

Code Implementation:

Homepage:

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Homepage.aspx.vb"
Inherits="Homepage" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>ArtVault - HomePage</title>
    <style type="text/css">
        body {
            font-family: Arial, sans-serif;
            margin: 0;
            padding: 0;
            line-height: 1.6;
        }
        .header {
            background: #333;
            color: white;
            padding: 15px;
            overflow: hidden;
        }
        .header h1 {
            margin: 0;
            float: left;
        }
        .header-buttons {
            float: right;
        }
        .btn {
            padding: 8px 15px;
            margin-left: 10px;
            border: none;
            border-radius: 3px;
            cursor: pointer;
        }
        .btn-login {
            background: #4CAF50;
            color: white;
        }
        .btn-signup {
            background: #2196F3;
            color: white;
        }
        .content-section {
            width: 90%;
            max-width: 1200px;
            margin: 20px auto;
        }
        .section-title {
            border-bottom: 1px solid #ddd;
            padding-bottom: 10px;
        }
    </style>
</head>
<body>
    <div class="header">
        <h1>ArtVault</h1>
        <div class="header-buttons">
            <button class="btn btn-login">Login</button>
            <button class="btn btn-signup">Signup</button>
        </div>
    </div>
    <div class="content-section">
        <div class="section-title">
            <h2>Welcome to ArtVault</h2>
        </div>
    </div>
</body>
</html>
```

```

        .artwork-container, .events-container {
            display: flex;
            flex-wrap: wrap;
            gap: 20px;
            margin-top: 20px;
        }
        .artwork-card, .event-card {
            border: 1px solid #ddd;
            padding: 15px;
            width: 250px;
        }
        .artwork-title {
            font-weight: bold;
            margin-bottom: 5px;
        }
        .event-name {
            font-weight: bold;
            margin-bottom: 5px;
        }
    }
</style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="header">
            <h1>ArtVault</h1>
            <div class="header-buttons">
                <asp:Button ID="btnLogin" runat="server" Text="Login" CssClass="btn
btn-login" OnClick="btnLogin_Click" />
                <asp:Button ID="btnSignup" runat="server" Text="Sign Up"
CssClass="btn btn-signup" OnClick="btnSignup_Click" />
                <asp:Label ID="lblWelcome" runat="server" Visible="false"
style="color:white; margin-right:10px;"></asp:Label>
                <asp:Button ID="btnLogout" runat="server" Text="Logout"
CssClass="btn" OnClick="btnLogout_Click" Visible="false" />
            </div>
        </div>

        <div class="content-section">
            <h2>Discover Beautiful Artworks and Events</h2>
            <p>Explore our collection and upcoming exhibitions</p>
        </div>

        <div class="content-section">
            <h3 class="section-title">Featured Artworks</h3>
            <div class="artwork-container">
                <asp:Repeater ID="artworkRepeater" runat="server">
                    <ItemTemplate>
                        <div class="artwork-card">
                            <div class="artwork-title"><%# Eval("TITLE") %></div>
                            <div>By <%# Eval("ARTIST_NAME") %></div>
                        </div>
                    </ItemTemplate>
                </asp:Repeater>
            </div>
        </div>

        <div class="content-section">
            <h3 class="section-title">Upcoming Events</h3>

```

```

        <div class="events-container">
            <asp:Repeater ID="eventsRepeater" runat="server">
                <ItemTemplate>
                    <div class="event-card">
                        <div class="event-name"><%# Eval("EVENT_NAME") %></div>
                        <div><%# FormatDateTime(Eval("START_DATE"),
DateFormat.LongDate) %></div>
                        <div><%# Eval("EVENT_LOCATION") %></div>
                    </div>
                </ItemTemplate>
            </asp:Repeater>
        </div>
    </div>
</form>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class Homepage
    Inherits System.Web.UI.Page

```

```

    Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Load
        If Not IsPostBack Then
            If Session("UserID") IsNot Nothing Then
                ShowLoggedInState()
            Else
                ShowLoggedOutState()
            End If

            LoadFeaturedArtworks()
            LoadAvailableEvents()
        End If
    End Sub

```

```

    Private Sub ShowLoggedInState()
        btnLogin.Visible = False
        btnSignup.Visible = False
        lblWelcome.Visible = True
        lblWelcome.Text = "Welcome, " & Session("UserName").ToString()
        btnLogout.Visible = True
    End Sub

```

```

    Private Sub ShowLoggedOutState()
        btnLogin.Visible = True
        btnSignup.Visible = True
        lblWelcome.Visible = False
        btnLogout.Visible = False
    End Sub

```

```

    Protected Sub btnLogin_Click(ByVal sender As Object, ByVal e As EventArgs)
        Response.Redirect("Login.aspx")
    End Sub

```

```

    Protected Sub btnSignup_Click(ByVal sender As Object, ByVal e As EventArgs)

```

```

        Response.Redirect("Registration.aspx")
    End Sub

    Protected Sub btnLogout_Click(ByVal sender As Object, ByVal e As EventArgs)
        Session.Clear()
        ShowLoggedOutState()
        Response.Redirect("Homepage.aspx")
    End Sub

    Private Sub LoadFeaturedArtworks()
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
        Dim query As String = "SELECT a.TITLE, p.FIRST_NAME + ' ' + p.LAST_NAME AS
ARTIST_NAME " &
                                "FROM ARTWORK a INNER JOIN ARTIST ar ON a.ARTIST_ID =
ar.ARTIST_ID " &
                                "INNER JOIN PERSON p ON ar.ARTIST_ID = p.PERSON_ID " &
                                "WHERE a.STATUS = 'Available' ORDER BY a.STOCKED_DATE
DESC"

        Using conn As New SqlConnection(connStr)
            Dim cmd As New SqlCommand(query, conn)
            Dim adapter As New SqlDataAdapter(cmd)
            Dim dt As New DataTable()
            adapter.Fill(dt)
            artworkRepeater.DataSource = dt
            artworkRepeater.DataBind()
        End Using
    End Sub

    Private Sub LoadAvailableEvents()
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
        Dim query As String = "SELECT EVENT_NAME, START_DATE, EVENT_LOCATION " &
                                "FROM EVENT WHERE START_DATE >= GETDATE() ORDER BY
START_DATE"

