Basic Calculator in C#

In this article, I am going to build a basic calculator in C#.

Priyanka Jain   Aug 26 2013

6   10   390.3k

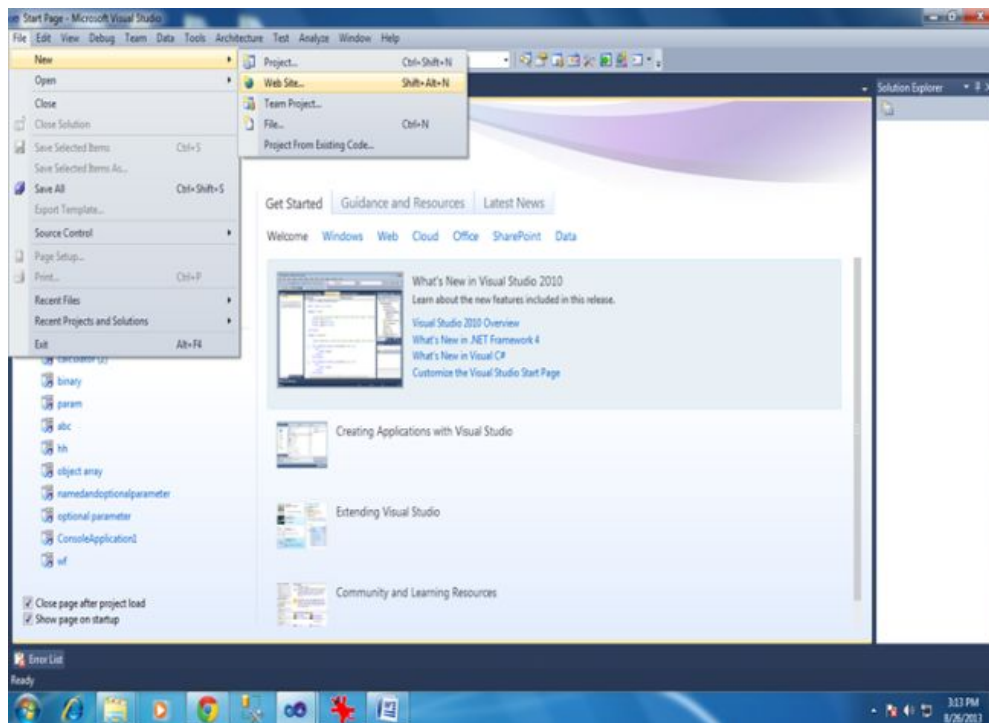*Here is a procedure to create a basic calculator. In this