

# **Project Report: Lab 04**

**Submitted by: Muhammad Abdullah**

Source code files for the core project logic.

## File: PineValleyFurniture\Catalog.aspx

```
<%@ Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
    CodeFile="Catalog.aspx.cs" Inherits="PineValleyFurniture.Catalog"
    Title="Update Catalog - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

    <%-- Layout mirrors Lab 01 Catalog.html (.content - text-align:center, inputs centred) --%>
    <div class="content">

        <h3>Update Catalog</h3>
        <h4>Employee only</h4>

        <%-- Fields match PRODUCT_t: Product_Description, Product_Finish, Standard_Price --%>
        <asp:TextBox ID="NameTextBox" runat="server" placeholder="Product Description" /><br />
        <asp:RequiredFieldValidator runat="server" ControlToValidate="NameTextBox"
            ErrorMessage="Product description is required." Display="Dynamic" CssClass="err-label" />

        <asp:TextBox ID="DescriptionTextBox" runat="server" placeholder="Product Finish" /><br />

        <asp:TextBox ID="PriceTextBox" runat="server" placeholder="Standard Price e.g. 299.99" /><br>
        <asp:RegularExpressionValidator runat="server" ControlToValidate="PriceTextBox"
            ValidationExpression="^\d+(\.\d{1,2})?$"
            ErrorMessage="Price must be a valid number." Display="Dynamic" CssClass="err-label" />

        <asp:Button ID="AddProductButton" runat="server" Text="Add product"
            CssClass="pvf-btn" OnClick="AddProductButton_Click" />
        &nbsp;
        <asp:Button ID="RemoveProductButton" runat="server" Text="Remove product"
            CssClass="pvf-btn" OnClick="RemoveProductButton_Click" />

        <asp:Label ID="MessageLabel" runat="server" CssClass="msg-label" />

        <a href="Help.aspx" class="help-link">Help Page</a>

    </div>

</asp:Content>
```



```

try
{
    using (var conn = new SqlConnection(connStr))
    {
        conn.Open();

        var cmd = new SqlCommand(
            "INSERT INTO PRODUCT_t (Product_Line_Id, Product_Description, " +
            "Product_Finish, Standard_Price) VALUES (NULL, @d, @f, @p)", conn);
        cmd.Parameters.AddWithValue("@d", description);
        cmd.Parameters.AddWithValue("@f", finish);
        cmd.Parameters.AddWithValue("@p", price);
        cmd.ExecuteNonQuery();
        return true;
    }
}
catch (SqlException) { return false; }
}

private bool DeleteProduct(string description)
{
    string connStr = ConfigurationManager.ConnectionStrings["PineValleyDB"].ConnectionString;
    try
    {
        using (var conn = new SqlConnection(connStr))
        {
            conn.Open();
            var cmd = new SqlCommand(
                "DELETE FROM PRODUCT_t WHERE Product_Description = @d", conn);
            cmd.Parameters.AddWithValue("@d", description);
            return cmd.ExecuteNonQuery() > 0;
        }
    }
    catch (SqlException) { return false; }
}

private void ClearForm()
{
    NameTextBox.Text = string.Empty; // Product_Description
    DescriptionTextBox.Text = string.Empty; // Product_Finish
    PriceTextBox.Text = string.Empty; // Standard_Price
}
}
}

```

## File: PineValleyFurnitureHelp.aspx

```
<%@ Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
    CodeFile="Help.aspx.cs" Inherits="PineValleyFurniture.Help"
    Title="Help - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

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

        <h2>Help Page</h2>

        <div class="help-section" style="margin-top:20px;">
            <h3>Q1: How do I register as a new customer?</h3>
            <p>Click <strong>Registration</strong> in the navigation bar, fill in your details.</p>
        </div>

        <div class="help-section">
            <h3>Q2: How do I search for products?</h3>
            <p>Go to <strong>Products</strong>, type a keyword in the search box and click on the search button.</p>
        </div>

        <div class="help-section">
            <h3>Q3: How do I add items to my cart?</h3>
            <p>On the <strong>Products</strong> page, click <em>Add to Cart</em> on the product you want to add. View your cart on the <strong>Order</strong> page.</p>
        </div>

        <div class="help-section">
            <h3>Q4: How do I place an order?</h3>
            <p>Open the <strong>Order</strong> page, review items and quantities, then click on the <strong>Place Order</strong> button to proceed to Payment.</p>
        </div>

        <div class="help-section">
            <h3>Q5: Who can update the catalog?</h3>
            <p>The <strong>Catalog</strong> page is for employees only. Log in with an Employee ID and password to add or remove products.</p>
        </div>

        <div class="help-section">
            <h3>Q6: What payment methods are accepted?</h3>
            <p>Cash on Delivery (COD), Credit/Debit Card, and Bank Transfer.</p>
        </div>

    </div>

</asp:Content>
```