        Using conn As New SqlConnection(connStr)
            Dim cmd As New SqlCommand(query, conn)
            Dim adapter As New SqlDataAdapter(cmd)
            Dim dt As New DataTable()
            adapter.Fill(dt)
            eventsRepeater.DataSource = dt
            eventsRepeater.DataBind()
        End Using
    End Sub
End Class

```

Login page:

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Login.aspx.vb"
Inherits="Login" %>
```

```
<!DOCTYPE html>
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
  <title>ArtVault - Login</title>
  <style>
    body {
      font-family: Arial;
      margin: 0;
      padding: 20px;
      background-color: #f5f5f5;
    }
    .login-container {
      max-width: 400px;
      margin: 50px auto;
      padding: 20px;
      background: white;
      border-radius: 5px;
      box-shadow: 0 0 10px rgba(0,0,0,0.1);
    }
    .form-group {
      margin-bottom: 15px;
    }
    label {
      display: block;
      margin-bottom: 5px;
      font-weight: bold;
    }
    input[type="email"], input[type="password"] {
      width: 100%;
      padding: 8px;
      box-sizing: border-box;
      border: 1px solid #ddd;
      border-radius: 4px;
    }
    .btn-login {
      background-color: #4CAF50;
      color: white;
      border: none;
      padding: 10px 15px;
      width: 100%;
      border-radius: 4px;
      cursor: pointer;
    }
    .message {
      margin: 10px 0;
      padding: 10px;
      border-radius: 4px;
    }
    .error {
      background-color: #ffebee;
      color: #c62828;
    }
  </style>
</head>
<body>
```

```

    }
    .success {
        background-color: #e8f5e9;
        color: #2e7d32;
    }
    .validation-error {
        color: red;
        font-size: 12px;
    }
    .register-link {
        text-align: center;
        margin-top: 15px;
    }
}
</style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="login-container">
            <h2 style="text-align: center;">Login to ArtVault</h2>

            <div class="form-group">
                <asp:Label ID="lblEmail" runat="server" Text="Email:"
AssociatedControlID="txtEmail"></asp:Label>
                <asp:TextBox ID="txtEmail" runat="server" TextMode="Email"
required="true"></asp:TextBox>
                <asp:RegularExpressionValidator ID="revEmail" runat="server"
ControlToValidate="txtEmail"
ValidationExpression="^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-
Z]{2,}$"
ErrorMessage="Please enter a valid email address"
CssClass="validation-error"
Display="Dynamic">
                </asp:RegularExpressionValidator>
            </div>

            <div class="form-group">
                <asp:Label ID="lblPassword" runat="server" Text="Password:"
AssociatedControlID="txtPassword"></asp:Label>
                <asp:TextBox ID="txtPassword" runat="server" TextMode="Password"
required="true"></asp:TextBox>
            </div>

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

            <div class="form-group">
                <asp:Label ID="lblMessage" runat="server"
CssClass="message"></asp:Label>
            </div>

            <div class="register-link">
                <asp:HyperLink ID="lnkRegister" runat="server"
NavigateUrl="~/Registration.aspx">Don't have an account? Register
here</asp:HyperLink>
            </div>
        </div>
    </form>

```

```

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

```

```

Imports System.Data
Imports System.Data.SqlClient
Imports System.Security.Cryptography
Imports System.Text

```

```

Partial Class Login
    Inherits System.Web.UI.Page

```

```

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

```

```

    ' Redirect authenticated users away from login page
    If Session("UserID") IsNot Nothing Then
        RedirectBasedOnRole()
    End If

```

```

    ' Check for successful registration redirect
    If Request.QueryString("registration") = "success" Then
        lblMessage.Text = "Registration successful! Please login."
        lblMessage.CssClass = "message success"
    End If
End Sub

```

```

    Protected Sub btnLogin_Click(ByVal sender As Object, ByVal e As EventArgs)
Handles btnLogin.Click

```

```

    If Not Page.IsValid Then Return

```

```

    Const ADMIN_USERNAME As String = "admin@gmail.com"
    Const ADMIN_PASSWORD As String = "SecureAdmin123!"

```

```

    Dim username As String = txtEmail.Text.Trim()
    Dim password As String = txtPassword.Text

```

```

    ' First check for admin login
    If username.Equals(ADMIN_USERNAME, StringComparison.OrdinalIgnoreCase) Then
        If password = ADMIN_PASSWORD Then
            ' Complete admin session setup
            Session("UserID") = "ADMIN-001" ' Or fetch from DB
            Session("UserRole") = "Admin"
            Session("UserName") = "Administrator"
            RedirectBasedOnRole()
            Return ' Critical - exit after successful admin auth
        Else
            lblMessage.Text = "Invalid admin password"
            lblMessage.CssClass = "message error"
            Return
        End If
    End If

```

```

    ' Regular user authentication
    Dim conn As New SqlConnection("Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI")
    Dim query As String = "SELECT PERSON_ID, FIRST_NAME, ROLE FROM PERSON WHERE
EMAIL = @Email AND PASSWORD = @Password"

```

```

password = HashPassword(txtPassword.Text)

Using cmd As New SqlCommand(query, conn)
    cmd.Parameters.AddWithValue("@Email", username)
    cmd.Parameters.AddWithValue("@Password", password)

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

        If reader.Read() Then
            Session("UserID") = reader("PERSON_ID").ToString()
            Session("UserName") = reader("FIRST_NAME").ToString()
            Session("UserRole") = reader("ROLE").ToString()
            RedirectBasedOnRole()
        Else
            lblMessage.Text = "Invalid email or password."
            lblMessage.CssClass = "message error"
        End If
    Catch ex As Exception
        lblMessage.Text = "Login error. Please try later."
        lblMessage.CssClass = "message error"
        ' Log error: System.Diagnostics.Trace.WriteLine(ex.ToString())
    End Try
End Using
End Sub

Private Sub RedirectBasedOnRole()

    Select Case Session("UserRole").ToString()
        Case "Admin"
            Response.Redirect("~/AdminDashboard.aspx")
        Case "Artist"
            Response.Redirect("~/ArtistDashboard.aspx")
        Case "Customer"
            Response.Redirect("~/CustomerDashboard.aspx")
        Case "Employee"
            Response.Redirect("~/EmployeeDashboard.aspx")
        Case Else
            Response.Redirect("~/Registration.aspx")
    End Select
End Sub

Private Function HashPassword(ByVal password As String) As String
    ' Consistent with Register page hashing
    Using sha256 As SHA256 = SHA256.Create()
        Dim bytes As Byte() =
sha256.ComputeHash(Encoding.UTF8.GetBytes(password))
        Dim builder As New StringBuilder()
        For Each b As Byte In bytes
            builder.Append(b.ToString("x2"))
        Next
        Return builder.ToString()
    End Using
End Function
End Class

```

Registration:

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Registration.aspx.vb"
Inherits="Register" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>ArtVault - Registration</title>
</head>
<body>
    <form id="form1" runat="server">
        <div class="form-box">
            <h2>Create Your Account</h2>

            <div>
                <label>CNIC</label>
                <asp:TextBox ID="txtCNIC" runat="server"></asp:TextBox>
                <asp:RequiredFieldValidator ID="RequiredFieldValidator"
runat="server"
ControlToValidate="txtCNIC"
ErrorMessage="CNIC is required."
ForeColor="Red">*</asp:RequiredFieldValidator>
                <asp:RegularExpressionValidator
ID="regexValidatorCNIC"
runat="server"
ControlToValidate="txtCNIC"
ErrorMessage="Enter a valid CNIC (e.g., 12345-1234567-1)."
ValidationExpression="^\d{5}-\d{7}-\d{1}$"
ForeColor="Red">
                </asp:RegularExpressionValidator>

