

Default.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="Default.aspx.cs"
Inherits="PVFC._Default" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
  <title>My WEBSITE</title>
  <style>
    .linkStyle { display: inline-block; margin: 10px 0; }
  </style>
</head>
<body>
  <form id="form1" runat="server">
    <h2>Role Base Access Control</h2>
    <asp:HyperLink ID="lnkTask1Problem" runat="server"
      NavigateUrl="Problem_Statement.txt"
      CssClass="linkStyle">Problem Statement</asp:HyperLink><br />

    <asp:HyperLink ID="lnkTask1Report" runat="server"
      NavigateUrl="Code_Implementation_Report.pdf"
      CssClass="linkStyle">Code Implementation Report</asp:HyperLink><br />

    <asp:HyperLink ID="lnkTask1Output" runat="server"
      NavigateUrl="Sample_Output.pdf"
      CssClass="linkStyle">Sample Output</asp:HyperLink><br />

    <asp:HyperLink ID="lnkTask1Demo" runat="server"
      NavigateUrl="login.aspx"
      CssClass="linkStyle">Demonstration Page</asp:HyperLink><br />
  </form>
</body>
</html>
```

Default.aspx.cs

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

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

Login.aspx

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

```
<!DOCTYPE html>
<html>
<head runat="server">
  <title>Login - PVFC System</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f0f0f0;
      margin: 0;
      padding: 20px;
    }
    .login-container {
      max-width: 450px;
      margin: 50px auto;
      background: white;
      padding: 30px;
      border-radius: 10px;
      box-shadow: 0 2px 10px rgba(0,0,0,0.1);
    }
    h2 {
      text-align: center;
      color: #333;
      border-bottom: 2px solid #4CAF50;
      padding-bottom: 10px;
    }
    .demo-credentials {
      background: #e8f5e9;
      border: 1px solid #4CAF50;
      padding: 15px;
      margin: 20px 0;
      border-radius: 8px;
    }
    .demo-credentials h3 {
      margin: 0 0 10px 0;
      color: #2e7d32;
      font-size: 16px;
    }
    .demo-credentials table {
      width: 100%;
      font-size: 14px;
    }
    .demo-credentials td {
      padding: 5px;
    }
    .demo-credentials .role {
      font-weight: bold;
      color: #4CAF50;
    }
    input {
      width: 100%;
      padding: 10px;
      margin: 8px 0;
      border: 1px solid #ddd;
      border-radius: 4px;
      box-sizing: border-box;
    }
  </style>
</head>
</html>
```

```

}
.btn-login {
  width: 100%;
  padding: 10px;
  background: #4CAF50;
  color: white;
  border: none;
  border-radius: 4px;
  cursor: pointer;
  font-size: 16px;
}
.btn-login:hover {
  background: #45a049;
}
.register-link {
  text-align: center;
  margin-top: 15px;
}
.register-link a {
  color: #4CAF50;
  text-decoration: none;
}
.error-msg {
  color: red;
  text-align: center;
  margin: 10px 0;
}
.info-msg {
  color: #2196F3;
  text-align: center;
  margin: 10px 0;
}
}
</style>
</head>
<body>
  <form id="form1" runat="server">
    <div class="Login-container">
      <h2>PVFC Management System</h2>

      <div class="demo-credentials">
        <h3> Demo Credentials </h3>
        <table>
          <tr>
            <td class="role"> Admin:</td>
            <td>Username: <strong>admin1</strong></td>
            <td>Password: <strong>admin123</strong></td>
          </tr>
          <tr>
            <td class="role"> Manager:</td>
            <td>Username: <strong>manager1</strong></td>
            <td>Password: <strong>manager123</strong></td>
          </tr>
          <tr>
            <td class="role"> Salesperson:</td>
            <td>Username: <strong>sales1</strong></td>
            <td>Password: <strong>sales123</strong></td>
          </tr>
          <tr>
            <td class="role"> Customer:</td>
            <td>Username: <strong>laiba</strong></td>

```

```

        <td>Password: <strong>laiba123</strong></td>
    </tr>
</table>
<p style="font-size: 12px; color: #666; margin: 10px 0 0 0; text-align:
center;">
    Each role has different access permissions
</p>
</div>

<asp:Label ID="lblMsg" runat="server" CssClass="error-msg" />

<asp:TextBox ID="txtUser" runat="server" placeholder="Username" /><br />
<asp:TextBox ID="txtPass" runat="server" TextMode="Password"
placeholder="Password" /><br />

<asp:Button ID="btnLogin" runat="server" Text="Login" CssClass="btn-login"
OnClick="btnLogin_Click" />

<div class="register-link">
    <a href="CustomerRegistration.aspx">New Customer? Register Here</a>
</div>
</div>
</form>
</body>
</html>

```

Login.aspx.cs

```

using System;
using System.Data.SqlClient;
using System.Configuration;

namespace PVFC
{
    public partial class Login : System.Web.UI.Page
    {
        string connStr =
ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

        protected void btnLogin_Click(object sender, EventArgs e)
        {
            using (SqlConnection connect = new SqlConnection(connStr))
            {
                connect.Open();

                SqlCommand command = new SqlCommand("SELECT UserID "+
"FROM Users "+
"WHERE Username=@u AND Password=@p AND IsActive=1", connect);

                command.Parameters.AddWithValue("@u", txtUser.Text);
                command.Parameters.AddWithValue("@p", txtPass.Text);

                object userId = command.ExecuteScalar();

                if (userId == null)
                {
                    lblMsg.Text = "Invalid username or password!";
                }
            }
        }
    }
}

```



```

<html>
<head runat="server">
  <title>Customer Store</title>
  <style>
    body { font-family: Arial; margin: 20px; background: #f5f5f5; }
    .container { max-width: 1200px; margin: auto; background: white; padding: 20px;
border: 1px solid #ddd; }
    h2 { color: #333; border-bottom: 2px solid #4CAF50; padding-bottom: 10px; }
    h3 { color: #4CAF50; margin: 20px 0 10px 0; }
    table { width: 100%; border-collapse: collapse; margin-bottom: 20px; }
    th { background: #4CAF50; color: white; padding: 10px; text-align: left; }
    td { padding: 8px; border: 1px solid #ddd; }
    .cart-table th { background: #FF9800; }
    .btn { padding: 5px 10px; margin: 2px; cursor: pointer; border: none; border-
radius: 3px; color: white; }
    .btn-add { background: #4CAF50; }
    .btn-remove { background: #f44336; }
    .btn-checkout { background: #2196F3; padding: 8px 20px; font-size: 14px; }
    .btn-clear { background: #FF9800; }
    .btn-back { background: #666; }
    .search-box { margin-bottom: 15px; padding: 10px; background: #f9f9f9; }
    .cart-summary { background: #e8f5e9; padding: 10px; margin: 10px 0; text-align:
right; }
    .qty-box { width: 50px; padding: 3px; text-align: center; }
    .success { background: #e8f5e9; border: 1px solid #4CAF50; color: #2e7d32;
padding: 8px; margin: 10px 0; }
    .error { background: #ffebee; border: 1px solid #f44336; color: #c62828;
padding: 8px; margin: 10px 0; }
    .info { background: #e3f2fd; border: 1px solid #2196F3; color: #1565c0; padding:
8px; margin: 10px 0; }
    .button-group { text-align: center; margin-top: 20px; padding-top: 20px; border-
top: 1px solid #ddd; }
  </style>
</head>
<body>
  <form id="form1" runat="server">
    <div class="container">
      <h2>Shopping Store</h2>

      <!-- Search -->
      <div class="search-box">
        <asp:TextBox ID="txtSearch" runat="server" placeholder="Search
product..." />
        <asp:Button ID="btnSearch" runat="server" Text="Search" CssClass="btn
btn-add" OnClick="btnSearch_Click" />
        <asp:Button ID="btnShowAll" runat="server" Text="Show All" CssClass="btn
btn-clear" OnClick="btnShowAll_Click" />
      </div>

      <!-- Products -->
      <h3>Products</h3>
      <asp:GridView ID="gvProducts" runat="server" AutoGenerateColumns="False"
DataKeyNames="Product_Id" OnRowCommand="gvProducts_RowCommand"
Width="100%">
        <Columns>
          <asp:BoundField DataField="Product_Id" HeaderText="ID" />
          <asp:BoundField DataField="Product_Description" HeaderText="Name" />
          <asp:BoundField DataField="Standard_Price" HeaderText="Price"
DataFormatString="{0:C2}" />
          <asp:TemplateField HeaderText="Qty">
            <ItemTemplate>

```