section I will build a basic calculator that can perform the following operations:*
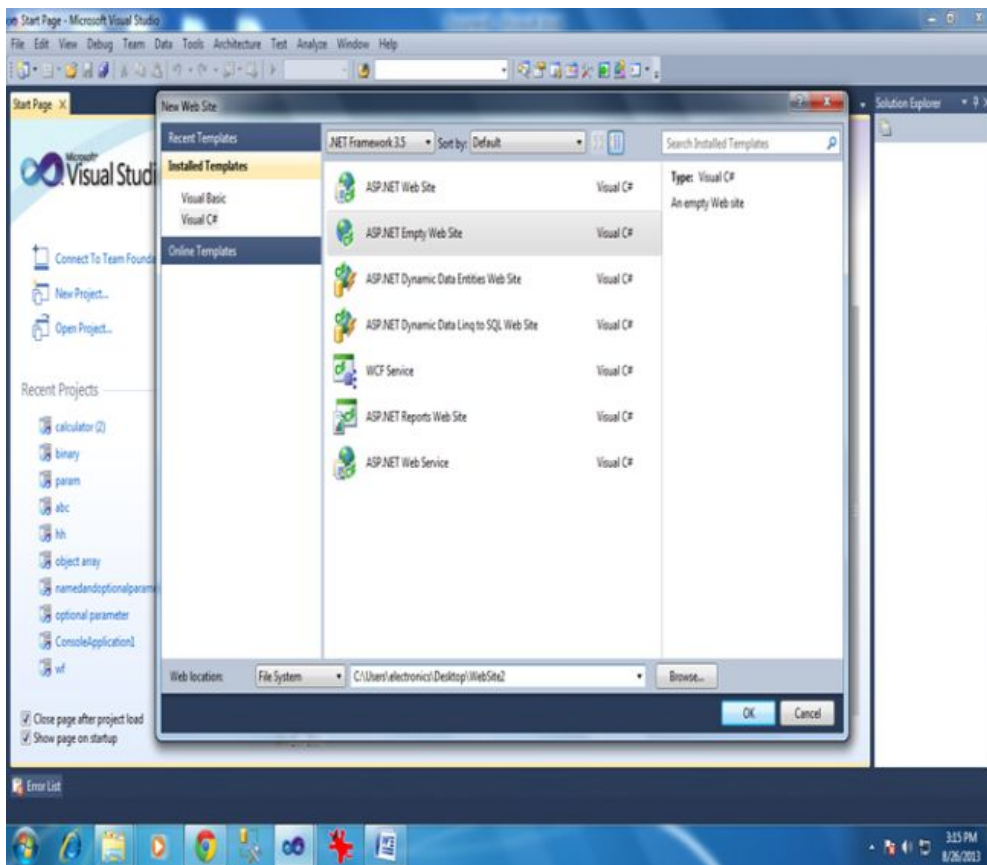
- *Addition*
- *Subtraction*
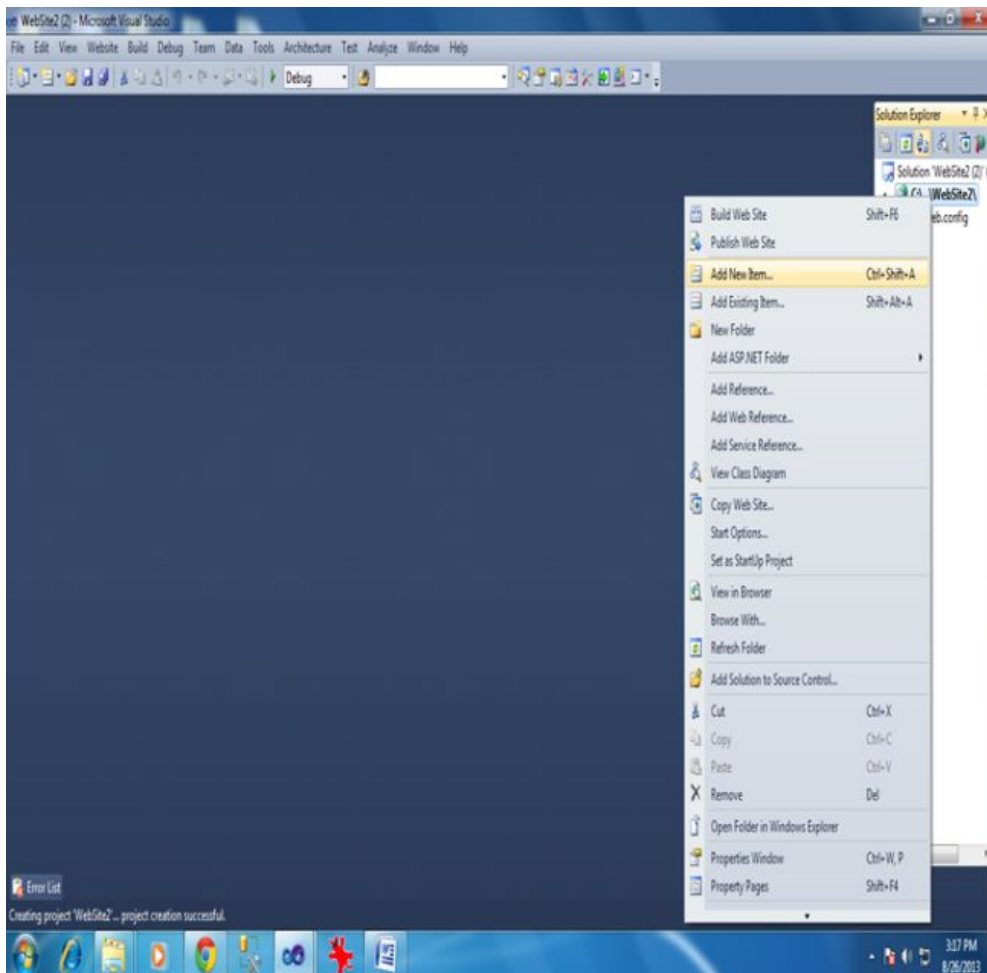- *Multiplication*
- *Division*
- *Clear*

