

Assignment 9 ASP.NET State Management, Ajax

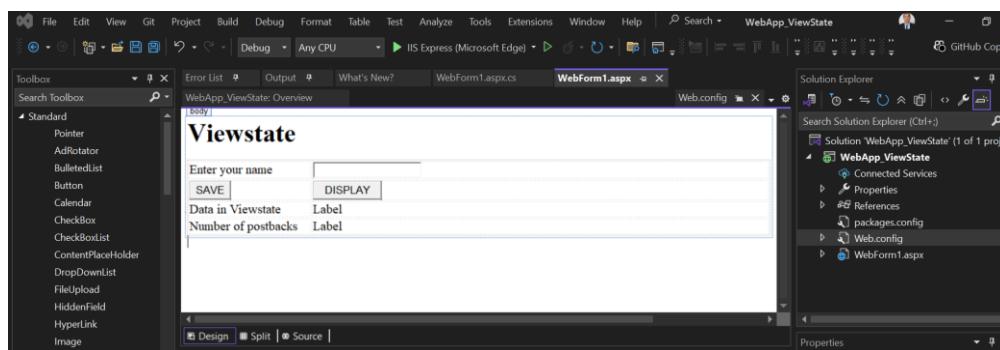
Question 1: VIEWSTATE

Create a web application that takes input from the user, then display it with number of post-backs made to server.

The screenshot shows a web browser window with the URL <https://localhost:44360/WebForm1.aspx>. The page title is "Viewstate". The form contains the following fields:

Enter your name	<input type="text" value="John"/>
<input type="button" value="SAVE"/>	<input type="button" value="DISPLAY"/>
Data in Viewstate	Label
Number of postbacks	Label

The screenshot shows the same web browser window after a post-back. The "DISPLAY" button has been clicked, and the "Data in Viewstate" field now contains the value "John". The "Number of postbacks" field contains the value "4".



```

<%@ Page Language="C#" EnableViewState="true" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="WebApp_ViewState.WebForm1" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <style type="text/css">
        .auto-style1 {
            width: 100%;
        }
        .auto-style2 {
            width: 187px;
        }
    </style>
</head>
<body>
    <div>
        <h1>Viewstate</h1>
    </div>
    <div>
        <form id="form1" runat="server">
            <table class="auto-style1">
                <tr>
                    <td class="auto-style2">Enter your name</td>
                    <td>
                        <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
                    </td>
                </tr>
                <tr>
                    <td class="auto-style2">
                        <asp:Button ID="Button1" runat="server" Text="SAVE" OnClick="Button1_Click" />
                    </td>
                    <td>
                        <asp:Button ID="Button2" runat="server" Text="DISPLAY" OnClick="Button2_Click" />
                    </td>
                </tr>
                <tr>
                    <td class="auto-style2">Data in Viewstate</td>
                    <td>
                        <asp:Label ID="Label1" runat="server" Text="Label"></asp:Label>
                    </td>
                </tr>
                <tr>
                    <td class="auto-style2">Number of postbacks</td>
                    <td>
                        <asp:Label ID="Label2" runat="server" Text="Label"></asp:Label>
                    </td>
                </tr>
            </table>
        </div>
    </form>
</body>
</html>

