

Lab 1 – Create a Simple aspx Page

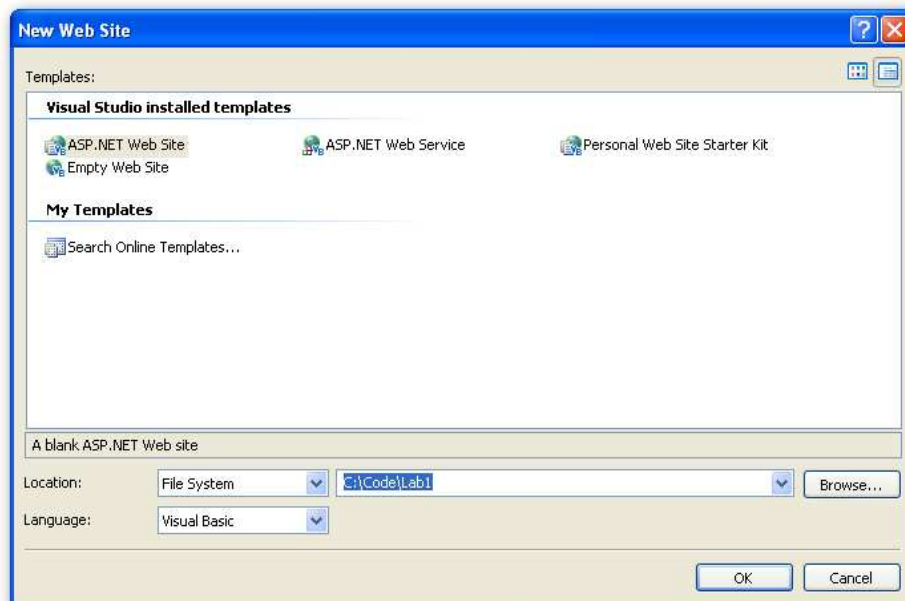
Objective

In this exercise, you will create a new web site using Visual Studio 2005. In addition, you will add three controls to the default page and add code to calculate the square root of a number and display it on the page. You will then rerun the application with a breakpoint and observe the value of the text variables placed into the controls during runtime.

Step-by-Step Instructions

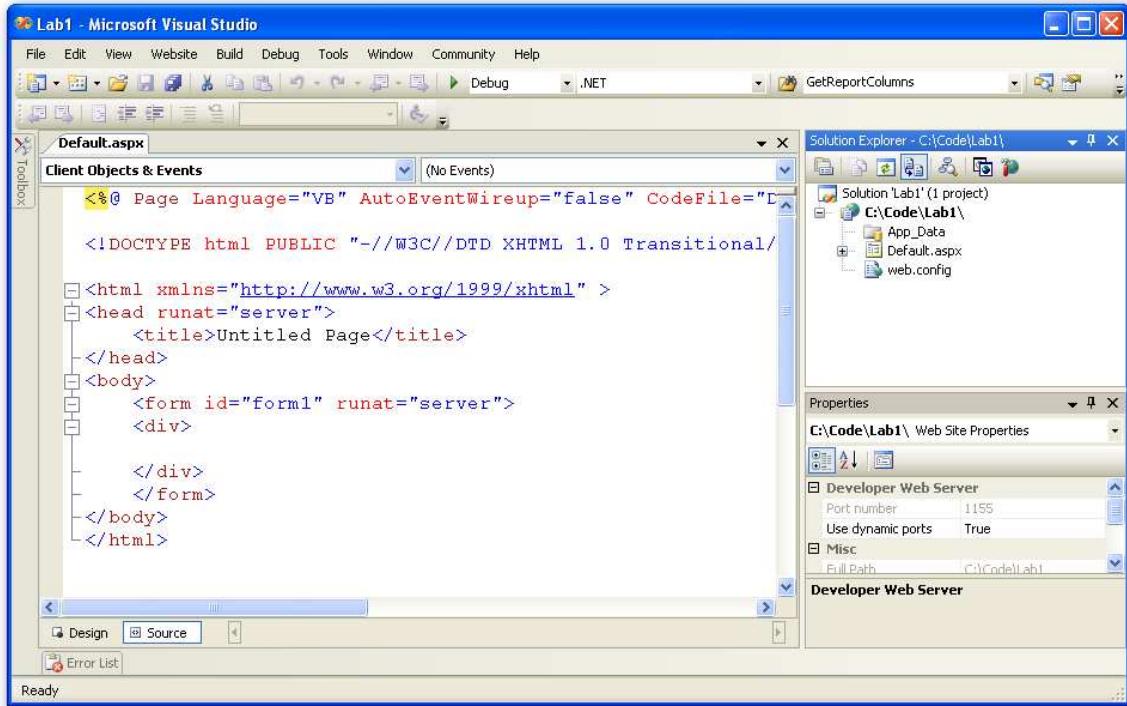
1. Start Visual Studio 2005 (Visual Studio can typically be found under **Start → All Programs → Microsoft Visual Studio 2005 → Microsoft Visual Studio 2005**)
2. Create a new web site. **File → New → Web Site (Or, File → New Web Site...)**
3. Select the following options:

