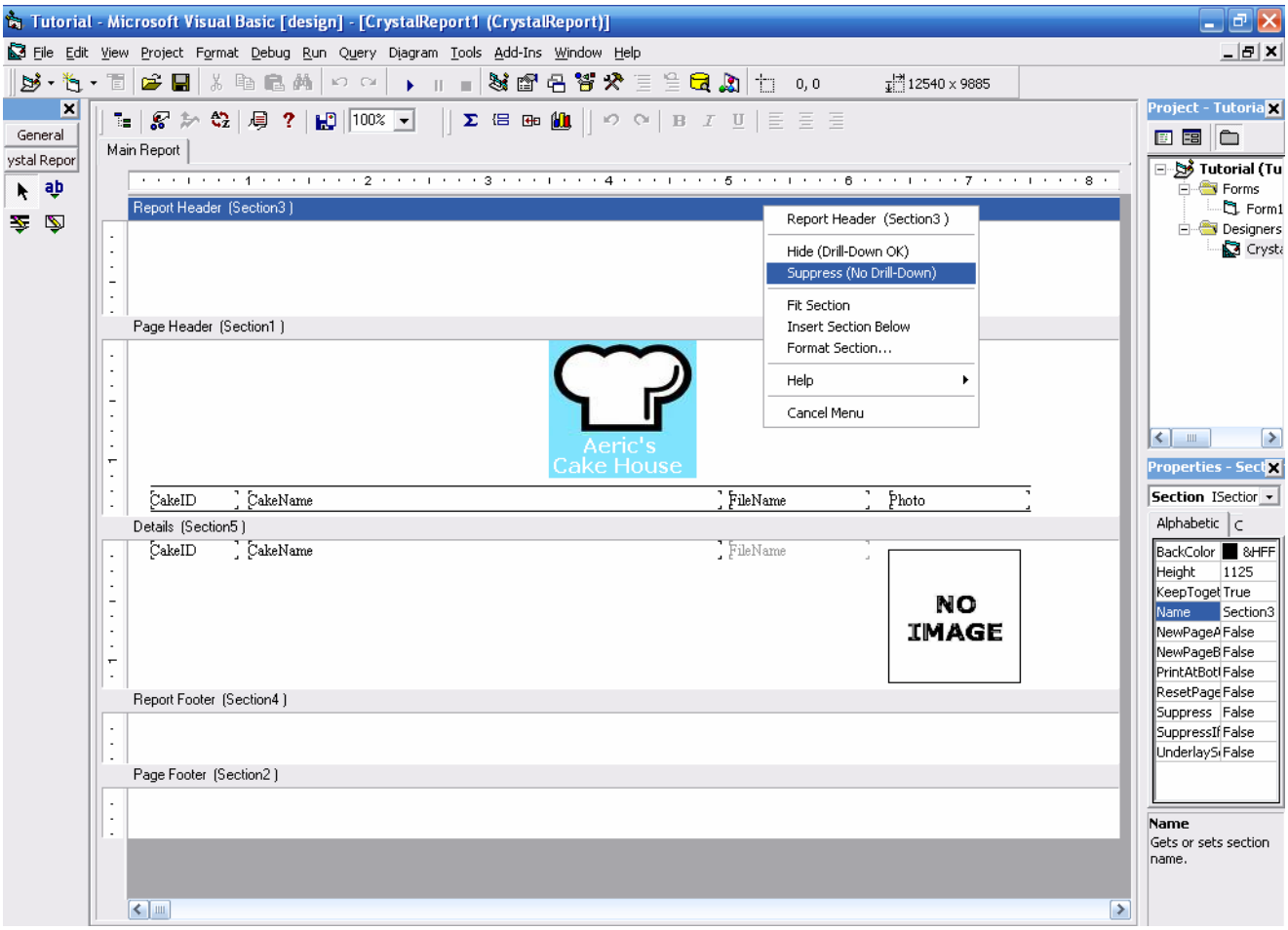
To hide the FileName field, right click the FileName field and click on **Format…**.



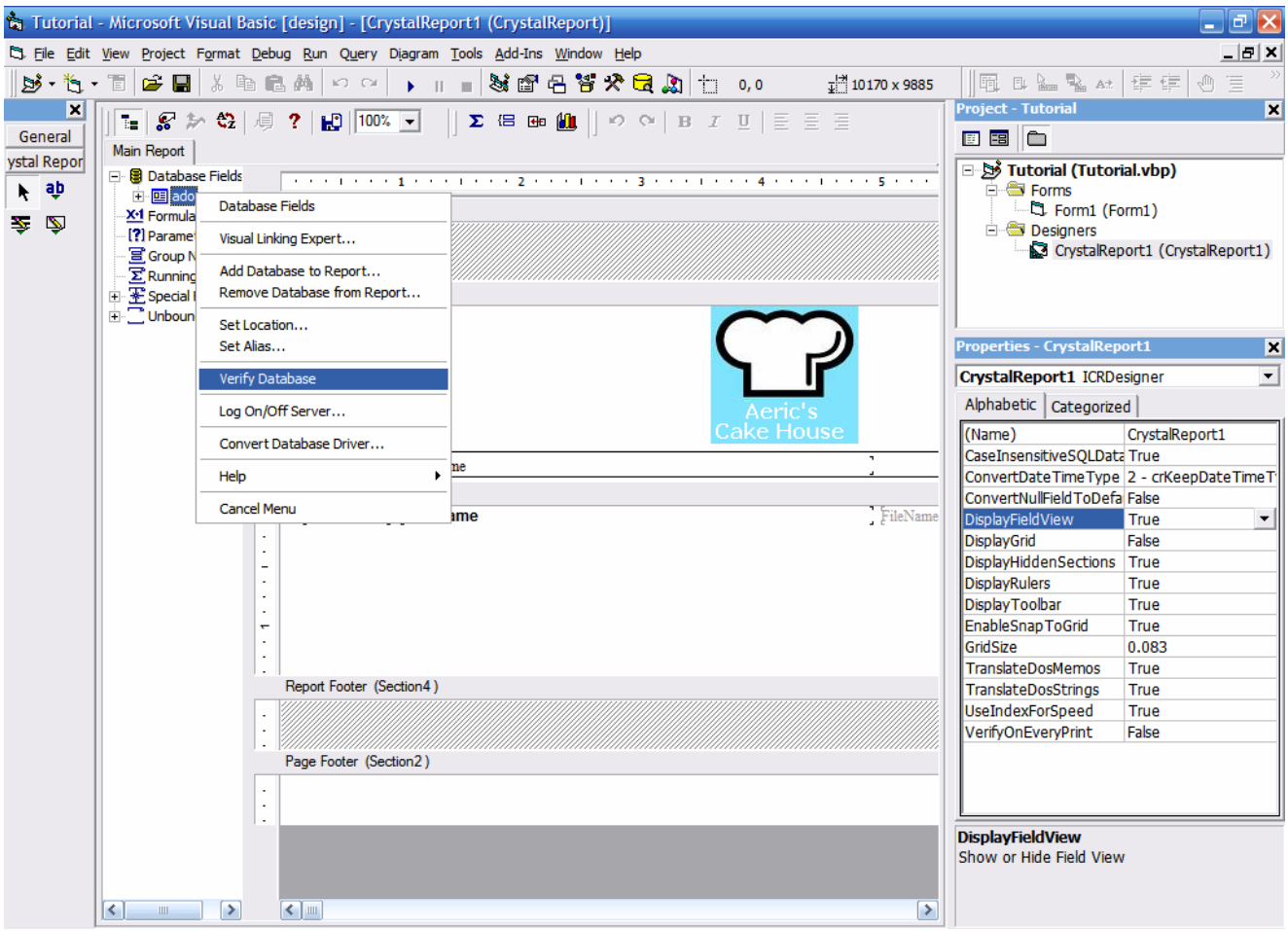
On the **Common** tab, check the checkbox next to **Suppress**.



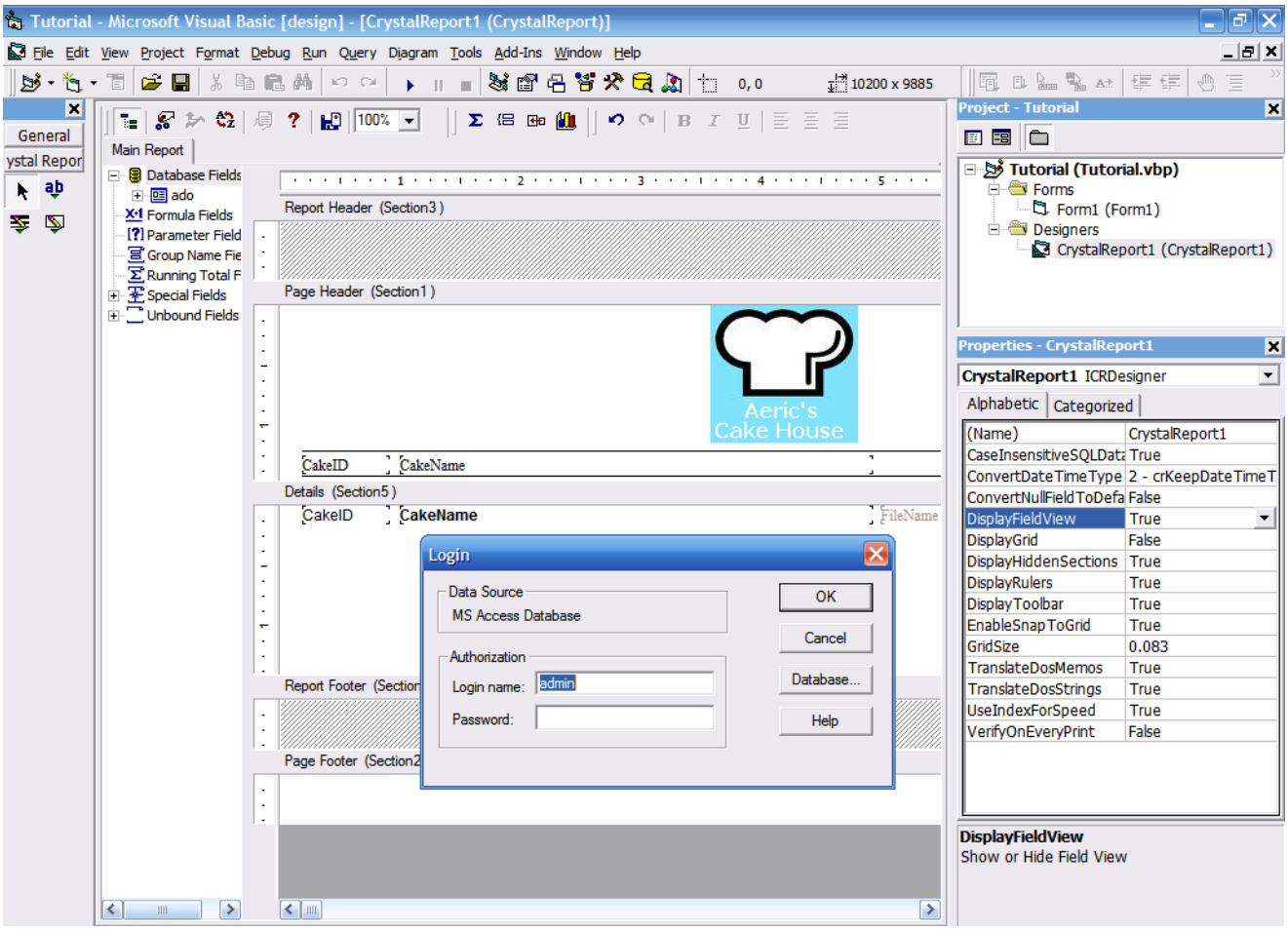
Hide the Report Header and Report Footer by right click the section separator and click on **Suppress (No Drill-Down)**.