```

        <asp:TextBox ID="txtQty" runat="server" Text="1"
Width="40px" CssClass="qty-box" />
        </ItemTemplate>
    </asp:TemplateField>
    <asp:ButtonField ButtonType="Button" Text="Add to Cart"
CommandName="AddToCart" />
    </Columns>
    <HeaderStyle BackColor="#4CAF50" ForeColor="White" />
</asp:GridView>

<!-- Cart -->
<h3>Your Cart</h3>
<asp:GridView ID="gvCart" runat="server" AutoGenerateColumns="False"
OnRowCommand="gvCart_RowCommand" Width="100%" CssClass="cart-table"
EmptyDataText="Cart is empty">
    <Columns>
        <asp:BoundField DataField="Product_Name" HeaderText="Product" />
        <asp:BoundField DataField="Price" HeaderText="Price"
DataFormatString="{0:C2}" />
        <asp:BoundField DataField="Quantity" HeaderText="Qty" />
        <asp:BoundField DataField="Total" HeaderText="Total"
DataFormatString="{0:C2}" />
        <asp:ButtonField ButtonType="Button" Text="Remove"
CommandName="Remove" />
    </Columns>
    <HeaderStyle BackColor="#FF9800" ForeColor="White" />
</asp:GridView>
<h3>Customers who bought this also bought:</h3>
<asp:GridView ID="gvRecommendations" runat="server"></asp:GridView>
<!-- Summary -->
<div class="cart-summary">
    <strong>Total: <asp:Label ID="lblTotal" runat="server" Text="$0.00"
/></strong>
    <br />
    <asp:Button ID="btnClearCart" runat="server" Text="Clear Cart"
CssClass="btn btn-clear" OnClick="btnClearCart_Click" />
    <asp:Button ID="btnCheckout" runat="server" Text="Checkout"
CssClass="btn btn-checkout" OnClick="btnCheckout_Click" />
</div>

    <asp:Label ID="lblMsg" runat="server" />
    <h3>Buy Again</h3>
<asp:GridView ID="gvReorder" runat="server"></asp:GridView>

    <div class="button-group">
        <asp:Button ID="btnBack" runat="server" Text="Back to Main"
CssClass="btn btn-back" OnClick="btnBack_Click" />
    </div>
    <br /><br />
</div>
</form>
</body>
</html>

```

CustomerDashboard.aspx.cs

```

using System;
using System.Configuration;
using System.Data;
using System.Data.SqlClient;

```

```

using System.Web.UI.WebControls;
using System.Net;
using System.IO;
using Newtonsoft.Json;
using System.Collections.Generic;

namespace PVFC
{
    public partial class CustomerDashboard : BasePage
    {
        string connectionString =
ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

        protected void Page_Load(object sender, EventArgs e)
        {
            CheckAccess(new string[] { "Customer", "Admin", "Manager", "Salesperson" });

            if (!IsPostBack)
            {
                LoadProducts();
                LoadCart();
                gvRecommendations.DataSource = null;
                gvRecommendations.DataBind();
                LoadReorderSuggestions();
            }

            private void LoadProducts()
            {
                using (SqlConnection connect = new SqlConnection(connectionString))
                {
                    string sqlquery = "SELECT Product_Id, Product_Description,
Standard_Price " +
                                "FROM PRODUCT_t ORDER BY Product_Id";

                    SqlDataAdapter dataAdapter = new SqlDataAdapter(sqlquery, connect);

                    DataTable dataTable = new DataTable();
                    dataAdapter.Fill(dataTable);

                    gvProducts.DataSource = dataTable;
                    gvProducts.DataBind();
                }

                protected void btnSearch_Click(object sender, EventArgs e)
                {
                    string search = txtSearch.Text.Trim();

                    if (string.IsNullOrEmpty(search))
                    {
                        LoadProducts();
                        return;
                    }

                    using (SqlConnection connect = new SqlConnection(connectionString))
                    {
                        string sqlquery = "SELECT Product_Id, Product_Description,
Standard_Price "+

```

```

        "FROM PRODUCT_t "+
        "WHERE Product_Description LIKE '%" + @s + '%"';

        SqlCommand command = new SqlCommand(sqlquery, connect);
        command.Parameters.AddWithValue("@s", search);

        SqlDataAdapter dataAdapter = new SqlDataAdapter(command);
        DataTable dataTable = new DataTable();
        dataAdapter.Fill(dataTable);

        gvProducts.DataSource = dataTable;
        gvProducts.DataBind();
    }
}

protected void btnShowAll_Click(object sender, EventArgs e)
{
    txtSearch.Text = "";
    LoadProducts();
}

protected void gvProducts_RowCommand(object sender, GridViewCommandEventArgs e)
{
    if (e.CommandName != "AddToCart")
        return;

    int index = Convert.ToInt32(e.CommandArgument);
    int productId = Convert.ToInt32(gvProducts.DataKeys[index].Value);

    string productName = gvProducts.Rows[index].Cells[1].Text;

    decimal price = Convert.ToDecimal(
        gvProducts.Rows[index].Cells[2].Text
        .Replace("$", "")
        .Replace(",", ""));

    TextBox txtQty = (TextBox)gvProducts.Rows[index].FindControl("txtQty");
    int qty = Convert.ToInt32(txtQty.Text);

    if (qty <= 0)
    {
        ShowMessage("Invalid quantity!", "error");
        return;
    }

    DataTable cart = Session["Cart"] as DataTable;

    if (cart == null)
    {
        cart = new DataTable();
        cart.Columns.Add("Product_Id", typeof(int));
        cart.Columns.Add("Product_Name", typeof(string));
        cart.Columns.Add("Price", typeof(decimal));
        cart.Columns.Add("Quantity", typeof(int));
        cart.Columns.Add("Total", typeof(decimal));
    }

    bool found = false;

```

```

foreach (DataRow row in cart.Rows)
{
    if ((int)row["Product_Id"] == productId)
    {
        row["Quantity"] = (int)row["Quantity"] + qty;
        row["Total"] = (decimal)row["Price"] * (int)row["Quantity"];
        found = true;
        break;
    }
}

if (!found)
{
    cart.Rows.Add(productId, productName, price, qty, price * qty);
}

Session["Cart"] = cart;

LoadCart();
ShowMessage(productName + " added to cart!", "success");

LoadRecommendations(productId);
}

protected void gvCart_RowCommand(object sender, GridViewCommandEventArgs e)
{
    if (e.CommandName != "Remove")
        return;

    int index = Convert.ToInt32(e.CommandArgument);

    DataTable cart = Session["Cart"] as DataTable;

    if (cart != null && index < cart.Rows.Count)
    {
        string name = cart.Rows[index]["Product_Name"].ToString();

        cart.Rows.RemoveAt(index);

        Session["Cart"] = cart;

        LoadCart();
        ShowMessage(name + " removed from cart", "info");
    }
}

private void LoadRecommendations(int productId)
{
    List<int> recIds = GetRecommendations(productId);

    if (recIds == null || recIds.Count == 0)
    {
        gvRecommendations.DataSource = null;
        gvRecommendations.DataBind();
        return;
    }

    string ids = string.Join(",", recIds);
}

```

```

        using (SqlConnection connect = new SqlConnection(connectionString))
        {
            string sqlquery = "SELECT Product_Id, Product_Description,
Standard_Price "+
                                "FROM PRODUCT_t "+
                                "WHERE Product_Id IN (" + ids + ")";

            SqlDataAdapter dataAdapter = new SqlDataAdapter(sqlquery, connect);
            DataTable dataTable = new DataTable();
            dataAdapter.Fill(dataTable);

            gvRecommendations.DataSource = dataTable;
            gvRecommendations.DataBind();
        }
    }
    private void LoadReorderSuggestions()
    {
        int userId = Convert.ToInt32(Session["UserId"]);

        using (SqlConnection connect = new SqlConnection(connectionString))
        {
            string sqlquery = "SELECT DISTINCT p.Product_Id, p.Product_Description,
p.Standard_Price "+
                                "FROM PRODUCT_t p "+
                                "JOIN Order_line_t ol ON p.Product_Id = ol.Product_Id
"+
                                "JOIN Orders_t o ON o.Order_Id = ol.Order_Id "+
                                "WHERE o.UserID = @uid ";

            SqlCommand command = new SqlCommand(sqlquery, connect);
            command.Parameters.AddWithValue("@uid", userId);