Setting	Value
Visual Studio installed templates	ASP.NET Web Site
Location	File System – C:\Code\Lab1
Language	Visual Basic

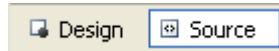


4. Click **OK** to Continue.

Visual Studio then creates the new web site and displays the Source view of the *Default.aspx* page.



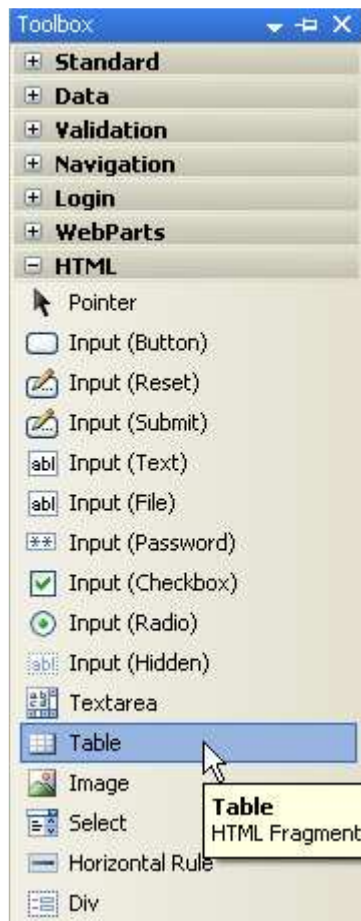
5. Switch from the source view to the design view of the page by clicking on the **Design** button on the bottom left-hand side of the Visual Studio window.



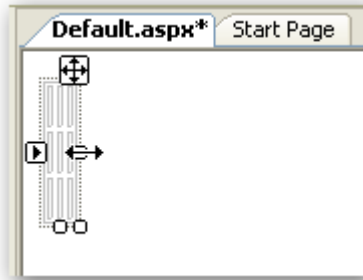
6. If the toolbox is not showing, select **Toolbox** from the **View** menu.
7. Make sure that Auto Hide is disabled on the Toolbox by clicking on the push-pin. To disable Auto Hide the push-pin should be pointing down as shown below:



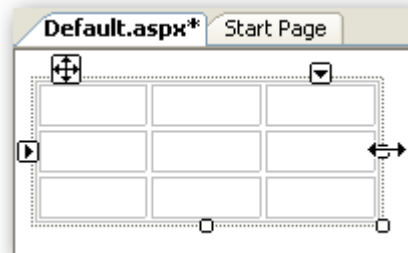
8. From the **HTML** grouping of the toolbox, drag a table onto the web form. By default, a 3x3 table will be created on the web form.



