

# LAB 7

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*Default.aspx*

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```
<%@ Page Title="PVFC Home" Language="vb" AutoEventWireup="false"
CodeBehind="Default.aspx.vb" Inherits="pvfc_website._Default" %>

<!DOCTYPE html>
<html>
<head runat="server">
  <title>PVFC Home</title>
  <link rel="stylesheet" href="pvfcstyles.css">
</head>
<body>
  <form id="form1" runat="server">
    <div class="navbar">
      <!-- EVERYONE can see these -->
      <a href="Default.aspx">Home</a>
      <a href="productSearch.aspx">Products</a>

      <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
      <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
      <a href="catalog.aspx">Manage Catalog</a>
      <% End If %>

      <!-- ONLY CUSTOMERS (2) can see these -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
      <a href="updateCustomer.aspx">Update Profile</a>
      <a href="payment.aspx">Cart & Checkout</a>
      <% End If %>

      <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
      <% If Session("RoleId") Is Nothing Then %>
      <a href="register.aspx">Register</a>
      <a href="login.aspx">Login</a>
      <% Else %>
      <a href="login.aspx">Logout</a>
      <% End If %>

      <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>
      <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
      <% End If %>
    </div>

    <div class="main-content container">
      <h1>Pine Valley Furniture Company</h1>
      <p style="text-align: center;">Welcome to our online store. Please
navigate using the menu above.</p>
    </div>
  </form>
</body>
</html>
```

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

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*Default.aspx.vb*

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```
Public Class _Default
    Inherits System.Web.UI.Page

    Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
        Handles Me.Load

    End Sub

End Class
```

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*login.aspx*

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```
<%@ Page Language="vb" AutoEventWireup="false" CodeBehind="login.aspx.vb"
Inherits="pvfc_website.login" %>

<!DOCTYPE html>
<html lang="en">
<head runat="server">
    <meta charset="UTF-8">
    <title>System Login</title>
    <link rel="stylesheet" href="pvfcstyles.css">
</head>
<body>
    <form id="form1" runat="server">
        <div class="navbar">
            <!-- EVERYONE can see these -->
            <a href="Default.aspx">Home</a>
            <a href="productSearch.aspx">Products</a>

            <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
            <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
            <a href="catalog.aspx">Manage Catalog</a>
            <% End If %>

            <!-- ONLY CUSTOMERS (2) can see these -->
            <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
            <a href="updateCustomer.aspx">Update Profile</a>
            <a href="payment.aspx">Cart & Checkout</a>
            <% End If %>

            <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
            <% If Session("RoleId") Is Nothing Then %>
            <a href="register.aspx">Register</a>
            <a href="login.aspx">Login</a>
```

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        <% Else %>
        <a href="login.aspx">Logout</a>
        <% End If %>
    </div>

    <div class="page-wrapper" style="display: flex; align-items: flex-start;
justify-content: center;">
        <div class="login-container">
            <h1>System Login</h1>

            <asp:Label ID="lblMessage" runat="server" Font-Bold="true"
ForeColor="Red" Style="display: block; margin-bottom: 15px;"></asp:Label>

            <div style="text-align: left;">
                <label>Username</label>
                <asp:TextBox ID="emailTB" runat="server"
placeholder="you@email.com"></asp:TextBox>

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

                <asp:Button ID="btnlogin" runat="server" Text="Log In"
Style="width: 100%; margin-top: 15px;" />
            </div>
        </div>

        <div style="width: 220px; background: #fff; border: 1px solid
#e5e7eb; border-radius: 10px; padding: 1.2rem; font-family: sans-serif; flex-
shrink: 0; margin-top: 20px; margin-left: 40px;">
            <p style="font-size: 11px; font-weight: bold; color: #888; text-
transform: uppercase; letter-spacing: 0.05em; margin: 0 0 1rem 0;">Test
Credentials</p>

            <div style="margin-bottom: 1rem; padding-bottom: 1rem; border-
bottom: 1px solid #f0f0f0;">
                <span style="font-size: 11px; background: #dbeafe; color:
#1d4ed8; padding: 2px 8px; border-radius: 4px; font-weight: bold;">Admin</span>
                <p style="font-size: 11px; color: #888; margin: 8px 0
2px;">Username</p>
                <p style="font-size: 12px; font-family: monospace; margin: 0
0 6px;">admin@pvfc.com</p>
                <p style="font-size: 11px; color: #888; margin: 0 0
2px;">Password</p>
                <p style="font-size: 12px; font-family: monospace; margin:
0;">admin123</p>
            </div>

            <div style="margin-bottom: 1rem; padding-bottom: 1rem; border-
bottom: 1px solid #f0f0f0;">
                <span style="font-size: 11px; background: #dcfce7; color:
#15803d; padding: 2px 8px; border-radius: 4px; font-weight:
bold;">Employee</span>
                <p style="font-size: 11px; color: #888; margin: 8px 0
2px;">Username</p>
                <p style="font-size: 12px; font-family: monospace; margin: 0
0 6px;">employee@pvfc.com</p>
                <p style="font-size: 11px; color: #888; margin: 0 0
2px;">Password</p>
                <p style="font-size: 12px; font-family: monospace; margin:
0;">emp123</p>
            </div>

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        <div>
            <span style="font-size: 11px; background: #fef9c3; color:
#854d0e; padding: 2px 8px; border-radius: 4px; font-weight:
bold;">Customer</span>
            <p style="font-size: 11px; color: #888; margin: 8px 0 0;
line-height: 1.5;">Register first via the register page to get a customer
account.</p>
        </div>
    </div>
</div>
</form>
</body>
</html>

```

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*login.aspx.vb*

---

```

Imports System.Data.SqlClient
Imports System.Web.Configuration

Public Class login
    Inherits System.Web.UI.Page

    ' LOGOUT MECHANISM
    Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Load
        If Not IsPostBack Then
            ' log out = destroy session
            If Session("RoleId") IsNot Nothing Then
                Session.Clear()
                Session.Abandon()
                lblMessage.ForeColor = Drawing.Color.Green
                lblMessage.Text = "You have been successfully logged out."
            End If
        End If
    End Sub

    ' AUTHENTICATION MECHANISM
    Protected Sub btnlogin_Click(sender As Object, e As EventArgs) Handles
btnlogin.Click
        Dim constr As String =
WebConfigurationManager.ConnectionStrings("PVFCConString").ConnectionString

        ' retrieve both RoleId (for RBAC) and Customer_Id (to link to their
profile)
        Dim query As String = "SELECT RoleId, Customer_Id FROM Users WHERE
Username = @Username AND Password = @Password"

        Try
            Using con As New SqlConnection(constr)
                Using cmd As New SqlCommand(query, con)
                    cmd.Parameters.AddWithValue("@Username", emailTB.Text.Trim())
                    cmd.Parameters.AddWithValue("@Password", pwdTB.Text)

                    con.Open()

                    Using dr As SqlDataReader = cmd.ExecuteReader()
                        If dr.Read() Then
                            ' Success = Establish RBAC Session
                            Dim role As Integer = Convert.ToInt32(dr("RoleId"))

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        Session("RoleId") = role

        ' If they are a Customer, save their Customer_Id to
the session too
        If Not IsDBNull(dr("Customer_Id")) Then
            Session("CustomerId") =
Convert.ToInt32(dr("Customer_Id"))
        End If

        ' Route based on role
        If role = 1 Then
            ' Admin
            Response.Redirect("adminDashboard.aspx", False)
        ElseIf role = 2 Then
            ' Customer
            Response.Redirect("Default.aspx", False)
        ElseIf role = 3 Then
            ' Employee
            Response.Redirect("catalog.aspx", False)
        Else
            lblMessage.Text = "Role Not Found"
        End If
    Else
        ' Invalid credentials
        lblMessage.Text = "Cannot login. Invalid
credentials."
    End If
End Using
End Using
End Using
Catch ex As Exception
    lblMessage.Text = "An error occurred: " & ex.Message
End Try
End Sub

End Class

```

---

*register.aspx*

---

```

<%@ Page Title="Register Page" Language="vb" AutoEventWireup="false"
CodeBehind="register.aspx.vb" Inherits="pvfc_website.register" %>