```

```

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

namespace WebApp_ViewState
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            // On every postback, increase the counter stored in ViewState
            if (IsPostBack)
            {
                int count = 0;

                if (ViewState["number_postback"] != null)
                    count = (int)ViewState["number_postback"];

                count++; // one more postback
                ViewState["number_postback"] = count;
            }
        }

        protected void Button2_Click(object sender, EventArgs e)
        {
            // Display data from ViewState
            if (ViewState["name"] != null)
                Label1.Text = ViewState["name"].ToString();

            if (ViewState["number_postback"] != null)
                Label2.Text = ViewState["number_postback"].ToString();
        }

        protected void Button1_Click(object sender, EventArgs e)
        {
            // Save the name in ViewState
            ViewState["name"] = TextBox1.Text;
            TextBox1.Text = string.Empty;
        }
    }
}

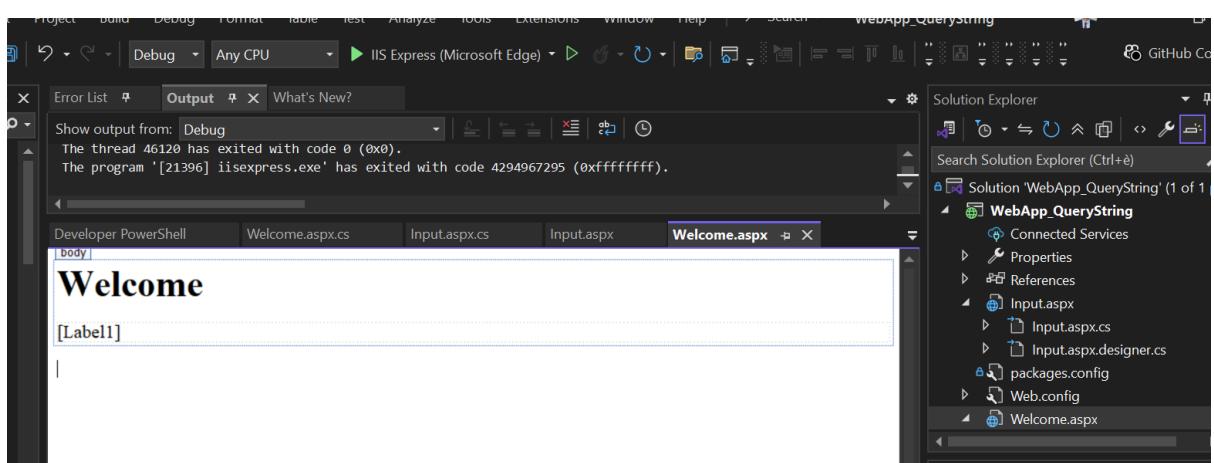
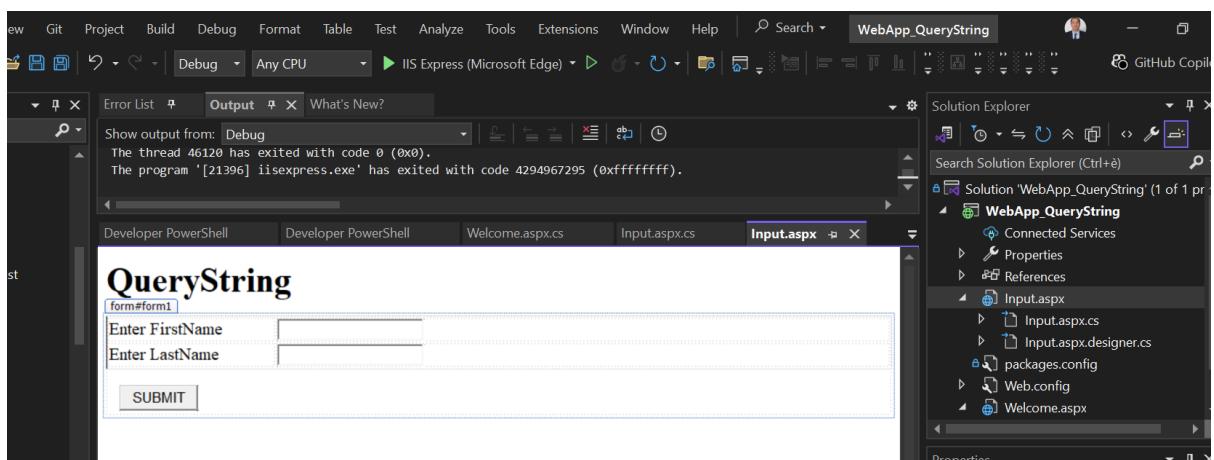
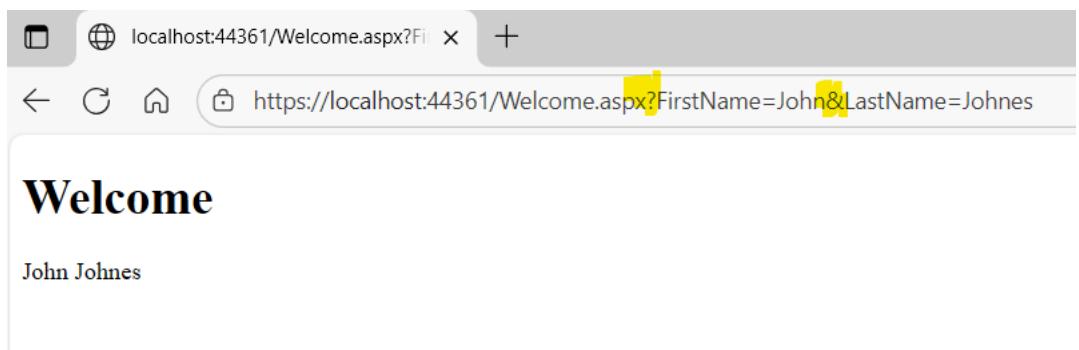
```