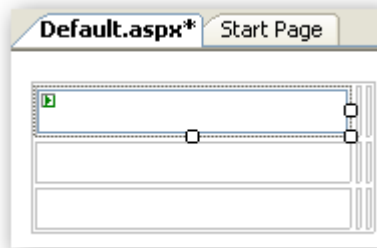
9. Enlarge the table by selecting and resizing it on the page. By enlarging the table you will make space for the controls that we are going to add:



After the resize, the table should look like the one below:

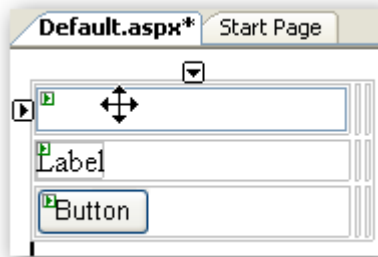


10. From the **Standard** grouping of the toolbox, drag a text box onto the web form into the top left box on the table:



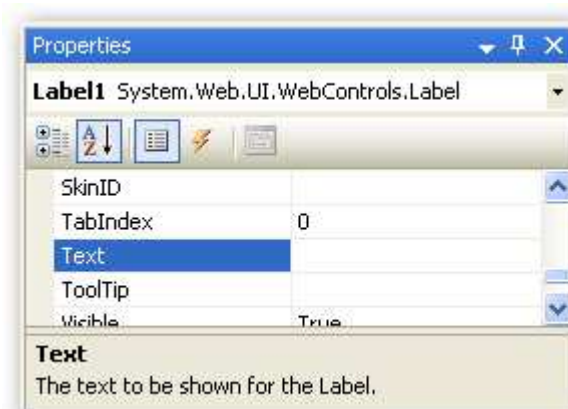
11. From the **Standard** grouping of the toolbox, drag a label control onto the web form into the cell below the text box.

- From the **Standard** toolbox group, drag a button control onto the web form into the box below the label. The form should now look like:



- Right-click on the label control and choose **Properties**
- Remove any text in the **Text** property so that the word **Label** does not show on the screen when the application is run.

Note: Before changing anything in the properties window, make sure that the property window identifies the proper control. In the example below “**Label1** System.Web.UI.WebControls.Label” is in the first line of the Properties window.




- Right-click on the button control and choose **Properties**
- Change the **Text** property to “*Calculate Square Root*”.

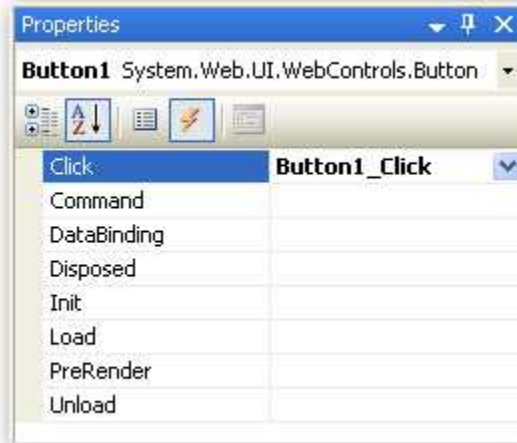
17. Click on the **Source** button on the bottom the screen to see the code that was generated by the Visual Studio. Notice that Visual Studio placed a HTML table in the form's code along with three <asp:> web controls. At this point you are now ready to add Visual Basic code to the web page to make the form calculate the square root of the given number.

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Default.aspx.vb" Inherits="_Default" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" >
<head runat="server">
  <title>Untitled Page</title>
</head>
<body>
  <form id="form1" runat="server">
    <div>
      <table style="width: 172px">
        <tr>
          <td>
            <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
          </td>
          <td>
          </td>
          <td>
          </td>
        </tr>
        <tr>
          <td>
            <asp:Label ID="Label1" runat="server"></asp:Label>
          </td>
          <td>
          </td>
          <td>
          </td>
        </tr>
        <tr>
          <td>
            <asp:Button ID="Button1" runat="server" Text="Calculate Square Root" />
          </td>
          <td>
          </td>
          <td>
          </td>
        </tr>
      </table>
    </div>
  </form>
</body>
</html>
```

18. Switch back to design view by clicking the **Design** button at the bottom of the screen.

19. Click on the Button and click on the Events button  in the Properties window.

20. The list that appears is the list of possible events that the button web control can handle. Double-click inside the text box of the **Click** event. Visual Studio will automatically create the **Button1_Click** method and switch over to the code file of the form.



Below is the code that was automatically generated:

```
Partial Class _Default
    Inherits System.Web.UI.Page

    Protected Sub Button1_Click(ByVal sender As Object, ByVal e As System.EventArgs) Handles Button1.Click

    End Sub
End Class
```

21. Add the following code to the click event.