```

```

<!DOCTYPE html>
<html lang="en">
<head runat="server">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>New Customer Registration</title>
    <link rel="stylesheet" href="pvfcstyles.css">
</head>
<body>
    <form id="form1" runat="server">

        <div class="navbar">
            <!-- EVERYONE can see these -->
            <a href="Default.aspx">Home</a>

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        <a href="productSearch.aspx">Products</a>

        <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
        <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
        <a href="catalog.aspx">Manage Catalog</a>
        <% End If %>

        <!-- ONLY CUSTOMERS (2) can see these -->
        <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
        <a href="updateCustomer.aspx">Update Profile</a>
        <a href="payment.aspx">Cart & Checkout</a>
        <% End If %>

        <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
        <% If Session("RoleId") Is Nothing Then %>
        <a href="register.aspx">Register</a>
        <a href="login.aspx">Login</a>
        <% Else %>
        <a href="login.aspx">Logout</a>
        <% End If %>

        <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
        <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>
        <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
        <% End If %>
    </div>

    <div class="page-wrapper">
        <div class="login-container">

            <h1>Create Account</h1>
            <p style="color: #666; font-size: 14px; margin-bottom: 20px;">
                Join PVFC today
            </p>

            <asp:Label ID="lblMessage" runat="server"
                Font-Bold="true" Style="display: block; margin-bottom:
15px;">
            </asp:Label>

            <div style="text-align: left;">

                <label>Full Name</label>
                <asp:TextBox ID="txtName" runat="server"
                    placeholder="Full Name">
                </asp:TextBox>

                <label>Address</label>
                <asp:TextBox ID="txtAddress" runat="server"
                    placeholder="Street Address">
                </asp:TextBox>

                <label>City</label>
                <asp:TextBox ID="txtCity" runat="server"
                    placeholder="City">
                </asp:TextBox>

                <label>State</label>

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

        <label>Postal Code</label>
        <asp:TextBox ID="txtPostalCode" runat="server"
            placeholder="e.g. 32601-2871">
        </asp:TextBox>

        <label>Email Address (Username)</label>
        <asp:TextBox ID="txtEmail" runat="server"
placeholder="example@email.com" TextMode="Email"></asp:TextBox>

        <label>Password</label>
        <asp:TextBox ID="txtPassword" runat="server"
placeholder="Create a password" TextMode="Password"></asp:TextBox>

    </div>

    <asp:Button ID="btnRegister" runat="server"
        Text="Sign Up" Style="width: 100%;" />

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

```

---

*register.aspx.vb*

---

```

Imports System.Data.SqlClient
Imports System.Web.Configuration

Public Class register
    Inherits System.Web.UI.Page
    Protected Sub btnRegister_Click(sender As Object, e As EventArgs) Handles
btnRegister.Click
        Dim constr As String =
WebConfigurationManager.ConnectionStrings("PVFCCConnString").ConnectionString
        Dim conn As New SqlConnection(constr)

        ' We use a SQL Transaction to ensure BOTH inserts succeed.
        ' If one fails, it rolls back both, preventing "orphan" data.
        Dim transaction As SqlTransaction = Nothing
        Dim cmdCustomer As New SqlCommand()
        Dim cmdUser As New SqlCommand()

        Try
            conn.Open()
            transaction = conn.BeginTransaction()

            cmdCustomer.Connection = conn
            cmdCustomer.Transaction = transaction

            ' INSERT The Customer Profile

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        cmdCustomer.CommandText = "INSERT INTO CUSTOMER_t (Customer_Name,
Customer_Address, Customer_City, Customer_State, Postal_Code) " &
        "VALUES (@Name, @Address, @City, @State,
@PostalCode); " &
        "SELECT SCOPE_IDENTITY();" ' Get the ID of
the new customer record just created

        cmdCustomer.Parameters.AddWithValue("@Name", txtName.Text)
        cmdCustomer.Parameters.AddWithValue("@Address", txtAddress.Text)
        cmdCustomer.Parameters.AddWithValue("@City", txtCity.Text)
        cmdCustomer.Parameters.AddWithValue("@State", txtState.Text)
        cmdCustomer.Parameters.AddWithValue("@PostalCode",
txtPostalCode.Text)

        ' ExecuteScalar returns the ID generated by SCOPE_IDENTITY()
        Dim newCustomerId As Integer =
Convert.ToInt32(cmdCustomer.ExecuteScalar())

        ' INSERT The Login Credentials
        cmdUser.Connection = conn
        cmdUser.Transaction = transaction

        cmdUser.CommandText = "INSERT INTO Users (Username, Password, RoleId,
Customer_Id) " &
        "VALUES (@Username, @Password, 2, @CustId)" ' Role
2 = Customer

        cmdUser.Parameters.AddWithValue("@Username", txtEmail.Text.Trim())
        cmdUser.Parameters.AddWithValue("@Password", txtPassword.Text)
        cmdUser.Parameters.AddWithValue("@CustId", newCustomerId) ' Link to
the profile we just made

        cmdUser.ExecuteNonQuery()

        ' If we made it here without errors, save everything to the database
        transaction.Commit()

        lblMessage.ForeColor = Drawing.Color.Green
        lblMessage.Text = "Registration successful! You can now log in."

        ' Clear the form
        txtName.Text = ""
        txtEmail.Text = ""
        If txtAddress.Text.Trim().Length > 100 Then
            lblMessage.ForeColor = Drawing.Color.Red
            lblMessage.Text = "Address is too long. Please shorten it."
            Return
        End If

Catch ex As Exception
    ' If anything went wrong (like a duplicate email), undo the whole
thing
    If transaction IsNot Nothing Then
        transaction.Rollback()
    End If
    lblMessage.ForeColor = Drawing.Color.Red
    lblMessage.Text = "Error during registration: " & ex.Message

Finally
    If conn.State = ConnectionState.Open Then conn.Close()
    conn.Dispose()
    cmdCustomer.Dispose()
    cmdUser.Dispose()

```

```
End Try
End Sub
```

```
End Class
```

---

*adminDashboard.aspx*

---

```
<%@ Page Language="vb" AutoEventWireup="false"
CodeBehind="adminDashboard.aspx.vb" Inherits="pvfc_website.adminDashboard" %>

<!DOCTYPE html>
<html lang="en">
<head runat="server">
  <meta charset="UTF-8">
  <title>Admin Dashboard</title>
  <link rel="stylesheet" href="pvfcstyles.css">
</head>
<body>
  <form id="form1" runat="server">

    <div class="navbar">

      <!-- EVERYONE can see these -->
      <a href="Default.aspx">Home</a>
      <a href="productSearch.aspx">Products</a>

      <!-- Visible to Admins (1) and Employees (3) -->
      <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
      <a href="catalog.aspx">Manage Catalog</a>
      <% End If %>

      <!-- Visible ONLY to Customers (2) -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
      <a href="updateCustomer.aspx">Update Profile</a>
      <a href="payment.aspx">Cart & Checkout</a>
      <% End If %>

      <!-- Login/Logout Toggle -->
      <% If Session("RoleId") Is Nothing Then %>
      <a href="register.aspx">Register</a>
      <a href="login.aspx">Login</a>
      <% Else %>
      <a href="login.aspx">Logout</a>
      <% End If %>

      <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>
      <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
      <% End If %>
    </div>

    <!-- DASHBOARD CONTENT -->
```

```

<div class="page-wrapper">
  <div class="main-content container" style="margin-top: 50px;">
    <h1>Admin Dashboard</h1>
    <p>Welcome to the PVFC Control Center, Administrator.</p>
    <hr style="margin: 20px 0;" />

    <h3>Quick Actions</h3>
    <ul style="list-style-type: none; padding: 0;">
      <li style="margin-bottom: 10px;">
        <a href="catalog.aspx" class="btn" style="text-decoration: none; display: inline-block; padding: 10px 20px; background-color: #2c3e50; color: white; border-radius: 4px;">Update Product Catalog & Inventory</a>
      </li>
    </ul>
  </div>
</div>

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

```

---

*admiDashboard.aspx.vb*

---

```

Public Class adminDashboard
  Inherits System.Web.UI.Page

  Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
    Handles Me.Load
    ' --- THE STRICT GATEKEEPER to prevent unauthorized access ---
    ' Check if session is empty (Guest) OR if the role is anything OTHER than
    1 (Admin)
    If Session("RoleId") Is Nothing OrElse Convert.ToInt32(Session("RoleId"))
    <> 1 Then
      ' Kick unauthorized users out to the login page
      Response.Redirect("login.aspx", False)
      Exit Sub
    End If

  End Sub

End Class

```

---

*catalog.aspx*

---

```

<%@ Page Title="Admin Panel - Catalog Update" Language="vb"
AutoEventWireup="false" CodeBehind="catalog.aspx.vb"
Inherits="pvfc_website.catalog" %>

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