            SqlDataAdapter dataAdapter = new SqlDataAdapter(command);
            DataTable dataTable = new DataTable();
            dataAdapter.Fill(dataTable);

            gvReorder.DataSource = dataTable;
            gvReorder.DataBind();
        }
    }

    public List<int> GetRecommendations(int productId)
    {
        List<int> recs = new List<int>();

        try
        {
            //somee link
            string baseUrl = "http://www.igrawebsite.somee.com/Lab11";
            string url = baseUrl + "/Recommendation.aspx?pid=" + productId;

            WebRequest req = WebRequest.Create(url);
            ServicePointManager.ServerCertificateValidationCallback += (sender,
cert, chain, sslPolicyErrors) => true;
            WebResponse res = req.GetResponse();

            using (StreamReader reader = new StreamReader(res.GetResponseStream()))
            {
                string json = reader.ReadToEnd();
            }
        }
    }
}

```

```

        if (!string.IsNullOrEmpty(json))
        {
            recs = JsonConvert.DeserializeObject<List<int>>(json);
        }
    }
}
catch (Exception ex)
{
    ShowMessage("Recommendation error: " + ex.Message, "error");
}

return recs;
}

private void LoadCart()
{
    DataTable cart = Session["Cart"] as DataTable;

    DataTable display = new DataTable();
    display.Columns.Add("Product_Name");
    display.Columns.Add("Price");
    display.Columns.Add("Quantity");
    display.Columns.Add("Total");

    decimal total = 0;

    if (cart != null)
    {
        foreach (DataRow row in cart.Rows)
        {
            display.Rows.Add(row["Product_Name"], row["Price"], row["Quantity"],
row["Total"]);
            total += Convert.ToDecimal(row["Total"]);
        }
    }

    gvCart.DataSource = display;
    gvCart.DataBind();

    lblTotal.Text = "$" + total.ToString("N2");
}

protected void btnClearCart_Click(object sender, EventArgs e)
{
    Session["Cart"] = null;
    LoadCart();
    ShowMessage("Cart cleared", "info");
}

protected void btnCheckout_Click(object sender, EventArgs e)
{
    DataTable cart = Session["Cart"] as DataTable;

    if (cart == null || cart.Rows.Count == 0)
    {
        ShowMessage("Cart is empty!", "error");
        return;
    }
}

```

```

    }

    Session["CheckoutCart"] = cart;
    Response.Redirect("Checkout.aspx");
}

protected void btnBack_Click(object sender, EventArgs e)
{
    RedirectToDashboard();
}

private void ShowMessage(string msg, string type)
{
    lblMsg.Text = msg;
    lblMsg.CssClass = type;
}
}
}

```

AdminDashboard.aspx

```

<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="AdminDashboard.aspx.cs"
Inherits="PVFC.AdminDashboard" %>
<html>
<body>
    <form runat="server">
<h2>Admin Dashboard</h2>
<asp:HyperLink runat="server" NavigateUrl="ProductCatalogUpdate.aspx">Product Catalog
Update</asp:HyperLink><br /><br />
<asp:HyperLink runat="server" NavigateUrl="ProductSearch.aspx">Product
Search</asp:HyperLink><br /><br />
<asp:HyperLink runat="server" NavigateUrl="CustomerDashboard.aspx">Product
Selection</asp:HyperLink><br /><br />
<asp:HyperLink runat="server" NavigateUrl="PaymentProvision.aspx">Payment
Provision</asp:HyperLink>
<asp:HyperLink runat="server" NavigateUrl="CustomerSegmentation.aspx">Customer
Segmentation</asp:HyperLink><br /><br />
<asp:HyperLink runat="server" NavigateUrl="DemandForecast.aspx">
    Demand Forecast
</asp:HyperLink>

<br /><br />
    <div class="button-group">
        <asp:Button ID="btnLogout" runat="server" Text="Logout" CssClass="btn-
logout" OnClick="btnLogout_Click" />
    </div>

</form>
</body>
</html>

```

AdminDashboard.aspx.cs

```

using System;

namespace PVFC
{
    public partial class AdminDashboard : BasePage

```

```

    {
        protected void Page_Load(object sender, EventArgs e)
        {
            CheckAccess(new string[] { "Admin" });
        }
        protected void btnLogout_Click(object sender, EventArgs e)
        {
            Session.Clear();
            Session.Abandon();
            Response.Redirect("Login.aspx");
        }
    }
}
}

```

ManagerDashboard.aspx

```

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

```

```

<html>
<body>
<form runat="server">

<h2>Manager Dashboard</h2>

<asp:HyperLink runat="server" NavigateUrl="ProductSearch.aspx">
    Product Search
</asp:HyperLink>
<br /><br />

<asp:HyperLink runat="server" NavigateUrl="CustomerDashboard.aspx">
    Product Selection
</asp:HyperLink>
<br /><br />

<asp:HyperLink runat="server" NavigateUrl="PaymentProvision.aspx">
    Payment Provision
</asp:HyperLink>
    <asp:HyperLink runat="server" NavigateUrl="DemandForecast.aspx">
        Demand Forecast
    </asp:HyperLink>

<br /><br />
    <div class="button-group">
        <asp:Button ID="btnLogout" runat="server" Text="Logout" CssClass="btn-
logout" OnClick="btnLogout_Click" />
    </div>

</form>
</body>
</html>

```

ManagerDashboard.aspx.cs

```
using System;

namespace PVFC
{
    public partial class ManagerDashboard : BasePage
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            CheckAccess(new string[] { "Manager" });
        }
        protected void btnLogout_Click(object sender, EventArgs e)
        {
            Session.Clear();
            Session.Abandon();
            Response.Redirect("Login.aspx");
        }
    }
}
```

SalespersonDashboard.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="SalesDashboard.aspx.cs"
Inherits="PVFC.SalesDashboard" %>
<html>
<body>
<form runat="server">
<h2>Salesperson Dashboard</h2>
<asp:HyperLink runat="server" NavigateUrl="CustomerDashboard.aspx">Product
Selection</asp:HyperLink><br /><br />
<asp:HyperLink runat="server" NavigateUrl="PaymentProvision.aspx">Payment
Provision</asp:HyperLink>
<br /><br />
    <div class="button-group">
        <asp:Button ID="btnLogout" runat="server" Text="Logout" CssClass="btn-
logout" OnClick="btnLogout_Click" />
    </div>

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

SalespersonDashboard.aspx.cs

```
using System;

namespace PVFC
{
    public partial class SalesDashboard : BasePage
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            CheckAccess(new string[] { "Salesperson" });
        }
    }
}
```

```

    }

    protected void btnLogout_Click(object sender, EventArgs e)
    {
        Session.Clear();
        Session.Abandon();
        Response.Redirect("Login.aspx");
    }
}

```

CustomerRegistration.aspx

```

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

```

```

<!DOCTYPE html>
<html>
<head runat="server">
    <title>Customer Registration</title>
</head>
<body>
<form id="form1" runat="server">
    <h2>New Customer Registration</h2>

    Customer ID:<br />
    <asp:TextBox ID="txtId" runat="server" /><br /><br />

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

    Address:<br />
    <asp:TextBox ID="txtAddress" runat="server" /><br /><br />

    State:<br />
    <asp:TextBox ID="txtState" runat="server" /><br /><br />

    City:<br />
    <asp:DropDownList ID="ddlCity" runat="server" AutoPostBack="true"
        OnSelectedIndexChanged="ddlCity_SelectedIndexChanged">
        <asp:ListItem Text="Lahore" Value="54000" />
        <asp:ListItem Text="Karachi" Value="74000" />
        <asp:ListItem Text="Islamabad" Value="44000" />
        <asp:ListItem Text="Rawalpindi" Value="46000" />
    </asp:DropDownList><br /><br />

    Postal Code:<br />
    <asp:TextBox ID="txtPostal" runat="server" ReadOnly="true" /><br /><br />

    Username:<br />
    <asp:TextBox ID="txtUsername" runat="server" /><br /><br />

    Password:<br />
    <asp:TextBox ID="txtPassword" runat="server" TextMode="Password" /><br /><br />
    <asp:Button ID="btnRegister" runat="server"
        Text="Register Customer"
        OnClick="btnRegister_Click" />

    <br /><br />

```

```

        <asp:Label ID="lblMsg" runat="server" ForeColor="Green" />
    </form>
</body>
</html>

```

CustomerRegistration.aspx.cs