**File: PineValleyFurniture\Help.aspx.cs**

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

namespace PineValleyFurniture
{
    public partial class Help : Page
    {
        protected void Page_Load(object sender, EventArgs e) { }
    }
}
```

## File: PineValleyFurnitureLogin.aspx

```
<%@ Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
    CodeFile="Login.aspx.cs" Inherits="PineValleyFurniture.Login"
    Title="Customer Login - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

    <%-- Layout mirrors Lab 01 login.html (.mainBody flex-column, align-items:center) --%>
    <div class="mainBody">

        <div class="title">Customer Login</div>

        <div class="input">
            <asp:TextBox ID="UsernameTextBox" runat="server" placeholder="Enter Customer Name" /><br>
            <asp:RequiredFieldValidator ID="rfvUsername" runat="server"
                ControlToValidate="UsernameTextBox"
                ErrorMessage="Customer name is required."
                Display="Dynamic" CssClass="err-label" />
        </div>

        <asp:Button ID="LoginButton" runat="server" Text="Login"
            CssClass="pvf-btn" OnClick="LoginButton_Click" />
        <br />
        <asp:Button ID="RegisterButton" runat="server" Text="Register"
            CssClass="pvf-btn"
            OnClientClick="window.location='Registration.aspx'; return false;" />
        <br />

        <asp:Label ID="MessageLabel" runat="server" CssClass="err-label" />

        <a href="Help.aspx" class="help-link">Help Page</a>

    </div>

</asp:Content>
```

## File: PineValleyFurnitureLogin.aspx.cs

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

namespace PineValleyFurniture
{
    public partial class Login : Page
    {
        protected void Page_Load(object sender, EventArgs e) { }

        protected void LoginButton_Click(object sender, EventArgs e)
        {
            string customerName = UsernameTextBox.Text.Trim();

            int customerId = GetCustomerId(customerName);
            if (customerId > 0)
            {
                Session["Username"] = customerName;
                Session["CustomerId"] = customerId;
                Response.Redirect("Products.aspx");
            }
            else
            {
                MessageLabel.Text = "Customer name not found. Please register first.";
            }
        }

        /// <summary>
        /// Looks up CUSTOMER_t by Customer_Name and returns the Customer_Id (0 if not found).
        /// CUSTOMER_t has no password column - name lookup is how login works with this schema.
        /// </summary>
        private int GetCustomerId(string customerName)
        {
            string connStr = ConfigurationManager.ConnectionStrings["PineValleyDB"].ConnectionString;

            using (var conn = new SqlConnection(connStr))
            {
                conn.Open();
                var cmd = new SqlCommand(
                    "SELECT Customer_Id FROM CUSTOMER_t WHERE Customer_Name = @n", conn);
                cmd.Parameters.AddWithValue("@n", customerName);
                object result = cmd.ExecuteScalar();
                return result != null ? Convert.ToInt32(result) : 0;
            }
        }
    }
}
```