```

```

<link rel="stylesheet" href="pvfcstyles.css">
</head>
<body>
  <form id="form1" runat="server">

    <div class="navbar">
      <!-- EVERYONE can see these -->
      <a href="Default.aspx">Home</a>
      <a href="productSearch.aspx">Products</a>

      <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
      <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
      <a href="catalog.aspx">Manage Catalog</a>
      <% End If %>

      <!-- ONLY CUSTOMERS (2) can see these -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
      <a href="updateCustomer.aspx">Update Profile</a>
      <a href="payment.aspx">Cart & Checkout</a>
      <% End If %>

      <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
      <% If Session("RoleId") Is Nothing Then %>
      <a href="register.aspx">Register</a>
      <a href="login.aspx">Login</a>
      <% Else %>
      <a href="login.aspx">Logout</a>
      <% End If %>

      <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>
      <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
      <% End If %>
    </div>

    <div class="main-content container">
      <h2>Product Update Catalogue</h2>

      <asp:Label ID="lblMessage" runat="server" Font-Bold="true"
        Style="display: block; margin-bottom: 15px;">
      </asp:Label>

      <!--
        DataKeyNames: stores Product_Id per row so it is
                      not visible or editable on the page
        OnRowCommand: fires when any button inside the grid is clicked
      --%>
      <asp:GridView ID="gvCatalog" runat="server"
        AutoGenerateColumns="False"
        Width="100%"
        DataKeyNames="Product_Id"
        OnRowCommand="gvCatalog_RowCommand"
        BorderColor="#dddddd"
        BorderStyle="Solid"
        BorderWidth="1px"
        CellPadding="8">

```

```

        Bold="true" />
        <HeaderStyle BackColor="#2c3e50" ForeColor="White" Font-
        <AlternatingRowStyle BackColor="#f8f9fa" />
        <Columns>
            <asp:BoundField DataField="Product_Id"
                HeaderText="ID"
                ReadOnly="True" />
            <asp:TemplateField HeaderText="Description">
                <ItemTemplate>
                    <asp:TextBox ID="txtDesc" runat="server"
                        Text='<%# Bind("Product_Description") %>'
                        Width="95%">
                    </asp:TextBox>
                </ItemTemplate>
            </asp:TemplateField>
            <asp:TemplateField HeaderText="Finish">
                <ItemTemplate>
                    <asp:TextBox ID="txtFinish" runat="server"
                        Text='<%# Bind("Product_Finish") %>'
                        Width="95%">
                    </asp:TextBox>
                </ItemTemplate>
            </asp:TemplateField>
            <asp:TemplateField HeaderText="Standard Price">
                <ItemTemplate>
                    <asp:TextBox ID="txtPrice" runat="server"
                        Text='<%# Bind("Standard_Price") %>'
                        Width="80px">
                    </asp:TextBox>
                </ItemTemplate>
            </asp:TemplateField>
            <asp:TemplateField HeaderText="Stock Quantity">
                <ItemTemplate>
                    <asp:TextBox ID="txtQty" runat="server"
                        Text='<%# Bind("Product_Quantity") %>'
                        Width="80px">
                    </asp:TextBox>
                </ItemTemplate>
            </asp:TemplateField>
            <asp:TemplateField HeaderText="Action">
                <ItemTemplate>
                    <asp:Button ID="btnUpdate" runat="server"
                        Text="Update"
                        CommandName="UpdateRow"
                        CommandArgument='<%# Container.DataItemIndex %>'
                    />
                </ItemTemplate>
            </asp:TemplateField>
        </Columns>
    </asp:GridView>
</div>
</form>
</body>
</html>

```

---

*catalog.aspx.vb*

---

```
Imports System.Data
Imports System.Data.SqlClient
Imports System.Web.Configuration

Public Class catalog
    Inherits System.Web.UI.Page

    ' Page Load - bind the GridView only on first load
    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load

        ' 1. Check the URL. If the user is browsing the Lab 5 folder, SKIP the
        security check completely!
        If Not Request.RawUrl.ToLower().Contains("/lab5/") Then

            ' --- THE GATEKEEPER to prevent unauthorized access ---
            ' Check if session is empty (Guest) OR if the role is Customer (Role
            2)
            If Session("RoleId") Is Nothing OrElse
            Convert.ToInt32(Session("RoleId")) = 2 Then
                ' Kick them out to the login page
                Response.Redirect("login.aspx", False)
                Exit Sub ' Stop executing the rest of the page load
            End If

            End If

            ' Only load the catalog if they passed the security check
            If Not IsPostBack Then
                BindCatalog()
            End If
        End Sub

        ' BindCatalog - fetch all products and display in the GridView
        Private Sub BindCatalog()

            Dim connectionString As String =
            WebConfigurationManager.ConnectionStrings("PVFCConString").ConnectionString

            Dim selectSQL As String =
                "SELECT Product_Id, Product_Description, Product_Finish, " &
                "      Standard_Price, Product_Quantity " &
                "FROM Product_T"

            Dim con As New SqlConnection(connectionString)
            Dim cmd As New SqlCommand(selectSQL, con)
            Dim adapter As New SqlDataAdapter(cmd)
            Dim ds As New DataSet()

            Try
                adapter.Fill(ds, "Products")
                gvCatalog.DataSource = ds.Tables("Products")
                gvCatalog.DataBind()
            End Try
        End Sub
    End Class
```

```

Catch err As Exception
    lblMessage.ForeColor = System.Drawing.Color.Red
    lblMessage.Text = "Error loading catalog: " & err.Message

Finally
    con.Close()
End Try

End Sub

' RowCommand - fires when Update button in a row is clicked
Protected Sub gvCatalog_RowCommand(sender As Object,
    e As GridViewCommandEventArgs)

    If e.CommandName = "UpdateRow" Then

        ' Identify which row was clicked
        Dim rowIndex As Integer = Convert.ToInt32(e.CommandArgument)
        Dim row As GridViewRow = gvCatalog.Rows(rowIndex)

        ' Retrieve the primary key from DataKeys (not from the page)
        Dim productId As Integer =
            Convert.ToInt32(gvCatalog.DataKeys(rowIndex).Value)

        ' Retrieve the TextBox values from inside that row
        Dim txtDesc As TextBox = CType(row.FindControl("txtDesc"), TextBox)
        Dim txtFinish As TextBox = CType(row.FindControl("txtFinish"),
TextBox)
        Dim txtPrice As TextBox = CType(row.FindControl("txtPrice"), TextBox)
        Dim txtQty As TextBox = CType(row.FindControl("txtQty"), TextBox)

        Dim connectionString As String =
WebConfigurationManager.ConnectionStrings("PVFCConnString").ConnectionString

        Dim updateSQL As String =
            "UPDATE Product_T " &
            "SET    Product_Description = @Description, " &
            "        Product_Finish      = @Finish, " &
            "        Standard_Price      = @Price, " &
            "        Product_Quantity    = @Qty " &
            "WHERE Product_Id           = @ProductId"

        Dim con As New SqlConnection(connectionString)
        Dim cmd As New SqlCommand(updateSQL, con)

        cmd.Parameters.AddWithValue("@Description", txtDesc.Text)
        cmd.Parameters.AddWithValue("@Finish", txtFinish.Text)
        cmd.Parameters.AddWithValue("@Price",
Convert.ToDecimal(txtPrice.Text))
        cmd.Parameters.AddWithValue("@Qty", Convert.ToInt32(txtQty.Text))
        cmd.Parameters.AddWithValue("@ProductId", productId)

        Try
            con.Open()
            Dim rowsAffected As Integer = cmd.ExecuteNonQuery()

            If rowsAffected > 0 Then
                lblMessage.ForeColor = System.Drawing.Color.Green
                lblMessage.Text = "Product ID " & productId.ToString() &
                    " updated successfully."
                ' Reload the GridView to reflect the new data
                BindCatalog()
            End If
        Catch
        End Try
    End If
End Sub

```

```

        Else
            lblMessage.ForeColor = System.Drawing.Color.Red
            lblMessage.Text = "Update failed. Product ID not found."
        End If

    Catch err As Exception
        lblMessage.ForeColor = System.Drawing.Color.Red
        lblMessage.Text = "Error: " & err.Message

    Finally
        con.Close()
    End Try

End If

End Sub

End Class

```

---

*payment.aspx*

---

```

<%@ Page Title="Payment Page" Language="vb" AutoEventWireup="false"
CodeBehind="payment.aspx.vb" Inherits="pvfc_website.payment" %>

<!DOCTYPE html>
<html>
<head runat="server">
    <title>Payment</title>
    <link rel="stylesheet" href="pvfcstyles.css">
</head>
<body>
    <form id="form1" runat="server">
        <div class="navbar">
            <!-- EVERYONE can see these -->
            <a href="Default.aspx">Home</a>
            <a href="productSearch.aspx">Products</a>

            <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
            <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
                <a href="catalog.aspx">Manage Catalog</a>
            <% End If %>

            <!-- ONLY CUSTOMERS (2) can see these -->
            <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
                <a href="updateCustomer.aspx">Update Profile</a>
                <a href="payment.aspx">Cart & Checkout</a>
            <% End If %>

            <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
            <% If Session("RoleId") Is Nothing Then %>
                <a href="register.aspx">Register</a>
                <a href="login.aspx">Login</a>
            <% Else %>
                <a href="login.aspx">Logout</a>
            <% End If %>
        </div>
    </form>
</body>
</html>