Question2: Query-String

Create a web application that takes first name & last name as input and navigates to another page through query string.

The screenshot shows a web browser window with the following details:

- Address Bar:** localhost:44361/Input.aspx
- Title Bar:** QueryString
- Form Content:**
 - Label: Enter FirstName
 - Label: Enter LastName
 - Button: SUBMIT



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

namespace WebApp_QueryString
{
    public partial class WebForm1 : System.Web.UI.Page
    {
```

```
protected void Page_Load(object sender, EventArgs e)
{
}
protected void Button1_Click(object sender, EventArgs e)
{
    Response.Redirect("Welcome.aspx?FirstName=" + TextBox1.Text + "&LastName=" + TextBox2.Text);
}
}
```

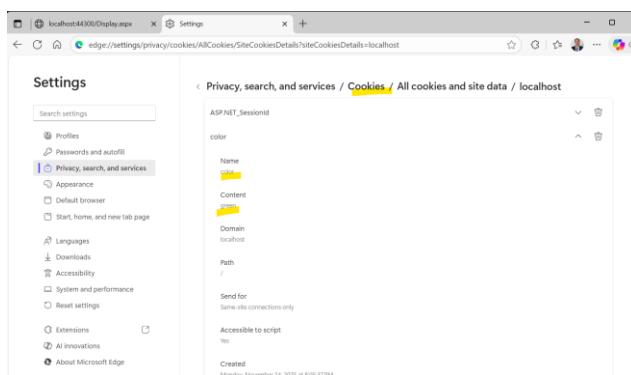
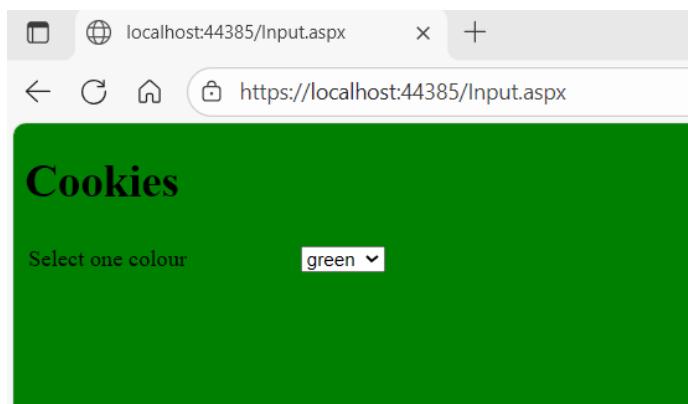
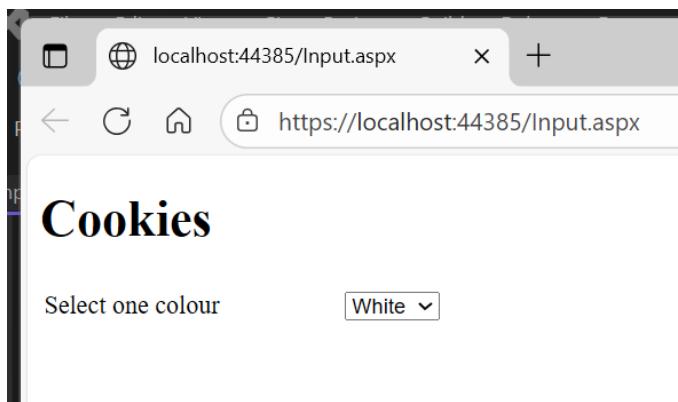
Welcome.aspx.cs

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

namespace WebApp_QueryString
{
    public partial class WebForm2 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            Label1.Text = Request.QueryString["FirstName"].ToString()
            + " " + Request.QueryString["LastName"].ToString();
        }
    }
}
```

Question 3: Cookie

Create a web application that selects any one of the color from dropdown list, in turn that changes the background color to selected color through cookies.