```

using System;
using System.Configuration;
using System.Data.SqlClient;

namespace PVFC
{
    public partial class CustomerRegistration : System.Web.UI.Page
    {
        string connectionString =
ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

        protected void Page_Load(object sender, EventArgs e)
        {
            if (!IsPostBack)
            {
                ddlCity.Items.Insert(0, new System.Web.UI.WebControls.ListItem("Select
City", ""));
            }
        }

        protected void ddlCity_SelectedIndexChanged(object sender, EventArgs e)
        {
            txtPostal.Text = ddlCity.SelectedValue;
        }

        protected void btnRegister_Click(object sender, EventArgs e)
        {
            try
            {
                using (SqlConnection connect = new SqlConnection(connectionString))
                {
                    connect.Open();

                    string query = "INSERT INTO CUSTOMER_t"+
"(Customer_Id, Customer_Name, Customer_Address,
Customer_City, Customer_State, Postal_Code)" +
"VALUES"+
"(@Id, @Name, @Address, @City, @State, @Postal)";

                    SqlCommand command1 = new SqlCommand(query, connect);
                    command1.Parameters.AddWithValue("@Id", txtId.Text);
                    command1.Parameters.AddWithValue("@Name", txtName.Text);
                    command1.Parameters.AddWithValue("@Address", txtAddress.Text);
                    command1.Parameters.AddWithValue("@City",
ddlCity.SelectedItem.Text);
                    command1.Parameters.AddWithValue("@State", txtState.Text);
                    command1.Parameters.AddWithValue("@Postal", txtPostal.Text);

                    command1.ExecuteNonQuery();

                    string Query = "INSERT INTO Users(Username, Password)" +
"VALUES(@u,@p); SELECT SCOPE_IDENTITY()";

```

```

        SqlCommand command2 = new SqlCommand(Query, connect);
        command2.Parameters.AddWithValue("@u", txtUsername.Text);
        command2.Parameters.AddWithValue("@p", txtPassword.Text);

        int userId = Convert.ToInt32(command2.ExecuteScalar());

        SqlCommand command3 = new SqlCommand("INSERT INTO UserRoles
VALUES(@uid,4)", connect);
        command3.Parameters.AddWithValue("@uid", userId);
        command3.ExecuteNonQuery();

        Session["UserID"] = userId;
        Session["CustomerID"] = txtId.Text;

        Response.Redirect("CustomerDashboard.aspx");
    }
    catch (Exception ex)
    {
        lblMsg.Text = "Error: " + ex.Message;
    }
}
}
}
}
}

```

OrderPlacement.aspx

```

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

```

```

<!DOCTYPE html>
<html>
<head runat="server">
<title>Product Selection</title>
</head>

<body>

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

<h2>Confirm Your Order</h2>

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

<br /><br />

Quantity:<br />
<asp:TextBox ID="txtQuantity" runat="server" Text="1"></asp:TextBox>

<br /><br />

<asp:Button ID="btnConfirm"
runat="server"
Text="Confirm Order"
OnClick="btnConfirm_Click" />

<br /><br />

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

```

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

OrderPlacement.aspx.cs

```
using System;
using System.Configuration;
using System.Data.SqlClient;

namespace PVFC
{
    public partial class OrderPlacement : BasePage
    {
        string connectionString =
ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

        protected void Page_Load(object sender, EventArgs e)
        {
            if (Session["UserID"] == null)
            {
                Response.Redirect("Login.aspx");
                return;
            }

            if (!IsPostBack)
            {
                if (Session["SelectedProduct"] == null)
                {
                    Response.Redirect("CustomerDashboard.aspx");
                    return;
                }

                lblProduct.Text = "Selected Product ID: " +
Session["SelectedProduct"].ToString();
            }
        }

        protected void btnConfirm_Click(object sender, EventArgs e)
        {
            try
            {
                if (Session["SelectedProduct"] == null || Session["UserID"] == null)
                {
                    lblMsg.Text = "Invalid session.";
                    return;
                }

                int productId = Convert.ToInt32(Session["SelectedProduct"]);
                int quantity = Convert.ToInt32(txtQuantity.Text);
                int userId = Convert.ToInt32(Session["UserID"]);

                using (SqlConnection connect = new SqlConnection(connectionString))
                {
                    connect.Open();

                    SqlCommand commandOrder = new SqlCommand("INSERT INTO Orders_t
(UserID, Order_Date)"+
```



```
h3 {
  color: #4CAF50;
  margin: 20px 0 10px 0;
}
.search-box {
  background: #f9f9f9;
  padding: 15px;
  border: 1px solid #ddd;
  margin-bottom: 20px;
  border-radius: 8px;
}
.search-box label {
  font-weight: bold;
  display: block;
  margin-bottom: 5px;
}
.search-box select {
  width: 100%;
  padding: 10px;
  margin: 10px 0;
  border: 1px solid #ccc;
  border-radius: 4px;
  font-size: 14px;
}
.result-box {
  margin-top: 20px;
  padding: 15px;
  background: #f5f5f5;
  border: 1px solid #ddd;
  border-radius: 8px;
}
.product-detail {
  background: white;
  padding: 15px;
  margin-top: 10px;
  border: 1px solid #ddd;
  border-radius: 8px;
}
.product-detail table {
  width: 100%;
}
.product-detail td {
  padding: 8px;
}
.product-detail .label {
  font-weight: bold;
  width: 120px;
  background: #f0f0f0;
}
.btn {
  padding: 8px 20px;
  margin: 5px;
  cursor: pointer;
  border: none;
  border-radius: 4px;
  color: white;
}
.btn-search {
  background: #2196F3;
}
.btn-search:hover {
```

```

        background: #0b7dda;
    }
    .btn-clear {
        background: #FF9800;
    }
    .btn-clear:hover {
        background: #e68900;
    }
    .btn-back {
        background: #D2691E;
    }
    .btn-back:hover {
        background: #8B4513;
    }
    .button-group {
        text-align: center;
        margin-top: 20px;
        padding-top: 20px;
        border-top: 1px solid #ddd;
    }
    .message {
        padding: 10px;
        margin: 10px 0;
        border-radius: 4px;
    }
    .error {
        background: #ffebee;
        border: 1px solid #f44336;
        color: #c62828;
    }
    .success {
        background: #e8f5e9;
        border: 1px solid #4CAF50;
        color: #2e7d32;
    }
    .info {
        background: #e3f2fd;
        border: 1px solid #2196F3;
        color: #1565c0;
    }
    .result-count {
        margin: 10px 0;
        color: #666;
        font-size: 14px;
    }
}
</style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h2>Product Search</h2>

            <div class="search-box">
                <label>Select Product Name:</label>
                <asp:DropDownList ID="ddlProductNames" runat="server"
AutoPostBack="true"
                OnSelectedIndexChanged="ddlProductNames_SelectedIndexChanged"
Width="100%">
                    <asp:ListItem Text="-- Select a Product --" Value="" />
                </asp:DropDownList>
            </div>
        </div>
    </form>
</body>
</html>

```

```

        <div style="text-align: center; margin-top: 15px;">
            <asp:Button ID="btnSearch" runat="server" Text="Search Product"
            CssClass="btn btn-search" OnClick="btnSearch_Click" />
            <asp:Button ID="btnClear" runat="server" Text="Clear" CssClass="btn
            btn-clear" OnClick="btnClear_Click" />
        </div>
    </div>

    <div class="result-box">
        <h3>Product Details</h3>
        <asp:Label ID="lblResultCount" runat="server" Text="Select a product
        from the dropdown to view details." CssClass="result-count" />

        <div class="product-detail" id="productDetail" runat="server"
        visible="false">
            <table>
                <tr>
                    <td class="label">Product ID:</td>
                    <td><asp:Label ID="lblProductId" runat="server" Font-
                    Bold="true" /></td>
                </tr>
                <tr>
                    <td class="label">Product Name:</td>
                    <td><asp:Label ID="lblProductName" runat="server" Font-
                    Bold="true" ForeColor="#4CAF50" /></td>
                </tr>
                <tr>
                    <td class="label">Finish:</td>
                    <td><asp:Label ID="lblFinish" runat="server" /></td>
                </tr>
                <tr>
                    <td class="label">Price:</td>
                    <td><asp:Label ID="lblPrice" runat="server" Font-Bold="true"
                    ForeColor="#2196F3" /></td>
                </tr>
                <tr>
                    <td class="label">Category:</td>
                    <td><asp:Label ID="lblCategory" runat="server" /></td>
                </tr>
            </table>
        </div>
    </div>

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

    <div class="button-group">
        <asp:Button ID="btnBack" runat="server" Text="← Back to Dashboard"
        CssClass="btn btn-back" OnClick="btnBack_Click" />
    </div>
</form>
</body>
</html>

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

<!DOCTYPE html>
<html>
<head runat="server">
    <title>Product Search</title>
    <style>

```