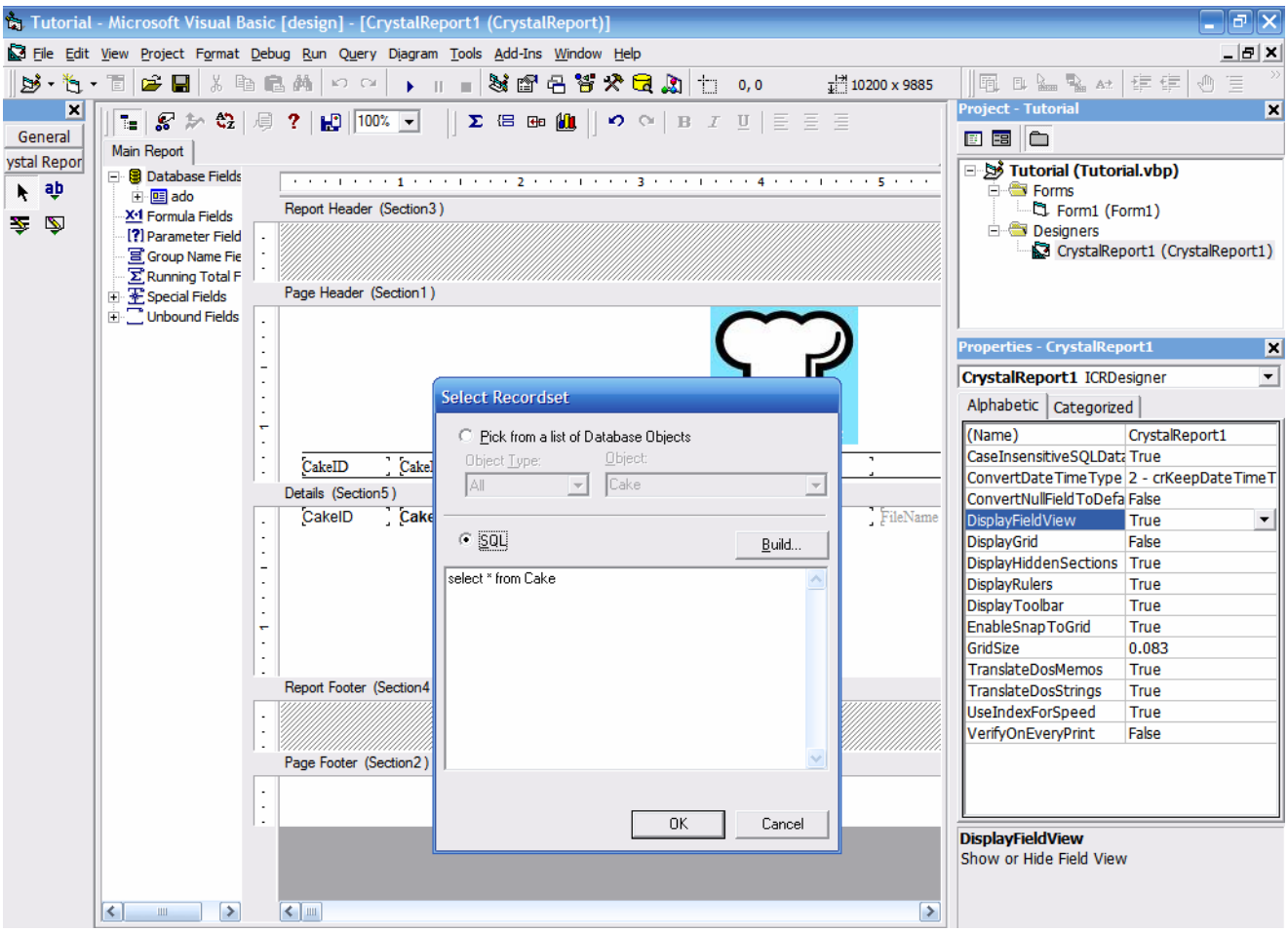
If you have made changes in the database table, right click the **ado** and click **verify database**.



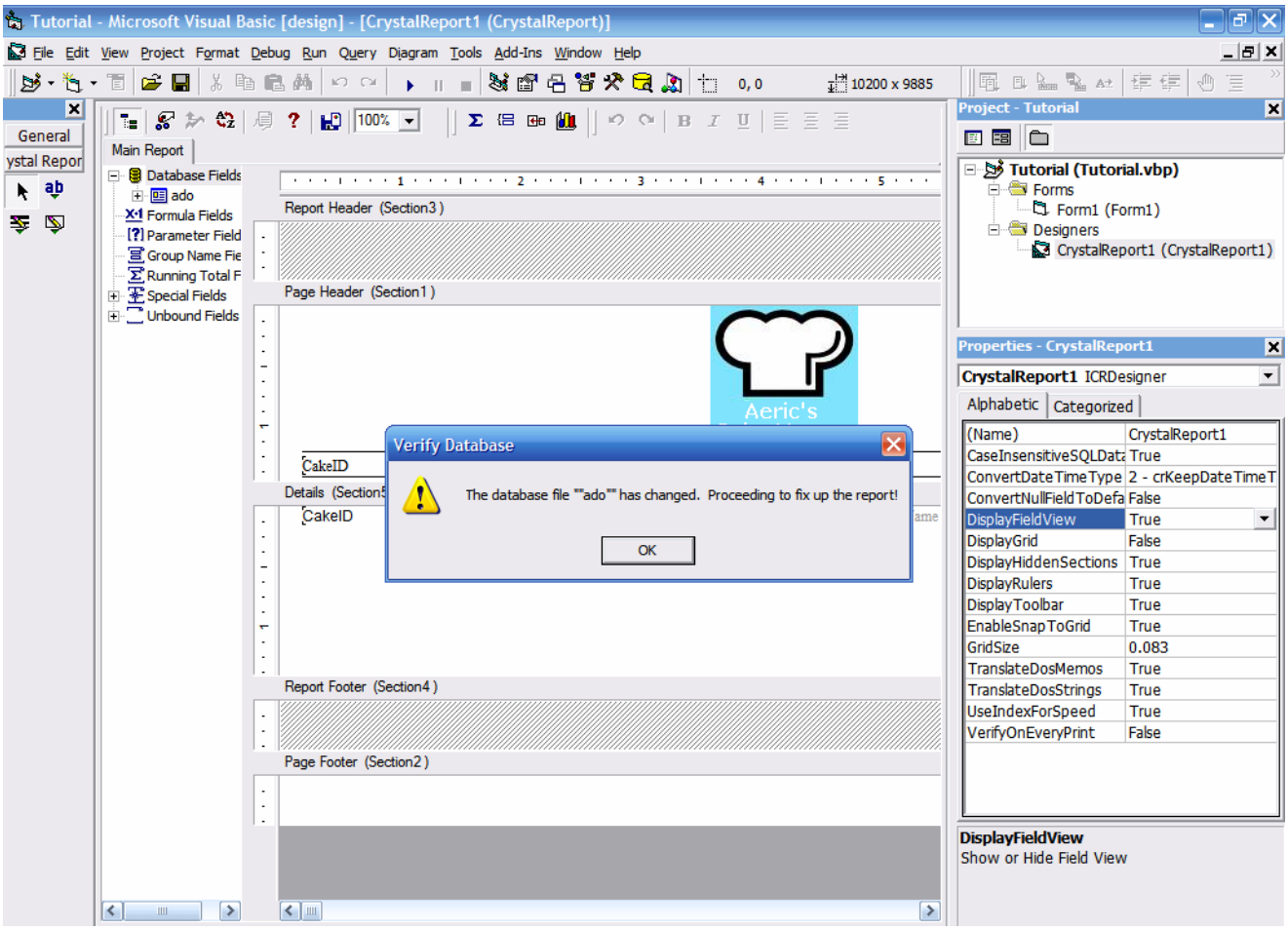
You will be asked for the database password. Key in the password and click **OK**.



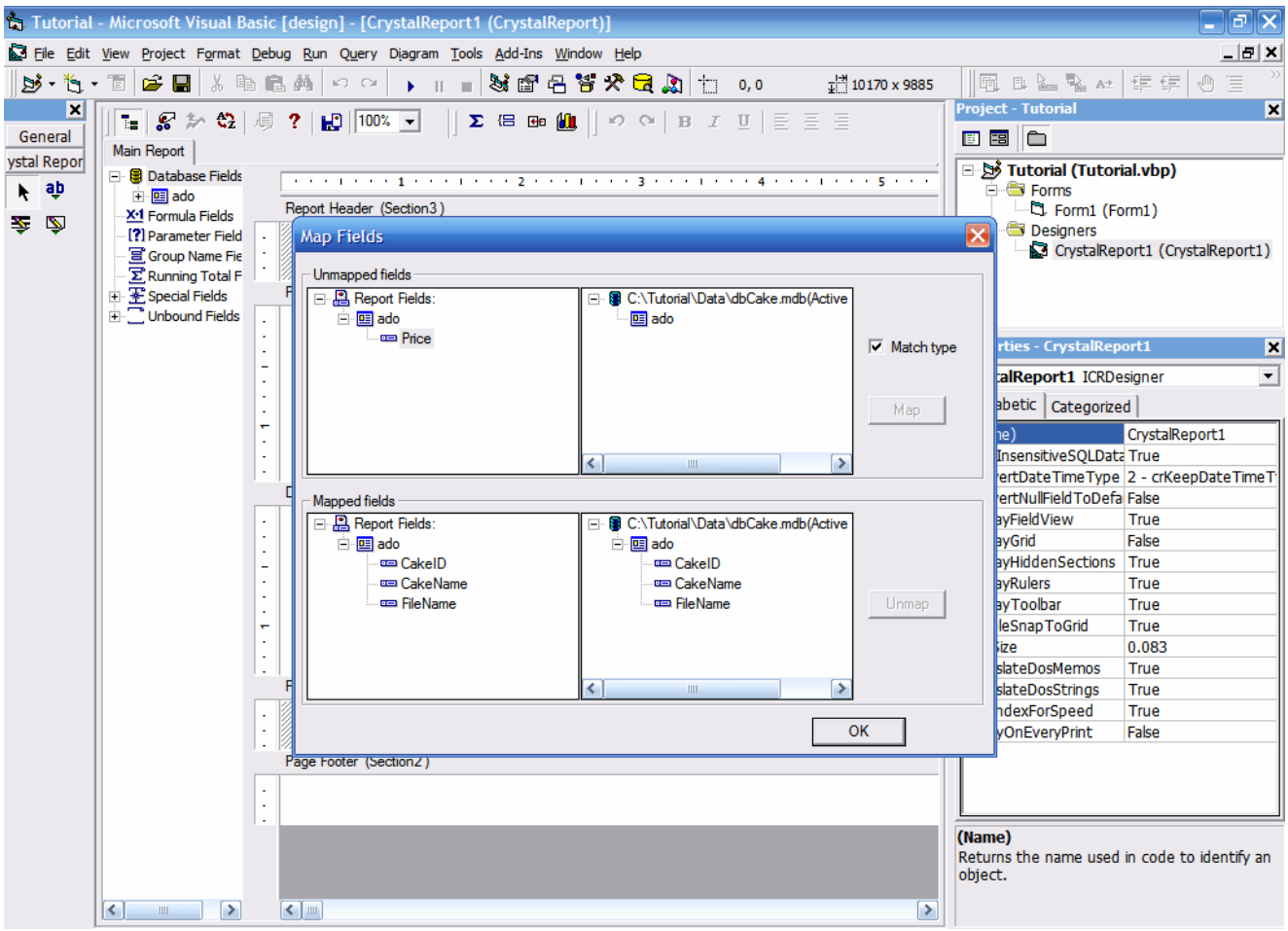
A **Select Recordset** dialogue box will appear. Click **OK** if the SQL is correct.



