1A. Create an application to print on screen the output of adding, subtracting, multiplying and dividing two numbers entered by the user in C#.

```
using System;
public class HelloWorld
{
    public static void Main(string[] args)
    {
            int num1,num2, add, sub, multiplay, div;
            Console.WriteLine("Enter Number :");
            num1=Convert.ToInt32(Console.ReadLine());
            num2=Convert.ToInt32(Console.ReadLine());
            add=num1+num2;
                sub=num1-num2;
            multiplay=num1*num2;
                div=num1/num2;
            Console.WriteLine(add);
            Console.WriteLine(sub);
            Console.WriteLine(multiplay);
            Console.WriteLine(div);
    }
}
```

OUTPUT :

Enter Number :

20

10

30

10

200

2

1B. Create an application to print Floyd's triangle till n rows in C#.

```csharp
using System;
class A
{
    static void Main()
    {
        Console.Write("Enter the number  ");
        int n = Convert.ToInt32(Console.ReadLine());
        int number = 1;
        for (int i = 1; i <= n; i++)
        {
            for (int j = 1; j <= i; j++)
            {
                Console.Write(number + " ");
                number++;
            }
            Console.WriteLine();
        }
    }
}
```

OUTPUT :

```
Enter the number  5
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

1C Create an application to demonstrate following operations

i. Generate Fibonacci series.

```
using System;
public class HelloWorld
{
    public static void Main(string[] args)
    {
        int n1=0;
        int n2=1;
        int n=10;
        Console.Write(n1);
        Console.Write(n2);
        for(int i=2;i<n;i++){
            int n3=n1+n2;
            n1=n2; n2=n3;
            Console.Write(n3);
        }
    }
}
```

<u>OUTPUT :</u>

0112358132134

ii. Test for prime numbers.

```
using System;

public class HelloWorld
{
    public static void Main(string[] args)
    {
        Console.WriteLine("Enter No : ");
        int n= Convert.ToInt32(Console.ReadLine());
        int flag=0;//prime num
        for(int i=2;i<n/2;i++){
            if(n%i == 0){
                flag=1; break;
            }
        }
        if(flag==0){
            Console.WriteLine("prime number");
        }
        else{
            Console.WriteLine("not prime");
        }
    }
}
```

<u>OUTPUT :</u>

Enter No :

7

prime number

2A Create a simple application to demonstrate the concepts boxing and unboxing.

```
using System;

public class A {

    public static void Main() {

        int x=10;

            Object o=x;

            x=20;

            Console.WriteLine("Normal variable :"+x);

            Console.WriteLine("Object :"+o);

            int y=(int)o;

            Console.WriteLine(" variable value of Unboxing  :"+y);

        }

}
```

<u>OUTPUT :</u>

Normal variable :20

Object :10

variable value of Unboxing :10

2B Create a simple application to perform addition and subtraction using delegate.

```
using System;
public delegate void tyit(int p, int q);
class A{
   public void show(int x,int y){
      Console.WriteLine(x+y);
   }
   public void disp(int a,int b){
      Console.WriteLine(a-b);
   }
}
class B{
   public static void Main(){
      A obj = new A();
      tyit t1 = new tyit(obj.show);
      tyit t2 = new tyit(obj.disp);
      t1 = t1+t2+t1+t2+t1;
      t1(10,6);

   }
}
```

OUTPUT :

16
4
16
4
16

2C. Create a simple application to demonstrate use of the concepts of interfaces.

```
using System;

interface A

{

        void show();

}

public class B : A

{

        public void show()

        {

                Console.WriteLine("b class.");

        }

}

public class Program

{

        public static void Main()

        {

                B b=new B();

                b.show();

        }

}
```

<u>OUTPUT :</u>

b class

3A Create a simple web page with various sever controls to demonstrate setting and use of their properties. (Example : AutoPostBack)

WebForm1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="AutoPostBack.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
    <form id="form1" runat="server">
    <div>
       <asp:DropDownList ID="DropDownList1" AutoPostBack="true" runat="server"
OnSelectedIndexChanged="DropDownList1_SelectedIndexChanged">
           <asp:ListItem Value="400706">Nerul</asp:ListItem>
           <asp:ListItem Value="400705">Uran</asp:ListItem>
           <asp:ListItem Value="400707">Thane</asp:ListItem>
       </asp:DropDownList>
       <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>
       <asp:RadioButtonList ID="RadioButtonList1" AutoPostBack="true" runat="server"
OnSelectedIndexChanged="RadioButtonList1_SelectedIndexChanged">
           <asp:ListItem Text="Red" Value="Red"></asp:ListItem>
           <asp:ListItem Text="Blue" Value="Blue"></asp:ListItem>
           <asp:ListItem Text="Pink" Value="Pink"></asp:ListItem>
       </asp:RadioButtonList>
       <asp:RadioButtonList ID="RadioButtonList2" runat="server" AutoPostBack="true"
OnSelectedIndexChanged="RadioButtonList2_SelectedIndexChanged" style="height: 77px">
           <asp:ListItem>Times New Roman</asp:ListItem>
           <asp:ListItem>Arial</asp:ListItem>
           <asp:ListItem>Jokerman</asp:ListItem>
       </asp:RadioButtonList>
       <asp:RadioButtonList ID="RadioButtonList3" runat="server" AutoPostBack="True"
OnSelectedIndexChanged="RadioButtonList3_SelectedIndexChanged">
           <asp:ListItem>Small</asp:ListItem>
           <asp:ListItem>Medium</asp:ListItem>
           <asp:ListItem>Large</asp:ListItem>
           <asp:ListItem>Xlarge</asp:ListItem>
           <asp:ListItem>XXlarge</asp:ListItem>
       </asp:RadioButtonList>
       <asp:CheckBox ID="CheckBox1" Text="bold" runat="server" AutoPostBack="true"
OnCheckedChanged="CheckBox1_CheckedChanged" />
       <asp:CheckBox ID="CheckBox2" Text="underline" runat="server"
AutoPostBack="true" OnCheckedChanged="CheckBox2_CheckedChanged" />
       <asp:CheckBox ID="CheckBox3" Text="italic" runat="server" AutoPostBack="true"
OnCheckedChanged="CheckBox3_CheckedChanged" />
    </div>
  </form>
```

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

WebForm1.aspx.cs
```csharp
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace AutoPostBack
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void DropDownList1_SelectedIndexChanged(object sender, EventArgs e)
        {
            Label1.Text = DropDownList1.SelectedValue;
        }

        protected void RadioButtonList1_SelectedIndexChanged(object sender, EventArgs e)
        {
            if (RadioButtonList1.SelectedIndex == 0)
                Label1.ForeColor = System.Drawing.Color.Red;
            if (RadioButtonList1.SelectedIndex == 1)
                Label1.ForeColor = System.Drawing.Color.Blue;
            if (RadioButtonList1.SelectedIndex == 2)
                Label1.ForeColor = System.Drawing.Color.Pink;
        }
        protected void RadioButtonList2_SelectedIndexChanged(object sender, EventArgs e)
        {
            Label1.Font.Name = RadioButtonList2.SelectedValue;
        }
        protected void RadioButtonList3_SelectedIndexChanged(object sender, EventArgs e)
        {
            if (RadioButtonList3.SelectedIndex == 0)
                Label1.Font.Size = FontUnit.Small;
            if (RadioButtonList3.SelectedIndex == 1)
                Label1.Font.Size = FontUnit.Medium;
            if (RadioButtonList3.SelectedIndex == 2)
                Label1.Font.Size = FontUnit.Large;
            if (RadioButtonList3.SelectedIndex == 3)
                Label1.Font.Size = FontUnit.XLarge;
            if (RadioButtonList3.SelectedIndex == 4)
                Label1.Font.Size = FontUnit.XXLarge;
        }
```

```csharp
protected void CheckBox1_CheckedChanged(object sender, EventArgs e)
    {
      if (CheckBox1.Checked)
        Label1.Font.Bold = true;
      else
        Label1.Font.Bold = false;
    }
  protected void CheckBox2_CheckedChanged(object sender, EventArgs e)
    {
      if (CheckBox2.Checked)
        Label1.Font.Underline = true;
      else
        Label1.Font.Underline = false;
    }
  protected void CheckBox3_CheckedChanged(object sender, EventArgs e)
    {
      if (CheckBox3.Checked)
        Label1.Font.Italic = true;
      else
        Label1.Font.Italic = false;
    }
  }
}
```

OUTPUT :

Nerul ▼ 400706
○ Red
○ Blue
◉ Pink
○ Times New Roman
○ Arial
◉ Jokerman
○ Small
○ Medium
◉ Large
○ Xlarge
○ XXlarge
☐ bold ☑ underline ☐ italic

3B. Create a simple application to demonstrate your vacation using calendar control.

Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="calender.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
    <form id="form1" runat="server">
        <div>
            <asp:Calendar ID="Calendar1" runat="server" OnDayRender="Calendar1_DayRender"
OnSelectionChanged="Calendar1_SelectionChanged" BackColor="#FFFFCC"
BorderColor="#FFCC66" BorderWidth="1px" DayNameFormat="Shortest" Font-
Names="Verdana" Font-Size="8pt" ForeColor="#663399" Height="200px"
ShowGridLines="True" Width="220px">

            <DayHeaderStyle BackColor="#FFCC66" Font-Bold="True" Height="1px" />

            <NextPrevStyle Font-Size="9pt" ForeColor="#FFFFCC" />

            <OtherMonthDayStyle ForeColor="#CC9966" />

            <SelectedDayStyle BackColor="#CCCCFF" Font-Bold="True" />

            <SelectorStyle BackColor="#FFCC66" />

            <TitleStyle BackColor="#990000" Font-Bold="True" Font-Size="9pt"
ForeColor="#FFFFCC" />
            <TodayDayStyle BackColor="#FFCC66" ForeColor="White" />
        </asp:Calendar>
        <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>
        </div>
    </form>
</body>
</html>
```

Webform.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace calender
{
```

```
public partial class WebForm1 : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
    }
    protected void Calendar1_SelectionChanged(object sender, EventArgs e)
    {
        Response.Write(Calendar1.SelectedDate.ToLongDateString());
    }

    protected void Calendar1_DayRender(object sender, DayRenderEventArgs e)
    {
        if (e.Day.Date.Day == 7 && e.Day.Date.Month == 9)
        {
            Label obj1 = new Label();
            obj1.Text = "HDB";
            e.Cell.Controls.Add(obj1);
        }
        DateTime t1 = new DateTime(2024, 09, 07);
        DateTime t2 = t1.AddDays(5);

        Calendar1.SelectedDates.SelectRange(t1, t2);

        TimeSpan t = new DateTime(2024, 09, 11) - DateTime.Now;
        Label1.Text = (" No of days remaining " + t.Days);
    }
  }
}
```

OUTPUT :

07 September 2024

≤	September 2024					≥
Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	31
1	2	3	4	5	6	7HDB
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

No of days remaining 3

3C Demonstrate the use of Treeview operations on the web form.

Site1.master

```
<%@ Master Language="C#" AutoEventWireup="true" CodeBehind="Site1.master.cs"
Inherits="treeview.Site1" %>
<!DOCTYPE html>
<html>
<head runat="server">
    <asp:ContentPlaceHolder ID="head" runat="server">
    </asp:ContentPlaceHolder>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <asp:Table ID="Table1" runat="server">
            <asp:TableRow>
                <asp:TableCell>
            <asp:SiteMapPath ID="SiteMapPath1" runat="server"
            PathSeparator="  #"></asp:SiteMapPath>
                        <asp:TreeView ID="TreeView1" runat="server">
                         <Nodes>
                         <asp:TreeNode Text="sem V">
                             <asp:TreeNode Text="AWD"
NavigateUrl="~/WebForm1.aspx"></asp:TreeNode>
                             <asp:TreeNode Text="SPD"
NavigateUrl="~/WebForm2.aspx"></asp:TreeNode>
                             <asp:TreeNode Text="ET"
NavigateUrl="~/WebForm3.aspx"></asp:TreeNode>
                             <asp:TreeNode Text="AI"
NavigateUrl="~/WebForm4.aspx"></asp:TreeNode>
                         </asp:TreeNode>
                         </Nodes>
                        </asp:TreeView>
                </asp:TableCell>
                <asp:TableCell>
                    <asp:ContentPlaceHolder ID="ContentPlaceHolder1" runat="server">
                    </asp:ContentPlaceHolder>
                </asp:TableCell>

            </asp:TableRow>
          </asp:Table>
        </div>
    </form>
</body>
</html>
```

Webform1.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs" Inherits="treeview.WebForm1"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    AWD
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Advanced web programming
</asp:Content>
```

Webform2.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs" Inherits="treeview.WebForm2"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    SPD
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Software project Development
</asp:Content>
```

Webform3.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm3.aspx.cs" Inherits="treeview.WebForm3"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    ET
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Emerging Technology
</asp:Content>
```

Webform4.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm4.aspx.cs" Inherits="treeview.WebForm4"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    AI
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Artificial Intellegence
```

</asp:Content>

Web.sitemap

```xml
<?xml version="1.0" encoding="utf-8" ?>
<siteMap xmlns="http://schemas.microsoft.com/AspNet/SiteMap-File-1.0" >
 <siteMapNode  title="SEM V"  >
   <siteMapNode url="~/WebForm1.aspx" title="AWP"  description="" />
   <siteMapNode url="~/WebForm2.aspx" title="ET"  description="" />
       <siteMapNode url="~/WebForm3.aspx" title="AI"  description="" />
       <siteMapNode url="~/WebForm4.aspx" title="SPD"  description="" />
 </siteMapNode>
</siteMap>
```

OUTPUT :

```
AWD
 SEM V # AWP
  ⊟ sem V
     AWD
                 Advanced web programming
     SPD
     ET
     AI
```

4A. Create a Registration form to demonstrate use of various Validation controls.

Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="validation_control.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
   <title></title>
</head>
<body>
   <form id="form1" runat="server">
     <div>
        Sign up
        <br /> <br />
        Enter Name :<asp:TextBox ID="TextBox1"
runat="server"></asp:TextBox><asp:RequiredFieldValidator ID="RequiredFieldValidator1"
runat="server" ErrorMessage="Enter Name"
ControlToValidate="TextBox1"></asp:RequiredFieldValidator>
        <br /> <br />

        Enter Age :<asp:TextBox ID="TextBox2"
runat="server"></asp:TextBox><asp:RangeValidator ID="RangeValidator1" runat="server"
ErrorMessage="Enter valid Age" ControlToValidate="TextBox2" MinimumValue="20"
MaximumValue="80" Type="Integer"></asp:RangeValidator>
        <br /> <br />

        Enter Email :<asp:TextBox ID="TextBox3"
runat="server"></asp:TextBox><asp:RegularExpressionValidator
ID="RegularExpressionValidator1" runat="server" ErrorMessage="Enter Valid Email"
ControlToValidate="TextBox3"
ValidationExpression="\S+@\S+\.\S+"></asp:RegularExpressionValidator>
        <br /> <br />

        Enter Pswd:<asp:TextBox ID="TextBox4"
runat="server"></asp:TextBox><asp:RequiredFieldValidator ID="RequiredFieldValidator2"
runat="server" ErrorMessage="Enter valid password"
ControlToValidate="TextBox4"></asp:RequiredFieldValidator>
        <br /> <br />

        Re-Enter Pswd:<asp:TextBox ID="TextBox5"
runat="server"></asp:TextBox><asp:CompareValidator ID="CompareValidator1"
runat="server" ErrorMessage="Password mismatch" ControlToValidate="TextBox5"
ControlToCompare="TextBox4" Operator="Equal"></asp:CompareValidator>
        <br /> <br />
```

```
        Mobile No:<asp:TextBox ID="TextBox6"
runat="server"></asp:TextBox><asp:CustomValidator ID="CustomValidator1" runat="server"
ErrorMessage="Enter valid mobile no." ControlToValidate="TextBox6"
OnServerValidate="CustomValidator1_ServerValidate"></asp:CustomValidator>
        <br /> <br />
        <asp:Button ID="Button1" runat="server" Text="Submit" OnClick="Button1_Click" />
    </div>
  </form>
</body>
</html>
```

Webform1.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace validation_control
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
        }
        protected void Button1_Click(object sender, EventArgs e)
        {
            if (Page.IsValid)
                Response.Write("DETAILS SUBMITTED SUCCESSFULLY");
        }
        protected void CustomValidator1_ServerValidate(object source, ServerValidateEventArgs
args)
        {
            if (args.Value.Length == 10)
                args.IsValid = true;
            else
                args.IsValid = false;
        }
    }
}
```

Web.config
```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
                <appSettings>
```

```xml
            <add key="ValidationSettings:UnobtrusiveValidationMode"
value="None"></add>
            </appSettings>
            <system.web>
                    <compilation debug="true" targetFramework="4.6.1"/>
                    <httpRuntime targetFramework="4.6.1"/>
            </system.web>
            <system.codedom>
    <compilers>
      <compiler language="c#;cs;csharp" extension=".cs"
type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.CSharpCodeProvider,
Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=2.0.1.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" warningLevel="4"
compilerOptions="/langversion:default /nowarn:1659;1699;1701" />
      <compiler language="vb;vbs;visualbasic;vbscript" extension=".vb"
type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.VBCodeProvider,
Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=2.0.1.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" warningLevel="4"
compilerOptions="/langversion:default /nowarn:41008 /define:_MYTYPE=\&quot;Web\&quot;
/optionInfer+" />

    </compilers>
  </system.codedom>
</configuration>
```

OUTPUT :

DETAILS SUBMITTED SUCCESSFULLY
Sign up

Enter Name : Anita

Enter Age : 20

Enter Email : anitapatil@gmail.com

Enter Pswd: anita

Re-Enter Pswd: anita

Mobile No: 9876547698

Submit

4B. Create Web Form to demonstrate use of Adrotator Control.

Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="adrotator.WebForm1" %>
<!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" runat="server" AdvertisementFile="~/adv.xml"
Target="_blank"/>

        </div>
    </form>
</body>
</html>
```
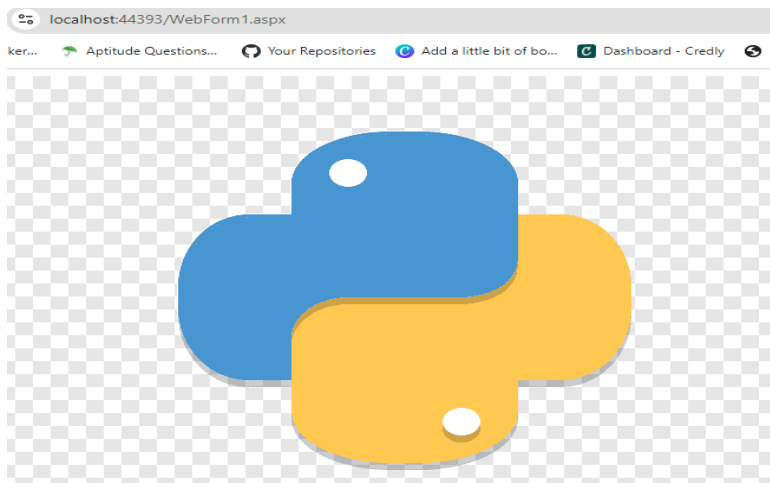
Adv.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<Advertisements>
        <Ad>
                <ImageUrl>c.png</ImageUrl>
                <NavigateUrl>https://www.google.com/</NavigateUrl>
                <AlternateText>c++</AlternateText>
                <Keyword>c++</Keyword>
                <Impressions>2</Impressions>
        </Ad>
        <Ad>
                <ImageUrl>java.png</ImageUrl>
                <NavigateUrl>https://www.java.com/en/</NavigateUrl>
                <AlternateText>java</AlternateText>
                <Keyword>java</Keyword>
                <Impressions>2</Impressions>
        </Ad>
        <Ad>
                <ImageUrl>python.png</ImageUrl>
                <NavigateUrl>https://www.python.org/</NavigateUrl>
                <AlternateText>python</AlternateText>
                <Keyword>python</Keyword>
                <Impressions>2</Impressions>
        </Ad>
</Advertisements>
```

OUTPUT :

4C. Create Web Form to demonstrate use User Controls

Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="user_controls.WebForm1" %>
<%@ Register Src="~/WebUserControl1.ascx" TagPrefix="uc1" TagName="tyit" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            DOB <uc1:tyit runat="server" id="tyit" />
        </div>
    </form>
</body>
</html>
```

Webform2.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"
Inherits="user_controls.WebForm2" %>
<%@ Register Src="~/WebUserControl1.ascx" TagPrefix="uc1" TagName="tyit" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>

            DOJ<uc1:tyit runat="server" id="tyit" />

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

Webform3.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm3.aspx.cs"
Inherits="user_controls.WebForm3" %>
<%@ Register Src="~/WebUserControl1.ascx" TagPrefix="uc1" TagName="tyit" %>
<!DOCTYPE html>
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
  <title></title>
</head>
<body>
  <form id="form1" runat="server">
    <div>
      DOP<uc1:tyit runat="server" id="tyit" />

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

WebUserControl1.aspx

```
<%@ Control Language="C#" AutoEventWireup="true"
CodeBehind="WebUserControl1.ascx.cs" Inherits="user_controls.WebUserControl1" %>

<asp:Calendar ID="Calendar1" runat="server"
OnSelectionChanged="Calendar1_SelectionChanged"></asp:Calendar>

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

WebUserControl1.aspx.cs
```csharp
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace user_controls
{
    public partial class WebUserControl1 : System.Web.UI.UserControl
    {
        protected void Page_Load(object sender, EventArgs e)
        {
        }

        protected void Calendar1_SelectionChanged(object sender, EventArgs e)
        {
            Label1.Text = Calendar1.SelectedDate.ToLongDateString();
        }
    }
}
```

OUTPUT :

DOB

≤	September 2024					≥
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

18 September 2024

DOJ

≤	September 2024					≥
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

09 September 2024

DOP

≤	September 2024					≥
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

12 September 2024

5A. Create Web Form to demonstrate use of Website Navigation controls.
5B. Create a web application to demonstrate use of Master Page and content page.

i. MenuList

Site1.master

```
<%@ Master Language="C#" AutoEventWireup="true" CodeBehind="Site1.master.cs"
Inherits="menulist.Site1" %>
<!DOCTYPE html>
<html>
<head runat="server">
    <link href="/StyleSheet1.css" rel="stylesheet" />
    <asp:ContentPlaceHolder ID="head" runat="server">
    </asp:ContentPlaceHolder>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <asp:Table ID="Table1" runat="server">
                <asp:TableRow>
                    <asp:TableCell>
                        <asp:TreeView ID="TreeView1" runat="server">
                            <Nodes>
                                <asp:TreeNode Text="SEM V">
                                    <asp:TreeNode Text="AI"
NavigateUrl="~/WebForm1.aspx"></asp:TreeNode>
                                    <asp:TreeNode Text="AWD"
NavigateUrl="~/WebForm2.aspx"></asp:TreeNode>
                                    <asp:TreeNode Text="IOT"
NavigateUrl="~/WebForm3.aspx"></asp:TreeNode>
                                    <asp:TreeNode Text="SPD"
NavigateUrl="~/WebForm4.aspx"></asp:TreeNode>
                                    <asp:TreeNode Text="NGT"
NavigateUrl="~/WebForm5.aspx"></asp:TreeNode>
                                </asp:TreeNode>
                            </Nodes>
                        </asp:TreeView>
                    </asp:TableCell>
                    <asp:TableCell>
                        <asp:ContentPlaceHolder ID="ContentPlaceHolder1" runat="server">
                        </asp:ContentPlaceHolder>
                    </asp:TableCell>
                </asp:TableRow>
            </asp:Table>
        </div>
    </form>
```
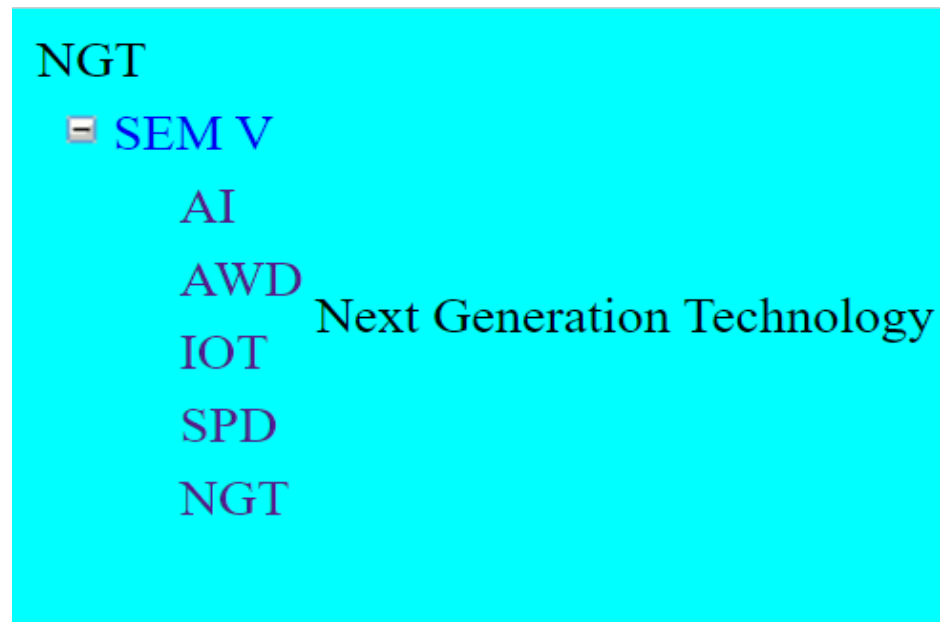
```
</body>
</html>
```

Webform1.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/site1.Master" AutoEventWireup="true"
CodeBehind="WebForm5.aspx.cs" Inherits="menulist.WebForm1" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    AI
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Artificial Intellegence
</asp:Content>
```

Webform2.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/site1.Master" AutoEventWireup="true"
CodeBehind="WebForm2.aspx.cs" Inherits="menulist.WebForm2" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    AWD
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Advanced Web Development
</asp:Content>
```

Webform3.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/site1.Master" AutoEventWireup="true"
CodeBehind="WebForm3.aspx.cs" Inherits="menulist.WebForm3" %>
<asp:Content ID="Content3" ContentPlaceHolderID="head" runat="server">
    IOT
</asp:Content>
<asp:Content ID="Content4" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Internet Of Things
</asp:Content>
```

Webform4.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/site1.Master" AutoEventWireup="true"
CodeBehind="WebForm4.aspx.cs" Inherits="menulist.WebForm4" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    SPD
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Software Project Development
</asp:Content>
```

Webform5.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/site1.Master" AutoEventWireup="true"
CodeBehind="WebForm5.aspx.cs" Inherits="menulist.WebForm5" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    NGT
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Next Generation Technology
</asp:Content>
```

OUTPUT :

ii. TreeList

Site1.master

```
<%@ Master Language="C#" AutoEventWireup="true" CodeBehind="Site1.master.cs"
Inherits="treeview.Site1" %>
<!DOCTYPE html>
<html>
<head runat="server">
    <asp:ContentPlaceHolder ID="head" runat="server">
    </asp:ContentPlaceHolder>
</head>
```

```
<body>
    <form id="form1" runat="server">
        <div>
         <asp:Table ID="Table1" runat="server" Height="412px" GridLines="Both"
Width="285px">
        <asp:TableRow>
            <asp:TableCell ColumnSpan="2">TYIT MASTER</asp:TableCell>
        </asp:TableRow>
        <asp:TableRow>
            <asp:TableCell>
            <asp:TreeView ID="TreeView1" runat="server">
             <Nodes>
                <asp:TreeNode Text="SEM V">
                <asp:TreeNode Text="AWD" NavigateUrl="~/WebForm1.aspx" />
                <asp:TreeNode Text="IOT" NavigateUrl="~/WebForm2.aspx" />
                <asp:TreeNode Text="AI" NavigateUrl="~/WebForm3.aspx" />
                </asp:TreeNode>
                <asp:TreeNode Text="SEM VI">
                <asp:TreeNode Text="GIS" NavigateUrl="~/WebForm4.aspx" />
                <asp:TreeNode Text="BI" NavigateUrl="~/WebForm5.aspx" />
                </asp:TreeNode>
            </Nodes>
            </asp:TreeView>
            </asp:TableCell>
        </asp:TableRow>
        </asp:Table>
            <asp:ContentPlaceHolder ID="ContentPlaceHolder1" runat="server">
            </asp:ContentPlaceHolder>
        </div>
    </form>
</body>
</html>
```

Webform1.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs" Inherits="treeview.WebForm1"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Advanced Web Programming
</asp:Content>
```