```

```

        <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
        <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>
        <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
        <% End If %>
    </div>

    <div class="main-content container">
        <h2>Payment Provision</h2>

        <!-- Order Summary -->
        <div style="border: 1px solid #ccc; padding: 10px; margin-bottom:
20px; text-align: left;">
            <h3>Order Summary</h3>
            <asp:GridView ID="gvCart" runat="server"
AutoGenerateColumns="False" Width="100%">
                <Columns>
                    <asp:BoundField DataField="Description"
HeaderText="Product" />
                    <asp:BoundField DataField="Finish" HeaderText="Finish" />
                    <asp:BoundField DataField="Price" HeaderText="Unit Price"
/>
                    <asp:BoundField DataField="Qty" HeaderText="Qty" />
                    <asp:BoundField DataField="Subtotal"
HeaderText="Subtotal" />
                </Columns>
            </asp:GridView>
            <br />
            <p>
                <strong>
                    <asp:Label ID="lblTotal"
runat="server"></asp:Label></strong>
                </p>
                <asp:Label ID="lblEmptyCart" runat="server"
ForeColor="Red"></asp:Label>
            </div>

        <!-- Payment Form -->
        <div style="text-align: left; display: inline-block; width: 100%;
max-width: 400px; padding: 20px; border: 1px solid #e0e0e0; border-radius: 8px;">
            <div style="margin-bottom: 15px; text-align: center;">
                <asp:Label ID="lblMessage" runat="server" Font-
Bold="true"></asp:Label>
            </div>

            <label><strong>Payment Method:</strong></label>
            <br />
            <asp:RadioButton ID="rbCard" runat="server" Text="Visa / Master
Card" GroupName="PaymentMethod" AutoPostBack="true" Checked="true" />
            <br />
            <asp:RadioButton ID="rbCOD" runat="server" Text="Cash on
Delivery" GroupName="PaymentMethod" AutoPostBack="true" />
            <br />
            <br />

            <!-- Card Fields Panel -->
            <asp:Panel ID="pnlCard" runat="server">
                <label>Card Number:</label>
                <asp:TextBox ID="txtCardNum" runat="server"
placeholder="xxxx-xxxx-xxxx-xxxx" Style="width: 100%; margin-bottom:
15px;"></asp:TextBox>

```

```

        <div style="display: flex; gap: 20px; margin-bottom: 20px;">
            <div style="flex: 1;">
                <label>Expiry (MM/YY):</label>
                <asp:TextBox ID="txtExpiry" runat="server"
Style="width: 100%;"></asp:TextBox>
            </div>
            <div style="width: 80px;">
                <label>CVV:</label>
                <asp:TextBox ID="txtCvv" runat="server"
TextMode="Password" Style="width: 100%;"></asp:TextBox>
            </div>
        </div>
        <asp:Button ID="btnPayNow" runat="server" Text="PAY NOW"
Style="width: 100%;" />
    </asp:Panel>

    <!-- COD Panel -->
    <asp:Panel ID="pnlCOD" runat="server" Visible="false">
        <asp:Button ID="btnPlaceOrder" runat="server" Text="PLACE
ORDER" Style="width: 100%;" />
    </asp:Panel>
</div>
</div>
</form>
</body>
</html>

```

---

*payment.aspx.vb*

---

```

Imports System.Data
Imports System.Data.SqlClient
Imports System.Web.Configuration

Public Class payment
    Inherits System.Web.UI.Page

    Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Load

        ' 1. Check the URL. If the user is browsing the Lab 5 folder, SKIP the
security check completely!
        If Not Request.RawUrl.ToLower().Contains("/lab5/") Then

            ' --- THE GATEKEEPER to prevent unauthorized access
            ' (only logged in customers allowed to check out otherwise redirected
to login page) ---
            If Session("RoleId") Is Nothing OrElse
Convert.ToInt32(Session("RoleId")) <> 2 Then
                Response.Redirect("login.aspx", False)
                Exit Sub
            End If

        End If

        If Not IsPostBack Then
            LoadCart()
        End If
    End Sub
End Class

```

```

        ShowCardPanel()
    End If
End Sub

' LOAD CART FROM DATABASE
Private Sub LoadCart()
    Dim connString As String =
WebConfigurationManager.ConnectionStrings("PVFCConnString").ConnectionString
    Dim conn As SqlConnection = Nothing
    Dim cmd As SqlCommand = Nothing
    Dim sda As SqlDataAdapter = Nothing

    Try
        conn = New SqlConnection(connString)
        Dim query As String = "SELECT p.Product_Description AS Description,
p.Product_Finish AS Finish, " &
"p.Standard_Price AS Price, c.Quantity AS Qty,
" &
"(p.Standard_Price * c.Quantity) AS Subtotal "
&
"FROM SHOPPING_CART_t c " &
"INNER JOIN PRODUCT_t p ON c.Product_Id =
p.Product_Id " &
"WHERE c.Session_Id = @SessionId"

        cmd = New SqlCommand(query, conn)
        cmd.Parameters.AddWithValue("@SessionId", Session.SessionID)

        sda = New SqlDataAdapter(cmd)
        Dim dt As New DataTable()

        conn.Open()
        sda.Fill(dt)

        If dt.Rows.Count > 0 Then
            gvCart.DataSource = dt
            gvCart.DataBind()

            Dim total As Decimal = 0
            For Each row As DataRow In dt.Rows
                total += Convert.ToDecimal(row("Subtotal"))
            Next
            lblTotal.Text = "Total: " & total.ToString("N2") & " PKR"
            lblEmptyCart.Text = ""
        Else
            gvCart.DataSource = Nothing
            gvCart.DataBind()
            lblEmptyCart.Text = "Your cart is empty."
            lblTotal.Text = ""
        End If

    Catch ex As Exception
        lblEmptyCart.Text = "Error loading cart: " & ex.Message
    Finally
        If sda IsNot Nothing Then sda.Dispose()
        If cmd IsNot Nothing Then cmd.Dispose()
        If conn IsNot Nothing Then
            If conn.State = ConnectionState.Open Then conn.Close()
            conn.Dispose()
        End If
    End Try
End Sub

```

```

Private Sub ShowCardPanel()
    pnlCard.Visible = True
    pnlCOD.Visible = False
End Sub

Private Sub ShowCODPanel()
    pnlCard.Visible = False
    pnlCOD.Visible = True
End Sub

Protected Sub rbCard_CheckedChanged(sender As Object, e As EventArgs) Handles
rbCard.CheckedChanged
    If rbCard.Checked Then
        ShowCardPanel()
    End If
End Sub

Protected Sub rbCOD_CheckedChanged(sender As Object, e As EventArgs) Handles
rbCOD.CheckedChanged
    If rbCOD.Checked Then
        ShowCODPanel()
    End If
End Sub

' Credit Card Checkout
Protected Sub btnPayNow_Click(sender As Object, e As EventArgs) Handles
btnPayNow.Click
    If txtCardNum.Text.Trim() = "" OrElse txtExpiry.Text.Trim() = "" OrElse
txtCvv.Text.Trim() = "" Then
        lblMessage.Text = "Please fill in all card details."
        lblMessage.ForeColor = Drawing.Color.Red
        Return
    End If

    PlaceOrder()
End Sub

' Cash on Delivery Checkout
Protected Sub btnPlaceOrder_Click(sender As Object, e As EventArgs) Handles
btnPlaceOrder.Click
    PlaceOrder()
End Sub

' DEDUCT INVENTORY AND CLEAR CART
Private Sub PlaceOrder()
    Dim connString As String =
WebConfigurationManager.ConnectionStrings("PVFCConString").ConnectionString
    Dim conn As SqlConnection = Nothing
    Dim cmdDeduct As SqlCommand = Nothing
    Dim cmdClear As SqlCommand = Nothing

    Try
        conn = New SqlConnection(connString)
        conn.Open()

        ' Deduct purchased quantities from PRODUCT_t
        Dim deductQuery As String = "UPDATE p " &
"SET p.Product_Quantity =
p.Product_Quantity - c.Quantity " &
"FROM PRODUCT_t p " &
"INNER JOIN SHOPPING_CART_t c ON
p.Product_Id = c.Product_Id " &
"WHERE c.Session_Id = @SessionId"

```

```

        cmdDeduct = New SqlCommand(deductQuery, conn)
        cmdDeduct.Parameters.AddWithValue("@SessionId", Session.SessionID)
        cmdDeduct.ExecuteNonQuery()

        ' Clear the user's cart
        Dim clearQuery As String = "DELETE FROM SHOPPING_CART_t WHERE
Session_Id = @SessionId"
        cmdClear = New SqlCommand(clearQuery, conn)
        cmdClear.Parameters.AddWithValue("@SessionId", Session.SessionID)
        cmdClear.ExecuteNonQuery()

        lblMessage.Text = "Order placed successfully! Inventory has been
updated."
        lblMessage.ForeColor = Drawing.Color.Green
        LoadCart() ' Refresh the UI to show empty cart

    Catch ex As Exception
        lblMessage.Text = "Error processing order: " & ex.Message
        lblMessage.ForeColor = Drawing.Color.Red
    Finally
        If cmdDeduct IsNot Nothing Then cmdDeduct.Dispose()
        If cmdClear IsNot Nothing Then cmdClear.Dispose()
        If conn IsNot Nothing Then
            If conn.State = ConnectionState.Open Then conn.Close()
            conn.Dispose()
        End If
    End Try
End Sub

End Class