            </div>
            <br />

            <!-- First Name -->
            <div>
                <label>First Name</label>
                <asp:TextBox ID="txtFirstName" runat="server"></asp:TextBox>
                <asp:RequiredFieldValidator ID="rfvFirstName" runat="server"
ControlToValidate="txtFirstName"
ErrorMessage="First Name is required."
ForeColor="Red">*</asp:RequiredFieldValidator>

            </div>
            <br />

            <!-- Last Name -->
            <div>
                <label>Last Name</label>
                <asp:TextBox ID="txtLastName" runat="server"></asp:TextBox>
            </div>
            <br />

            <!-- Email -->
            <div>
                <label>Email</label>
```

```

<asp:TextBox ID="txtEmail" runat="server"></asp:TextBox>
<asp:RequiredFieldValidator ID="rfvEmail" runat="server"
    ControlToValidate="txtEmail"
    ErrorMessage="Email is required."
    ForeColor="Red">*</asp:RequiredFieldValidator>
<asp:RegularExpressionValidator ID="revEmail" runat="server"
    ControlToValidate="txtEmail"
    ValidationExpression="\w+@[a-zA-Z_]+?\.[a-zA-Z]{2,3}$"
    ErrorMessage="Invalid email format."
    ForeColor="Red">*</asp:RegularExpressionValidator>
</div>
<br />

<!-- Phone Number -->
<div>
    <label>Phone Number</label>
    <asp:TextBox ID="txtPhone" runat="server"></asp:TextBox>
    <asp:RequiredFieldValidator ID="rfvPhone" runat="server"
        ControlToValidate="txtPhone"
        ErrorMessage="Phone Number is required."
        ForeColor="Red">*</asp:RequiredFieldValidator>
</div>
<br />

<!-- Gender -->
<div>
    <label>Gender</label>
    <asp:DropDownList ID="ddlGender" runat="server">
        <asp:ListItem Text="Select Gender" Value=""></asp:ListItem>
        <asp:ListItem Text="Male" Value="M"></asp:ListItem>
        <asp:ListItem Text="Female" Value="F"></asp:ListItem>
    </asp:DropDownList>
    <asp:RequiredFieldValidator ID="rfvGender" runat="server"
        ControlToValidate="ddlGender"
        InitialValue=""
        ErrorMessage="Gender is required."
        ForeColor="Red">*</asp:RequiredFieldValidator>
</div>
<br />

<!-- Password -->
<div>
    <label>Password</label>
    <asp:TextBox ID="txtPassword" runat="server"
TextMode="Password"></asp:TextBox>
    <asp:RequiredFieldValidator ID="rfvPassword" runat="server"
        ControlToValidate="txtPassword"
        ErrorMessage="Password is required."
        ForeColor="Red">*</asp:RequiredFieldValidator>
    <asp:RegularExpressionValidator ID="revPassword" runat="server"
        ControlToValidate="txtPassword"
        ValidationExpression="^(?=.*[a-z])(?=.*[A-
Z])(?=.*\d)(?=.*[@$!%*?&#])[A-Za-z\d@$!%*?&#]{8,}$"
        ErrorMessage="Password must be at least 8 characters long, and
include uppercase, lowercase, number, and special character."
        ForeColor="Red">*</asp:RegularExpressionValidator>
</div>
<br />

```

```

<!-- Confirm Password -->
<div>
    <label>Confirm Password</label>
    <asp:TextBox ID="txtConfirmPassword" runat="server"
TextMode="Password"></asp:TextBox>
    <asp:RequiredFieldValidator ID="rfvConfirmPassword" runat="server"
        ControlToValidate="txtConfirmPassword"
        ErrorMessage="Confirm Password is required."
        ForeColor="Red">*</asp:RequiredFieldValidator>
    <asp:CompareValidator ID="cvPassword" runat="server"
        ControlToValidate="txtConfirmPassword"
        ControlToCompare="txtPassword"
        ErrorMessage="Passwords do not match."
        ForeColor="Red">*</asp:CompareValidator>
</div>
<br />

<!-- City -->
<div>
    <label>City</label>
    <asp:TextBox ID="txtCity" runat="server"></asp:TextBox>
    <asp:RequiredFieldValidator ID="rfvCity" runat="server"
        ControlToValidate="txtCity"
        ErrorMessage="City is required."
        ForeColor="Red">*</asp:RequiredFieldValidator>
</div>
<br />

<!-- State -->
<div>
    <label>State</label>
    <asp:TextBox ID="txtState" runat="server"></asp:TextBox>
    <asp:RequiredFieldValidator ID="rfvState" runat="server"
        ControlToValidate="txtState"
        ErrorMessage="State is required."
        ForeColor="Red">*</asp:RequiredFieldValidator>
</div>
<br />

<!-- Postal Code -->
<div>
    <label>Postal Code</label>
    <asp:TextBox ID="txtPostalCode" runat="server"></asp:TextBox>
    <asp:RequiredFieldValidator ID="rfvPostalCode" runat="server"
        ControlToValidate="txtPostalCode"
        ErrorMessage="Postal Code is required."
        ForeColor="Red">*</asp:RequiredFieldValidator>
</div>
<br />

<!-- Country -->
<div>
    <label>Country</label>
    <asp:TextBox ID="txtCountry" runat="server"></asp:TextBox>
    <asp:RequiredFieldValidator ID="rfvCountry" runat="server"
        ControlToValidate="txtCountry"
        ErrorMessage="Country is required."

```

```

        ForeColor="Red">*</asp:RequiredFieldValidator>
    </div>
    <br />

    <div>
        <label>Role</label>
        <asp:DropDownList runat="server" ID="txtRole">
            <asp:ListItem Text="Register as a " Value=""></asp:ListItem>
            <asp:ListItem Text="Customer" Value="Customer"></asp:ListItem>
            <asp:ListItem Text="Artist" Value="Artist"></asp:ListItem>
        </asp:DropDownList>
    </div>
    <br />
    <br />

    <!-- Submit Button -->
    <div>
        <asp:Button ID="btnRegister" runat="server" Text="Register"
        CssClass="btn" OnClick="btnRegister_Click" />
    </div>
    <br />

    <!-- Error Messages -->
    <div>
        <asp:Label ID="lblMessage" runat="server" CssClass="message"
        ForeColor="Red"></asp:Label>
    </div>
</div>
</form>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient
Imports System.Security.Cryptography
Imports System.Text

```

```

Partial Class Register
    Inherits System.Web.UI.Page

```

```

    Protected Sub btnRegister_Click(ByVal sender As Object, ByVal e As EventArgs)
Handles btnRegister.Click
    If Page.IsValid Then
        ' Check if email already exists
        If EmailExists(txtEmail.Text.Trim()) Then
            lblMessage.Text = "This email address is already registered."
            Return
        End If

        ' Hash the password
        Dim hashedPassword As String = HashPassword(txtPassword.Text)

        ' Start database transaction
        Dim conn As New SqlConnection()
        conn.ConnectionString = "Data Source=Eman\SQLEXPRESS;" &

```

