**Q1.**

**Sender**

**.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace StateManagement

{

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

{

protected void Page\_Load(object sender, EventArgs e)

{

if(!this.IsPostBack)

{

string[] cars = { "Ford", "Toyota", "Maruti Suzuki", "Hyndai" };

lstCars.DataSource = cars;

lstCars.DataBind();

}

}

protected void btnSubmit\_Click(object sender, EventArgs e)

{

if (lstCars.SelectedIndex == -1 || txtModel.Text == "")

{

lblMsg.Text = "Please select a car manufacturer and model.";

}

else

{

string car = lstCars.SelectedItem.Text;

string url = "CarManufacturerRecipirnt.aspx?";

url += "Item=" + Server.UrlEncode(lstCars.SelectedItem.Text)+"&";

url += "Model=" + Server.UrlEncode(txtModel.Text);

Response.Redirect(url);

}

}

}

}

**.aspx**

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

<!DOCTYPE html>

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

<head runat="server">

<title></title>

</head>

<body>

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

<div>

Manufacturer:&nbsp;&nbsp;&nbsp;

<asp:DropDownList ID="lstCars" runat="server">

</asp:DropDownList>

<br />

Model:&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;

<asp:TextBox ID="txtModel" runat="server"></asp:TextBox>

<br />

<br />

<asp:Button ID="btnSubmit" OnClick="btnSubmit\_Click" runat="server" Text="Submit" />

&nbsp;&nbsp;

<asp:Label ID="lblMsg" runat="server"></asp:Label>

</div>

</form>

</body>

</html>

**Recipient**

**.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace StateManagement

{

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

{

protected void Page\_Load(object sender, EventArgs e)

{

lblInfo.Text = "Item: " + Request.QueryString["Item"];

lblInfo.Text += "<br/>Model: " + Request.QueryString["Model"];

}

}

}

**.aspx**

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

<!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="lblInfo" runat="server" Text="Label"></asp:Label>

</div>

</form>

</body>

</html>

**Q2.**

**firstPage**

**.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace StateManagement

{

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

{

protected void Page\_Load(object sender, EventArgs e)

{

if(!this.IsPostBack)

{

string[] subjects = { "Maths", "Physics", "Chemistry", "English", "IP" };

lstSubjects.DataSource = subjects;

lstSubjects.DataBind();

}

}

protected void btnSubmit\_Click(object sender, EventArgs e)

{

Session["Name"] = txtName.Text;

Session["RollNo"] = txtRoll.Text;

Session["Subject"] = lstSubjects.SelectedItem.Text;

Response.Redirect("secondPage.aspx");

}

}

}

**.aspx**

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

<!DOCTYPE html>

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

<head runat="server">

<title></title>

</head>

<body>

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

<div>

Name:&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;

<asp:TextBox ID="txtName" runat="server"></asp:TextBox>

<br />

Roll No.:&nbsp;&nbsp;&nbsp;

<asp:TextBox ID="txtRoll" runat="server"></asp:TextBox>

<br />

Subjects:&nbsp;&nbsp;&nbsp;

<asp:DropDownList ID="lstSubjects" runat="server">

</asp:DropDownList>

<br />

<br />

<asp:Button ID="btnSubmit" OnClick="btnSubmit\_Click" runat="server" Text="Submit" />

</div>

</form>

</body>

</html>

**secondPage**

**.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace StateManagement

{

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

{

protected void Page\_Load(object sender, EventArgs e)

{

txtInfo.Text = "Name:"+Convert.ToString(Session["Name"]);

txtInfo.Text += "<br/>Roll No: "+Convert.ToString(Session["RollNo"]);

txtInfo.Text += "<br/>Subject: " + Convert.ToString(Session["Subject"]);

HttpCookie cookie = Request.Cookies["Preferences"];

if(cookie==null)

{

txtCount.Text = "Count: 0";

}

}

protected void btnOK\_Click(object sender, EventArgs e)

{

HttpCookie cookie = Request.Cookies["Preferences"];

if(cookie==null)

{

cookie = new HttpCookie("Preferences");

cookie["count"] = Convert.ToString(0);

}

int count = Int32.Parse(cookie["count"]);

count = count + 1;

cookie["count"] = Convert.ToString(count);

cookie.Expires = DateTime.Now.AddMinutes(2);

Response.Cookies.Add(cookie);

txtCount.Text = "Count: " + cookie["count"];

}

}

}

**.aspx**

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

<!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="txtInfo" runat="server"></asp:Label>

<br />

<br />

<asp:Label ID="txtCount" runat="server"></asp:Label>

<br />

<br />

<asp:Button ID="btnOK" OnClick="btnOK\_Click" runat="server" Text="OK" />

</div>

</form>

</body>

</html>

**Q3.**

**.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace StateManagement

{

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

{

protected void Page\_Load(object sender, EventArgs e)