Steps:

Open Microsoft Visual Studio 2010 then click on "File" -> "New" -> "Website".
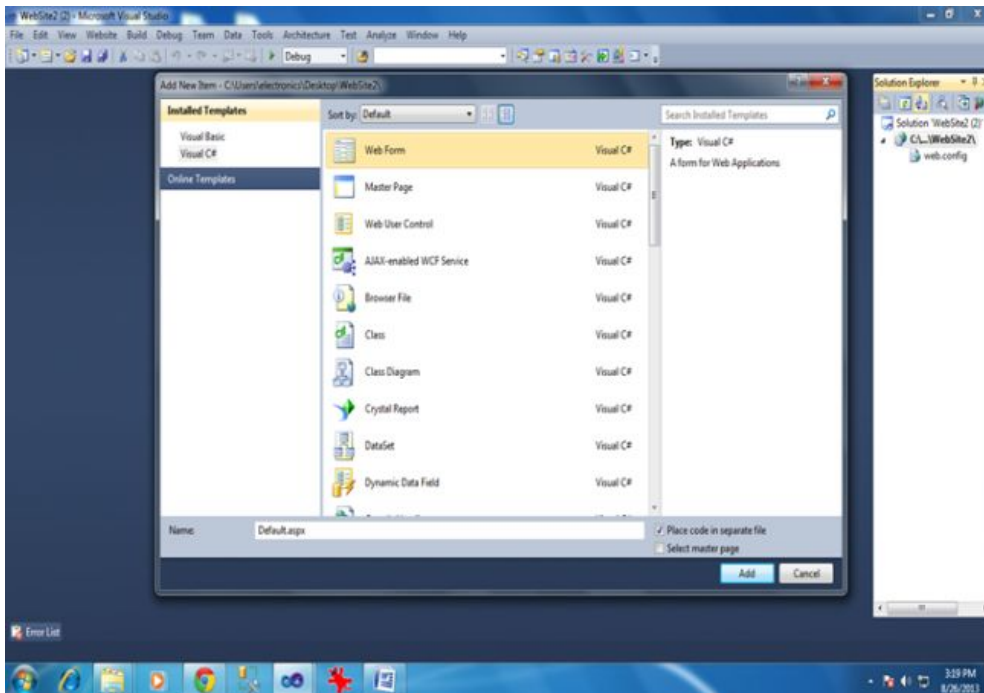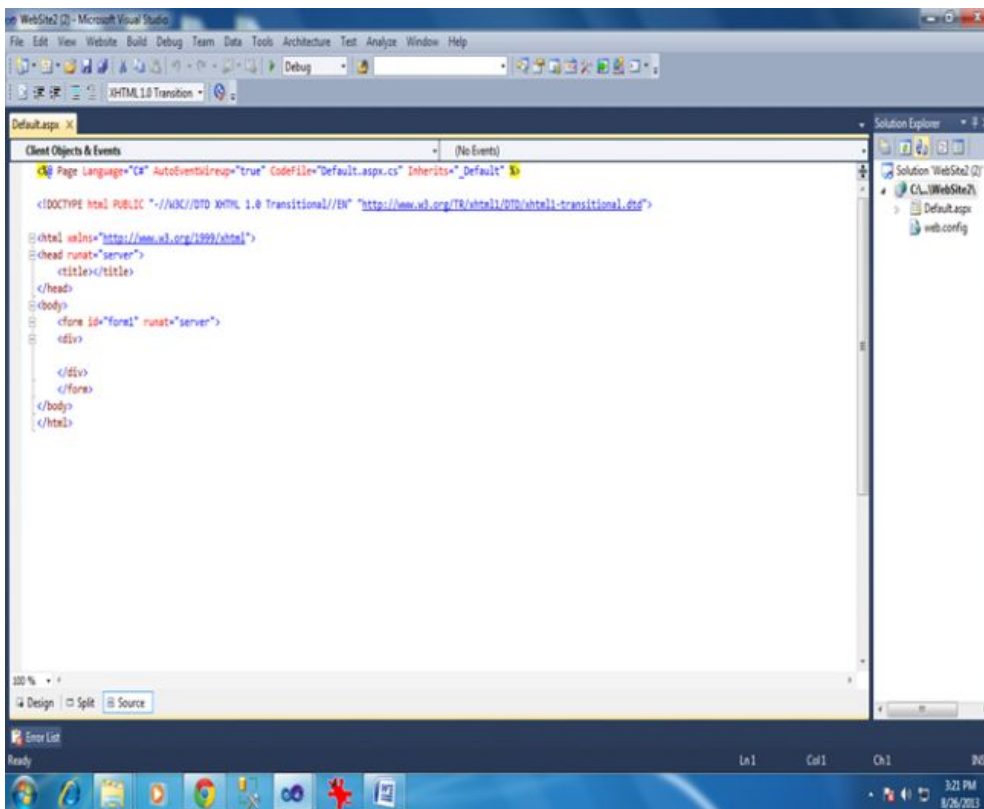

Then select "ASP.NET Empty Website".