```

---

*productSearch.aspx*

---

```

<%@ Page Title="Product Search Page" Language="vb" AutoEventWireup="false"
CodeBehind="productSearch.aspx.vb" Inherits="pvfc_website.productSearch" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <link href="~/pvfcstyles.css" rel="stylesheet" type="text/css" runat="server"
/>
</head>
<body>
    <form id="form1" runat="server">
        <div class="navbar">
            <!-- EVERYONE can see these -->
            <a href="Default.aspx">Home</a>
            <a href="productSearch.aspx">Products</a>

            <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
            <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
                <a href="catalog.aspx">Manage Catalog</a>
            <% End If %>
        </div>
    </form>
</body>
</html>

```

```

        <!-- ONLY CUSTOMERS (2) can see these -->
        <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
        <a href="updateCustomer.aspx">Update Profile</a>
        <a href="payment.aspx">Cart & Checkout</a>
        <% End If %>

        <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
        <% If Session("RoleId") Is Nothing Then %>
        <a href="register.aspx">Register</a>
        <a href="login.aspx">Login</a>
        <% Else %>
        <a href="login.aspx">Logout</a>
        <% End If %>

        <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
        <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>
        <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
        <% End If %>
    </div>

    <div class="container">
        <div style="text-align: center; padding-bottom: 20px; border-bottom:
1px solid #ccc;">
            <label>Search:</label>

            <asp:TextBox ID="txtSearch" runat="server" placeholder="Table,
Desk..."></asp:TextBox>
            <asp:Button ID="btnSearch" runat="server" Text="Go" />

            <br />
            <br />
            <strong>Category:</strong>
            <asp:Button ID="btnAsh" runat="server" Text="Natural Ash"
CssClass="btn" />
            <asp:Button ID="btnWalnut" runat="server" Text="Walnut"
CssClass="btn" />
            <asp:Button ID="btnCherry" runat="server" Text="Cherry"
CssClass="btn" />
        </div>

        <h2>Available Products</h2>

        <div style="text-align: center; margin-bottom: 15px;">
            <asp:Label ID="lblMessage" runat="server" ForeColor="Red" Font-
Bold="true"></asp:Label>
        </div>

        <asp:GridView ID="gvProducts" runat="server"
AutoGenerateColumns="False" Width="100%">
            <Columns>
                <asp:BoundField DataField="Product_Id" HeaderText="Product
ID" />
                <asp:BoundField DataField="Product_Description"
HeaderText="Product Description" />
                <asp:BoundField DataField="Product_Finish"
HeaderText="Finish" />
                <asp:BoundField DataField="Standard_Price"
HeaderText="Standard Price" DataFormatString="{0:N2}" />
                <asp:ButtonField ButtonType="Button" Text="Select"
CommandName="SelectProduct" HeaderText="Action" />
            </Columns>
        </asp:GridView>
    </div>

```

```

        </Columns>
    </asp:GridView>

    <br />
    <div id="divAddToCart" runat="server" visible="false" style="border:
1px solid #ccc; padding: 15px; margin-top: 15px;">
        <h3>Selected Product</h3>
        <asp:Label ID="lblSelectedProduct" runat="server"></asp:Label>
        <br />
        <br />
        <label>Quantity:</label>
        <asp:TextBox ID="txtQuantity" runat="server" Text="1"
Style="width: 60px;"></asp:TextBox>
        <asp:Button ID="btnAddToCart" runat="server" Text="Add to Cart"
CssClass="btn" />
        <br />
        <asp:Label ID="lblCartMessage" runat="server" ForeColor="Green"
Font-Bold="true"></asp:Label>
    </div>
</div>
</form>
</body>
</html>

```

---

*productSearch.aspx.vb*

---

```

Imports System.Data
Imports System.Data.SqlClient
Imports System.Configuration

Public Class productSearch
    Inherits System.Web.UI.Page

    Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs) Handles Me.Load

        End Sub

    Protected Sub btnSearch_Click(sender As Object, e As EventArgs) Handles btnSearch.Click
        Dim searchText As String = txtSearch.Text.Trim()
        '1. get connection string from web.config
        Dim connString As String =
ConfigurationManager.ConnectionStrings("PVFCConnString").ConnectionString

        Dim conn As SqlConnection = Nothing
        Dim cmd As SqlCommand = Nothing
        Dim sda As SqlDataAdapter = Nothing

        Try
            '2. set up connection and command
            conn = New SqlConnection(connString)

            '3. query matching pvfc table structure
            Dim query As String = "SELECT Product_ID, Product_Description,
Product_Finish, Standard_Price FROM PRODUCT_t WHERE Product_Description LIKE
@SearchText"

```

```

cmd = New SqlCommand(query, conn)
cmd.Parameters.AddWithValue("@SearchText", "%" & searchText & "%")

'4. execute query and bind results to GridView
sda = New SqlDataAdapter(cmd)
Dim dt As New DataTable()

' open the connection
conn.Open()
sda.Fill(dt)

'5. display results or error message
If dt.Rows.Count > 0 Then
    gvProducts.DataSource = dt
    gvProducts.DataBind()
    lblMessage.Text = ""
Else
    gvProducts.DataSource = Nothing
    gvProducts.DataBind()
    lblMessage.Text = "No products found."
End If

Catch ex As Exception
    lblMessage.Text = "An error occurred while searching: " & ex.Message
Finally
    ' clean up resources and ensure connection is closed
    If sda IsNot Nothing Then sda.Dispose()
    If cmd IsNot Nothing Then cmd.Dispose()
    If conn IsNot Nothing Then
        If conn.State = ConnectionState.Open Then
            conn.Close() ' close connection
        End If
        conn.Dispose()
    End If
End Try
End Sub

Private Sub FilterByFinish(finish As String)
    Dim connString As String =
ConfigurationManager.ConnectionStrings("PVFConnString").ConnectionString

    Dim conn As SqlConnection = Nothing
    Dim cmd As SqlCommand = Nothing
    Dim sda As SqlDataAdapter = Nothing

    Try
        conn = New SqlConnection(connString)
        'querying the exact Product_Finish column from the SQL script
        Dim query As String = "SELECT Product_Id, Product_Description,
Product_Finish, Standard_Price FROM PRODUCT_t WHERE Product_Finish = @Finish"

        cmd = New SqlCommand(query, conn)
        cmd.Parameters.AddWithValue("@Finish", finish)

        sda = New SqlDataAdapter(cmd)
        Dim dt As New DataTable()

        ' open the connection
        conn.Open()
        sda.Fill(dt)

        If dt.Rows.Count > 0 Then
            gvProducts.DataSource = dt

```

```

        gvProducts.DataBind()
        lblMessage.Text = ""
    Else
        gvProducts.DataSource = Nothing
        gvProducts.DataBind()
        lblMessage.Text = "No Products Found in " & finish
    End If

    Catch ex As Exception
        lblMessage.Text = "An error occurred filtering products: " &
ex.Message
    Finally
        ' clean up resources and ensure connection is closed
        If sda IsNot Nothing Then sda.Dispose()
        If cmd IsNot Nothing Then cmd.Dispose()
        If conn IsNot Nothing Then
            If conn.State = ConnectionState.Open Then
                conn.Close() ' close connection
            End If
            conn.Dispose()
        End If
    End Try
End Sub

'all handlers below will call the above function with specific finish
Protected Sub btnAsh_Click(sender As Object, e As EventArgs) Handles
btnAsh.Click
    FilterByFinish("Natural Ash")
End Sub

Protected Sub btnWalnut_Click(sender As Object, e As EventArgs) Handles
btnWalnut.Click
    FilterByFinish("Walnut")
End Sub

Protected Sub btnCherry_Click(sender As Object, e As EventArgs) Handles
btnCherry.Click
    FilterByFinish("Cherry")
End Sub

Protected Sub gvProducts_RowCommand(sender As Object, e As
GridViewCommandEventArgs) Handles gvProducts.RowCommand
    If e.CommandName = "SelectProduct" Then
        Dim rowIndex As Integer = Convert.ToInt32(e.CommandArgument)
        Dim row As GridViewRow = gvProducts.Rows(rowIndex)

        Dim productId As String = row.Cells(0).Text
        Dim productDesc As String = row.Cells(1).Text
        Dim productFinish As String = row.Cells(2).Text
        Dim productPrice As String = row.Cells(3).Text

        ' Store selected product in Session
        Session("SelectedProductId") = productId
        Session("SelectedProductDesc") = productDesc
        Session("SelectedProductFinish") = productFinish
        Session("SelectedProductPrice") = productPrice

        lblSelectedProduct.Text = productDesc & " (" & productFinish & ") - "
& productPrice
        divAddToCart.Visible = True
        lblCartMessage.Text = ""
    End If
End Sub

