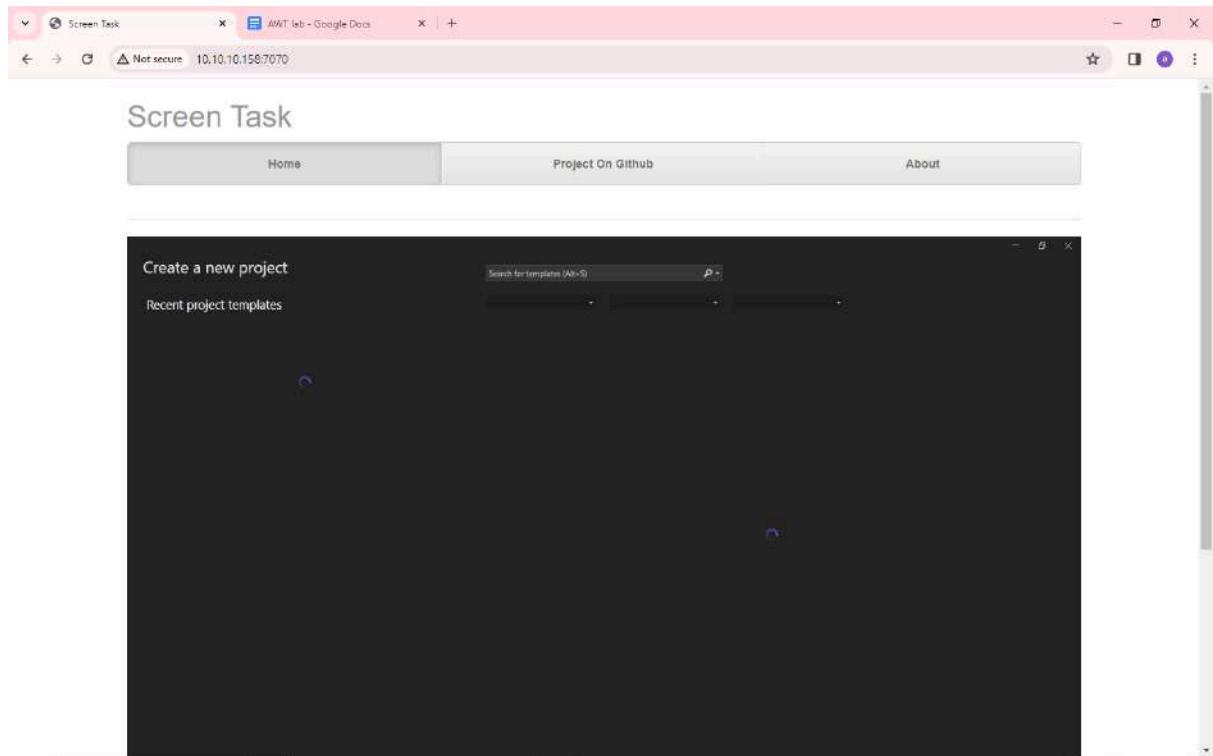


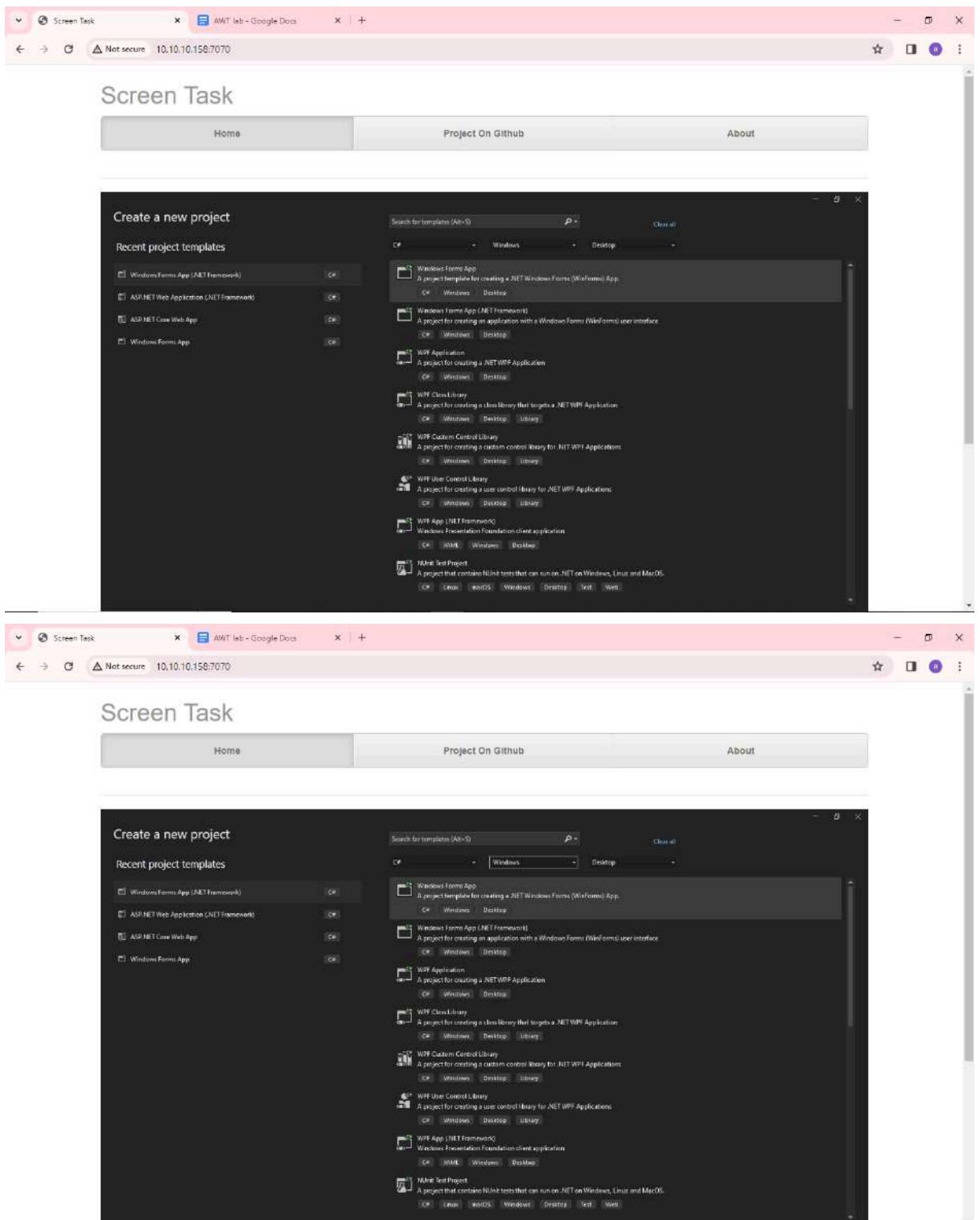
Lab1:

1) .net mvc entire framework(backend , frontend)

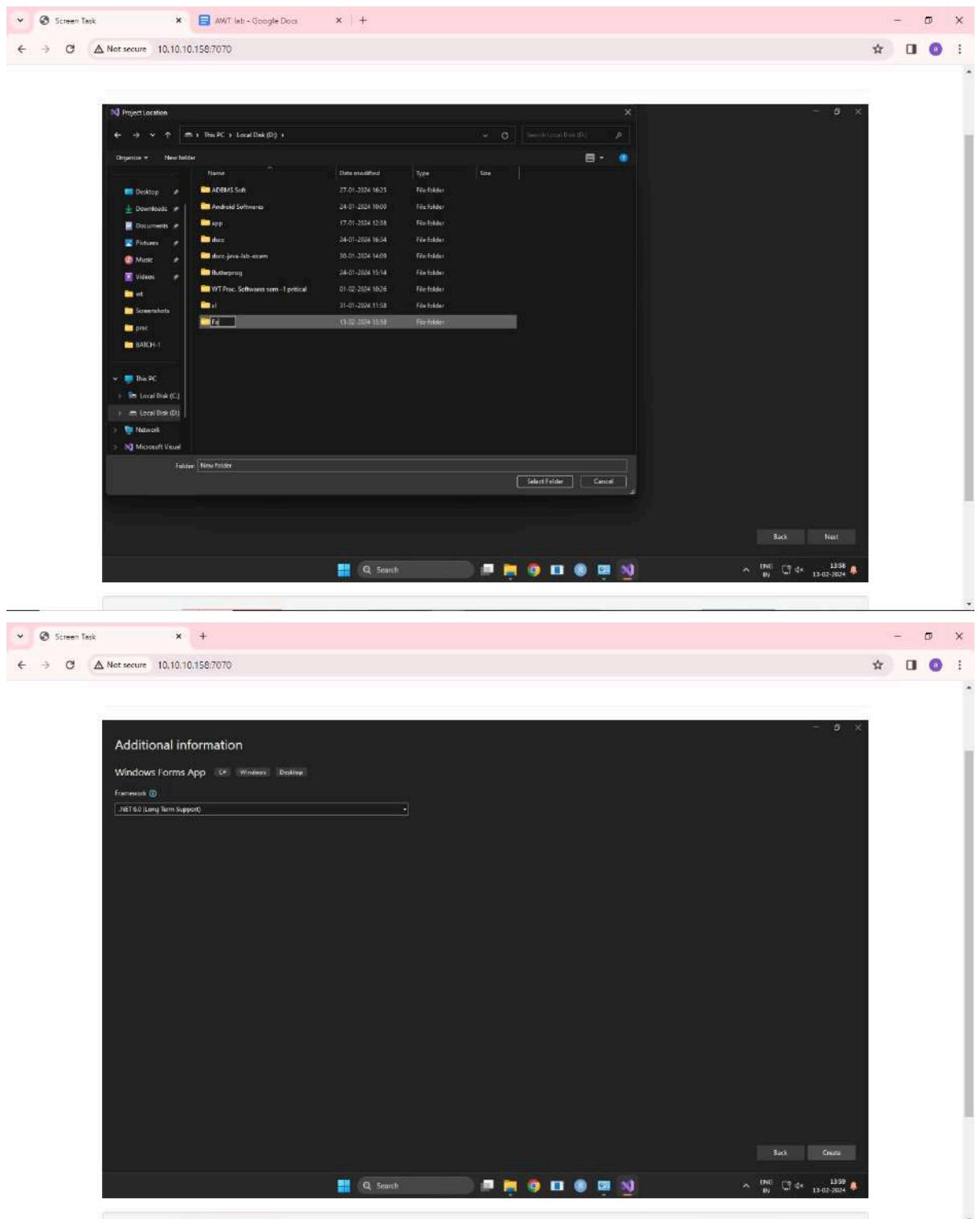
2) Conversion mean<

Create new project

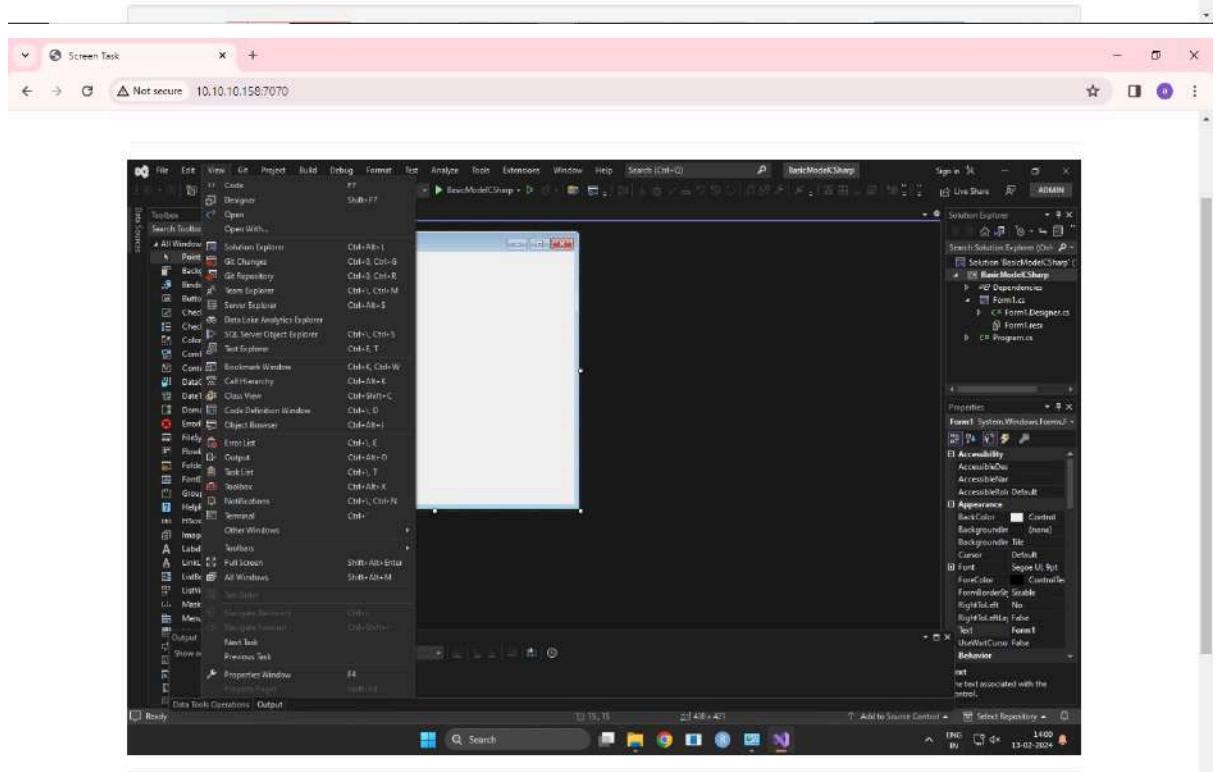
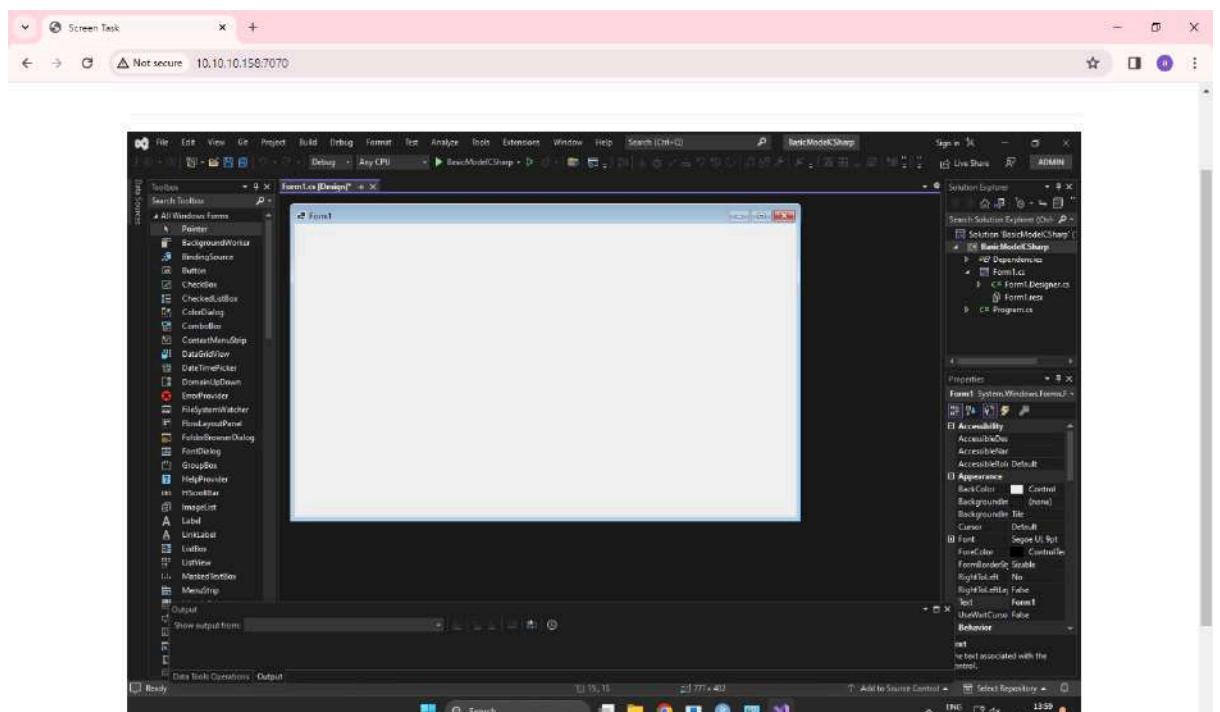


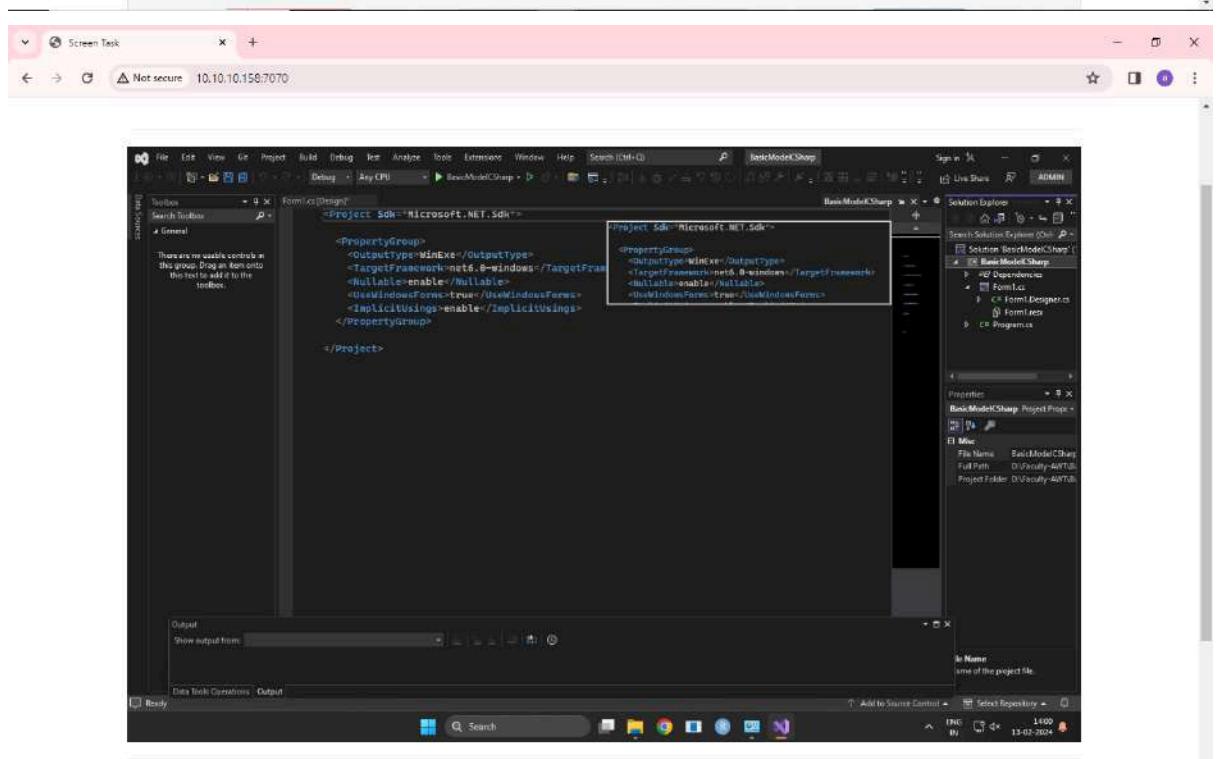
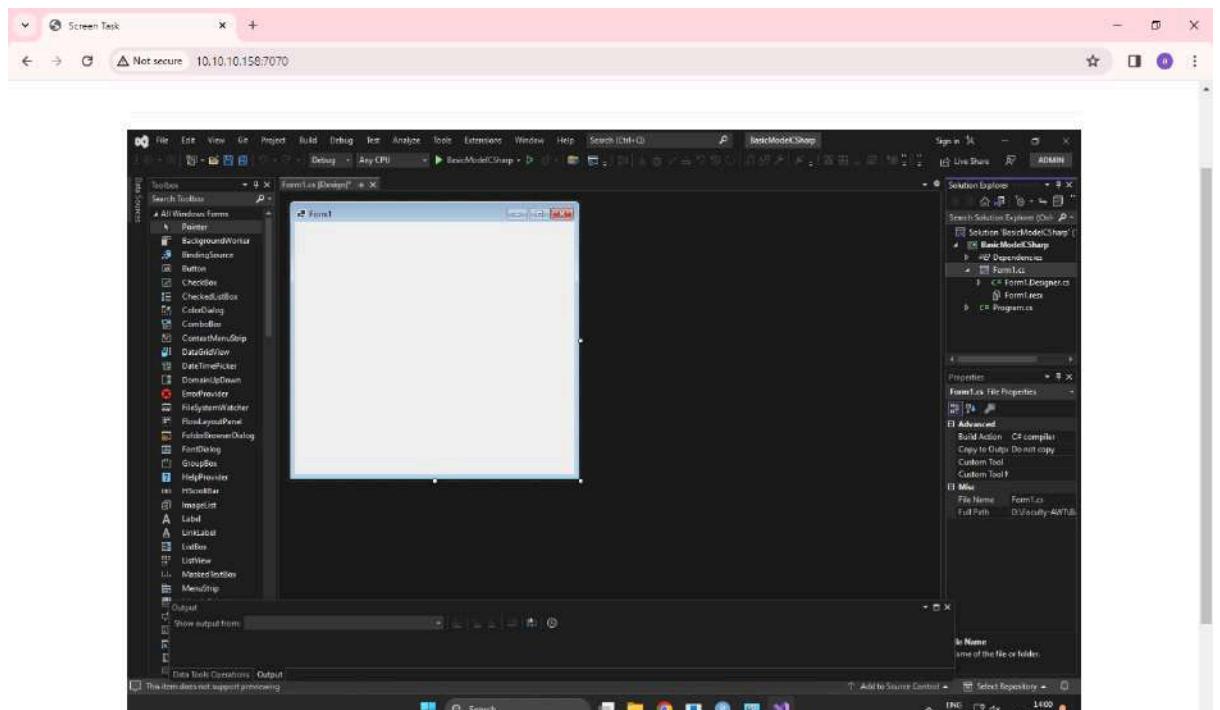


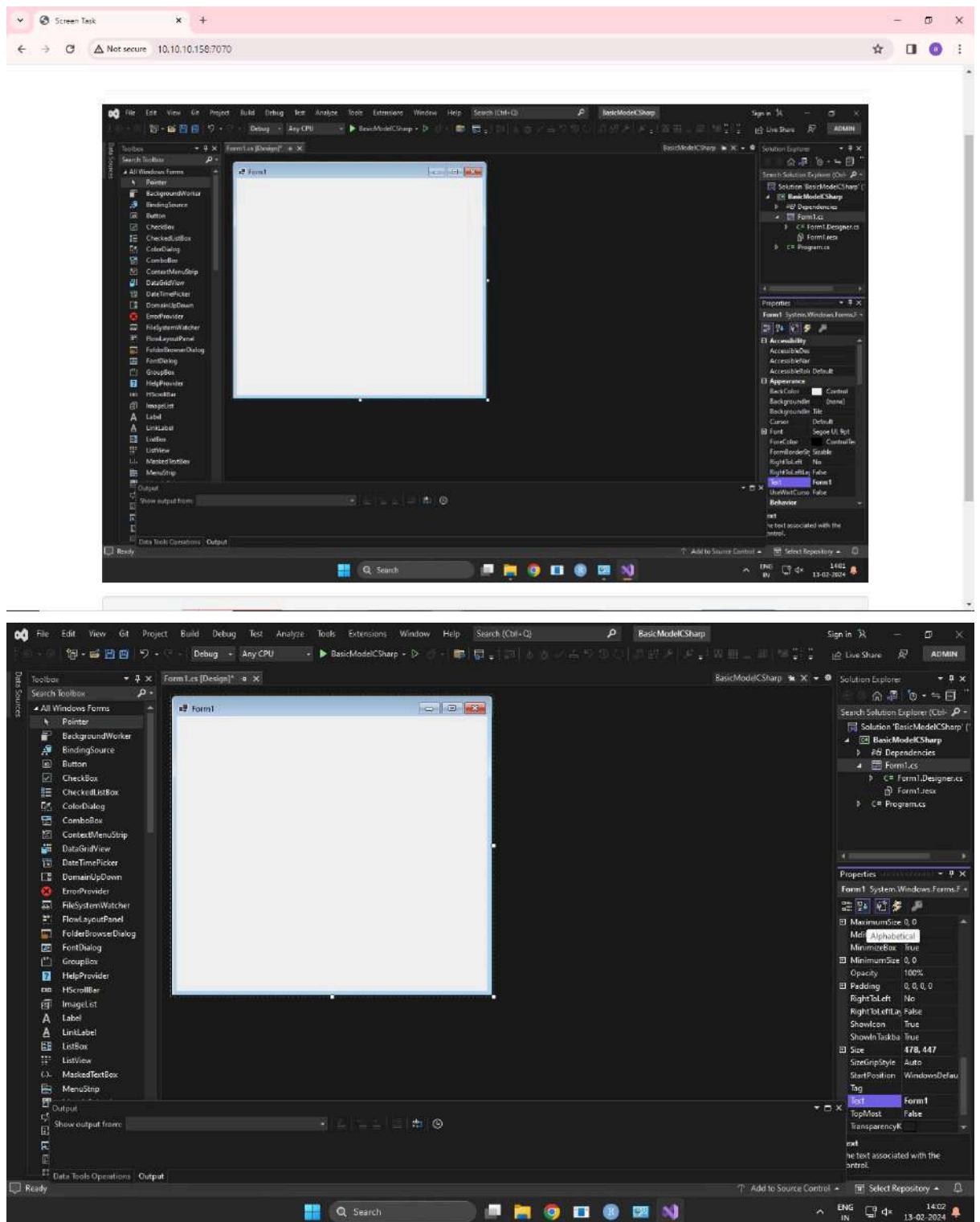
New folder in d drive



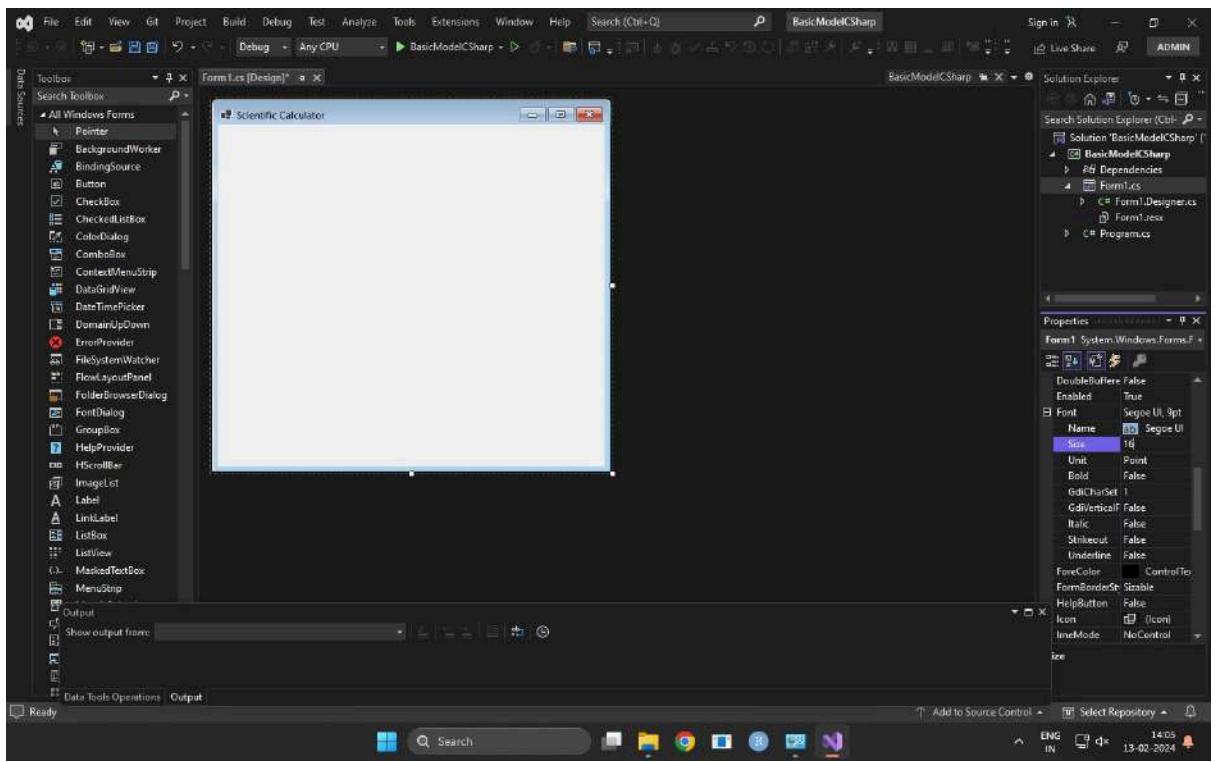
Default .net6.0



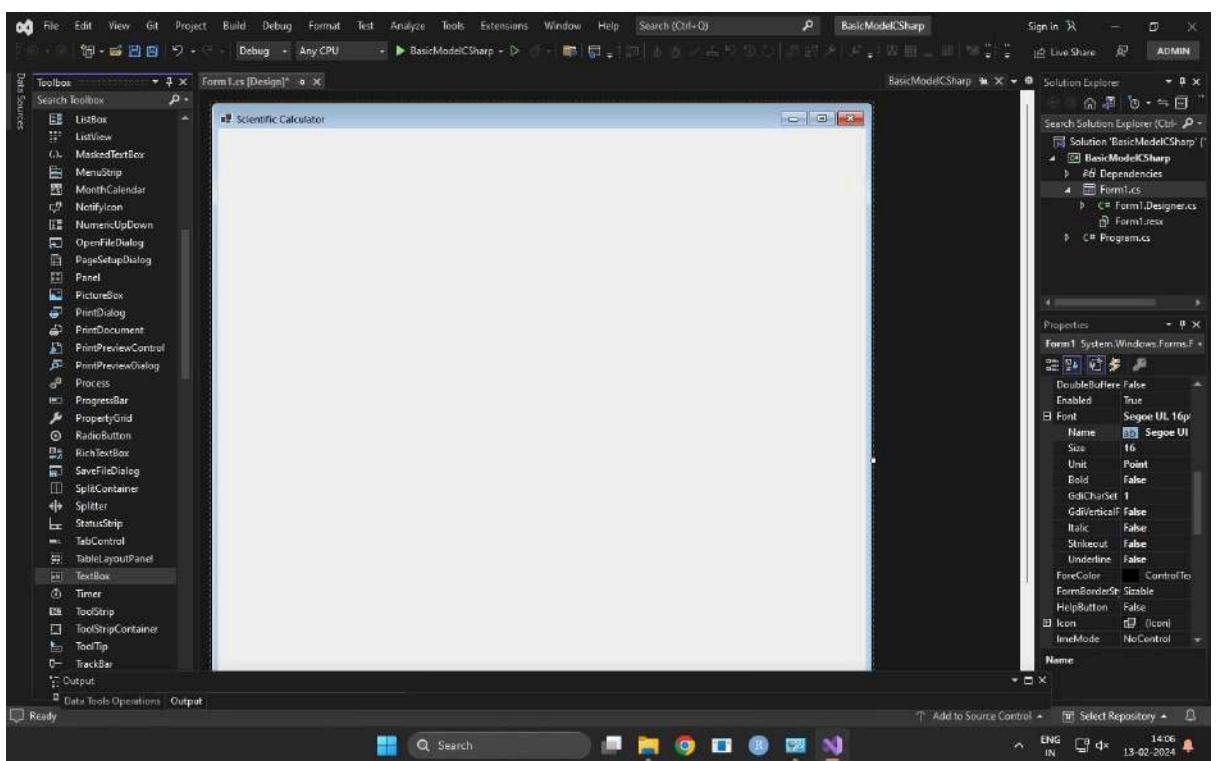




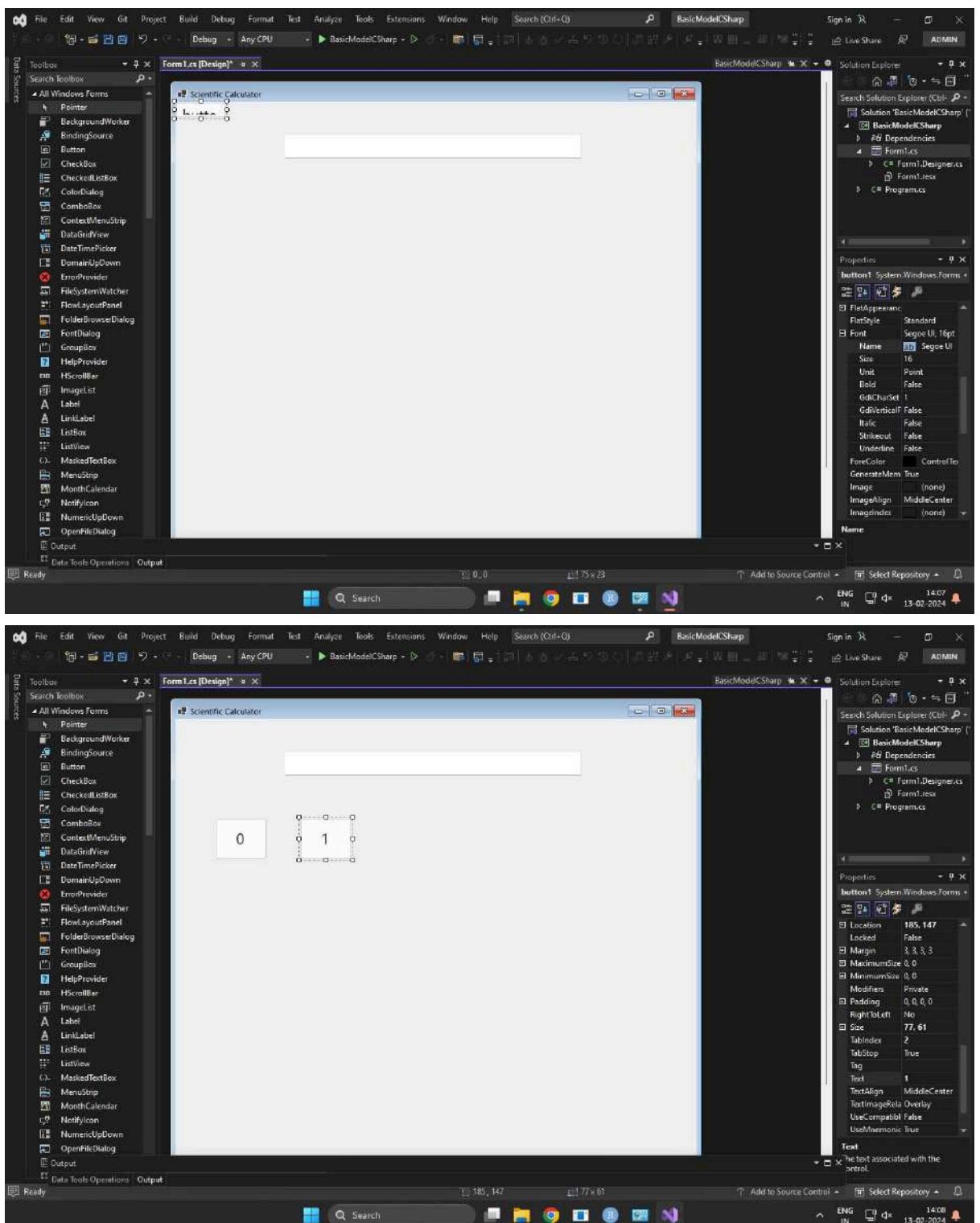
(name) name of the object -> form1

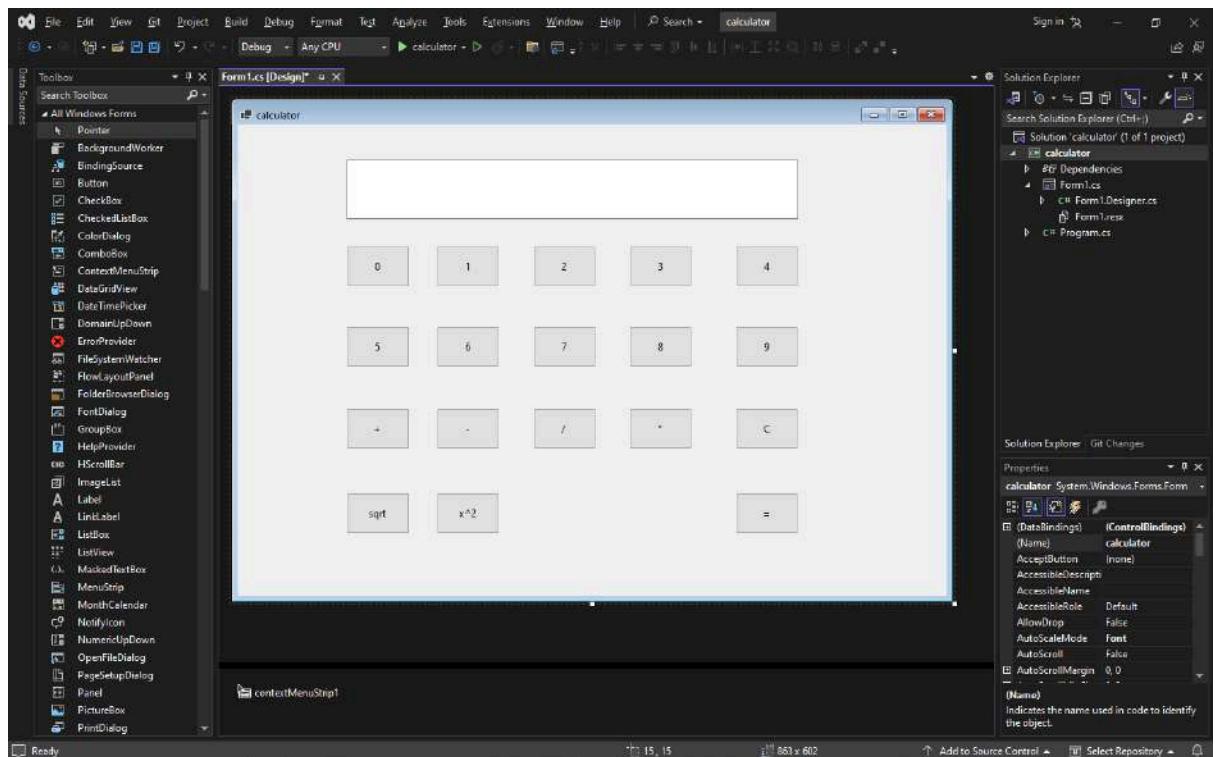


Double click text box

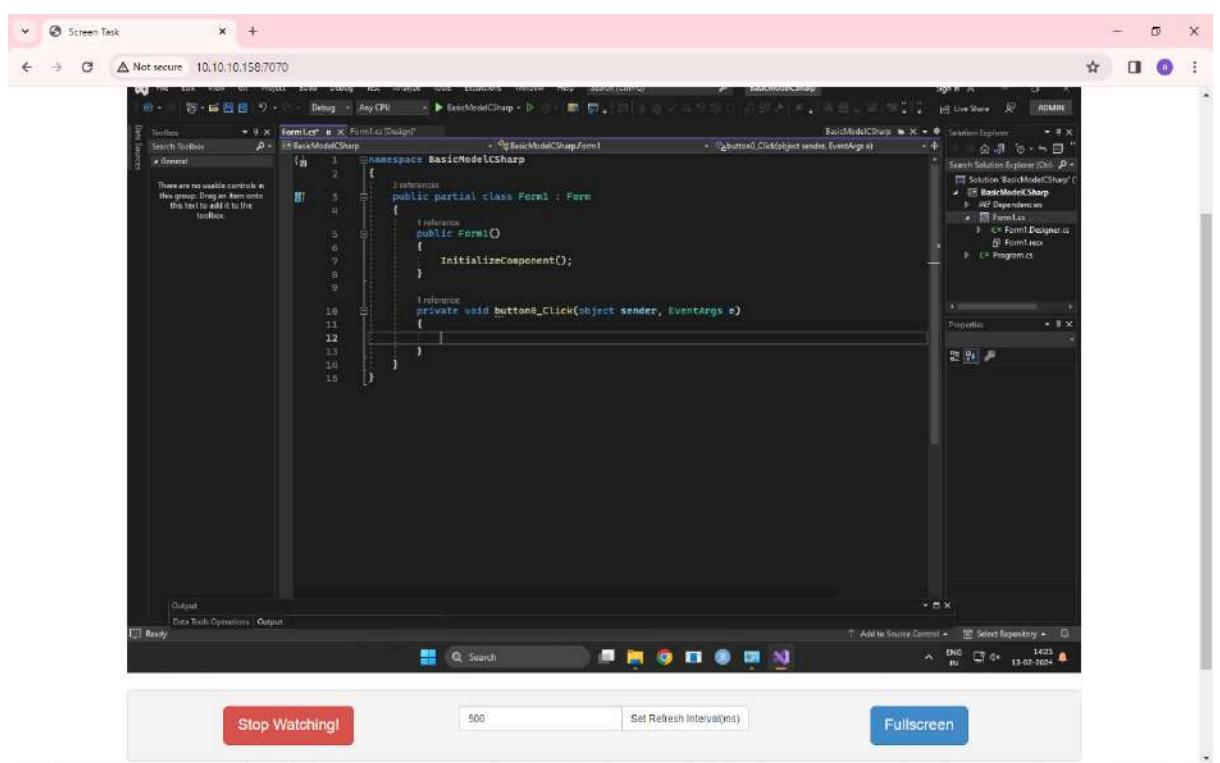


Add button





Double click on button



The screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the code editor for a file named `Form1.cs`. The code is as follows:

```
namespace BasicModelCSharp
{
    public partial class Form1 : Form
    {
        // reference
        public Form1()
        {
            InitializeComponent();
        }

        // reference
        private void button0_Click(object sender, EventArgs e)
        {
            textBox1.Text = textBox1.Text + "0";
        }
    }
}
```

The code editor has syntax highlighting for C# and shows line numbers from 1 to 16. The `button0_Click` event handler is currently selected. The Solution Explorer on the right shows a project named `BasicModelCSharp` containing files `Form1.cs`, `Form1.Designer.cs`, and `Form1.resx`.

This screenshot shows the same Microsoft Visual Studio interface as the previous one, but the code in the `Form1.cs` editor has been modified. The code now includes three event handlers for different buttons:

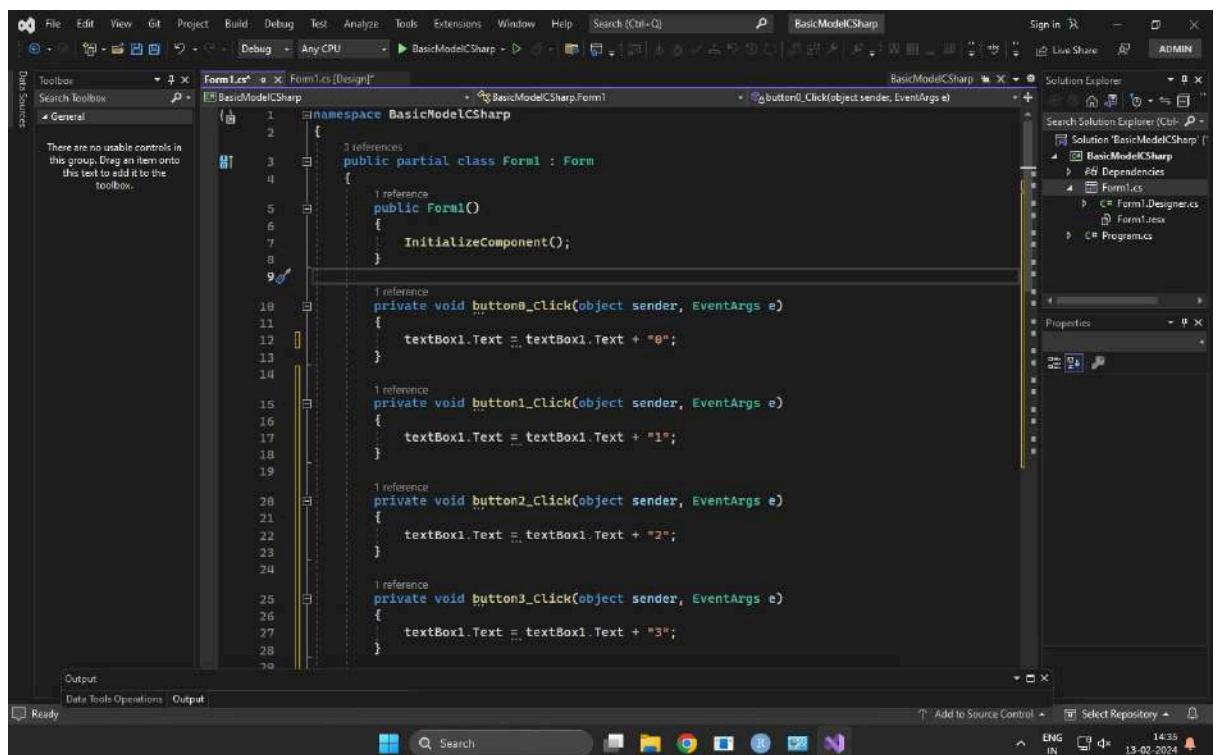
```
namespace BasicModelCSharp
{
    public partial class Form1 : Form
    {
        // reference
        public Form1()
        {
            InitializeComponent();
        }

        // reference
        private void button1_Click(object sender, EventArgs e)
        {
            textBox1.Text = textBox1.Text + "1";
        }

        // reference
        private void button2_Click(object sender, EventArgs e)
        {
            textBox1.Text = textBox1.Text + "2";
        }

        // reference
        private void button3_Click(object sender, EventArgs e)
        {
        }
    }
}
```

The code editor shows line numbers from 13 to 30. The `button3_Click` event handler is currently selected. The Solution Explorer on the right remains the same, displaying the `BasicModelCSharp` project structure.