Webform2.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs" Inherits="treeview.WebForm2"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Internet of Things
</asp:Content>
```

Webform3.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm3.aspx.cs" Inherits="treeview.WebForm3"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Artificial Intellegence
</asp:Content>
```

Webform4.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm4.aspx.cs" Inherits="treeview.WebForm4"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    GTS
</asp:Content>
```

Webform5.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm5.aspx.cs" Inherits="treeview.WebForm5"
%>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    BI
</asp:Content>
```

OUTPUT :

```
TYIT MASTER




⊟ SEM V
      AWD
      IOT
      AI
⊟ SEM VI
      GIS
      BI




```

Advanced Web Programming

iii. SiteMapPathList

Site1.master
```
<%@ Master Language="C#" AutoEventWireup="true" CodeBehind="Site1.master.cs"
Inherits="sitemap.Site1" %>
<!DOCTYPE html>
<html>
<head runat="server">
  <asp:ContentPlaceHolder ID="head" runat="server">
  </asp:ContentPlaceHolder>
</head>
<body>
  <form id="form1" runat="server">
    <div>
     <asp:Table ID="Table1" runat="server" Height="412px" GridLines="Both"
Width="285px">
        <asp:TableRow>
          <asp:TableCell ColumnSpan="2">TYIT MASTER</asp:TableCell>
        </asp:TableRow>
```

```
        <asp:TableRow>
        <asp:TableCell>
          <asp:SiteMapPath ID="SiteMapPath1" runat="server"></asp:SiteMapPath>
          <asp:TreeView ID="TreeView1" runat="server">
            <Nodes>
              <asp:TreeNode Text="SEM V">
              <asp:TreeNode Text="AWD" NavigateUrl="~/WebForm1.aspx" />
              <asp:TreeNode Text="IOT" NavigateUrl="~/WebForm2.aspx" />
              <asp:TreeNode Text="AI" NavigateUrl="~/WebForm3.aspx" />
              </asp:TreeNode>
              <asp:TreeNode Text="SEM VI">
              <asp:TreeNode Text="GIS" NavigateUrl="~/WebForm4.aspx" />
              <asp:TreeNode Text="BI" NavigateUrl="~/WebForm5.aspx" />
              </asp:TreeNode>
            </Nodes>
          </asp:TreeView>
        </asp:TableCell>
        </asp:TableRow>
      </asp:Table>
      <asp:ContentPlaceHolder ID="ContentPlaceHolder1" runat="server">
      </asp:ContentPlaceHolder>
    </div>
    </form>
</body>
</html>
```
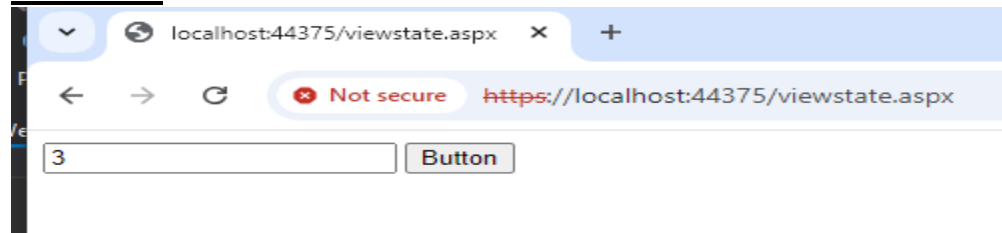
Add 5 content pages
Webform1.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs" Inherits="sitemap.WebForm1" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Advanced Web Programming
</asp:Content>
```

Webform2.aspx
```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs" Inherits="sitemap.WebForm2" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    Internet Of Things
</asp:Content>
```

Webform3.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm3.aspx.cs" Inherits="sitemap.WebForm3" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    AI
</asp:Content>
```

Webform4.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm4.aspx.cs" Inherits="sitemap.WebForm4" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    GIS
</asp:Content>
```

Webform5.aspx

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master"
AutoEventWireup="true" CodeBehind="WebForm5.aspx.cs" Inherits="sitemap.WebForm5" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    BI
</asp:Content>
```

OUTPUT :

Advanced Web Programming

5C. Create a web application to demonstrate various states of ASP.NET Pages.
1) Viewstate.aspx
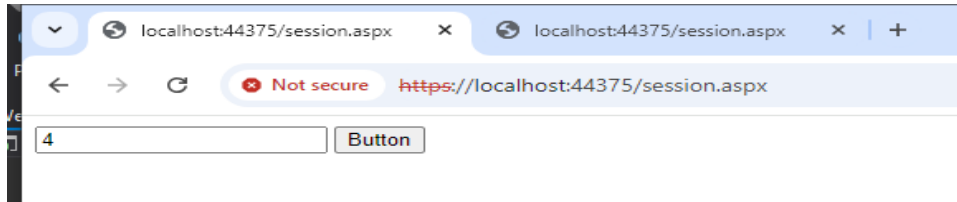
```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="viewstate.aspx.cs"
Inherits="WebApplication3.viewstate" %>
<!DOCTYPE html>
<body>
    <form id="form1" runat="server">
        <div>
            <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
            <asp:Button ID="Button1" runat="server" Text="Button" OnClick="Button1_Click" />
        </div>
    </form>
</body>
</html>
```

Viewstate.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace WebApplication3
{
    public partial class viewstate : System.Web.UI.Page
    {
        int x = 1;
        protected void Page_Load(object sender, EventArgs e)
        {
            if (!IsPostBack)
            {
                TextBox1.Text = "0";
            }}
        protected void Button1_Click(object sender, EventArgs e)
        {
            if (ViewState["a"] != null){
                x = Convert.ToInt32(ViewState["a"]) + 1;
            }
            TextBox1.Text = x.ToString();
            ViewState["a"] = x;
        }}}
```

OUTPUT :

2) Session.aspx

```
<% @ Page Language="C#" AutoEventWireup="true" CodeBehind="session.aspx.cs"
Inherits="WebApplication3.session" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
    <form id="form1" runat="server">
        <div>
            <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
            <asp:Button ID="Button1" runat="server" Text="Button" OnClick="Button1_Click" />
        </div>
    </form>
</body>
</html>
```

Session.aspx.cs

```csharp
using System;
using System.Collections.Generic;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace WebApplication3
{
    public partial class session : System.Web.UI.Page
    {
        int x = 1;
        protected void Page_Load(object sender, EventArgs e)
        {
            if (!IsPostBack)
            {
                TextBox1.Text = "0";
            }
        }
        protected void Button1_Click(object sender, EventArgs e)
        {
            if (Session["a"] != null)
            {
                x = Convert.ToInt32(Session["a"]) + 1;
            }
            TextBox1.Text = x.ToString();
            Session["a"] = x;
        }
    }
}
```
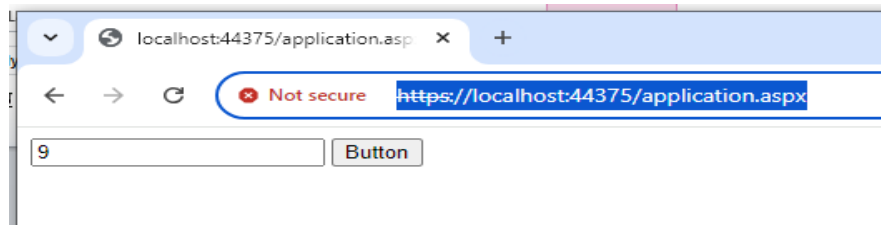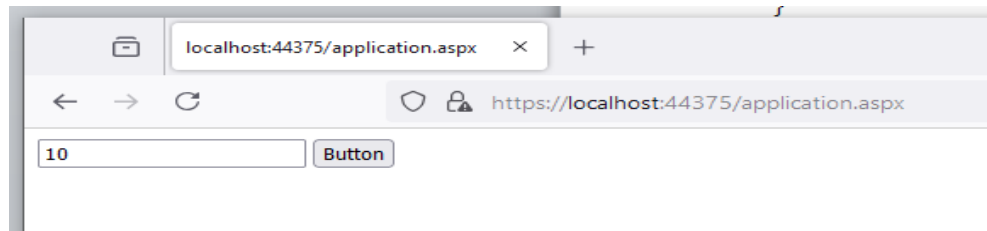
OUTPUT :

3) application.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="application.aspx.cs"
Inherits="WebApplication3.application" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
            <asp:Button ID="Button1" runat="server" Text="Button" OnClick="Button1_Click" />
        </div>
    </form>
</body>
</html>
```

application.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace WebApplication3
{
    public partial class application : System.Web.UI.Page
    {
        int x = 1;
        protected void Page_Load(object sender, EventArgs e)
        {
            if (!IsPostBack)
            {
                TextBox1.Text = "0";
            }
```