## File: PineValleyFurniture\Order.aspx

```
<!-- Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
      CodeFile="Order.aspx.cs" Inherits="PineValleyFurniture.Order"
      Title="Shopping Cart - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

    <!-- Layout mirrors Lab 01 Order.html (.content - text-align:center, table centred) -->
    <div class="content">

        <h2>Shopping Cart</h2>

        <!-- Cart GridView (mirrors Lab 01's cart table columns) -->
        <asp:GridView ID="CartGridView" runat="server" AutoGenerateColumns="False"
            CssClass="cart-table" EmptyDataText="Your cart is empty."
            OnRowCommand="CartGridView_RowCommand">
            <Columns>
                <asp:BoundField DataField="Name" HeaderText="Product" />
                <asp:BoundField DataField="Price" HeaderText="Price (PKR)" />
                <asp:TemplateField HeaderText="Quantity">
                    <ItemTemplate>
                        <asp:TextBox ID="QtyTextBox" runat="server" TextMode="Number"
                            Text='<%= Eval("Quantity") %>'
                            style="width:60px;" />
                    </ItemTemplate>
                </asp:TemplateField>
                <asp:BoundField DataField="Total" HeaderText="Total" />
                <asp:ButtonField ButtonType="Button" CommandName="Remove"
                    Text="X" HeaderText="Remove" />
            </Columns>
        </asp:GridView>

        <div class="total" style="margin-top:15px;">
            Grand Total:
            <asp:Label ID="GrandTotalLabel" runat="server" Text="0" />
            PKR
        </div>

        <div style="margin-top:20px;">
            <asp:Button ID="UpdateCartButton" runat="server" Text="Update Cart"
                CssClass="pvf-btn" OnClick="UpdateCartButton_Click" />
            &nbsp;
            <asp:Button ID="CheckoutButton" runat="server" Text="Checkout"
                CssClass="pvf-btn-blue" OnClick="CheckoutButton_Click" />
        </div>

        <a href="Help.aspx" class="help-link">Help Page</a>

    </div>

</asp:Content>
```



```
    {
        var cart = Session["Cart"] as List<CartItem> ?? new List<CartItem>();
        CartGridView.DataSource = cart;
        CartGridView.DataBind();
        GrandTotalLabel.Text = cart.Sum(i => i.Total).ToString();
    }
}
```

## File: PineValleyFurniture\PageLifecycle.aspx

```
<%@ Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
    CodeFile="PageLifecycle.aspx.cs" Inherits="PineValleyFurniture.PageLifecycle"
    Title="Page Lifecycle - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

    <h2>ASP.NET Page Lifecycle Events</h2>
    <p style="margin: 10px 0;">
        This page demonstrates the order in which ASP.NET raises page-processing events
        once the Page object is created. Click the postback button to observe the difference
        between a first request and a postback.
    </p>

    <div style="margin: 15px 0;">
        <asp:Button ID="PostBackButton" runat="server" Text="Trigger Postback"
            CssClass="pvf-btn" OnClick="PostBackButton_Click" />
        &nbsp;
        <asp:Label ID="PostBackLabel" runat="server" CssClass="msg-label" />
    </div>

    <h3 style="margin-bottom: 10px;">Event Log (this request):</h3>
    <asp:Label ID="EventLogLabel" runat="server" />

    <div style="margin-top: 30px; background:#ffffd5; border:1px solid #e5c97e; padding:15px;">
        <h3>Event Reference</h3>
        <table class="catalog-table" style="margin-top:10px;">
            <tr>
                <th>#</th>
                <th>Event</th>
                <th>When it fires</th>
            </tr>
            <tr>
                <td>1</td>
                <td>PreInit</td>
                <td>Before the control tree is
            </tr>
            <tr>
                <td>2</td>
                <td>Init</td>
                <td>Controls initialized, ViewState
            </tr>
            <tr>
                <td>3</td>
                <td>InitComplete</td>
                <td>Initialization complete
            </tr>
            <tr>
                <td>4</td>
                <td>PreLoad</td>
                <td>Before ViewState and postback
            </tr>
            <tr>
                <td>5</td>
                <td>Load</td>
                <td>Page_Load - use <code>Init
            </tr>
            <tr>
                <td>6</td>
                <td>Control events</td>
                <td>Button_Click etc. fir
            </tr>
            <tr>
                <td>7</td>
                <td>LoadComplete</td>
                <td>All child controls loa
            </tr>
            <tr>
                <td>8</td>
                <td>PreRender</td>
                <td>Last chance to modify con
            </tr>
            <tr>
                <td>9</td>
                <td>SaveStateComplete</td>
                <td>ViewState saved
            </tr>
            <tr>
                <td>10</td>
                <td>Render</td>
                <td>HTML written to the respon
            </tr>
            <tr>
                <td>11</td>
                <td>Unload</td>
                <td>Cleanup - fires <em>
            </tr>
        </table>
    </div>

</asp:Content>
```