```
body {
  font-family: Arial, sans-serif;
  background-color: #f2f2f2;
}
.container {
  width: 800px;
  margin: 40px auto;
  padding: 25px;
  background-color: white;
  border: 1px solid #ccc;
  border-radius: 10px;
}
h2 {
  text-align: center;
  margin-bottom: 20px;
  color: #333;
  border-bottom: 2px solid #4CAF50;
  padding-bottom: 10px;
}
h3 {
  color: #4CAF50;
  margin: 20px 0 10px 0;
}
.search-box {
  background: #f9f9f9;
  padding: 15px;
  border: 1px solid #ddd;
  margin-bottom: 20px;
  border-radius: 8px;
}
.search-box label {
  font-weight: bold;
  display: block;
  margin-bottom: 5px;
}
.search-box select {
  width: 100%;
  padding: 10px;
  margin: 10px 0;
  border: 1px solid #ccc;
  border-radius: 4px;
  font-size: 14px;
}
.result-box {
  margin-top: 20px;
  padding: 15px;
  background: #f5f5f5;
  border: 1px solid #ddd;
  border-radius: 8px;
}
.product-detail {
  background: white;
  padding: 15px;
  margin-top: 10px;
  border: 1px solid #ddd;
  border-radius: 8px;
}
.product-detail table {
  width: 100%;
}
.product-detail td {
```

```
        padding: 8px;
    }
    .product-detail .label {
        font-weight: bold;
        width: 120px;
        background: #f0f0f0;
    }
    .btn {
        padding: 8px 20px;
        margin: 5px;
        cursor: pointer;
        border: none;
        border-radius: 4px;
        color: white;
    }
    .btn-search {
        background: #2196F3;
    }
    .btn-search:hover {
        background: #0b7dda;
    }
    .btn-clear {
        background: #FF9800;
    }
    .btn-clear:hover {
        background: #e68900;
    }
    .btn-back {
        background: #D2691E;
    }
    .btn-back:hover {
        background: #8B4513;
    }
    .button-group {
        text-align: center;
        margin-top: 20px;
        padding-top: 20px;
        border-top: 1px solid #ddd;
    }
    .message {
        padding: 10px;
        margin: 10px 0;
        border-radius: 4px;
    }
    .error {
        background: #ffebee;
        border: 1px solid #f44336;
        color: #c62828;
    }
    .success {
        background: #e8f5e9;
        border: 1px solid #4CAF50;
        color: #2e7d32;
    }
    .info {
        background: #e3f2fd;
        border: 1px solid #2196F3;
        color: #1565c0;
    }
    .result-count {
        margin: 10px 0;
    }
```

```

        color: #666;
        font-size: 14px;
    }
</style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h2>Product Search</h2>

            <div class="search-box">
                <label>Select Product Name:</label>
                <asp:DropDownList ID="ddlProductNames" runat="server"
AutoPostBack="true"
                OnSelectedIndexChanged="ddlProductNames_SelectedIndexChanged"
Width="100%">
                    <asp:ListItem Text="-- Select a Product --" Value="" />
                </asp:DropDownList>

                <div style="text-align: center; margin-top: 15px;">
                    <asp:Button ID="btnSearch" runat="server" Text="Search Product"
CssClass="btn btn-search" OnClick="btnSearch_Click" />
                    <asp:Button ID="btnClear" runat="server" Text="Clear" CssClass="btn
btn-clear" OnClick="btnClear_Click" />
                </div>
            </div>

            <div class="result-box">
                <h3>Product Details</h3>
                <asp:Label ID="lblResultCount" runat="server" Text="Select a product
from the dropdown to view details." CssClass="result-count" />

                <div class="product-detail" id="productDetail" runat="server"
visible="false">
                    <table>
                        <tr>
                            <tr>
                                <td class="label">Product ID:</td>
                                <td><asp:Label ID="lblProductId" runat="server" Font-
Bold="true" /></td>
                            </tr>
                            <tr>
                                <td class="label">Product Name:</td>
                                <td><asp:Label ID="lblProductName" runat="server" Font-
Bold="true" ForeColor="#4CAF50" /></td>
                            </tr>
                            <tr>
                                <td class="label">Finish:</td>
                                <td><asp:Label ID="lblFinish" runat="server" /></td>
                            </tr>
                            <tr>
                                <td class="label">Price:</td>
                                <td><asp:Label ID="lblPrice" runat="server" Font-Bold="true"
ForeColor="#2196F3" /></td>
                            </tr>
                            <tr>
                                <td class="label">Category:</td>
                                <td><asp:Label ID="lblCategory" runat="server" /></td>
                            </tr>
                        </table>
                    </div>
                </div>
            </div>
        </div>
    </form>

```

```

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

        <div class="button-group">
            <asp:Button ID="btnBack" runat="server" Text="Back to Dashboard"
            CssClass="btn btn-back" OnClick="btnBack_Click" />
        </div>
    </div>
</form>
</body>
</html>

```

ProductSearch.aspx.cs

```

using System;
using System.Configuration;
using System.Data;
using System.Data.SqlClient;

namespace PVFC
{
    public partial class ProductSearch : BasePage
    {
        string connStr =
        ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

        protected void Page_Load(object sender, EventArgs e)
        {
            CheckAccess(new string[] { "Admin", "Manager", "Customer" });

            if (!IsPostBack)
            {
                LoadProductNames();
            }
        }

        private void LoadProductNames()
        {
            try
            {
                using (SqlConnection con = new SqlConnection(connStr))
                {
                    string query = @"SELECT Product_Id, Product_Description
                                    FROM PRODUCT_t
                                    ORDER BY Product_Description";

                    SqlCommand cmd = new SqlCommand(query, con);
                    con.Open();
                    SqlDataReader dr = cmd.ExecuteReader();

                    ddlProductNames.Items.Clear();
                    ddlProductNames.Items.Add(new System.Web.UI.WebControls.ListItem("---
                    Select a Product ---", ""));

                    while (dr.Read())
                    {
                        ddlProductNames.Items.Add(new
                    System.Web.UI.WebControls.ListItem(
                        dr["Product_Description"].ToString(),

```

```

        dr["Product_Id"].ToString());
    }
    dr.Close();
}
}
catch (Exception ex)
{
    ShowMessage("Error loading products: " + ex.Message, "error");
}
}

// When user selects a product from dropdown
protected void ddlProductNames_SelectedIndexChanged(object sender, EventArgs e)
{
    if (!string.IsNullOrEmpty(ddlProductNames.SelectedValue))
    {
        int productId = Convert.ToInt32(ddlProductNames.SelectedValue);
        LoadProductDetails(productId);
    }
    else
    {
        productDetail.Visible = false;
        lblResultCount.Text = "Select a product from the dropdown to view
details.";
    }
}

protected void btnSearch_Click(object sender, EventArgs e)
{
    if (string.IsNullOrEmpty(ddlProductNames.SelectedValue))
    {
        ShowMessage("Please select a product from the dropdown first!",
"error");
        return;
    }

    int productId = Convert.ToInt32(ddlProductNames.SelectedValue);
    LoadProductDetails(productId);
    ShowMessage("Product details loaded successfully!", "success");
}

protected void btnClear_Click(object sender, EventArgs e)
{
    ddlProductNames.SelectedIndex = 0;
    productDetail.Visible = false;
    lblResultCount.Text = "Select a product from the dropdown to view details.";
    ShowMessage("Cleared! Select a product to view details.", "info");
}

private void LoadProductDetails(int productId)
{
    try
    {
        using (SqlConnection con = new SqlConnection(connStr))
        {
            string query = @"SELECT
                                P.Product_Id,
                                P.Product_Description,
                                P.Product_Finish,

```

```

        P.Standard_Price,
        ISNULL(PL.Product_Line_Name, 'Uncategorized') AS
Category
        FROM PRODUCT_t P
        LEFT JOIN PRODUCT_LINE_t PL ON P.Product_Line_Id =
PL.Product_Line_Id
        WHERE P.Product_Id = @pid";

SqlCommand cmd = new SqlCommand(query, con);
cmd.Parameters.AddWithValue("@pid", productId);

con.Open();
SqlDataReader dr = cmd.ExecuteReader();

if (dr.Read())
{
    lblProductId.Text = dr["Product_Id"].ToString();
    lblProductName.Text = dr["Product_Description"].ToString();
    lblFinish.Text = dr["Product_Finish"].ToString();
    lblPrice.Text = "$" +
Convert.ToDecimal(dr["Standard_Price"]).ToString("N2");
    lblCategory.Text = dr["Category"].ToString();

    productDetail.Visible = true;
    lblResultCount.Text = "Showing details for selected product:";
}
else
{
    productDetail.Visible = false;
    lblResultCount.Text = "Product not found!";
    ShowMessage("Product not found in database!", "error");
}
dr.Close();
}
}
catch (Exception ex)
{
    ShowMessage("Error loading product details: " + ex.Message, "error");
}
}

protected void btnBack_Click(object sender, EventArgs e)
{
    RedirectToDashboard();
}

private void ShowMessage(string message, string type)
{
    lblMsg.Text = message;
    if (type == "error")
    {
        lblMsg.CssClass = "message error";
    }
    else if (type == "success")
    {
        lblMsg.CssClass = "message success";
    }
    else
    {

```