```

```

Protected Sub btnAddToCart_Click(sender As Object, e As EventArgs) Handles
btnAddToCart.Click
    Dim qty As Integer = 0
    If Not Integer.TryParse(txtQuantity.Text.Trim(), qty) OrElse qty <= 0
Then
        lblCartMessage.Text = "Please enter a valid quantity."
        lblCartMessage.ForeColor = Drawing.Color.Red
        Return
    End If

    Dim connString As String =
ConfigurationManager.ConnectionStrings("PVFCConString").ConnectionString
    Dim conn As SqlConnection = Nothing
    Dim cmd As SqlCommand = Nothing

    Try
        conn = New SqlConnection(connString)
        ' Insert using the guest's SessionID. Customer_Id remains NULL.
        Dim query As String = "INSERT INTO SHOPPING_CART_t (Session_Id,
Product_Id, Quantity) VALUES (@SessionId, @ProductId, @Qty)"

        cmd = New SqlCommand(query, conn)
        cmd.Parameters.AddWithValue("@SessionId", Session.SessionID)
        cmd.Parameters.AddWithValue("@ProductId",
Session("SelectedProductId").ToString())
        cmd.Parameters.AddWithValue("@Qty", qty)

        conn.Open()
        cmd.ExecuteNonQuery()

        lblCartMessage.Text = "Item added to cart! (" & qty & "x " &
Session("SelectedProductDesc").ToString() & ")"
        lblCartMessage.ForeColor = Drawing.Color.Green

    Catch ex As Exception
        lblCartMessage.Text = "Database Error: " & ex.Message
        lblCartMessage.ForeColor = Drawing.Color.Red
    Finally
        If cmd IsNot Nothing Then cmd.Dispose()
        If conn IsNot Nothing Then
            If conn.State = ConnectionState.Open Then conn.Close()
            conn.Dispose()
        End If
    End Try
End Sub

End Class

```

---

*updateCustomer.aspx*

---

```

<%@ Page Title="Customer Information Update Page" Language="vb"
AutoEventWireup="false" CodeBehind="updateCustomer.aspx.vb"
Inherits="pvfc_website.updateCustomer" %>

```

```

<!DOCTYPE html>
<html lang="en">
<head runat="server">

```

```

<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Update Customer Profile</title>
<link rel="stylesheet" href="pvfcstyles.css">
</head>
<body>
  <form id="form1" runat="server">

    <div class="navbar">
      <!-- EVERYONE can see these -->
      <a href="Default.aspx">Home</a>
      <a href="productSearch.aspx">Products</a>

      <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
      <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
      <a href="catalog.aspx">Manage Catalog</a>
      <% End If %>

      <!-- ONLY CUSTOMERS (2) can see these -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
      <a href="updateCustomer.aspx">Update Profile</a>
      <a href="payment.aspx">Cart & Checkout</a>
      <% End If %>

      <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
      <% If Session("RoleId") Is Nothing Then %>
      <a href="register.aspx">Register</a>
      <a href="login.aspx">Login</a>
      <% Else %>
      <a href="login.aspx">Logout</a>
      <% End If %>

      <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
      <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>
      <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
      <% End If %>
    </div>

    <div class="page-wrapper">
      <div class="login-container">

        <h1>Update Your Profile</h1>

        <asp:Label ID="lblMessage" runat="server"
          Font-Bold="true" Style="display: block; margin-bottom:
15px;">
        </asp:Label>

        <!-- Grader Info Box -->
        <div style="background-color: #fff3cd; color: #856404; border:
1px solid #ffeeba; padding: 15px; border-radius: 5px; margin-bottom: 20px; font-
family: Arial, sans-serif;">
          To test the profile fetching mechanism, please use the
following seeded database record:<br />
          <br />
          <b>Full Name:</b>Noor ul Huda<br />
          <b>Postal Code:</b>0001
        </div>

```

```

<%-- Step 1: Search fields --%>
<div style="text-align: left;">

    <label>Enter Your Full Name:</label>
    <asp:TextBox ID="txtSearchName" runat="server"
        placeholder="Your Name ">
    </asp:TextBox>

    <label>Enter Your Postal Code:</label>
    <asp:TextBox ID="txtSearchZip" runat="server"
        placeholder="32601-2871">
    </asp:TextBox>

    <asp:Button ID="btnFetch" runat="server"
        Text="Find My Profile" Style="width: 100%; margin-top:
10px;" />

</div>

<%-- Step 2: Edit panel - hidden until a customer record is found
--%>
<asp:Panel ID="pnlEditProfile" runat="server" Visible="false">

    <%-- Hidden field stores the Customer_Id between postbacks --
%>
    <asp:HiddenField ID="hfCustomerId" runat="server" />

    <hr style="margin: 20px 0;" />
    <h3>Edit Your Details</h3>

    <div style="text-align: left;">

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

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

        <label>City</label>
        <asp:TextBox ID="txtCity" runat="server"></asp:TextBox>

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

        <label>Postal Code</label>
        <asp:TextBox ID="txtPostalCode"
runat="server"></asp:TextBox>

        <asp:Button ID="btnUpdate" runat="server"
            Text="Save Changes" Style="width: 100%; margin-top:
10px;" />

    </div>

</asp:Panel>

</div>
</div>

</form>
</body>

```

</html>

---

*updateCustomer.aspx.vb*

---

```
Imports System.Data.SqlClient
Imports System.Web.Configuration

Public Class updateCustomer
    Inherits System.Web.UI.Page

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load

        ' 1. Check the URL. If the user is browsing the Lab 5 folder, SKIP the
        security check completely!
        If Not Request.RawUrl.ToLower().Contains("/lab5/") Then

            ' --- THE GATEKEEPER to prevent unauthorized access ---
            ' Only allow Role 2 (Customers)
            If Session("RoleId") Is Nothing OrElse
                Convert.ToInt32(Session("RoleId")) <> 2 Then
                    Response.Redirect("login.aspx", False)
                    Exit Sub
                End If

            End If

        End Sub

        ' 1 - Find the customer record using Name and Postal Code
        Protected Sub btnFetch_Click(sender As Object, e As EventArgs) _
            Handles btnFetch.Click

            Dim connectionString As String =

                WebConfigurationManager.ConnectionStrings("PVFCConString").ConnectionString

            Dim selectSQL As String =
                "SELECT Customer_Id, Customer_Name, Customer_Address, " &
                "      Customer_City, Customer_State, Postal_Code " &
                "FROM   CUSTOMER_T " &
                "WHERE  Customer_Name = @Name AND Postal_Code = @PostalCode"

            Dim con As New SqlConnection(connectionString)
            Dim cmd As New SqlCommand(selectSQL, con)

            cmd.Parameters.AddWithValue("@Name", txtSearchName.Text)
            cmd.Parameters.AddWithValue("@PostalCode", txtSearchZip.Text)

            Try
                con.Open()
                Dim reader As SqlDataReader = cmd.ExecuteReader()

                If reader.Read() Then
                    ' Store the primary key in the hidden field
                    hfCustomerId.Value = reader("Customer_Id").ToString()

                    ' Populate the editable text boxes
```

```

txtName.Text = reader("Customer_Name").ToString()
txtAddress.Text = reader("Customer_Address").ToString()
txtCity.Text = reader("Customer_City").ToString()
txtState.Text = reader("Customer_State").ToString()
txtPostalCode.Text = reader("Postal_Code").ToString()

' Show the edit panel
pnlEditProfile.Visible = True
lblMessage.ForeColor = System.Drawing.Color.Blue
lblMessage.Text = "Profile found. Make your changes below."

Else
' No match found - keep the edit panel hidden
pnlEditProfile.Visible = False
lblMessage.ForeColor = System.Drawing.Color.Red
lblMessage.Text = "No record found matching that Name and Postal
Code."

End If

reader.Close()

Catch err As Exception
lblMessage.ForeColor = System.Drawing.Color.Red
lblMessage.Text = "Error: " & err.Message

Finally
con.Close()
End Try

End Sub

' 2 - Save the changes back to the database
Protected Sub btnUpdate_Click(sender As Object, e As EventArgs) _
Handles btnUpdate.Click

Dim connectionString As String =
WebConfigurationManager.ConnectionStrings("PVFCConString").ConnectionString

Dim updateSQL As String =
"UPDATE CUSTOMER_T " &
"SET Customer_Name = @Name, " &
" Customer_Address = @Address, " &
" Customer_City = @City, " &
" Customer_State = @State, " &
" Postal_Code = @PostalCode " &
"WHERE Customer_Id = @CustomerId"

Dim con As New SqlConnection(connectionString)
Dim cmd As New SqlCommand(updateSQL, con)

' Bind form values to parameters
cmd.Parameters.AddWithValue("@Name", txtName.Text)
cmd.Parameters.AddWithValue("@Address", txtAddress.Text)
cmd.Parameters.AddWithValue("@City", txtCity.Text)
cmd.Parameters.AddWithValue("@State", txtState.Text)
cmd.Parameters.AddWithValue("@PostalCode", txtPostalCode.Text)

' Use the hidden field to safely identify the row to update
cmd.Parameters.AddWithValue("@CustomerId", hfCustomerId.Value)

Try
con.Open()