## File: PineValleyFurniture\Payment.aspx

```
<!-- Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
     CodeFile="Payment.aspx.cs" Inherits="PineValleyFurniture.Payment"
     Title="Payment - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

    <!-- Layout mirrors Lab 01 payment.html (.content wrapper, .payment-form form-groups) -->
    <div class="content">

        <h3>Payment</h3>

        <div class="payment-form" style="margin-top:20px;">

            <div class="form-group">
                <label for="NameTextBox">Name</label>
                <asp:TextBox ID="NameTextBox" runat="server" placeholder="Full name" />
                <asp:RequiredFieldValidator runat="server" ControlToValidate="NameTextBox"
                    ErrorMessage="Name is required." Display="Dynamic" CssClass="err-label" />
            </div>

            <div class="form-group">
                <label for="PaymentMethodDropDown">Payment Method</label>
                <asp:DropDownList ID="PaymentMethodDropDown" runat="server"
                    AutoPostBack="True" OnSelectedIndexChanged="PaymentMethodDropDown_Changed">
                    <asp:ListItem Text="-- Select Method --" Value="" />
                    <asp:ListItem Text="Cash on Delivery (COD)" Value="COD" />
                    <asp:ListItem Text="Credit / Debit Card" Value="Card" />
                    <asp:ListItem Text="Bank Transfer" Value="Bank" />
                </asp:DropDownList>
            </div>

            <!-- Card fields - shown/hidden via code-behind -->
            <asp:Panel ID="CardPanel" runat="server" Visible="False">
                <div class="form-group">
                    <label for="CardNumberTextBox">Card Number</label>
                    <asp:TextBox ID="CardNumberTextBox" runat="server"
                        placeholder="XXXX XXXX XXXX XXXX" />
                </div>
                <div class="form-group">
                    <label for="ExpiryTextBox">Expiry Date</label>
                    <asp:TextBox ID="ExpiryTextBox" runat="server" placeholder="MM/YY" />
                </div>
                <div class="form-group">
                    <label for="CvvTextBox">CVV</label>
                    <asp:TextBox ID="CvvTextBox" runat="server" placeholder="CVV" />
                </div>
            </asp:Panel>

        </div>

        <asp:Button ID="ConfirmButton" runat="server" Text="Confirm Payment"
            CssClass="pvf-btn-blue" OnClick="ConfirmButton_Click" />

        <asp:Label ID="MessageLabel" runat="server" CssClass="msg-label" />

        <a href="Help.aspx" class="help-link">Help Page</a>

    </div>
```

&lt;/asp:Content&gt;