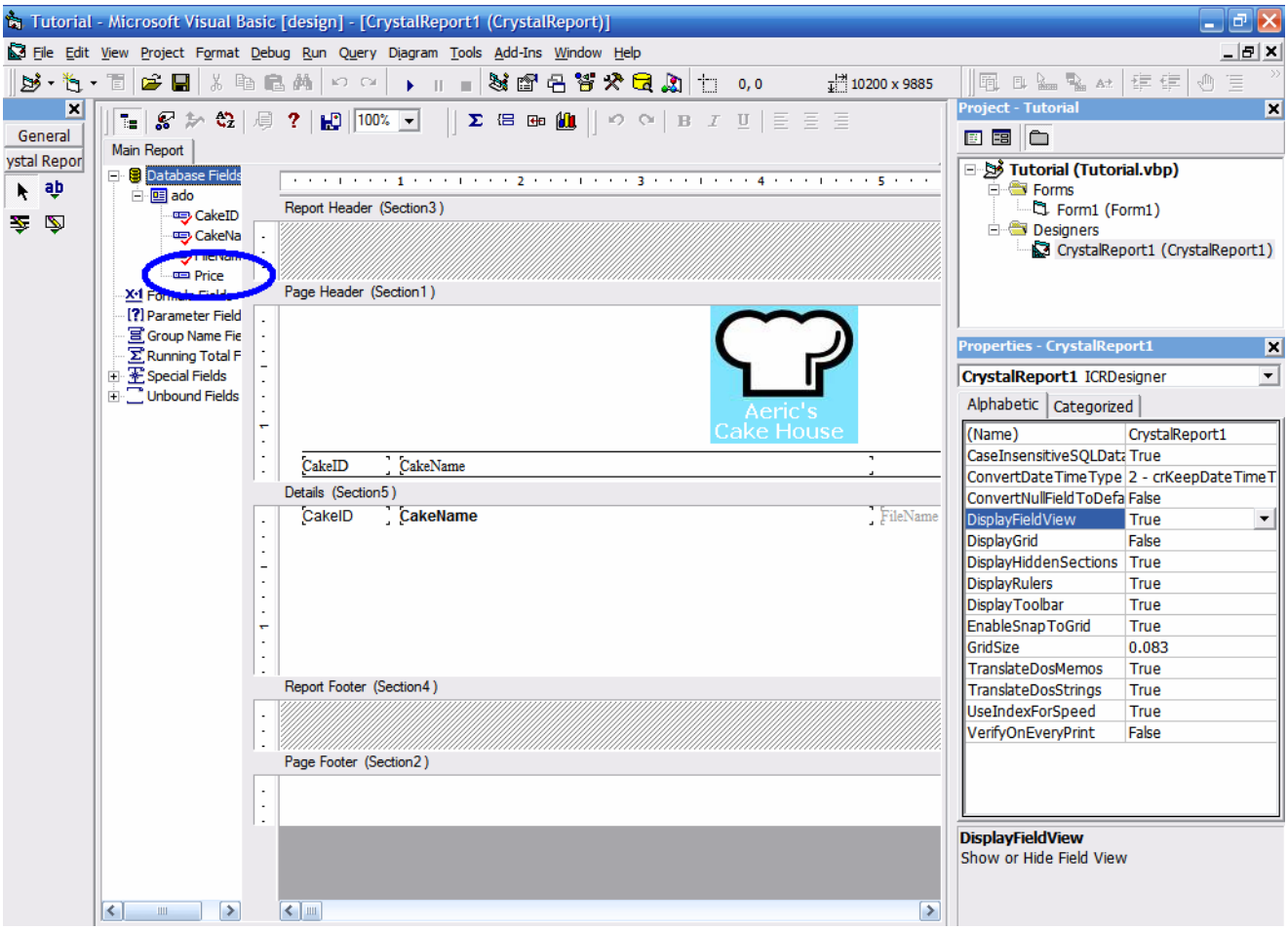
A message will pop up to inform you that the **ado** has changed. Click **OK**.



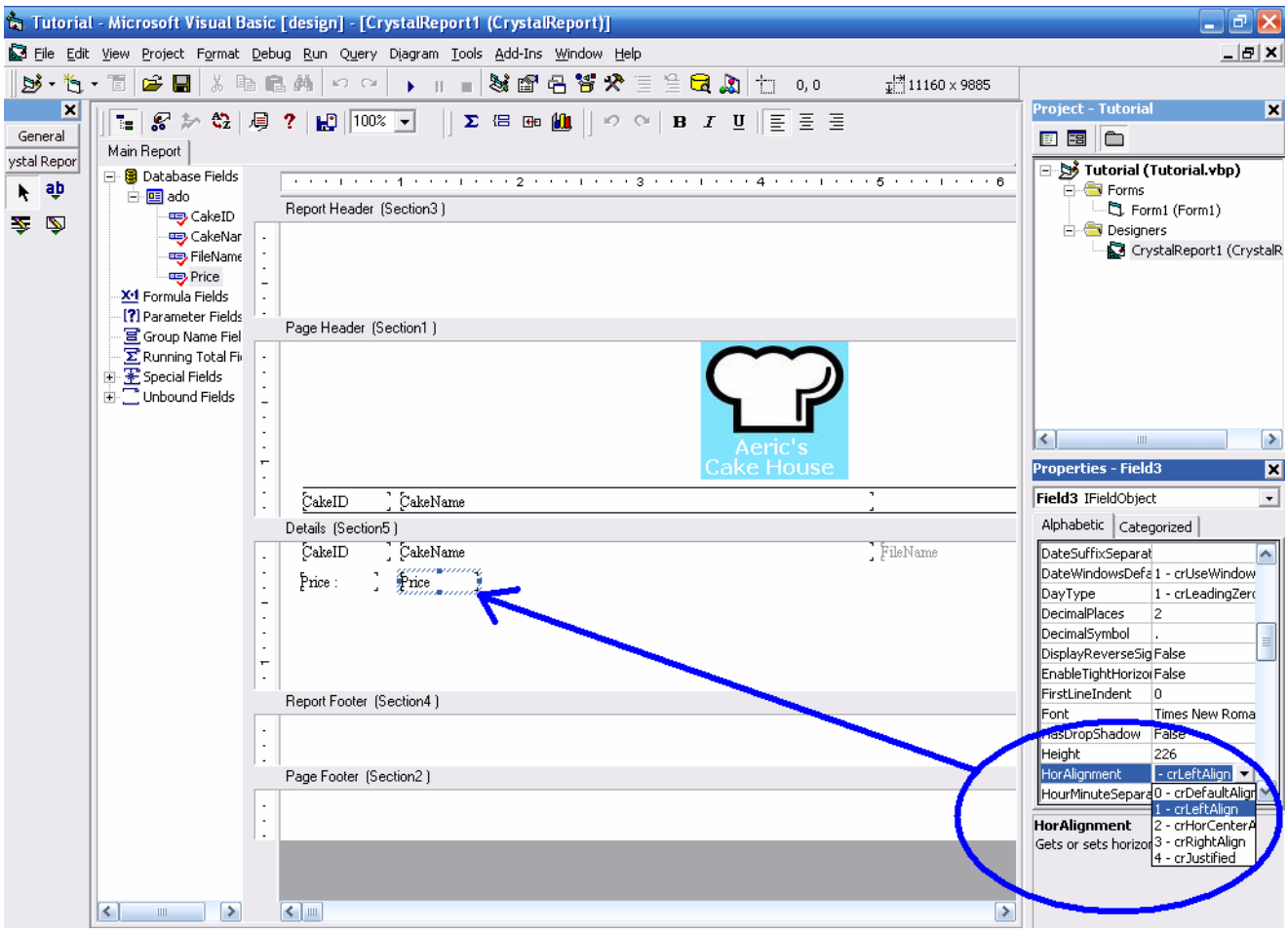
I have added a new field **Price** in the database table. Click **OK** to continue.



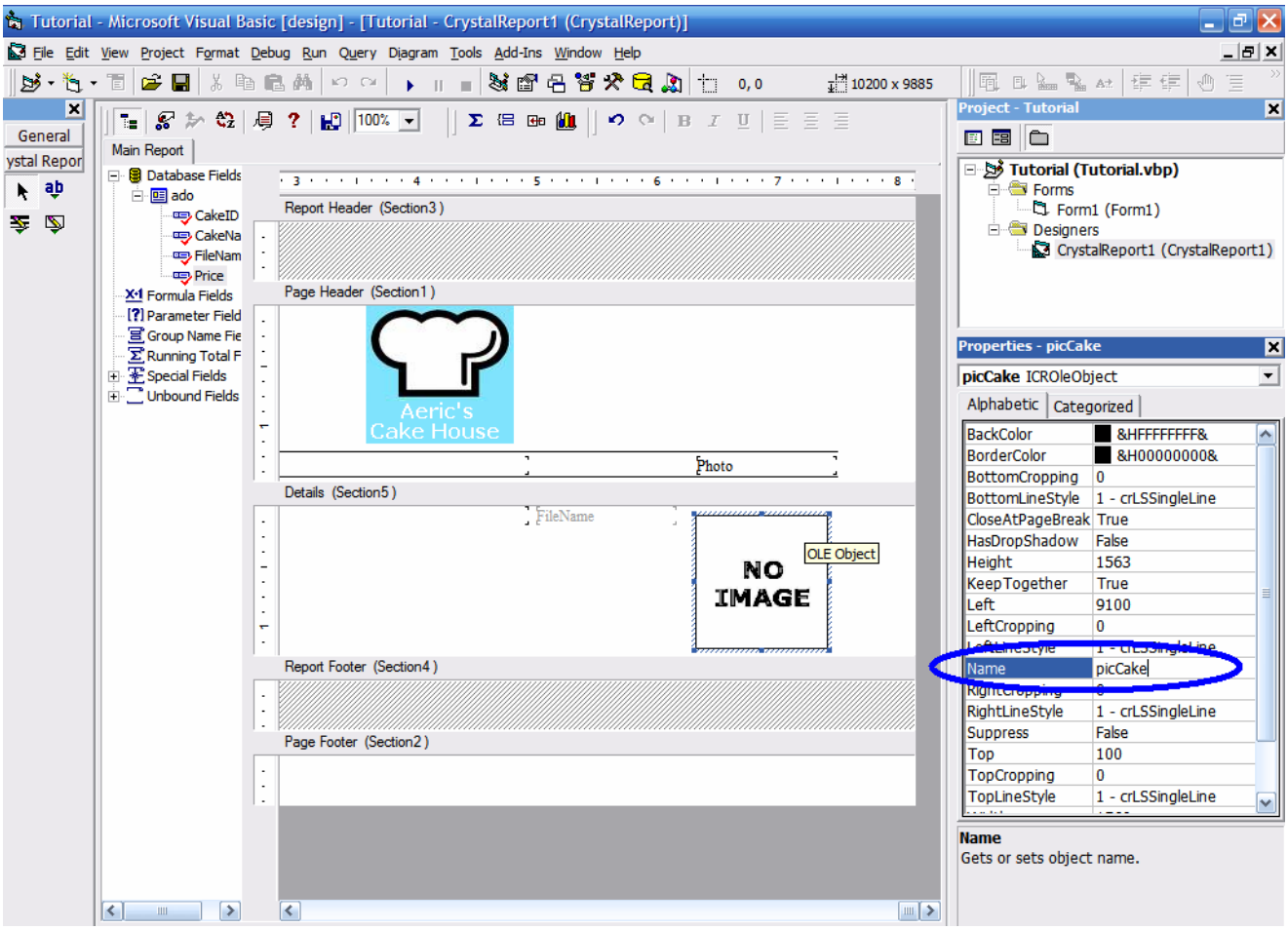
Now, click at the plus sign of **ado** and you can see the new field is added.