```

                                "Initial Catalog=ArtVault;Integrated
Security=SSPI"
    Try
        conn.Open()
        Dim transaction As SqlTransaction = conn.BeginTransaction()

        Try
            ' Insert into PERSON table
            Dim personQuery As String = "INSERT INTO PERSON (PERSON_ID,
FIRST_NAME, LAST_NAME, EMAIL, PHONE_NO, " &
                                "GENDER, CITY, STATE,
POSTAL_CODE, COUNTRY, ROLE, PASSWORD) " &
                                "VALUES (@PersonID, @FirstName,
@LastName, @Email, @Phone, @Gender, " &
                                "@City, @State, @PostalCode,
@Country, @Role, @Password)"

            Using cmd As New SqlCommand(personQuery, conn, transaction)
                cmd.Parameters.AddWithValue("@PersonID",
txtCNIC.Text.Trim())
                cmd.Parameters.AddWithValue("@FirstName",
txtFirstName.Text.Trim())
                cmd.Parameters.AddWithValue("@LastName",
                    If(String.IsNullOrEmpty(txtLastName.Text),
                        DirectCast(DBNull.Value, Object),
                        DirectCast(txtLastName.Text.Trim(), Object)))
                cmd.Parameters.AddWithValue("@Email", txtEmail.Text.Trim())
                cmd.Parameters.AddWithValue("@Phone", txtPhone.Text.Trim())
                cmd.Parameters.AddWithValue("@Gender",
ddlGender.SelectedValue)
                cmd.Parameters.AddWithValue("@City", txtCity.Text.Trim())
                cmd.Parameters.AddWithValue("@State", txtState.Text.Trim())
                cmd.Parameters.AddWithValue("@PostalCode",
txtPostalCode.Text.Trim())
                cmd.Parameters.AddWithValue("@Country",
txtCountry.Text.Trim())
                cmd.Parameters.AddWithValue("@Role", txtRole.SelectedValue)
                cmd.Parameters.AddWithValue("@Password", hashedPassword)

                cmd.ExecuteNonQuery()
            End Using

            ' Insert into CUSTOMER table
            Dim customerQuery As String = "INSERT INTO CUSTOMER
(CUSTOMER_ID, ACCOUNT_CREATION_DATE) " &
                                "VALUES (@CustomerID,
@CreationDate)"

            Using cmd As New SqlCommand(customerQuery, conn, transaction)
                cmd.Parameters.AddWithValue("@CustomerID",
txtCNIC.Text.Trim())
                cmd.Parameters.AddWithValue("@CreationDate", DateTime.Now)
                cmd.ExecuteNonQuery()
            End Using

            ' Commit transaction if all operations succeeded
            transaction.Commit()

```

```

        ' Registration successful - redirect to login or welcome page
        Session("RegistrationSuccess") = True
        Response.Redirect("Login.aspx?registration=success")

    Catch ex As Exception
        ' Rollback transaction if any error occurs
        Try
            If transaction IsNot Nothing Then
                transaction.Rollback()
            End If
        Catch rollbackEx As Exception
            lblMessage.Text = "A critical error occurred during
registration. " &
                "Administrators have been notified. Please try again later."
        End Try

        lblMessage.Text = "An error occurred during registration. Please
try again. Error: " & ex.Message

    End Try
Catch connEx As Exception
    lblMessage.Text = "Could not connect to database. Please try again
later. Error: " & connEx.Message
Finally
    conn.Close()
End Try
End If
End Sub

Private Function EmailExists(ByVal email As String) As Boolean
    Dim query As String = "SELECT COUNT(*) FROM PERSON WHERE EMAIL = @Email"

    Dim conn As New SqlConnection()
    conn.ConnectionString = "Data Source=Eman\SQLEXPRESS;" &
        "Initial Catalog=ArtVault;Integrated
Security=SSPI"
    Using cmd As New SqlCommand(query, conn)
        cmd.Parameters.AddWithValue("@Email", email)
        Try
            conn.Open()
            Dim count As Integer = Convert.ToInt32(cmd.ExecuteScalar())
            Return count > 0
        Catch ex As Exception
            Return False ' Assume email doesn't exist if there's an error
        End Try
    End Using
End Function

Private Function HashPassword(ByVal password As String) As String
    ' Use SHA256 hashing (in production, consider stronger hashing like PBKDF2
or bcrypt)
    Using sha256 As SHA256 = SHA256.Create()
        Dim bytes As Byte() =
sha256.ComputeHash(Encoding.UTF8.GetBytes(password))
        Dim builder As New StringBuilder()
        For Each b As Byte In bytes
            builder.Append(b.ToString("x2"))
        Next
    End Using
End Function

```

```

        Return builder.ToString()
    End Using
End Function
End Class

```

Admin Dashboard:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="AdminDashboard.aspx.vb"
Inherits="AdminDashboard" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Admin Dashboard</title>
    <style>
        body { font-family: Arial; margin: 0; padding: 0; background: #f5f5f5; }
        .container { max-width: 1200px; margin: 0 auto; padding: 20px; }
        .header { background: #333; color: white; padding: 15px; margin-bottom:
20px; }
        .card { background: white; border-radius: 5px; box-shadow: 0 2px 5px
rgba(0,0,0,0.1); padding: 20px; margin-bottom: 20px; }
        .grid-view { width: 100%; margin-top: 15px; border-collapse: collapse; }
        .grid-view th { background: #333; color: white; padding: 10px; text-align:
left; }
        .grid-view td { padding: 10px; border-bottom: 1px solid #ddd; }
        .btn { padding: 8px 15px; background: #4CAF50; color: white; border: none;
border-radius: 4px; cursor: pointer; }
        .btn:hover { background: #45a049; }
        .btn-danger { background: #f44336; }
        .btn-danger:hover { background: #d32f2f; }
        .summary-box { display: flex; justify-content: space-between; margin-bottom:
20px; }
        .summary-item { flex: 1; margin: 0 10px; text-align: center; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="header">
            <h1>ArtVault Admin Dashboard</h1>
            <asp:Label ID="lblWelcome" runat="server"></asp:Label>
            <asp:Button ID="btnLogout" runat="server" Text="Logout" CssClass="btn
btn-danger" OnClick="btnLogout_Click" style="float: right;" />
        </div>

        <div class="container">
            <div class="summary-box">
                <div class="card summary-item">
                    <h3>Total Artworks</h3>
                    <asp:Label ID="lblTotalArtworks" runat="server" Font-
Size="Large"></asp:Label>
                </div>
                <div class="card summary-item">