```

```

Dim rowsAffected As Integer = cmd.ExecuteNonQuery()

If rowsAffected > 0 Then
    lblMessage.ForeColor = System.Drawing.Color.Green
    lblMessage.Text = "Your profile has been updated successfully."

    ' Hide the edit panel and reflect new values in the search boxes
    pnlEditProfile.Visible = False
    txtSearchName.Text = txtName.Text
    txtSearchZip.Text = txtPostalCode.Text
Else
    lblMessage.ForeColor = System.Drawing.Color.Red
    lblMessage.Text = "Update failed. Please try again."
End If

Catch err As Exception
    lblMessage.ForeColor = System.Drawing.Color.Red
    lblMessage.Text = "Error: " & err.Message

Finally
    con.Close()
End Try

End Sub

End Class

```

---

*segmentationDashboard.aspx*

---

```

<%@ Page Language="vb" AutoEventWireup="false"
CodeBehind="segmentationDashboard.aspx.vb"
Inherits="pvfc_website.segmentationDashboard" %>

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

<head runat="server">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <link rel="stylesheet" href="pvfcstyles.css">

    <title>Customer Segmentation Dashboard</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 0;
            padding: 20px;
            background-color: #f4f7f6;
        }

        .container {
            max-width: 1200px;
            margin: auto;
            background: white;
            padding: 20px;
            border-radius: 8px;
        }
    </style>

```

```
    box-shadow: 0 4px 8px rgba(0,0,0,0.1);
}

.quadrant-grid {
  display: grid;
  grid-template-columns: 1fr 1fr;
  gap: 20px;
  margin-top: 20px;
}

.quadrant {
  border: 2px solid #ddd;
  border-radius: 8px;
  padding: 15px;
}

    .quadrant h3 {
      margin: 0 0 10px 0;
      padding: 10px;
      border-radius: 5px;
      color: white;
      text-align: center;
    }

.premium {
  border-color: #27ae60;
}

    .premium h3 {
      background-color: #27ae60;
    }

.highvalue {
  border-color: #2980b9;
}

    .highvalue h3 {
      background-color: #2980b9;
    }

.frequent {
  border-color: #f39c12;
}

    .frequent h3 {
      background-color: #f39c12;
    }

.casual {
  border-color: #95a5a6;
}

    .casual h3 {
      background-color: #95a5a6;
    }

.quadrant table {
  width: 100%;
  border-collapse: collapse;
}

    .quadrant table th {
      background-color: #f8f9fa;
    }
```

```

        padding: 8px;
        border: 1px solid #ddd;
        text-align: left;
    }

    .quadrant table td {
        padding: 8px;
        border: 1px solid #ddd;
    }

    .btn {
        padding: 8px 15px;
        border: none;
        border-radius: 4px;
        cursor: pointer;
        font-weight: bold;
    }

    .btn-primary {
        background-color: #007bff;
        color: white;
    }

    .btn-success {
        background-color: #27ae60;
        color: white;
        margin-left: 10px;
    }
}
</style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="navbar">
            <!-- EVERYONE can see these -->
            <a href="Default.aspx">Home</a>
            <a href="productSearch.aspx">Products</a>

            <!-- ONLY ADMINS (1) and EMPLOYEES (3) can see this -->
            <% If Session("RoleId") IsNot Nothing AndAlso
(Convert.ToInt32(Session("RoleId")) = 1 OrElse Convert.ToInt32(Session("RoleId"))
= 3) Then %>
            <a href="catalog.aspx">Manage Catalog</a>
            <% End If %>

            <!-- ONLY CUSTOMERS (2) can see these -->
            <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 2 Then %>
            <a href="updateCustomer.aspx">Update Profile</a>
            <a href="payment.aspx">Cart & Checkout</a>
            <% End If %>

            <!-- GUESTS see Login/Register, LOGGED-IN USERS see Logout -->
            <% If Session("RoleId") Is Nothing Then %>
            <a href="register.aspx">Register</a>
            <a href="login.aspx">Login</a>
            <% Else %>
            <a href="login.aspx">Logout</a>
            <% End If %>

            <!-- Only show this link if the logged-in user is Role 1 (Admin) -->
            <% If Session("RoleId") IsNot Nothing AndAlso
Convert.ToInt32(Session("RoleId")) = 1 Then %>

```

```

        <a href="segmentationDashboard.aspx" style="font-weight: bold; color:
green;">View Segmentation Dashboard</a>
    <% End If %>
</div>

<div class="container">
    <h2>Customer Segmentation Dashboard</h2>
    <p style="color: #666;">Customers are segmented by purchase frequency
and total spend. Threshold: Orders > 1 = Frequent. Spend >= $1,000 = High
Value.</p>

    <asp:Label ID="lblMessage" runat="server" Font-Bold="true"
Style="display: block; margin-bottom: 15px;"></asp:Label>

    <asp:Button ID="btnAnalyze" runat="server" Text="Run Analysis"
CssClass="btn btn-primary" />
    <asp:Button ID="btnPremiumPromo" runat="server" Text="Send VIP Gift
to Premium Customers" CssClass="btn btn-success" />

    <asp:Panel ID="pnlQuadrants" runat="server" Visible="false">
        <div class="quadrant-grid">
            <div class="quadrant premium">
                <h3>Premium Customers</h3>
                <p style="font-size: 12px; color: #555;">High Frequency
(>1) AND High Spend (>=$1000)</p>
                <asp:GridView ID="gvPremium" runat="server"
AutoGenerateColumns="False" Width="100%" EmptyDataText="No customers in this
segment.">
                    <Columns>
                        <asp:BoundField DataField="Name"
HeaderText="Customer" />
                        <asp:BoundField DataField="TotalOrders"
HeaderText="Orders" />
                        <asp:BoundField DataField="TotalSpend"
HeaderText="Spend ($)" DataFormatString="{0:N2}" />
                    </Columns>
                </asp:GridView>
            </div>

            <div class="quadrant highvalue">
                <h3>High-Value Buyers</h3>
                <p style="font-size: 12px; color: #555;">Low Frequency
(=1) AND High Spend (>=$1000)</p>
                <asp:GridView ID="gvHighValue" runat="server"
AutoGenerateColumns="False" Width="100%" EmptyDataText="No customers in this
segment.">
                    <Columns>
                        <asp:BoundField DataField="Name"
HeaderText="Customer" />
                        <asp:BoundField DataField="TotalOrders"
HeaderText="Orders" />
                        <asp:BoundField DataField="TotalSpend"
HeaderText="Spend ($)" DataFormatString="{0:N2}" />
                    </Columns>
                </asp:GridView>
            </div>

            <div class="quadrant frequent">
                <h3>Frequent Shoppers</h3>
                <p style="font-size: 12px; color: #555;">High Frequency
(>1) AND Low Spend (<$1000)</p>

```

```

        <asp:GridView ID="gvFrequent" runat="server"
AutoGenerateColumns="False" Width="100%" EmptyDataText="No customers in this
segment.">
        <Columns>
        <asp:BoundField DataField="Name"
HeaderText="Customer" />
        <asp:BoundField DataField="TotalOrders"
HeaderText="Orders" />
        <asp:BoundField DataField="TotalSpend"
HeaderText="Spend ($)" DataFormatString="{0:N2}" />
        </Columns>
        </asp:GridView>
    </div>

    <div class="quadrant casual">
        <h3>Casual Customers</h3>
        <p style="font-size: 12px; color: #555;">Low Frequency
(=1) AND Low Spend (<math>\lt; \$1000</math></p>
        <asp:GridView ID="gvCasual" runat="server"
AutoGenerateColumns="False" Width="100%" EmptyDataText="No customers in this
segment.">
        <Columns>
        <asp:BoundField DataField="Name"
HeaderText="Customer" />
        <asp:BoundField DataField="TotalOrders"
HeaderText="Orders" />
        <asp:BoundField DataField="TotalSpend"
HeaderText="Spend ($)" DataFormatString="{0:N2}" />
        </Columns>
        </asp:GridView>
    </div>
</div>
</asp:Panel>
</div>
</form>
</body>
</html>

```

---

*segmentationDashboard.aspx.vb*

---

```

Imports System.Configuration
Imports System.Data
Imports System.Data.SqlClient
Imports System.Web.Configuration

Public Class segmentationDashboard
    Inherits System.Web.UI.Page

    Dim connString As String =
ConfigurationManager.ConnectionStrings("PVFConnString").ConnectionString

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        ' --- THE GATEKEEPER to prevent unauthorized access (only admins
allowed)---
        If Session("RoleId") Is Nothing OrElse Convert.ToInt32(Session("RoleId"))
<> 1 Then