Then "Add New Item":

Then select "Web Form":

And click "Add". Now it will open the page as in the following:

Here we will write our code:.

Process to create calculator

First we need to create a TextBox and 16 Buttons as in the following:

- *10 Buttons for numbers (0-9)*
- *5 Buttons to perform operation (addition (+), Subtraction (-) , Multiplication (*), Division (/) ,Clear (CLR))*
- *1 Buttons for evaluation (=)*

Here is the code for the "Default.aspx" page:

```html
<html xmlns="http://www.w3.org/1999/xhtml">
<head id="Head1" runat="server">
    <title></title>
    <style type="text/css">
    .cal
    {
        position:absolute;
        top:50px;
        left:150px;
        right:400px;
        height:500px;
        bottom:100px;
        background-color:Teal;
    }
    </style>
</head>
<body>
    <form id="form1" runat="server">
    <div class="cal">
        <asp:Label ID="l" Text=" BASIC CALCULATOR" runat="server" Style="margin-left: 200px"
            Font-Bold="False" Font-Italic="False"></asp:Label>
        <asp:TextBox ID="t" runat="server" Style="margin-left: 100px; margin-top: 24px;"
            Width="335px" Height="41px"></asp:TextBox>
        <asp:Button ID="b1" Text="1" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b1_Click" />
        <asp:Button ID="b2" Text="2" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b2_Click" />
        <asp:Button ID="b3" Text="3" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b3_Click" />
        <asp:Button ID="add" Text="+" runat="server" Height="37px" Style="margin-left: 0px;
            margin-top: 0px;" Width="57px" OnClick="add_Click" />
        <asp:Button ID="b4" Text="4" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b4_Click" />
        <asp:Button ID="b5" Text="5" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b5_Click" />
        <asp:Button ID="b6" Text="6" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b6_Click" />
        <asp:Button ID="sub" Text="-" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="sub_Click" />
        <asp:Button ID="b7" Text="7" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b7_Click" />
        <asp:Button ID="b8" Text="8" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b8_Click" />
        <asp:Button ID="b9" Text="9" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b9_Click" />
        <asp:Button ID="mul" Text="*" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="mul_Click" />
        <asp:Button ID="b0" runat="server" Text="0" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="b0_Click" />
        <asp:Button ID="clr" runat="server" Text="CLR" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="clr_Click" />
        <asp:Button ID="eql" runat="server" Text="=" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="eql_Click" />
        <asp:Button ID="div" Text="/" runat="server" Height="37px" Style="margin-left: 0px"
            Width="57px" OnClick="div_Click" />
```

```
      </div>
      </form>
</body>
</html>
```

