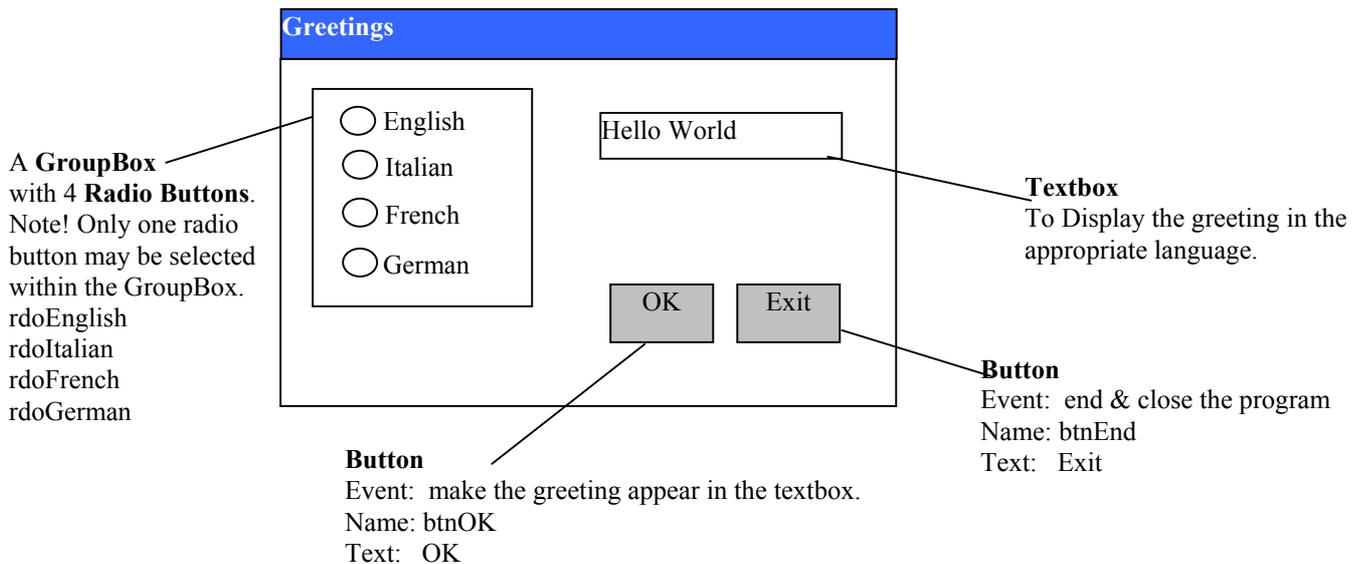


The Greetings Program

A Second Visual BASIC Application : Greetings

The following instructions take you through the steps to create a simple application. A greeting is displayed in one of four different languages (English, French Italian and German) depending on which option button is selected.

Screen design:



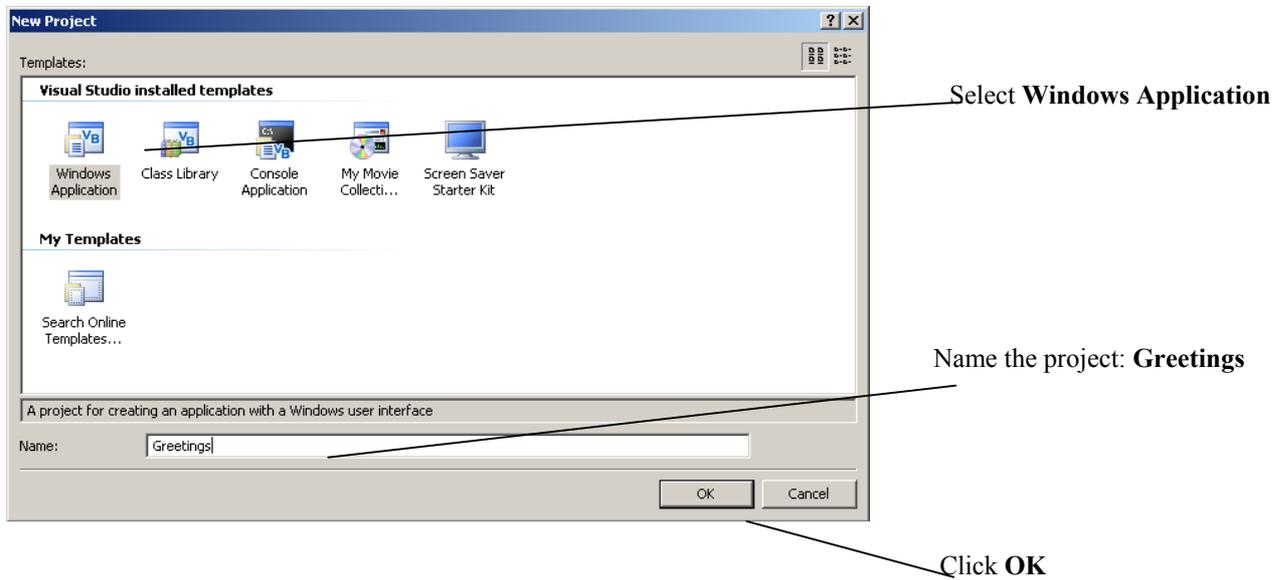
The steps required to produce the application are shown below and will be explained on the following pages:

- 1 Create a new project (see page 2)
- 2 Add the control objects to the Form:
 - Buttons -OK & Exit
 - Textbox -to display greeting
 - GroupBox -to contain the radio buttons below
 - Radio Buttons. -English, Italian, French, German
- 3 Set the properties for the objects.
i.e. Buttons, Textbox, GroupBox, Radio Buttons.
- 4 Write the BASIC code for the each button.
i.e. OK & Exit buttons
- 5 Save and run the application

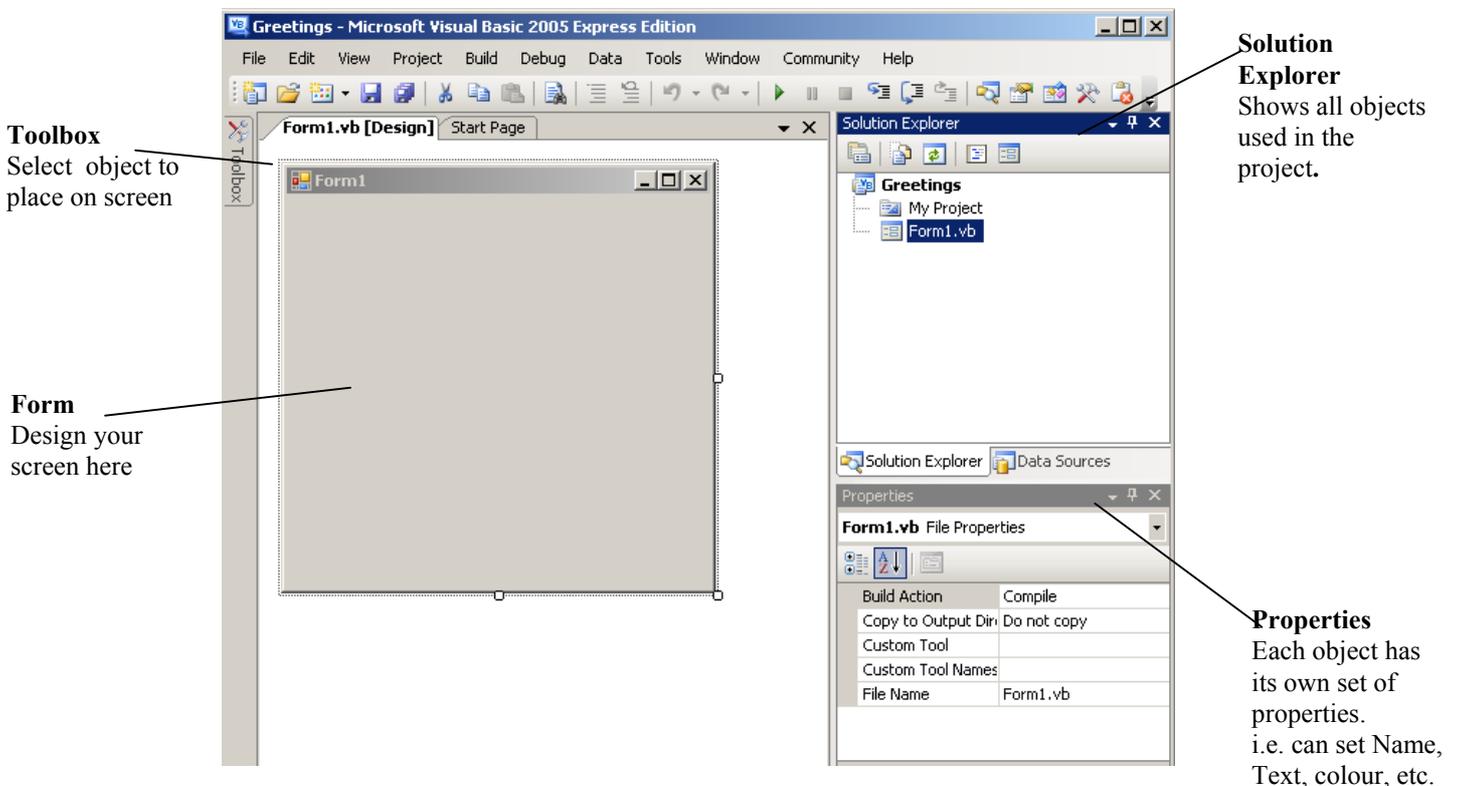
Create a New Project

Each application is treated as a separate project (i.e. a collection of Forms with control objects and program code).

1 Select *New Project* from the **File** menu.



The Form, Toolbox, Solution and Properties windows appear on screen.