```

        lblMsg.CssClass = "message info";
    }
}
}

```

ProductCatalogUpdate.aspx

```

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

```

```

<!DOCTYPE html>
<html>
<head runat="server">
    <title>Product Catalog Update</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 20px;
            background-color: #f5f5f5;
        }
        .container {
            max-width: 1000px;
            margin: auto;
            background: white;
            padding: 20px;
            border: 1px solid #ddd;
            border-radius: 10px;
        }
        h2 {
            color: #333;
            border-bottom: 2px solid #4CAF50;
            padding-bottom: 10px;
        }
        h3 {
            color: #4CAF50;
            margin: 20px 0 10px 0;
        }
        .select-product {
            background: #f9f9f9;
            padding: 20px;
            border: 1px solid #ddd;
            margin-bottom: 20px;
            border-radius: 8px;
        }
        .select-product label {
            font-weight: bold;
            display: block;
            margin-bottom: 5px;
        }
        .select-product select {
            width: 100%;
            padding: 10px;
            margin: 10px 0;
            border: 1px solid #ccc;
            border-radius: 4px;
            font-size: 14px;
        }
        .update-form {
            margin-top: 20px;
            padding: 20px;
        }
    </style>

```

```
        border: 1px solid #ddd;
        background: #fafafa;
        border-radius: 8px;
    }
    .update-form label {
        display: inline-block;
        width: 120px;
        font-weight: bold;
    }
    .update-form input, .update-form select {
        padding: 8px;
        margin: 5px 0 15px 0;
        width: 250px;
        border: 1px solid #ccc;
        border-radius: 4px;
    }
    .btn {
        padding: 8px 20px;
        margin: 5px;
        cursor: pointer;
        border: none;
        color: white;
        border-radius: 4px;
    }
    .btn-update {
        background: #4CAF50;
    }
    .btn-update:hover {
        background: #45a049;
    }
    .btn-refresh {
        background: #2196F3;
    }
    .btn-refresh:hover {
        background: #0b7dda;
    }
    .btn-back {
        background: #D2691E;
    }
    .btn-back:hover {
        background: #8B4513;
    }
    .button-group {
        text-align: center;
        margin-top: 20px;
        padding-top: 20px;
        border-top: 1px solid #ddd;
    }
    .success {
        background: #e8f5e9;
        border: 1px solid #4CAF50;
        color: #2e7d32;
        padding: 10px;
        margin: 10px 0;
    }
    .error {
        background: #ffebee;
        border: 1px solid #f44336;
        color: #c62828;
        padding: 10px;
        margin: 10px 0;
    }
```

```

    }
    .info {
        background: #e3f2fd;
        border: 1px solid #2196F3;
        color: #1565c0;
        padding: 10px;
        margin: 10px 0;
    }
</style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h2>Product Catalog Management</h2>

            <!-- Select Product Section -->
            <div class="select-product">
                <h3>Select Product to Update</h3>
                <label>Choose Product:</label>
                <asp:DropDownList ID="ddlProducts" runat="server" AutoPostBack="true"
                    OnSelectedIndexChanged="ddlProducts_SelectedIndexChanged"
Width="100%">
                    <asp:ListItem Text="-- Select a Product --" Value="" />
                </asp:DropDownList>
                <asp:Button ID="btnRefresh" runat="server" Text="Refresh List"
                    CssClass="btn btn-refresh" OnClick="btnRefresh_Click" />
            </div>

            <!-- Update Form -->
            <div class="update-form">
                <h3>Update Product Details</h3>

                <label>Product ID:</label>
                <asp:TextBox ID="txtProductId" runat="server" ReadOnly="true"
BackColor="#f0f0f0" />
                <br />

                <label>Category:</label>
                <asp:DropDownList ID="ddlProductLine" runat="server">
                    <asp:ListItem Text="-- Select Category --" Value="" />
                    <asp:ListItem Text="Cherry Tree" Value="1" />
                    <asp:ListItem Text="Scandinavia" Value="2" />
                    <asp:ListItem Text="Country Look" Value="3" />
                </asp:DropDownList>
                <br />

                <label>Product Name:</label>
                <asp:TextBox ID="txtDescription" runat="server" />
                <br />

                <label>Finish:</label>
                <asp:TextBox ID="txtFinish" runat="server" />
                <br />

                <label>Price (<math>\$</math>):</label>
                <asp:TextBox ID="txtPrice" runat="server" />
                <br />

                <br />
                <asp:Button ID="btnUpdate" runat="server" Text="Update Product"
                    CssClass="btn btn-update" OnClick="btnUpdate_Click" />
            </div>
        </div>
    </form>

```



```

        SqlCommand command = new SqlCommand(sqlquery, connect);
        connect.Open();
        SqlDataReader dataReader = command.ExecuteReader();

        ddlProducts.Items.Clear();
        ddlProducts.Items.Add(new System.Web.UI.WebControls.ListItem("--
Select a Product --", ""));

        while (dataReader.Read())
        {
            ddlProducts.Items.Add(new System.Web.UI.WebControls.ListItem(
                dataReader["Product_Description"].ToString(),
                dataReader["Product_Id"].ToString()));
        }
        dataReader.Close();
    }
}
catch (Exception ex)
{
    ShowMessage("Error loading products: " + ex.Message, "error");
}
}

protected void ddlProducts_SelectedIndexChanged(object sender, EventArgs e)
{
    if (!string.IsNullOrEmpty(ddlProducts.SelectedValue))
    {
        int productId = Convert.ToInt32(ddlProducts.SelectedValue);
        LoadProductDetails(productId);
        ShowMessage("Product selected. You can now update the details.",
"info");
    }
    else
    {
        ClearForm();
    }
}

private void LoadProductDetails(int productId)
{
    try
    {
        using (SqlConnection connect = new SqlConnection(connectionString))
        {
            string sqlQuery = "SELECT "+
                "Product_Id, "+
                "Product_Description, "+
                "Product_Finish, "+
                "Standard_Price, "+
                "Product_Line_Id "+
                "FROM PRODUCT_t "+
                "WHERE Product_Id = @pid";

            SqlCommand command = new SqlCommand(sqlQuery, connect);
            command.Parameters.AddWithValue("@pid", productId);

            connect.Open();
            SqlDataReader dr = command.ExecuteReader();

```

```

        if (dr.Read())
        {
            txtProductId.Text = dr["Product_Id"].ToString();
            txtDescription.Text = dr["Product_Description"].ToString();
            txtFinish.Text = dr["Product_Finish"].ToString();
            txtPrice.Text = dr["Standard_Price"].ToString();

            // Set dropdown value
            string lineId = dr["Product_Line_Id"] != DBNull.Value ?
dr["Product_Line_Id"].ToString() : "";
            if (!string.IsNullOrEmpty(lineId))
                ddlProductLine.SelectedValue = lineId;
            else
                ddlProductLine.SelectedIndex = 0;
        }
        dr.Close();
    }
}
catch (Exception ex)
{
    ShowMessage("Error loading product details: " + ex.Message, "error");
}
}

protected void btnUpdate_Click(object sender, EventArgs e)
{
    if (string.IsNullOrEmpty(txtProductId.Text))
    {
        ShowMessage("Please select a product to update first!", "error");
        return;
    }

    try
    {
        using (SqlConnection con = new SqlConnection(connectionString))
        {
            string query = "UPDATE PRODUCT_t "+
                "SET Product_Line_Id = @LineId, "+
                "Product_Description = @Desc, "+
                "Product_Finish = @Finish, "+
                "Standard_Price = @Price "+
                "WHERE Product_Id = @Pid";

            using (SqlCommand cmd = new SqlCommand(query, con))
            {
                cmd.Parameters.AddWithValue("@Pid", txtProductId.Text);

                if (string.IsNullOrEmpty(ddlProductLine.SelectedValue))
                    cmd.Parameters.AddWithValue("@LineId", DBNull.Value);
                else
                    cmd.Parameters.AddWithValue("@LineId",
ddlProductLine.SelectedValue);

                cmd.Parameters.AddWithValue("@Desc", txtDescription.Text);
                cmd.Parameters.AddWithValue("@Finish", txtFinish.Text);

                decimal price;
                if (decimal.TryParse(txtPrice.Text, out price))
                    cmd.Parameters.AddWithValue("@Price", price);
            }
        }
    }
}

```