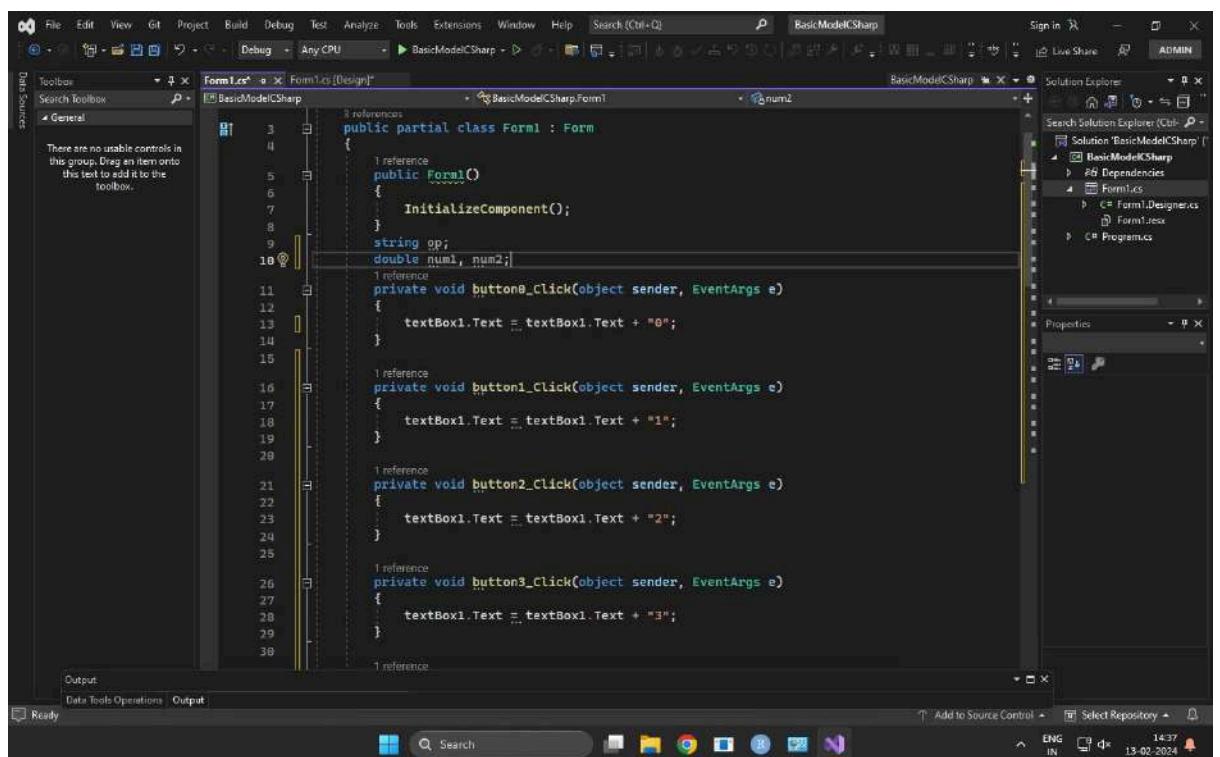
```
namespace BasicModelCSharp
{
    public partial class Form1 : Form
    {
        InitializeComponent();

        private void button0_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "0";
        }

        private void button1_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "1";
        }

        private void button2_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "2";
        }

        private void button3_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "3";
        }
    }
}
```



```
namespace BasicModelCSharp
{
    public partial class Form1 : Form
    {
        InitializeComponent();
        string op;
        double num1, num2;

        private void button0_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "0";
        }

        private void button1_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "1";
        }

        private void button2_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "2";
        }

        private void button3_Click(object sender, EventArgs e)
        {
            textBox1.Text += textBox1.Text + "3";
        }
    }
}
```

to hold to nums in text box

The screenshot shows the Visual Studio IDE with the code editor open to `Form1.cs [Design]` under the `BasicModelCSharp` project. The code implements a basic calculator logic for addition:

```
    textBox1.Text = textBox1.Text + "5";  
    }  
    1 reference  
    private void button6_Click(object sender, EventArgs e)  
    {  
        textBox1.Text = textBox1.Text + "6";  
    }  
    1 reference  
    private void button7_Click(object sender, EventArgs e)  
    {  
        textBox1.Text = textBox1.Text + "7";  
    }  
    1 reference  
    private void button8_Click(object sender, EventArgs e)  
    {  
        textBox1.Text = textBox1.Text + "8";  
    }  
    1 reference  
    private void button9_Click(object sender, EventArgs e)  
    {  
        textBox1.Text = textBox1.Text + "9";  
    }  
    1 reference  
    private void plus_Click(object sender, EventArgs e)  
    {  
        op = "+";  
        num1 = Convert.ToDouble(textBox1.Text);  
    }
```

Similar for minus

The screenshot shows the Visual Studio IDE with the code editor open to `Form1.cs [Design]` under the `BasicModelCSharp` project. The code implements a basic calculator logic for subtraction, specifically for the minus operation:

```
    1 reference  
    private void button9_Click(object sender, EventArgs e)  
    {  
        textBox1.Text = textBox1.Text + "9";  
    }  
    1 reference  
    private void plus_Click(object sender, EventArgs e)  
    {  
        op = "+";  
        num1 = Convert.ToDouble(textBox1.Text);  
        textBox1.Clear();  
    }  
    1 reference  
    private void minus_Click(object sender, EventArgs e)  
    {  
    }
```

```
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```

The screenshot shows the Visual Studio IDE with the code editor open for the `Form1.cs` file. The code implements basic arithmetic operations based on user input from a single text box. The `multiplication_Click` method initializes variables and clears the text box. The `equal_Click` method handles addition, subtraction, division, and multiplication by setting the result to the text box's text.

```
82     private void multiplication_Click(object sender, EventArgs e)
83     {
84         op = "*";
85         num1 = Convert.ToDouble(textBox1.Text);
86         textBox1.Clear();
87     }
88
89     private void equal_Click(object sender, EventArgs e)
90     {
91         double res=0;
92         num2 = Convert.ToDouble(textBox1.Text);
93         if (op == "+")
94         {
95             res = num1 + num2;
96         }
97         if (op == "-")
98         {
99             res = num1 - num2;
100        }
101        if (op == "/")
102        {
103            res = num1 / num2;
104        }
105        if (op == "*")
106        {
107            res = num1 * num2;
108        }
109        textBox1.Text = res.ToString();
110    }
111 }
```

The screenshot shows the Visual Studio IDE with the code editor open for the `Form1.cs` file. The `clear_Click` method is defined to clear the content of the text box when the clear button is clicked.

```
104     if (op == "*")
105     {
106         res = num1 * num2;
107     }
108     textBox1.Text = res.ToString();
109
110     private void power_Click(object sender, EventArgs e)
111     {
112     }
113
114     private void clear_Click(object sender, EventArgs e)
115     {
116     }
117
118 }
```

```
98     {
99         res = num1 - num2;
100    }
101    if (op == "/")
102    {
103        res = num1 / num2;
104    }
105    if (op == "*")
106    {
107        res = num1 * num2;
108    }
109    textBox1.Text = res.ToString();
110}
111
112 // reference
113 private void power_Click(object sender, EventArgs e)
114 {
115     double res;
116     num1= Convert.ToDouble(textBox1.Text);
117     res = num1 * num1;
118     textBox1.Text = res.ToString();
119 }
120
121 // reference
122 private void clear_Click(object sender, EventArgs e)
123 {
124     textBox1.Text = "";
125 }
```

```
private void power_Click(object sender, EventArgs e)
{
    double res;
    num1 = Convert.ToDouble(textBox1.Text);
    res = num1 * num1;
    textBox1.Text = res.ToString();
}

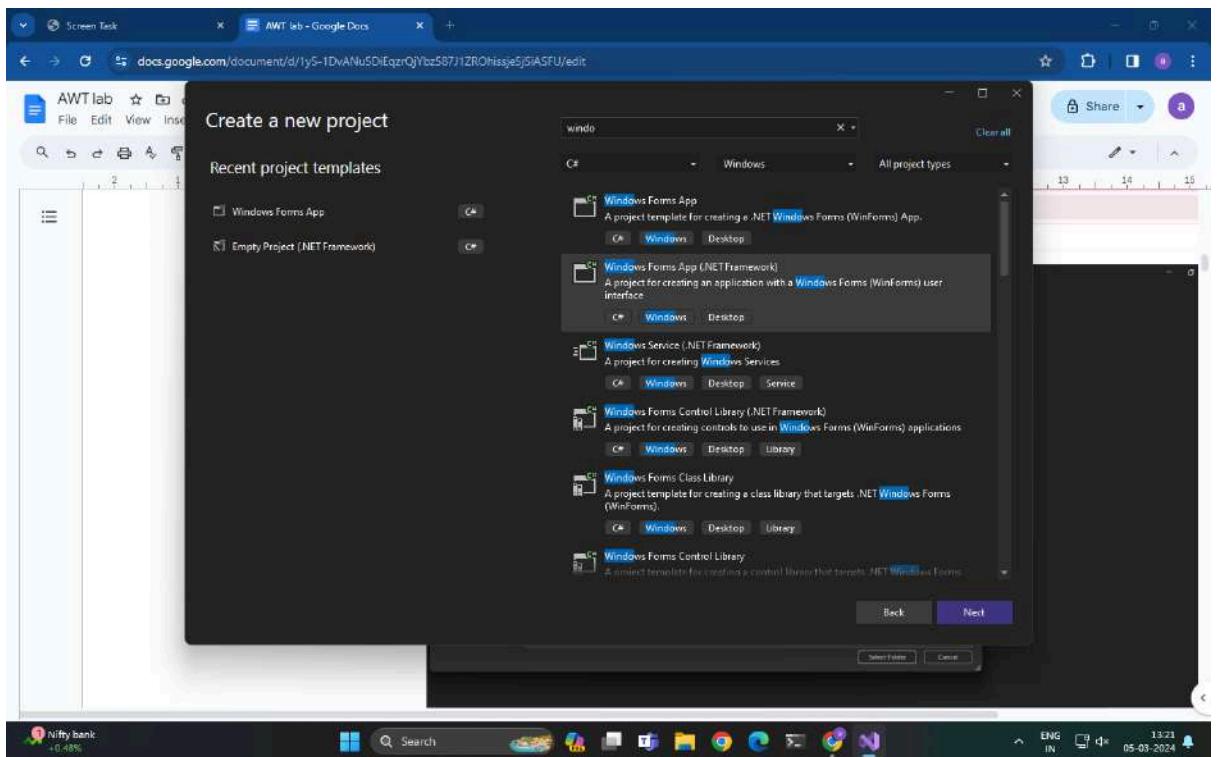
private void clear_Click(object sender, EventArgs e)
{
    textBox1.Text = "";
}

private void sqrt_Click(object sender, EventArgs e)
{
    double res;
    num1= Convert.ToDouble(textBox1.Text);
    res=Math.Sqrt(num1);
    textBox1.Text = res.ToString();
}
```

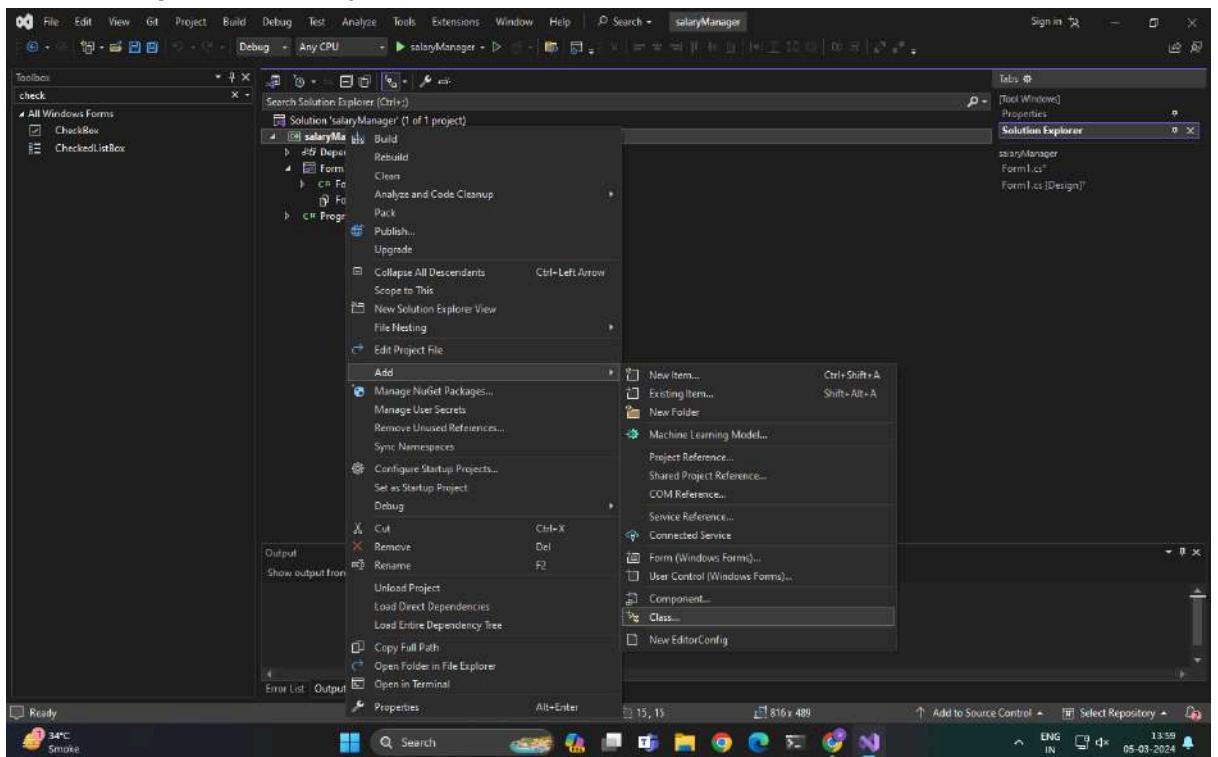
Lab2 (5-3-24)

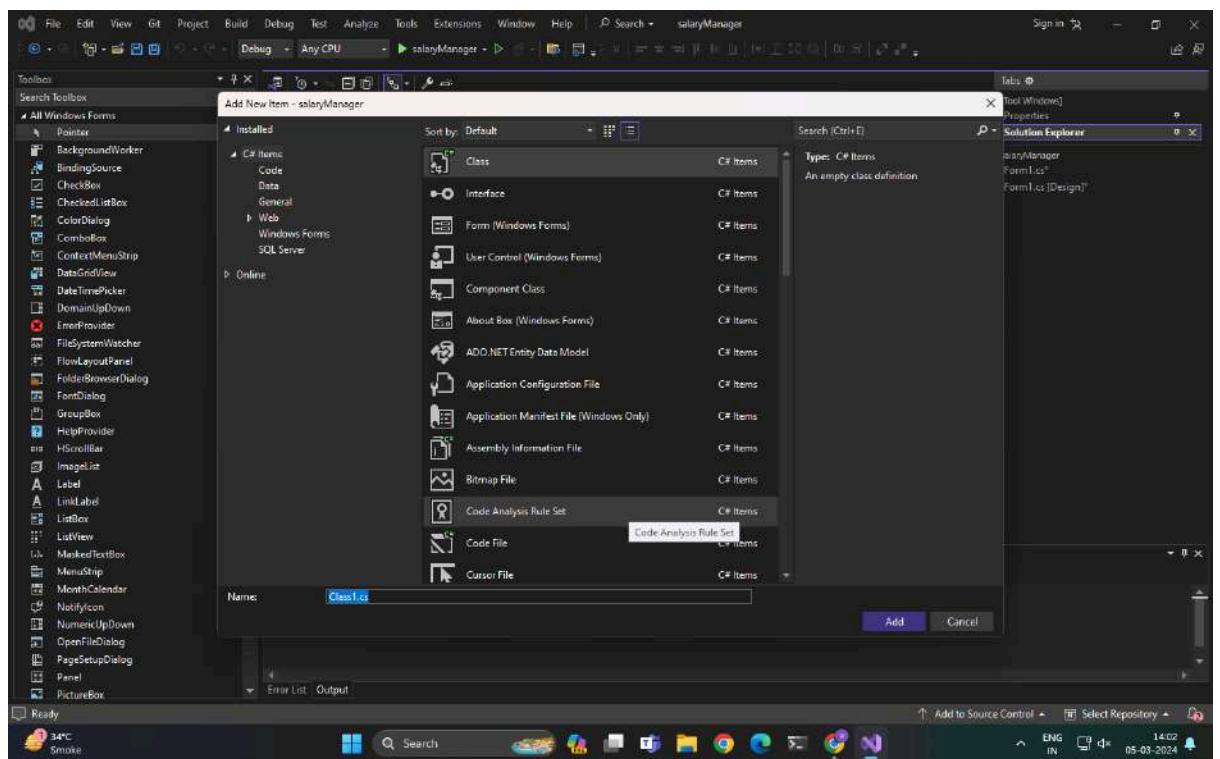
Abstract class(hiding)

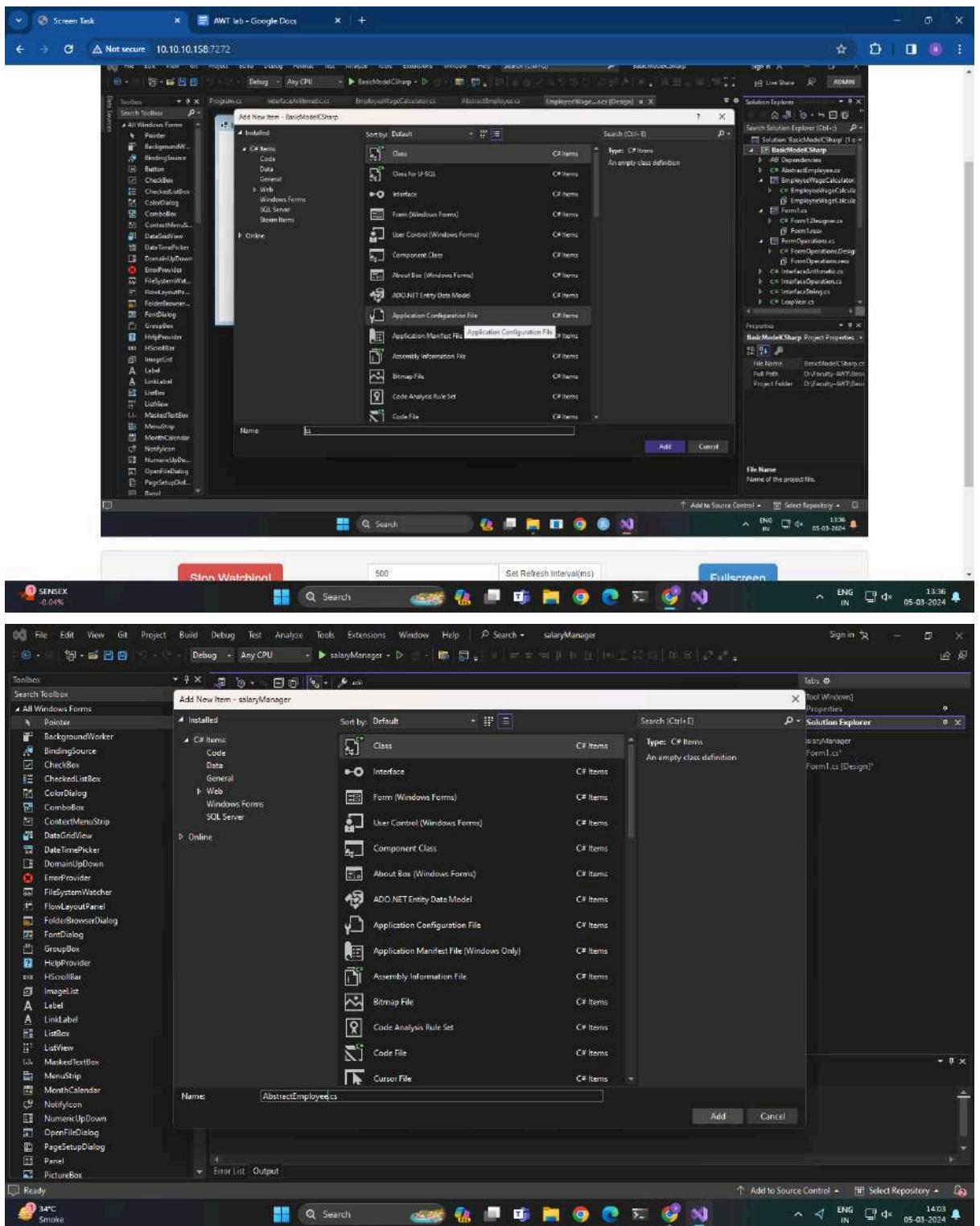
How to access the abstract class -> create subclass child of abstract class->define properties->create object of subclass to access



Add class right click on project ->add ->class







```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace BasicModelCSharp
{
    [System.Serializable]
    abstract class AbstractEmployee
    {
        string ename = "";
        string dname = "";

        public string Ename { get { return ename; } set { ename = value; } }

        public string Dname { get { return dname; } set { dname = value; } }

        public abstract double getSalary();
    }

    class Hmop : AbstractEmployee
    {
        int hrs;

        public int Hrs { get { return hrs; } set { hrs = value; } }

        public override double getSalary() { return hrs * 60; }
    }

    class Manager : AbstractEmployee
    {
        int basic;
        double da = .5, ta = .2, pf = .4;

        public int Basic { get { return basic; } set { basic = value; } }

        public override double getSalary() { return basic + (basic * da) + (basic * ta) - (basic * pf); }
    }
}
```

```
using System;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace BasicModelCSharp
{
    public partial class EmployeeWageCalculator : Form
    {
        public EmployeeWageCalculator()
        {
            InitializeComponent();
        }

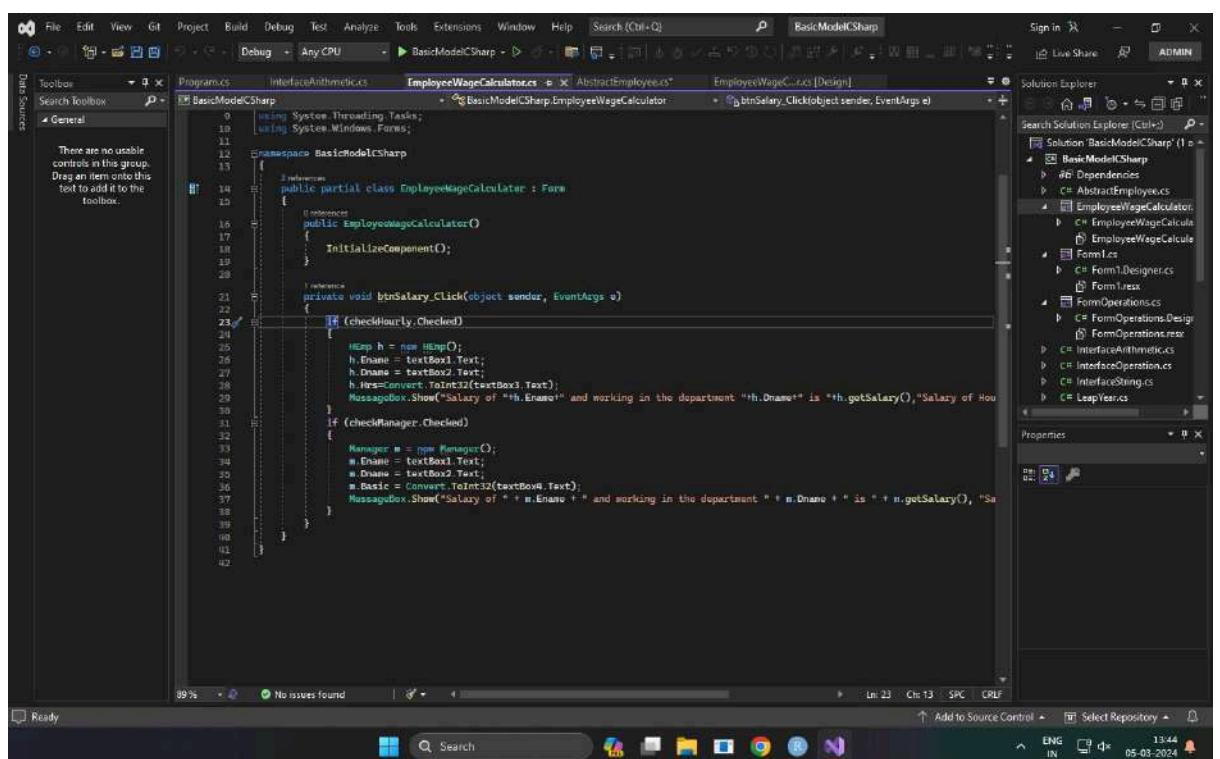
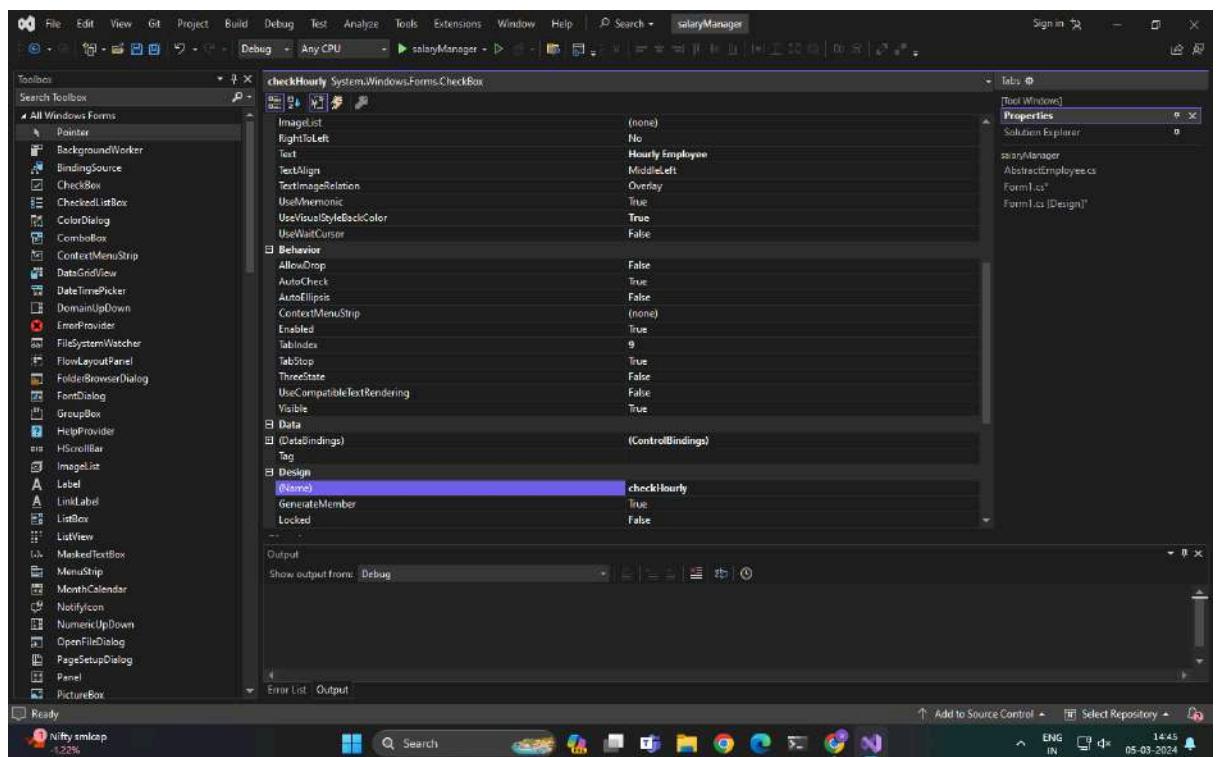
        private void btnSalary_Click(object sender, EventArgs e)
        {
            if (checkHourly.Checked)
            {
                Hmop h = new Hmop();
                h.Ename = textBox1.Text;
                h.Dname = textBox2.Text;
                h.Hrs = Convert.ToInt32(textBox3.Text);
                MessageBox.Show("Salary of " + h.Ename + " and working in the department " + h.Dname + " is " + h.getSalary(), "Salary");
            }
            else
            {
                Manager m = new Manager();
                m.Ename = textBox1.Text;
                m.Dname = textBox2.Text;
                m.Basic = Convert.ToInt32(textBox3.Text);
                MessageBox.Show("Salary of " + m.Ename + " and working in the department " + m.Dname + " is " + m.getSalary(), "Salary");
            }
        }
    }
}
```

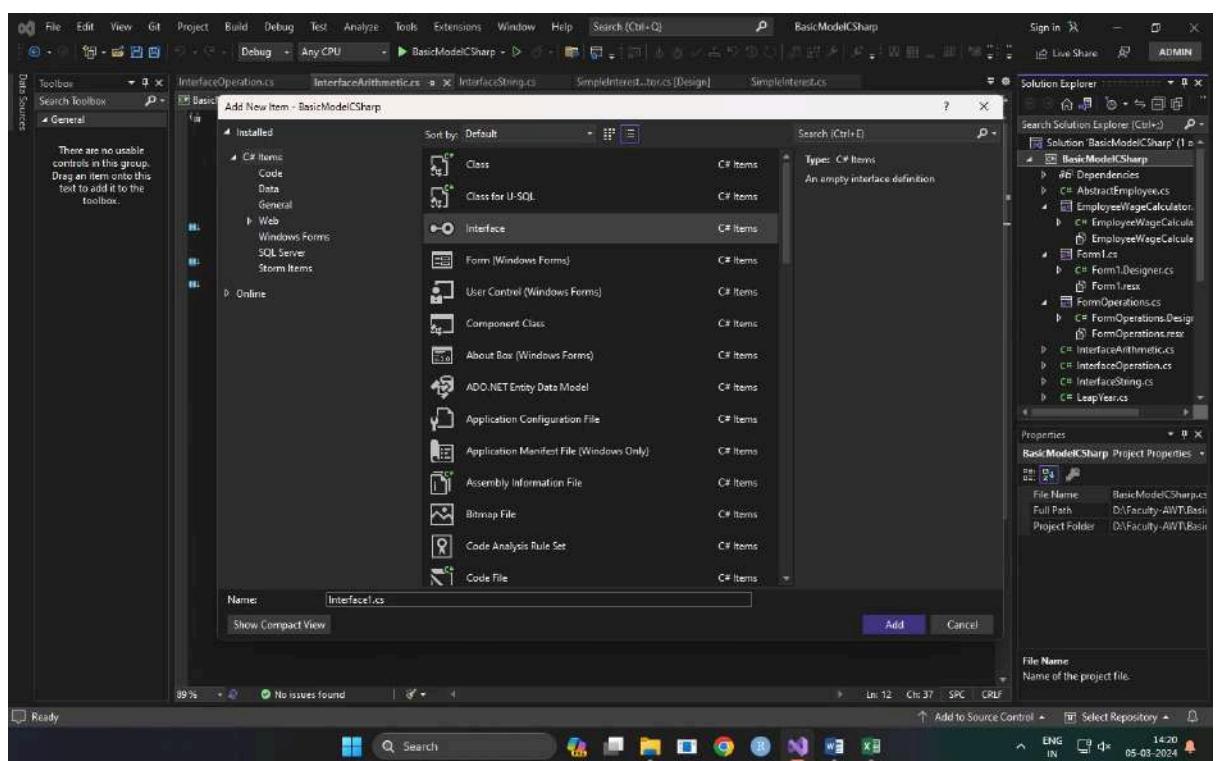
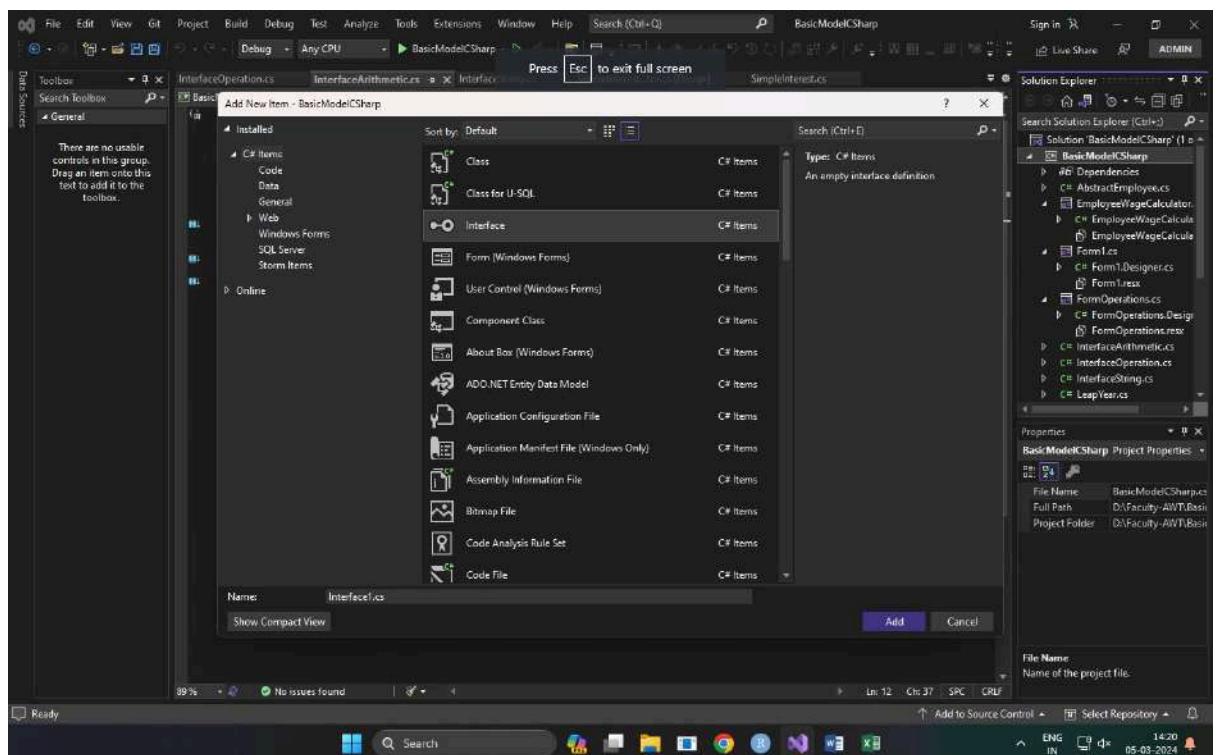
H

The screenshot shows the Microsoft Visual Studio IDE interface. The title bar reads "BasicModelCSharp". The main window displays the code editor with the file "AbstractEmployee.cs" open. The code defines an abstract class "AbstractEmployee" with properties "ename" and "dname", and an abstract method "getSalary()". It also defines two concrete classes: "Hemp" and "Manager", which inherit from "AbstractEmployee". The "Hemp" class has a property "hrs" and overrides the "getSalary()" method to return $hrs * 500$. The "Manager" class has properties "basic", "da", "ta", and "pf", and overrides the "getSalary()" method to calculate the salary based on these values.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace BasicModelCSharp
{
    abstract class AbstractEmployee
    {
        string ename = "";
        string dname = "";
        public string Ename { get { return ename; } set { ename = value; } }
        public string Dname { get { return dname; } set { dname = value; } }
        public abstract double getSalary();
    }
    class Hemp : AbstractEmployee
    {
        int hrs;
        public int Hrs { get { return hrs; } set { hrs = value; } }
        public override double getSalary() { return hrs * 500; }
    }
    class Manager : AbstractEmployee
    {
        int basic;
        double da = .5, ta = .2, pf = .4;
        public int Basic { get { return basic; } set { basic = value; } }
        public override double getSalary() { return basic * (basic + da) * (basic + ta) * (basic + pf); }
    }
}
```

The Solution Explorer window on the right shows the project structure, including files like "EmployeeWageCalculator.cs", "Form1.cs", and "FormOperations.cs". The Properties window is also visible on the far right.





Screenshot of Visual Studio showing the Solution Explorer pane on the right, which lists various projects and files under the solution 'BasicModelCSharp'. The Properties pane is also visible on the right, showing file properties for 'InterfaceArithmetics.cs'.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace BasicModelCSharp
{
    internal interface InterfaceArithmetic
    {
        int Add(int num1, int num2);
        int Mul(int num1, int num2);
    }
}
```

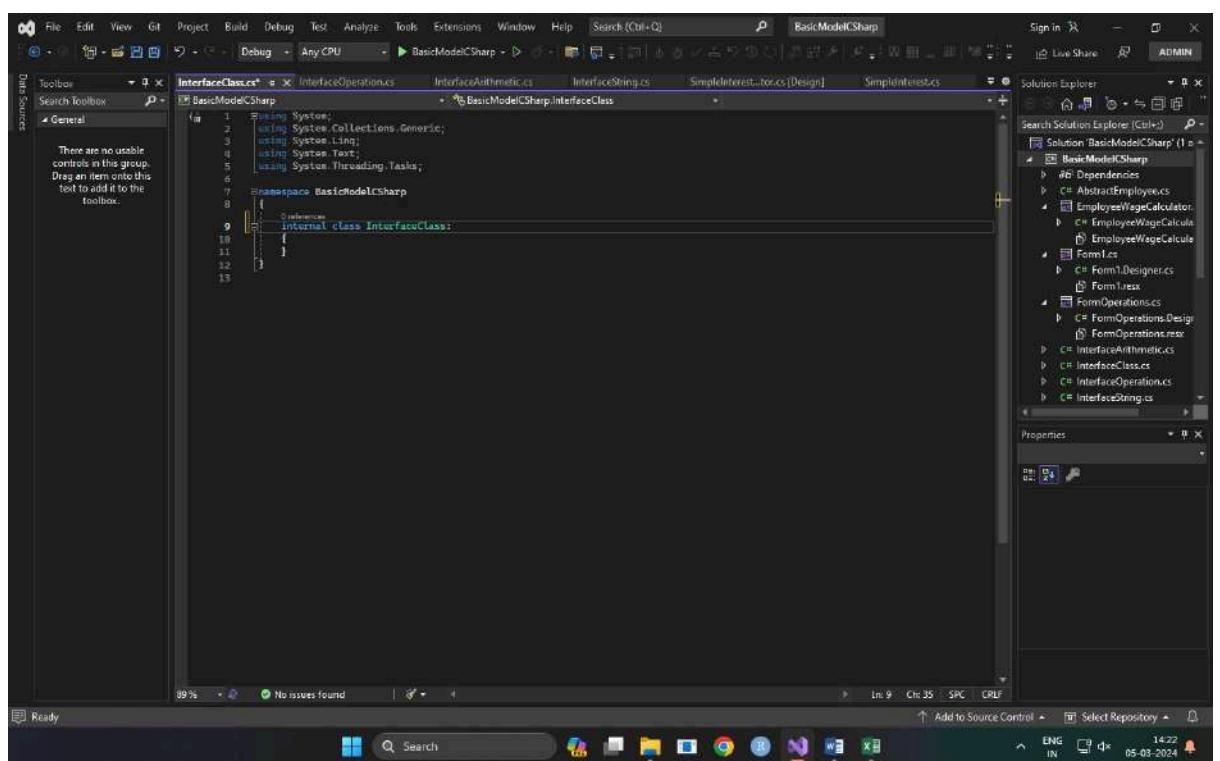
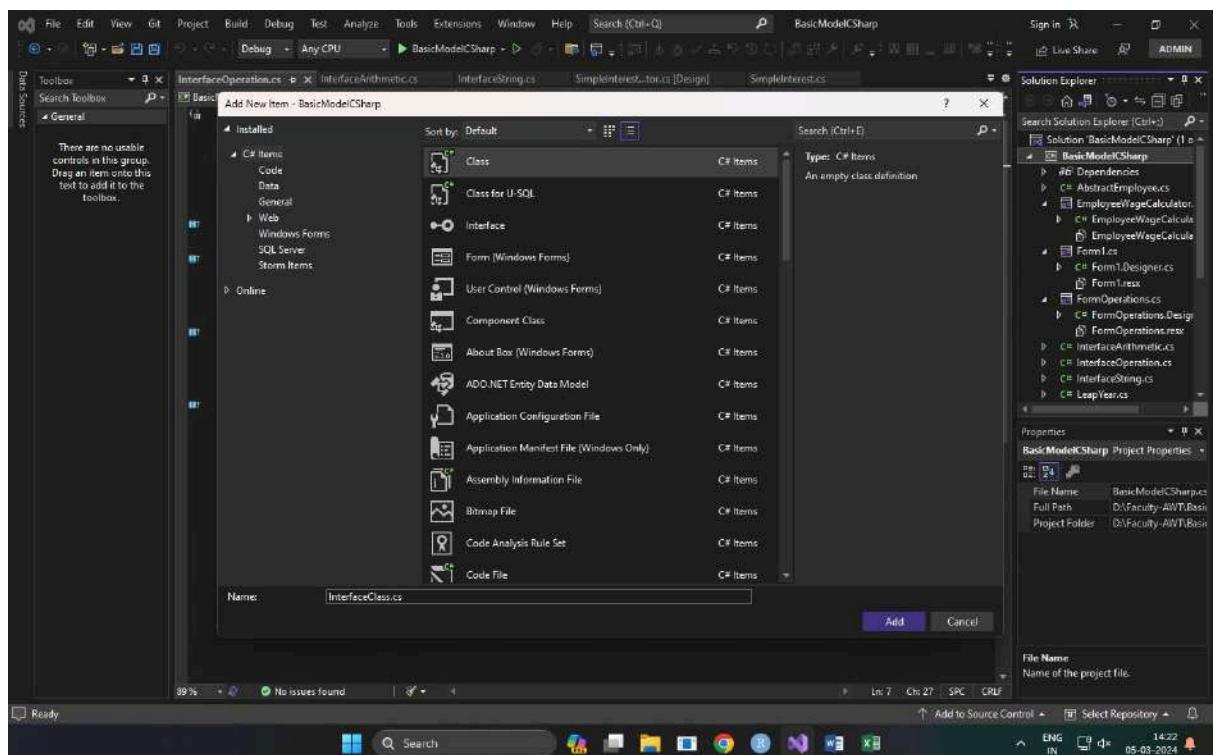
Screenshot of Visual Studio showing a context menu open over the code editor. The menu includes options like 'Add' (New Item..., Existing Item..., New Folder, etc.), 'Build' (Build, Rebuild, Clean, etc.), and 'Edit Project File'.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

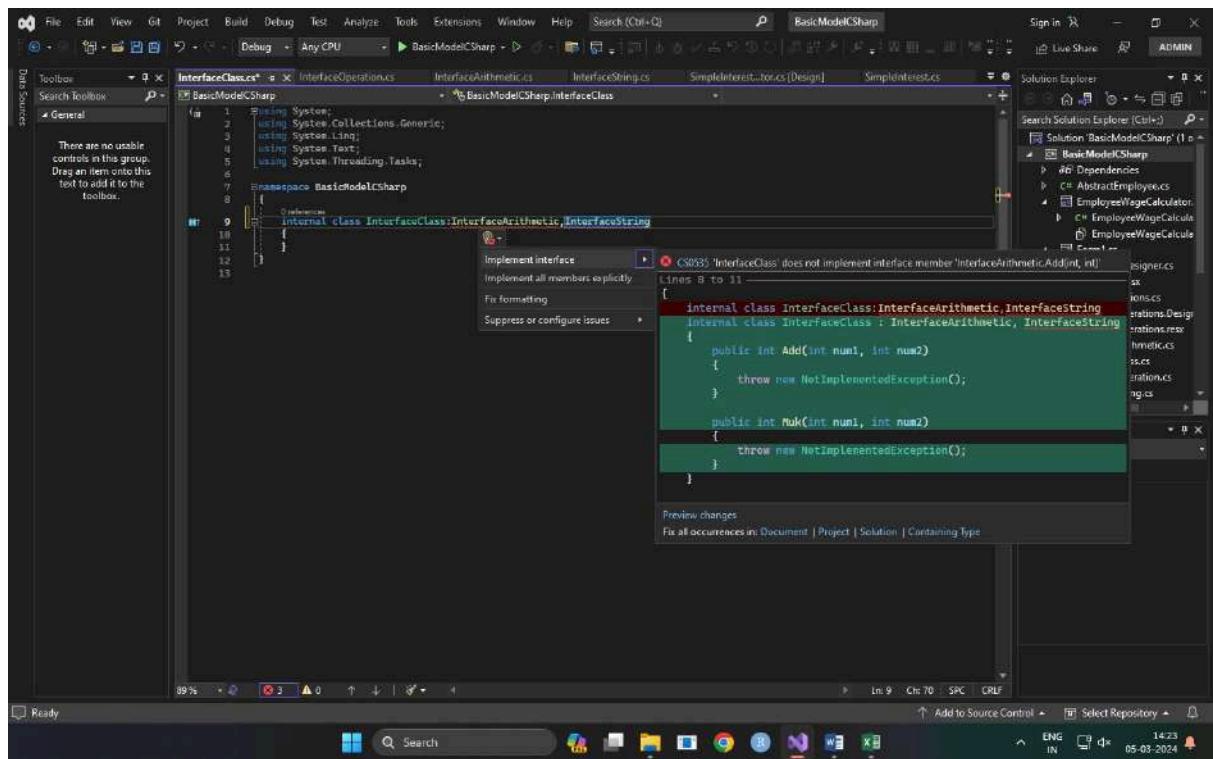
namespace BasicModelCSharp
{
    internal class InterfaceOperation : InterfaceArithmetic, InterfaceString
    {
        public int Add(int num1, int num2)
        {
            return num1+num2;
        }

        public string concatenation(string s1, string s2)
        {
            return s1+s2;
        }

        public int Mul(int num1, int num2)
        {
            return num1*num2;
        }
    }
}
```



in



Implement method of interface

Screenshot of Microsoft Visual Studio showing the code editor with the file `InterfaceClass.cs` open. The code defines a class `InterfaceClass` that implements two interfaces: `InterfaceArithmetic` and `InterfaceString`. The `Add` method is implemented correctly, returning the sum of `num1` and `num2`. The `Mul` method is also implemented correctly, returning the product of `num1` and `num2`. The `concatination` method is implemented with a throwaway implementation that always throws a `NotImplementedException`. A tooltip for this method shows the error message: "CS0535 InterfaceClass does not implement interface member InterfaceString.concatination(string, string)". The Solution Explorer on the right shows the project structure for "BasicModelCSharp".