## File: PineValleyFurniture\Payment.aspx.cs

```
using System;
using System.Collections.Generic;
using System.Configuration;
using System.Data.SqlClient;
using System.Web.UI;

namespace PineValleyFurniture
{
    public partial class Payment : Page
    {
        protected void Page_Load(object sender, EventArgs e) { }

        /// <summary>Shows card fields only when "Card" method is selected.</summary>
        protected void PaymentMethodDropDown_Changed(object sender, EventArgs e)
        {
            CardPanel.Visible = (PaymentMethodDropDown.SelectedValue == "Card");
        }

        protected void ConfirmButton_Click(object sender, EventArgs e)
        {
            string method = PaymentMethodDropDown.SelectedValue;
            if (string.IsNullOrEmpty(method))
            {
                MessageLabel.Text = "Please select a payment method.";
                MessageLabel.CssClass = "err-label";
                return;
            }

            string name = NameTextBox.Text.Trim();
            var cart = Session["Cart"] as List<CartItem> ?? new List<CartItem>();

            if (ProcessPayment(name, method, cart))
            {
                // Clear cart after successful payment
                Session["Cart"] = null;
                MessageLabel.Text = "Payment confirmed! Thank you for your order.";
                MessageLabel.CssClass = "msg-label";
            }
            else
            {
                MessageLabel.Text = "Payment failed. Please try again.";
                MessageLabel.CssClass = "err-label";
            }
        }

        private bool ProcessPayment(string name, string method, List<CartItem> cart)
        {
            string connStr = ConfigurationManager.ConnectionStrings["PineValleyDB"].ConnectionString;
            try
            {
                {
                    using (var conn = new SqlConnection(connStr))
                    {
                        conn.Open();

                        // Get Customer_Id stored in session from login
                        int customerId = Session["CustomerId"] != null
                            ? (int)Session["CustomerId"] : 1;

                        // Insert into ORDER_t and get the generated identity ID
                        var orderCmd = new SqlCommand(
```

```

        "INSERT INTO ORDER_t (Customer_Id, Order_Date) " +
        "OUTPUT INSERTED.Order_Id " +
        "VALUES (@cid, @d)", conn);
orderCmd.Parameters.AddWithValue("@cid", customerId);
orderCmd.Parameters.AddWithValue("@d", DateTime.Now);
int orderId = (int)orderCmd.ExecuteScalar();

// Insert each cart item into Order_line_t
foreach (var item in cart)
{
    var lineCmd = new SqlCommand(
        "INSERT INTO Order_line_t (Order_Id, Product_Id, Ordered_Quantity) " +
        "VALUES (@oid, @pid, @q)", conn);
    lineCmd.Parameters.AddWithValue("@oid", orderId);
    lineCmd.Parameters.AddWithValue("@pid", item.ProductId);
    lineCmd.Parameters.AddWithValue("@q", item.Quantity);
    lineCmd.ExecuteNonQuery();
}

return true;
}
}
catch (SqlException) { return false; }
}
}
}

```

## File: PineValleyFurniture\Products.aspx

```
<%@ Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
    CodeFile="Products.aspx.cs" Inherits="PineValleyFurniture.Products"
    Title="Products - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

    <div class="content">
        <h3>Products</h3>

        <%-- Search bar (mirrors Lab 01 search input) --%>
        <asp:TextBox ID="SearchTextBox" runat="server" CssClass="search-input"
            placeholder="Search for Products" />
        <asp:Button ID="SearchButton" runat="server" Text="Search"
            CssClass="pvf-btn" OnClick="SearchButton_Click" />

        <asp:Label ID="CartMessageLabel" runat="server" CssClass="msg-label" />

        <%-- Product cards rendered by a Repeater, mirroring Lab 01 layout --%>
        <div class="products">
            <asp:Repeater ID="ProductsRepeater" runat="server"
                OnItemCommand="ProductsRepeater_ItemCommand">
                <ItemTemplate>
                    <div class="product">
                        <p><%# Eval("Name") %></p>
                        <p>Product Finish: <%# Eval("Finish") %></p>
                        <p>Price: <%# Eval("Price") %> PKR</p>
                        <asp:Button runat="server" Text="Add to Cart"
                            CommandName="AddToCart"
                            CommandArgument='<%# Eval("ProductId") + "|" + Eval("Name") + "|" + E
                            CssClass="pvf-btn" />
                    </div>
                </ItemTemplate>
            </asp:Repeater>
        </div>

        <a href="Help.aspx" class="help-link">Help Page</a>
    </div>

</asp:Content>
```



```

    {
        using (var conn = new SqlConnection(connStr))
        {
            conn.Open();

            string sql = string.IsNullOrEmpty(search)
                ? "SELECT Product_Id, Product_Description, Product_Finish, Standard_Price FROM PRODUCT"
                : "SELECT Product_Id, Product_Description, Product_Finish, Standard_Price FROM PRODUCT"
                + "WHERE Product_Description LIKE @q OR Product_Finish LIKE @q";

            var cmd = new SqlCommand(sql, conn);
            if (!string.IsNullOrEmpty(search))
                cmd.Parameters.AddWithValue("@q", "%" + search + "%");

            using (var reader = cmd.ExecuteReader())
            {
                while (reader.Read())
                {
                    products.Add(new ProductModel
                    {
                        ProductId = Convert.ToInt32(reader["Product_Id"]),
                        Name       = reader["Product_Description"].ToString(),
                        Finish     = reader["Product_Finish"].ToString(),
                        Price      = Convert.ToDecimal(reader["Standard_Price"])
                    });
                }
            }
        }
    }
}
catch (Exception ex)
{
    CartMessageLabel.Text      = "Error loading products: " + ex.Message;
    CartMessageLabel.CssClass = "err-label";
}

ProductsRepeater.DataSource = products;
ProductsRepeater.DataBind();
}
}

public class ProductModel
{
    public int    ProductId { get; set; } // PRODUCT_t.Product_Id
    public string Name      { get; set; } // PRODUCT_t.Product_Description
    public string Finish   { get; set; } // PRODUCT_t.Product_Finish
    public decimal Price   { get; set; } // PRODUCT_t.Standard_Price
}
}