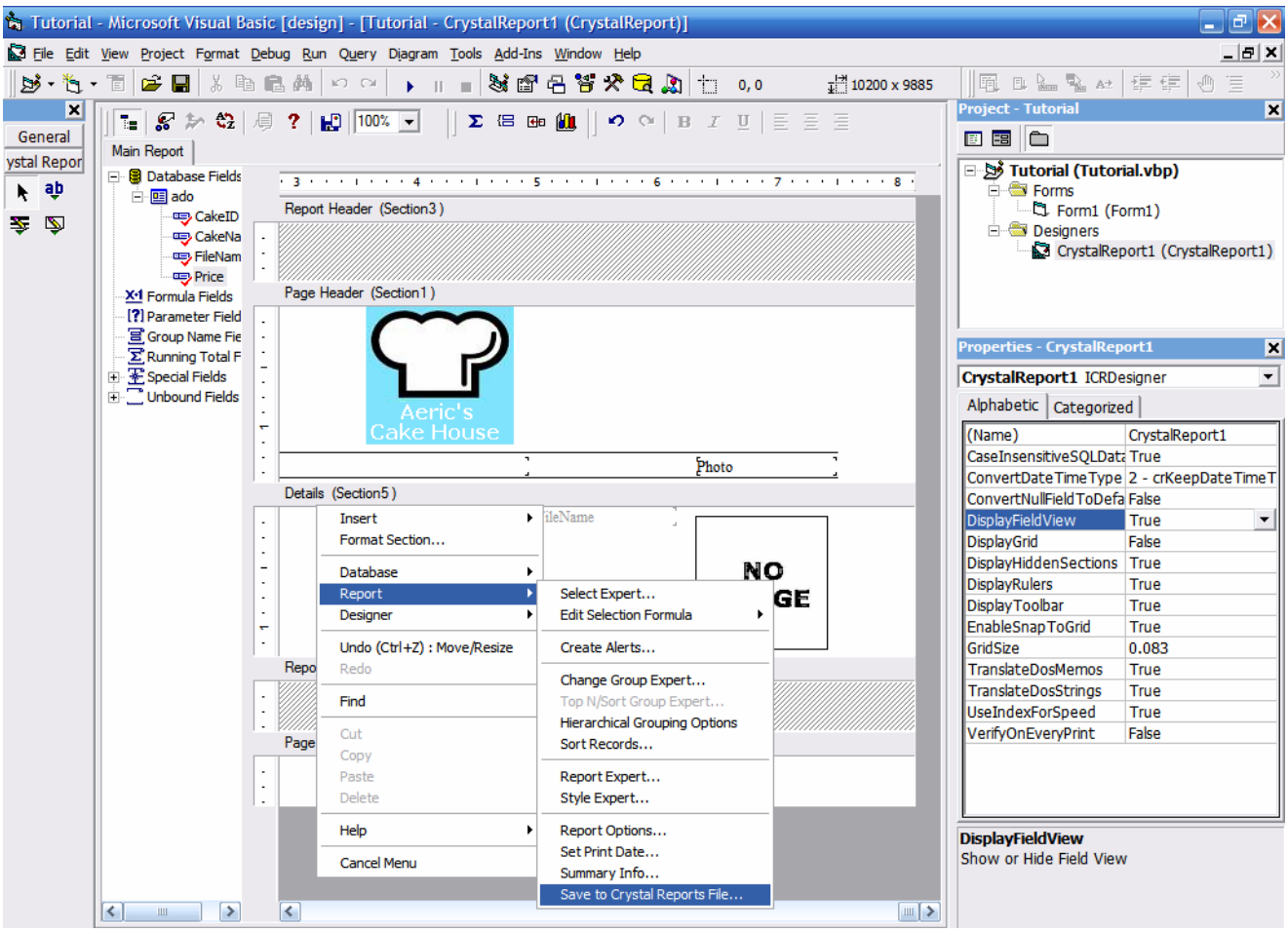
Drag and drop the new field and set **HorAlignment** to crLeftAlign.



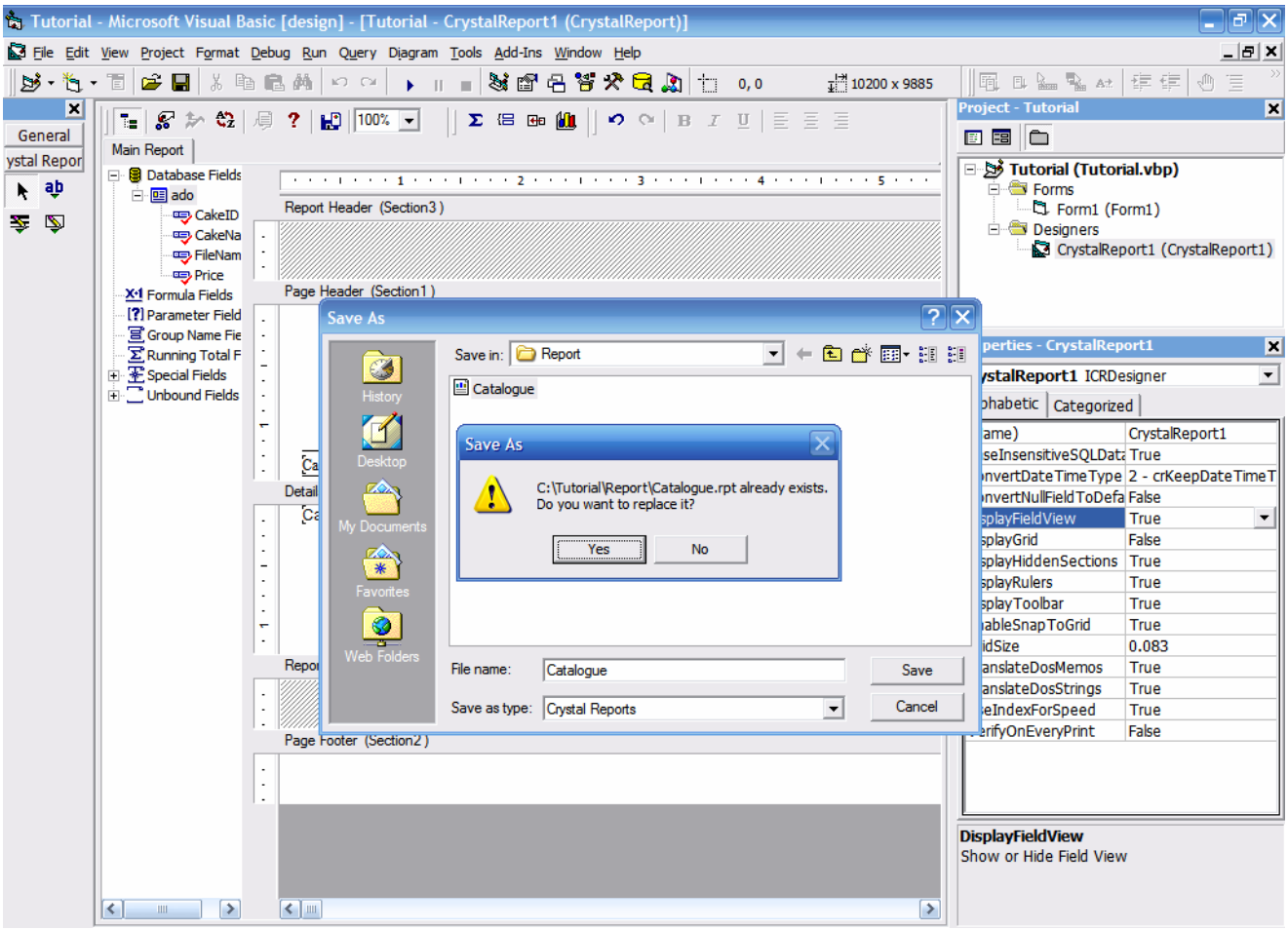
Rename Picture1 as **picCake** and Field5 for FileName as **adoFileName**.