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace BasicModelCSharp
{
    internal class InterfaceClass : InterfaceArithmetic, InterfaceString
    {
        // Implementations
        public int Add(int num1, int num2)
        {
            return num1 + num2;
        }

        public int Mul(int num1, int num2)
        {
            return num1 * num2;
        }

        // Implementations
        public string concatination(string s1, string s2)
        {
            throw new NotImplementedException();
        }
    }
}
```

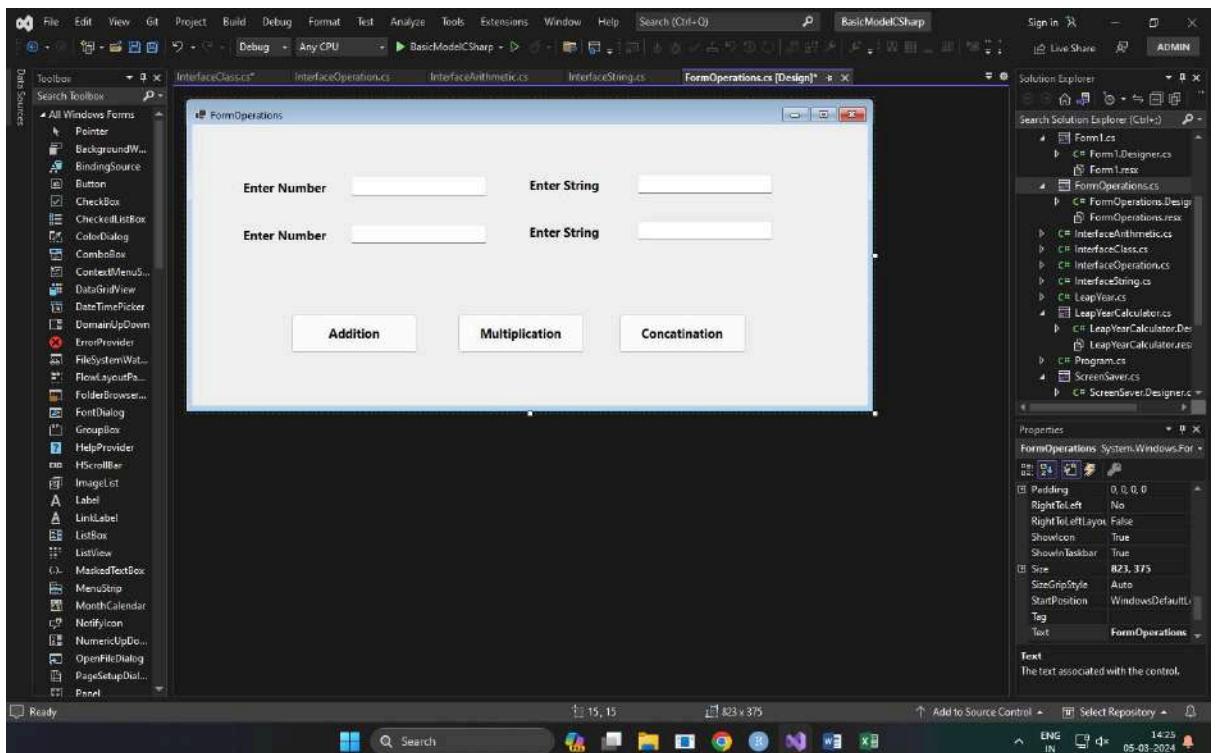
Screenshot of Microsoft Visual Studio showing the code editor with the file `InterfaceClass.cs` open. The code is identical to the previous screenshot. However, the `concatination` method now has a correct implementation that concatenates the two input strings. The Solution Explorer on the right shows the project structure for "BasicModelCSharp".

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace BasicModelCSharp
{
    internal class InterfaceClass : InterfaceArithmetic, InterfaceString
    {
        // Implementations
        public int Add(int num1, int num2)
        {
            return num1 + num2;
        }

        public int Mul(int num1, int num2)
        {
            return num1 * num2;
        }

        // Implementations
        public string concatination(string s1, string s2)
        {
            return s1 + s2;
        }
    }
}
```

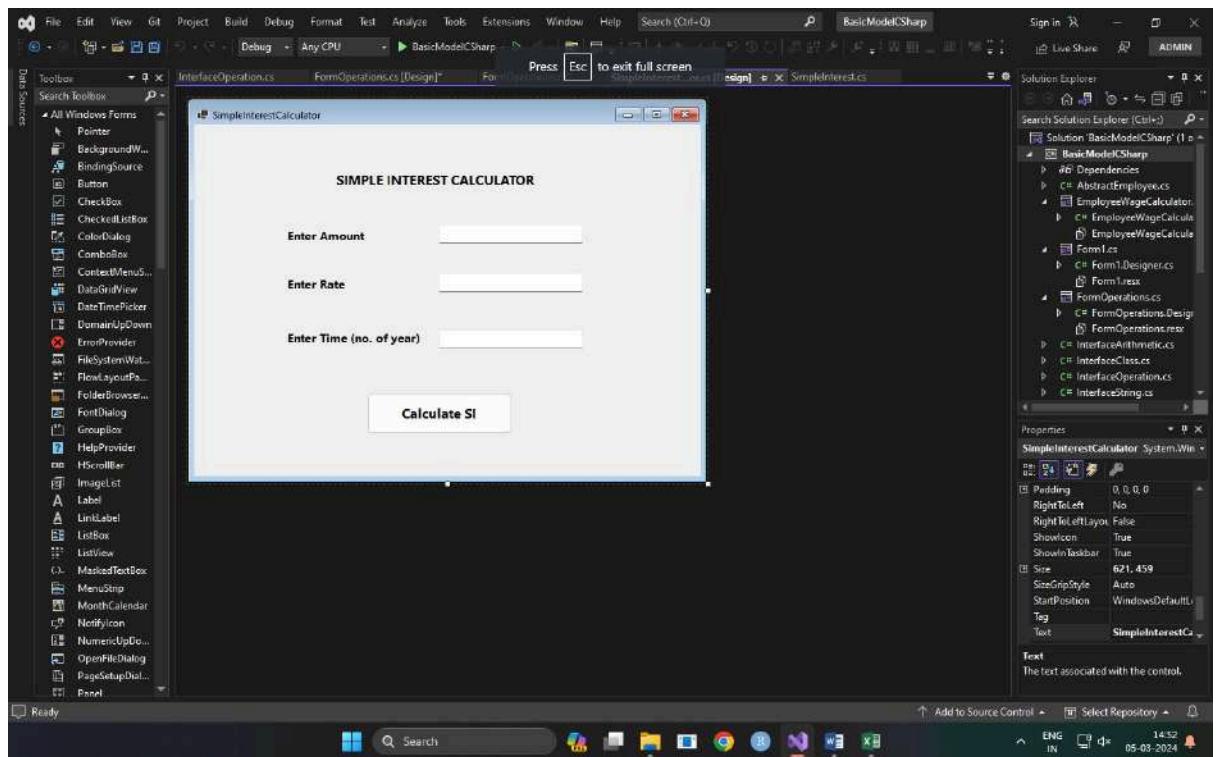


```

    1  //using System;
    2  //using System.Collections.Generic;
    3  //using System.ComponentModel;
    4  //using System.Data;
    5  //using System.Drawing;
    6  //using System.Linq;
    7  //using System.Text;
    8  //using System.Threading.Tasks;
    9  //using System.Windows.Forms;
   10 
   11 namespace BasicModelCSharp
   12 {
   13     public partial class FormOperations : Form
   14     {
   15         public FormOperations()
   16         {
   17             InitializeComponent();
   18         }
   19         InterfaceOperation op = new InterfaceOperation();
   20         private void btnAddition_Click(object sender, EventArgs e)
   21         {
   22             int res = op.Add(Convert.ToInt32(textBox1.Text), Convert.ToInt32(textBox2.Text));
   23             MessageBox.Show("Addition of numbers is: " + res.ToString(), "Addition Operation");
   24         }
   25 
   26         private void btnMultiply_Click(object sender, EventArgs e)
   27         {
   28             int res = op.Mul(Convert.ToInt32(textBox1.Text), Convert.ToInt32(textBox2.Text));
   29             MessageBox.Show("Multiplication of numbers is: " + res.ToString(), "Multiplication Operation");
   30         }
   31 
   32         private void btnConcat_Click(object sender, EventArgs e)
   33         {
   34             string res = op.concatination(textBox3.Text, textBox4.Text);
   35             MessageBox.Show("Multiplication of numbers is: " + res, "Multiplication Operation");
   36         }
   37     }
   38 }

```

form-> 3)



----- 19-3-24 -----ad rotator

```
<?xml version="1.0" encoding="utf-8" ?>
<Advertisements>
    <Ad>
        <ImageUrl>/Image/facebook.png</ImageUrl>
        <NavigateUrl>https://www.facebook.com/</NavigateUrl>
        <AlternateText>Facebook</AlternateText>
        <Impression>30</Impression>
        <Keyword>BVIMIT</Keyword>
    </Ad>
    <Ad>
        <ImageUrl>/Image/Flipkart.png</ImageUrl>
        <NavigateUrl>https://www.flipkart.com/</NavigateUrl>
        <AlternateText>flipkart</AlternateText>
        <Impression>20</Impression>
        <Keyword>BVIMIT</Keyword>
    </Ad>
    <Ad>
        <ImageUrl>/Image/Google.png</ImageUrl>
        <NavigateUrl>https://www.google.com/</NavigateUrl>
        <AlternateText>Google</AlternateText>
        <Impression>30</Impression>
        <Keyword>BVIMIT</Keyword>
    </Ad>
    <Ad>
        <ImageUrl>/Image/Image.png</ImageUrl>
```

```

        <NavigateUrl>https://www.facebook.com/</NavigateUrl>
        <AlternateText>Amazon</AlternateText>
        <Impression>20</Impression>
        <Keyword>BVIMIT</Keyword>
    </Ad>
</Advertisements>

<%@ Page Language="C#" AutoEventWireup="true"
CodeBehind="ADLoader.aspx.cs" Inherits="life_cycle.ADLoader" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <asp:AdRotator ID="AdRotator1" AdvertisementFile="~/XMLFile1.xml"
runat="server" />
        </div>
    </form>
</body>
</html>

pageLifecycle
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace life_cycle
{
    public partial class page_life_cycle : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            Label1.Text += "<br/>" + "Page Load....";

        }
        protected void Button1_Click(object sender, EventArgs e)
        {
            Label1.Text += "<br/>" + "Button Click event...";

        }
    }
}
```

```

protected void Page_Init(object sender, EventArgs e)
{
    Label1.Text += "<br/>" + "Page init ...";
}
protected void Page_InitComplete(object sender, EventArgs e)
{
    Label1.Text += "<br/>" + "Page init Complete...";
}
protected override void OnPreLoad( EventArgs e)
{
    Label1.Text += "<br/>" + "On pre load..";
}
protected void Page_LoadComplete(object sender, EventArgs e)
{
    Label1.Text += "<br/>" + "Page init complete..";
}
protected override void OnPreRender(EventArgs e)
{
    Label1.Text += "<br/>" + "On pre load..";
}
protected void Page_Unload(object sender, EventArgs e)
{
    Label1.Text += "<br/>" + "Page unload..";
}

}

}


```

Page Life cycle

```

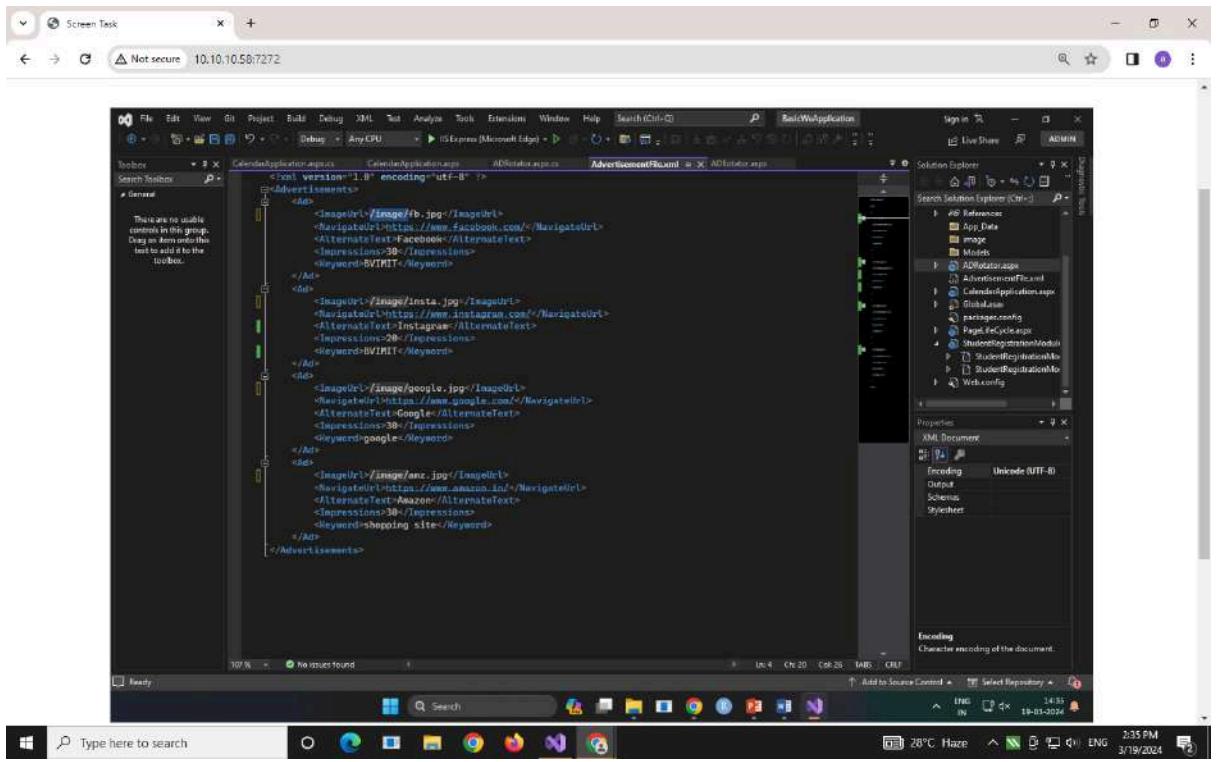
<%@ Page Language="C#" AutoEventWireup="true"
CodeBehind="page_life_cycle.aspx.cs" Inherits="life_cycle.page_life_cycle" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
        </div>

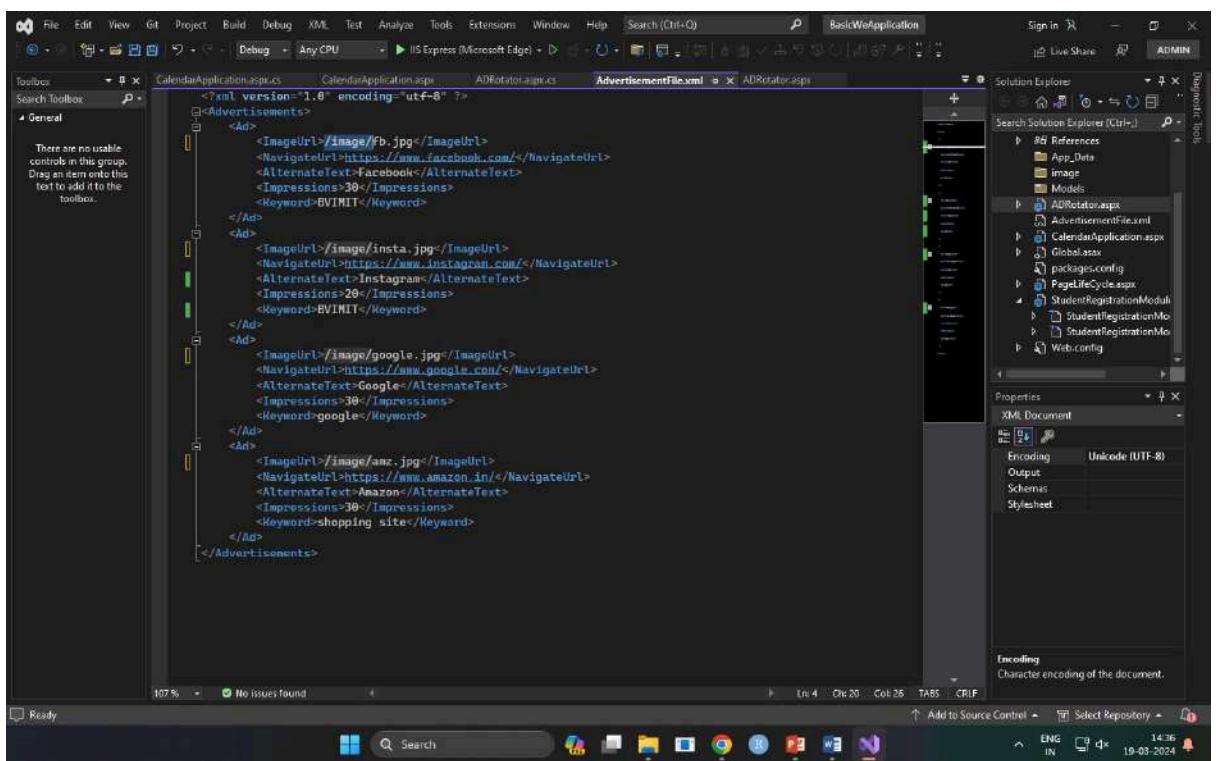
```

```
<p>
    <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>
</p>
<p>
    <asp:Button ID="Button1" runat="server" OnClick="Button1_Click"
Text="Button" />
</p>
</form>
</body>
</html>
```



The screenshot shows a Microsoft Edge browser window with the title "Screen Task". The address bar displays "Not secure 10.10.10.50:7272". The page content is a 404 Not Found error page from IIS Express (Microsoft Edge). The error message reads: "The resource you are looking for was not found. It may have been moved or deleted. Try refreshing the page or use the address bar to go to a different page." Below the error message, there is a link to "View the page on the local IIS server".

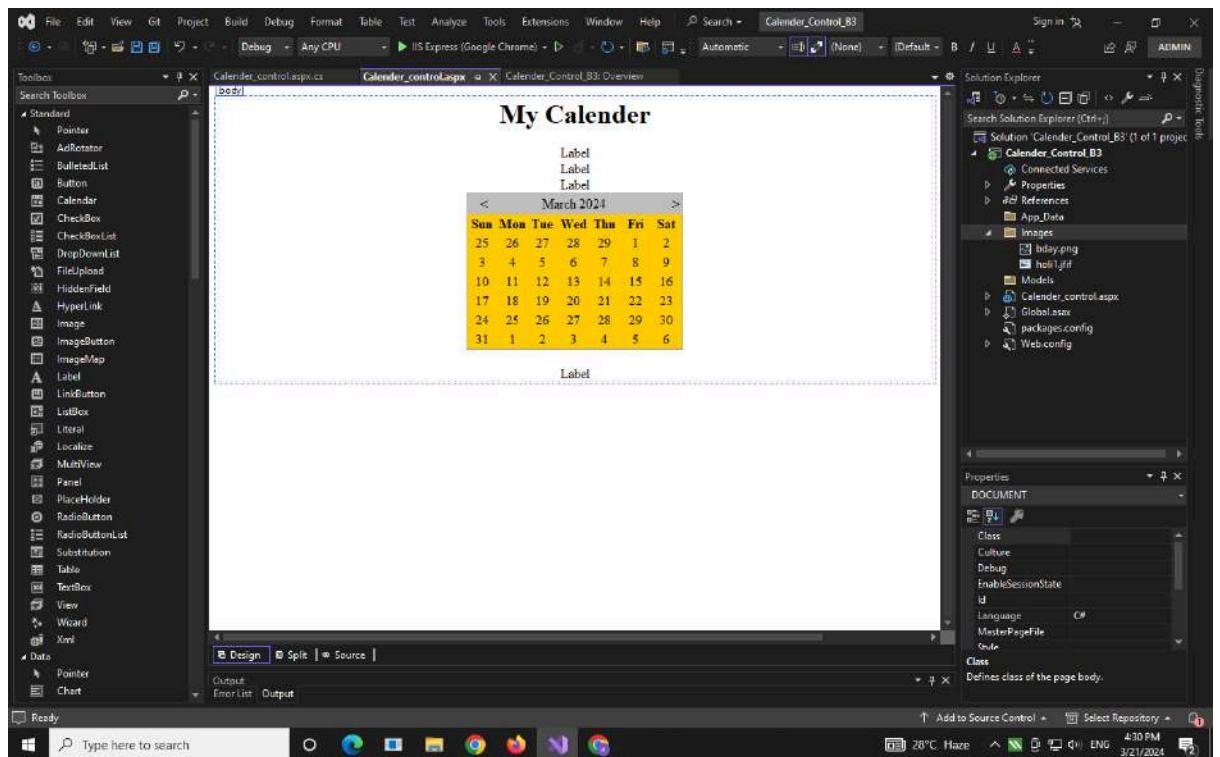
Below the browser window, the Windows taskbar is visible with icons for File Explorer, Microsoft Edge, and other system tools.



The screenshot shows Microsoft Visual Studio with the project "BasicWeApplication" open. The code editor displays the XML file "AdRotator.xml". The XML content is as follows:

```
<?xml version="1.0" encoding="utf-8" ?>
<Advertisements>
  <Ad>
    <ImageUrl>/image/b.jpg</ImageUrl>
    <NavigateUrl>https://www.facebook.com/</NavigateUrl>
    <AlternateText>Facebook</AlternateText>
    <Impressions>30</Impressions>
    <Keyword>BVINIT</Keyword>
  </Ad>
  <Ad>
    <ImageUrl>/image/insta.jpg</ImageUrl>
    <NavigateUrl>https://www.instagram.com/</NavigateUrl>
    <AlternateText>Instagram</AlternateText>
    <Impressions>20</Impressions>
    <Keyword>BVINIT</Keyword>
  </Ad>
  <Ad>
    <ImageUrl>/image/google.jpg</ImageUrl>
    <NavigateUrl>https://www.google.com/</NavigateUrl>
    <AlternateText>Google</AlternateText>
    <Impressions>30</Impressions>
    <Keyword>google</Keyword>
  </Ad>
  <Ad>
    <ImageUrl>/image/amz.jpg</ImageUrl>
    <NavigateUrl>https://www.amazon.in/</NavigateUrl>
    <AlternateText>Amazon</AlternateText>
    <Impressions>30</Impressions>
    <Keyword>shopping site</Keyword>
  </Ad>
</Advertisements>
```

The Solution Explorer on the right shows the project structure, including files like "ADRotator.aspx", "AdvertisementFile.xml", "CalendarApplication.aspx", "Global.asax", "PageLifeCycle.aspx", "StudentRegistrationModule.aspx", and "Web.config". The Properties window shows the XML Document properties.



Calendar

Design:

Source Code:

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="Calender.aspx.cs"
Inherits="WebApplication1.Calender" %>
```

```
<!DOCTYPE html>
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

```
<head runat="server">
```

```
    <title></title>
```

```
</head>
```

```
<body>
```

```
    <center>
```

```
        <form id="form1" runat="server">
```

```

<div

<h5>MY CALENDAR</h5>

<asp:Label ID="Label1" runat="server" Text="Label"></asp:Label><br />

</div>

<p>

<asp:Label ID="Label2" runat="server" Text="Label2"></asp:Label><br />

</p>

<asp:Label ID="Label3" runat="server" Text="Label3"></asp:Label><br />

<asp:Calendar ID="Calendar1" runat="server" BackColor="#99FF99" BorderColor="#FF6600"
CellPadding="5" CellSpacing="5" OnSelectionChanged="calendar1_VisibleMonthChanged"
OnDayRender="calendar1_DayRender"></asp:Calendar>

<asp:Label ID="Label4" runat="server" Text="Label"></asp:Label>

</form>

</center

</body>

</html>

```

Aspx.cs code:

```

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace WebApplication1

{

```

```
public partial class Calender : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        Label1.Text = "Today's Date is: " + Calendar1.TodaysDate.ToShortDateString();
    }

    protected void Calendar1_SelectionChanged(object sender, EventArgs e)
    {
        Label4.Text = Calendar1.SelectedDate.ToString("yyyy-MM-dd");
    }

    protected void calendar1_VisibleMonthChanged(object sender, MonthChangedEventArgs e)
    {
        Label3.Text = "Selected Month And Year is: " + e.NewDate.Month + "-" + e.NewDate.Year;
    }

    protected void calendar1_DayRender(object sender, DayRenderEventArgs e)
    {
        if (e.Day.Date == new DateTime(2024, 3, 29))
        {
            Literal l1 = new Literal();
            Image img1 = new Image();
            e.Cell.Width = 70;
            e.Cell.Height = 70;
            e.Cell.Font.Italic = true;

            e.Cell.BackColor = System.Drawing.Color.LightPink;
            img1.ImageUrl = "~/Image/Holi.jpeg";
        }
    }
}
```

```

        img1.Width = 30;

        img1.Height = 30;

        l1.Text = "<br /><font size=2 color=Red>Holi</font>";
        e.Cell.Controls.AddAt(1, l1);

        e.Cell.Controls.AddAt(0, img1);

    }

    if (e.Day.Date == new DateTime(2024, 3, 21))

    {

        Literal l1 = new Literal();

        Image img1 = new Image();

        e.Cell.Width = 30;

        e.Cell.Height = 30;

        e.Cell.Font.Italic = true;

        e.Cell.Font.Size = FontUnit.XLarge;

        e.Cell.BackColor = System.Drawing.Color.LightPink;

        img1.ImageUrl = "~/Image/bday.jpeg";;

        img1.Width = 30;

        img1.Height = 30;

        l1.Text = "<br /><font size=2 color=Pink>Bday</font>";

        e.Cell.Controls.AddAt(1, l1);

        e.Cell.Controls.AddAt(0, img1);

    }

}

protected void Calendar1_DayRender1(object sender, DayRenderEventArgs e)

{
}

```

```
protected void ChangeCalendar1_SelectionChanged(object sender, EventArgs e)
{
}

protected void calendar1_VisibleMonthChangednthsChangeCalendar1_SelectionChanged(object
sender, EventArgs e)
{
}

protected void calendar1_VisibleMonthChanged(object sender, EventArgs e)
{
}

}

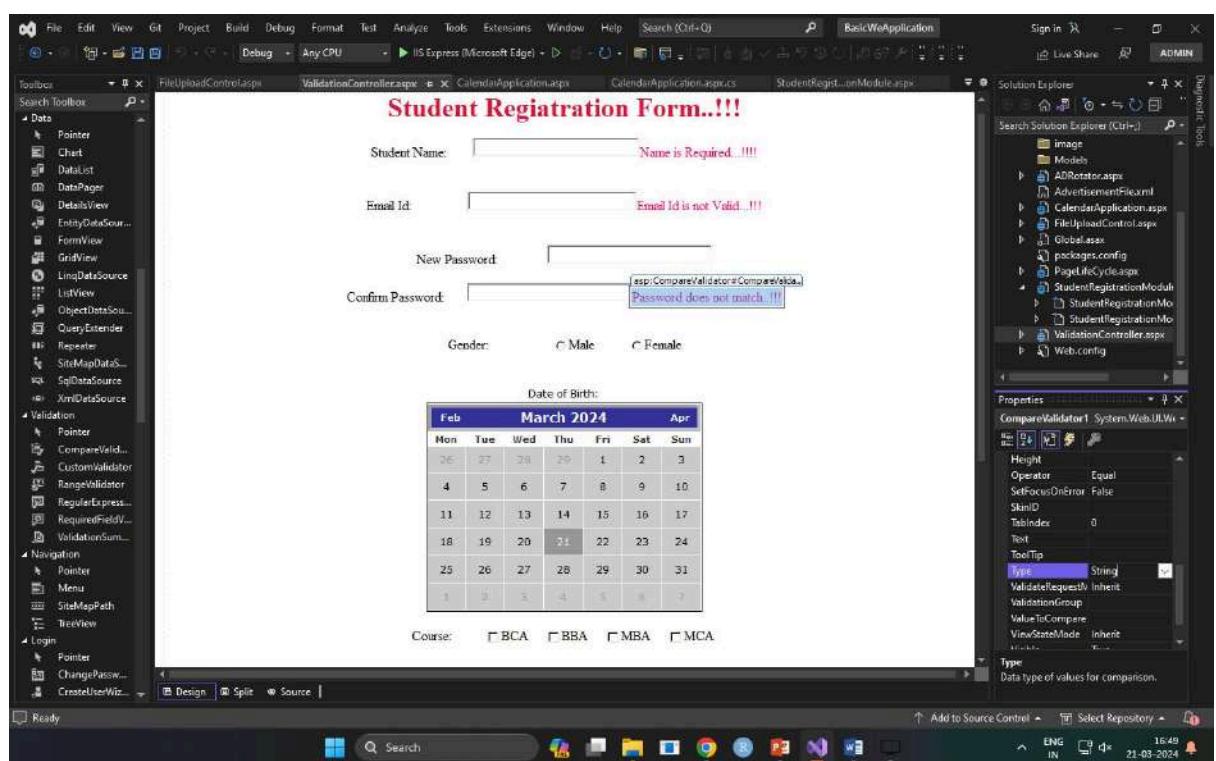
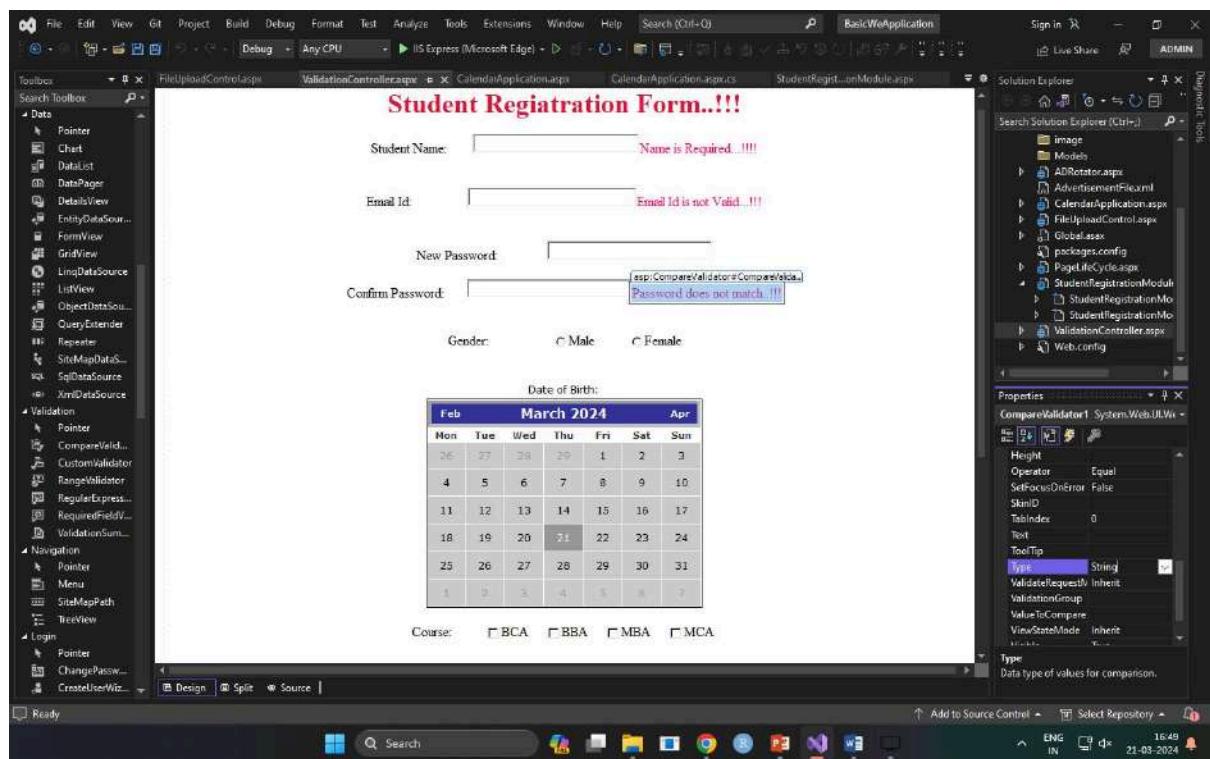
}

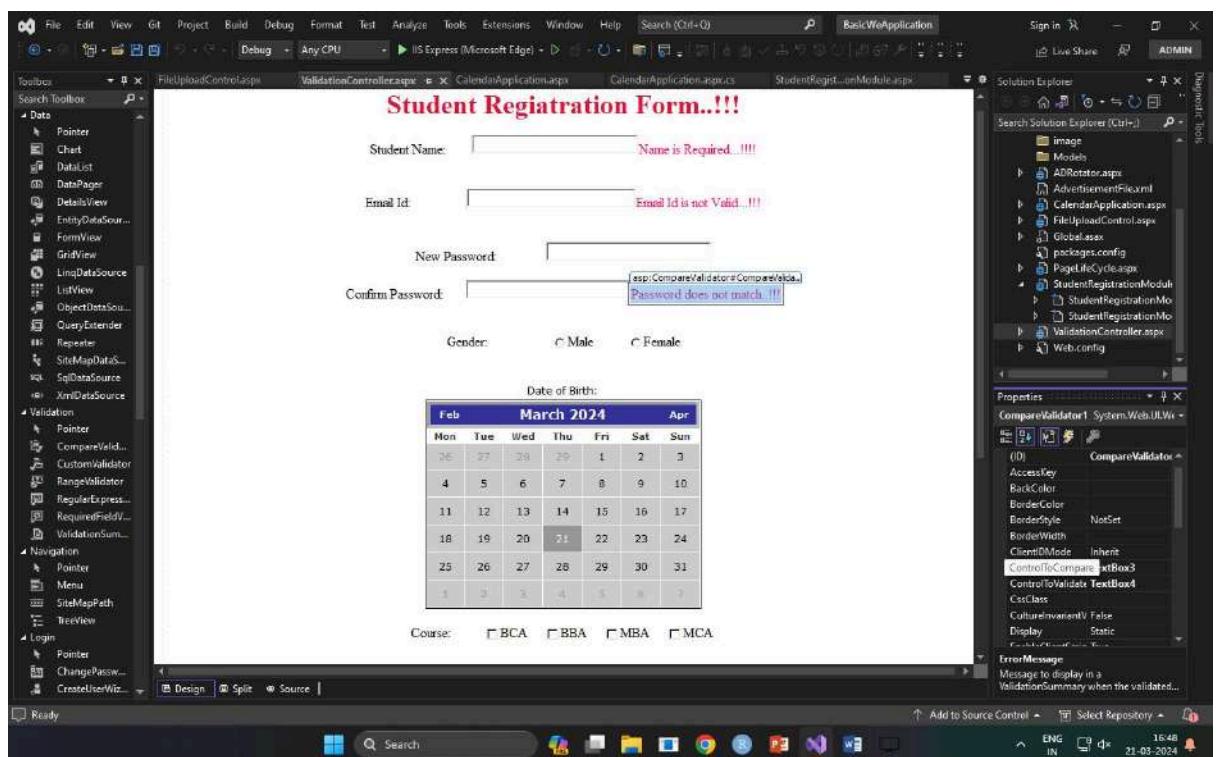
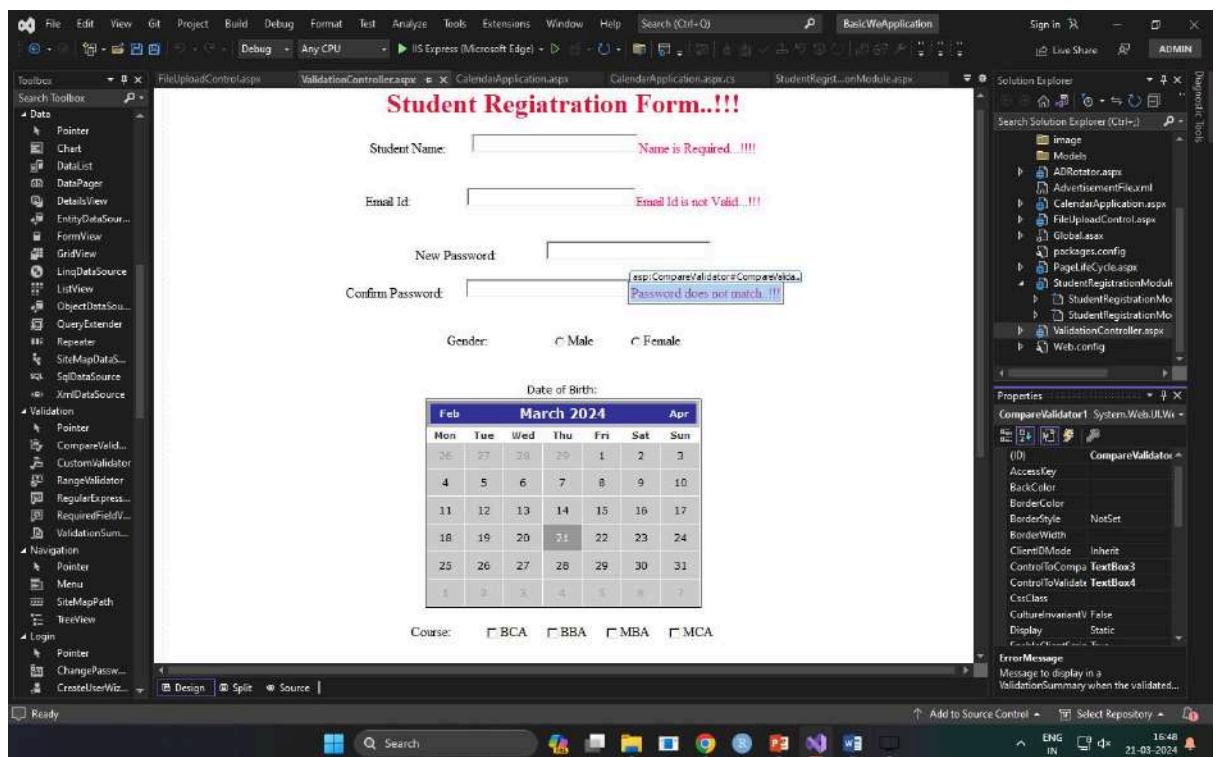
}
```

Key Points:

- Add images as per by adding folder in webform
- Add keyrender from the Event by clicking on calendar .It is above the property window.

Validation Controls:





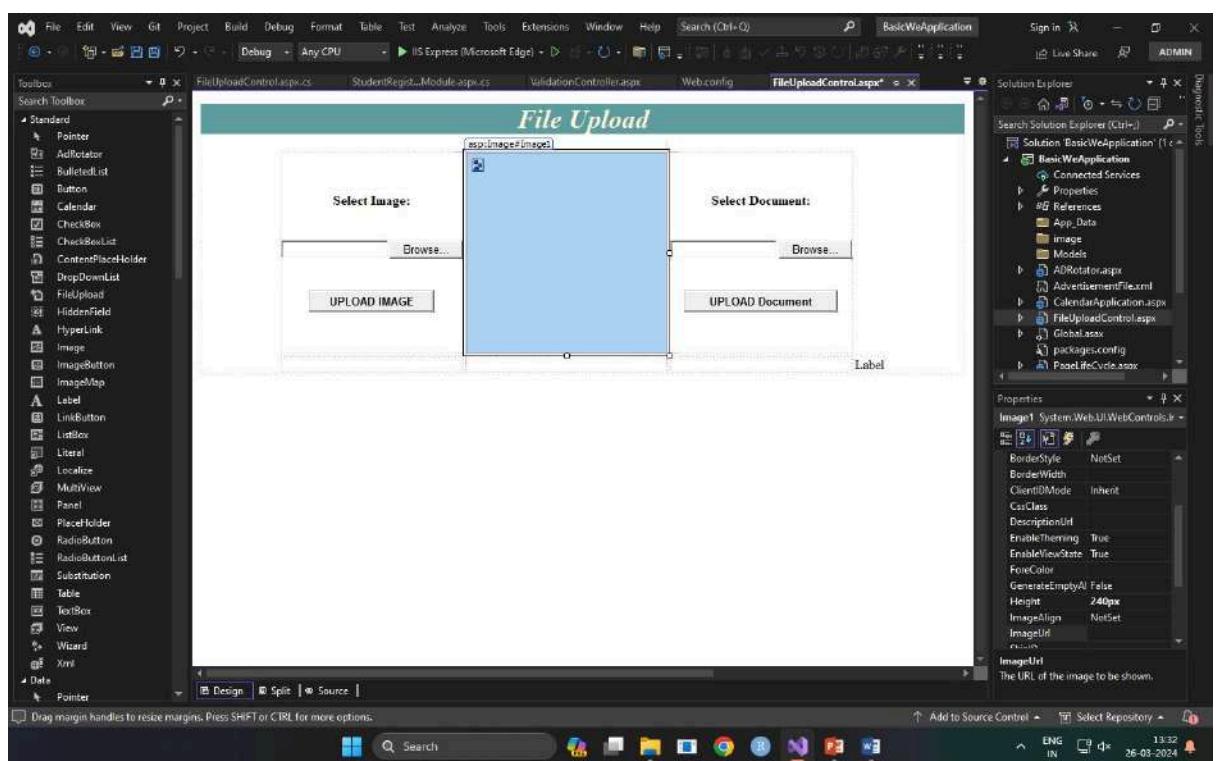
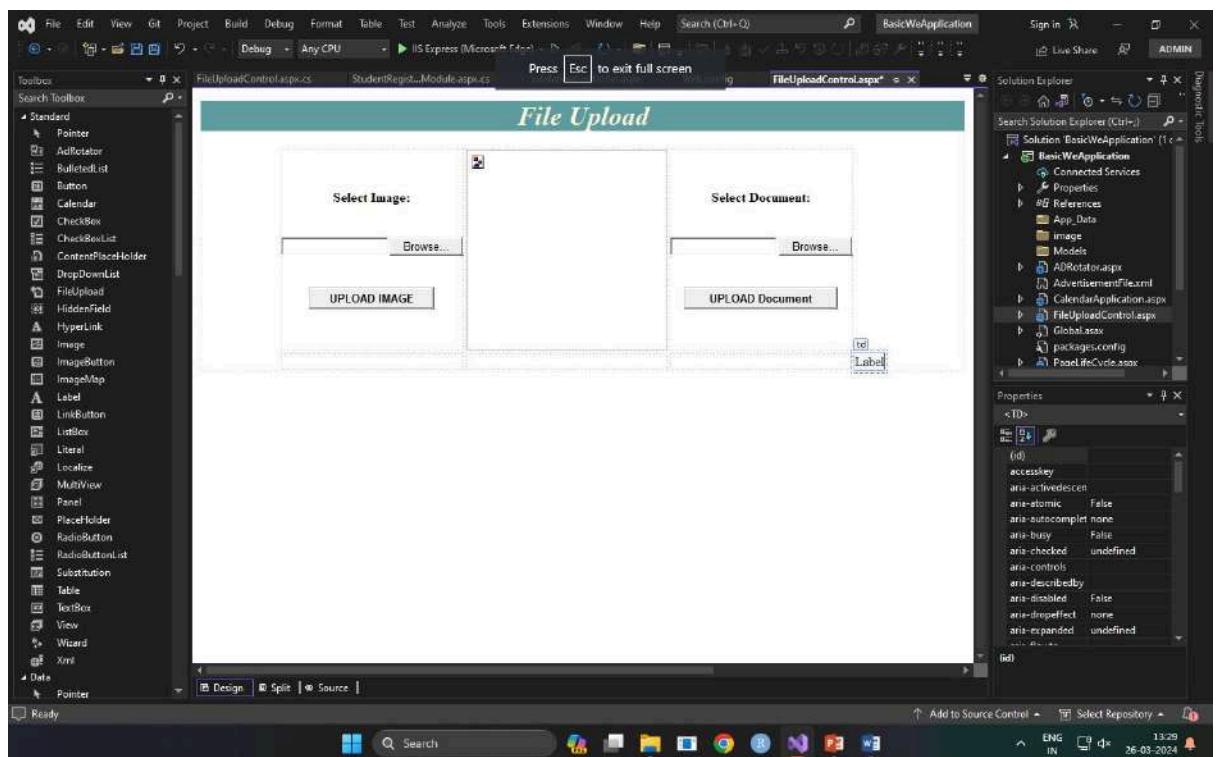
The screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the source code for a file named ValidationController.aspx. The code is written in ASP.NET markup and includes several server-side controls like labels, text boxes, and validators. The code is as follows:

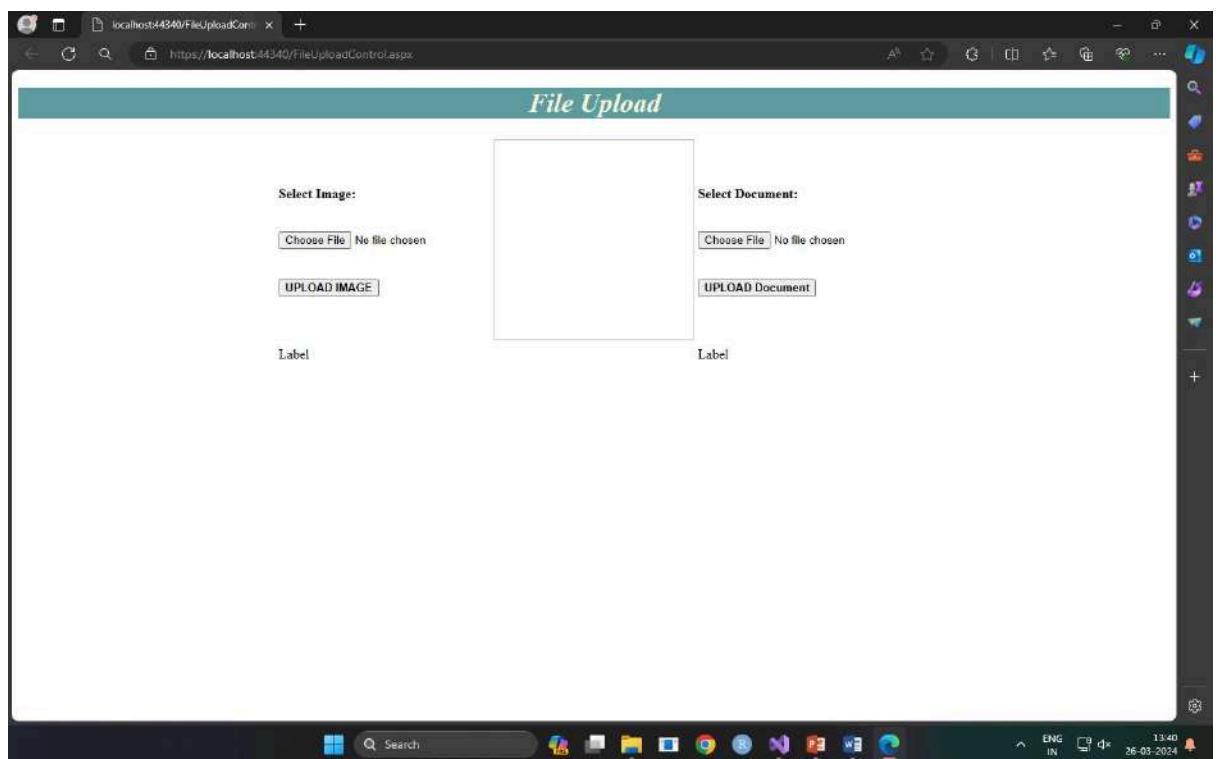
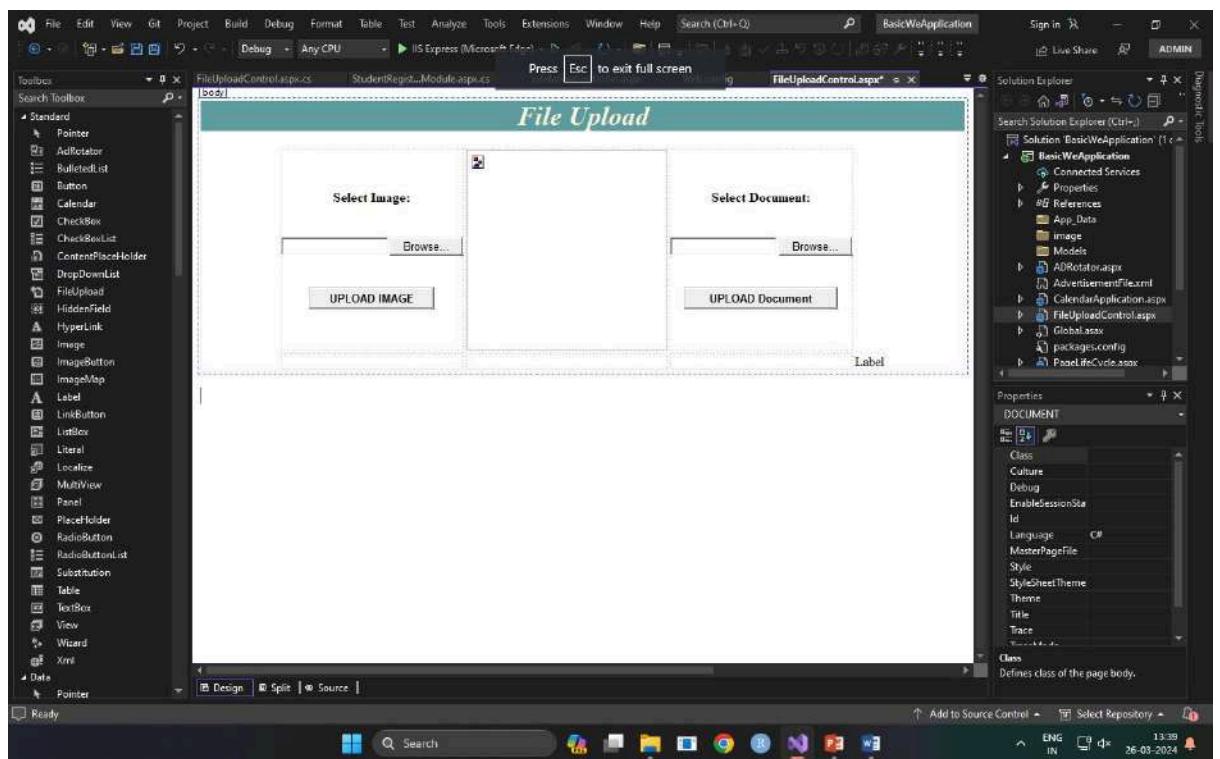
```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <center>
                <h1 style="color:crimson;">Student Registration Form..!!</h1>
                <asp:Label ID="Label1" runat="server" Text="Student Name : "></asp:Label>
                &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
                <asp:TextBox ID="TextBox1" runat="server" Width="191px"></asp:TextBox>
                <asp:RequiredFieldValidator ID="RequiredFieldValidator1" runat="server" ControlToValidate="TextBox1" ErrorMessage="Name is required" ValidationGroup="ValidationGroup1" />
                <br />
                <br />
                <br />
                <asp:Label ID="Label2" runat="server" Text="Email Id : "></asp:Label>
                &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
                <asp:TextBox ID="TextBox2" runat="server" Width="191px"></asp:TextBox>
                <asp:RegularExpressionValidator ID="RegularExpressionValidator1" runat="server" ControlToValidate="TextBox2" ErrorMessage="Email is not valid" ValidationGroup="ValidationGroup1" />
                <br />
                <br />
                <br />
                <asp:Label ID="Label3" runat="server" Text="New Password : "></asp:Label>
                &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
                <asp:TextBox ID="TextBox3" runat="server" TextMode="Password" Width="189px"></asp:TextBox>
                <asp:CompareValidator ID="CompareValidator1" runat="server" ControlToCompare="TextBox3" ControlToValidate="TextBox3" ErrorMessage="Passwords do not match" ValidationGroup="ValidationGroup1" />
                <br />
                <br />
                <asp:Label ID="Label4" runat="server" Text="Confirm Password : "></asp:Label>
                &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
                <asp:TextBox ID="TextBox4" runat="server" TextMode="Password" Width="189px"></asp:TextBox>
                <asp:CompareValidator ID="CompareValidator2" runat="server" ControlToCompare="TextBox4" ControlToValidate="TextBox4" ErrorMessage="Passwords do not match" ValidationGroup="ValidationGroup1" />
                <br />
                <br />
            </center>
        </div>
    </form>

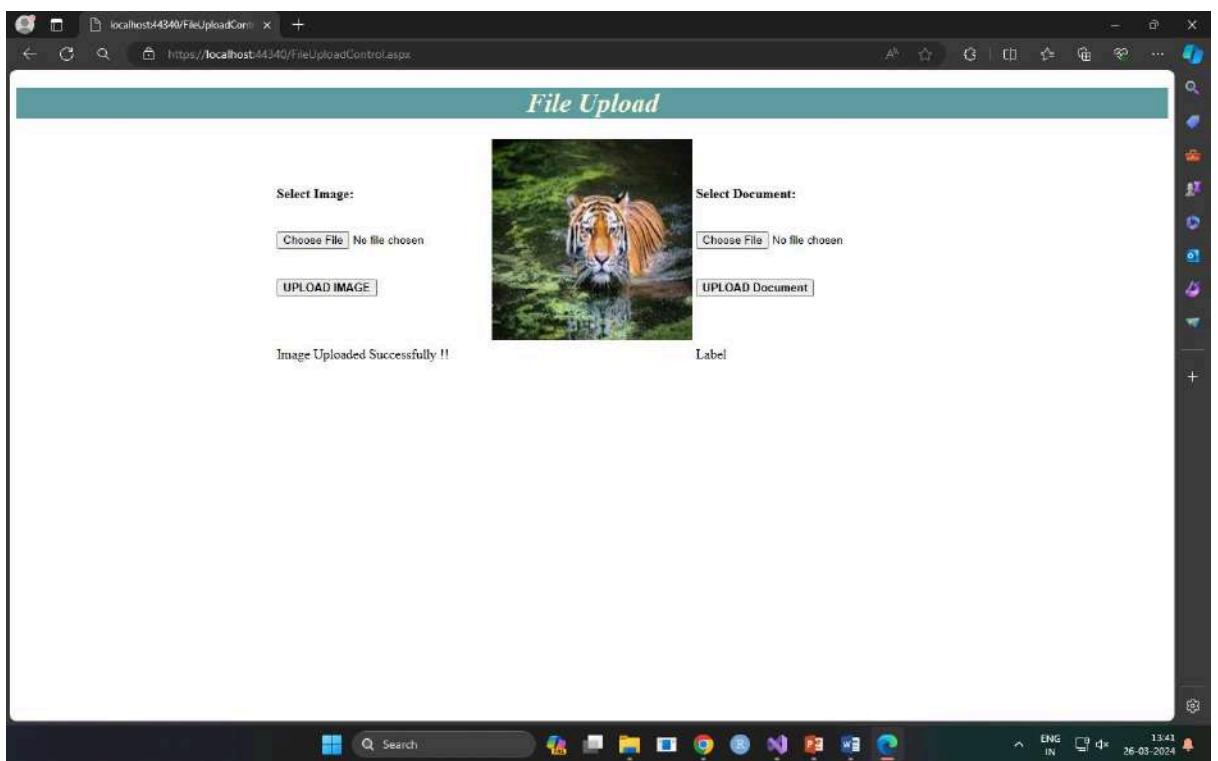
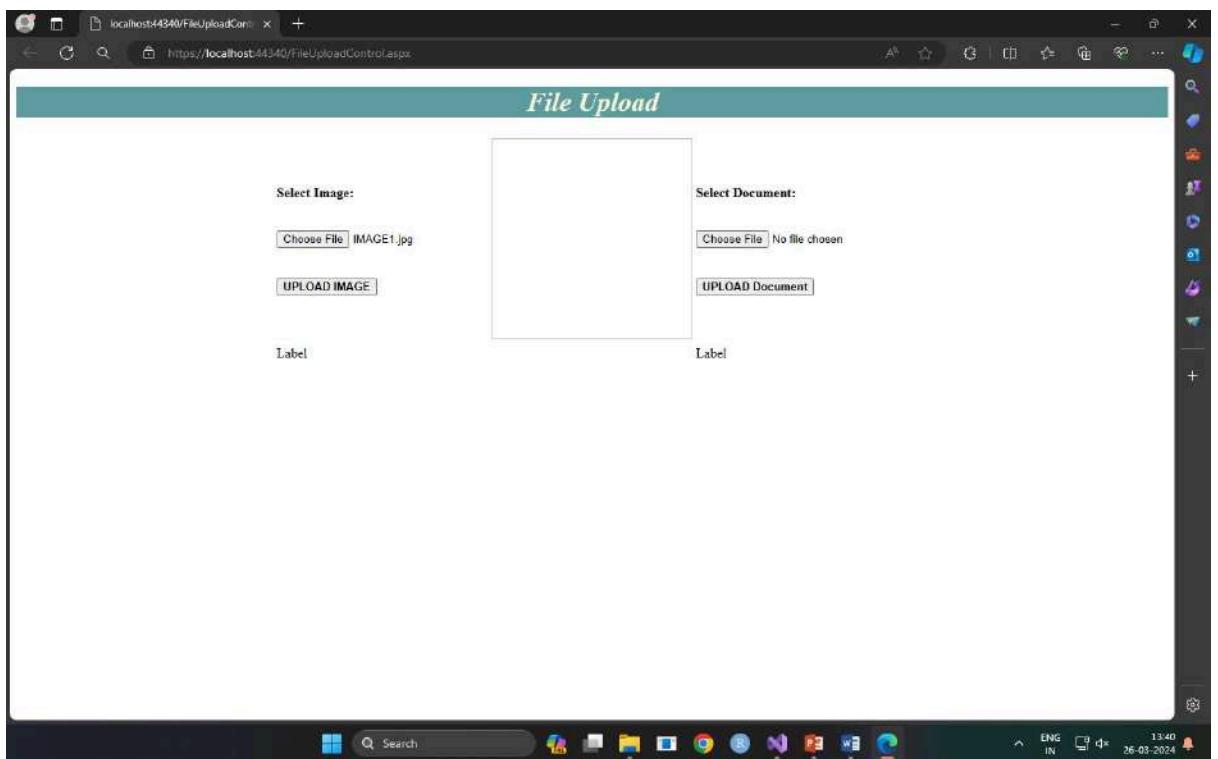
```

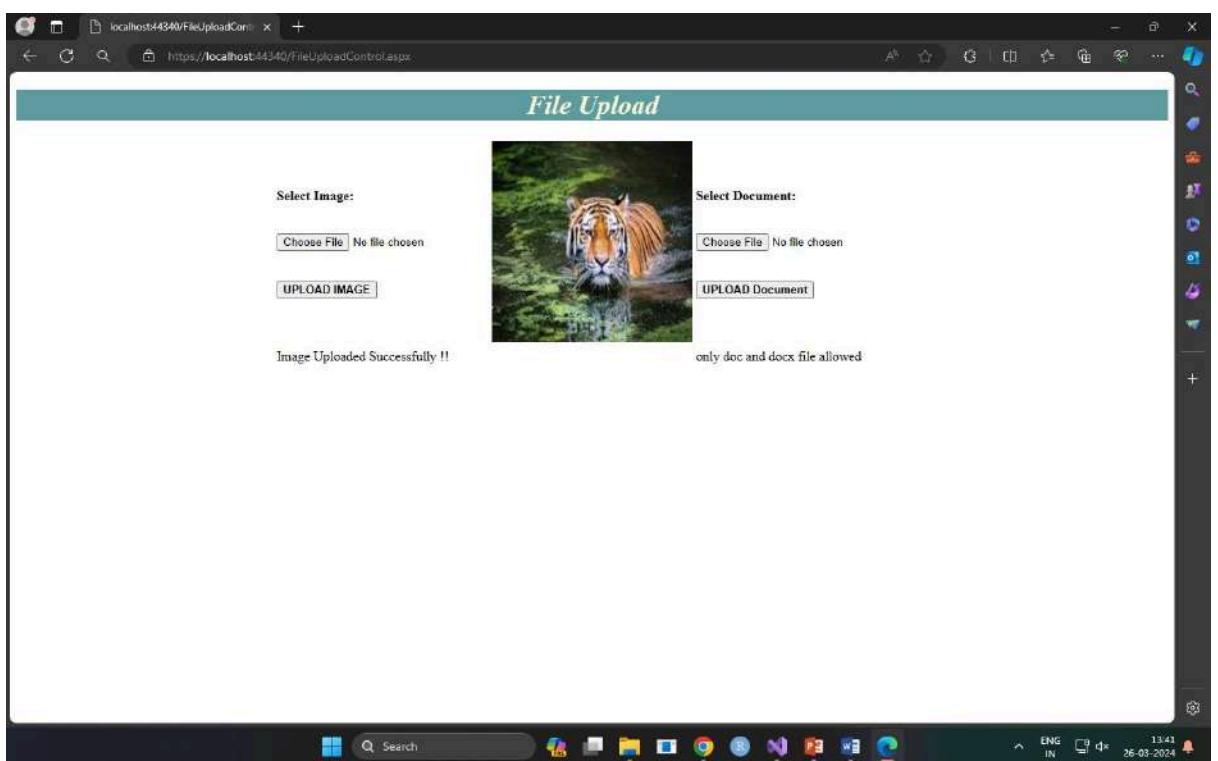
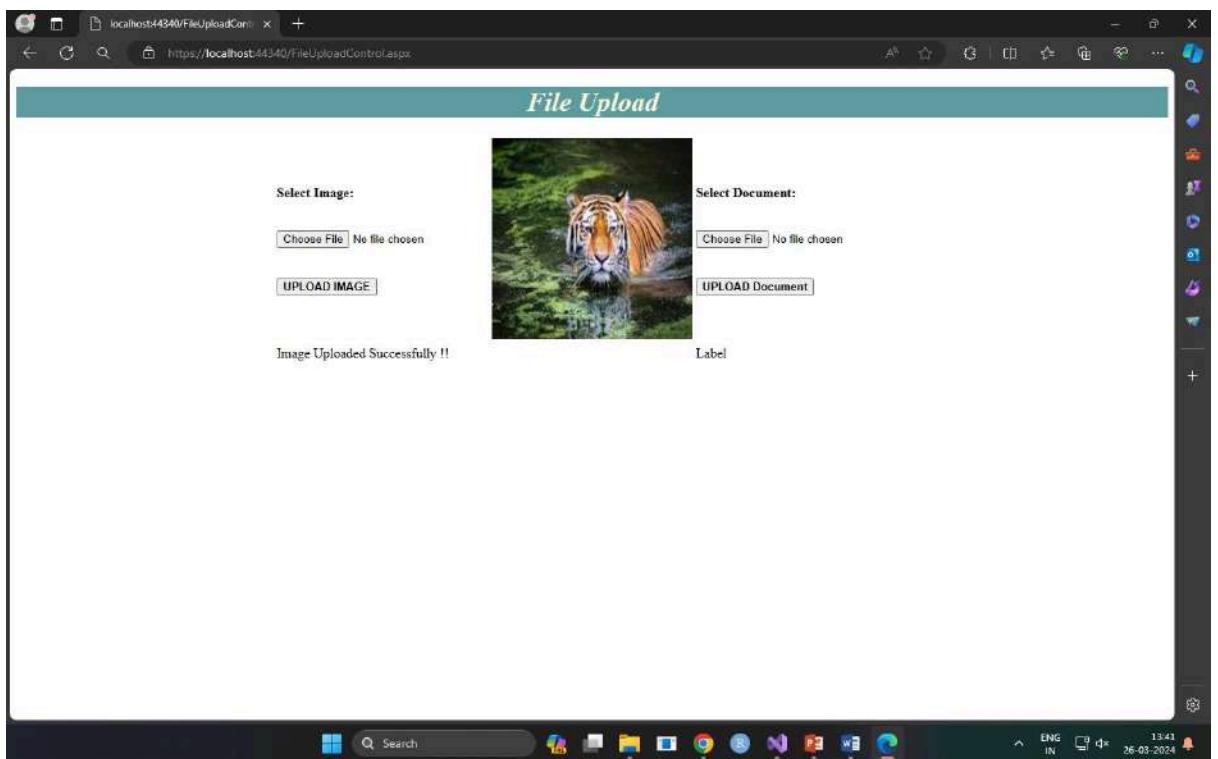
The Solution Explorer on the right shows the project structure, including files like Global.asax, PageLifeCycle.aspx, StudentRegistrationModule.aspx, ValidationController.aspx, and Web.config. The Properties window shows the file is ValidationController.aspx.

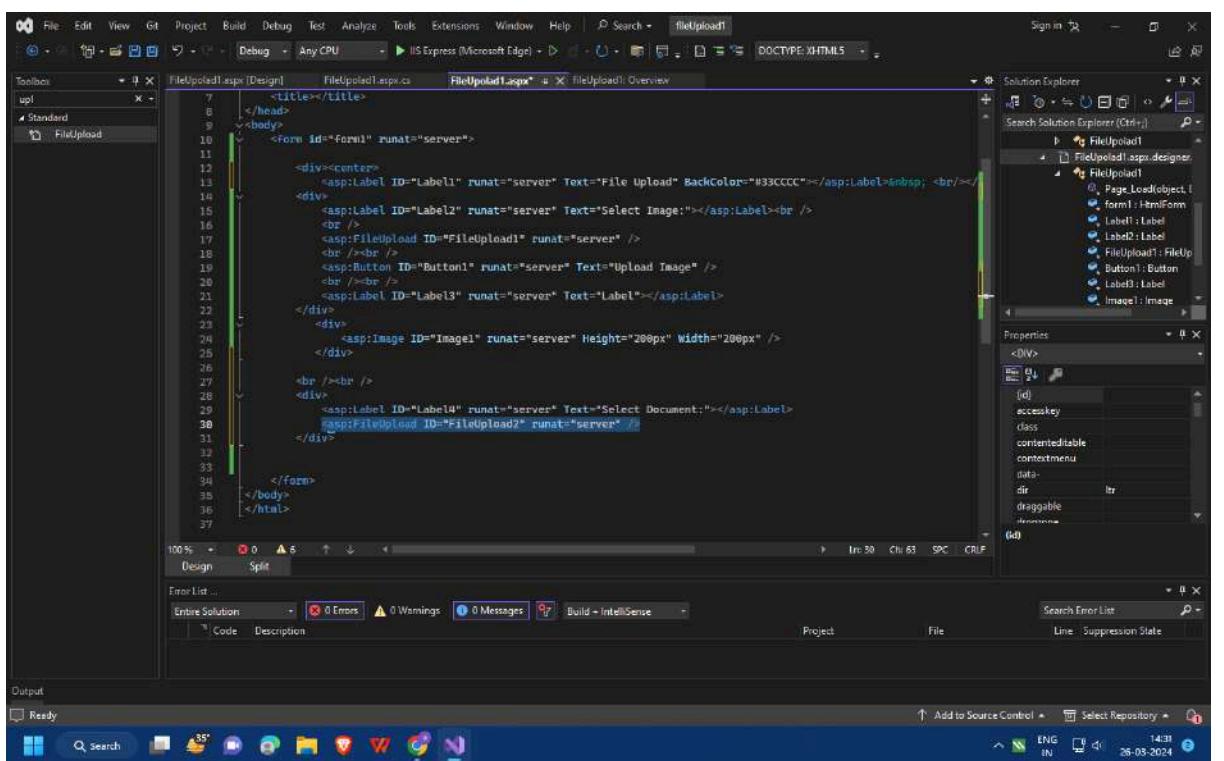
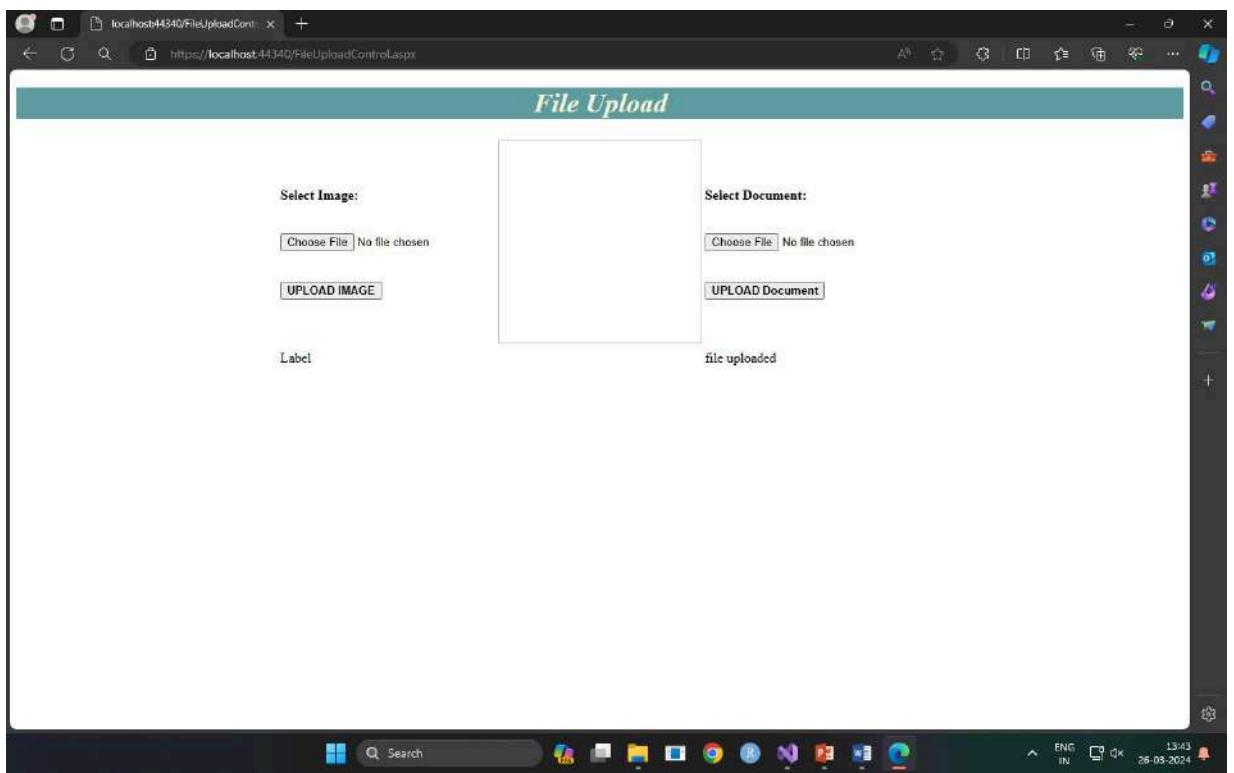
26-03-24











```
File Upload Control Logic
using System.Linq;
using System.Reflection.Emit;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace BasicWeApplication
{
    public partial class FileUploadControl : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
        }

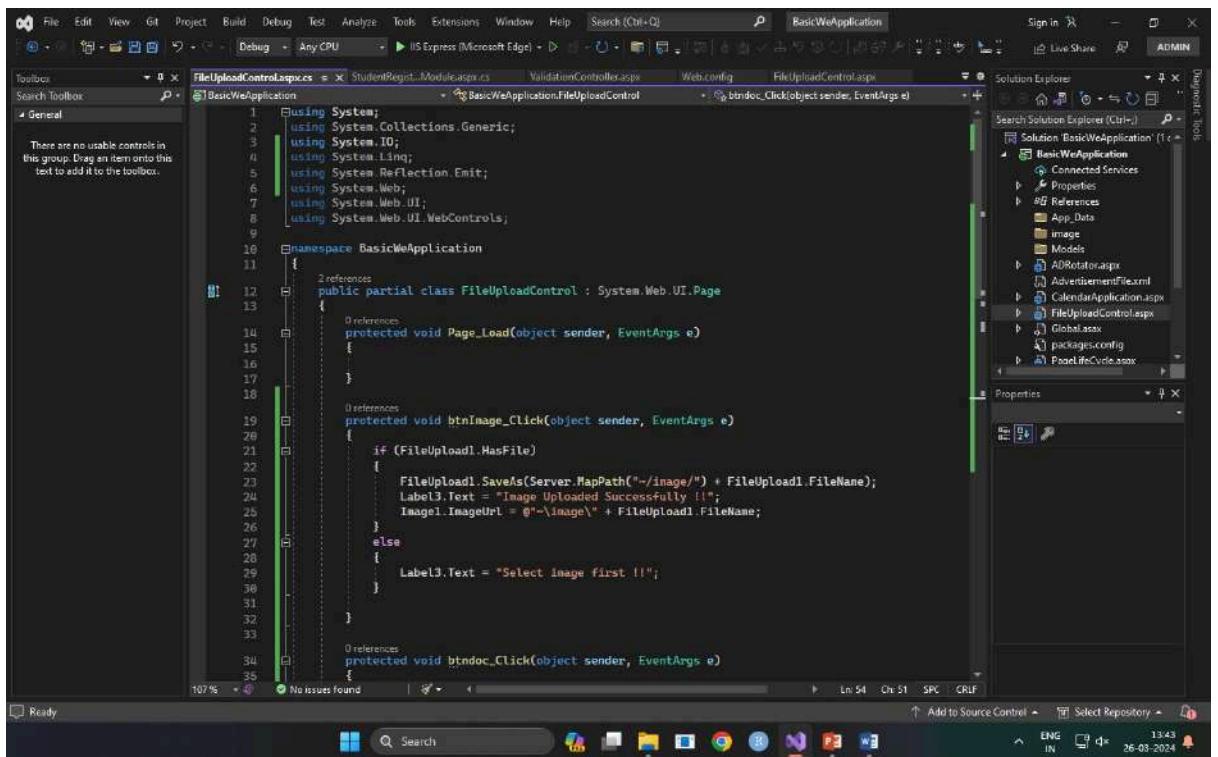
        protected void btnImage_Click(object sender, EventArgs e)
        {
            if (FileUpload1.HasFile)
            {
                FileUpload1.SaveAs(Server.MapPath("~/image/") + FileUpload1.FileName);
                Label3.Text = "Image Uploaded Successfully !!";
                Image1.ImageUrl = "~/image/" + FileUpload1.FileName;
            }
            else
            {
                Label3.Text = "Select image first !!";
            }
        }

        protected void btndoc_Click(object sender, EventArgs e)
        {
            string filePath = Path.GetFileName(FileUpload2.PostedFile.FileName);
            string fextn = Path.GetExtension(filePath);
        }
    }
}
```

```
File Upload Control Logic with Validation
using System.Linq;
using System.Reflection.Emit;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace BasicWeApplication
{
    public partial class FileUploadControl : System.Web.UI.Page
    {
        protected void btndoc_Click(object sender, EventArgs e)
        {
            string filePath = Path.GetFileName(FileUpload2.PostedFile.FileName);
            string fextn = Path.GetExtension(filePath);

            int size = FileUpload2.PostedFile.ContentLength;
            if (FileUpload2.HasFile)
            {
                if (fextn.ToLower() != ".doc" && fextn.ToLower() != ".docx")
                {
                    Label4.Text = "only doc and docx file allowed";
                }
                else if (size < 1024)
                {
                    Label4.Text = "file should be less than 1mb";
                }
                else
                {
                    FileUpload2.SaveAs(Server.MapPath("~/Upload/" + filePath));
                    Label4.Text = "file uploaded";
                }
            }
            else
            {
                Label8.Text = "please select file before uploading";
            }
        }
    }
}
```



Code for file upload control

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

```
namespace fileUpload1
```

```
{
    public partial class FileUpolad1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void Button1_Click(object sender, EventArgs e)
        {
            if(FileUpload1.HasFile)
            {
                FileUpload1.SaveAs(Server.MapPath("~/image/") +
FileUpload1.FileName);
                Label3.Text = "Image Uploaded Successfully !!";
                Image1.ImageUrl = @"~/image/" + FileUpload1.FileName;
            }
            else
        }
    }
}
```

```
{  
    Label3.Text = "Select image First !!!";  
}  
}  
  
protected void Button2_Click(object sender, EventArgs e)  
{  
    string filePath = Path.GetFileName(FileUpload2.PostedFile.FileName);  
    string fextn = Path.GetExtension(filePath);  
    int size = FileUpload2.PostedFile.ContentLength;  
    if (FileUpload2.HasFile)  
    {  
        if (fextn.ToLower() != ".doc" && fextn.ToLower() != ".docx")  
        {  
            Label4.Text = "Only doc and docx files are allowed !!!";  
        }  
        else if (size < 1024)  
        {  
            Label4.Text = "file should be less than 1mb!!";  
        }  
        else  
        {  
            FileUpload2.SaveAs(Server.MapPath("~/Upload/" + filePath));  
            Label4.Text = "File uploaded";  
        }  
    }  
    else  
    {  
        Label4.Text = "Please select file before uploading!!";  
    }  
}  
}
```

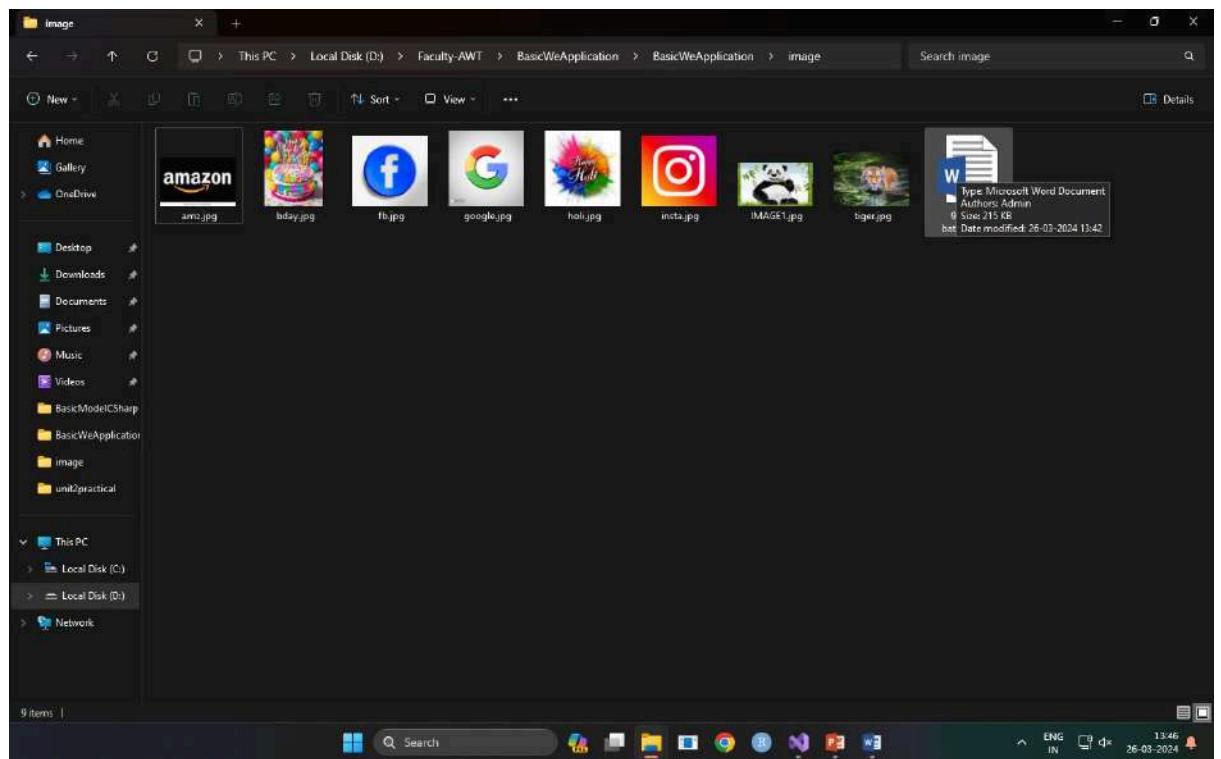
```
File Upload Control ASPX.cs
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Reflection.Emit;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace BasicWeApplication
{
    public partial class FileUploadControl : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void btnImage_Click(object sender, EventArgs e)
        {
            if (FileUpload1.HasFile)
            {
                FileUpload1.SaveAs(Server.MapPath("~/image/") + FileUpload1.FileName);
                Label3.Text = "Image Uploaded Successfully !!";
                Image1.ImageUrl = "~/image/" + FileUpload1.FileName;
            }
            else
            {
                Label3.Text = "Select image first !!";
            }
        }

        protected void btndoc_Click(object sender, EventArgs e)
        {
        }
    }
}
```



The screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the code for `FileUploadControl.aspx.cs`. The code handles file upload logic, specifically checking file type and size. It uses `Path.GetFileName`, `Path.GetExtension`, and `FileUpload.PostedFile.ContentLength` methods. Error messages are displayed in labels based on file type and size constraints. The Solution Explorer on the right shows the project structure for `BasicWebApplication`, including files like `FileUploadControl.aspx`, `FileUploadControl.aspx.cs`, and `Web.config`.

```
26 }  
27 else  
28 {  
29     Label3.Text = "Select image first !!!";  
30 }  
31 }  
32 }  
33 }  
34 protected void btndoc_Click(object sender, EventArgs e)  
35 {  
36     string filePath = Path.GetFileName(FileUpload2.PostedFile.FileName);  
37     string fextn = Path.GetExtension(filePath);  
38     int size = FileUpload2.PostedFile.ContentLength;  
39     if (FileUpload2.HasFile)  
40     {  
41         if (fextn.ToLower() != ".doc" && fextn.ToLower() != ".docx")  
42         {  
43             Label4.Text = "only doc and docx file allowed";  
44         }  
45         else if (size < 1824)  
46         {  
47             Label4.Text = "file should be less than 1mb";  
48         }  
49         else  
50         {  
51             FileUpload2.SaveAs(Server.MapPath("~/image/" + filePath));  
52             Label14.Text = "file uploaded";  
53         }  
54     }  
55 }  
56 }  
57 else  
58 {  
59     Label8.Text = "please select file before uploading";  
60 }  
61 }  
62 }
```

-----16-4-24-----
Diff bet connected and disconnected

The screenshot shows the Microsoft Visual Studio IDE interface comparing two database architecture approaches. The left pane shows the `ConnectedArchitecture.aspx` page, which displays a grid of data with columns labeled `Column0`, `Column1`, and `Column2`. The data consists of five rows, each with values `abc` in all three columns. Below the grid are buttons for `INSERT`, `UPDATE`, `DELETE`, `DISPLAY`, `Record COUNT`, and `SEARCH`. The right pane shows the `DisconnectedArchitecture.aspx` page, which has a similar layout but lacks the direct database connection shown in the left pane's Server Explorer.

This screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the C# code for the `ConnectedArchitecture.aspx.cs` file. The code implements a page that connects to a local database and displays employee data from a table named `Employee`. It also includes an `INSERT` query to add new records. The code uses `SqlConnection`, `SqlCommand`, and `SqlDataReader` objects. The `Display()` method retrieves data from the database and binds it to a `GridView`. The `btnInsert_Click()` event handler handles the insertion of new data into the database. The Solution Explorer on the right shows the project structure, including files like `ConnectedArchitecture.aspx`, `LINQwithDataSet.aspx.cs`, and `DataControls.aspx`.

```
1  using System;
2  using System.Collections.Generic;
3  using System.Data;
4  using System.Data.SqlClient;
5  using System.Linq;
6  using System.Web;
7  using System.Web.UI;
8  using System.Web.UI.WebControls;
9
10 namespace DatabaseApplication
11 {
12     public partial class ConnectedArchitecture : System.Web.UI.Page
13     {
14         SqlConnection conn;
15         SqlCommand cmd;
16         SqlDataReader dr;
17         protected void Page_Load(object sender, EventArgs e)
18         {
19             conn = new SqlConnection("Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\Documents\LocalDB.mdf");
20         }
21         public void Display()
22         {
23             conn.Open();
24             cmd = new SqlCommand("select * from Employee", conn);
25             dr = cmd.ExecuteReader();
26             //DataTable dt = new DataTable();
27             //dt.Load(dr);
28             GridView1.DataSource = dr;
29             GridView1.DataBind();
30             conn.Close();
31         }
32
33         protected void btnInsert_Click(object sender, EventArgs e)
34         {
35             conn.Open();
36             cmd = new SqlCommand("INSERT INTO Employee(Eid, Ename, Deptno) VALUES ('" + TextBox1.Text + "','" + TextBox2.Text + "','" + TextBox3.Text + "')", conn);
37             cmd.ExecuteNonQuery();
38             Response.Write("one record inserted.");
39             conn.Close();
40             Display();
41         }
42     }
43 }
```

This screenshot shows the Microsoft Visual Studio IDE interface, identical to the one above. It displays the same C# code for the `ConnectedArchitecture.aspx.cs` file. The code is identical to the first screenshot, implementing a page that connects to a local database and displays employee data from a table named `Employee`. It also includes an `INSERT` query to add new records. The code uses `SqlConnection`, `SqlCommand`, and `SqlDataReader` objects. The `Display()` method retrieves data from the database and binds it to a `GridView`. The `btnInsert_Click()` event handler handles the insertion of new data into the database. The Solution Explorer on the right shows the project structure, including files like `ConnectedArchitecture.aspx`, `LINQwithDataSet.aspx.cs`, and `DataControls.aspx`.