```
        }
        protected void Button1_Click(object sender, EventArgs e)
        {
            if (Application["a"] != null)
            {
                x = Convert.ToInt32(Application["a"]) + 1;
            }
            TextBox1.Text = x.ToString();
            Application["a"] = x;
        }
    }
}
```

OUTPUT :

GOOGLE

FIREFOX

6A. Create a web application for inserting and deleting records from a database.
webform2.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication31.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
   <title></title>
</head>
<body>
   <form id="form1" runat="server">
     <div>
        <asp:DetailsView ID="DetailsView1" runat="server" Height="50px" Width="125px"
AllowPaging="True" DataSourceID="SqlDataSource1">
          <Fields>
             <asp:CommandField ShowDeleteButton="True" ShowEditButton="True"
ShowInsertButton="True" />
          </Fields>
        </asp:DetailsView>
        <asp:SqlDataSource ID="SqlDataSource1" runat="server" ConnectionString="<%$
ConnectionStrings:TyitAConnectionString %>" DeleteCommand="DELETE FROM [emp]
WHERE [Id] = @Id" InsertCommand="INSERT INTO [emp] ([Id], [ename], [sal]) VALUES
(@Id, @ename, @sal)" SelectCommand="SELECT * FROM [emp]"
UpdateCommand="UPDATE [emp] SET [ename] = @ename, [sal] = @sal WHERE [Id] =
@Id">
          <DeleteParameters>
            <asp:Parameter Name="Id" Type="Int32" />
          </DeleteParameters>
          <InsertParameters>
            <asp:Parameter Name="Id" Type="Int32" />
            <asp:Parameter Name="ename" Type="String" />
            <asp:Parameter Name="sal" Type="String" />
          </InsertParameters>
          <UpdateParameters>
            <asp:Parameter Name="ename" Type="String" />
            <asp:Parameter Name="sal" Type="String" />
            <asp:Parameter Name="Id" Type="Int32" />
          </UpdateParameters>
        </asp:SqlDataSource>
     </div>
```
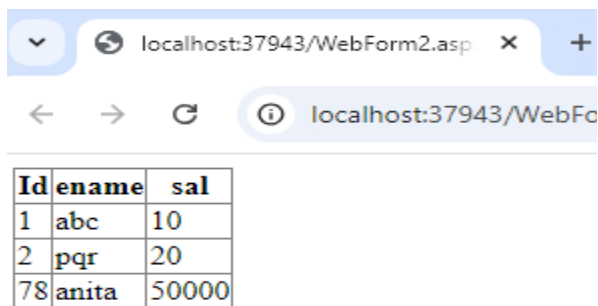
```
    </form>
</body>
</html>
```

OUTPUT :

Id	1
ename	abc
sal	2000
Edit Delete New	
1 2 3	

Edit

Id	1
ename	anita
sal	2000
Update Cancel	
1 2 3	

Update

Id	1
ename	anita
sal	2000
Edit Delete New	
1 2 3	

6B. Create a web application to display Disconnected Data Access and Databinding using GridView

<u>**webform2.aspx**</u>

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"
Inherits="WebApplication12.WebForm2" %>

<!DOCTYPE html>

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

<body>
    <form id="form1" runat="server">
        <div>
            <asp:GridView ID="GridView1" runat="server"></asp:GridView>
        </div>
    </form>
</body>
</html>
```

<u>**webform2.apsx.cs**</u>

```
using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

using System.Data;

using System.Data.SqlClient;

namespace WebApplication12

{

    public partial class WebForm2 : System.Web.UI.Page

    {

        protected void Page_Load(object sender, EventArgs e)
```

```
    {
        SqlConnection con = new SqlConnection("data Source=SQL;Initial Catalog=tyitanita24;
User ID=user1;Password=user1");

        SqlDataAdapter ad = new SqlDataAdapter("select * from emp", con);

        DataSet ds = new DataSet();

        ad.Fill(ds);

        GridView1.DataSource = ds;

        GridView1.DataBind();

    }

}

}
```

OUTPUT :

Id	ename	sal
1	abc	10
2	pqr	20
78	anita	50000

7A. Create a web application to demonstrate the use of different types of Cookies.
1) .Non persistant
Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication7.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
   <form id="form1" runat="server">
     <div>
        name : <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
        class : <asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>
       <asp:Button ID="Button1" runat="server" Text="Button" OnClick="Button1_Click"/>
     </div>
   </form>
</body>
</html>
```
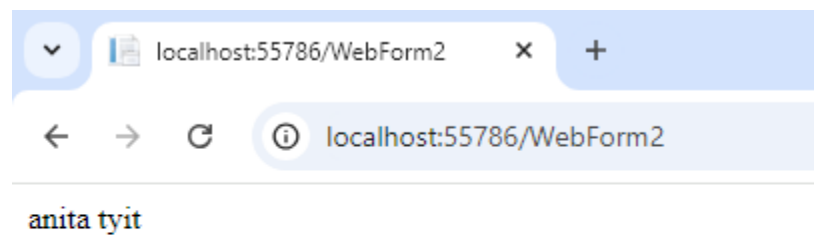
webform1.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace WebApplication7
{
   public partial class WebForm1 : System.Web.UI.Page
   {
     protected void Page_Load(object sender, EventArgs e)
     {
     }
     protected void Button1_Click(object sender, EventArgs e)
     {
        HttpCookie cookie = new HttpCookie("studinfo");
        cookie["name"] = TextBox1.Text;
        cookie["class"] = TextBox2.Text;
        cookie.Expires = DateTime.Now.AddDays(10);
        Response.Cookies.Add(cookie);
        Response.Redirect("WebForm2.aspx");
```

```
          }
       }
}
```

webform2.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"
Inherits="WebApplication7.WebForm2" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>
            <asp:Label ID="Label2" runat="server" Text="Label"></asp:Label>
        </div>
    </form>
</body>
</html>
```
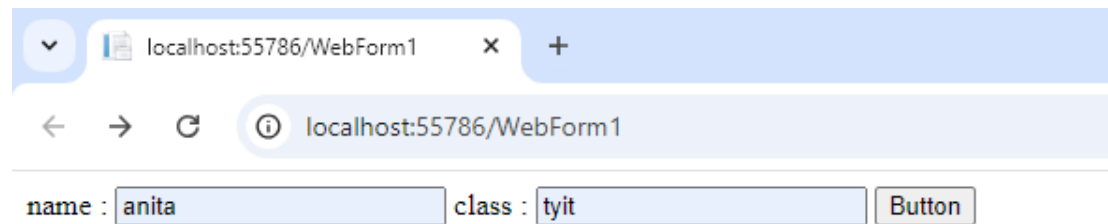
webform2.aspx.cs

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

namespace WebApplication7
{
    public partial class WebForm2 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            HttpCookie cookie = Request.Cookies["studinfo"];
            if (cookie != null)
            {
                Label1.Text = cookie["name"];
```
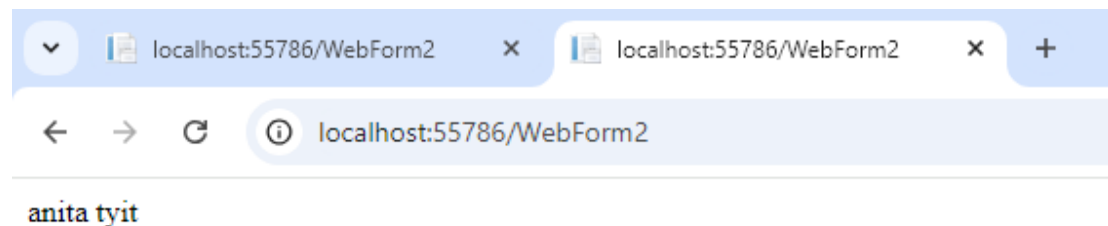
```
            Label2.Text = cookie["class"];
        }
    }
}
}
```

OUTPUT :

Chrome

name : anita   class : tyit   Button

anita tyit

Maintain data within same browser

anita tyit

2). Persistant : maintain cookie information

Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication7.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
   <form id="form1" runat="server">
     <div>
        name : <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
        class : <asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>
       <asp:Button ID="Button1" runat="server" Text="Button" OnClick="Button1_Click"/>
     </div>
   </form>
</body>
</html>
```
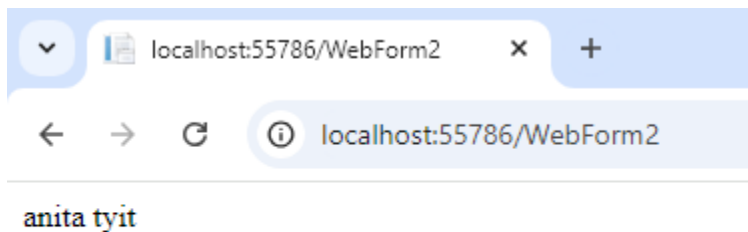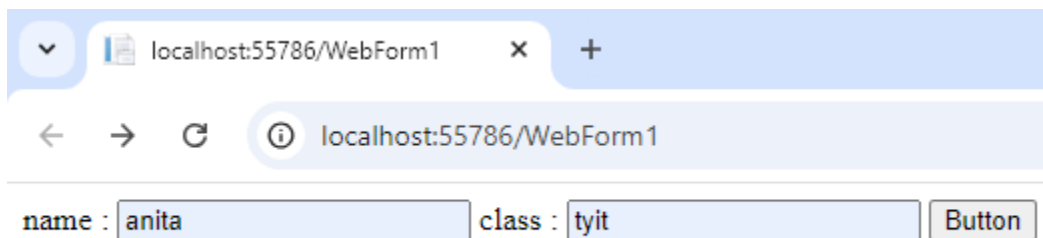
webform1.aspx.cs