Input.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="Input.aspx.cs" Inherits="WebApp_Cookie.WebForm1" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
<title></title>
<style type="text/css">
.auto-style1 {
width: 100%;
}
```

```

.auto-style2 {
    height: 25px;
}
.auto-style3 {
    height: 25px;
    width: 187px;
}

```

</style>

</head>

<body id="Body" runat="server">

<h1>Cookies</h1>

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

<div>

<table class="auto-style1">

<tr>

<td class="auto-style3">Select one colour</td>

<td class="auto-style2">

<asp:DropDownList ID="DropDownList1" runat="server" AutoPostBack="true" OnSelectedIndexChanged="DropDownList1_SelectedIndexChanged">

<asp:ListItem>red</asp:ListItem>

<asp:ListItem>blue</asp:ListItem>

<asp:ListItem>green</asp:ListItem>

<asp:ListItem>yellow</asp:ListItem>

<asp:ListItem Selected="True">white</asp:ListItem>

</asp:DropDownList>

</td>

</tr>

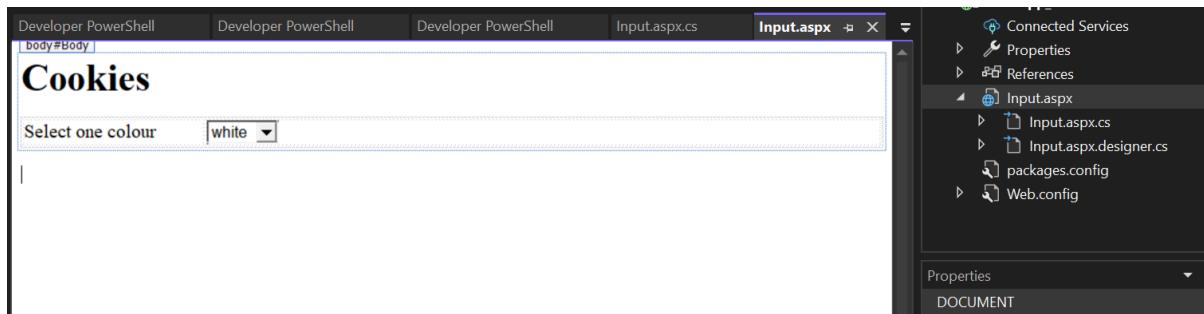
</table>

</div>

</form>

</body>

</html>



Input.aspx.cs

```

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

namespace WebApp_Cookie
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            // Read cookie when page loads
            if (Request.Cookies["color"] != null)
            {
                string bgColor = Request.Cookies["color"].Value;
            }
        }
    }
}

```

```

        Body.Style["background-color"] = bgColor;
    }

}

protected void DropDownList1_SelectedIndexChanged(object sender, EventArgs e)
{
    // Save selected color to cookie
    HttpCookie c = new HttpCookie("color");
    c.Value = DropDownList1.SelectedValue;
    c.Expires = DateTime.Now.AddDays(1); // Optional: cookie lives 1 day
    Response.Cookies.Add(c);

    // Also apply color immediately
    Body.Style["background-color"] = DropDownList1.SelectedValue;