Here is the code for the "Default.aspx.cs" page (the code for all the buttons) :

```csharp
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

public partial class _Default : System.Web.UI.Page
{
    static float a, c, d;
    static char b;
    protected void Page_Load(object sender, EventArgs e)
    {

    }
    protected void b1_Click(object sender, EventArgs e)
    {
        if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
        {
            t.Text = "";
            t.Text = t.Text + b1.Text;
        }
        else
            t.Text = t.Text + b1.Text;
    }
    protected void b2_Click(object sender, EventArgs e)
    {
        if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
        {
            t.Text = "";
            t.Text = t.Text + b2.Text;
        }
        else
            t.Text = t.Text + b2.Text;
    }
    protected void b3_Click(object sender, EventArgs e)
    {
        if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
        {
            t.Text = "";
            t.Text = t.Text + b3.Text;
        }
        else
            t.Text = t.Text + b3.Text;
    }
    protected void b4_Click(object sender, EventArgs e)
    {
        if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
        {
            t.Text = "";
            t.Text = t.Text + b4.Text;
        }
        else
            t.Text = t.Text + b4.Text;
```

```csharp
        }
        protected void b5_Click(object sender, EventArgs e)
        {
            if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
            {
                t.Text = "";
                t.Text = t.Text + b5.Text;
            }
            else
                t.Text = t.Text + b5.Text;
        }
        protected void b6_Click(object sender, EventArgs e)
        {
            if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
            {
                t.Text = "";
                t.Text = t.Text + b6.Text;
            }
            else
                t.Text = t.Text + b5.Text;
        }
        protected void b7_Click(object sender, EventArgs e)
        {
            if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
            {
                t.Text = "";
                t.Text = t.Text + b7.Text;
            }
            else
                t.Text = t.Text + b7.Text;
        }

        protected void b8_Click(object sender, EventArgs e)
        {
            if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
            {
                t.Text = "";
                t.Text = t.Text + b8.Text;
            }
            else
                t.Text = t.Text + b8.Text;
        }

        protected void b9_Click(object sender, EventArgs e)
        {
            if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
            {
                t.Text = "";
                t.Text = t.Text + b9.Text;
            }
            else
                t.Text = t.Text + b9.Text;
        }

        protected void b0_Click(object sender, EventArgs e)
        {
            if ((t.Text == "+") || (t.Text == "-") || (t.Text == "*") || (t.Text == "/"))
            {
                t.Text = "";
                t.Text = t.Text + b0.Text;
            }
```

```csharp
        else
            t.Text = t.Text + b0.Text;
    }


    protected void add_Click(object sender, EventArgs e)
    {
        a = Convert.ToInt32(t.Text);
        t.Text = "";
        b = '+';
        t.Text += b;
    }
    protected void sub_Click(object sender, EventArgs e)
    {
        a = Convert.ToInt32(t.Text);
        t.Text = "";
        b = '-';
        t.Text += b;
    }
    protected void mul_Click(object sender, EventArgs e)
    {
        a = Convert.ToInt32(t.Text);
        t.Text = "";
        b = '*';
        t.Text += b;
    }
    protected void div_Click(object sender, EventArgs e)
    {
        a = Convert.ToInt32(t.Text);
        t.Text = "";
        b = '/';
        t.Text += b;
    }
    protected void eql_Click(object sender, EventArgs e)
    {
        c = Convert.ToInt32(t.Text);
        t.Text = "";
        if (b == '/')
        {
            d = a / c;
            t.Text += d;
            a = d;
        }
        else if (b == '+')
        {
            d = a + c;
            t.Text += d;
            a = d;
        }
        else if (b == '-')
        {
            d = a - c;
            t.Text += d;
            a = d;
        }
        else
        {
            d = a * c;
            t.Text += d;
            a = d;
        }
```
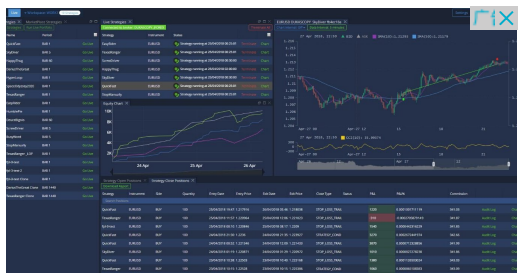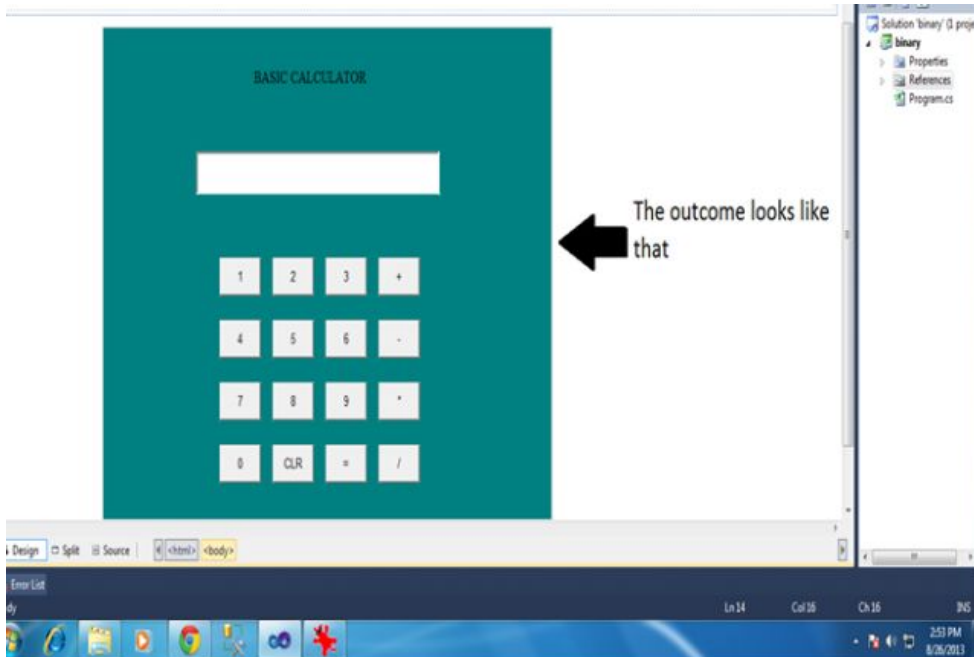
```
    }

    protected void clr_Click(object sender, EventArgs e)
    {
        t.Text = "";
    }
}
```

The final output looks as in the following:

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https://www.c-sharpcorner.com/members/priyanka-jain13

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6　　　　10

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