```

```

        <h3>Total Orders</h3>
        <asp:Label ID="lblTotalOrders" runat="server" Font-
Size="Large"></asp:Label>
    </div>
    <div class="card summary-item">
        <h3>Total Customers</h3>
        <asp:Label ID="lblTotalCustomers" runat="server" Font-
Size="Large"></asp:Label>
    </div>
</div>

<div class="card">
    <h2>Recent Orders</h2>
    <asp:GridView ID="gvRecentOrders" runat="server" CssClass="grid-
view" AutoGenerateColumns="False">
        <Columns>
            <asp:BoundField DataField="ORDER_ID" HeaderText="Order ID"
/>
            <asp:BoundField DataField="ORDER_DATE" HeaderText="Date"
DataFormatString="{0:d}" />
            <asp:BoundField DataField="CUSTOMER_NAME"
HeaderText="Customer" />
            <asp:BoundField DataField="ORDER_STATUS" HeaderText="Status"
/>
            <asp:BoundField DataField="TOTAL_AMOUNT" HeaderText="Amount"
DataFormatString="{0:C}" />
            <asp:TemplateField HeaderText="Actions">
                <ItemTemplate>
                    <asp:Button ID="btnViewOrder" runat="server"
Text="View" CssClass="btn"
CommandArgument='<%# Eval("ORDER_ID") %>'
OnClick="btnViewOrder_Click" />
                </ItemTemplate>
            </asp:TemplateField>
        </Columns>
    </asp:GridView>
</div>

<div class="card">
    <h2>Artwork Management</h2>
    <asp:Button ID="btnAddArtwork" runat="server" Text="Add New Artwork"
CssClass="btn" OnClick="btnAddArtwork_Click" />
    <asp:GridView ID="gvArtworks" runat="server" CssClass="grid-view"
AutoGenerateColumns="False">
        <Columns>
            <asp:BoundField DataField="ARTWORK_ID" HeaderText="ID" />
            <asp:BoundField DataField="TITLE" HeaderText="Title" />
            <asp:BoundField DataField="ARTIST_NAME" HeaderText="Artist"
/>
            <asp:BoundField DataField="PRICE" HeaderText="Price"
DataFormatString="{0:C}" />
            <asp:BoundField DataField="STATUS" HeaderText="Status" />
            <asp:TemplateField HeaderText="Actions">
                <ItemTemplate>
                    <asp:Button ID="btnEditArtwork" runat="server"
Text="Edit" CssClass="btn"
CommandArgument='<%# Eval("ARTWORK_ID") %>'
OnClick="btnEditArtwork_Click" />
                </ItemTemplate>
            </asp:TemplateField>
        </Columns>
    </asp:GridView>
</div>

```

```

        </ItemTemplate>
    </asp:TemplateField>
</Columns>
</asp:GridView>
</div>
<!-- Add this to your AdminDashboard.aspx after the Artwork Management
card -->
<div class="card">
    <h2>Employee Management</h2>
    <asp:Button ID="btnAddEmployee" runat="server" Text="Register New Employee"
    CssClass="btn" OnClick="btnAddEmployee_Click" />
    <asp:GridView ID="gvEmployees" runat="server" CssClass="grid-view"
    AutoGenerateColumns="False">
        <Columns>
            <asp:BoundField DataField="EMPLOYEE_ID" HeaderText="ID" />
            <asp:BoundField DataField="FULL_NAME" HeaderText="Name" />
            <asp:BoundField DataField="ROLE" HeaderText="Role" />
            <asp:BoundField DataField="SALARY" HeaderText="Salary"
    DataFormatString="{0:C}" />
            <asp:BoundField DataField="STATUS" HeaderText="Status" />
            <asp:BoundField DataField="JOINING_DATE" HeaderText="Join Date"
    DataFormatString="{0:d}" />
            <asp:TemplateField HeaderText="Actions">
                <ItemTemplate>
                    <asp:Button ID="btnEditEmployee" runat="server" Text="Edit"
    CssClass="btn"
    CommandArgument='<%# Eval("EMPLOYEE_ID") %>'
    OnClick="btnEditEmployee_Click" />
                </ItemTemplate>
            </asp:TemplateField>
        </Columns>
    </asp:GridView>
</div>

    <div class="card">
        <h2>Event Management</h2>
        <asp:Button ID="btnAddEvent" runat="server" Text="Create New Event"
    CssClass="btn" OnClick="btnAddEvent_Click" />
        <asp:GridView ID="gvEvents" runat="server" CssClass="grid-view"
    AutoGenerateColumns="False">
            <Columns>
                <asp:BoundField DataField="EVENT_NAME" HeaderText="Event Name" />
                <asp:BoundField DataField="START_DATE" HeaderText="Start Date"
    DataFormatString="{0:d}" />
                <asp:BoundField DataField="END_DATE" HeaderText="End Date"
    DataFormatString="{0:d}" />
                <asp:BoundField DataField="EVENT_LOCATION" HeaderText="Location" />
                <asp:BoundField DataField="ORGANIZER_NAME" HeaderText="Organizer" />
                <asp:TemplateField HeaderText="Actions">
                    <ItemTemplate>
                        <asp:Button ID="btnManageEvent" runat="server" Text="Manage"
    CssClass="btn"
    CommandArgument='<%# Eval("EVENT_NAME") + "|" +
    Eval("START_DATE", "{0:yyyy-MM-dd}") %>'
    OnClick="btnManageEvent_Click" />
                    </ItemTemplate>
                </asp:TemplateField>
            </Columns>
        </asp:GridView>
    </div>

```

```
</div>
```

```
</div>
```

```
</form>
```

```
</body>
```

```
</html>
```

```
Imports System.Data
```

```
Imports System.Data.SqlClient
```

```
Partial Class AdminDashboard
```

```
Inherits System.Web.UI.Page
```