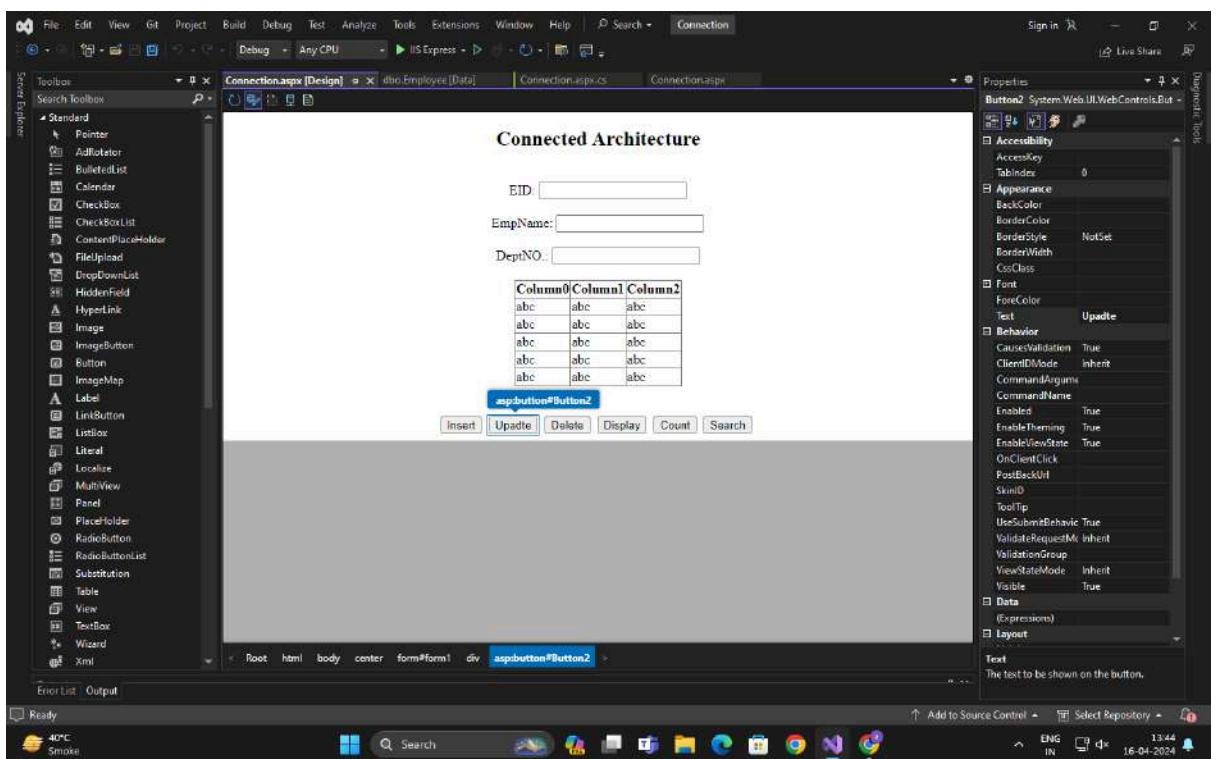
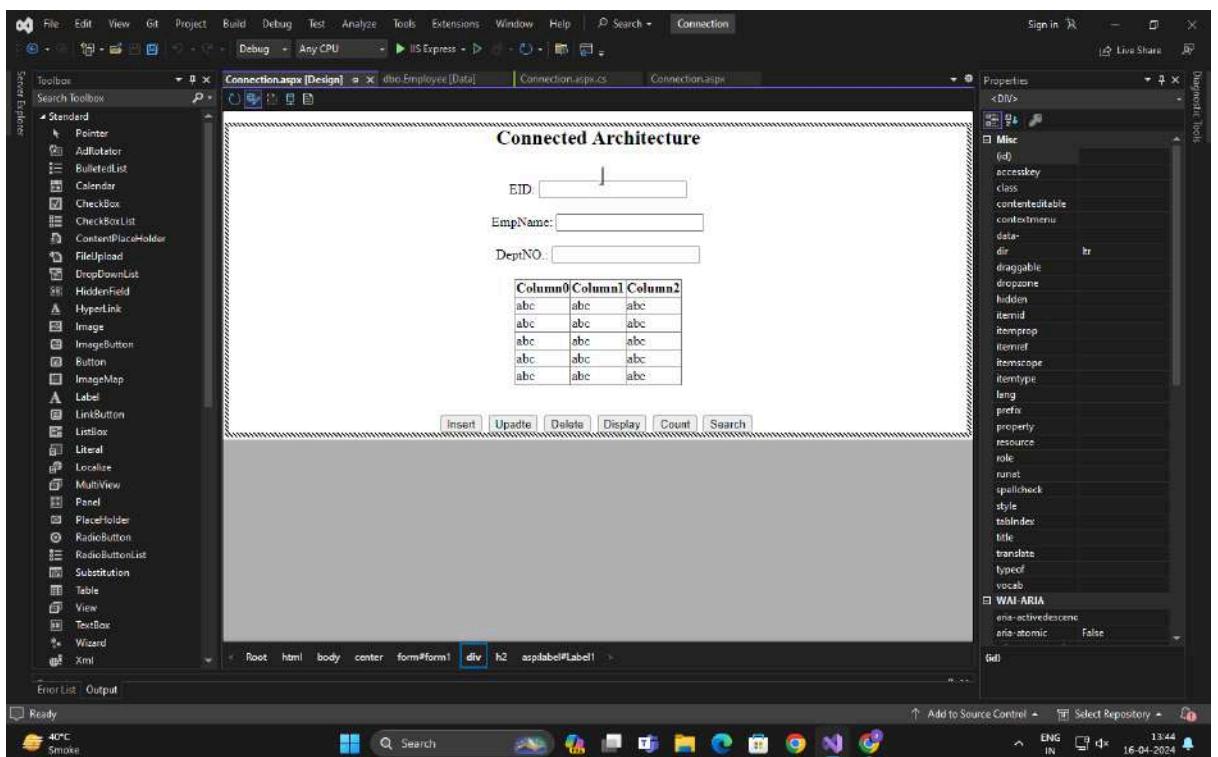
```
1  using System;
2  using System.Collections.Generic;
3  using System.Data;
4  using System.Data.SqlClient;
5  using System.Linq;
6  using System.Web;
7  using System.Web.UI;
8  using System.Web.UI.WebControls;
9
10 namespace DatabaseApplication
11 {
12     public partial class ConnectedArchitecture : System.Web.UI.Page
13     {
14         SqlConnection conn;
15         SqlCommand cmd;
16         SqlDataReader dr;
17         protected void Page_Load(object sender, EventArgs e)
18         {
19             conn = new SqlConnection("Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\Documents\LocalDB.mdf");
20         }
21         public void Display()
22         {
23             conn.Open();
24             cmd = new SqlCommand("select * from Employee", conn);
25             dr = cmd.ExecuteReader();
26             //DataTable dt = new DataTable();
27             //dt.Load(dr);
28             GridView1.DataSource = dr;
29             GridView1.DataBind();
30             conn.Close();
31         }
32
33         protected void btnInsert_Click(object sender, EventArgs e)
34         {
35             conn.Open();
36             cmd = new SqlCommand("INSERT INTO Employee(Eid, Ename, Deptno) VALUES ('" + TextBox1.Text + "','" + TextBox2.Text + "','" + TextBox3.Text + "')", conn);
37             cmd.ExecuteNonQuery();
38             Response.Write("one record inserted.");
39             conn.Close();
40             Display();
41         }
42     }
43 }
```

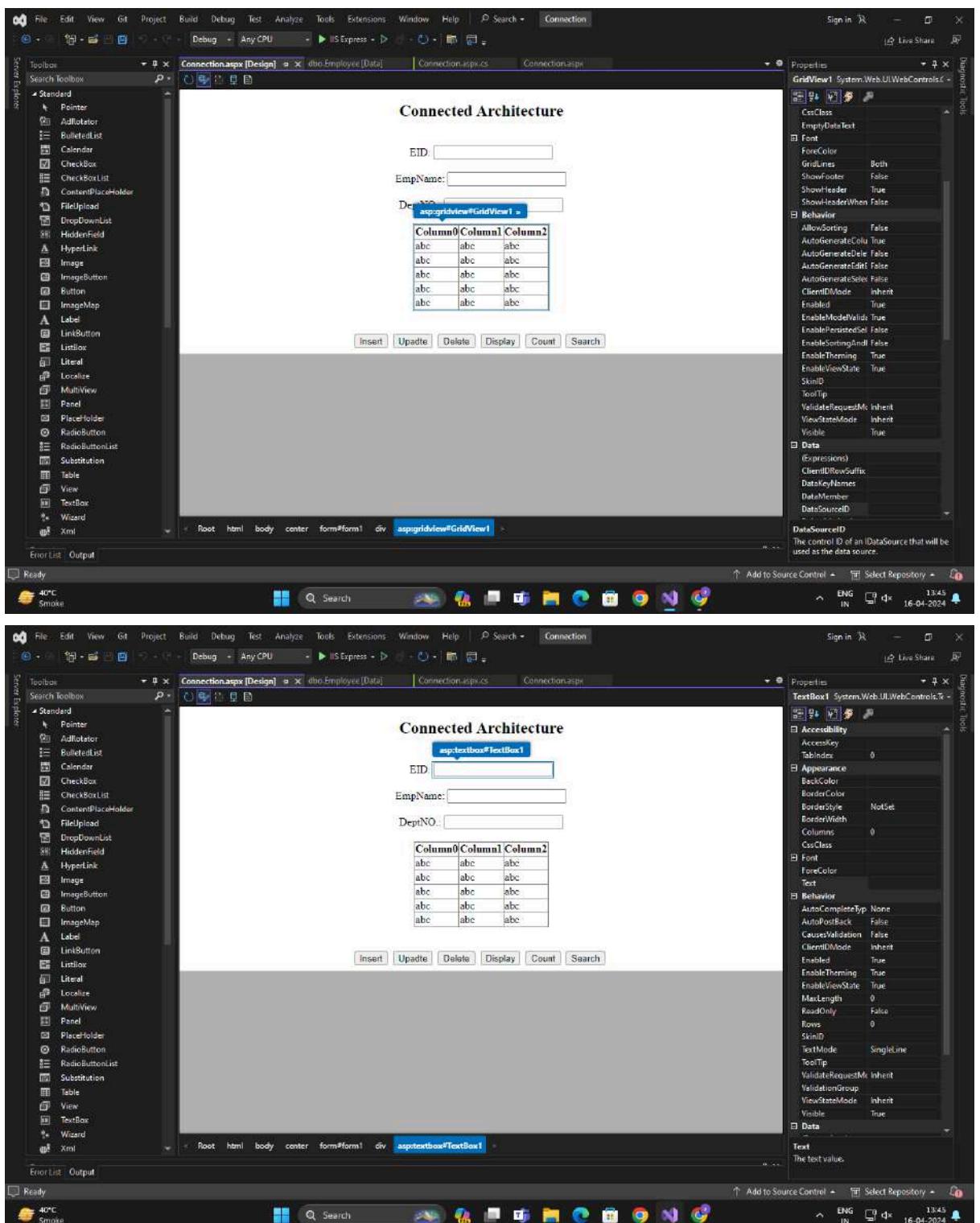
```
protected void btnInsert_Click(object sender, EventArgs e)
{
    conn.Open();
    cmd = new SqlCommand("INSERT INTO Employee(Eid, Ename, DeptNo) VALUES ('" +
        TextBox1.Text + "','" + TextBox2.Text + "','" + TextBox3.Text + "')",
        conn);
    cmd.ExecuteNonQuery();
    Response.Write("one record inserted:");
    conn.Close();
    Display();
}

protected void btnUpdate_Click(object sender, EventArgs e)
{
    conn.Open();
    string abc = "UPDATE Employee SET Eid ='" + TextBox1.Text + "', " +
        "Ename ='" + TextBox2.Text + "','" +
        "DeptNo ='" + TextBox3.Text + "' WHERE Eid ='" + TextBox1.Text + "'";
    cmd = new SqlCommand(abc, conn);
    cmd.ExecuteNonQuery();
    Response.Write("one record updated:");
    conn.Close();
    Display();
}

protected void btnDelete_Click(object sender, EventArgs e)
{
    conn.Open();
    cmd = new SqlCommand("DELETE FROM Employee where Eid= '" + TextBox1.Text + "'",
        conn);
    cmd.ExecuteNonQuery();
    Response.Write("one record Delete:");
    conn.Close();
    Display();
}
```

Design:





Code:

Connection.aspx

```
<%@ Page Language="C#" AutoEventWireup="true"
CodeBehind="Connection.aspx.cs" Inherits="Connection.Connection" %>
```

```
<!DOCTYPE html>
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

```

<head runat="server">
    <title></title>
</head>
<body>
    <center>
        <form id="form1" runat="server">
            <div>
                <h2> <asp:Label ID="Label1" runat="server" Text="Connected Architecture"></asp:Label></h2>
                <br />
                <asp:Label ID="Label2" runat="server" Text="EID: "></asp:Label>
                <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
                <br /><br />
                <asp:Label ID="Label3" runat="server" Text="EmpName: "></asp:Label>
                <asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>
                <br /><br />
                <asp:Label ID="Label4" runat="server" Text="DeptNO.: "></asp:Label>
                <asp:TextBox ID="TextBox3" runat="server"></asp:TextBox>
                <br /><br />
                <asp:GridView ID="GridView1" runat="server"></asp:GridView>
                <br /><br />
                <asp:Button ID="Button1" runat="server" Text="Insert" OnClick="Button1_Click"/>&nbsp;
                <asp:Button ID="Button2" runat="server" Text="Upadte" OnClick="Button2_Click"/>&nbsp;
                <asp:Button ID="Button3" runat="server" Text="Delete" OnClick="Button3_Click"/>&nbsp;
                <asp:Button ID="Button4" runat="server" Text="Display" OnClick="Button4_Click" />&nbsp;
                <asp:Button ID="Button5" runat="server" Text="Count" OnClick="Button5_Click"/>&nbsp;
                <asp:Button ID="Button6" runat="server" Text="Search" OnClick="Button6_Click"/>&nbsp;

            </div>
        </form>
    </center>
</body>
</html>

```

connection.aspx.cs

```

using System;
using System.Collections.Generic;
using System.Data.SqlClient;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.UI;

```

```
using System.Web.UI.WebControls;
using static System.Net.Mime.MediaTypeNames;
using System.Xml.Linq;

namespace Connection
{
    public partial class Connection : System.Web.UI.Page
    {
        SqlConnection conn;
        SqlCommand cmd;
        SqlDataReader dr;
        protected void Page_Load(object sender, EventArgs e)
        {
            conn = new SqlConnection(@"Data
Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Student\Document
s\B238DB.mdf;Integrated Security=True;Connect Timeout=30 ");
        }
        public void Display()
        {
            conn.Open();
            cmd = new SqlCommand("select * from Employee", conn);
            dr = cmd.ExecuteReader();
            //DataTable dt = new DataTable();
            //dt.Load(dr);
            GridView1.DataSource = dr;
            GridView1.DataBind();
            conn.Close();
        }
        protected void Button1_Click(object sender, EventArgs e)
        {
            conn.Open();

            cmd = new SqlCommand("INSERT INTO Employee(EID,EmpName,DeptNO)
VALUES (" + TextBox1.Text + "," + TextBox2.Text + "," + TextBox3.Text + ")",
conn);

            cmd.ExecuteNonQuery();

            Response.Write("One row inserted!");

            conn.Close();

            Display();
        }
        protected void Button2_Click(object sender, EventArgs e)
        {
            conn.Open();
```

```

        string updateSql = "UPDATE Employee SET EmpName = '" + TextBox2.Text
+ "' ,DeptNO = '" + TextBox3.Text + "' WHERE EID = " + TextBox1.Text + ":";

        cmd = new SqlCommand(updateSql, conn);

        cmd.ExecuteNonQuery();

        Response.Write("One row updated!");

        conn.Close();

        Display();
    }
protected void Button3_Click(object sender, EventArgs e)
{
    conn.Open();

    string deleteSql = "DELETE FROM Employee WHERE EID = " +
TextBox1.Text + ":";

    cmd = new SqlCommand(deleteSql, conn);

    cmd.ExecuteNonQuery();

    Response.Write("One row deleted!");

    conn.Close();

    Display();
}
protected void Button4_Click(object sender, EventArgs e)
{
    Display();
}

protected void Button6_Click(object sender, EventArgs e)
{
    conn.Open();

    cmd = new SqlCommand("SELECT * FROM EMPLOYEE WHERE EID = '" +
TextBox1.Text+"'", conn);
    cmd.CommandType = CommandType.Text;
    dr = cmd.ExecuteReader();
    GridView1.DataSource = dr;

    GridView1.DataBind();

    conn.Close();
}

```

```
        }
    protected void Button5_Click(object sender, EventArgs e)
    {
        conn.Open();
        cmd = new SqlCommand("select Count(*) from Employee", conn);
        int a = (int)cmd.ExecuteScalar();
        Response.Write("Total Record: " + a.ToString());
        conn.Close();
    }
}
```

Output:

localhost:4305/Connection.aspx

One row inserted!

Connected Architecture

EID:

EmpName:

DeptNO:

EID	EmpName	DeptNO
1	pran	4
2	Ritik	222
3	Satyam	333
4	Sarang	555
12	pranjal	6

[Insert](#) [Update](#) [Delete](#) [Display](#) [Count](#) [Search](#)

localhost:4305/Connection.aspx

One row deleted!

Connected Architecture

EID:

EmpName:

DeptNO:

EID	EmpName	DeptNO
1	pran	4
2	Ritik	222
3	Satyam	333
4	Sarang	555

[Insert](#) [Update](#) [Delete](#) [Display](#) [Count](#) [Search](#)

Nifty bank -0.6%

localhost:4305/Connection.aspx

13:36 16-04-2024

localhost:44305/Connection.aspx

One row updated!

Connected Architecture

EID:

EmpName:

DeptNO:

EID	EmpName	DeptNO
1	pran	4
2	Ritik	222
3	Satyam	333
4	Sarang	555





Connected Architecture

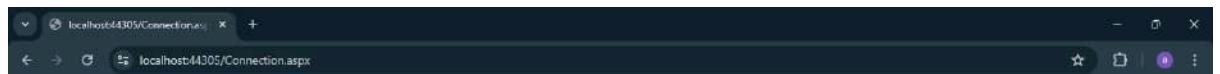
EID: [12]

EmpName: [pranjal]

DeptNO: [6]

EID	EmpName	DeptNO
1	pran	4
2	Ritik	222
3	Satyam	333
4	Sarang	555

[Insert] [Update] [Delete] [Display] [Count] [Search]



Connected Architecture

EID: [12]

EmpName: [pranjal]

DeptNO: [6]

EID	EmpName	DeptNO
1	pran	4
2	Ritik	222
3	Satyam	333
4	Sarang	555

[Insert] [Update] [Delete] [Display] [Count] [Search]



The screenshot shows the Microsoft Visual Studio IDE interface. The main area is a code editor displaying C# code for an ASP.NET page named `ConnectedArchitecture.aspx.cs`. The code includes methods for handling button clicks and displaying data from a database. The `Server Explorer` and `Solution Explorer` are visible on the left and right sides respectively, showing project files like `ConnectedArchitecture`, `LINQwithDataSet.aspx`, and `DatabaseApplication`. The `Properties` window is also open on the right.

```
using System;
using System.Data.SqlClient;
using System.Configuration;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;

public partial class ConnectedArchitecture : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        if (!IsPostBack)
        {
            Display();
        }
    }

    protected void btnDisplay_Click(object sender, EventArgs e)
    {
        Display();
    }

    protected void btnRcdCnt_Click(object sender, EventArgs e)
    {
        int a = cmd.ExecuteScalar();
        Response.Write("Total Record:-> " + a.ToString());
        conn.Close();
    }

    protected void btnSearch_Click(object sender, EventArgs e)
    {
        cmd = new SqlCommand("SELECT Eid,Ename,DeptNo FROM Employee where Eid=' " + TextBox1.Text + " ', conn");
        Response.Write("one record search:");
        dr = cmd.ExecuteReader();
        DataTable dt = new DataTable();
        dr.Load(dt);
        GridView1.DataSource = dt;
        GridView1.DataBind();
        conn.Close();
    }
}

class DatabaseApplication
{
    public static SqlConnection conn()
    {
        string str = ConfigurationManager.ConnectionStrings["DBFacultyConnection"].ConnectionString;
        SqlConnection conn = new SqlConnection(str);
        return conn;
    }

    public static void cmdExecute(string query, SqlConnection conn)
    {
        SqlCommand cmd = new SqlCommand(query, conn);
        cmd.ExecuteNonQuery();
        Response.Write("one record Delete:");
        conn.Close();
        Display();
    }
}
```

```
        cmd.ExecuteNonQuery();
        Response.Write("One record Delete:");
        conn.Close();
        Display();
    }

    protected void btnDisplay_Click(object sender, EventArgs e)
    {
        Display();
    }

    protected void btnRcdCnt_Click(object sender, EventArgs e)
    {
        conn.Open();
        cmd = new SqlCommand("select Count(*) from Employee", conn);

        int a = (Int)cmd.ExecuteScalar();
        Response.Write("Total Record:->" + a.ToString());
        conn.Close();
    }

    protected void btnSearch_Click(object sender, EventArgs e)
    {
        conn.Open();

        cmd = new SqlCommand("SELECT Eid,Ename,DeptNo FROM Employee where Eid=' " + TextBox1.Text + " ', conn");
        Response.Write("One record search:");
        dr = cmd.ExecuteReader();

        dt.Load(dr);
        GridView1.DataSource = dt;
        GridView1.DataBind();
        conn.Close();
    }
}
```

```
        cmd.ExecuteNonQuery();
        Response.Write("One record Delete:");
        conn.Close();
        Display();
    }

    protected void btnDisplay_Click(object sender, EventArgs e)
    {
        Display();
    }

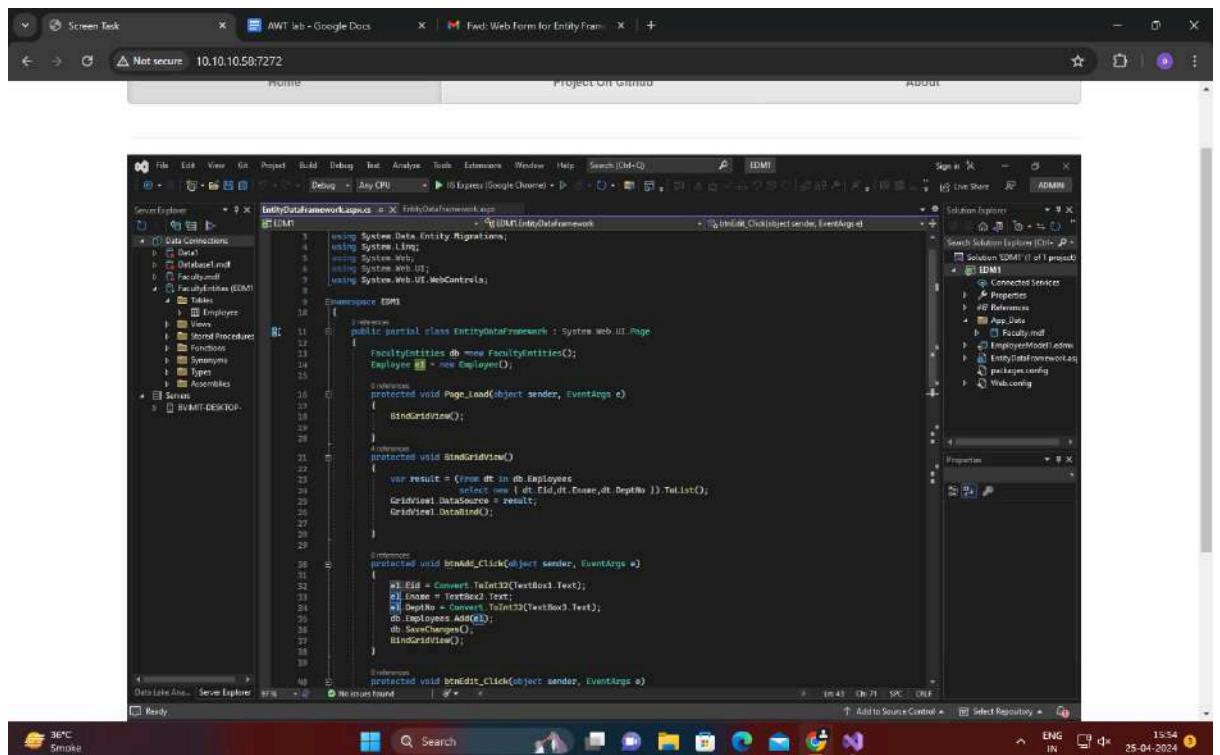
    protected void btnRcdCnt_Click(object sender, EventArgs e)
    {
        conn.Open();
        cmd = new SqlCommand("select Count(*) from Employee", conn);

        int a = (Int)cmd.ExecuteScalar();
        Response.Write("Total Record:->" + a.ToString());
        conn.Close();
    }

    protected void btnSearch_Click(object sender, EventArgs e)
    {
        conn.Open();

        cmd = new SqlCommand("SELECT Eid,Ename,DeptNo FROM Employee where Eid=' " + TextBox1.Text + " ', conn");
        Response.Write("One record search:");
        dr = cmd.ExecuteReader();
        GridView1.DataSource = dr;
        GridView1.DataBind();
        conn.Close();
    }
}
```

Missed last prac-----
-----25-4-24



The screenshot shows the Microsoft Visual Studio IDE with the following details:

- Solution Explorer:** Shows the project structure for "EntityDataFramework.aspx".
- Code Editor:** Displays the C# code for "EntityDataSource1.aspx.cs".
- Toolbars:** Standard Visual Studio toolbars for File, Edit, View, Project, Build, Debug, Ref, Analyze, Tools, Estimates, Window, Help.
- Status Bar:** Shows the current file path ("EntityDataSource1.aspx.cs"), line numbers (40), and other status information.
- Taskbar:** Shows multiple open windows including "Screen Task", "AWT lab - Google Docs", and "Fwd: Web Form for Entity Frame".
- System Tray:** Shows system icons like battery level, network, and date/time (25-04-2024).

```
using System.Data.Entity.Migrations;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

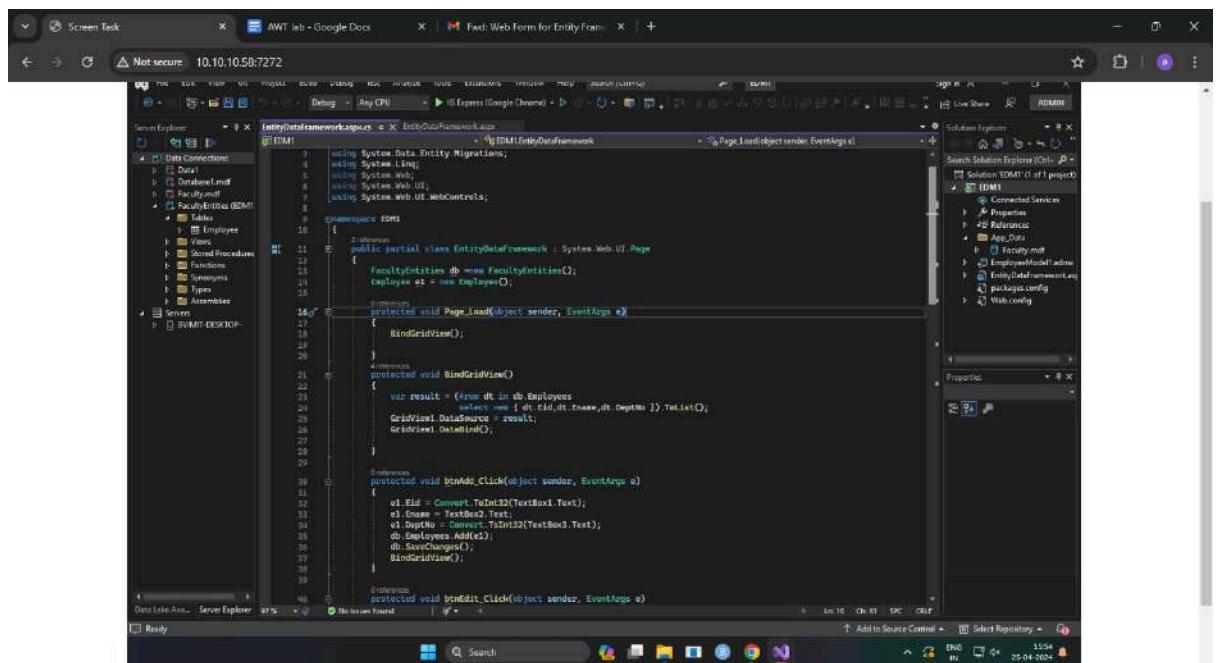
namespace EDM1
{
    public partial class EntityDataFramework : System.Web.UI.Page
    {
        FacultyEntities db = new FacultyEntities();
        Employee e1 = new Employee();

        protected void Page_Load(object sender, EventArgs e)
        {
            BindGridView();
        }

        protected void BindGridView()
        {
            var result = (from dt in db.Employees
                         select new { dt.Id, dt.Name, dt.Depth }).ToList();
            GridView1.DataSource = result;
            GridView1.DataBind();
        }

        protected void btnAdd_Click(object sender, EventArgs e)
        {
            int Eid = Convert.ToInt32(textBox1.Text);
            string Ename = textBox2.Text;
            int DepthNo = Convert.ToInt32(textBox3.Text);
            db.Employees.Add(e1);
            db.SaveChanges();
            BindGridView();
        }

        protected void btnEdit_Click(object sender, EventArgs e)
        {
            e1.Id = Convert.ToInt32(textBox1.Text);
            e1.Ename = textBox2.Text;
            e1.DepthNo = Convert.ToInt32(textBox3.Text);
            db.Employees.Add(e1);
            db.SaveChanges();
            BindGridView();
        }
    }
}
```



The screenshot shows the Microsoft Visual Studio IDE with the following details:

- Solution Explorer:** Shows the project structure for "EntityDataFramework.aspx".
- Code Editor:** Displays the C# code for "EntityDataFramework.aspx.cs".
- Toolbars:** Standard Visual Studio toolbars for File, Edit, View, Project, Build, Debug, Ref, Analyze, Tools, Estimates, Window, Help.
- Status Bar:** Shows the current file path ("EntityDataFramework.aspx.cs"), line numbers (40), and other status information.
- Taskbar:** Shows multiple open windows including "Screen Task", "AWT lab - Google Docs", and "Fwd: Web Form for Entity Frame".
- System Tray:** Shows system icons like battery level, network, and date/time (25-04-2024).

```
using System.Data.Entity.Migrations;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace EDM1
{
    public partial class EntityDataFramework : System.Web.UI.Page
    {
        FacultyEntities db = new FacultyEntities();
        Employee e1 = new Employee();

        protected void Page_Load(object sender, EventArgs e)
        {
            BindGridView();
        }

        protected void BindGridView()
        {
            var result = (from dt in db.Employees
                         select new { dt.Id, dt.Name, dt.Depth }).ToList();
            GridView1.DataSource = result;
            GridView1.DataBind();
        }

        protected void btnAdd_Click(object sender, EventArgs e)
        {
            int Eid = Convert.ToInt32(textBox1.Text);
            string Ename = textBox2.Text;
            int DepthNo = Convert.ToInt32(textBox3.Text);
            db.Employees.Add(e1);
            db.SaveChanges();
            BindGridView();
        }

        protected void btnEdit_Click(object sender, EventArgs e)
        {
            e1.Id = Convert.ToInt32(textBox1.Text);
            e1.Ename = textBox2.Text;
            e1.DepthNo = Convert.ToInt32(textBox3.Text);
            db.Employees.Add(e1);
            db.SaveChanges();
            BindGridView();
        }
    }
}
```



The screenshot shows the Microsoft Visual Studio IDE with the following details:

- Solution Explorer:** Shows the project structure for "EntityDataFramework.aspx".
- Code Editor:** Displays the C# code for "EntityDataFramework.aspx.cs".
- Toolbars:** Standard Visual Studio toolbars for File, Edit, View, Project, Build, Debug, Ref, Analyze, Tools, Estimates, Window, Help.
- Status Bar:** Shows the current file path ("EntityDataFramework.aspx.cs"), line numbers (40), and other status information.
- Taskbar:** Shows multiple open windows including "Screen Task", "AWT lab - Google Docs", and "Fwd: Web Form for Entity Frame".
- System Tray:** Shows system icons like battery level, network, and date/time (25-04-2024).

```
using System;
using System.Collections.Generic;
using System.Data.Entity.Migrations;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data.Entity;

public partial class EntityData : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        BindGridView();
    }

    protected void BindGridView()
    {
        var result = (from E in db.Employees
                     where E.Eid == e1.Eid
                     select E).Single();
        db.Employees.AddOrUpdate(result);
        db.SaveChanges();
        BindGridView();
    }

    protected void btnAdd_Click(object sender, EventArgs e)
    {
        e1.Eid = int.Parse(textBox1.Text);
        var result = (from E in db.Employees
                     where E.Eid == e1.Eid
                     select E).Single();
        result.Ename = textBox2.Text;
        result.Birthdate = DateTime.Parse(textBox3.Text);
        db.Employees.AddOrUpdate(result);
        db.SaveChanges();
        BindGridView();
    }

    protected void btnDelete_Click(object sender, EventArgs e)
    {
        e1.Eid = int.Parse(textBox1.Text);
        var result = (from E in db.Employees
                     where E.Eid == e1.Eid
                     select E).Single();
        db.Employees.Remove(result);
        db.SaveChanges();
        BindGridView();
    }

    protected void btnSearch_Click(object sender, EventArgs e)
    {
        e1.Eid = int.Parse(textBox1.Text);
        var result = (from E in db.Employees
                     where E.Eid == e1.Eid
                     select new
                     {
                         E.Eid,
                         E.Ename,
                         E.Birthdate
                     }).ToList();
        GridView1.DataSource = result;
        GridView1.DataBind();
    }
}
```

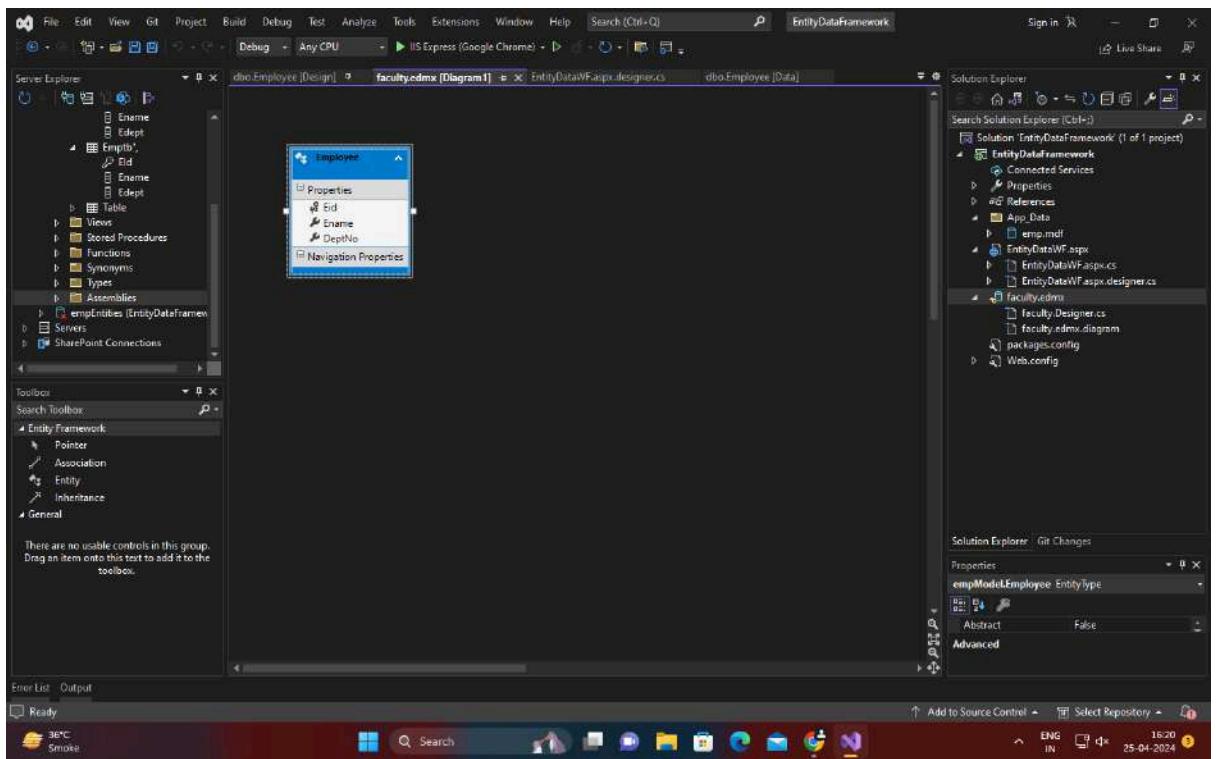
```
using System;
using System.Collections.Generic;
using System.Data.Entity.Migrations;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data.Entity;

public partial class EntityData : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        BindGridView();
    }

    protected void BindGridView()
    {
        var result = (from dt in db.Employees
                     select new { dt.Eid, dt.Ename, dt.Depth }).ToList();
        GridView1.DataSource = result;
        GridView1.DataBind();
    }

    protected void btnAdd_Click(object sender, EventArgs e)
    {
        e1.Eid = Convert.ToInt32(textBox1.Text);
        e1.Ename = textBox2.Text;
        e1.Depth = Convert.ToInt32(textBox3.Text);
        db.Employees.Add(e1);
        db.SaveChanges();
        BindGridView();
    }
}
```

Right click on project name-> add-> new item-> left corner (DATA) -> ADO.NET Entity data model -> name the file-> add-> select EF designer as default-> next->entity framework 6.x -> next-> select your table name -> finish



Screenshot of Microsoft Visual Studio showing the code editor for EntityDataFramework.cs. The code implements business logic for updating employee data:

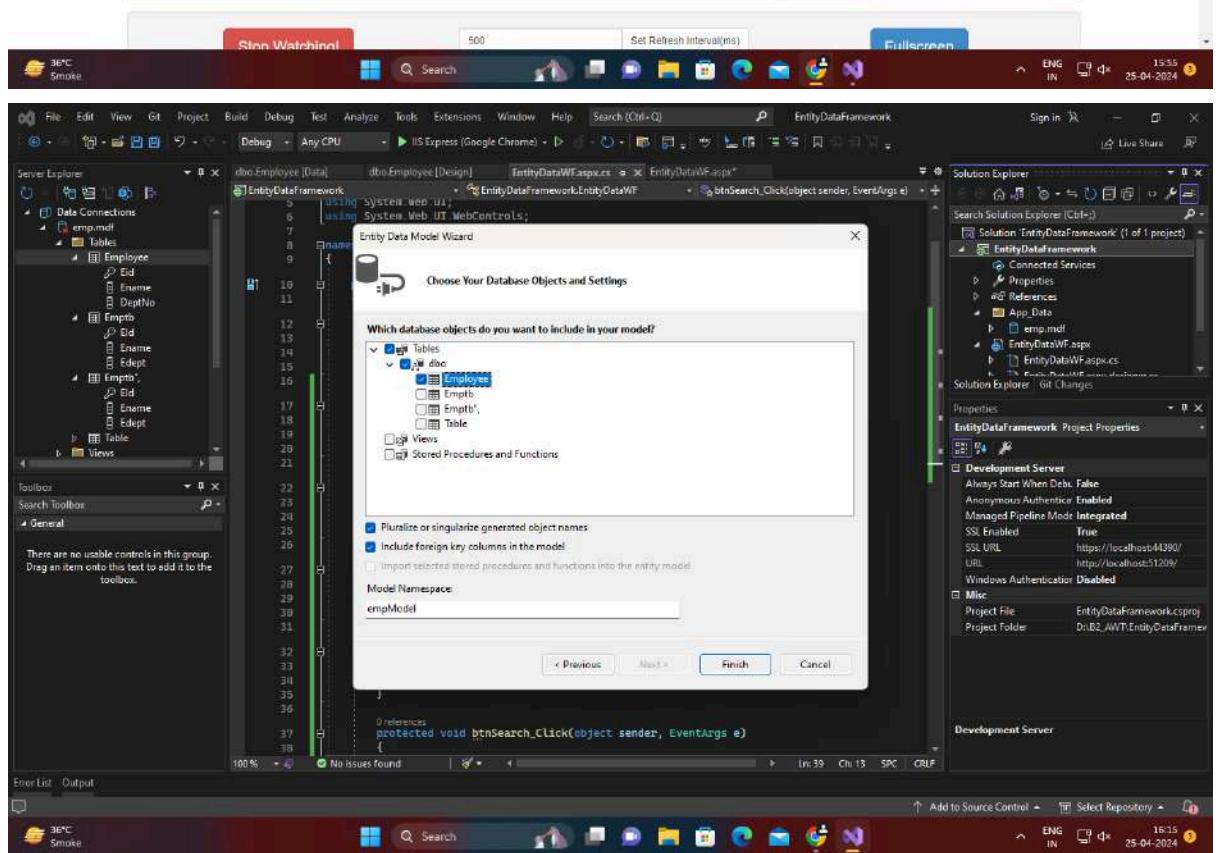
```

    protected void btnEdit_Click(object sender, EventArgs e)
    {
        int Eid = int.Parse(textBox1.Text);
        var result = (from E in db.Employees where E.Eid == Eid select E).Single();
        result.Ename = textBox2.Text;
        result.Deptho = Convert.ToInt32(textBox3.Text);
        db.Employees.AddOrUpdate(result);
        db.SaveChanges();
        BindGridView();
    }

    protected void btnDelete_Click(object sender, EventArgs e)
    {
        Eid = int.Parse(textBox1.Text);
        var result = (from E in db.Employees where E.Eid == Eid select E).Single();
        db.Employees.Remove(result);
        db.SaveChanges();
        BindGridView();
    }

    protected void btnSearch_Click(object sender, EventArgs e)
    {
        Eid = int.Parse(textBox1.Text);
        var result = (from E in db.Employees where E.Eid == Eid select E).Single();
        result.Ename = textBox2.Text;
        result.Deptho = Convert.ToInt32(textBox3.Text);
        Gridview1.DataSource = result;
        Gridview1.DataBind();
    }

```



Screenshot of Microsoft Visual Studio showing two windows side-by-side.

Top Window:

- Server Explorer:** Shows the database structure for the "faculty.edmx" file, including tables like Employee, Dept, and EmpType.
- Code Editor:** Displays the code for the "EntityDataFramework.EntityDataWF.aspx.cs" page. The code includes event handlers for button clicks (btnAdd_Click, btnEdit_Click, btnDelete_Click) and text box changes (TextBox1_TextChanged).
- Solution Explorer:** Shows the project structure for "EntityDataFramework" and the "faculty.edmx" file.

```

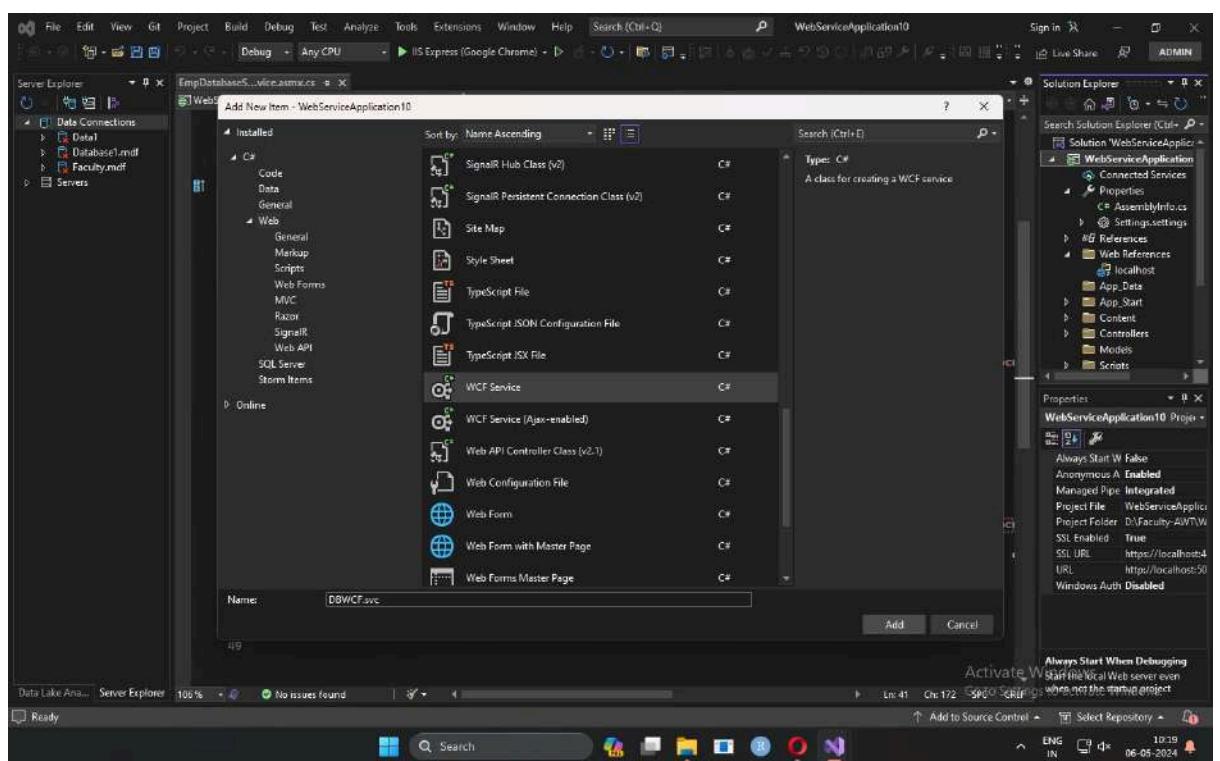
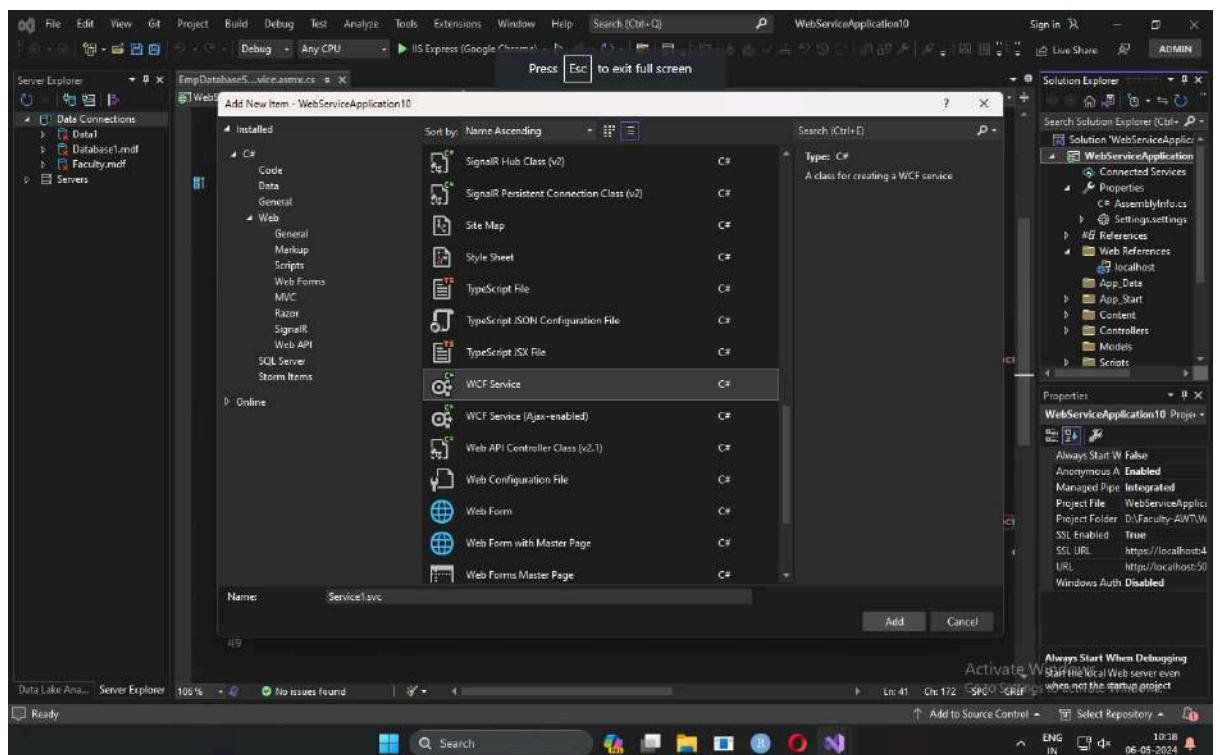
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.UI;
6  using System.Web.UI.WebControls;
7
8  namespace EntityDataFramework
9  {
10     public partial class EntityDataWF : System.Web.UI.Page
11     {
12         protected void Page_Load(object sender, EventArgs e)
13         {
14         }
15
16         protected void TextBox1_TextChanged(object sender, EventArgs e)
17         {
18         }
19
20         protected void btnAdd_Click(object sender, EventArgs e)
21         {
22         }
23
24         protected void btnEdit_Click(object sender, EventArgs e)
25         {
26         }
27
28         protected void btnDelete_Click(object sender, EventArgs e)
29         {
30         }
31
32         protected void btnSearch_Click(object sender, EventArgs e)
33         {
34         }
35     }
36 }

```

Bottom Window:

- Server Explorer:** Shows the database structure for the "faculty.edmx" file, including tables like Employee, Dept, and EmpType.
- Toolbox:** Shows the Entity Framework tools: Pointer, Association, Entity, Inheritance, and General.
- Code Editor:** Displays the code for the "EntityDataFramework.EntityDataWF.aspx.cs" page, similar to the top window.
- Solution Explorer:** Shows the project structure for "EntityDataFramework" and the "faculty.edmx" file.

Simple web service vs wcf service?
Wcf -> layered architecture



```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Runtime.Serialization;
5 using System.ServiceModel;
6 using System.Text;
7
8 namespace WebServiceApplication10
9 {
10     // NOTE: You can use the "Rename" command on the "Refactor" menu to change the interface name "IDBWCFC" in
11     [ServiceContract]
12     public interface IDBWCFC
13     {
14         [OperationContract]
15         void DoWork();
16     }
17 }
18
```

```
1 @using System;
2 using System.Collections.Generic;
3 using System.Data;
4 using System.Linq;
5 using System.Runtime.Serialization;
6 using System.ServiceModel;
7 using System.Text;
8
9 namespace WebServiceApplication10
10 {
11     // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCFC" in code.
12     // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCFC.svc or DBWCFC.svc
13     0 references
14     public class DBWCFC : IDBWCFC
15     {
16         0 references
17         public void DoWork()
18         {
19         }
20
21         1 reference
22         public DataSet getEmployee()
23         {
24             throw new NotImplementedException();
25         }
26     }
27 }
```

The screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the code for `DBWCF.cs` in a C# file. The code defines a class `DBWCF` that implements the interface `IDBWCF`. The implementation includes a method `getEmployee()` which creates a `SqlConnection`, executes a query, and returns a `DataSet`. The code uses namespaces from `System` to `System.Data.SqlClient`. The Solution Explorer on the right shows the project structure with files like `DBWCF.svc`, `EmpDatabaseService.svc.cs`, and `Web.config`. The Task List at the bottom indicates no issues found.

This screenshot is identical to the one above, showing the same code for `DBWCF.cs` in the Microsoft Visual Studio IDE. The code defines the `DBWCF` class implementing `IDBWCF`, with the `getEmployee()` method connecting to a LocalDB database and returning a `DataSet`. The Solution Explorer, Task List, and status bar are also visible.

The screenshot shows the Visual Studio IDE interface with the code editor open to the DBWCF.cs file. The code defines a class DBWCF that implements the IDBWCf interface. The getEmployee() method uses a SqlConnection and SqlCommand to execute a query against a local database named 'Faculty.mdf'. The code includes comments about renaming the class and launching the WCF Test Client.