```

        lblMsg.CssClass = "error";
    }
    else
    {
        lblMsg.CssClass = "info";
    }
}
}
}
}
}

```

PaymentProvision.aspx

```

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

```

```

<!DOCTYPE html>
<html>
<head runat="server">
<title>Payment Provision</title>

<style>

form{
width:420px;
margin:40px auto;
padding:25px;
border:1px solid #ccc;
background-color:white;
}

h2{
text-align:center;
}

input{
width:200px;
padding:5px;
}

button{
padding:6px 10px;
margin-right:5px;
}

</style>

</head>

<body>

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

<h2>Payment Provision</h2>

Order ID:<br />
<asp:TextBox ID="txtOrderId" runat="server"></asp:TextBox>

<br /><br />

```

```

Account Number:<br />
<asp:TextBox ID="txtAccount" runat="server"></asp:TextBox>

<br /><br />

Payment Method:<br />

<asp:Button ID="btnCash"
runat="server"
Text="Cash"
OnClick="btnCash_Click" />

<asp:Button ID="btnOnline"
runat="server"
Text="Online"
OnClick="btnOnline_Click" />

<asp:Button ID="btnOthers"
runat="server"
Text="Others"
OnClick="btnOthers_Click" />

<br /><br />

<asp:Button ID="btnSubmit"
runat="server"
Text="Submit Payment"
OnClick="btnSubmit_Click" />

<br /><br />

<asp:Label ID="lblOutput"
runat="server"
ForeColor="Green"></asp:Label>

</form>

</body>
</html>

```

PaymentProvision.aspx.cs

```

using System;

namespace PVFC
{
    public partial class PaymentProvision : BasePage
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            if (!IsPostBack)
            {
                if (Session["OrderID"] != null)
                {
                    txtOrderId.Text = Session["OrderID"].ToString();
                }
            }
        }
    }
}

```

```

protected void btnSubmit_Click(object sender, EventArgs e)
{
    lblOutput.Text = "Payment successful for Order ID: " + txtOrderId.Text;

    Session["OrderID"] = null;
    Session["SelectedProduct"] = null;

    RedirectToDashboard();
}

protected void btnCash_Click(object sender, EventArgs e)
{
    lblOutput.Text = "Cash selected";
}

protected void btnOnline_Click(object sender, EventArgs e)
{
    lblOutput.Text = "Online selected";
}

protected void btnOthers_Click(object sender, EventArgs e)
{
    lblOutput.Text = "Other payment selected";
}
}
}

```

BasePage.cs Class

```

using System;
using System.Web.UI;

namespace PVFC
{
    public class BasePage : Page
    {
        protected void CheckAccess(string[] allowedRoles)
        {
            if (Session["Role"] == null)
            {
                Response.Redirect("Login.aspx");
                return;
            }

            string role = Session["Role"].ToString();

            bool allowed = false;

            foreach (string r in allowedRoles)
            {
                if (r == role)
                {
                    allowed = true;
                    break;
                }
            }
        }
    }
}

```



```

th { background: #4CAF50; color: white; padding: 8px; text-align: left; }
td { padding: 8px; border: 1px solid #ddd; }
.summary { background: #e8f5e9; padding: 10px; text-align: right; margin: 15px
0; }
.payment-box { background: #f9f9f9; padding: 15px; border: 1px solid #ddd;
margin: 15px 0; border-radius: 5px; }
.payment-box label { display: inline-block; width: 120px; font-weight: bold; }
.payment-box input, .payment-box select { padding: 6px; margin: 5px 0; width:
200px; }
.btn { padding: 8px 20px; margin: 5px; cursor: pointer; border: none; border-
radius: 3px; color: white; }
.btn-confirm { background: #4CAF50; font-size: 16px; }
.btn-back { background: #666; }
.btn-pay { background: #2196F3; }
.confirm-box { background: #e3f2fd; padding: 15px; text-align: center; margin:
15px 0; border: 1px solid #2196F3; border-radius: 5px; }
.success { background: #e8f5e9; border: 1px solid #4CAF50; color: #2e7d32;
padding: 8px; }
.error { background: #ffebee; border: 1px solid #f44336; color: #c62828;
padding: 8px; }
.button-group { text-align: center; margin-top: 20px; padding-top: 20px; border-
top: 1px solid #ddd; }
</style>
</head>
<body>
<form id="form1" runat="server">
<div class="container">
<h2>Checkout & Payment</h2>

<h3>Order Summary</h3>
<asp:GridView ID="gvOrder" runat="server" AutoGenerateColumns="False"
Width="100%">
<Columns>
<asp:BoundField DataField="Product_Name" HeaderText="Product" />
<asp:BoundField DataField="Price" HeaderText="Price"
DataFormatString="{0:C2}" />
<asp:BoundField DataField="Quantity" HeaderText="Qty" />
<asp:BoundField DataField="Total" HeaderText="Total"
DataFormatString="{0:C2}" />
</Columns>
<HeaderStyle BackColor="#4CAF50" ForeColor="White" />
</asp:GridView>

<div class="summary">
<strong>Grand Total: <asp:Label ID="lblTotal" runat="server"
Text="$0.00" /></strong>
</div>

<!-- Payment Section -->
<div class="payment-box" id="paymentBox" runat="server" visible="true">
<h3>Payment Details</h3>
<label>Payment Method:</label>
<asp:DropDownList ID="ddlPaymentMethod" runat="server">
<asp:ListItem Text="-- Select Payment Method --" Value="" />
<asp:ListItem Text="Cash on Delivery" Value="Cash" />
<asp:ListItem Text="Credit Card" Value="Credit Card" />
<asp:ListItem Text="Debit Card" Value="Debit Card" />
<asp:ListItem Text="Online Banking" Value="Online Banking" />
</asp:DropDownList>
<br />

```

```

        <label>Card/Account Number:</label>
        <asp:TextBox ID="txtAccountNo" runat="server" placeholder="Enter
card/account number" />
        <br />

        <label>Name on Card:</label>
        <asp:TextBox ID="txtCardName" runat="server" placeholder="Enter name" />
        <br />

        <div id="cardDetails" runat="server">
            <label>Expiry Date:</label>
            <asp:TextBox ID="txtExpiry" runat="server" placeholder="MM/YY" />
            <br />

            <label>CVV:</label>
            <asp:TextBox ID="txtCVV" runat="server" TextMode="Password"
placeholder="123" Width="80px" />
            <br />
        </div>
    </div>

    <!-- Confirmation Box -->
    <div id="confirmBox" runat="server" class="confirm-box" visible="false">
        <h3>Order Confirmed & Payment Successful!</h3>
        <p>Order ID: <strong><asp:Label ID="lblOrderId" runat="server"
/></strong></p>
        <p>Payment Method: <strong><asp:Label ID="lblPaymentMethod"
runat="server" /></strong></p>
        <p>Total Amount: <strong><asp:Label ID="lblPaidAmount" runat="server"
/></strong></p>
        <p>Thank you for your purchase!</p>
    </div>

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

    <div class="button-group">
        <asp:Button ID="btnConfirm" runat="server" Text="Confirm Order & Pay"
CssClass="btn btn-confirm" OnClick="btnConfirm_Click" />
        <asp:Button ID="btnBack" runat="server" Text="Back to Cart"
CssClass="btn btn-back" OnClick="btnBack_Click" />
        <asp:Button ID="btnContinue" runat="server" Text="Continue Shopping"
CssClass="btn btn-back" OnClick="btnContinue_Click" Visible="false" />
    </div>
</form>
</body>
</html>

```

Checkout.aspx.cs

```

using System;
using System.Configuration;
using System.Data;
using System.Data.SqlClient;

namespace PVFC
{
    public partial class Checkout : BasePage
    {
        string connStr =
ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

```

```

protected void Page_Load(object sender, EventArgs e)
{
    // Security check - only logged in users can access checkout
    if (Session["UserID"] == null)
    {
        Response.Redirect("Login.aspx");
        return;
    }

    if (!IsPostBack)
    {
        LoadOrder();
    }
}

private void LoadOrder()
{
    DataTable cart = Session["CheckoutCart"] as DataTable;
    if (cart == null || cart.Rows.Count == 0)
    {
        Response.Redirect("CustomerDashboard.aspx");
        return;
    }