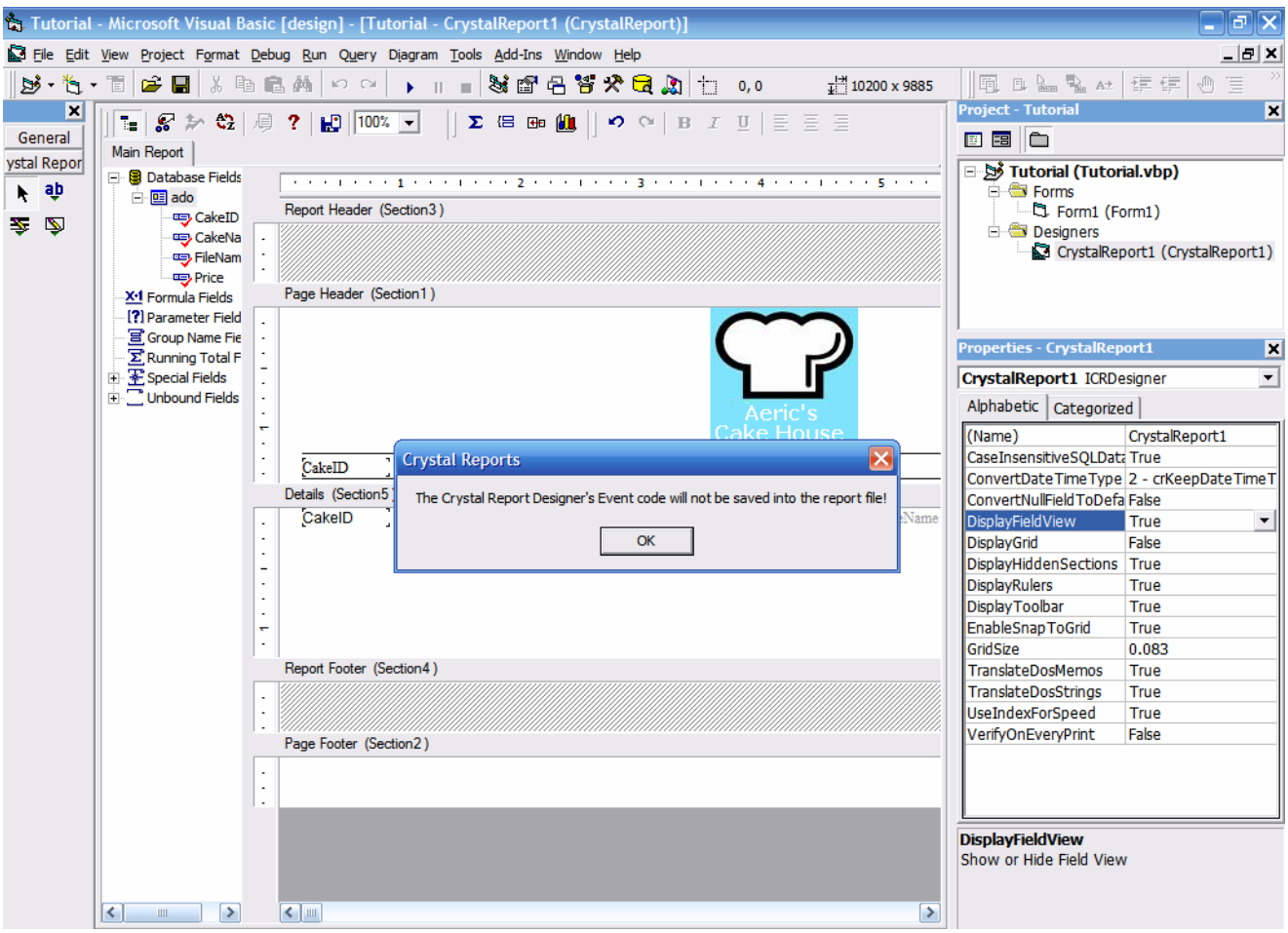
Right click inside any section, click on **Report** and click **Save to Crystal reports File…**.



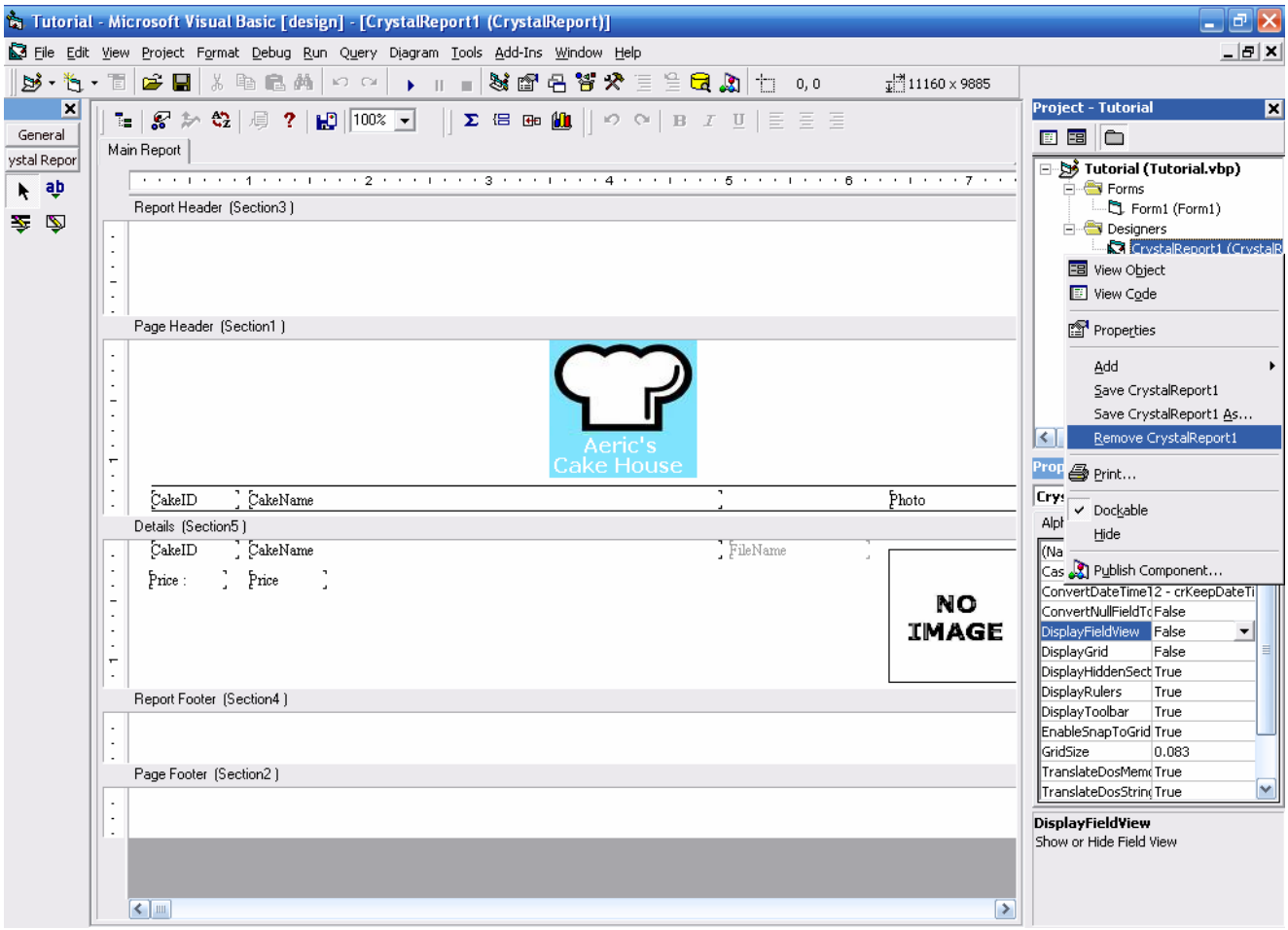
Browse for the report file and click **Yes** to replace it. Make a backup if you wish to do so.



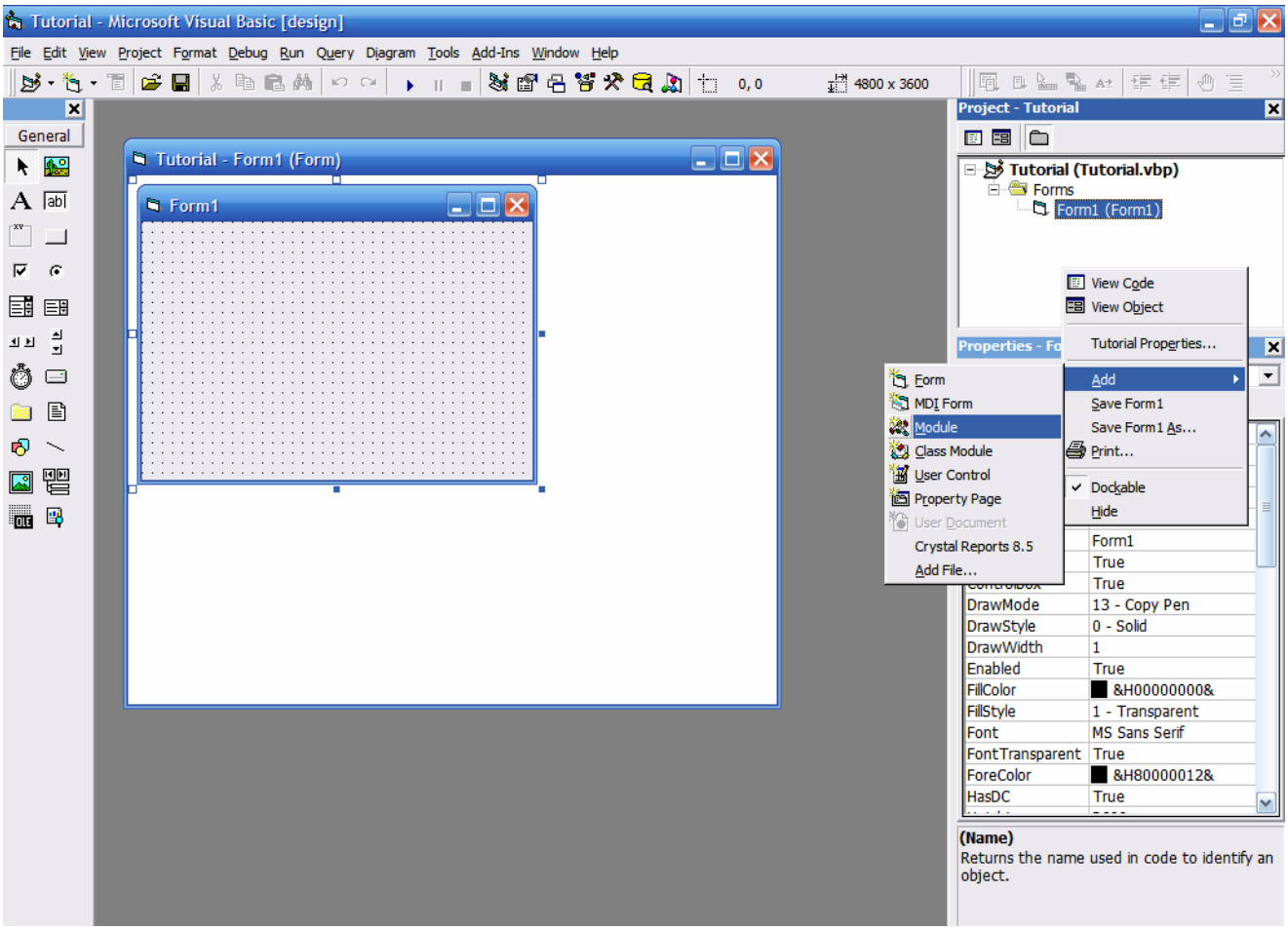
Click **OK** to proceed.