```
using System;
using System.Collections.Generic;
using System.Data;
using System.Linq;
using System.Runtime.Serialization;
using System.ServiceModel;
using System.Text;
using System.Data.SqlClient;

namespace WebServiceApplication10
{
    // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCF" in code.
    // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCF.svc or DBWCF.svc.cs
    [ServiceContract]
    public class DBWCF : IDBWCf
    {
        SqlConnection conn;
        SqlCommand cmd;
        SqlDataAdapter sda;
        DataSet ds;
        [OperationContract]
        public DataSet getEmployee()
        {
            conn = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\Documents\Faculty.mdf");
            cmd = new SqlCommand("select * from employee",conn);
            cmd.CommandType = CommandType.Text;
            sda = new SqlDataAdapter(cmd);
            sda.Fill(ds);
            return ds;
        }
    }
}
```

This screenshot is identical to the one above, but it highlights the connection string in the getEmployee() method with a green vertical bar, indicating it is the current selection.

```
using System;
using System.Collections.Generic;
using System.Data;
using System.Linq;
using System.Runtime.Serialization;
using System.ServiceModel;
using System.Text;
using System.Data.SqlClient;

namespace WebServiceApplication10
{
    // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCF" in code.
    // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCF.svc or DBWCF.svc.cs
    [ServiceContract]
    public class DBWCF : IDBWCf
    {
        SqlConnection conn;
        SqlCommand cmd;
        SqlDataAdapter sda;
        DataSet ds;
        [OperationContract]
        public DataSet getEmployee()
        {
            conn = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\Documents\Faculty.mdf");
            cmd = new SqlCommand("select * from employee",conn);
            cmd.CommandType = CommandType.Text;
            sda = new SqlDataAdapter(cmd);
            sda.Fill(ds);
            return ds;
        }
    }
}
```

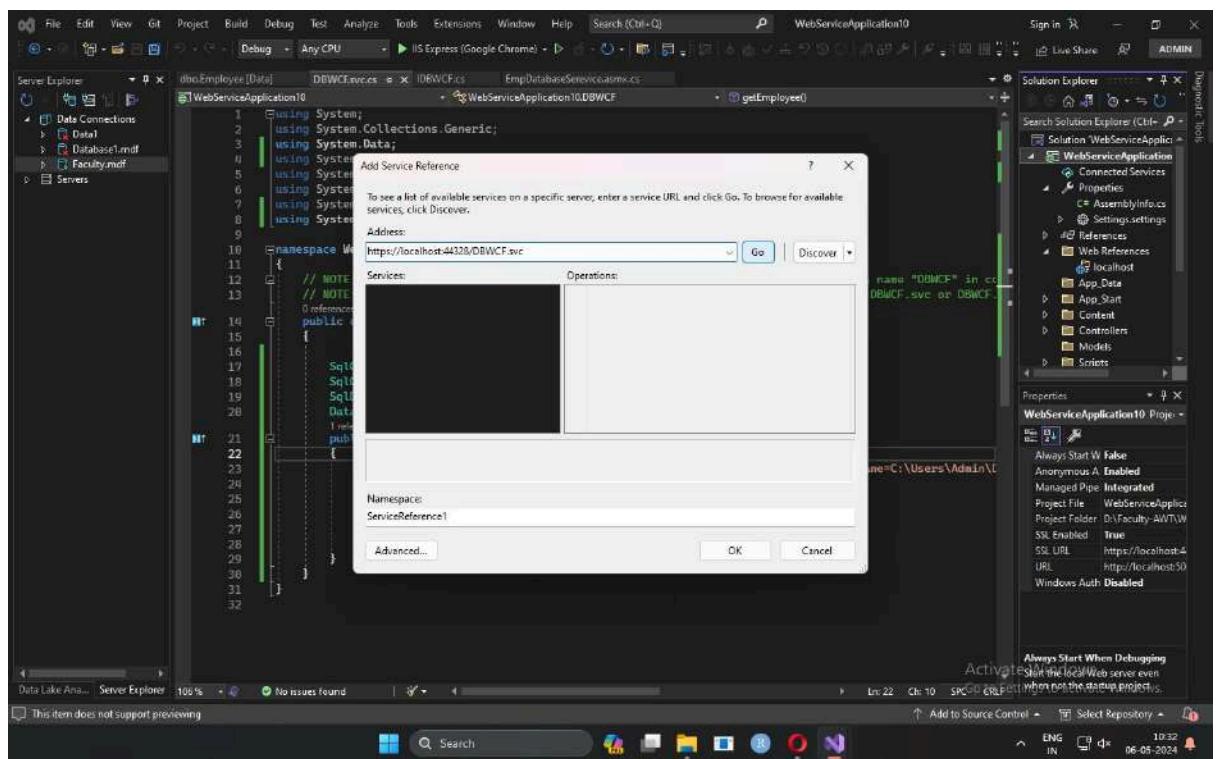
```
using System;
using System.Collections.Generic;
using System.Data;
using System.Linq;
using System.Runtime.Serialization;
using System.ServiceModel;
using System.Text;
using System.Data.SqlClient;

namespace WebServiceApplication10
{
    // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCF" in code, svc and config file simultaneously.
    // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCF.svc or DBWCF
    [ServiceContract]
    public class DBWCF : IDBWCF
    {
        SqlConnection conn;
        SqlCommand cmd;
        SqlDataAdapter sda;
        DataSet ds;
        [OperationContract]
        public DataSet getEmployee()
        {
            conn = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\Documents\Faculty.mdf");
            cmd = new SqlCommand("select * from employee",conn);
            cmd.CommandType = CommandType.Text;
            sda = new SqlDataAdapter(cmd);
            sda.Fill(ds);
            return ds;
        }
    }
}
```

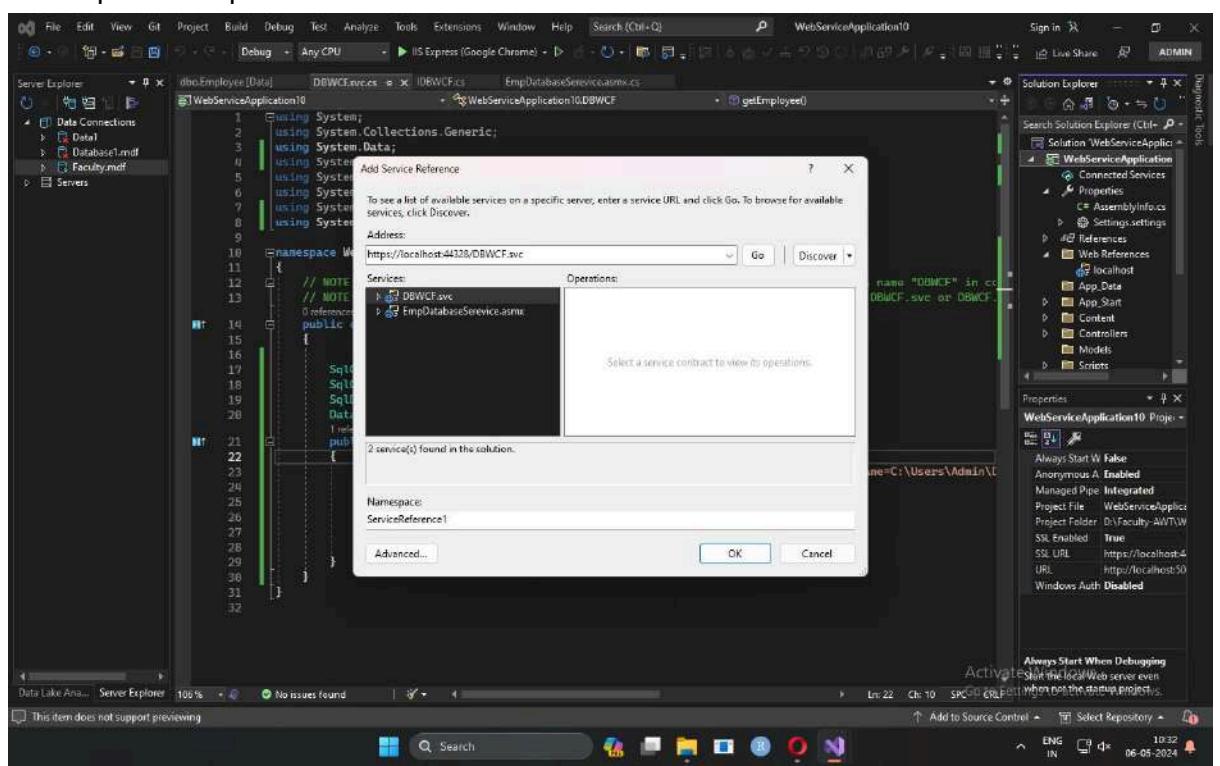
To add a service:
Select "Add Service" from the File menu or the context menu of the "My Service Projects".
This operation is not supported in the WCF Test Client because it uses type System.Threading.Tasks.Task<T>[System.Data.DataSet, System.Data, Version=4.0.0.0, Culture=neutral, PublicKeyToken=null]</> or DBWCF.svc.cs at the Solution level.

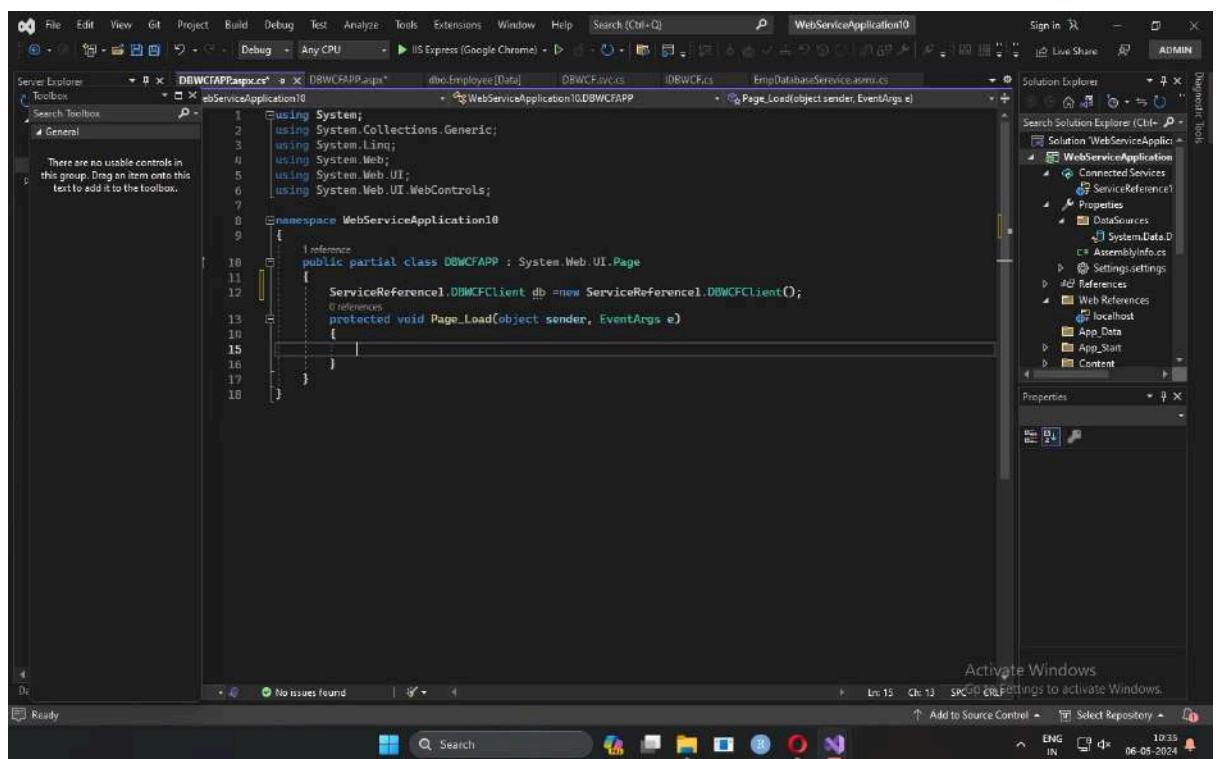
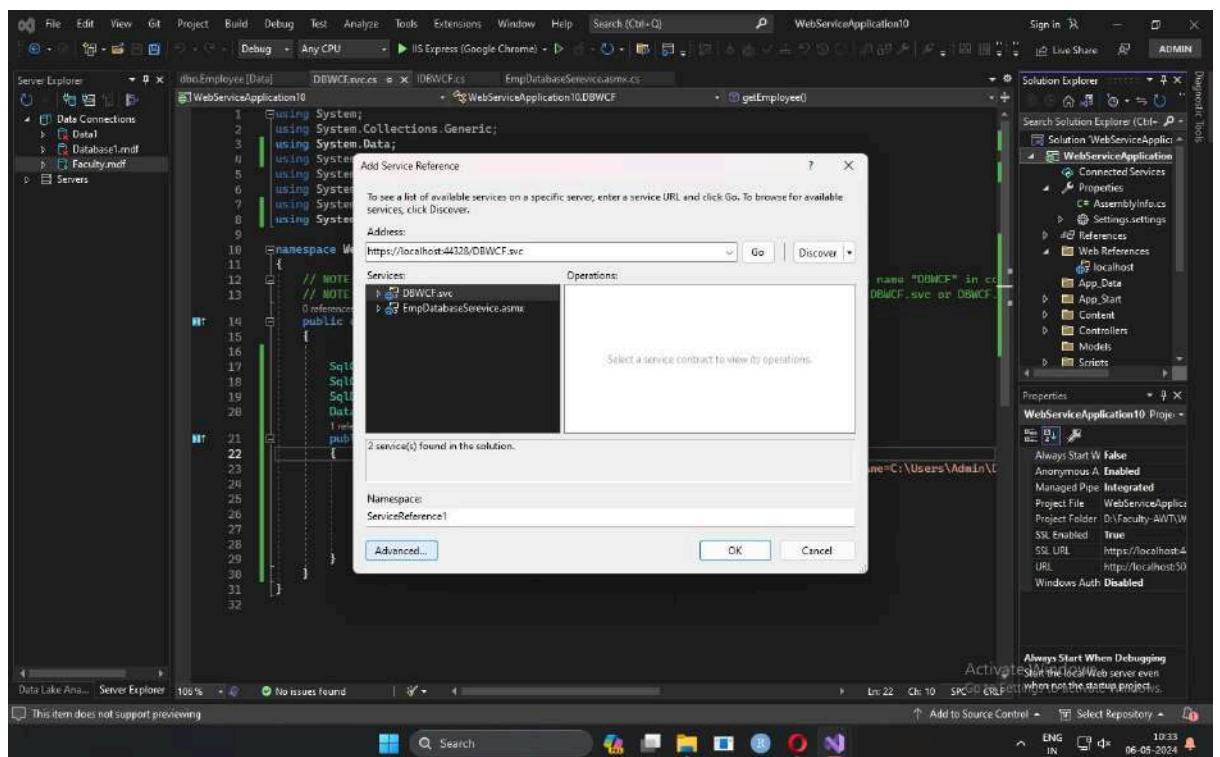
```
using System;
using System.Collections.Generic;
using System.Data;
using System.Linq;
using System.Runtime.Serialization;
using System.ServiceModel;
using System.Text;
using System.Data.SqlClient;

namespace WebServiceApplication10
{
    // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCF" in code, svc and config file simultaneously.
    // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCF.svc or DBWCF
    [ServiceContract]
    public class DBWCF : IDBWCF
    {
        SqlConnection conn;
        SqlCommand cmd;
        SqlDataAdapter sda;
        DataSet ds;
        [OperationContract]
        public DataSet getEmployee()
        {
            conn = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\Documents\Faculty.mdf");
            cmd = new SqlCommand("select * from employee",conn);
            cmd.CommandType = CommandType.Text;
            sda = new SqlDataAdapter(cmd);
            sda.Fill(ds);
            return ds;
        }
    }
}
```



Namespace is important click on discover





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Server Explorer Data Connections Data Database1.mdf Faculty.mdf Servers

DBWCFService1.cs DBWCFService1.svc.cs ISWCService1.cs

```

1  using System;
2  using System.Collections.Generic;
3  using System.Data;
4  using System.Linq;
5  using System.Runtime.Serialization;
6  using System.ServiceModel;
7  using System.Text;
8  using System.Data.SqlClient;
9
10 namespace WebServiceApplication
11 {
12     // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCFService1".
13     // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCFService1.svc or DBWCFService1.svc.cs
14     public class DBWCFService1 : IDBWCFService1
15     {
16         public DataSet GetEmployee()
17         {
18
19             SqlConnection conn = new SqlConnection("Data Source=(LocalDB)\MSSQLLocalDB;Initial Catalog=MyDb");
20             SqlCommand cmd = new SqlCommand("select * from employee", conn);
21             cmd.CommandType = CommandType.Text;
22             SqlDataAdapter sda = new SqlDataAdapter(cmd);
23             DataSet ds = new DataSet();
24             sda.Fill(ds);
25         }
26     }
27 }
28
29

```

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Server Explorer Data Connections Data Database1.mdf Faculty.mdf Servers

WebService1.cs WCFDBWebForm.aspx.cs

```

1  using System;
2  using System.Collections.Generic;
3  using System.Data;
4  using System.Linq;
5  using System.Web;
6  using System.Web.UI;
7  using System.Web.UI.WebControls;
8
9 namespace WebServiceApplication
10 {
11     public partial class WCFDBWebForm : System.Web.UI.Page
12     {
13
14         protected void Page_Load(object sender, EventArgs e)
15         {
16             ServiceReference1.DBWCFServiceClient svc = new ServiceReference1.DBWCFServiceClient();
17             DataSet dsnew = new DataSet();
18             ds = svc.GetEmployee();
19             GridView1.DataSource = ds;
20             GridView1.DataBind();
21         }
22     }
23

```

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Server Explorer Data Connections Data Database1.mdf Faculty.mdf Servers

DBWCFService1.svc.cs ISWCService1.cs

```

1  using System;
2  using System.Collections.Generic;
3  using System.Data;
4  using System.Linq;
5  using System.Runtime.Serialization;
6  using System.ServiceModel;
7  using System.Text;
8  using System.Data.SqlClient;
9
10 namespace WebServiceApplication
11 {
12     // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCFService1".
13     // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCFService1.svc or DBWCFService1.svc.cs
14     public class DBWCFService1 : IDBWCFService1
15     {
16         public DataSet GetEmployee()
17         {
18
19             SqlConnection conn = new SqlConnection("Data Source=(LocalDB)\MSSQLLocalDB;Initial Catalog=MyDb");
20             SqlCommand cmd = new SqlCommand("select * from employee", conn);
21             cmd.CommandType = CommandType.Text;
22             SqlDataAdapter sda = new SqlDataAdapter(cmd);
23             DataSet ds = new DataSet();
24             sda.Fill(ds);
25         }
26     }
27 }
28
29

```

```
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) WebServiceApplication10 Sign In Live Share ADMIN
Server Explorer Solution Explorer
Data Connections Solution 'WebServiceApplication10' -> WebServiceApplication
> Data
> Database1.mdf
> Faculty.mdf
> Tables
> Employee
> Views
> Stored Procedures
> Functions
> Synonyms
> Types
> Assemblies
> Servers
DBWCF.cs WebServiceApplication10.cspx DBWCFAPP.aspx EmpDatabaseService.asmx.cs getEmployee()
1 using System;
2 using System.Collections.Generic;
3 using System.Data;
4 using System.Linq;
5 using System.Runtime.Serialization;
6 using System.ServiceModel;
7 using System.Text;
8 using System.Data.SqlClient;
9
10 namespace WebServiceApplication10
11 {
12     // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCF" in code.
13     // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCF.svc or DBWCF
14     public class DBWCF : IDBWCF
15     {
16
17         SqlConnection conn;
18         SqlCommand cmd;
19         SqlDataAdapter sda;
20         DataSet ds;
21         [Reference]
22         public DataSet getEmployee()
23         {
24             conn = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\LocalDB\Name.mdf");
25             cmd = new SqlCommand("select * from Employee",conn);
26             sda = new SqlDataAdapter(cmd);
27             ds = new DataSet();
28             sda.Fill(ds);
29             return ds;
30         }
31     }
32 }
```

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No issues found

Ready

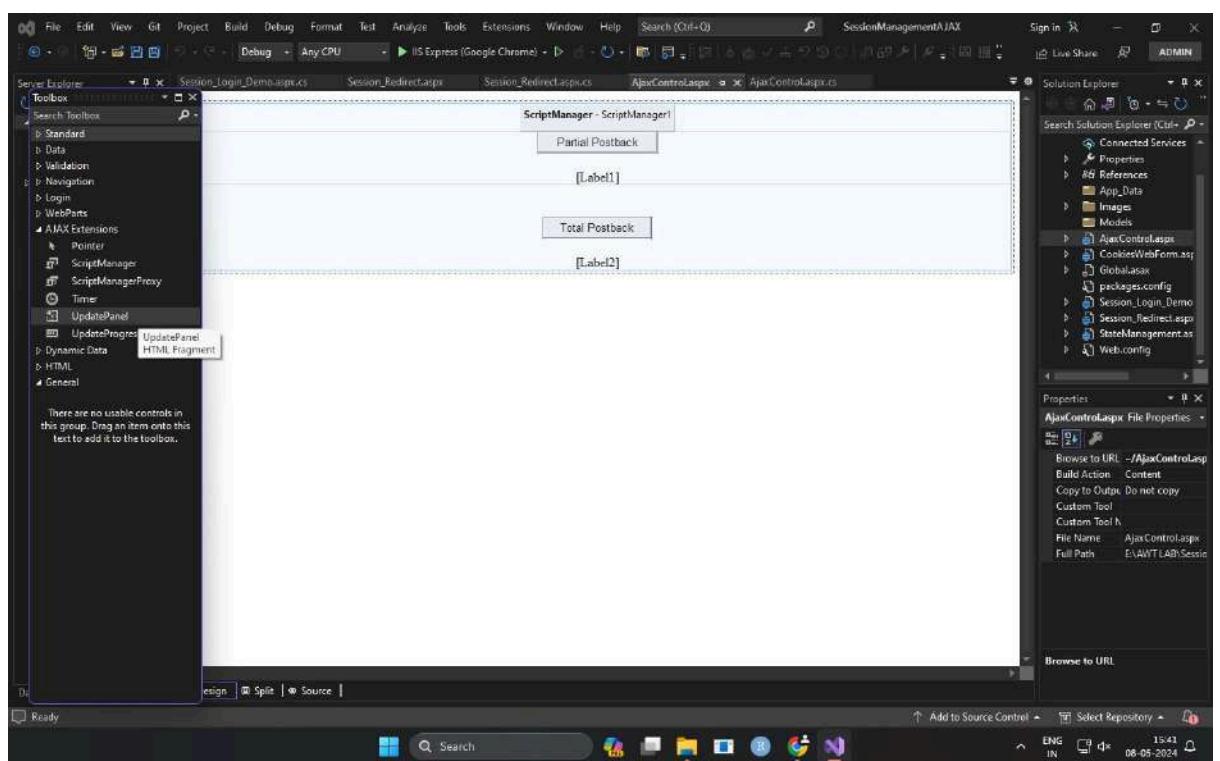
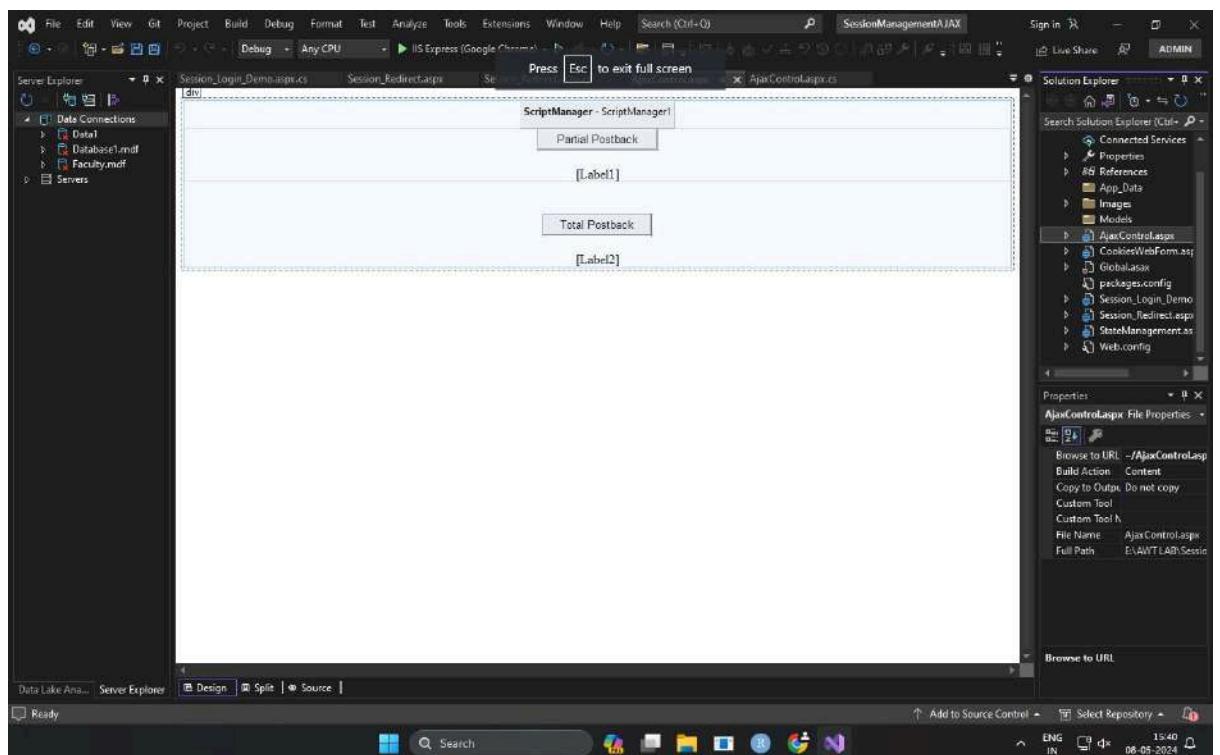
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) WebServiceApplication10 Sign In Live Share ADMIN
Server Explorer Solution Explorer
Data Connections Solution 'WebServiceApplication10' -> WebServiceApplication
> Data
> Database1.mdf
> Faculty.mdf
> Tables
> Employee
> Views
> Stored Procedures
> Functions
> Synonyms
> Types
> Assemblies
> Servers
DBWCF.cs WebServiceApplication10.cspx DBWCFAPP.aspx EmpDatabaseService.asmx.cs getEmployee()
1 using System;
2 using System.Collections.Generic;
3 using System.Data;
4 using System.Linq;
5 using System.Runtime.Serialization;
6 using System.ServiceModel;
7 using System.Text;
8 using System.Data.SqlClient;
9
10 namespace WebServiceApplication10
11 {
12 // NOTE: You can use the "Rename" command on the "Refactor" menu to change the class name "DBWCF" in code.
13 // NOTE: In order to launch WCF Test Client for testing this service, please select DBWCF.svc or DBWCF
14 public class DBWCF : IDBWCF
15 {
16
17 SqlConnection conn;
18 SqlCommand cmd;
19 SqlDataAdapter sda;
20 DataSet ds;
21 [Reference]
22 public DataSet getEmployee()
23 {
24 conn = new SqlConnection(@"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=C:\Users\Admin\LocalDB\Name.mdf");
25 cmd = new SqlCommand("select * from Employee",conn);
26 sda = new SqlDataAdapter(cmd);
27 ds = new DataSet();
28 sda.Fill(ds);
29 return ds;
30 }
31 }
32 }

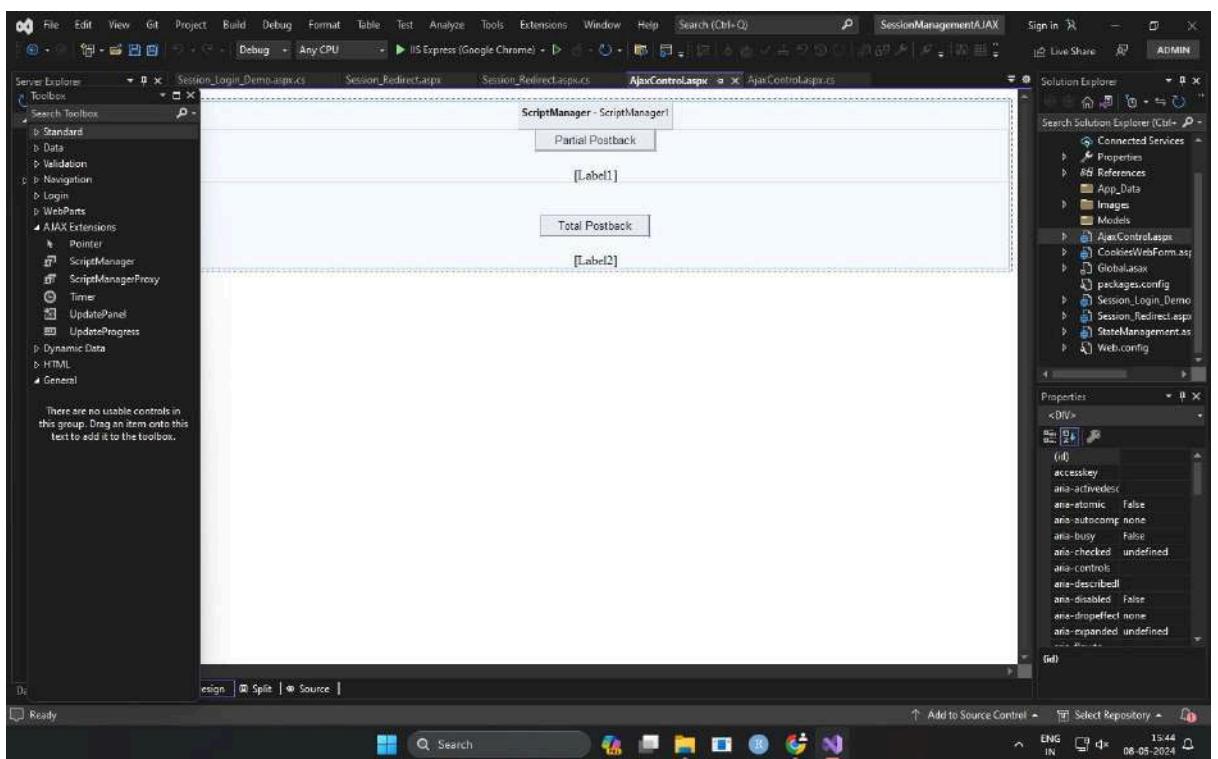
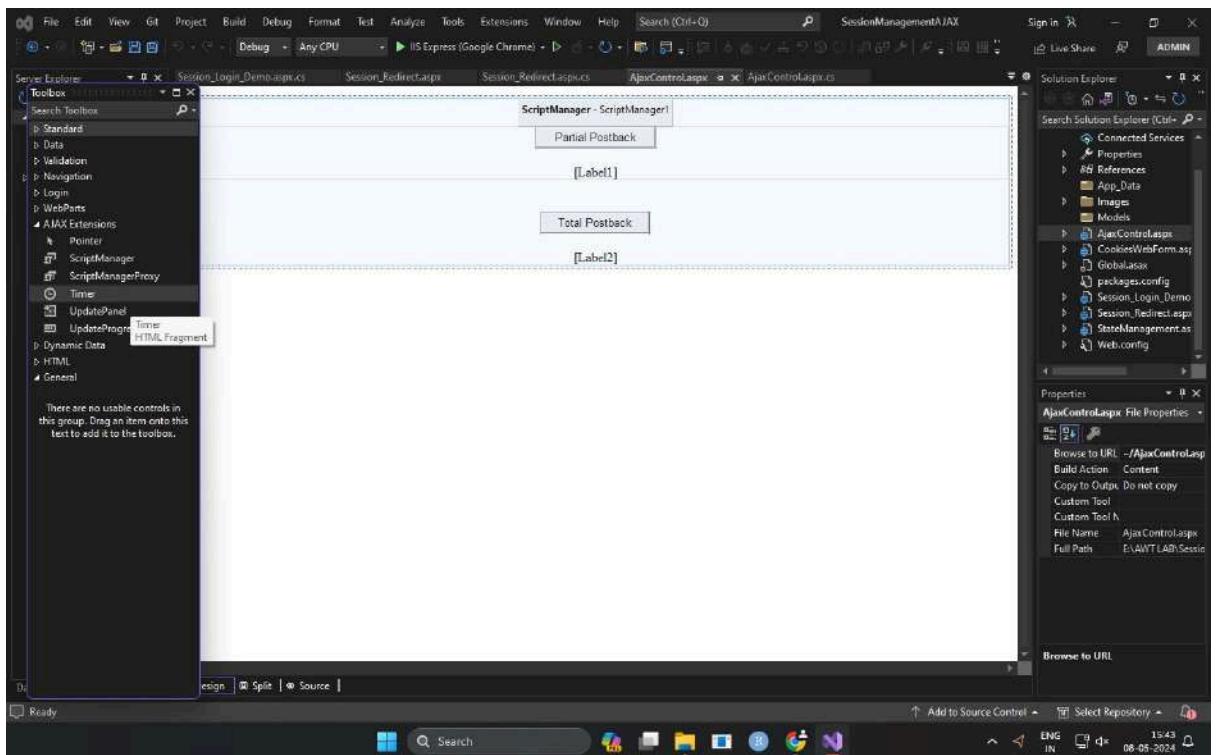
Activate Windows

No issues found

Ready

8-5-24
Awt lab





```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="AjaxControl.aspx.cs" Inherits="SessionManagementAJAX.AjaxControl" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <center>
        <form id="form1" runat="server">
            <div>
                <asp:ScriptManager ID="ScriptManager1" runat="server">
                </asp:ScriptManager>
                <asp:UpdatePanel ID="UpdatePanel1" runat="server">
                    <ContentTemplate>
                        <asp:Button ID="btnPartialPostback" runat="server" Text="Partial Postback" OnClick="btnPartialPostback_Click" />
                        <br />
                        <br />
                        <asp:Label ID="Label1" runat="server"></asp:Label>
                    </ContentTemplate>
                </asp:UpdatePanel>
            <br />
            <br />
            <asp:Button ID="Button2" runat="server" OnClick="Button2_Click" Text="Total Postback" />
            <br />
            <br />
            <asp:Label ID="Label2" runat="server"></asp:Label>
        </div>
    </form>
</center>
</body>
</html>
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace SessionManagementAJAX
{
    public partial class AjaxControl : System.Web.UI.Page
    {
        string time = DateTime.Now.ToString();
        protected void Page_Load(object sender, EventArgs e)
        {
        }
        protected void btnPartialPostBack_Click(object sender, EventArgs e)
        {
            Label1.Text = "Showing time from panel" + time;
            Label2.Text = "Showing time from outside" + time;
        }
        protected void Button2_Click(object sender, EventArgs e)
        {
            Label1.Text = "Showing time from panel" + time;
            Label2.Text = "Showing time from outside" + time;
        }
    }
}
```

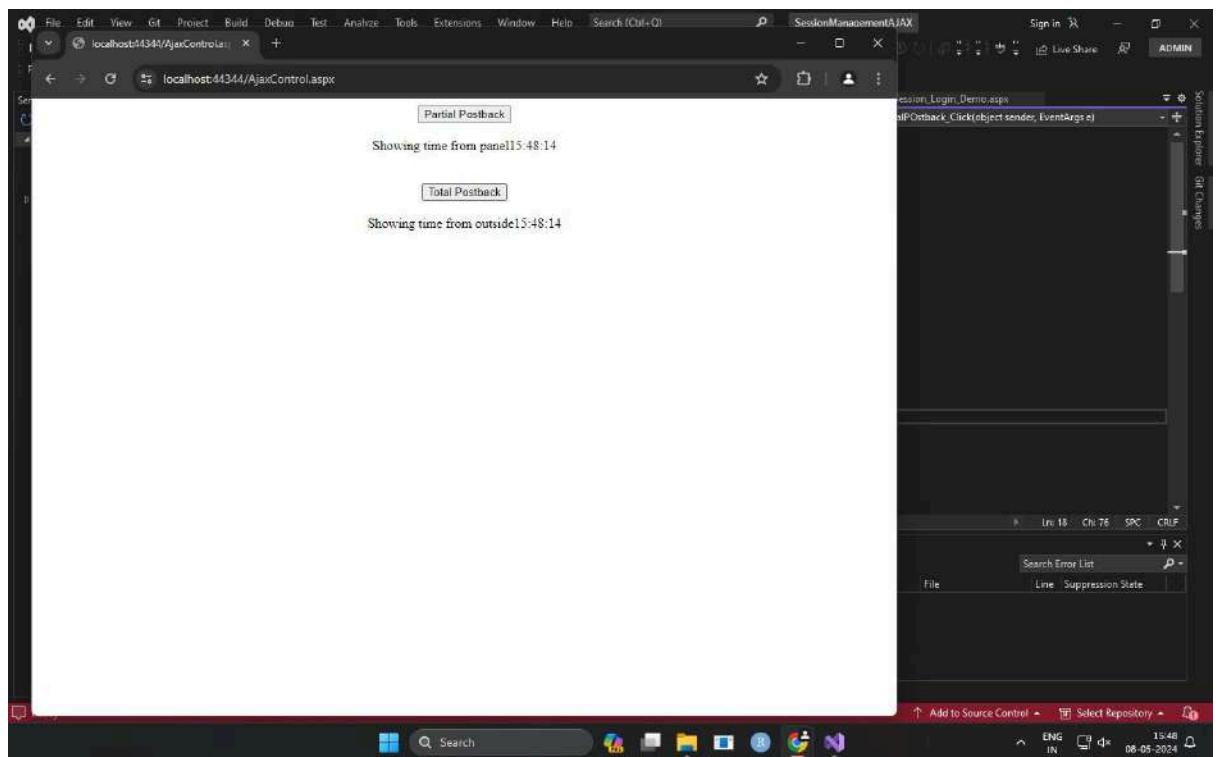
Sugite Endpoint Security
Virus Protection
Removable Drive (E) scan completed.
No virus found

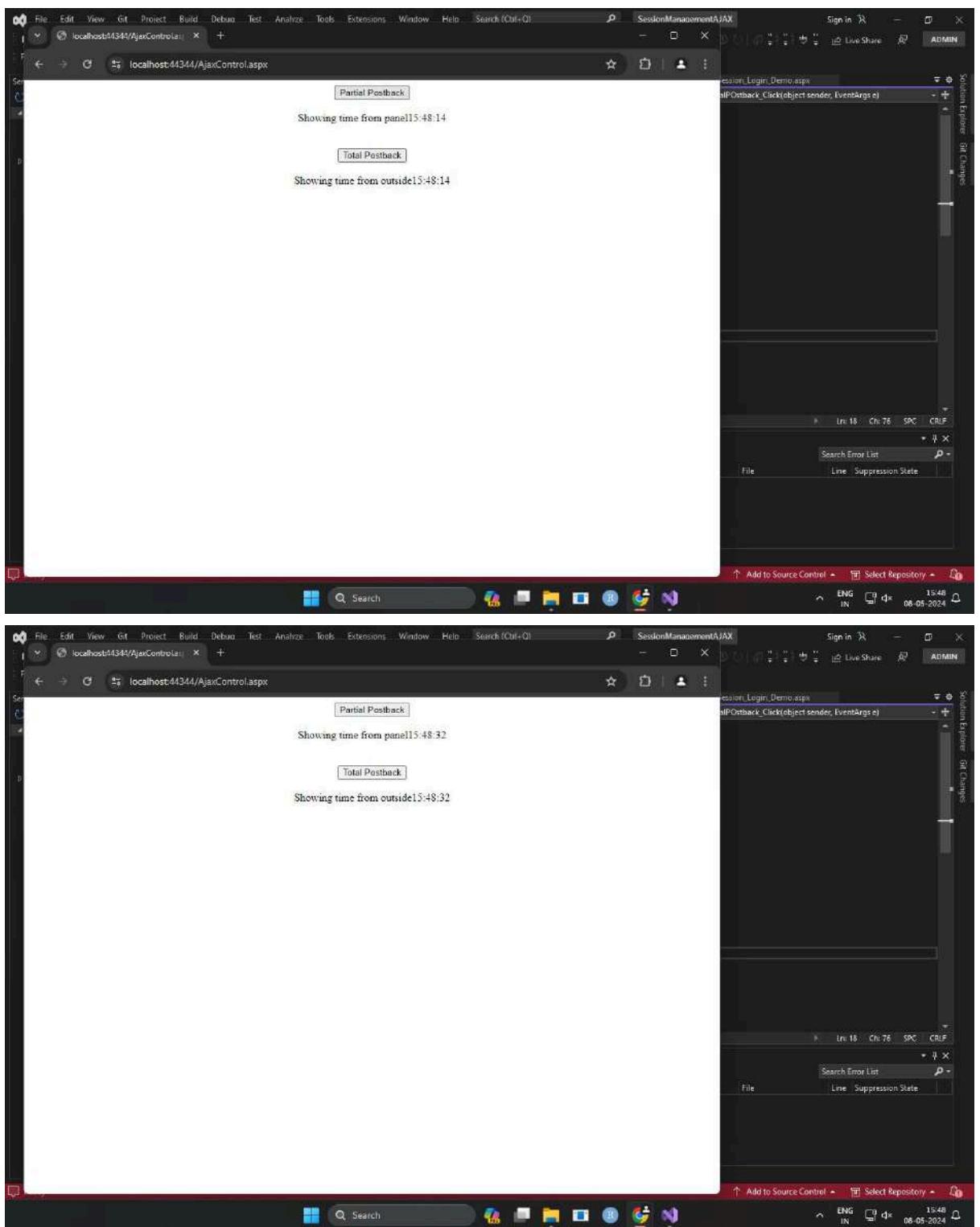
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace SessionManagementAJAX
{
    public partial class AjaxControl : System.Web.UI.Page
    {
        string time = DateTime.Now.ToString();
        protected void Page_Load(object sender, EventArgs e)
        {
        }

        protected void btnPartialPostback_Click(object sender, EventArgs e)
        {
            Label1.Text = "Showing time from panel" + time;
            Label2.Text = "Showing time from outside" + time;
        }

        protected void Button2_Click(object sender, EventArgs e)
        {
            Label1.Text = "Showing time from panel" + time;
            Label2.Text = "Showing time from outside" + time;
        }
    }
}
```





Code

ajax.aspx.cs

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

```
using System.Web.UI.WebControls;

namespace ajax
{
    public partial class ajaxform : System.Web.UI.Page
    {
        string time = DateTime.Now.ToString("yyyy-MM-dd HH:mm:ss");
        protected void Page_Load(object sender, EventArgs e)
        {

        }

        protected void btnPartialPostback(object sender, EventArgs e)
        {
            Label1.Text = "Showing time from panel" + time;
            Label2.Text = "Showing time from Outside" + time;
        }

        protected void Button2_Click(object sender, EventArgs e)
        {
            Label1.Text = "Showing time from panel" + time;
            Label2.Text = "Showing time from outside" + time;
        }
    }
}
```

ajaxform.aspx

```
<%@ Page Language="C#" AutoEventWireup="true"
CodeBehind="ajaxform.aspx.cs" Inherits="ajax.ajaxform" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>

    <center>

        <form id="form1" runat="server">
            <div>
                <asp:ScriptManager ID="ScriptManager1"
runat="server"></asp:ScriptManager>
                <asp:UpdatePanel ID="UpdatePanel1" runat="server">
```

```
<ContentTemplate>

    <asp:Button ID="Button1" runat="server" Text="Partial Postback"
    OnClick="btnPartialPostback"/>

    <br />
    <br />
    <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>

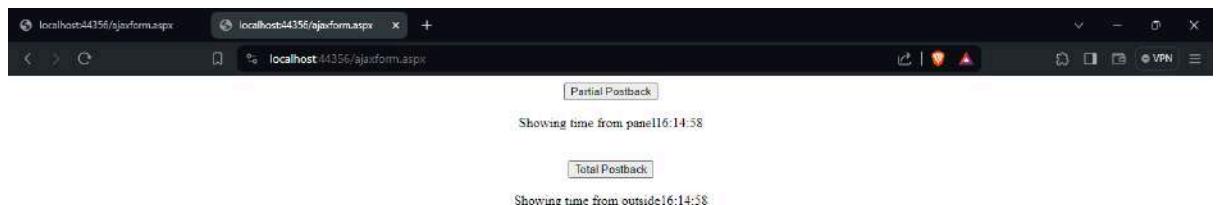
</ContentTemplate>
    </asp:UpdatePanel>
<br />
<br />
    <asp:Button ID="Button2" runat="server" OnClick="Button2_Click" Text="Total
Postback" />
    <br />
    <br />

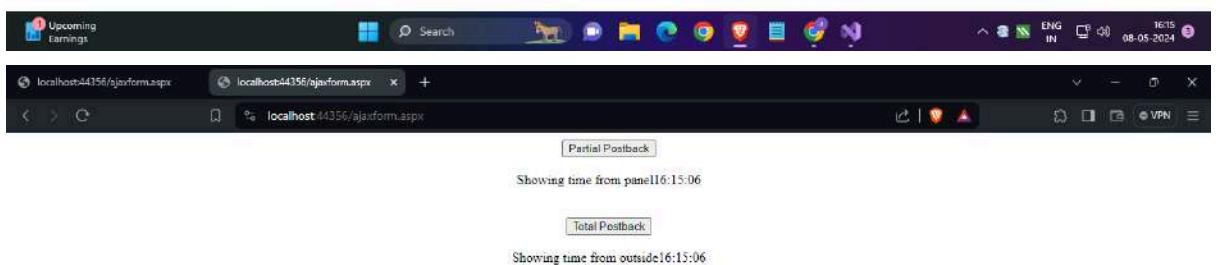
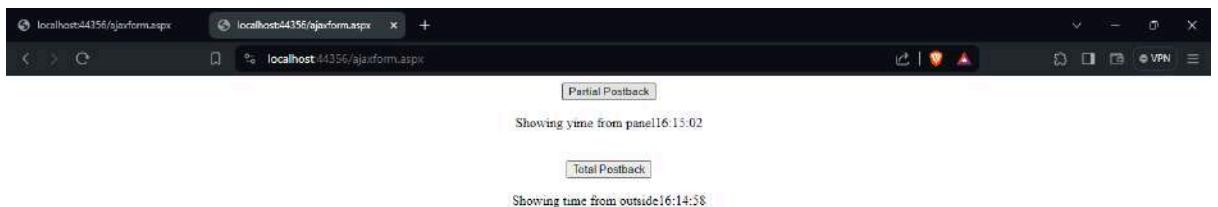
    <asp:Label ID="Label2" runat="server" Text="Label"></asp:Label>
</div>
</form>

    </center>
</body>
</html>
```

Output:







14-5-24

ASP.NET MVC Framework

ASP.NET MVC is a web application framework developed by Microsoft for building dynamic web sites and web applications. It follows the Model-View-Controller (MVC) architectural pattern.