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

namespace WebApplication7
{
   public partial class WebForm1 : System.Web.UI.Page
   {
     protected void Page_Load(object sender, EventArgs e)
     {
     }
     protected void Button1_Click(object sender, EventArgs e)
     {
        HttpCookie cookie = new HttpCookie("studinfo");
        cookie["name"] = TextBox1.Text;
        cookie["class"] = TextBox2.Text;
         //persistant cookie setting
```

```
            cookie.Expires = DateTime.Now.AddDays(10);
            Response.Cookies.Add(cookie);
            Response.Redirect("WebForm2.aspx");
        }
    }
}
```

webform2.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"
Inherits="WebApplication7.WebForm2" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
    <form id="form1" runat="server">
        <div>
            <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>
            <asp:Label ID="Label2" runat="server" Text="Label"></asp:Label>

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

webform2.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace WebApplication7
{
    public partial class WebForm2 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            HttpCookie cookie = Request.Cookies["studinfo"];
            if (cookie != null)
```
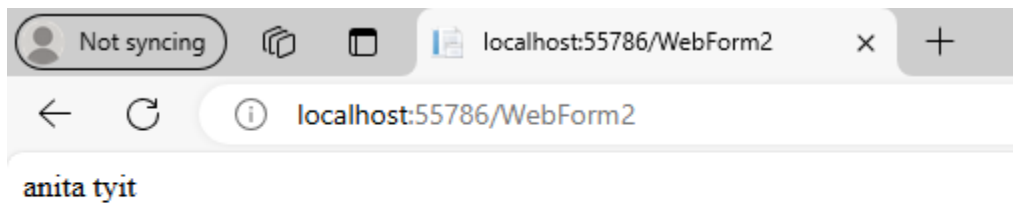
```
        {
            Label1.Text = cookie["name"];
            Label2.Text = cookie["class"];
        }
    }
  }
}
```

OUTPUT :

Chrome

Microsoft edge

7B. Create a web application to demonstrate Form Security and Windows Security with proper Authentication and Authorization properties.

WebFrom1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="Authentication_Authorization.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
    <form id="form1" runat="server">
        <div>
            User name : <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
            Pass : <asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>
            <asp:Button ID="Button1" runat="server" Text="Login" OnClick="Button1_Click" />
        </div>
    </form>
</body>
</html>
```

WebFrom1.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Web.Security;
namespace Authentication_Authorization
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Button1_Click(object sender, EventArgs e)
        {
            if (FormsAuthentication.Authenticate(TextBox1.Text, TextBox2.Text))
            {
                FormsAuthentication.RedirectFromLoginPage(TextBox1.Text, false);
            }
            else
            {
                Response.Write("Invalid Credentitals");
                TextBox1.Text = "";
                TextBox2.Text = "";
            }
        }
    }
}
```

WebForm2.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"
Inherits="Authentication_Authorization.WebForm2" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
   <title></title>
</head>
<body>
   <form id="form1" runat="server">
      <div>

         Welcome  !!

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

Web.config

```
<system.web>
   <authentication mode="Forms">
      <forms loginUrl="WebForm1.aspx" defaultUrl="WebForm2.aspx" timeout="20"
protection="None">
      <credentials passwordFormat="Clear">
               <user name="user1" password="user1"/>
      </credentials>
      </forms>
   </authentication>
   <authorization>
      <deny users="?"/>
   </authorization>
</system.web>
```

OUTPUT :

User name : user1	Pass : user1	Login

Welcome !!

8A Create a web application for inserting and deleting records from a database. (Using Execute-Non Query).

webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication12.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            Enter Id:<asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
            Enter name:<asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>
            Enter Salary: <asp:TextBox ID="TextBox3" runat="server"></asp:TextBox>
            <asp:Button ID="Button1" runat="server" Text="Inert" />
            <asp:Button ID="Button2" runat="server" Text="Delete" />
        </div>
    </form>
</body>
</html>
```

webform1.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.SqlClient;
namespace WebApplication12
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
        }
        protected void Button1_Click(object sender, EventArgs e)
        {
            SqlConnection con = new SqlConnection("data Source=SQL;Initial Catalog=tyitanita24;
User ID=user1;Password=user1");
            SqlCommand cmd = new SqlCommand("insert into emp values(@Id,@ename,@sal)", con);
```

48

```
            cmd.Parameters.AddWithValue("@Id", TextBox1.Text);
            cmd.Parameters.AddWithValue("@ename", TextBox2.Text);
            cmd.Parameters.AddWithValue("@sal", TextBox3.Text);
            con.Open();
            cmd.ExecuteNonQuery();
            Response.Write("data inserted");
            con.Close();
        }

        protected void Button2_Click(object sender, EventArgs e)
        {
            SqlConnection con = new SqlConnection("data Source=SQL;Initial Catalog=tyitanita24;
User ID=user1;Password=user1");
            SqlCommand cmd = new SqlCommand("delete from emp where Id=@Id", con);
            cmd.Parameters.AddWithValue("@Id", TextBox1.Text);
            con.Open();
            cmd.ExecuteNonQuery();
            Response.Write("data deleted");
            con.Close();
        }
    }
}
```

OUTPUT :
Data insertion

Data deletion

data deleted

Enter Id: 78   Enter name: [ ]   Enter Salary: [ ]   [Inert] [Delete]

8B Create a web application for user defined exception handling
Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication24.WebForm1" %>
<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            Enter age :<asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
         <asp:Button ID="Button1" runat="server" Text="Button" OnClick="Button1_Click" />
        </div>
    </form>
</body>
</html>
```
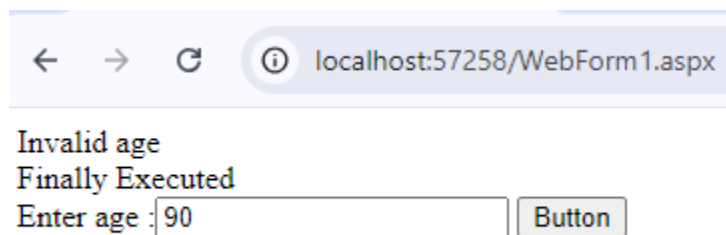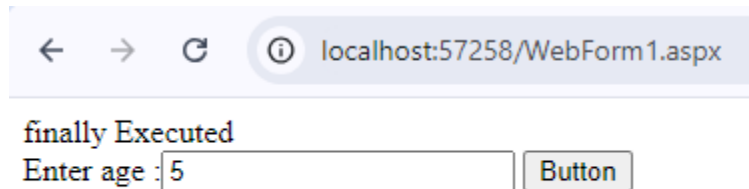
Webform1.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace WebApplication24
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        class ageException : Exception
        {
            public ageException(string s) : base(s)
            {
            }
        }
        protected void Page_Load(object sender, EventArgs e)
        {
        }
        protected void Button1_Click(object sender, EventArgs e)
```

```
        {
            int a = Convert.ToInt32(TextBox1.Text);
            try
            {
              if (a > 80)
              {
                  throw new ageException("Invalid age  "+ "<br>");
              }
            }
            catch(ageException obj)
            {
              Response.Write(obj.Message);

            }
            finally
            {
              Response.Write(" Finally Executed");

            }
        }
    }
}
```

OUTPUT :

9A Create a web application to demonstrate use of GridView button column and GridView events along with paging and sorting
Webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication32.WebForm1" %>
<!DOCTYPE html>
<body>
    <form id="form1" runat="server">
      <div>
        <asp:GridView ID="GridView1" runat="server" AllowPaging="True"
AllowSorting="True" AutoGenerateColumns="False" BackColor="Cyan" DataKeyNames="Id"
DataSourceID="SqlDataSource1" PageSize="2">
            <Columns>
                <asp:CommandField ShowDeleteButton="True" ShowEditButton="True"
ShowSelectButton="True" />
                <asp:BoundField DataField="Id" HeaderText="Id" ReadOnly="True"
SortExpression="Id" />
                <asp:BoundField DataField="ename" HeaderText="ename"
SortExpression="ename" />
              <asp:BoundField DataField="sal" HeaderText="sal" SortExpression="sal" />
                <asp:BoundField DataField="addr" HeaderText="addr" SortExpression="addr" />
            </Columns>
        </asp:GridView>
        <asp:SqlDataSource ID="SqlDataSource1" runat="server" ConnectionString="<%$
ConnectionStrings:ConnectionString %>" DeleteCommand="DELETE FROM [emp] WHERE
[Id] = @Id" InsertCommand="INSERT INTO [emp] ([Id], [ename], [sal], [addr]) VALUES
(@Id, @ename, @sal, @addr)" SelectCommand="SELECT * FROM [emp]"
UpdateCommand="UPDATE [emp] SET [ename] = @ename, [sal] = @sal, [addr] = @addr
WHERE [Id] = @Id">
            <DeleteParameters>
              <asp:Parameter Name="Id" Type="Int32" />
            </DeleteParameters>
            <InsertParameters>
              <asp:Parameter Name="Id" Type="Int32" />
              <asp:Parameter Name="ename" Type="String" />
              <asp:Parameter Name="sal" Type="String" />
              <asp:Parameter Name="addr" Type="String" />
            </InsertParameters>
            <UpdateParameters>
              <asp:Parameter Name="ename" Type="String" />
              <asp:Parameter Name="sal" Type="String" />
              <asp:Parameter Name="addr" Type="String" />
              <asp:Parameter Name="Id" Type="Int32" />
            </UpdateParameters>
        </asp:SqlDataSource>
```