2 Add the required controls to the Form.

Adding a control is much like drawing an object in a paint application. To place an object select it from the toolbox and draw it in position on the Form.

a) To place the OK button

From the Toolbox, click the button tool  Button and position it as shown in the screen design (on page 1). The button is drawn on screen by clicking the mouse where the top left corner is to be and dragging the pointer to the bottom right of the button and releasing the mouse button.

Note that the command button is labelled *button1*.

b) To place the Exit button

Repeat the above process to draw the second button on the screen.

Note that this command button is labelled *button2*.

c) To place the Textbox

From the toolbox, click Textbox  TextBox. Draw the Text box on screen as shown on the screen design.

Note that this text box is called *Textbox1*

d) To place the GroupBox.

From the toolbox, click GroupBox  GroupBox. Position the GroupBox as shown in the screen design. Note that the radio buttons will be placed inside the group box.

Note that this group box is labelled *GroupBox1*

e) To place the English radio button.

From the toolbox, click Radio Button  RadioButton. Position the option button for the first option on the Form.

Note that this option button is labelled *radio button1*

f) To place the radio buttons for Italian, French and German repeat the last step to draw each option button.

Objects can be resized by clicking on them -six white 'handles' appear around the object. To resize the object drag one of the handles to stretch the control to the size required.

Setting Properties

Each object (Button, Textbox, Radio Button, etc) has its own set of properties. These properties include the objects **name**, **size**, **position** and **colour**. When an object is first created BASIC automatically sets its properties to the default values.

You can set properties at design time and at run time.

- *Design time* is when you create the application's interface in the Form window. To set a property at design time use the Property Window (see example screen).
- *Run time* is when the user actually runs the application. To set a property at run time, write BASIC code in the code window.

Set the following properties for each object as shown:

Object	Property	Set to	Comment
Form	Name	frmGreetings	Name used within program.
	Text	Greetings	Name displayed in blue bar at top of form
Button1	Name	btnOK	Name used within program.
	Text	OK	Text displayed on the button.
Button2	Name	btnExit	Name used within program.
	Text	Exit	Text displayed on the button.
Radiobutton1	Name	rdoEnglish	Name used within program.
	Text	English	Text displayed on the button.
Radiobutton2	Name	rdoItalian	Name used within program.
	Text	Italian	Text displayed on the button.
Radiobutton3	Name	rdoFrench	Name used within program.
	Text	French	Text displayed on the button.
Radiobutton4	Name	rdoGerman	Name used within program.
	Text	German	Text displayed on the button.
Textbox	Name	txtDisplay	Name used within program.

To set the property for an object

- a) Select the object by clicking on it.
- b) Press F4 to see the objects property window.
- c) Select the property to be changed. Enter the new value in the data entry line and press enter.

When the properties have been set save your work via *Save* from the **File** menu.

Give the application the name GREETINGS.

Write the BASIC Code

To make the buttons respond at run time, you need to write code called an event procedure. Event procedures are executed when an event occurs: for example when the user clicks the OK button on the Greetings Form.

When you design an application, it is often helpful to write down how the application should respond to each event. Then it becomes clear which event procedure you need to write code for.

The Greetings application responds to two click events

Event	Respond	Event Procedure
User clicks OK button	Display greeting in text box depending on which option button is selected.	btnOK
User clicks Exit button	Ends the application	btnExit

- To write the BASIC code for the OK button

a) Double click on the **OK** button

Visual BASIC displays a template for an event procedure named **btnOK_Click**.

```
Private Sub btnOK_Click(ByVal sender As System.Object, ByVal e As
                        System.EventArgs) Handles btnOK.Click

End Sub
```

The PRIVATE SUB and END SUB statements mark the beginning and end of the event procedure.

b) Type the bold code below between the PRIVATE SUB and END SUB statements

```
Private Sub btnOK_Click(ByVal sender As System.Object, ByVal e As
                        System.EventArgs) Handles btnOK.Click
    If rdoEnglish.Checked Then
        txtDisplay.text = "Hello World"
    End If
    If rdoFrench.Checked Then
        txtDisplay.Text = "Bonjour tout le monde"
    End If
    If rdoItalian.Checked Then
        txtDisplay.Text = "Ciao Mondo"
    End If
    If rdoGerman.Checked Then
        txtDisplay.Text = "Hallo welt"
    End If
End Sub
```

Close the Code window.

- To Write the BASIC code for the Exit button

a) Double click on the **Exit** button

b) Add the following single statement within the Private SUB and END SUB statements:

```
Private Sub btnExit_Click(ByVal sender As System.Object, ByVal e As
                          System.EventArgs) Handles btnExit.Click

    End

End Sub
```

Close this code window.

The Application is complete. **SAVE YOUR WORK**

RUN the application by pressing the F5 key.

Click on the English option button and then the OK button. The message *Hello World* should appear in the text box. If not go back and check that you have entered the BASIC code correctly.

Test the other option buttons to see if they display the appropriate greeting.