```

## File: PineValleyFurniture\Registration.aspx

```
<%@ Page Language="C#" MasterPageFile="~/Site.Master" AutoEventWireup="true"
    CodeFile="Registration.aspx.cs" Inherits="PineValleyFurniture.Registration"
    Title="Customer Registration - Pine Valley Furniture" %>

<asp:Content ID="HeadContent" ContentPlaceHolderID="HeadContent" runat="server" />

<asp:Content ID="MainContent" ContentPlaceHolderID="MainContent" runat="server">

    <%-- Layout mirrors Lab 01 registration.html (.content - text-align:center, inputs centred) --%>
    <%-- Fields match CUSTOMER_t: Customer_Name, Customer_Address, Customer_City, Customer_State, Postal_
    <div class="content">

        <h2>Customer Registration</h2>

        <asp:TextBox ID="CustomerNameTextBox" runat="server" placeholder="Customer Name" /><br />
        <asp:RequiredFieldValidator runat="server" ControlToValidate="CustomerNameTextBox"
            ErrorMessage="Customer name is required." Display="Dynamic" CssClass="err-label" />

        <asp:TextBox ID="AddressTextBox" runat="server" placeholder="Address (Optional)" /><br />
        <asp:TextBox ID="CityTextBox" runat="server" placeholder="City (Optional)" /><br />
        <asp:TextBox ID="StateTextBox" runat="server" placeholder="State e.g. FL (Optional)" /><br />
        <asp:TextBox ID="PostalCodeTextBox" runat="server" placeholder="Postal Code (Optional)" /><br />

        <asp:Button ID="RegisterButton" runat="server" Text="Register"
            CssClass="pvf-btn" OnClick="RegisterButton_Click" />

        <asp:Label ID="MessageLabel" runat="server" CssClass="msg-label" />

        <a href="Help.aspx" class="help-link">Help Page</a>

    </div>

</asp:Content>
```

## File: PineValleyFurniture\Registration.aspx.cs

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

namespace PineValleyFurniture
{
    public partial class Registration : Page
    {
        protected void Page_Load(object sender, EventArgs e) { }

        protected void RegisterButton_Click(object sender, EventArgs e)
        {
            if (!Page.IsValid) return;

            string name      = CustomerNameTextBox.Text.Trim();
            string address   = AddressTextBox.Text.Trim();
            string city      = CityTextBox.Text.Trim();
            string state     = StateTextBox.Text.Trim();
            string postalCode = PostalCodeTextBox.Text.Trim();

            if (SaveCustomer(name, address, city, state, postalCode))
            {
                MessageLabel.Text      = "Registration successful! You can now log in.";
                MessageLabel.CssClass = "msg-label";
            }
            else
            {
                MessageLabel.Text      = "Registration failed. Please try again.";
                MessageLabel.CssClass = "err-label";
            }
        }

        private bool SaveCustomer(string name, string address,
                                   string city, string state, string postalCode)
        {
            string connStr = ConfigurationManager.ConnectionStrings["PineValleyDB"].ConnectionString;
            try
            {
                using (var conn = new SqlConnection(connStr))
                {
                    conn.Open();