```
<asp:FormView ID="FormView1" runat="server" DataKeyNames="Id"
DataSourceID="SqlDataSource2">
        <EditItemTemplate>
            Id:<asp:Label ID="IdLabel1" runat="server" Text='<%# Eval("Id") %>' />
            <br />
            ename:<asp:TextBox ID="enameTextBox" runat="server" Text='<%#
Bind("ename") %>' /><br />
            sal:
        <asp:TextBox ID="salTextBox" runat="server" Text='<%# Bind("sal") %>' />
            <br />
            addr:
        <asp:TextBox ID="addrTextBox" runat="server" Text='<%# Bind("addr") %>' />
            <br />
            <asp:LinkButton ID="UpdateButton" runat="server" CausesValidation="True"
CommandName="Update" Text="Update" />
             <asp:LinkButton ID="UpdateCancelButton" runat="server"
CausesValidation="False" CommandName="Cancel" Text="Cancel" />
        </EditItemTemplate>
        <InsertItemTemplate>
            Id: <asp:TextBox ID="IdTextBox" runat="server" Text='<%# Bind("Id") %>' />
            <br />
            ename:<asp:TextBox ID="enameTextBox" runat="server" Text='<%#
Bind("ename") %>' /><br />
            sal:<asp:TextBox ID="salTextBox" runat="server" Text='<%# Bind("sal") %>' />
            <br />
            addr:
        <asp:TextBox ID="addrTextBox" runat="server" Text='<%# Bind("addr") %>' /><br/>
            <asp:LinkButton ID="InsertButton" runat="server" CausesValidation="True"
CommandName="Insert" Text="Insert" />
             <asp:LinkButton ID="InsertCancelButton" runat="server"
CausesValidation="False" CommandName="Cancel" Text="Cancel" />
        </InsertItemTemplate>
        <ItemTemplate>
            Id:<asp:Label ID="IdLabel" runat="server" Text='<%# Eval("Id") %>' /><br />
            ename:
         <asp:Label ID="enameLabel" runat="server" Text='<%# Bind("ename") %>' />
            <br />
            Sal : <asp:Label ID="salLabel" runat="server" Text='<%# Bind("sal") %>' /><br />
            Addr : <asp:Label ID="addrLabel" runat="server" Text='<%# Bind("addr") %>' />
            <br />
        </ItemTemplate>
    </asp:FormView>
    <asp:SqlDataSource ID="SqlDataSource2" runat="server" ConnectionString="<%$
ConnectionStrings:ConnectionString %>" SelectCommand="SELECT * FROM [emp] WHERE
([Id] = @Id)">
        <SelectParameters>
```

```
              <asp:ControlParameter ControlID="GridView1" Name="Id"
PropertyName="SelectedValue" Type="Int32" />
         </SelectParameters>
       </asp:SqlDataSource>
    </div>
  </form>
</body>
</html>
```

OUTPUT :

			Id	ename	sal	addr
Edit	Delete	Select	5	abc	1000	thane
Edit	Delete	Select	4	pqr	2000	nerul
1 2						

Edit

		Id	ename	sal	addr
Update Cancel		5	anu	10000	Nerul
Edit Delete Select		4	pqr	2000	nerul
1 2					

Update

			Id	ename	sal	addr
Edit	Delete	Select	5	anu	10000	Nerul
Edit	Delete	Select	4	pqr	2000	nerul
1 2						

Delete

			Id	ename	sal	addr
Edit	Delete	Select	2	anita	5000	
Edit	Delete	Select	1	aaa	3000	vashi

Select

			Id	ename	sal	addr
Edit	Delete	Select	2	anita	5000	
Edit	Delete	Select	1	aaa	3000	vashi

Id: 2
ename: anita
sal: 5000
addr:

9B Create a web application to demonstrate data binding using DetailsView and FormView Control

webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication26.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
   <form id="form1" runat="server">
     <div>
        <asp:GridView ID="GridView1" runat="server" AutoGenerateColumns="False"
DataKeyNames="Id" DataSourceID="SqlDataSource1">
           <Columns>
             <asp:CommandField ShowSelectButton="True" />
             <asp:BoundField DataField="Id" HeaderText="Id" ReadOnly="True"
SortExpression="Id" />
           </Columns>
        </asp:GridView>
        <asp:SqlDataSource ID="SqlDataSource1" runat="server" ConnectionString="<%$
ConnectionStrings:tyit78ConnectionString %>" SelectCommand="SELECT [Id] FROM
[Employee]"></asp:SqlDataSource>
        <asp:DetailsView ID="DetailsView1" runat="server" Height="50px" Width="125px"
AutoGenerateRows="False" DataKeyNames="Id" DataSourceID="SqlDataSource2">
           <Fields>
             <asp:BoundField DataField="Id" HeaderText="Id" ReadOnly="True"
SortExpression="Id" />
             <asp:BoundField DataField="ename" HeaderText="ename"
SortExpression="ename" />
             <asp:BoundField DataField="sal" HeaderText="sal" SortExpression="sal" />
             <asp:BoundField DataField="age" HeaderText="age" SortExpression="age" />
           </Fields>
        </asp:DetailsView>
        <asp:SqlDataSource ID="SqlDataSource2" runat="server" ConnectionString="<%$
ConnectionStrings:tyit78ConnectionString %>" SelectCommand="SELECT * FROM
[Employee] WHERE ([Id] = @Id)">
           <SelectParameters>
             <asp:ControlParameter ControlID="GridView1" Name="Id"
PropertyName="SelectedValue" Type="Int32" />
           </SelectParameters>
        </asp:SqlDataSource>
        <asp:FormView ID="FormView1" runat="server" DataKeyNames="Id"
DataSourceID="SqlDataSource2" OnPageIndexChanging="FormView1_PageIndexChanging">
           <EditItemTemplate>
             Id:<asp:Label ID="IdLabel1" runat="server" Text='<%# Eval("Id") %>' /><br />
```

```
            ename:<asp:TextBox ID="enameTextBox" runat="server" Text='<%#
Bind("ename") %>' />
            <br />
            sal:<asp:TextBox ID="salTextBox" runat="server" Text='<%# Bind("sal") %>'
/><br />
            age:< asp:TextBox ID="ageTextBox" runat="server" Text='<%# Bind("age") %>'
/><br />
            <asp:LinkButton ID="UpdateButton" runat="server" CausesValidation="True"
CommandName="Update" Text="Update" />
             <asp:LinkButton ID="UpdateCancelButton" runat="server"
CausesValidation="False" CommandName="Cancel" Text="Cancel" />
        </EditItemTemplate>
        <InsertItemTemplate>
          Id: <asp:TextBox ID="IdTextBox" runat="server" Text='<%# Bind("Id") %>' />
          <br />
           ename: <asp:TextBox ID="enameTextBox" runat="server" Text='<%#
Bind("ename") %>' />
          <br />
          sal: <asp:TextBox ID="salTextBox" runat="server" Text='<%# Bind("sal") %>' />
          <br />
          age:< asp:TextBox ID="ageTextBox" runat="server" Text='<%# Bind("age") %>' />
          <br />
          <asp:LinkButton ID="InsertButton" runat="server" CausesValidation="True"
CommandName="Insert" Text="Insert" />
           <asp:LinkButton ID="InsertCancelButton" runat="server"
CausesValidation="False" CommandName="Cancel" Text="Cancel" />
        </InsertItemTemplate>
        <ItemTemplate>
          Id: <asp:Label ID="IdLabel" runat="server" Text='<%# Eval("Id") %>' />
          <br />
          ename: <asp:Label ID="enameLabel" runat="server" Text='<%# Bind("ename")
%>' />
          <br />
          sal: <asp:Label ID="salLabel" runat="server" Text='<%# Bind("sal") %>' />
          <br />
          age: <asp:Label ID="ageLabel" runat="server" Text='<%# Bind("age") %>' />
          <br />
        </ItemTemplate>
      </asp:FormView>
    </div>
  </form>
</body>
</html>
```
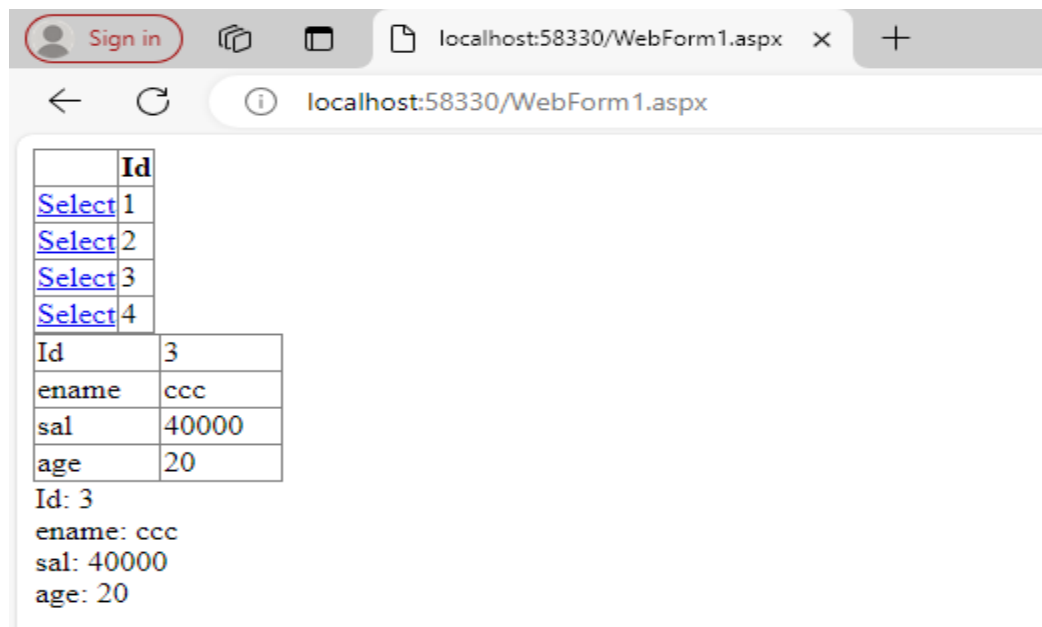
OUTPUT :