{

HttpCookie cookie = Request.Cookies["Preferences"];

if(cookie==null)

{

lblInfo.Text = "New Customer. Enter your name and cart your item.";

}

else

{

panel.Visible = false;

btnContinue.Visible = false;

lblInfo.Text = "Welcome " + cookie["Name"];

lblInfo.Text += "<br/>You have the following itmes in the cart:";

lblInfo.Text += "<br/>" + cookie["Cart"];

}

if(!this.IsPostBack)

{

lstItems.Items.Add("Pen");

lstItems.Items.Add("Pencil");

lstItems.Items.Add("Paper");

}

}

protected void btnContinue\_Click(object sender, EventArgs e)

{

HttpCookie cookie = Request.Cookies["Preferences"];

if(cookie==null)

{

cookie = new HttpCookie("Preferences");

cookie["Name"] = txtName.Text;

cookie["Cart"] =lstItems.SelectedItem.Text;

}

cookie.Expires = DateTime.Now.AddMinutes(2);

Response.Cookies.Add(cookie);

panel.Visible = false;

lblInfo.Text = "Welcome " + txtName.Text;

lblInfo.Text += "<br/>You have the following itmes in the cart:";

lblInfo.Text += "<br/>" + lstItems.SelectedItem.Text;

}

}

}

**.aspx**

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

<!DOCTYPE html>

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

<head runat="server">

<title></title>

</head>

<body>

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

<asp:Label ID="lblInfo" runat="server"></asp:Label>

<br />

<asp:Panel runat="server" ID="panel">

<div>

Name:&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;

<asp:TextBox ID="txtName" runat="server"></asp:TextBox>

<br />

Item:&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;

<asp:DropDownList ID="lstItems" runat="server">

</asp:DropDownList>

<br />

<br />

<asp:Button ID="btnContinue" OnClick="btnContinue\_Click" runat="server" Text="Conitnue Shopping" />

</div>

</asp:Panel>

</form>

</body>

</html>

**Q4.**

**LoginPage**

**.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace StateManagement

{

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

{

protected void Page\_Load(object sender, EventArgs e)

{

if (!this.IsPostBack)

{

User user1 = new User("Akansha", "123");

User user2 = new User("Shreyash", "456");

User user3 = new User("Rituza", "987");

Session["User1"] = user1;

Session["User2"] = user2;

Session["User3"] = user3;

}

}

protected void btnLogin\_Click(object sender, EventArgs e)

{

string name = txtName.Text;

string pwd = txtPwd.Text;

int counter;

User user1 = (User)Session["User1"];

User user2 = (User)Session["User2"];

User user3 = (User)Session["User3"];

if(name==user1.Name && pwd == user1.Password)

{

Response.Redirect("LoggedIn.aspx");

}

else if(name==user2.Name && pwd == user2.Password)

{

Response.Redirect("LoggedIn.aspx");

}

else if(name==user3.Name && pwd == user3.Password)

{

Response.Redirect("LoggedIn.aspx");

}

else

{

txtName.Text = "";

lblError.Text = "Invalid Credentials. Try Again";

if(this.ViewState["Invalid"]==null)

{

counter = 1;

}

else

{

counter = (int)this.ViewState["Invalid"] + 1;

}

ViewState["Invalid"] = counter;

if(counter>3)

{

lblError.Text = "More than 3 invalid attempts made.";

txtName.Enabled = false;

txtPwd.Enabled = false;

}

}

}

}

public class User

{

private string name;

private string password;

public User(string nm,string pwd)

{

name = nm;

password = pwd;

}

public string Name

{

get { return name; }

}

public string Password

{

get { return password; }

}

}

}

**.aspx**

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

<!DOCTYPE html>

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

<head runat="server">

<title></title>

</head>

<body>

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

<div>

Username:&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;

<asp:TextBox ID="txtName" runat="server"></asp:TextBox>

<br />

Password:&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;

<asp:TextBox ID="txtPwd" TextMode="Password" runat="server"></asp:TextBox>

<br />

<br />

<asp:Button ID="btnLogin" OnClick="btnLogin\_Click" runat="server" Text="Login" />

&nbsp;&nbsp;&nbsp;&nbsp;

<asp:Label ID="lblError" runat="server"></asp:Label>

</div>

</form>

</body>

</html>

**LoggedIn**

**.aspx**

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

<!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="lblMsg" runat="server" Text="Label"></asp:Label>

</div>

</form>

</body>

</html>

**.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace StateManagement

{

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

{

protected void Page\_Load(object sender, EventArgs e)

{

lblMsg.Text = "Successfully logged in.";

int count = 0;

if(Application["Counter"]!=null)

{

count = (int)Application["Counter"];

}

count++;

Application["Counter"] = count;

lblMsg.Text += "<br/>Count of successful log ins: " + count;

}

}

}