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

```
    If Not IsPostBack Then
```

```
        ' Check if user is logged in as admin
```

```
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Admin"
```

```
Then
```

```
            Response.Redirect("Login.aspx")
```

```
        End If
```

```
        lblWelcome.Text = "Welcome, " & Session("UserName").ToString()
```

```
        LoadDashboardData()
```

```
        LoadEmployees()
```

```
        LoadEvents()
```

```
    End If
```

```
End Sub
```

```
Private Sub LoadDashboardData()
```

```
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial  
Catalog=ArtVault;Integrated Security=SSPI"
```

```
    ' Load summary counts
```

```
    Using conn As New SqlConnection(connStr)
```

```
        ' Total Artworks
```

```
        Dim artQuery As String = "SELECT COUNT(*) FROM ARTWORK"
```

```
        Using cmd As New SqlCommand(artQuery, conn)
```

```
            conn.Open()
```

```
            lblTotalArtworks.Text = cmd.ExecuteScalar().ToString()
```

```
            conn.Close()
```

```
        End Using
```

```
        ' Total Orders
```

```
        Dim ordQuery As String = "SELECT COUNT(*) FROM ORDER_T"
```

```
        Using cmd As New SqlCommand(ordQuery, conn)
```

```
            conn.Open()
```

```
            lblTotalOrders.Text = cmd.ExecuteScalar().ToString()
```

```
            conn.Close()
```

```
        End Using
```

```
        ' Total Customers
```

```
        Dim custQuery As String = "SELECT COUNT(*) FROM CUSTOMER"
```

```
        Using cmd As New SqlCommand(custQuery, conn)
```

```
            conn.Open()
```

```
            lblTotalCustomers.Text = cmd.ExecuteScalar().ToString()
```

```
            conn.Close()
```

```
        End Using
```

```

End Using

' Load recent orders
LoadRecentOrders()

' Load artworks
LoadArtworks()
End Sub

Private Sub LoadRecentOrders()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query As String = "SELECT TOP 10 O.ORDER_ID, O.ORDER_DATE, P.FIRST_NAME
+ ' ' + P.LAST_NAME AS CUSTOMER_NAME, " &
        "O.ORDER_STATUS, SUM(AP.PRICE) AS TOTAL_AMOUNT " &
        "FROM ORDER_T O " &
        "JOIN CUSTOMER C ON O.CUSTOMER_ID = C.CUSTOMER_ID " &
        "JOIN PERSON P ON C.CUSTOMER_ID = P.PERSON_ID " &
        "JOIN ORDERLINE OL ON O.ORDER_ID = OL.ORDER_ID " &
        "JOIN ARTWORK A ON OL.ARTWORK_ID = A.ARTWORK_ID " &
        "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID = AP.ARTWORK_ID
" &
        "GROUP BY O.ORDER_ID, O.ORDER_DATE, P.FIRST_NAME,
P.LAST_NAME, O.ORDER_STATUS " &
        "ORDER BY O.ORDER_DATE DESC"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            Try
                conn.Open()
                Dim da As New SqlDataAdapter(cmd)
                Dim dt As New DataTable()
                da.Fill(dt)
                gvRecentOrders.DataSource = dt
                gvRecentOrders.DataBind()
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using
End Sub

Private Sub LoadArtworks()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query As String = "SELECT A.ARTWORK_ID, A.TITLE, P.FIRST_NAME + ' ' +
P.LAST_NAME AS ARTIST_NAME, " &
        "AP.PRICE, A.STATUS " &
        "FROM ARTWORK A " &
        "JOIN ARTIST AR ON A.ARTIST_ID = AR.ARTIST_ID " &
        "JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &
        "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID = AP.ARTWORK_ID
" &
        "ORDER BY A.STOCKED_DATE DESC"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            Try

```

```

        conn.Open()
        Dim da As New SqlDataAdapter(cmd)
        Dim dt As New DataTable()
        da.Fill(dt)
        gvArtworks.DataSource = dt
        gvArtworks.DataBind()
    Catch ex As Exception
        ' Handle error
    End Try
End Using
End Using
End Sub

Protected Sub btnViewOrder_Click(sender As Object, e As EventArgs)
    Dim btn As Button = CType(sender, Button)
    Response.Redirect("AdminOrderDetails.aspx?id=" & btn.CommandArgument)
End Sub

Protected Sub btnEditArtwork_Click(sender As Object, e As EventArgs)
    Dim btn As Button = CType(sender, Button)
    Response.Redirect("EditArtwork.aspx?id=" & btn.CommandArgument)
End Sub

Protected Sub btnAddArtwork_Click(sender As Object, e As EventArgs)
    Response.Redirect("AddArtwork.aspx")
End Sub

Protected Sub btnLogout_Click(sender As Object, e As EventArgs)
    Session.Abandon()
    Response.Redirect("Homepage.aspx")
End Sub
' Add these methods to your AdminDashboard class

Private Sub LoadEmployees()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query As String = "SELECT E.EMPLOYEE_ID, P.FIRST_NAME + ' ' +
P.LAST_NAME AS FULL_NAME, " &
        "E.ROLE, E.SALARY, E.STATUS, E.JOINING_DATE " &
        "FROM EMPLOYEE E " &
        "JOIN PERSON P ON E.EMPLOYEE_ID = P.PERSON_ID " &
        "ORDER BY E.JOINING_DATE DESC"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            Try
                conn.Open()
                Dim da As New SqlDataAdapter(cmd)
                Dim dt As New DataTable()
                da.Fill(dt)
                gvEmployees.DataSource = dt
                gvEmployees.DataBind()
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using

```

```

    End Using
End Sub

Protected Sub btnAddEmployee_Click(sender As Object, e As EventArgs)
    Response.Redirect("RegisterEmployee.aspx")
End Sub

Protected Sub btnEditEmployee_Click(sender As Object, e As EventArgs)
    Dim btn As Button = CType(sender, Button)
    Response.Redirect("EditEmployee.aspx?id=" & btn.CommandArgument)
End Sub

Private Sub LoadEvents()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query As String = "SELECT E.EVENT_NAME, E.START_DATE, E.END_DATE,
E.EVENT_LOCATION, " &
        "P.FIRST_NAME + ' ' + P.LAST_NAME AS ORGANIZER_NAME " &
        "FROM EVENT E " &
        "JOIN EMPLOYEE EMP ON E.EMPLOYEE_ID = EMP.EMPLOYEE_ID "
    &
        "JOIN PERSON P ON EMP.EMPLOYEE_ID = P.PERSON_ID " &
        "ORDER BY E.START_DATE DESC"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            Try
                conn.Open()
                Dim da As New SqlDataAdapter(cmd)
                Dim dt As New DataTable()
                da.Fill(dt)
                gvEvents.DataSource = dt
                gvEvents.DataBind()
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using
End Sub

Protected Sub btnAddEvent_Click(sender As Object, e As EventArgs)
    Response.Redirect("AddEvent.aspx")
End Sub

Protected Sub btnManageEvent_Click(sender As Object, e As EventArgs)
    Dim btn As Button = CType(sender, Button)
    Dim args = btn.CommandArgument.Split("|"c)

    ' Correct VB.NET syntax for URL building:
    Response.Redirect("ManageEvent.aspx?name=" & Server.UrlEncode(args(0)) &
        "&startDate=" & Server.UrlEncode(args(1)))
End Sub
End Class

```

Customer Dashboard:

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="CustomerDashboard.aspx.vb"
Inherits="CustomerDashboard" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>ArtVault - Dashboard</title>
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet" />
    <style>
        .profile-card { background-color: #f8f9fa; border-radius: 10px; }
        .artwork-img { height: 180px; object-fit: cover; background-color: #eee;
display: flex; align-items: center; justify-content: center; }
        .card-hover { box-shadow: 0 5px 15px rgba(0,0,0,0.1); }
        .no-image { color: #666; font-style: italic; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <!-- Header -->
        <nav class="navbar navbar-dark bg-dark mb-4">
            <div class="container">
                <a class="navbar-brand" href="Homepage.aspx">ArtVault</a>
            <div>
                <span class="text-light me-3">Welcome, <%= Session("UserName")
%></span>
                <asp:Button ID="btnLogout" runat="server" Text="Logout"
CssClass="btn btn-light btn-sm" OnClick="btnLogout_Click" />
            </div>
        </div>
        </nav>