    DataTable display = new DataTable();
    display.Columns.Add("Product_Name");
    display.Columns.Add("Price");
    display.Columns.Add("Quantity");
    display.Columns.Add("Total");

    decimal total = 0;
    foreach (DataRow row in cart.Rows)
    {
        display.Rows.Add(row["Product_Name"], row["Price"], row["Quantity"],
row["Total"]);
        total += Convert.ToDecimal(row["Total"]);
    }

    gvOrder.DataSource = display;
    gvOrder.DataBind();
    lblTotal.Text = "$" + total.ToString("N2");
}

protected void btnConfirm_Click(object sender, EventArgs e)
{
    DataTable cart = Session["CheckoutCart"] as DataTable;
    if (cart == null || cart.Rows.Count == 0)
    {
        ShowMessage("No items to order!", "error");
        return;
    }

    // Validate payment
    if (string.IsNullOrEmpty(ddlPaymentMethod.SelectedValue))
    {
        ShowMessage("Please select a payment method!", "error");
        return;
    }

    if (string.IsNullOrEmpty(txtAccountNo.Text))
    {

```

```

        ShowMessage("Please enter account/card number!", "error");
        return;
    }

    if (Session["UserID"] == null)
    {
        Response.Redirect("Login.aspx");
        return;
    }

    try
    {
        using (SqlConnection con = new SqlConnection(connStr))
        {
            con.Open();
            SqlTransaction trans = con.BeginTransaction();

            try
            {
                int userId = Convert.ToInt32(Session["UserID"]);

                // Insert order
                SqlCommand cmdOrder = new SqlCommand(
                    "INSERT INTO Orders_t (UserID, Order_Date) OUTPUT
INSERTED.Order_Id VALUES (@uid, GETDATE())",
                    con, trans);
                cmdOrder.Parameters.AddWithValue("@uid", userId);
                int orderId = Convert.ToInt32(cmdOrder.ExecuteScalar());

                // Insert order items
                foreach (DataRow row in cart.Rows)
                {
                    SqlCommand cmdItem = new SqlCommand(
                        "INSERT INTO Order_line_t (Order_Id, Product_Id,
Ordered_Quantity) VALUES (@oid, @pid, @qty)",
                        con, trans);
                    cmdItem.Parameters.AddWithValue("@oid", orderId);
                    cmdItem.Parameters.AddWithValue("@pid", row["Product_Id"]);
                    cmdItem.Parameters.AddWithValue("@qty", row["Quantity"]);
                    cmdItem.ExecuteNonQuery();
                }

                trans.Commit();

                // Show confirmation with payment details
                lblOrderId.Text = orderId.ToString();
                lblPaymentMethod.Text = ddlPaymentMethod.SelectedItem.Text;
                lblPaidAmount.Text = lblTotal.Text;

                paymentBox.Visible = false;
                confirmBox.Visible = true;
                btnConfirm.Visible = false;
                btnBack.Visible = false;
                btnContinue.Visible = true;

                // Clear carts
                Session["Cart"] = null;
                Session["CheckoutCart"] = null;

                ShowMessage("Order placed successfully! Order ID: " + orderId,
"success");
            }
            catch { }
        }
    }
}

```

```

        }
        catch
        {
            trans.Rollback();
            throw;
        }
    }
}
catch (Exception ex)
{
    ShowMessage("Error: " + ex.Message, "error");
}
}

protected void btnBack_Click(object sender, EventArgs e)
{
    Response.Redirect("CustomerDashboard.aspx");
}

protected void btnContinue_Click(object sender, EventArgs e)
{
    Response.Redirect("CustomerDashboard.aspx");
}

private void ShowMessage(string msg, string type)
{
    lblMsg.Text = msg;
    lblMsg.CssClass = type;
}
}
}
}

```

Recommendation.aspx

```

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

```

Recommendation.aspx.cs

```

using System;
using System.Configuration;
using System.Data.SqlClient;
using System.Collections.Generic;
using System.Web.Script.Serialization;

namespace PVFC
{
    public partial class Recommendation : System.Web.UI.Page
    {
        string connStr =
ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

        protected void Page_Load(object sender, EventArgs e)
        {
            Response.Clear();
            Response.ContentType = "application/json";

```

```

List<int> recs = new List<int>();

try
{
    int productId = 0;

    if (!string.IsNullOrEmpty(Request.QueryString["pid"]))
        productId = Convert.ToInt32(Request.QueryString["pid"]);

    using (SqlConnection con = new SqlConnection(connStr))
    {
        con.Open();

        string query = @"
SELECT TOP 5 ol2.Product_Id
FROM Order_line_t ol1
JOIN Order_line_t ol2
ON ol1.Order_Id = ol2.Order_Id
WHERE ol1.Product_Id = @pid
AND ol2.Product_Id != @pid
GROUP BY ol2.Product_Id
ORDER BY COUNT(*) DESC";

        SqlCommand cmd = new SqlCommand(query, con);
        cmd.Parameters.AddWithValue("@pid", productId);

        SqlDataReader dr = cmd.ExecuteReader();

        while (dr.Read())
        {
            recs.Add(Convert.ToInt32(dr["Product_Id"]));
        }
    }
}
catch
{
    // return empty list instead of crashing
}

JavaScriptSerializer js = new JavaScriptSerializer();
Response.Write(js.Serialize(recs));
Response.End();
}
}
}

```

DemandForecast.aspx

```

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

```

```

<!DOCTYPE html>
<html>
<head runat="server">
    <title>Demand Forecast</title>

    <style>
        body { font-family: Arial; background: #f5f5f5; }
        .container {
            width: 80%;
            margin: auto;

```

```

        background: white;
        padding: 20px;
        margin-top: 30px;
        border: 1px solid #ddd;
    }
    h2 { color: #333; }
    table { width: 100%; border-collapse: collapse; }
    th {
        background: #4CAF50;
        color: white;
        padding: 10px;
    }
    td {
        padding: 8px;
        border: 1px solid #ddd;
    }
    .info {
        background: #e3f2fd;
        padding: 10px;
        margin-bottom: 15px;
        border: 1px solid #2196F3;
    }
</style>
</head>

<body>
<form runat="server">

<div class="container">

    <h2>Demand Forecast</h2>

    <div class="info">
        This report shows high-demand products based on previous orders.
    </div>

    <asp:GridView ID="gvForecast" runat="server" AutoGenerateColumns="False">
        <Columns>
            <asp:BoundField DataField="Product_Id" HeaderText="Product ID" />
            <asp:BoundField DataField="Product_Description" HeaderText="Product Name" />
            <asp:BoundField DataField="DemandScore" HeaderText="Demand Score" />
            <asp:BoundField DataField="Action" HeaderText="Manager Decision" />
        </Columns>
    </asp:GridView>

    <br />

    <asp:Button ID="btnBack" runat="server" Text="Back To DashBoard"
OnClick="btnBack_Click" />

</div>

</form>
</body>
</html>

```

DemandForecast.aspx.cs

```

using System;
using System.Configuration;
using System.Data;

```

```

using System.Data.SqlClient;

namespace PVFC
{
    public partial class DemandForecast : BasePage
    {
        string connectionString =
ConfigurationManager.ConnectionStrings["PVFCConnectionString"].ConnectionString;

        protected void Page_Load(object sender, EventArgs e)
        {
            CheckAccess(new string[] { "Admin", "Manager" });

            if (!IsPostBack)
            {
                LoadForecast();
            }
        }

        private void LoadForecast()
        {
            using (SqlConnection connect = new SqlConnection(connectionString))
            {
                string sqlquery = "SELECT " +
                "p.Product_Id, " +
                "p.Product_Description, " +
                "COUNT(*) AS DemandScore, " +

                "CASE " +
                "WHEN COUNT(*) >= 20 THEN 'Urgent Restock' " +
                "WHEN COUNT(*) >= 10 THEN 'Increase Stock' " +
                "WHEN COUNT(*) >= 5 THEN 'Moderate Demand' " +
                "ELSE 'Low Demand' " +
                "END AS Action " +

                "FROM Order_line_t ol " +
                "JOIN PRODUCT_t p ON ol.Product_Id = p.Product_Id " +

                "GROUP BY p.Product_Id, p.Product_Description " +
                "ORDER BY DemandScore DESC";
                SqlDataAdapter dataAdapter = new SqlDataAdapter(sqlquery, connect);
                DataTable dataTable = new DataTable();
                dataAdapter.Fill(dataTable);

                gvForecast.DataSource = dataTable;
                gvForecast.DataBind();
            }
        }

        protected void btnBack_Click(object sender, EventArgs e)
        {
            RedirectToDashboard();
        }
    }
}

```