ASP.NET MVC is built on top of the ASP.NET platform and provides a more modular and testable way of building web applications compared to the traditional ASP.NET Web Forms model.

The MVC pattern separates the application into three main components:

- Model:** Represents the data and business logic of the application.
- View:** Represents the user interface (UI) and displays data to the user.
- Controller:** Manages the flow of data between the Model and View.

ASP.NET MVC uses a template-based view engine called Razor to render views. It also includes features like routing, dependency injection, and unit testing support.

Advantages of ASP.NET MVC:

- Separation of concerns: The MVC pattern clearly separates the presentation logic from the business logic.
- Testability: The modular nature of the MVC pattern makes it easier to write unit tests for different components.
- Scalability: The MVC pattern is well-suited for building large-scale web applications.
- Flexibility: The MVC pattern allows for greater flexibility in terms of view rendering and integration with other technologies.

Disadvantages of ASP.NET MVC:

- Learning curve: The MVC pattern requires a significant learning curve for developers who are used to the traditional ASP.NET Web Forms model.
- Performance overhead: The template-based view engine can introduce performance overhead compared to traditional server-side controls.
- Complexity: The MVC pattern can be complex to implement and maintain, especially for simple applications.

Conclusion:

ASP.NET MVC is a powerful and flexible web application framework that follows the Model-View-Controller (MVC) architectural pattern. It provides a modular and testable way of building web applications and offers several advantages over traditional ASP.NET Web Forms. However, it also has some disadvantages, such as a learning curve and performance overhead. Overall, ASP.NET MVC is a popular choice for building modern web applications.

ASP.NET MVC Framework

ASP.NET MVC is a web application framework developed by Microsoft for building dynamic web sites and web applications. It follows the Model-View-Controller (MVC) architectural pattern.

ASP.NET MVC is built on top of the ASP.NET platform and provides a more modular and testable way of building web applications compared to the traditional ASP.NET Web Forms model.

The MVC pattern separates the application into three main components:

- Model:** Represents the data and business logic of the application.
- View:** Represents the user interface (UI) and displays data to the user.
- Controller:** Manages the flow of data between the Model and View.

ASP.NET MVC uses a template-based view engine called Razor to render views. It also includes features like routing, dependency injection, and unit testing support.

Advantages of ASP.NET MVC:

- Separation of concerns: The MVC pattern clearly separates the presentation logic from the business logic.
- Testability: The modular nature of the MVC pattern makes it easier to write unit tests for different components.
- Scalability: The MVC pattern is well-suited for building large-scale web applications.
- Flexibility: The MVC pattern allows for greater flexibility in terms of view rendering and integration with other technologies.

Disadvantages of ASP.NET MVC:

- Learning curve: The MVC pattern requires a significant learning curve for developers who are used to the traditional ASP.NET Web Forms model.
- Performance overhead: The template-based view engine can introduce performance overhead compared to traditional server-side controls.
- Complexity: The MVC pattern can be complex to implement and maintain, especially for simple applications.

Conclusion:

ASP.NET MVC is a powerful and flexible web application framework that follows the Model-View-Controller (MVC) architectural pattern. It provides a modular and testable way of building web applications and offers several advantages over traditional ASP.NET Web Forms. However, it also has some disadvantages, such as a learning curve and performance overhead. Overall, ASP.NET MVC is a popular choice for building modern web applications.

ASP.NET MVC Framework

- Views**
.cshtml file where you write HTML and C# or VB.NET code
- Global.asax**
contains code for responding to application-level and session-level events raised by ASP.NET or by HTTP modules
- Packages.config**
maintain the list of packages referenced by the project
- Web.config**
an XML-based configuration file used in ASP.NET-based applications to manage various settings that are concerned with the configuration of our website

Action method

- Action method must be public. It cannot be private or protected
- Action method cannot be overloaded
- Action method cannot be a static method
- All the public methods of the controller class are called Action Method.

```

    graph TD
        SC[StudentController class] --> P[public class StudentController : Controller]
        P --> A[Action method]
        P --> V[View() defined in base Controller class]
        A --> R[Return type]
        A --> I[Index()]
        I --> V
    
```

• Index() is the default Action Method

ASP.NETMVC.pptx - PowerPoint

- MVC framework includes various Result class which can be returned from an action method
- Result class represents different types of responses, such as HTML, file, string, JSON, javascript, etc

Result Class	Description
ViewResult	Represents HTML and markup.
EmptyResult	Represents No response.
ContentResult	Represents string literal.
FileContentResult / FilePathResult / FileStreamResult	Represents the content of a file.
JavaScriptResult	Represent a JavaScript script.
JsonResult	Represent JSON that can be used in AJAX.
RedirectResult	Represents a redirection to a new URL.
RedirectToRouteResult	Represents another action of same or other controller.
PartialViewResult	Returns HTML from Partial view.
HttpUnauthorizedResult	Returns HTTP 403 status.

Click to add notes

SIDE 9 OF 21 ENGLISH (INDIA)

ENG IN 14-05-2024 15:13

ASP.NETMVC.pptx - PowerPoint

- ActionResult class is the base class of all the above result classes, so it can be the return type of action method that returns any result listed above
- ActionVerbs: `HttpGet`, `HttpPost`, `HttpPut`**
 - is to handle different type of Http requests
 - MVC framework includes `HttpGet`, `HttpPost`, `HttpPut`, `HttpDelete`, `HttpOptions`, and `HttpPatch` action verbs
 - If you don't apply any action verbs to an action method, then it will handle `HttpGet` request by default

Click to add notes

SIDE 10 OF 21 ENGLISH (INDIA)

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ASP.NETMVC.pptx - PowerPoint

Http method	Usage
GET	To retrieve the information from the server. Parameters will be appended in the query string.
POST	To create a new resource.
PUT	To update an existing resource.
HEAD	Identical to GET except that server do not return the message body.
OPTIONS	It represents a request for information about the communication options supported by the web server.
DELETE	To delete an existing resource.
PATCH	To full or partial update the resource.

Click to add notes

SIDE 11 OF 21 ENGLISH (INDIA)

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Model

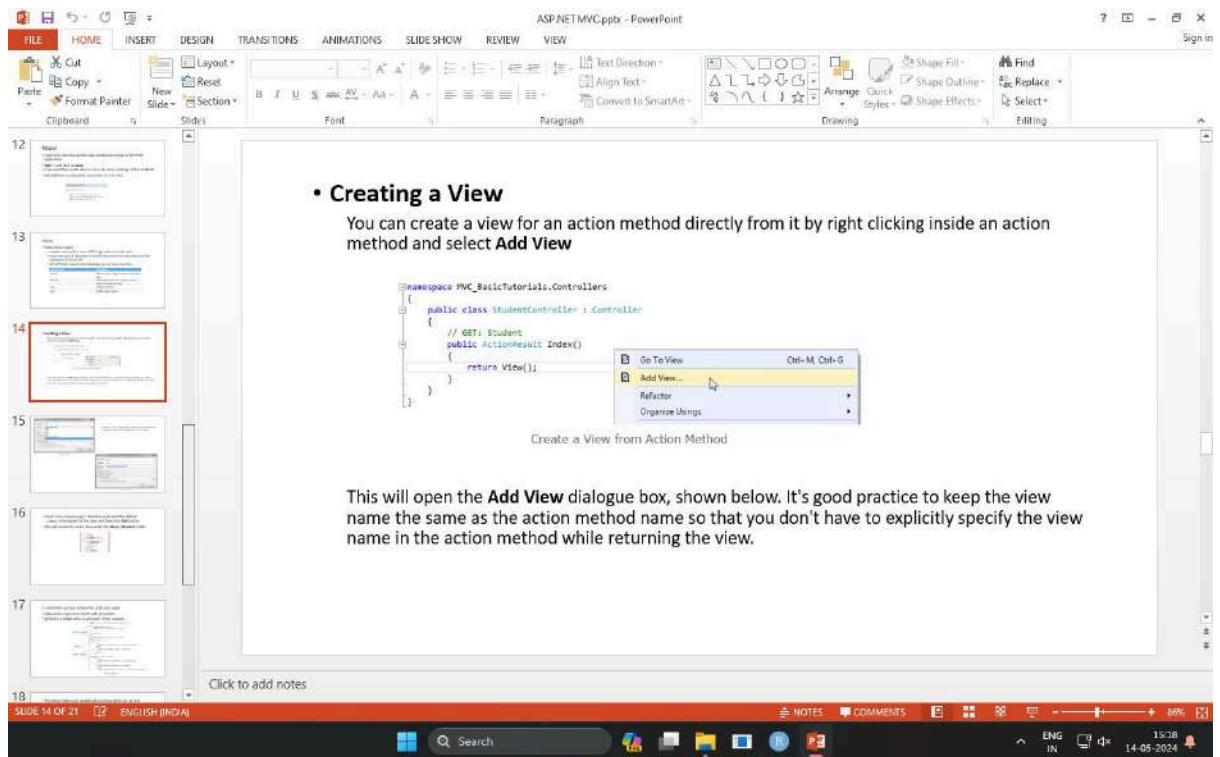
- represents domain-specific data and business logic in the MVC application
- Add -> and click on Class**
- If we want this model class to store id, name, and age of the students
- We will have to add public properties for the class

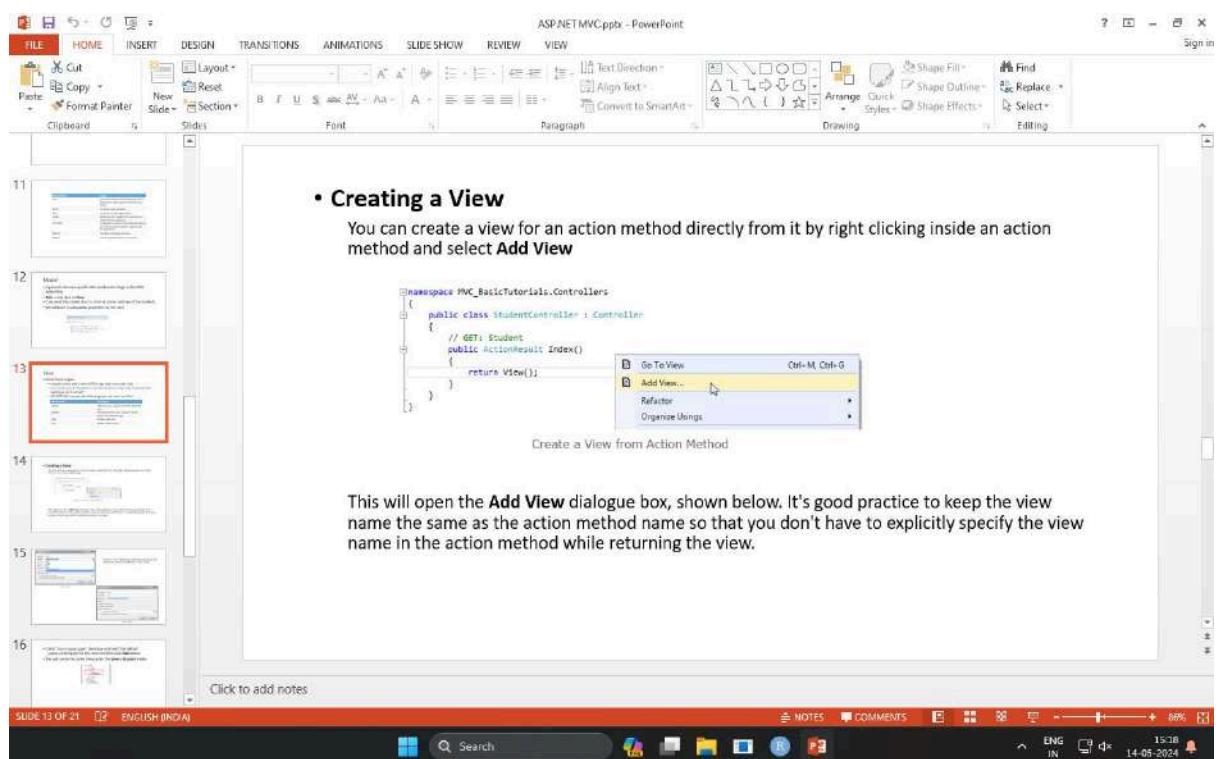
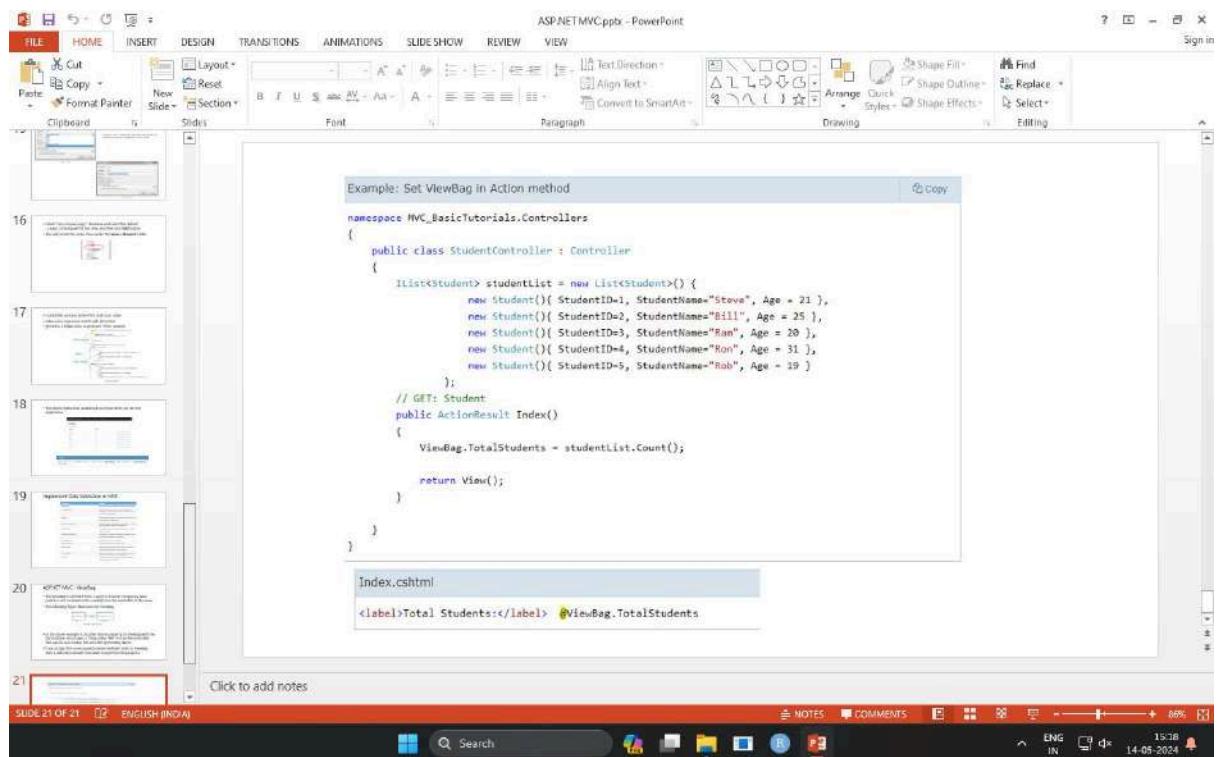
Example: Model class

```
public class Student
{
    public int StudentId { get; set; }
    public string StudentName { get; set; }
    public int Age { get; set; }
}
```

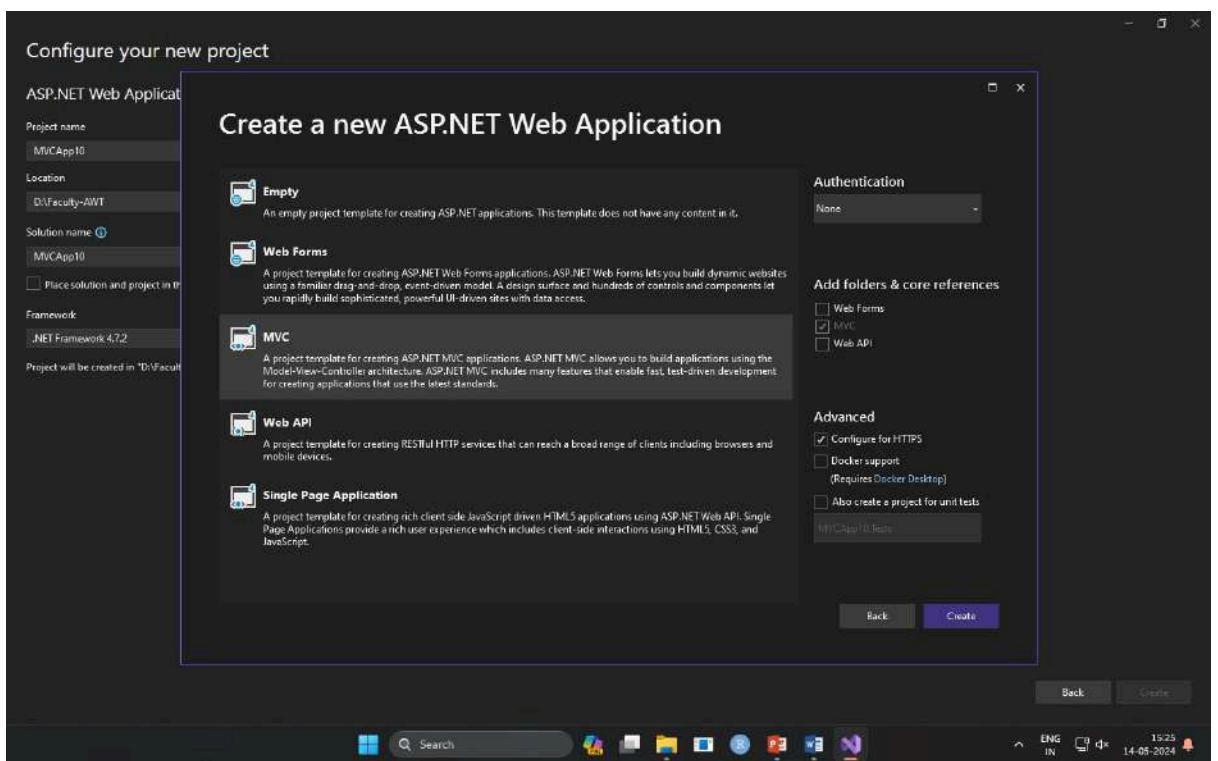
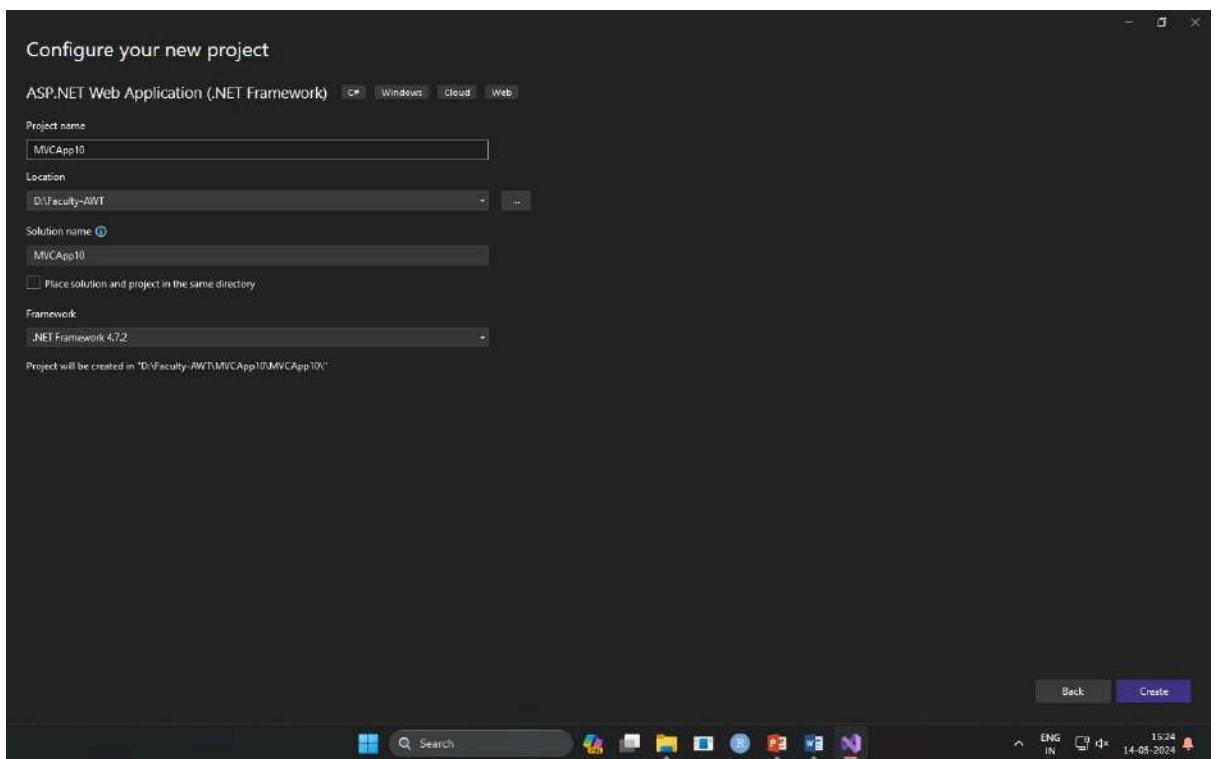
Click to add notes

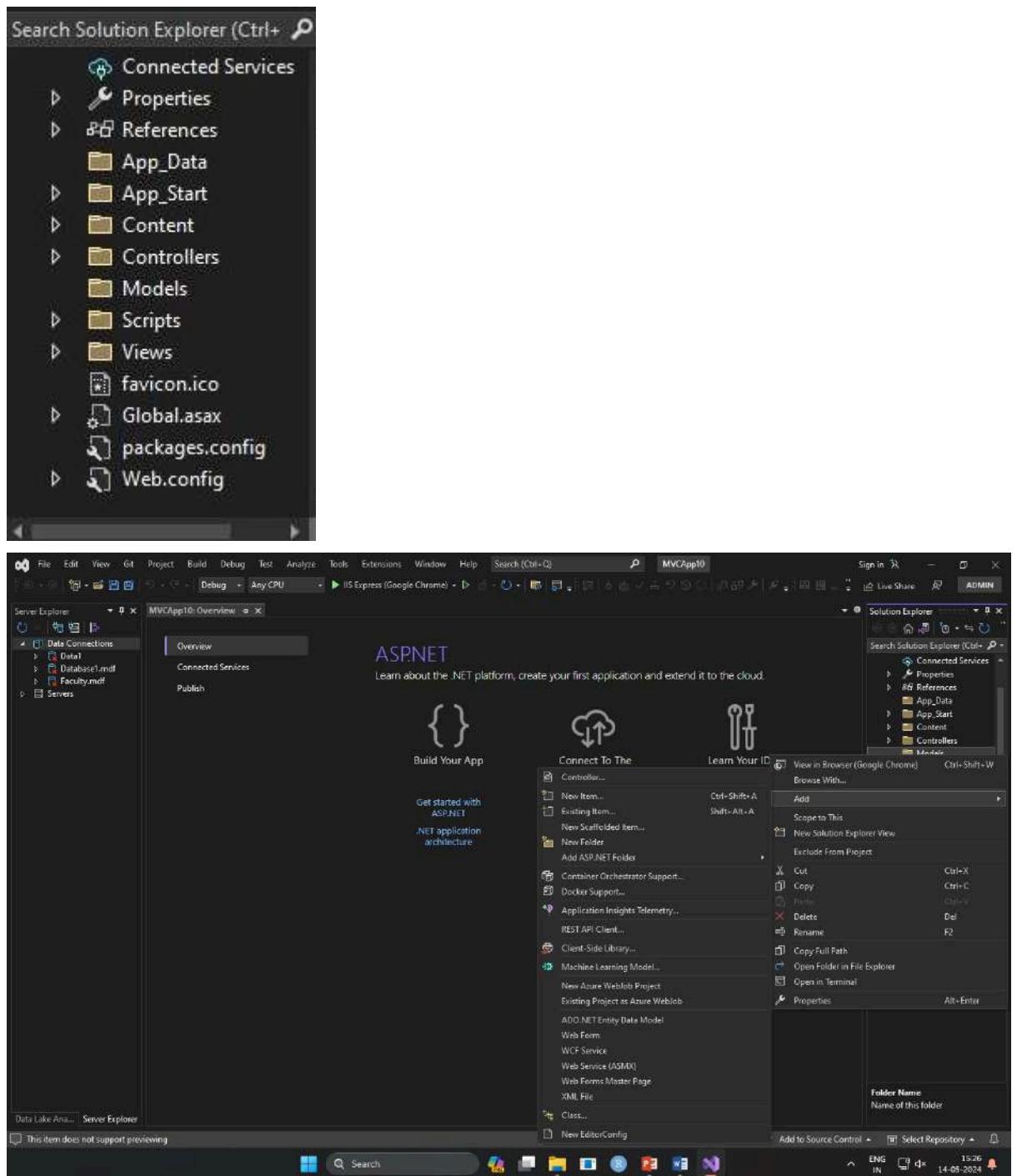
SIDE 12 OF 21 ENGLISH (INDIA)

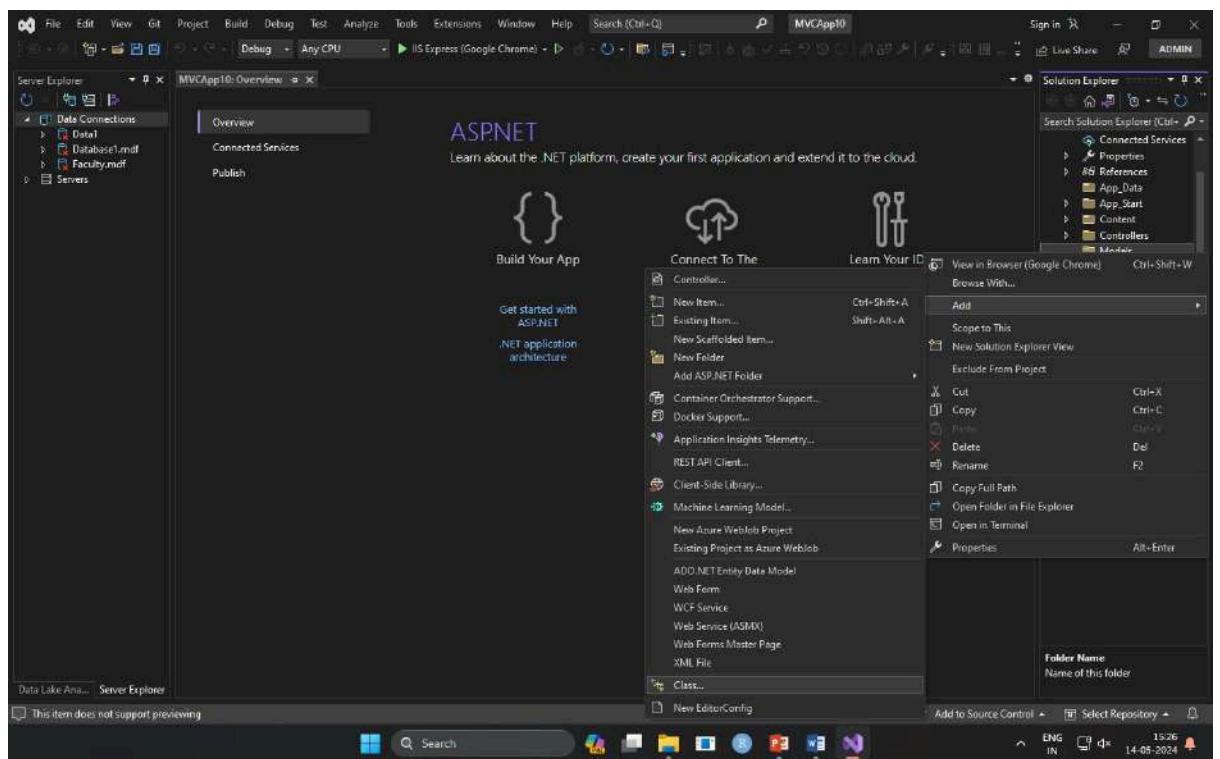


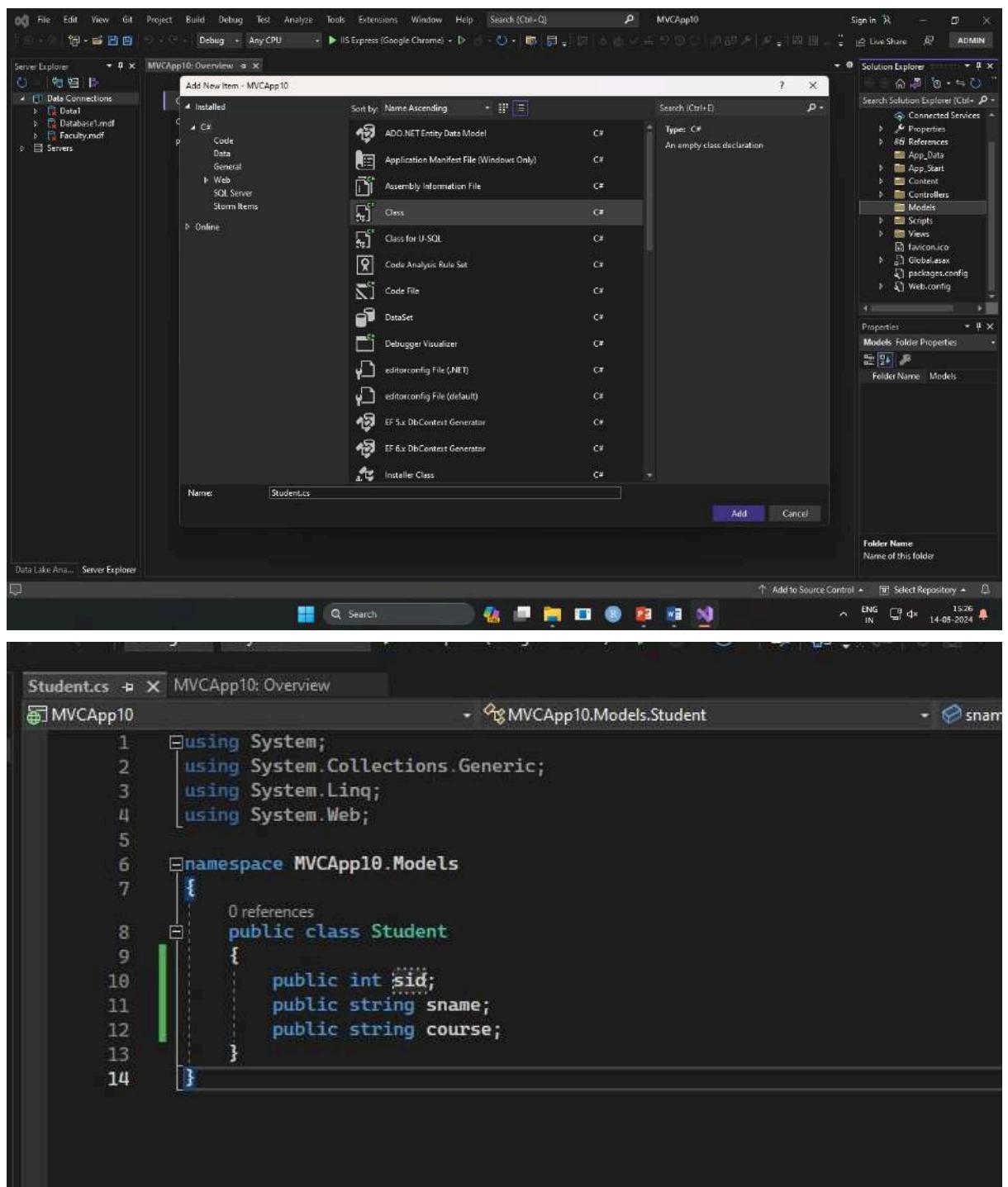


Steps:
Most imp prac

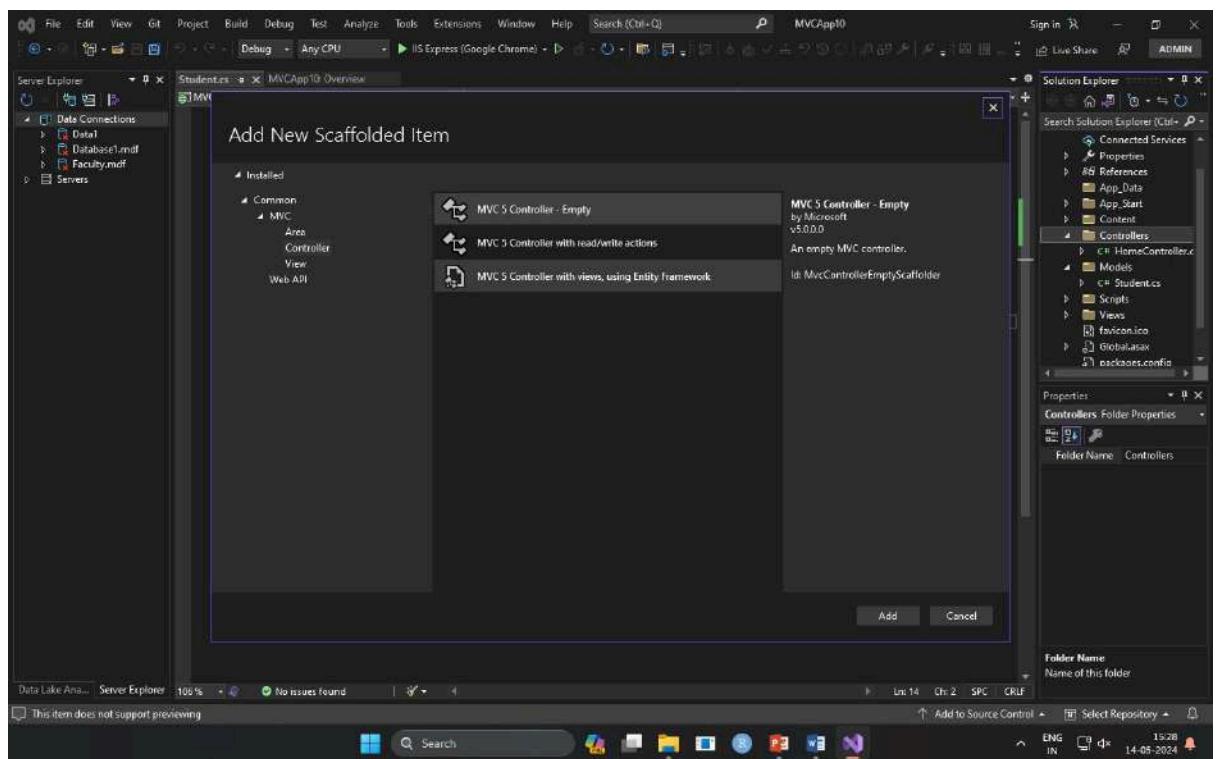




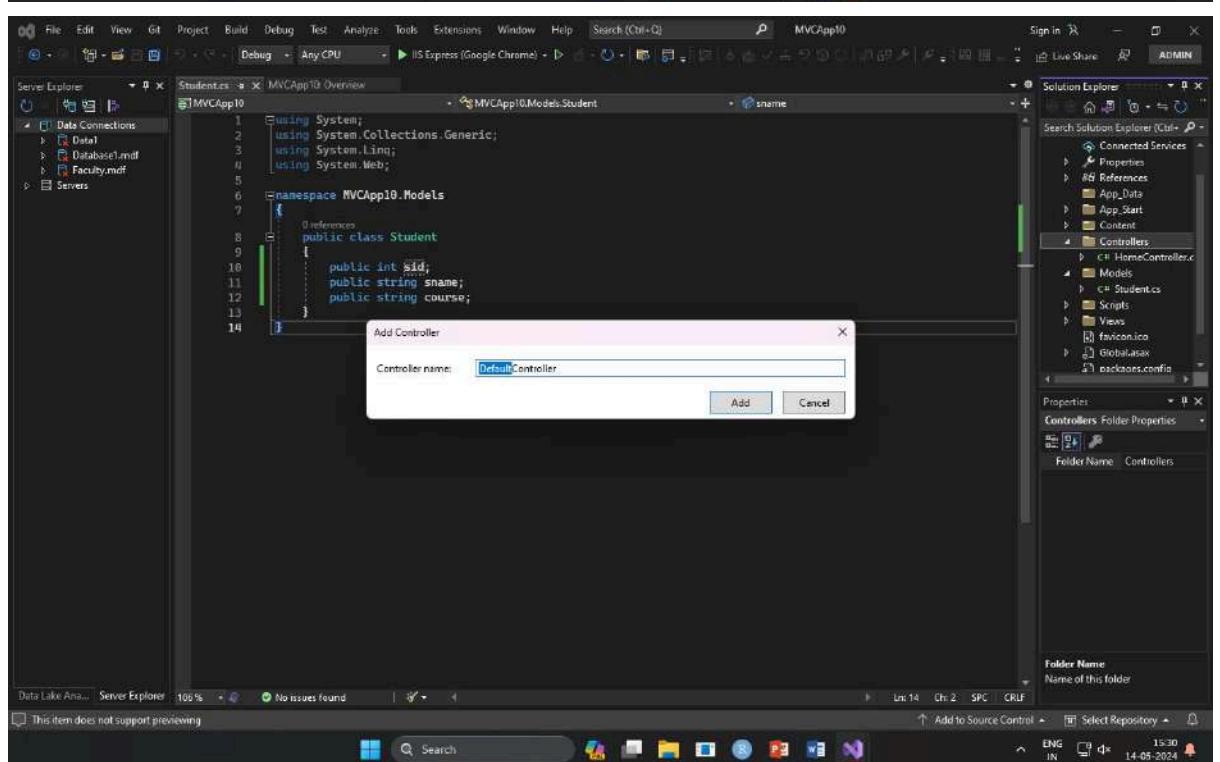
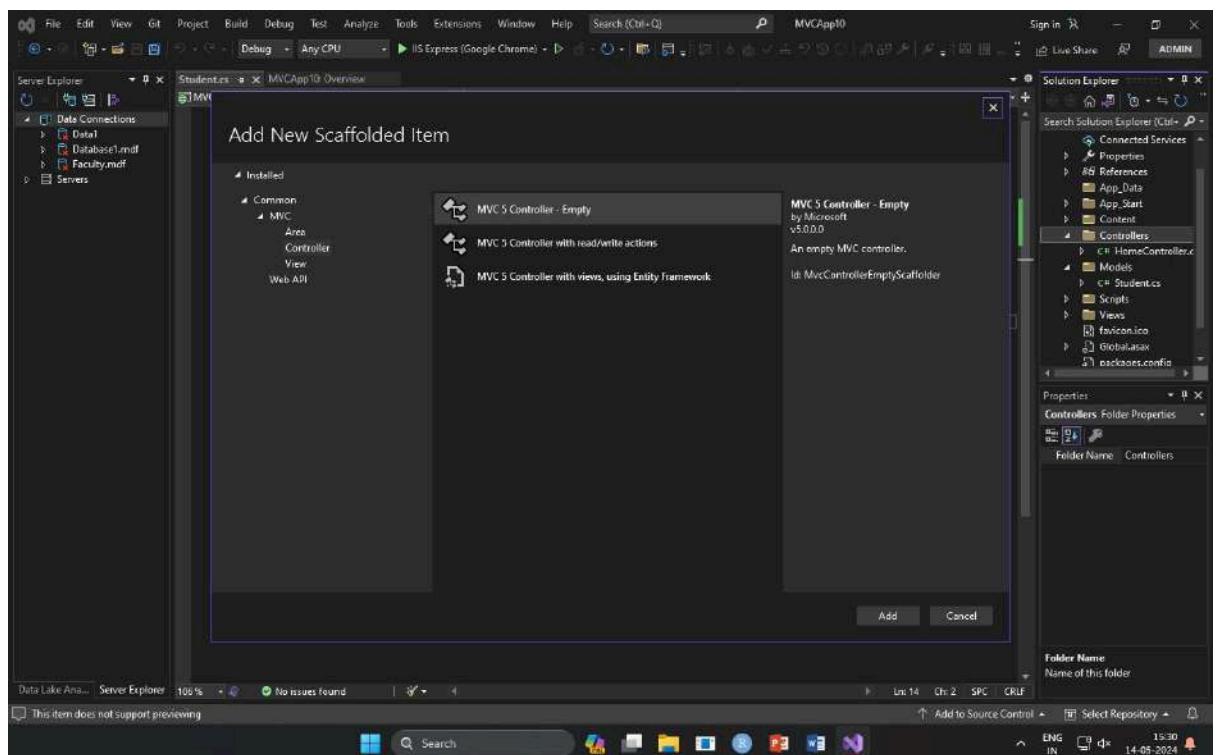




Right click controller folder add controller



Entity framework -> another way to get data from database



Model class is student therefore we will have student.controller

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5 using System.Web.Mvc;
6
7 namespace MVCApp10.Controllers
8 {
9     public class StudentController : Controller
10    {
11        // GET: Student
12        public ActionResult Index()
13        {
14            return View();
15        }
16    }
17 }
```

Action method provide data to model view