                    var cmd = new SqlCommand(
                        "INSERT INTO CUSTOMER_t (Customer_Name, Customer_Address, " +
                        "Customer_City, Customer_State, Postal_Code) " +
                        "VALUES (@n, @a, @c, @s, @p)", conn);
                    cmd.Parameters.AddWithValue("@n", name);
                    cmd.Parameters.AddWithValue("@a", address);
                    cmd.Parameters.AddWithValue("@c", city);
                    cmd.Parameters.AddWithValue("@s", state);
                    cmd.Parameters.AddWithValue("@p", postalCode);
                    cmd.ExecuteNonQuery();
                    return true;
                }
            }
            catch (SqlException)
            {
                return false;
            }
        }
    }
}
```

} } }

## File: PineValleyFurniture\Site.Master

```
<!-- @ Master Language="C#" AutoEventWireup="true" CodeFile="Site.Master.cs" Inherits="PineValleyFurniture.S
<!DOCTYPE html>
<html>
<head runat="server">
    <meta charset="utf-8" />
    <title>Pine Valley Furniture</title>
    <link runat="server" rel="stylesheet" type="text/css" href="~/Content/PVF.css" />
    <asp:ContentPlaceHolder ID="HeadContent" runat="server" />
</head>
<body>
    <form id="MainForm" runat="server">

        <!-- HEADER -->
        <div class="pvf-header">
            <h1>Pine Valley Furniture</h1>
        </div>

        <!-- NAVBAR -->
        <nav class="pvf-nav">
            <ul>
                <li><a href="Login.aspx">Login</a></li>
                <li><a href="Registration.aspx">Registration</a></li>
                <li><a href="Products.aspx">Products</a></li>
                <li><a href="Catalog.aspx">Catalog</a></li>
                <li><a href="Order.aspx">Order</a></li>
                <li><a href="Payment.aspx">Payment</a></li>
                <li><a href="Help.aspx">Help</a></li>
                <li><a href="PageLifecycle.aspx">Page Events</a></li>
            </ul>
        </nav>

        <!-- PAGE BODY -->
        <div class="pvf-content">
            <asp:ContentPlaceHolder ID="MainContent" runat="server" />
        </div>

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

**File: PineValleyFurniture\Site.Master.cs**

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

namespace PineValleyFurniture
{
    public partial class SiteMaster : MasterPage
    {
        protected void Page_Load(object sender, EventArgs e) { }
    }
}
```

## File: PineValleyFurniture\web.config

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>

  <appSettings>
    <!-- Disables jQuery requirement for ASP.NET validators -->
    <add key="ValidationSettings:UnobtrusiveValidationMode" value="None" />
  </appSettings>

  <connectionStrings>
    <!-- Update Data Source and Initial Catalog to match your SQL Server instance -->
    <add name="PineValleyDB"
          connectionString="workstation id=PineValleyDB.mssql.somee.com;packet size=4096;user id=AbdullahForma
          providerName="System.Data.SqlClient" />
  </connectionStrings>

  <system.webServer>
    <defaultDocument>
      <files>
        <add value="Login.aspx" />
      </files>
    </defaultDocument>
  </system.webServer>

  <system.web>
    <compilation debug="true" targetFramework="4.7.2" />
    <httpRuntime targetFramework="4.7.2" />
    <sessionState timeout="30" />
    <authentication mode="Forms">
      <forms loginUrl="Login.aspx" defaultUrl="Products.aspx" />
    </authentication>
  </system.web>

</configuration>
```

**File: PineValleyFurniture\App\_Code\CartItem.cs**

```
namespace PineValleyFurniture
{
    /// <summary>
    /// Represents a single item in the shopping cart, stored in Session["Cart"].
    /// Matches PRODUCT_t (Product_Id, Product_Description, Standard_Price) and Order_line_t.
    /// </summary>
    public class CartItem
    {
        public int    ProductId { get; set; }    // PRODUCT_t.Product_Id
        public string Name      { get; set; }    // PRODUCT_t.Product_Description
        public decimal Price    { get; set; }    // PRODUCT_t.Standard_Price
        public int    Quantity  { get; set; }
        public decimal Total    { get { return Price * Quantity; } }
    }
}
```