```
Label1.Text = Math.Sqrt(CDb1(TextBox1.Text))
```

This line of code will set the Text property of *Label1* control to the square root of the value inside *TextBox1*.

The final code in the *_Default* class should like the one below:

```
Partial Class _Default
    Inherits System.Web.UI.Page

    Protected Sub Button1_Click(ByVal sender As Object, ByVal e As System.EventArgs) Handles Button1.Click
        Label1.Text = Math.Sqrt(CDb1(TextBox1.Text))
    End Sub
End Class
```

22. Click **Start Debugging** from the **Debug** menu to test the application. Visual Studio will now launch a browser and run the application. Upon running the following dialog will appear.

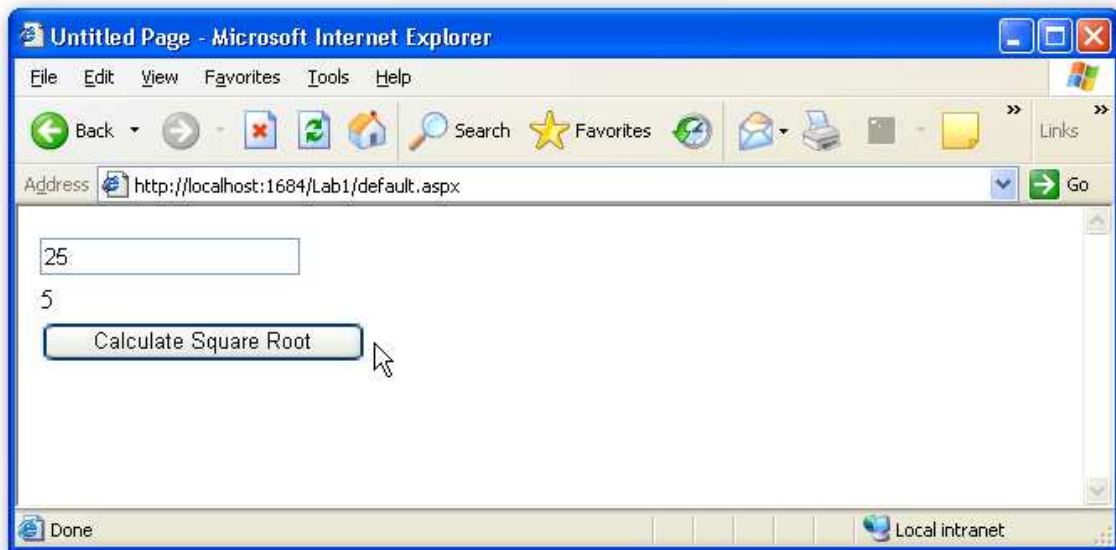


This dialog will set up the web.config file for debugging by setting the “*debug=true*” parameter. The following line will be added to the *web.config* configuration file:

```
<compilation debug="true" strict="false" explicit="true"/>
```

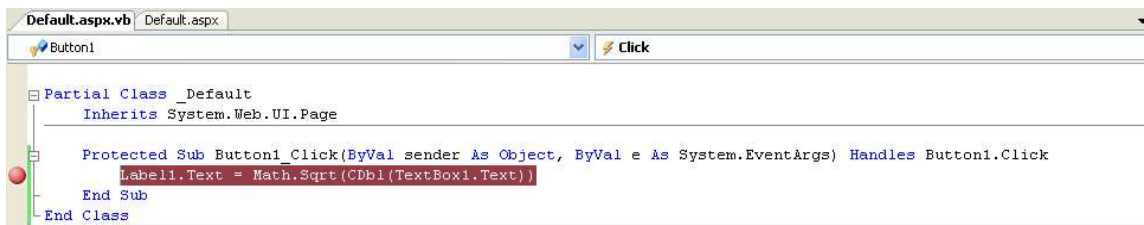
23. Type a number in the text box and click on the button. The browser should now reload the page, calculate the square root of the number in the text box, and display the square root inside the Label1 control.

Note: We have not implemented any validation or error handling in this application. Therefore, any non-valid numbers will generate an exception in Visual Studio and stop the execution of the application. These topics will be discussed in Chapters 7 and 8.



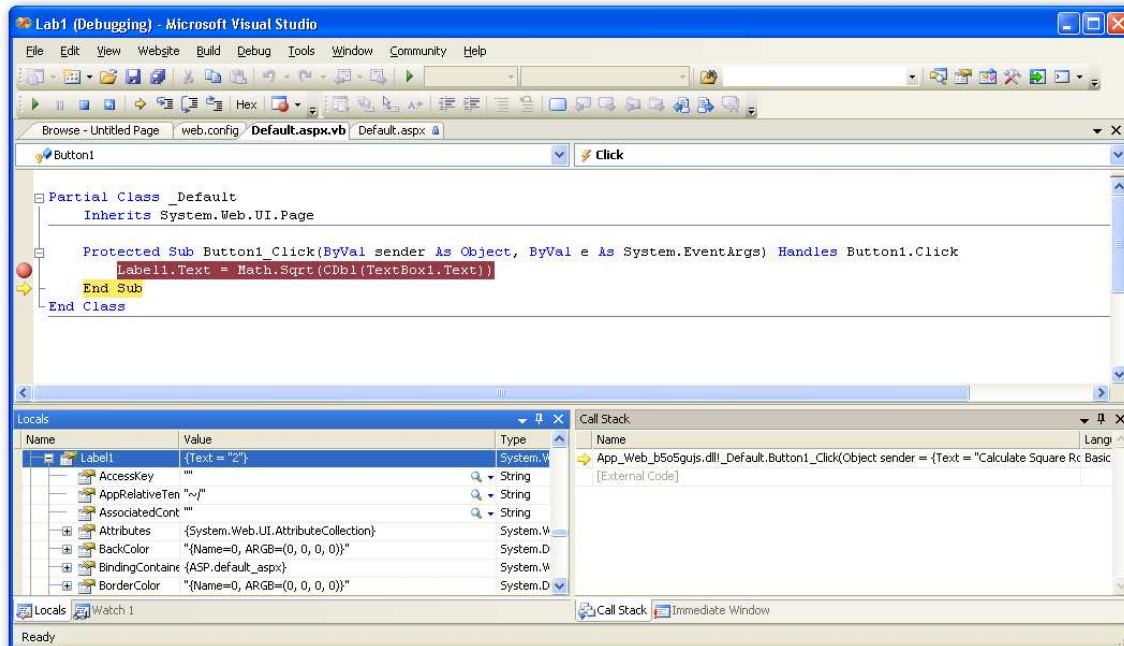
24. Switch back to Visual Studio and choose **Stop Debugging** from the **Debug** menu. The browser will now be closed and your web project will be switched back to the development mode.
25. Return to the *default.aspx.vb* file and open it for editing.
26. Locate the “*Label1.Text...*” line in the code and click the brownish yellow bar next to this line of code to set a break point.

Note: Line will now be highlighted in red and there will be a red circle on the left side of the code window.



27. Start debugging again by clicking **F5**
28. Write a number in the text box and then click on the button.
29. Notice that Visual Studio appears and program execution stops on the marked line of code. Hover over “*TextBox1.Text*” in the source code and notice that a popup will be displayed showing the text that you placed in the text box.

30. Press **F11** to move to the next line of code. The display should look similar to the one below:



31. Now, hover over “*Label1.Text*” in your code window. Notice that a popup appears that contains the square root of the number you typed into the text box.
32. Click **F5** to continue to run the application and leave debug mode.
33. Close your browser to stop debugging the application.