```
1 using MVCApp10.Models;
2 using System;
3 using System.Collections.Generic;
4 using System.Linq;
5 using System.Web;
6 using System.Web.Mvc;
7
8 namespace MVCApp10.Controllers
9 {
10    public class StudentController : Controller
11    {
12        // GET: Student
13        public ActionResult Index()
14        {
15            ViewBag.ItemList = "Student Details";
16            List<Student> studlist = new List<Student>()
17            { new Student{ studentID=1,studentName="Sulakshana",studentAge=22},
18              new Student{ studentID=2,studentName="Mahesh",studentAge=21}
19            };
20            return View(studlist);
21        }
22    }
23 }
24 }
```

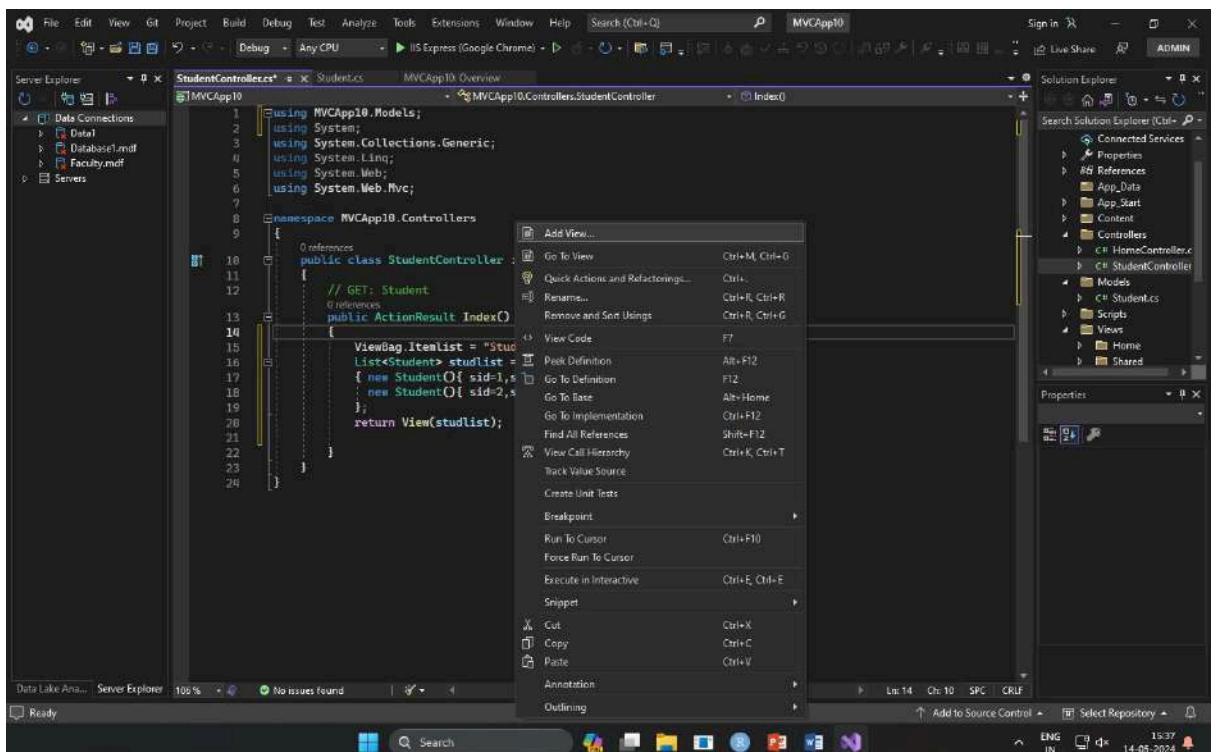
```
1  using MVCApp10.Models;
2  using System;
3  using System.Collections.Generic;
4  using System.Linq;
5  using System.Web;
6  using System.Web.Mvc;
7
8  namespace MVCApp10.Controllers
9  {
10     public class StudentController : Controller
11     {
12         // GET: Student
13         public ActionResult Index()
14         {
15             ViewBag.ItemList = "Student Details";
16             List<Student> studlist = new List<Student>()
17             { new Student(){ sid=1,sname="Sulakshana",course="MCA"}, 
18             new Student(){ sid=2,sname="Mahesh",course="MCA"} };
19
20             return View(studlist);
21         }
22     }
23 }
```

What is a view bag

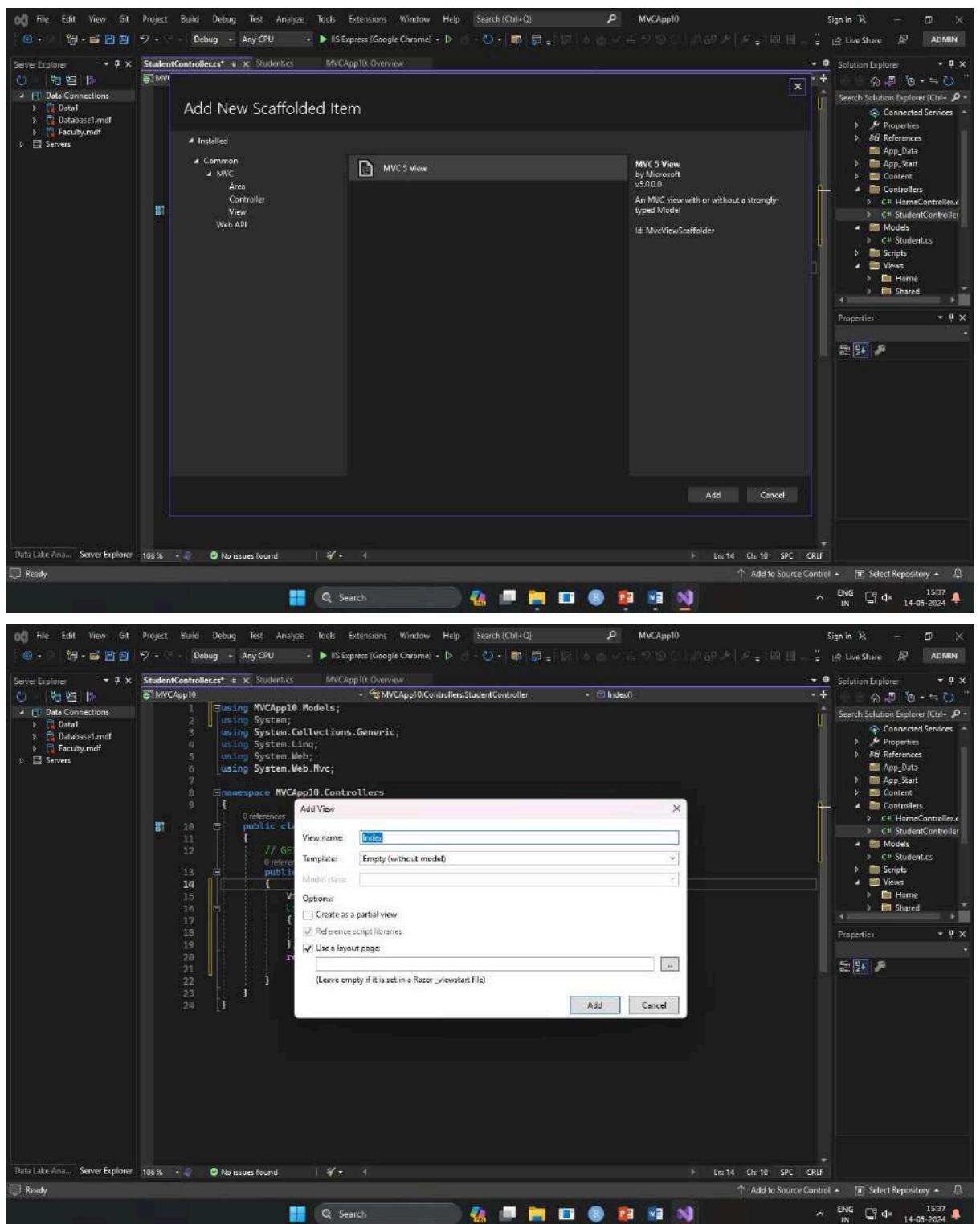
To add view ->

Right click inside body {}

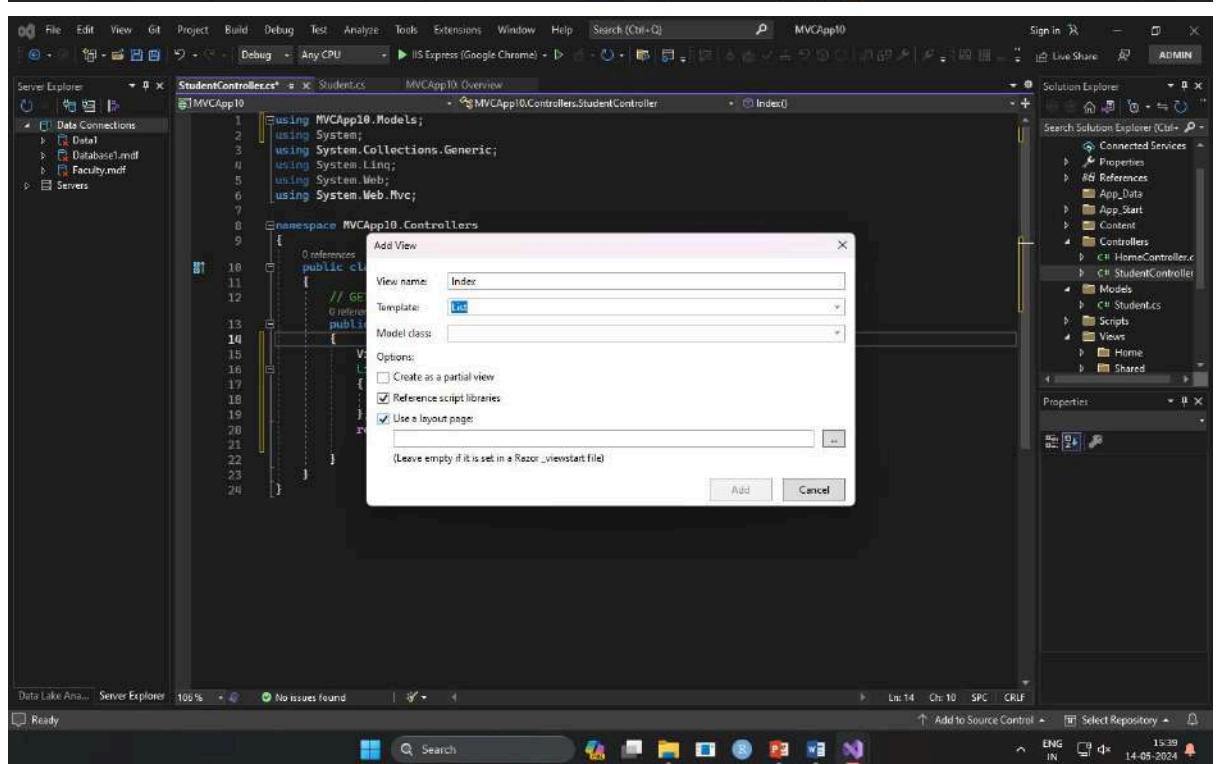
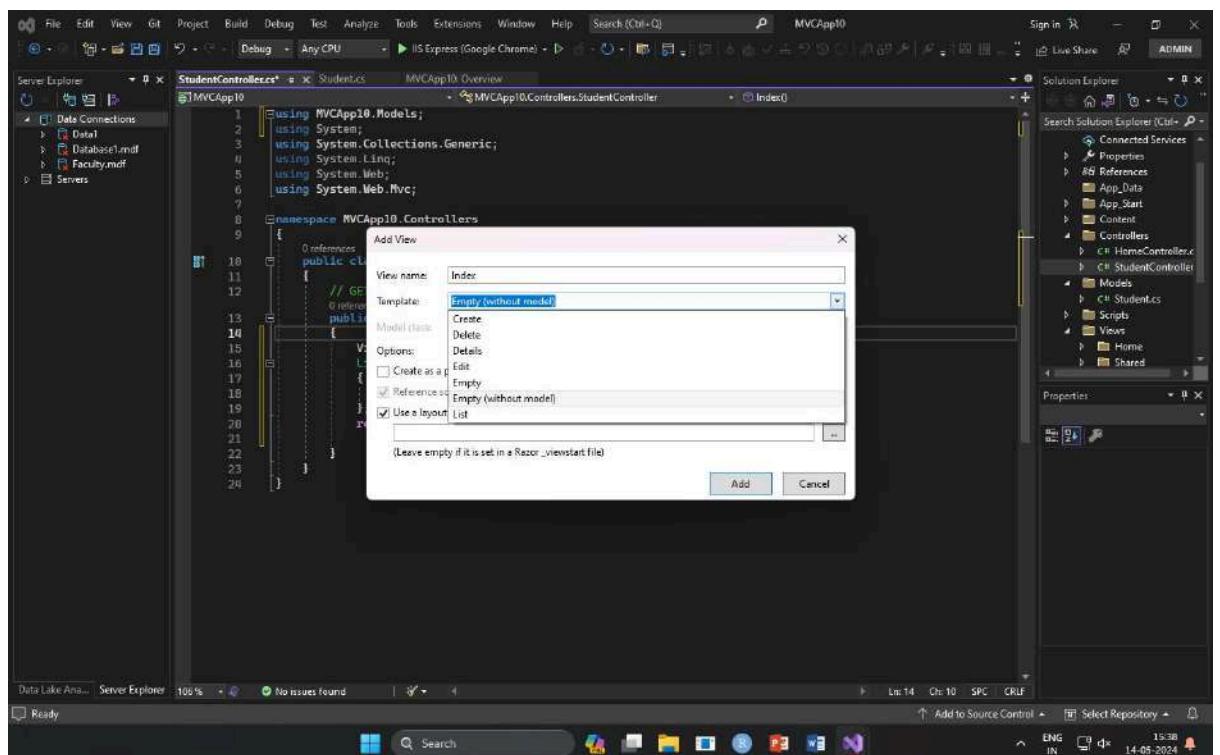
Add view

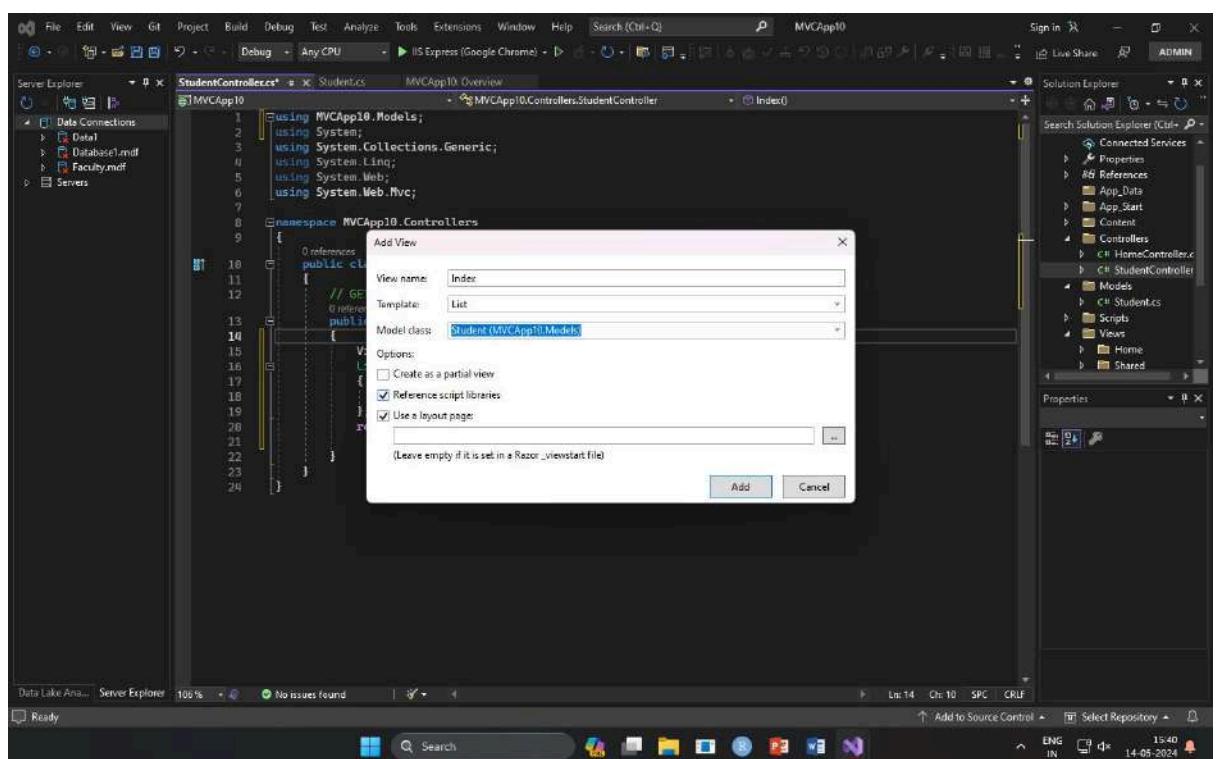
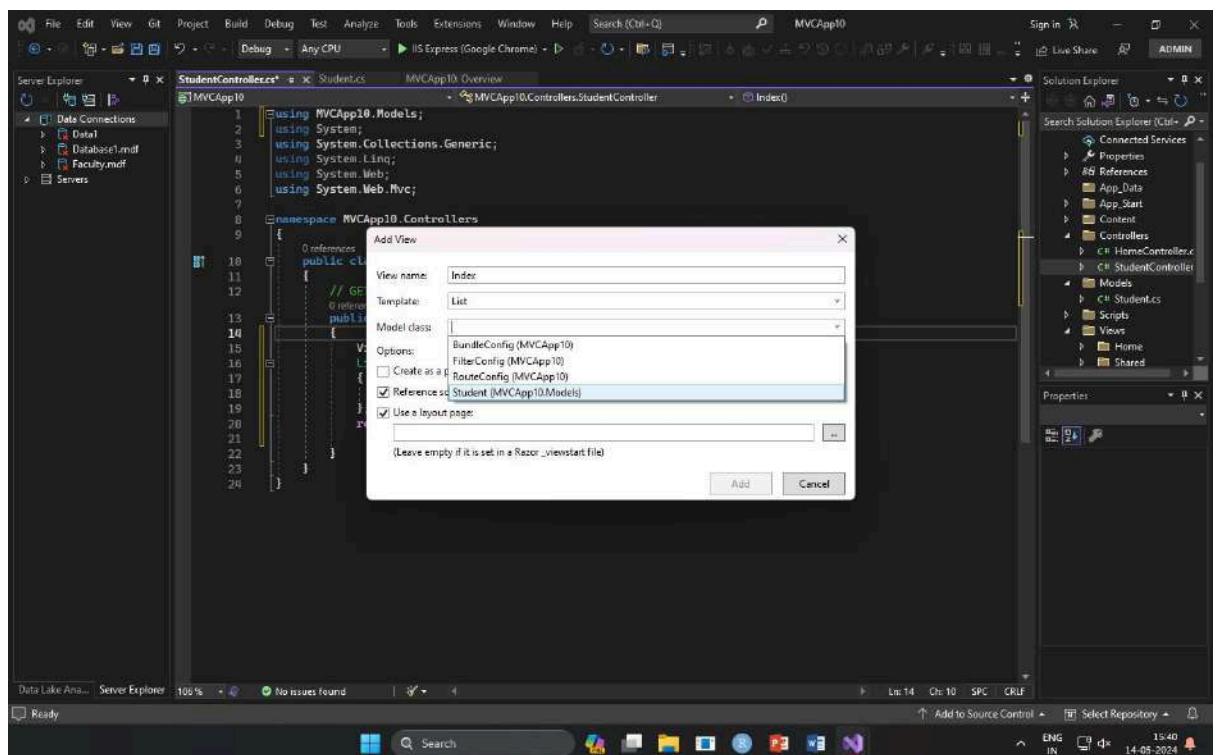


Add view

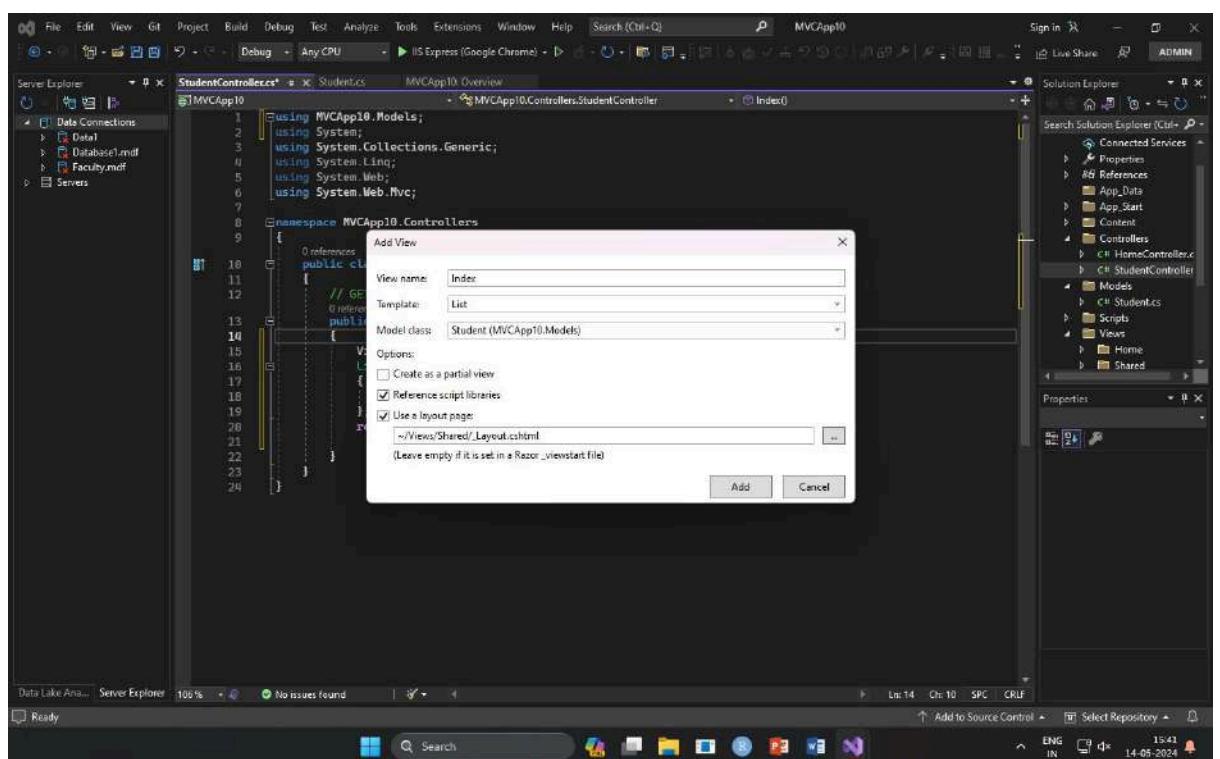
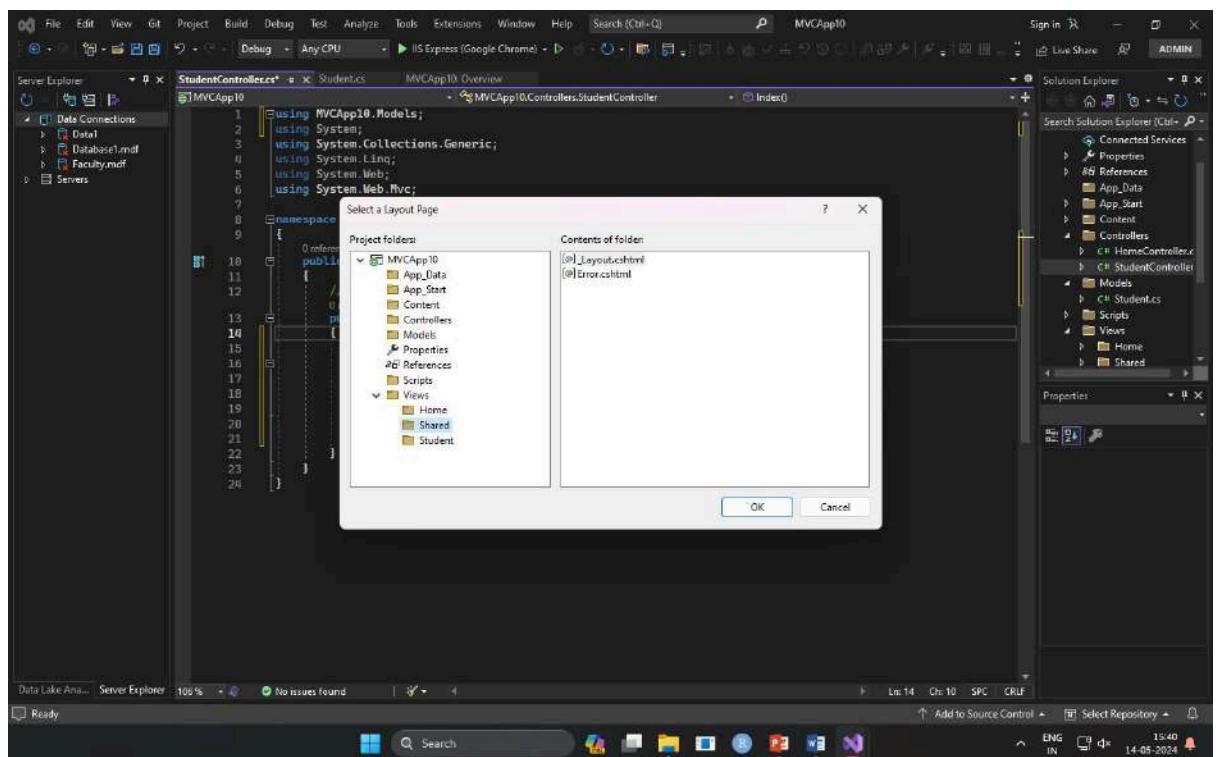


Action method name and view name should be same

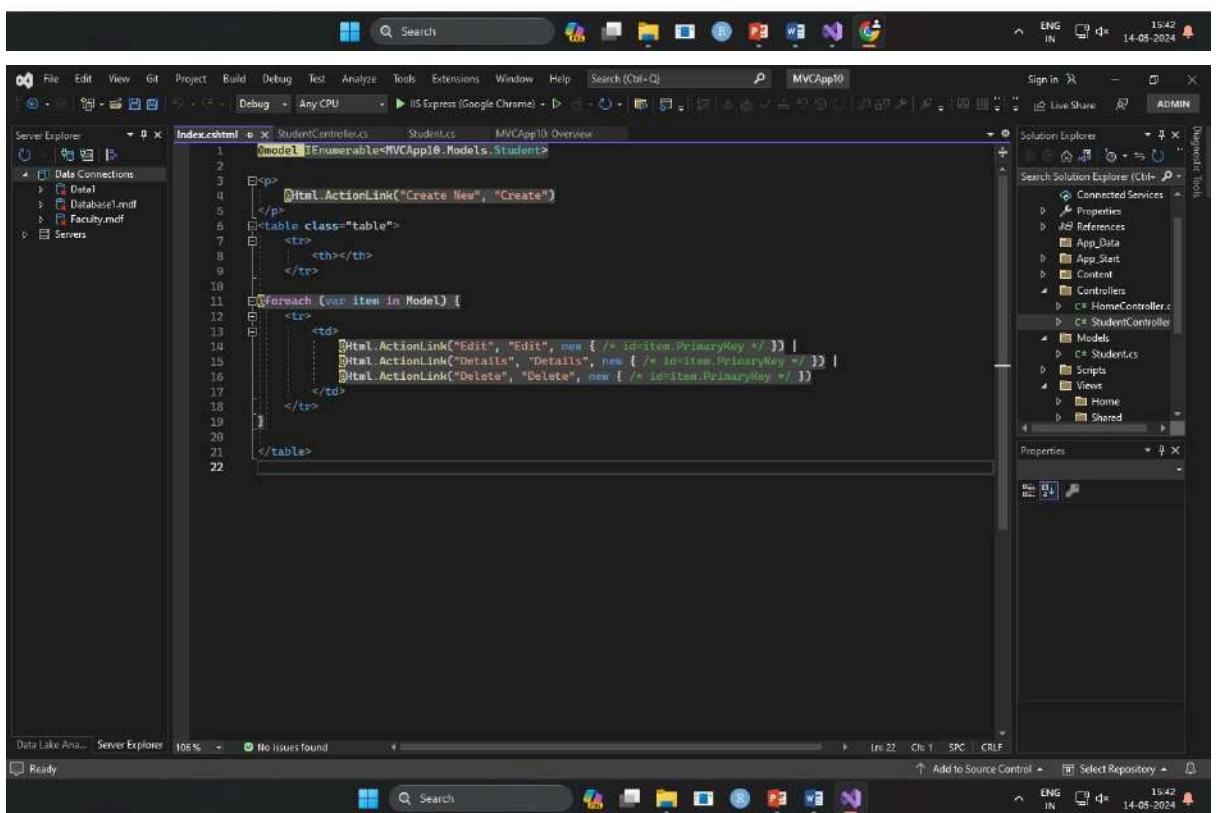
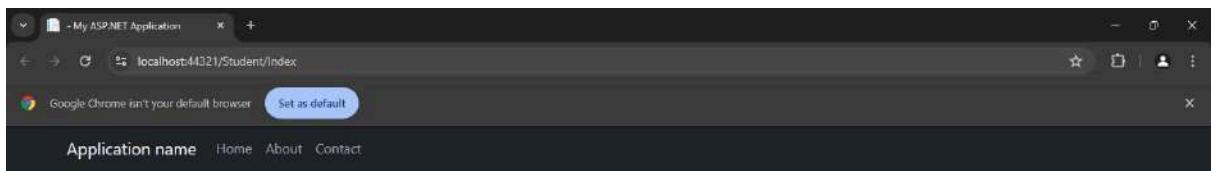




layout will be default layout



```
1 <model> IEnumerable<MVCApp10.Models.Student>
2
3 <p>
4     @Html.ActionLink("Create New", "Create")
5 </p>
6 <table class="table">
7     <tr>
8         <th></th>
9     </tr>
10    @foreach (var item in Model) {
11        <tr>
12            <td>
13                @Html.ActionLink("Edit", "Edit", new { /* id=item.PrimaryKey */ })
14                @Html.ActionLink("Details", "Details", new { /* id=item.PrimaryKey */ })
15                @Html.ActionLink("Delete", "Delete", new { /* id=item.PrimaryKey */ })
16            </td>
17        </tr>
18    }
19
20
21 </table>
```



The screenshot shows the Microsoft Visual Studio interface with the following details:

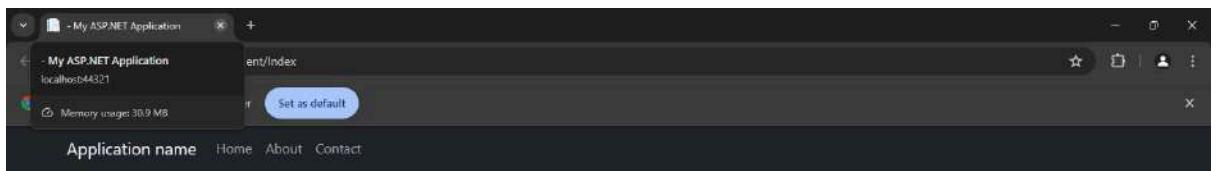
- Title Bar:** MVCApp10
- Menu Bar:** File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help
- Toolbar:** Standard icons for file operations.
- Server Explorer:** Shows Data Connections (Database1.mdf, Faculty.mdf) and Servers.
- Solution Explorer:** Shows the project structure:
 - Models
 - Scripts
 - Views
 - Home
 - Shared
 - Student
 - Index.cshtml
 - ViewStart.cshtml
 - Web.config
 - Global.asax
 - packages.config
 - Web.config
- Properties:** Shows the properties for the Student folder.
- Code Editor:** Displays the `Index.cshtml` file content:<table class="table">
| <Html.DisplayNameFor(model => model.sid)> |
| <Html.DisplayNameFor(model => model.sname)> |
| <Html.DisplayNameFor(model => model.course)> |
<Html.DisplayFor(modelItem => item.sid)>

| <Html.DisplayFor(modelItem => item.sname)> |
| <Html.DisplayFor(modelItem => item.course)> |
- Status Bar:** Ready, Add to Source Control, Select Repository, ENG IN, 14-05-2024, 15:46.

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** MVCApp10
- Menu Bar:** File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help, Search (Ctrl+Q)
- Toolbar:** Standard icons for file operations.
- Server Explorer:** Shows Data Connections (Database1.mdf, Faculty.mdf) and Servers.
- Solution Explorer:** Shows the project structure:
 - Models
 - Scripts
 - Views
 - Home
 - Shared
 - Student
 - Index.cshtml
 - ViewStart.cshtml
 - Web.config
 - Global.asax
 - packages.config
 - Web.config
- Properties:** Shows the properties for the Student folder.
- Code Editor:** Displays the `StudentController.cs` file content:using MVCApp10.Models;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Mvc;

namespace MVCApp10.Controllers
{
 public class StudentController : Controller
 {
 // GET: Student
 public ActionResult Index()
 {
 ViewBag.ItemList = "Student Details";
 List<Student> studlist = new List<Student>()
 { new Student(){ sid=1,sname="Sulakshana",course="MCA"}, new Student(){ sid=2,sname="Mahesh",course="MCA"} };
 return View(studlist);
 }
 }
}
- Status Bar:** Ready, Add to Source Control, Select Repository, ENG IN, 14-05-2024, 15:42.



Student Details

sid	sname	course
1	Sulakshana	MCA
2	Mahesh	MCA

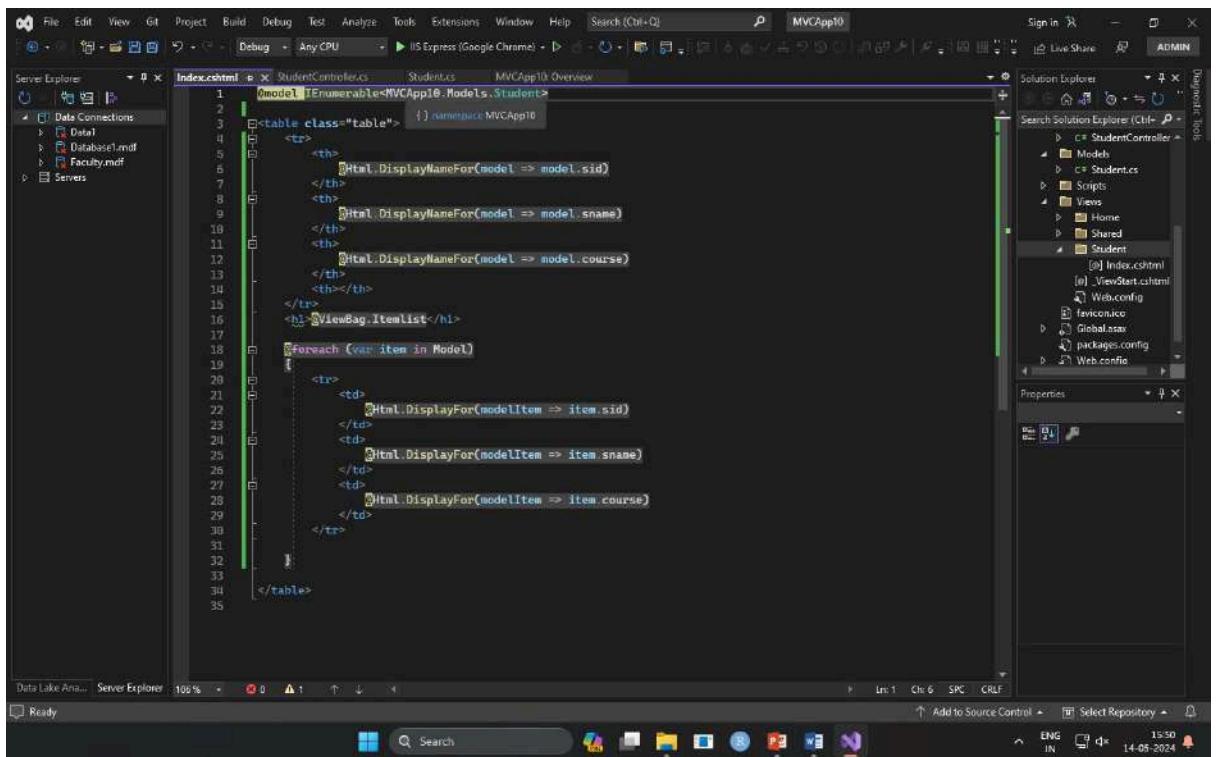
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Cshtml razor view/ razor code/ razor file

Bind html code to razor view

@model -> model used for view is student



Refres attributes from student file i.e sid ...sname...

@htmlDisplayNameFor-> value from model display with label

displayFor -> Display with value

-----performed-----

The screenshot shows the Microsoft Visual Studio interface with the following details:

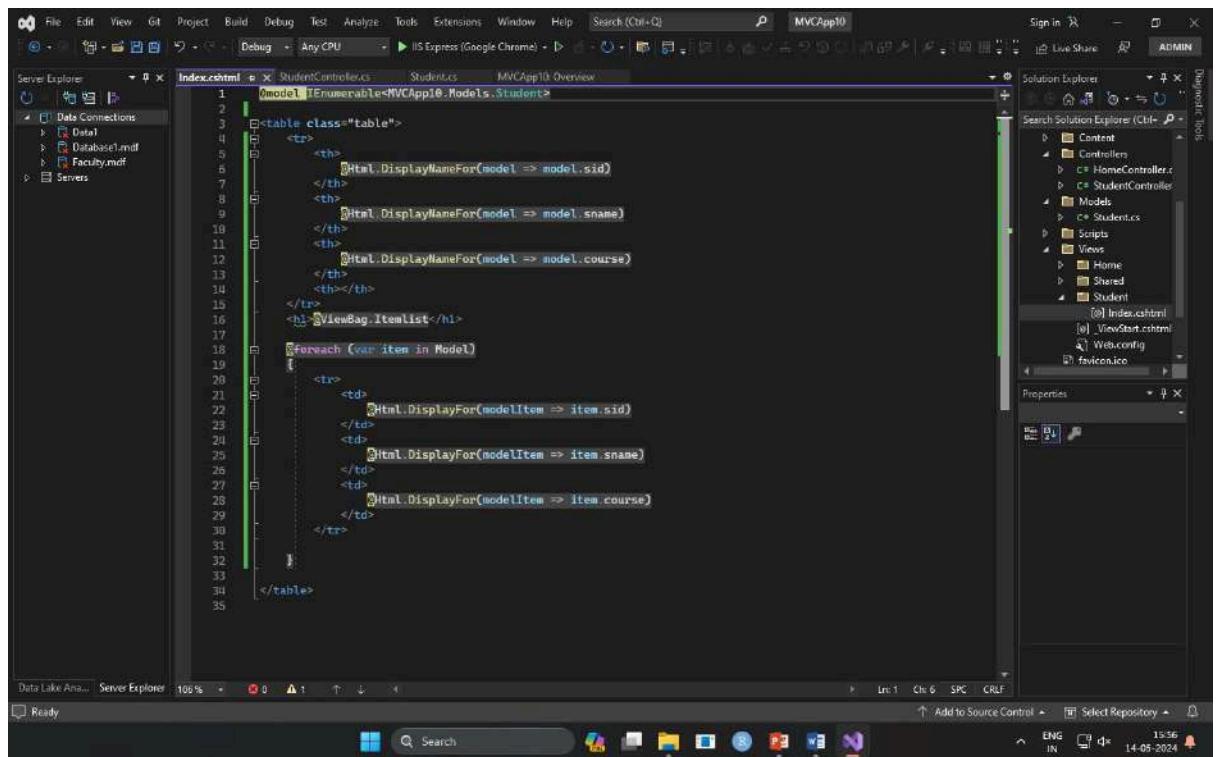
- Project:**** MVCApp10
- Code Editor:**** Student.cs (MVCApp10.Models)
- Content:**** Index.cshtml, StudentController.cs, MVCApp10 Overview
- Solution Explorer:**** Shows the project structure with files like App_Start, Content, Controllers (HomeController.cs, StudentController.cs), Models (Student.cs), Scripts, Views, favicon.ico, Global.asax, packages.config, and Web.config.
- Properties:**** Properties pane is visible.
- Task List:**** No issues found.
- Status Bar:**** Ready, Add to Source Control, Select Repository, ENG IN, 15:54, 14-05-2024.

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5 
6 namespace MVCApp10.Models
7 {
8     public class Student
9     {
10         public int sid;
11         public string sname;
12         public string course;
13     }
14 }
```

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Project:**** MVCApp10
- Code Editor:**** StudentController.cs (MVCApp10.Controllers)
- Content:**** Index.cshtml, Student.cs, MVCApp10 Overview
- Solution Explorer:**** Shows the project structure with files like App_Start, Content, Controllers (HomeController.cs, StudentController.cs), Models (Student.cs), Scripts, Views, favicon.ico, Global.asax, packages.config, and Web.config.
- Properties:**** Properties pane is visible.
- Task List:**** No issues found.
- Status Bar:**** Ready, Add to Source Control, Select Repository, ENG IN, 15:54, 14-05-2024.

```
1 using MVCApp10.Models;
2 using System;
3 using System.Collections.Generic;
4 using System.Linq;
5 using System.Web;
6 using System.Web.Mvc;
7 
8 namespace MVCApp10.Controllers
9 {
10     public class StudentController : Controller
11     {
12         // GET: Student
13         public ActionResult Index()
14         {
15             ViewBag.itemlist = "Student Details";
16             List<Student> studlist = new List<Student>()
17             { new Student(){ sid=1,sname="Sulakshana",course="MCA"}, 
18             new Student(){ sid=2,sname="Mahesh",course="MCA"} };
19             return View(studlist);
20         }
21     }
22 }
23 }
```



Right click model folder -> add-> class

Write code->

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
```

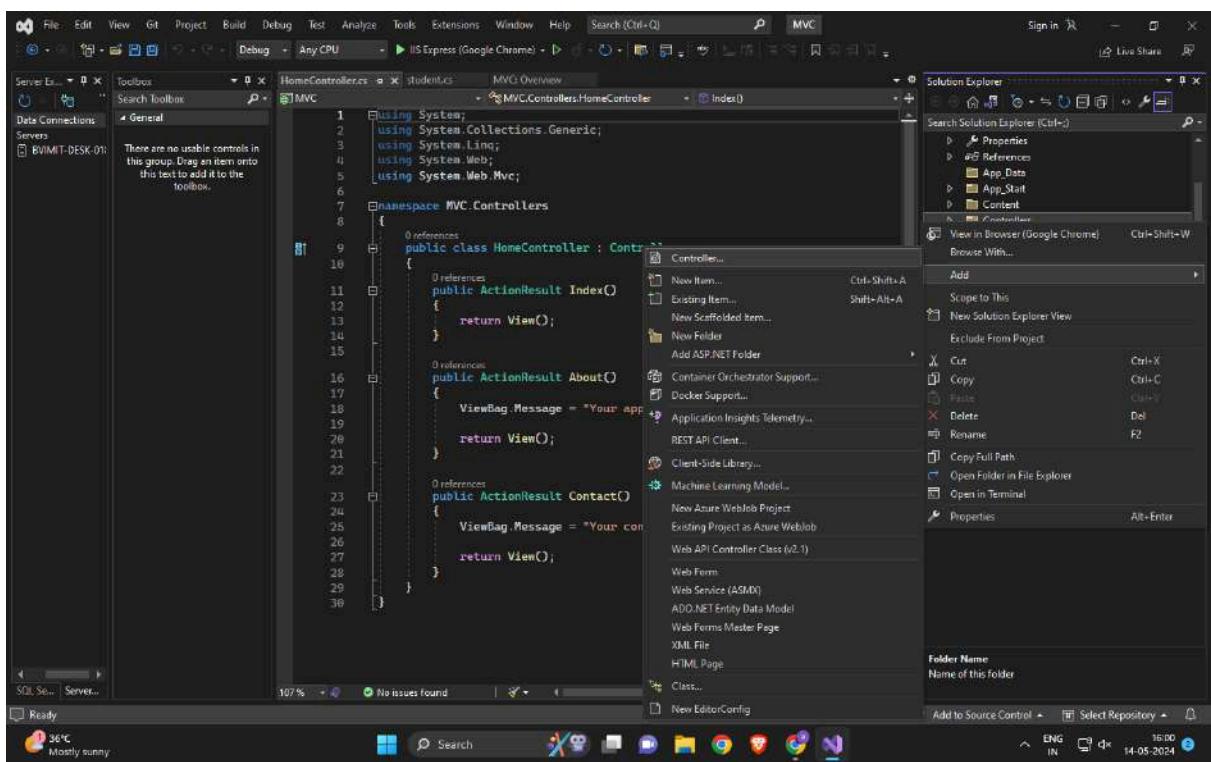
namespace MVC.Models

```
{
    public class student
    {
        public int sid;
        public string sname;
        public string course;
    }
}
```

Add controller by right click controller folder ->add controller -> select empty by default

Give name same as model i.e studentController

Write code->



Code for controller file ->

```
using MVC.Models;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Security.Authentication.ExtendedProtection.Configuration;
using System.Web;
using System.Web.Mvc;
using System.Xml.Linq;

namespace MVC.Controllers
{
    public class HomeController : Controller
    {
        // private string sname;
        // private string course;

        // GET: student
        public ActionResult Index()
        {
            ViewBag.Itemlist = "Student Details";
            List<student> studlist = new List<student>()
            {
                new student(){ sid = 1, sname="Pranjal", course="MCA"},  
new student(){ sid = 2, sname ="Harry", course = "MCA"}  
            };
        }
    }
}
```

```
    };
    return View(studlist);
}
}
```

To create view right click inside body part and add view

The screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the code editor for the file `studentController.cs`. A modal dialog box titled "Add View" is open, prompting the user to define a new view. The "View name" field is set to "Index", and the "Template" dropdown is set to "List". The "Model class" dropdown is set to "student (MVC.Models)". Under the "Options" section, three checkboxes are checked: "Reference script libraries", "Use a layout page", and "Leave empty if it is set in a Razor _viewstart file". Below these options is a text input field containing the path `~/Views/Home/Index.cshtml`. At the bottom right of the modal are "Add" and "Cancel" buttons.

```
2 using System;
3 using System.Collections.Generic;
4 using System.Linq;
5 using System.Security.Authentication.ExtendedProtection.Configuration;
6 using System.Web;
7 using System.Web.Mvc;
8 using System.Xml.Linq;
9
10 Add View
11
12 View name: Index
13 Template: List
14 Model class: student (MVC.Models)
15 Options:
16      Create as a partial view
17      Reference script libraries
18      Use a layout page
19         
20         (Leave empty if it is set in a Razor _viewstart file)
21
22 Add Cancel
23
24
25
26     }
27     return View(studlist);
28 }
29 }
```

The Solution Explorer on the right side of the interface lists the project structure, including the `Controllers`, `Models`, and `Views` folders. The `Views` folder contains subfolders for `Home` and `Shared`.

Screenshot of Microsoft Visual Studio showing the creation of an Index view in a studentController.cs file.

```

studentController.cs
using System;
using System.Collections.Generic;
using System.Linq;
using System.Security.Authentication.ExtendedProtection.Configuration;
using System.Web;
using System.Web.Mvc;
using System.Xml.Linq;

Add View

View name: Index
Template: List
Model class: student (MVC.Models)

Options:
 Create as a partial view
 Reference script libraries
 Use a layout page:
~/Views/Shared/_Layout.cshtml
(Leave empty if it is set in a Razor _viewstart file)

```

The code in studentController.cs is:

```

    public ActionResult Index()
    {
        var studlist = db.students.ToList();
        return View(studlist);
    }
}

```

Solution Explorer shows the project structure:

- Properties
- References
- App_Data
- App_Start
- Content
- Controllers
 - C# HomeController.cs
 - C# studentController.cs
- Models
- Scripts
- Views
 - Home
 - Shared

Properties window shows build actions for files.

Index - My ASP.NET Application browser screenshot shows the generated index page with student data.

Taskbar at the bottom shows the browser window and system icons.

code->
 /Student.cs

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;

```

```

namespace MVCProject.Models
{
    public class Student
    {
        public int sid;
        public String sname;
        public String course;

    }
}

//StudentController.cs

using MVCProject.Models;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Mvc;

namespace MVCProject.Controllers
{
    public class StudentController : Controller
    {
        // GET: Student
        public ActionResult Index()
        {
            ViewBag.ItemList = "Student Details";
            List<Student> studlist = new List<Student>()
            {
                new Student(){ sid=1,sname="Nikhil",course="MCA"},
                new Student(){ sid=2,sname="Sanket",course="MCA"},
                new Student(){ sid=2,sname="Rijuta",course="MCA"},
                new Student(){ sid=2,sname="Pranjal",course="MCA"},
                new Student(){ sid=2,sname="Shivani",course="MCA"}
            };

            return View(studlist);
        }
    }
}

```

```
//index.cshtml

@model IEnumerable<MVCPProject.Models.Student>

@{
    ViewBag.Title = "Index";
    Layout = "~/Views/Shared/_Layout.cshtml";
}

<h2>Index</h2>

<p>

<table class="table">
    <tr>
        <th>
            @Html.DisplayNameFor(model => model.sid)
            @Html.DisplayNameFor(model => model.sname)
            @Html.DisplayNameFor(model => model.course)
        </th>
    </tr>

@foreach (var item in Model) {
    <tr>
        <td>
            @Html.DisplayFor(modelitem => item.sid)
            @Html.DisplayFor(modelitem => item.sname)
            @Html.DisplayFor(modelitem => item.course)

        </td>
    </tr>
}

</table>

output->
```

Index - My ASP.NET Application

https://localhost:44357/Student/Index

Import favorites G Gmail YouTube Maps News Translate G Gmail

Application name Home About Contact

Index

sid	sname	course
1	Nikhil	MCA
2	Sanket	MCA
2	Rijuta	MCA
2	Pranjal	MCA
2	Shivani	MCA

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Search

File Explorer Edge File History

14:05 14-05-2024