        <div class="container">
            <!-- Profile -->
            <div class="card mb-4">
                <div class="card-body">
                    <h2>My Profile</h2>
                    <div class="row">
                        <div class="col-md-6">
                            <p><strong>Name:</strong> <asp:Label
ID="lblCustomerName" runat="server" /></p>
                            <p><strong>Email:</strong> <asp:Label ID="lblEmail"
runat="server" /></p>
                        </div>
                        <div class="col-md-6">
                            <p><strong>Phone:</strong> <asp:Label ID="lblPhone"
runat="server" /></p>
                            <p><strong>Member Since:</strong> <asp:Label
ID="lblMemberSince" runat="server" /></p>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </form>
</body>
</html>
```

```

<!-- Orders -->
<div class="card mb-4">
    <div class="card-body">
        <h3>Recent Orders</h3>
        <asp:GridView ID="gvRecentOrders" runat="server"
CssClass="table" AutoGenerateColumns="false">
            <Columns>
                <asp:BoundField DataField="ORDER_ID" HeaderText="Order
#" />
                <asp:BoundField DataField="ORDER_DATE" HeaderText="Date"
DataFormatString="{0:d}" />
                <asp:BoundField DataField="ORDER_STATUS"
HeaderText="Status" />
                <asp:TemplateField>
                    <ItemTemplate>
                        <asp:Button runat="server" Text="View"
CommandArgument='<%# Eval("ORDER_ID") %>'
OnClick="btnViewOrderDetails_Click"
CssClass="btn btn-sm btn-info" />
                    </ItemTemplate>
                </asp:TemplateField>
            </Columns>
        </asp:GridView>
    </div>
</div>

<!-- Artworks -->
<div class="card mb-4">
    <div class="card-body">
        <h3>Available Artworks</h3>
        <div class="row">
            <asp:Repeater ID="rptArtworks" runat="server">
                <ItemTemplate>
                    <div class="col-md-4 mb-3">
                        <div class="card h-100">
                            <div class="card-body">
                                <h5><%# Eval("TITLE") %></h5>
                                <p>Artist: <%# Eval("ARTIST_NAME")
%></p>
                                <p>Price: <%#
FormatCurrency(Eval("PRICE")) %></p>
                            </div>
                            <div class="card-footer">
                                <asp:Button runat="server"
Text="Purchase" CommandArgument='<%# Eval("ARTWORK_ID") %>'
OnClick="btnPurchaseArtwork_Click"
CssClass="btn btn-primary w-100" />
                            </div>
                        </div>
                    </div>
                </ItemTemplate>
            </asp:Repeater>
        </div>
    </div>
</div>

<!-- Events -->

```

```

        <div class="card">
            <div class="card-body">
                <h3>Upcoming Events</h3>
                <div class="row">
                    <asp:Repeater ID="rptEvents" runat="server">
                        <ItemTemplate>
                            <div class="col-md-6 mb-3">
                                <div class="card h-100">
                                    <div class="card-body">
                                        <h5><%# Eval("EVENT_NAME") %></h5>
                                        <p>Date: <%#
FormatDateTime(Eval("START_DATE"), DateFormat.ShortDate) %></p>
                                        <p>Location: <%# Eval("EVENT_LOCATION")
%></p>
                                        <p>From <%#
FormatCurrency(Eval("MIN_TICKET_PRICE")) %></p>
                                    </div>
                                    <div class="card-footer">
                                        <asp:Button runat="server" Text="Get
Tickets"
                                        CommandArgument='<%#
Eval("EVENT_NAME") & "|" & Eval("START_DATE") %>'
                                        OnClick="btnBuyTickets_Click"
                                        CssClass="btn btn-primary w-100" />
                                    </div>
                                </div>
                            </div>
                        </ItemTemplate>
                    </asp:Repeater>
                </div>
            </div>
        </form>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class CustomerDashboard
    Inherits System.Web.UI.Page

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Not IsPostBack Then
            If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Customer"
Then
                Response.Redirect("Login.aspx")
            End If

            LoadProfile()
            LoadOrders()
            LoadArtworks()
            LoadEvents()
        End If
    End Sub

```

```

Protected Sub LoadProfile()
    Dim connStr = "Data Source=Eman\SQLEXPRESS;" &
        "Initial Catalog=ArtVault;Integrated Security=SSPI"
    Dim query = "SELECT P.FIRST_NAME, P.LAST_NAME, P.EMAIL, P.PHONE_NO,
C.ACCOUNT_CREATION_DATE " &
        "FROM PERSON P INNER JOIN CUSTOMER C ON P.PERSON_ID =
C.CUSTOMER_ID " &
        "WHERE P.PERSON_ID = @ID"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@ID", Session("UserID"))
            Try
                conn.Open()
                Dim rdr = cmd.ExecuteReader()
                If rdr.Read() Then
                    lblCustomerName.Text = rdr("FIRST_NAME").ToString() & " " &
rdr("LAST_NAME").ToString()
                    lblEmail.Text = rdr("EMAIL")
                    lblPhone.Text = rdr("PHONE_NO")
                    lblMemberSince.Text =
CDate(rdr("ACCOUNT_CREATION_DATE")).ToString("d")
                End If
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using
End Sub

Protected Sub LoadOrders()
    Dim connStr = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query = "SELECT ORDER_ID, ORDER_DATE, ORDER_STATUS FROM ORDER_T " &
        "WHERE CUSTOMER_ID = @ID ORDER BY ORDER_DATE DESC"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@ID", Session("UserID"))
            Try
                conn.Open()
                Dim da As New SqlDataAdapter(cmd)
                Dim dt As New DataTable()
                da.Fill(dt)
                gvRecentOrders.DataSource = dt
                gvRecentOrders.DataBind()
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using
End Sub

Protected Sub LoadArtworks()
    Dim connStr = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query = "SELECT A.ARTWORK_ID, A.TITLE, AP.PRICE, " &
        "P.FIRST_NAME + ' ' + P.LAST_NAME AS ARTIST_NAME " &

```

```

        "FROM ARTWORK A " &
        "JOIN ARTIST AR ON A.ARTIST_ID = AR.ARTIST_ID " &
        "JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &
        "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID = AP.ARTWORK_ID " &
        "WHERE A.STATUS = 'Available' " &
        "ORDER BY A.STOCKED_DATE DESC"

Using conn As New SqlConnection(connStr)
    Using cmd As New SqlCommand(query, conn)
        Try
            conn.Open()
            Dim da As New SqlDataAdapter(cmd)
            Dim dt As New DataTable()
            da.Fill(dt)
            rptArtworks.DataSource = dt
            rptArtworks.DataBind()
        Catch ex As Exception
            ' Handle error
        End Try
    End Using
End Using
End Sub

Protected Sub LoadEvents()
    Dim connStr = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query = "SELECT E.EVENT_NAME, E.START_DATE, E.EVENT_LOCATION, " &
        "ISNULL(MIN(T.TICKET_PRICE), 0) AS MIN_TICKET_PRICE " &
        "FROM EVENT E LEFT JOIN TICKET T ON E.EVENT_NAME = T.EVENT_NAME AND
E.START_DATE = T.START_DATE " &
        "WHERE E.START_DATE >= CAST(GETDATE() AS DATE) " &
        "GROUP BY E.EVENT_NAME, E.START_DATE, E.EVENT_LOCATION " &
        "ORDER BY E.START_DATE"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            Try
                conn.Open()
                Dim da As New SqlDataAdapter(cmd)
                Dim dt As New DataTable()
                da.Fill(dt)