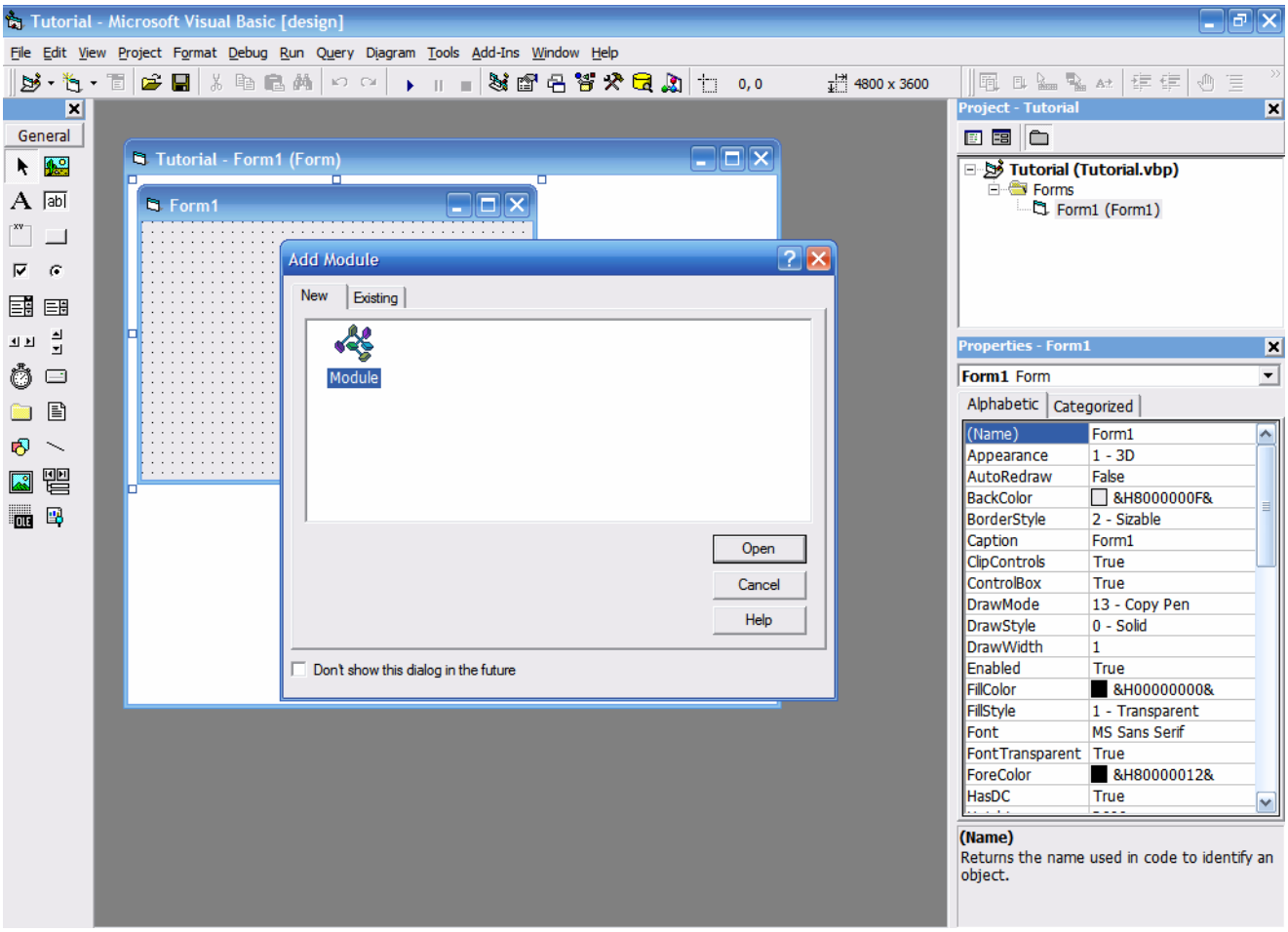
Remove the report designer if you want as we are going to use the external report file.



Right click on the Project Explorer and click on **Module**.



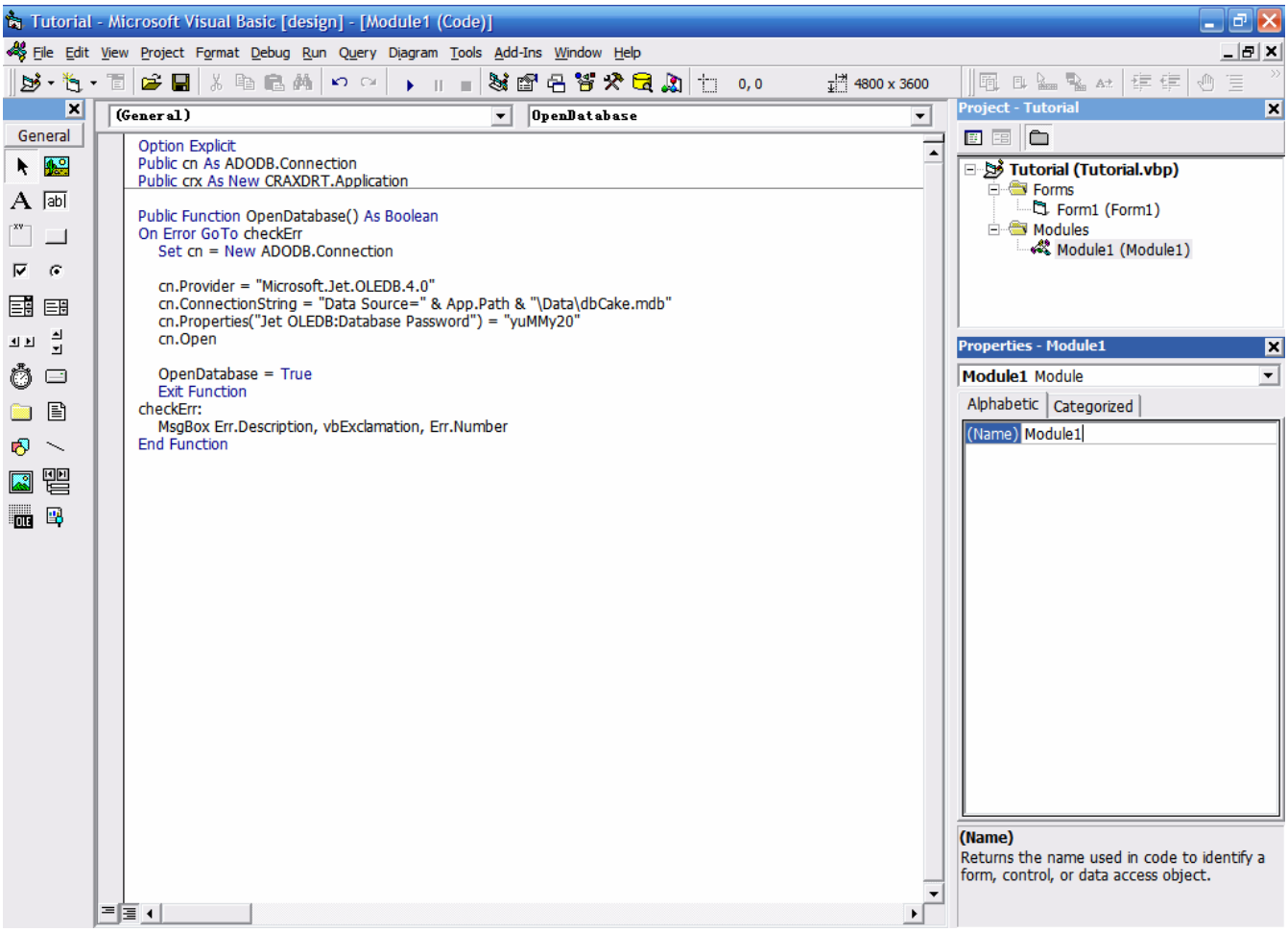
Click **Open** to add the new Module.



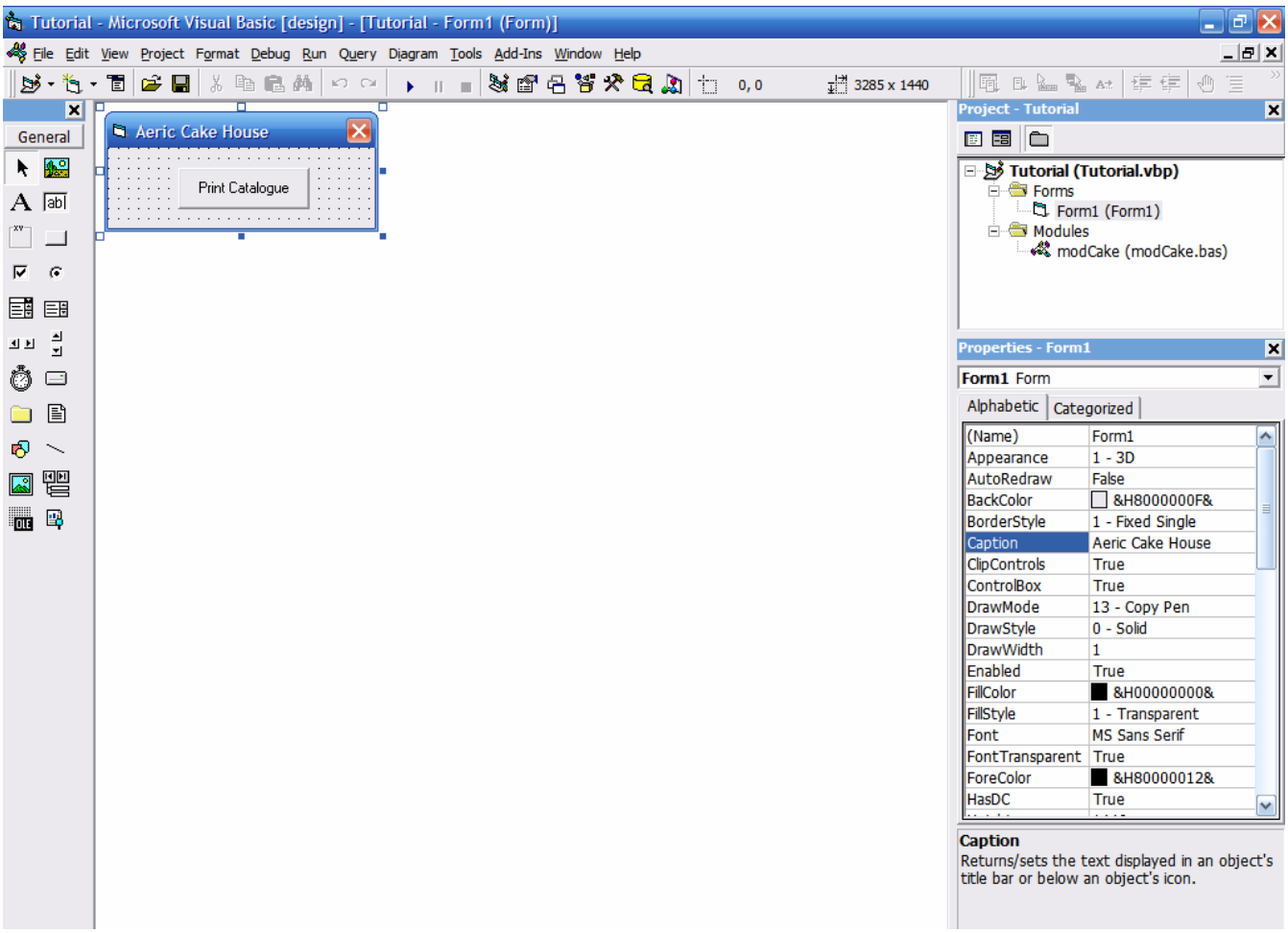
Insert the following code and save the module as **modCake**.

```
Option Explicit
Public cn As ADODB.Connection
Public crx As New CRAXDRT.Application

Public Function OpenDatabase() As Boolean
On Error GoTo checkErr
Set cn = New ADODB.Connection
cn.Provider = "Microsoft.Jet.OLEDB.4.0"
cn.ConnectionString = "Data Source=" & App.Path & "\Data\dbCake.mdb"
cn.Properties("Jet OLEDB:Database Password") = "yuMMy20"
cn.Open
OpenDatabase = True
Exit Function
checkErr:
   MsgBox Err.Description, vbExclamation, Err.Number
End Function
```

The code above is for connecting to the Access 2000 database with password protected using ADO. It is recommended to encrypt the password for higher security. The Crystal Report Application is also set in this module as a Public variable.