	Id
Select	1
Select	2
Select	3
Select	4

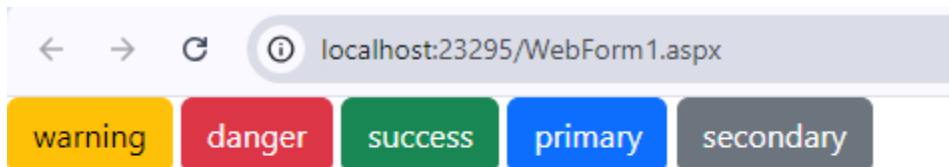| Id	3
ename	ccc
sal	40000
age	20

Id: 3

ename: ccc

sal: 40000

age: 20

10ACreate a web application to demonstrate JS Bootstrap Button.
webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication34.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6hW+ALEwIH"
crossorigin="anonymous">
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"
integrity="sha384-
YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz"
crossorigin="anonymous"></script>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <asp:Button ID="Button1" runat="server" Text="warning" CssClass="btn btn-warning"
/>
            <asp:Button ID="Button2" runat="server" Text="danger" CssClass="btn btn-danger" />
            <asp:Button ID="Button3" runat="server" Text="success" CssClass="btn btn-success" />
            <asp:Button ID="Button4" runat="server" Text="primary"  CssClass="btn btn-
primary"/>
            <asp:Button ID="Button5" runat="server" Text="secondary" CssClass="btn btn-
secondary" />
        </div>
    </form>
</body>
</html>
```

OUTPUT :

10B . Create a web application to demonstrate use of various Ajax controls.

1) Timer

webform1.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication33.WebForm1" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
   <form id="form1" runat="server">
     <div>
        Outside:<asp:Label ID="Label2" runat="server" Text="Label"></asp:Label>
        <asp:ScriptManager ID="ScriptManager1" runat="server"></asp:ScriptManager>
        <asp:UpdatePanel ID="UpdatePanel1" runat="server">
          <ContentTemplate>
             <asp:Timer ID="Timer1" runat="server" Interval="4000"
OnTick="Timer1_Tick"></asp:Timer>
             Inside:  <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>
          </ContentTemplate>
        </asp:UpdatePanel>
        <asp:UpdateProgress ID="UpdateProgress1" runat="server">
          <ProgressTemplate>
             pls.....wait.....loading
          </ProgressTemplate>
        </asp:UpdateProgress>
     </div>
   </form>
</body>
</html>
```

webform1.apx.cs

```
using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;
```
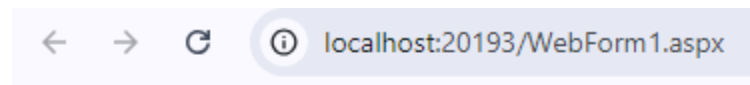
```csharp
namespace WebApplication33
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            Label2.Text = DateTime.Now.ToLongTimeString();
        }


        protected void Timer1_Tick(object sender, EventArgs e)
        {
            System.Threading.Thread.Sleep(2000);
            Label1.Text = DateTime.Now.ToLongTimeString();
        }
    }
}
```
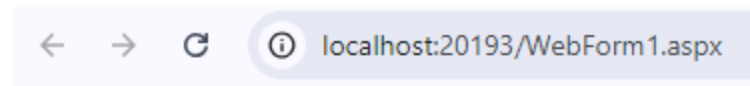
OUTPUT :

← → C ⓘ localhost:20193/WebForm1.aspx

Outside:16:12:30
Inside: 16:12:34

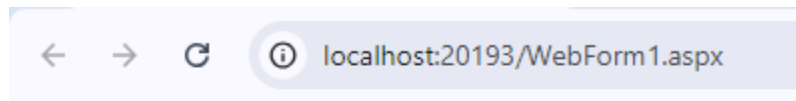← → C ⓘ localhost:20193/WebForm1.aspx

Outside:16:15:11
Inside: 16:15:18
pls.....wait.....loading

2) Accordion

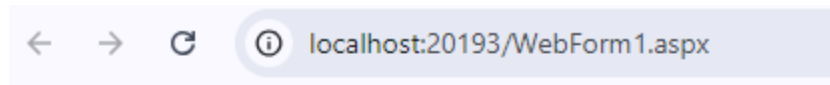**webform1.aspx**

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApplication33.WebForm1" %>
<%@ Register Assembly="AjaxControlToolkit" Namespace="AjaxControlToolkit"
TagPrefix="ajaxToolkit" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<body>
    <form id="form1" runat="server">
        <div>
            <ajaxToolkit:Accordion ID="Accordion1" runat="server">
                <Panes>
                    <ajaxToolkit:AccordionPane ID="AccordionPane1" runat="server">
                        <Header>
                            sem V
                        </Header>
                        <Content>
                            AWD
                            AI
                            SPD
                            IOT
                            ET
                        </Content>
                    </ajaxToolkit:AccordionPane>
                    <ajaxToolkit:AccordionPane ID="AccordionPane2" runat="server">
                        <Header>
                            sem  VI
                        </Header>
                        <Content>
                            BI
                            GIS
                            CL
                            SQA
                        </Content>
                    </ajaxToolkit:AccordionPane>
                </Panes>
            </ajaxToolkit:Accordion>
            <asp:ScriptManager ID="ScriptManager1" runat="server"></asp:ScriptManager>
        </div>
    </form>
</body>
</html>
```

OUTPUT :

sem V
AWD AI SPD IOT ET
sem VI

sem V
sem VI
BI GIS CL SQA

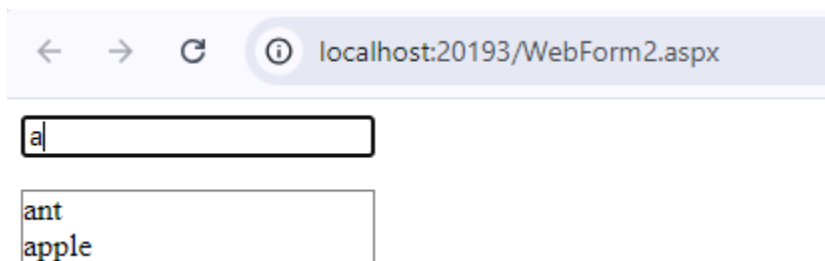### 3) AutoCompleteExtender

webform1.aspx

```
<% @ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"
Inherits="WebApplication33.WebForm2" %>
<% @ Register assembly="AjaxControlToolkit" namespace="AjaxControlToolkit"
tagprefix="ajaxToolkit" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
      <div>
        <asp:ScriptManager ID="ScriptManager1" runat="server"></asp:ScriptManager>
        <asp:TextBox ID="TextBox1" runat="server" ></asp:TextBox>
        <ajaxToolkit:AutoCompleteExtender ID="TextBox1_AutoCompleteExtender"
MinimumPrefixLength="1" runat="server" BehaviorID="TextBox1_AutoCompleteExtender"
DelimiterCharacters="" ServiceMethod="getinfo" TargetControlID="TextBox1">
        </ajaxToolkit:AutoCompleteExtender>
      </div>
    </form>
</body>
</html>
```

webform1.aspx.cs

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

namespace WebApplication33
{
    public partial class WebForm2 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
        }
        [System.Web.Script.Services.ScriptMethod()]
        [System.Web.Services.WebMethod()]
        public static string[] getinfo(string prefixText)
        {
            string []s1 = { "ant", "apple", "bat", "ball", "cat", "cup", "can" };
            var a = from t in s1 where t.ToLower().StartsWith(prefixText) select t;
            return a.ToArray();
        }
    }
}
```

OUTPUT :

10C. Create a web application to demonstrate Installation and use of NuGet package.

<u>mainwindow.xaml</u>

```xml
<Window x:Class="WpfApp2.MainWindow"
    xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
    xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
    xmlns:d="http://schemas.microsoft.com/expression/blend/2008"
    xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"
    xmlns:local="clr-namespace:WpfApp2"
    mc:Ignorable="d"
    Title="MainWindow" Height="450" Width="800">
  <Grid Background="LightPink">
    <StackPanel VerticalAlignment="Center">
      <Button Click="Button_click" Width="100px" Height="50px" Content="Click here
"></Button>
      <TextBlock Name="TBox1"></TextBlock>

    </StackPanel>
  </Grid>
</Window>
```
```
        mainwindow.xaml.cs
```
```csharp
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;
using Newtonsoft.Json; //add this line

namespace WpfApp2
{
    /// <summary>
    /// Interaction logic for MainWindow.xaml
    /// </summary>
    public partial class MainWindow : Window
    {
        public MainWindow()
        {
```

```csharp
        InitializeComponent();
    }
    public class A
    {
        public string Name { get; set; }
        public string Email { get; set; }
        public DateTime DOB { get; set; }

    }
    private void Button_click(object sender, RoutedEventArgs e)
    {
        A obj = new A
        {
            Name = "Anita patil",
            Email = "abc@gmail.com",
            DOB = new DateTime(2024,10,4),
        };
        string json = JsonConvert.SerializeObject(obj, Newtonsoft.Json.Formatting.Indented);
        TBox1.Text=json;
    }
  }
}
```

OUTPUT :