}

```

Question4: Session

Use Session object to get and display the User-Name and the Password entered from another page

localhost:44300/Input.aspx

Session

Enter UserName: John

Enter Password: 12345

SUBMIT

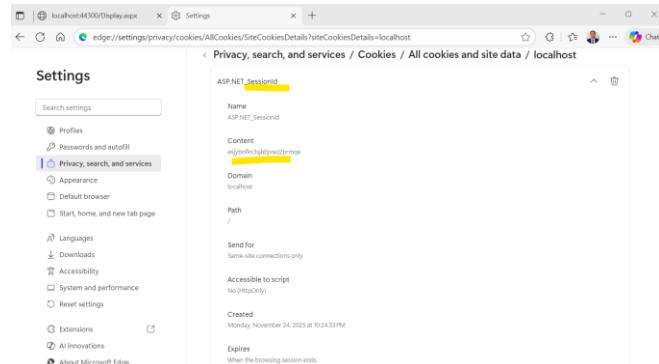
No data in session.

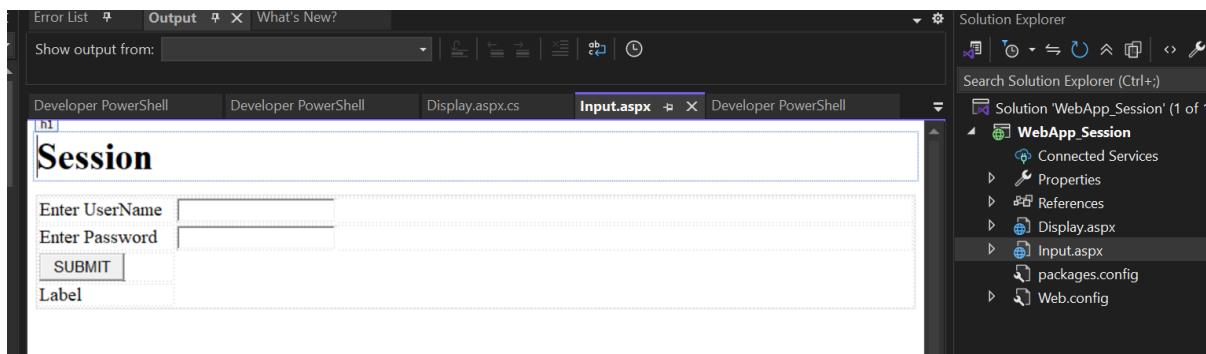
localhost:44300/Display.aspx

Homepage

Username: John
Password: 12345

LOGOUT





Input.aspx.cs

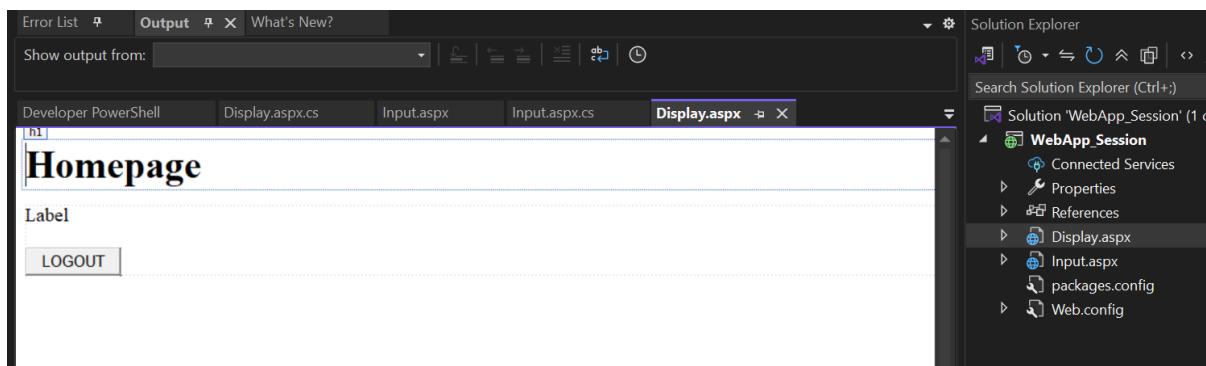
```

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

namespace WebApp_Session
{
    public partial class Input : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            // Read values from the session and show them
            if (Session["UserName"] != null && Session["Password"] != null)
            {
                Label1.Text = "Username: " + Session["UserName"].ToString()
                + "<br />Password: " + Session["Password"].ToString();
            }
            else
            {
                Label1.Text = "No data in session.";
            }
        }