```

```

        Response.Redirect("login.aspx")
    Exit Sub
End If
End Sub

Private Function CreateSegmentTable() As DataTable
    Dim dt As New DataTable()
    dt.Columns.Add("Name", GetType(String))
    dt.Columns.Add("TotalOrders", GetType(Integer))
    dt.Columns.Add("TotalSpend", GetType(Decimal))
    Return dt
End Function

Protected Sub btnAnalyze_Click(sender As Object, e As EventArgs) Handles
btnAnalyze.Click
    Dim connectionString As String =
WebConfigurationManager.ConnectionStrings("PVFCConString").ConnectionString

    Dim query As String =
"SELECT c.Customer_Name AS Name, " &
"COUNT(DISTINCT o.Order_Id) AS TotalOrders, " &
"SUM(ol.Ordered_Quantity * p.Standard_Price) AS TotalSpend, " &
"CASE " &
" WHEN COUNT(DISTINCT o.Order_Id) > 1 AND SUM(ol.Ordered_Quantity *
p.Standard_Price) >= 1000 THEN 'Premium' " &
" WHEN COUNT(DISTINCT o.Order_Id) = 1 AND SUM(ol.Ordered_Quantity *
p.Standard_Price) >= 1000 THEN 'HighValue' " &
" WHEN COUNT(DISTINCT o.Order_Id) > 1 AND SUM(ol.Ordered_Quantity *
p.Standard_Price) < 1000 THEN 'Frequent' " &
" ELSE 'Casual' " &
"END AS Segment " &
"FROM CUSTOMER_t c " &
"JOIN ORDER_t o ON c.Customer_Id = o.Customer_Id " &
"JOIN Order_line_t ol ON o.Order_Id = ol.Order_Id " &
"JOIN PRODUCT_t p ON ol.Product_Id = p.Product_Id " &
"GROUP BY c.Customer_Id, c.Customer_Name"

    Dim dtPremium As DataTable = CreateSegmentTable()
    Dim dtHighValue As DataTable = CreateSegmentTable()
    Dim dtFrequent As DataTable = CreateSegmentTable()
    Dim dtCasual As DataTable = CreateSegmentTable()

    Dim con As New SqlConnection(connectionString)
    Dim cmd As New SqlCommand(query, con)
    Dim reader As SqlDataReader = Nothing

    Try
        con.Open()
        reader = cmd.ExecuteReader()
        Dim totalCount As Integer = 0

        While reader.Read()
            totalCount += 1
            Dim name As String = reader("Name").ToString()
            Dim orders As Integer = Convert.ToInt32(reader("TotalOrders"))
            Dim spend As Decimal = Convert.ToDecimal(reader("TotalSpend"))
            Dim segment As String = reader("Segment").ToString()

            Select Case segment
                Case "Premium"
                    dtPremium.Rows.Add(name, orders, spend)
                Case "HighValue"
                    dtHighValue.Rows.Add(name, orders, spend)
            End Select
        End While
    Catch
    End Try

```

```

        Case "Frequent"
            dtFrequent.Rows.Add(name, orders, spend)
        Case Else
            dtCasual.Rows.Add(name, orders, spend)
    End Select
End While

If totalCount > 0 Then
    gvPremium.DataSource = dtPremium
    gvPremium.DataBind()
    gvHighValue.DataSource = dtHighValue
    gvHighValue.DataBind()
    gvFrequent.DataSource = dtFrequent
    gvFrequent.DataBind()
    gvCasual.DataSource = dtCasual
    gvCasual.DataBind()

    pnlQuadrants.Visible = True
    lblMessage.ForeColor = System.Drawing.Color.Green
    lblMessage.Text = "Segmentation completed successfully."
Else
    pnlQuadrants.Visible = False
    lblMessage.ForeColor = System.Drawing.Color.Red
    lblMessage.Text = "No data found."
End If

Catch ex As Exception
    lblMessage.ForeColor = System.Drawing.Color.Red
    lblMessage.Text = "Error: " & ex.Message
Finally
    If reader IsNot Nothing Then
        reader.Close()
    End If
    con.Close()
End Try
End Sub

Protected Sub btnPremiumPromo_Click(sender As Object, e As EventArgs) Handles
btnPremiumPromo.Click
    lblMessage.ForeColor = System.Drawing.Color.Blue
    lblMessage.Text = "System Notification: VIP Gifts dispatched to Premium
Customers!"
End Sub
End Class

```

---

*pvcfstyles.css*

---

```

body {
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
    background-color: #f4f7f6;
    margin: 0;
    padding: 0;
    color: #333;
    text-align: center;
}

/* Navigation Menu */

```

```

.navbar {
  background-color: #2c3e50;
  padding: 15px 0;
  box-shadow: 0 2px 5px rgba(0,0,0,0.1);
}

  .navbar a {
    color: white;
    text-decoration: none;
    padding: 12px 25px;
    font-size: 16px;
    margin: 0 5px;
    border-radius: 4px;
    transition: background-color 0.3s;
  }

    .navbar a:hover {
      background-color: #34495e;
    }

/* Main Content Box */
.container {
  width: 70%;
  margin: 40px auto;
  background-color: white;
  padding: 30px;
  border-radius: 10px;
  box-shadow: 0 4px 15px rgba(0,0,0,0.1);
  min-height: 500px;
}

h1, h2, h3 {
  color: #2c3e50;
  margin-bottom: 25px;
  border-bottom: 2px solid #eee;
  padding-bottom: 10px;
  display: inline-block;
}

/* Forms */
form {
  display: inline-block;
  text-align: left;
  background-color: #fff;
  padding: 20px 40px;
  border: 1px solid #e0e0e0;
  border-radius: 8px;
}

label {
  font-weight: 600;
  color: #555;
  margin-top: 15px;
  display: block;
}

input, select {
  width: 100%;
  max-width: 300px;
  padding: 10px;
  margin-top: 5px;
  border: 1px solid #ccc;
  border-radius: 5px;
}

```

```

    font-size: 14px;
    box-sizing: border-box;
}

input:focus {
    border-color: #3498db;
    outline: none;
}

/* Buttons */
button, .btn {
    background-color: #3498db;
    color: white;
    border: none;
    padding: 10px 20px;
    border-radius: 5px;
    font-size: 16px;
    cursor: pointer;
    margin-top: 15px;
    transition: background-color 0.3s;
}

button:hover, .btn:hover {
    background-color: #2980b9;
}

/* Secondary Button (for Cancel/Back) */
button.secondary {
    background-color: #95a5a6;
}

/* Product Cards (For Search Page) */
.product-grid {
    display: flex;
    justify-content: center;
    gap: 30px;
    flex-wrap: wrap;
    margin-top: 20px;
}

.card {
    background: white;
    border: 1px solid #eee;
    border-radius: 8px;
    padding: 20px;
    width: 220px;
    text-align: center;
    box-shadow: 0 2px 5px rgba(0,0,0,0.05);
    transition: transform 0.2s;
}

.card:hover {
    transform: translateY(-5px);
    box-shadow: 0 5px 15px rgba(0,0,0,0.1);
}

.card img-placeholder {
    display: block;
    height: 120px;
    background-color: #ecf0f1;
    margin-bottom: 15px;
}

```

```

        border-radius: 4px;
        line-height: 120px;
        color: #bdc3c7;
    }

/* Tables */
table {
    width: 100%;
    max-width: 800px;
    margin: 20px auto;
    border-collapse: collapse;
    background: white;
}

th, td {
    padding: 12px 15px;
    border-bottom: 1px solid #ddd;
    text-align: center;
}

th {
    background-color: #f8f9fa;
    font-weight: bold;
    color: #2c3e50;
}

tr:hover {
    background-color: #f1f1f1;
}

/* Ensure the body takes up the full screen height */
body {
    min-height: 100vh;
    display: flex;
    flex-direction: column;
}

.page-wrapper {
    flex: 1;
    display: flex;
    justify-content: center;
    align-items: center;
    width: 100%;
}

/* Styling for the Centered Form Container */
.login-container {
    background: white;
    padding: 40px;
    border-radius: 10px;
    box-shadow: 0 5px 20px rgba(0,0,0,0.1);
    width: 100%;
    max-width: 400px;
    text-align: center;
    border: 1px solid #e0e0e0;
}

.login-container h1 {
    margin-top: 0;
    font-size: 24px;
    color: #333;
}

```

```
.login-container input {
  width: 100%;
  margin-bottom: 15px;
}

.login-container button {
  width: 100%;
  padding: 12px;
  font-size: 16px;
  background-color: #3498db;
  color: white;
  border: none;
  border-radius: 5px;
  cursor: pointer;
}

.login-container button:hover {
  background-color: #2980b9;
}
```