Click on Form1. Add a button name **cmdPrint** on Form1. Change the button caption to **Print Catalogue**. Change Form1 **BorderStyle** as **Fixed Single** and caption or icon if you like.

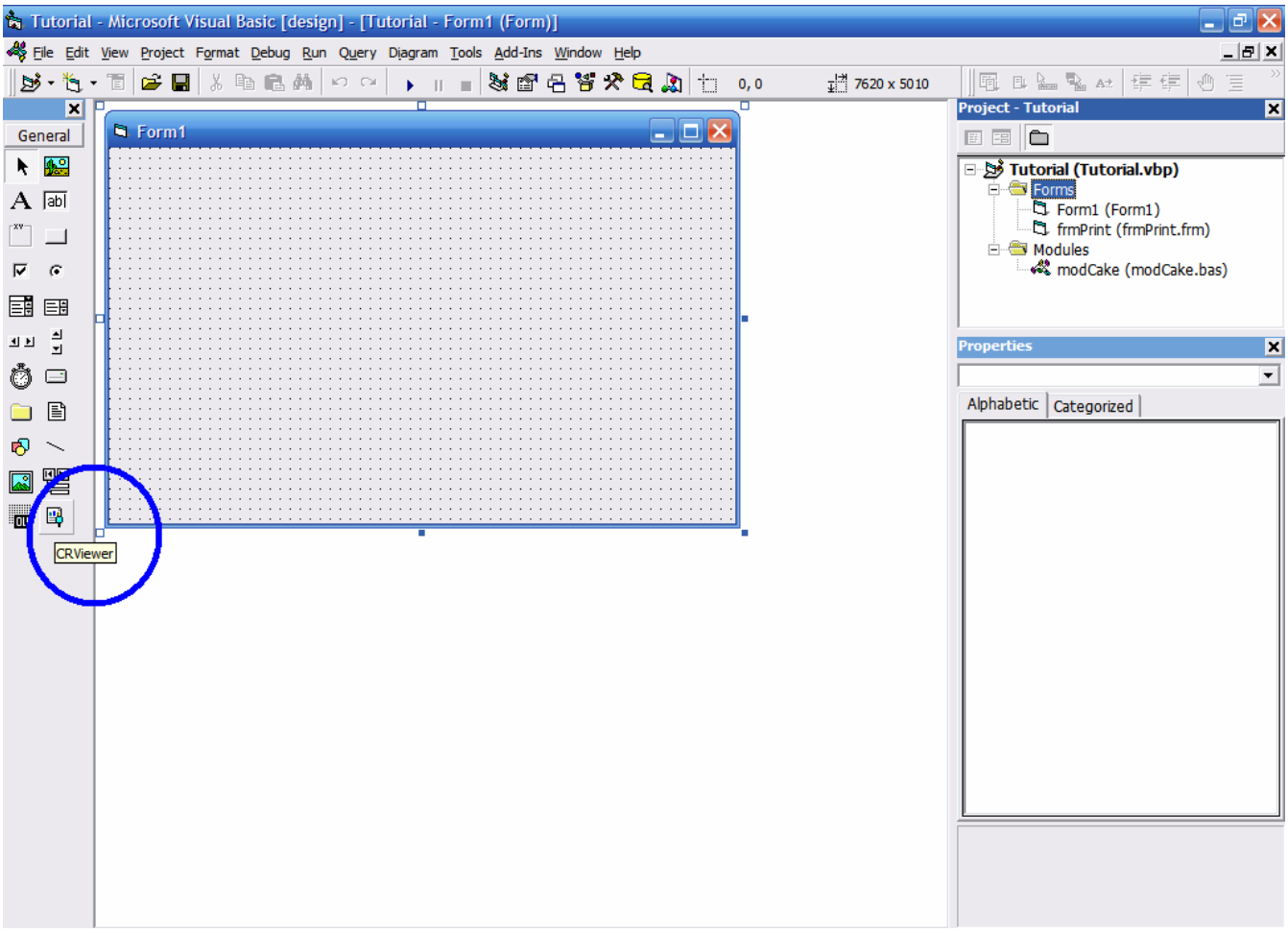


Click **View Code** and insert the following code in Form1 and save it as **frmPrint**.

```
Option Explicit

Private Sub cmdPrint_Click()
frmReport.WindowState = 2
frmReport.Show
Unload Me
End Sub

Private Sub Form_Load()
If OpenDatabase = False Then
   Unload Me
   Exit Sub
End If
End Sub
```

The above code will connect to the database when the Form loads.
If the database failed to load, check the database path, filename and password.
If the application failed to start, it will quit.
The print button will open a report form which we are going to create later.
The report form will be open as a Maximized window.

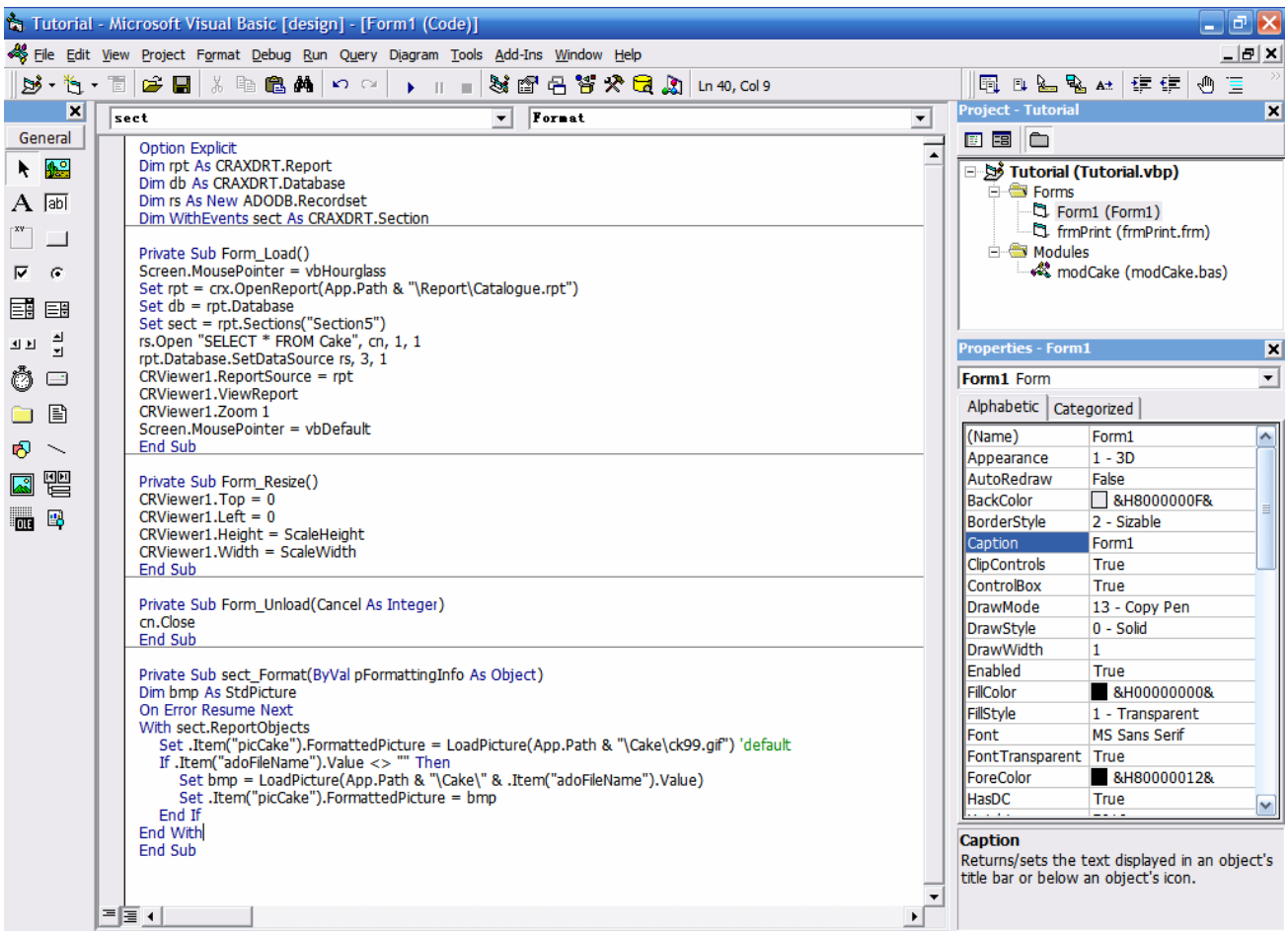
Now add a new form. Click **CRViewer** to add a **Crystal Report Viewer** object on this form.



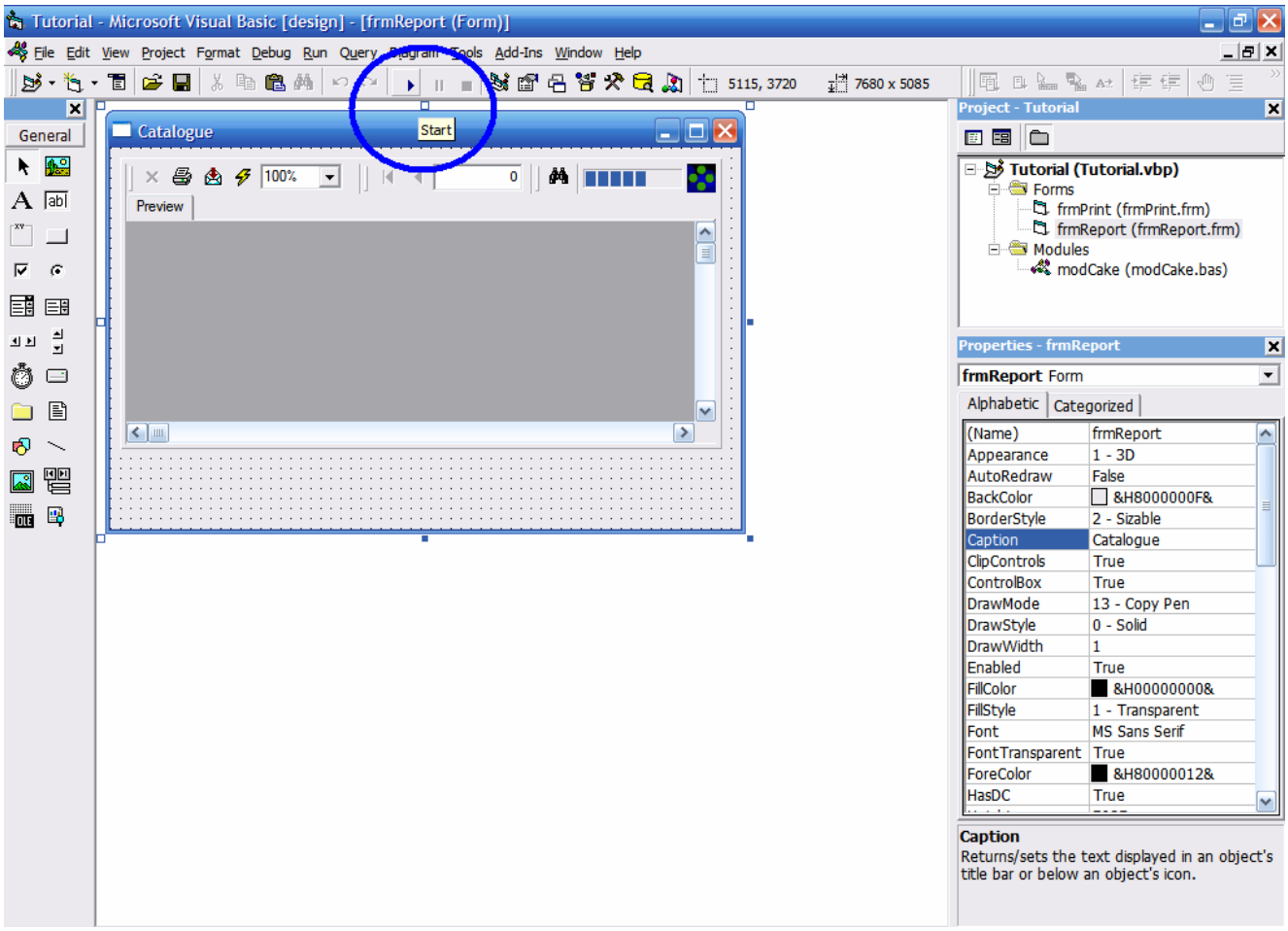
Add the following code and save the form as **frmReport**.

```
Option Explicit
Dim rpt As CRAXDRT.Report
Dim db As CRAXDRT.Database
Dim rs As New ADODB.Recordset
Dim WithEvents sect As CRAXDRT.Section
```