        protected void Button1_Click(object sender, EventArgs e)
        {
            Session["UserName"] = TextBox1.Text;
            Session["Password"] = TextBox2.Text;
            Response.Redirect("Display.aspx");
        }
    }
}

```



Display.aspx.cs

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

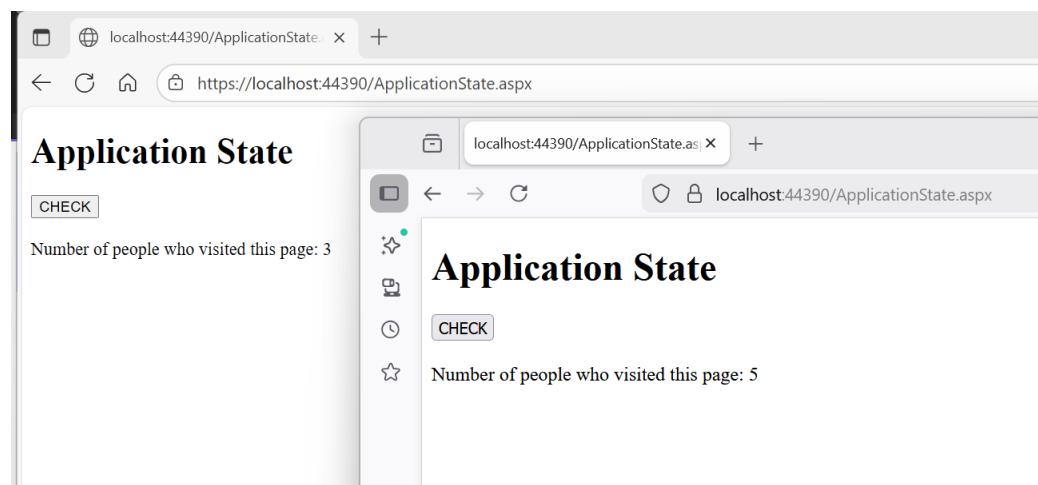
namespace WebApp_Session
{
    public partial class WebForm1 : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            // Read values from the session and show them
            if (Session["UserName"] != null && Session["Password"] != null)
            {
                Label1.Text = "Username: " + Session["UserName"].ToString()
                + "  
Password: " + Session["Password"].ToString();
            }
            else
            {
                Label1.Text = "No data in session.";
            }
        }

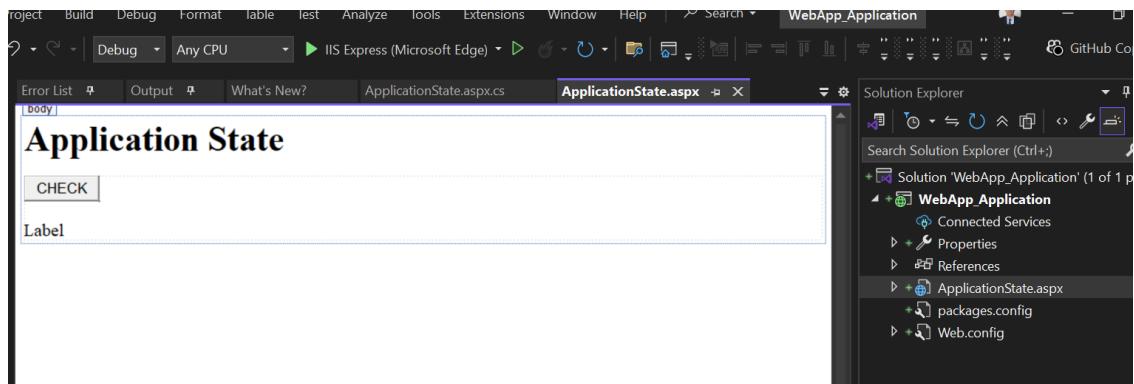
        protected void Button1_Click(object sender, EventArgs e)
        {
            Session.Abandon();
            Response.Redirect("Input.aspx");
        }
    }
}
```

Question5: Application

Create a web application that checks the number of users visited that page through Application state.

- Every time the page is requested, VisitorCount in **Application state** is increased.
- When the user presses **CHECK**, the label shows:
Number of people who visited this page: X





ApplicationState.aspx.cs

```

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

namespace WebApp_Application
{
    public partial class ApplicationState : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            // Initialize and increment visitor count on every page load
            Application.Lock();
            if (Application["VisitorCount"] == null)
            {
                Application["VisitorCount"] = 0;
            }

            Application["VisitorCount"] = (int)Application["VisitorCount"] + 1;
            Application.UnLock();
        }

        protected void Button1_Click(object sender, EventArgs e)
        {
            // Show number of visitors
            Label1.Text = "Number of people who visited this page: "
                + Application["VisitorCount"].ToString();
        }
    }
}

```

State Shared Between Users? Typical Use

Application	<input checked="" type="checkbox"/> Yes	Global counters, global data
Session	<input checked="" type="checkbox"/> No	Per-user data, login info