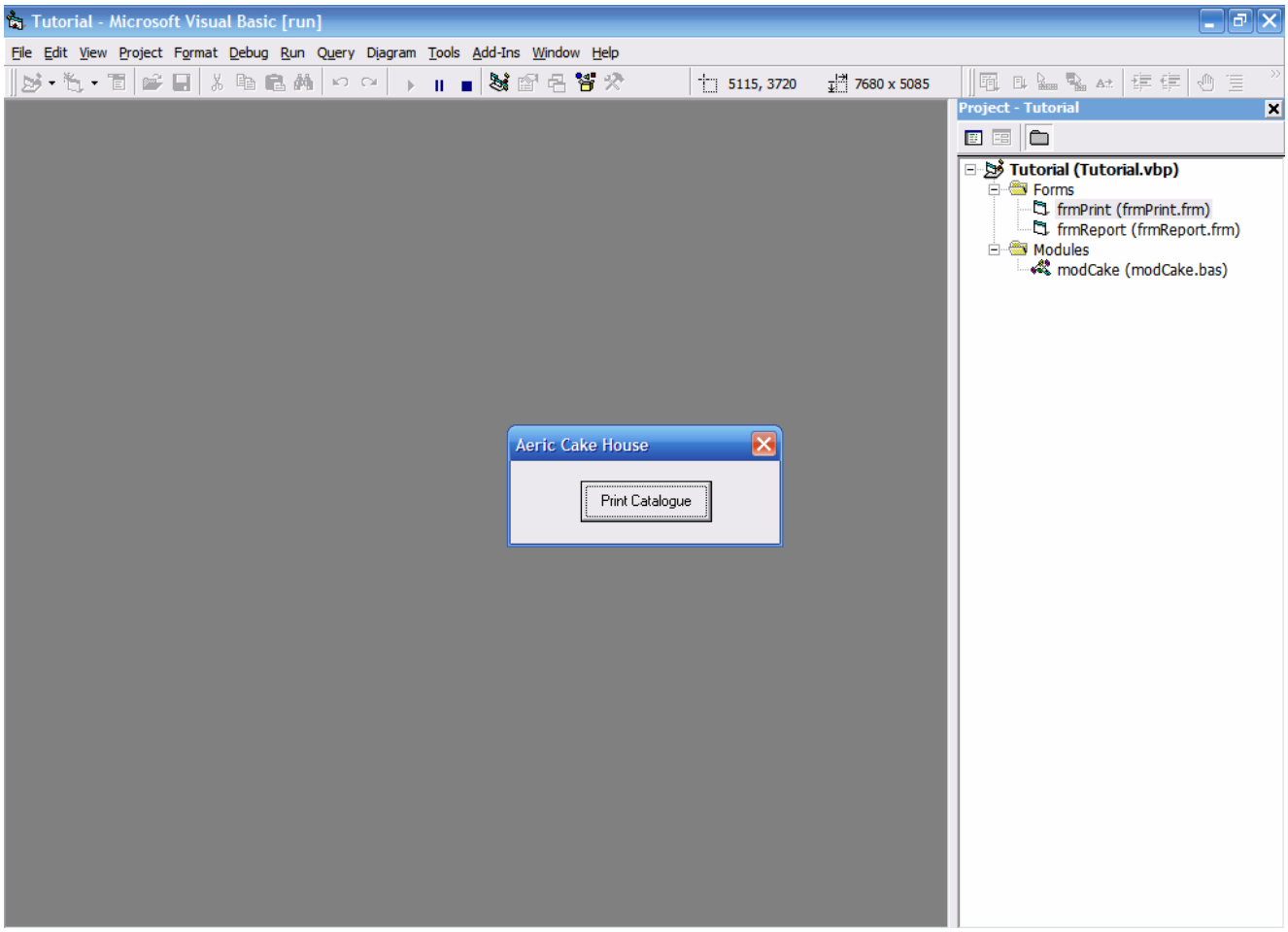
```
Private Sub Form_Load()
Screen.MousePointer = vbHourglass
Set rpt = crx.OpenReport(App.Path & "\Report\Catalogue.rpt")
Set db = rpt.Database
Set sect = rpt.Sections("Section5")
rs.Open "SELECT * FROM Cake", cn, 1, 1
rpt.Database.SetDataSource rs, 3, 1
CRViewer1.ReportSource = rpt
CRViewer1.ViewReport
CRViewer1.Zoom 1
Screen.MousePointer = vbDefault
End Sub

Private Sub Form_Resize()
CRViewer1.Top = 0
CRViewer1.Left = 0
CRViewer1.Height = ScaleHeight
CRViewer1.Width = ScaleWidth
End Sub

Private Sub Form_Unload(Cancel As Integer)
cn.Close
End Sub

Private Sub sect_Format(ByVal pFormattingInfo As Object)
Dim bmp As StdPicture
On Error Resume Next
With sect.ReportObjects
   Set .Item("picCake").FormattedPicture = LoadPicture(App.Path & "\Cake\ck99.gif") 'default
   If .Item("adoFileName").Value <> "" Then
      Set bmp = LoadPicture(App.Path & "\Cake\" & .Item("adoFileName").Value)
      Set .Item("picCake").FormattedPicture = bmp
   End If
End With
End Sub
```



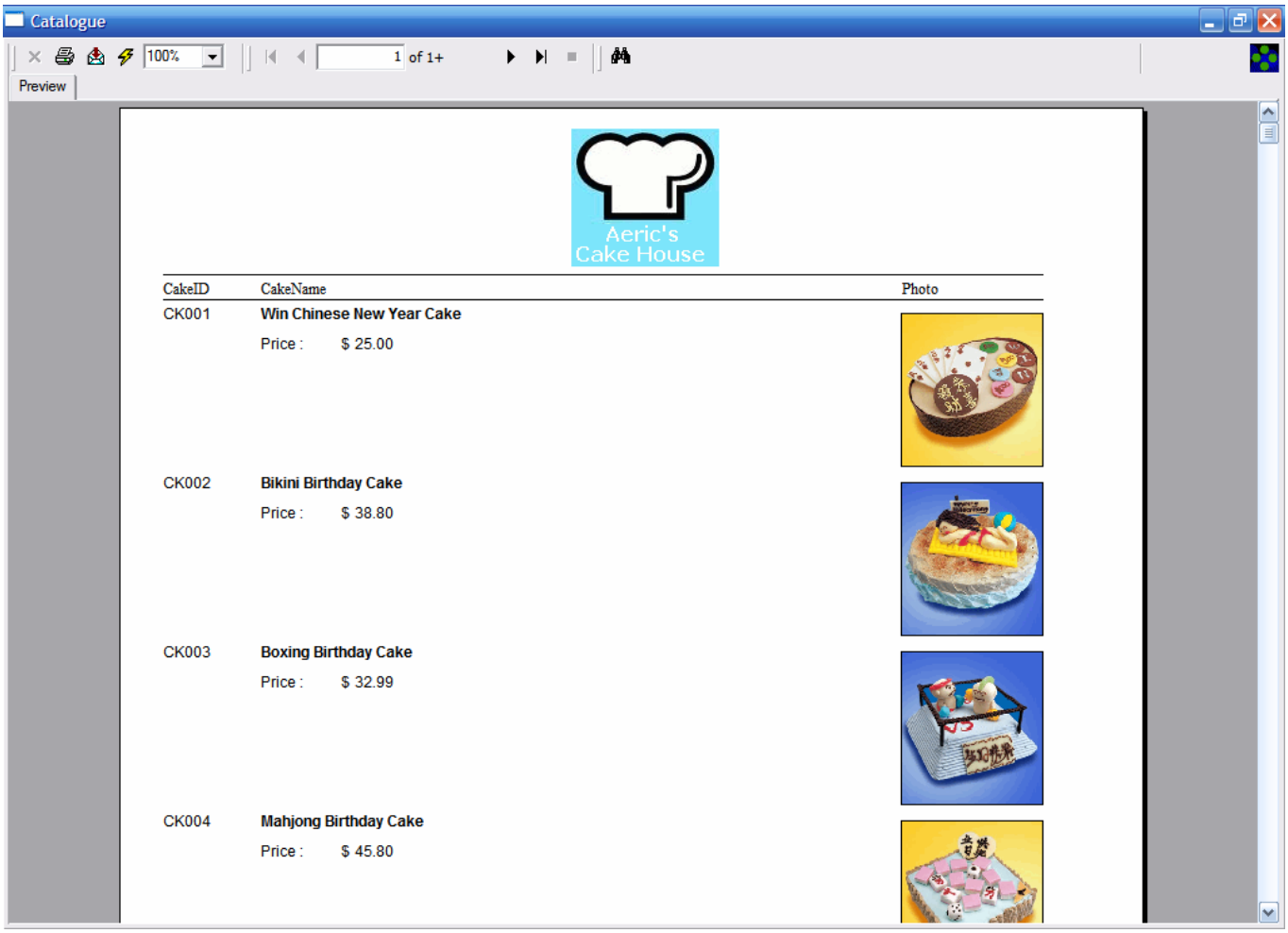
Now we have finished all the coding. Click on **Start** button to execute the project.



Click on the **Print Catalogue** button.



The report preview will show up. Click the printer button if you want to print the report.



This is how the trick works. Happy Coding.

Please send me an email at aeric80 [at] gmail [dot] com if you found any mistakes in this document or you want to suggest any improvement.