                If dt.Rows.Count = 0 Then
                    ' Create an empty data table with the same structure
                    Dim emptyDt As New DataTable()
                    For Each col As DataColumn In dt.Columns
                        emptyDt.Columns.Add(col.ColumnName, col.DataType)
                    Next
                    emptyDt.Rows.Add(emptyDt.NewRow())
                    rptEvents.DataSource = emptyDt
                Else
                    rptEvents.DataSource = dt
                End If
                rptEvents.DataBind()
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using
End Sub

```



```

        .btn-primary { background: #4CAF50; }
        .btn-secondary { background: #2196F3; }
        .btn-danger { background: #f44336; }
        .action-buttons { margin-top: 10px; display: flex; gap: 5px; }
        .btn-add { background: #9C27B0; margin-bottom: 20px; }
        .message { padding: 10px; margin: 10px 0; border-radius: 4px; }
        .message-info { background: #E3F2FD; color: #0D47A1; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <div class="header">
                <h1>My Artworks</h1>
                <asp:Label ID="lblWelcome" runat="server"></asp:Label>
                <asp:Button ID="btnLogout" runat="server" Text="Logout"
                CssClass="btn btn-danger" OnClick="btnLogout_Click" style="float: right;" />
            </div>

            <asp:Button ID="btnAddArtwork" runat="server" Text="Add New Artwork"
            CssClass="btn btn-add" OnClick="btnAddArtwork_Click" />

            <asp:Label ID="lblNoArtworks" runat="server" Text="You haven't added any
            artworks yet."
                CssClass="message message-info" Visible="false"></asp:Label>

            <asp:Label ID="lblMessage" runat="server" CssClass="message"
            Visible="false"></asp:Label>

            <div class="artwork-grid">
                <asp:Repeater ID="Repeater1" runat="server">
                    <ItemTemplate>
                        <div class="artwork-card">
                            <h3><%# Eval("TITLE") %></h3>
                            <p>Category: <%# Eval("CATEGORY") %></p>
                            <p>Status: <span class='<%# "status-" +
                            Eval("STATUS").ToString().ToLower().Replace(" ", "") %>'>
                                <%# Eval("STATUS") %>
                            </span></p>
                            <p>Price: <%# Eval("PRICE", "{0:C}") %></p>
                            <p>Added: <%# Eval("STOCKED_DATE", "{0:d}") %></p>
                            <div class="action-buttons">
                                <asp:Button ID="btnEdit" runat="server" Text="Edit"
                                CommandArgument='<%# Eval("ARTWORK_ID") %>'
                                OnClick="btnEdit_Click" CssClass="btn btn-
                                secondary" />
                            </div>
                        </div>
                    </ItemTemplate>
                </asp:Repeater>
            </div>
        </div>
    </form>
</body>
</html>

```

Imports System.Data

```

Imports System.Data.SqlClient

Partial Class ArtistDashboard
    Inherits System.Web.UI.Page

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing Then
            Response.Redirect("Login.aspx")
        End If

        ' Check if user is an artist
        If Session("UserRole").ToString() <> "Artist" Then
            Response.Redirect("Default.aspx")
        End If

        If Not IsPostBack Then
            lblWelcome.Text = "Welcome, " & Session("UserName").ToString()
            LoadArtistArtworks()
        End If
    End Sub

    Private Sub LoadArtistArtworks()
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;" &
            "Initial Catalog=ArtVault;Integrated Security=SSPI"
        Dim query As String = "SELECT A.ARTWORK_ID, A.TITLE, A.CATEGORY, A.STATUS, "
&
            "A.STOCKED_DATE, AP.PRICE " &
            "FROM ARTWORK A " &
            "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID = AP.ARTWORK_ID
" &
            "WHERE A.ARTIST_ID = @ArtistId " &
            "ORDER BY A.STOCKED_DATE DESC"

        Using conn As New SqlConnection(connStr)
            Using cmd As New SqlCommand(query, conn)
                cmd.Parameters.AddWithValue("@ArtistId", Session("UserID"))
                Try
                    conn.Open()
                    Dim da As New SqlDataAdapter(cmd)
                    Dim dt As New DataTable()
                    da.Fill(dt)
                    Repeater1.DataSource = dt ' Changed from rptArtworks to
Repeater1
                    Repeater1.DataBind()

                    ' Show message if no artworks found
                    If dt.Rows.Count = 0 Then
                        lblNoArtworks.Visible = True
                    Else
                        lblNoArtworks.Visible = False
                    End If
                Catch ex As Exception
                    lblMessage.Text = "Error loading artworks: " & ex.Message
                    lblMessage.ForeColor = Drawing.Color.Red
                End Try
            End Using
        End Using
    End Sub

```

```

Protected Sub btnAddArtwork_Click(sender As Object, e As EventArgs)
    Response.Redirect("AddArtwork.aspx")
End Sub

Protected Sub btnEdit_Click(sender As Object, e As EventArgs)
    Dim btn As Button = CType(sender, Button)
    Response.Redirect("EditArtwork.aspx?id=" & btn.CommandArgument)
End Sub

Protected Sub btnLogout_Click(sender As Object, e As EventArgs)
    Session.Abandon()
    Response.Redirect("Login.aspx")
End Sub
End Class

```

Employee Dashboard:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="EmployeeDashboard.aspx.vb"
Inherits="EmployeeDashboard" %>

```

```

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Employee Dashboard</title>
    <style>
        body { font-family: Arial; margin: 0; padding: 20px; background: #f5f5f5; }
        .container { max-width: 1000px; margin: 0 auto; }
        .header { background: #333; color: white; padding: 15px; margin-bottom:
20px; border-radius: 5px; }
        .card { background: white; border-radius: 5px; box-shadow: 0 2px 5px
rgba(0,0,0,0.1); padding: 20px; margin-bottom: 20px; }
        .profile-info { margin-bottom: 30px; }
        .profile-row { display: flex; margin-bottom: 10px; }
        .profile-label { width: 150px; font-weight: bold; }
        .events-table { width: 100%; border-collapse: collapse; margin-top: 20px; }
        .events-table th { background: #333; color: white; padding: 10px; text-
align: left; }
        .events-table td { padding: 10px; border-bottom: 1px solid #ddd; }
        .btn { padding: 8px 15px; background: #4CAF50; color: white; border: none;
border-radius: 4px; cursor: pointer; text-decoration: none; }
        .btn-logout { background: #f44336; }
        .btn-logout:hover { background: #d32f2f; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <div class="header">
                <h1>Employee Dashboard</h1>
                <asp:Label ID="lblWelcome" runat="server"></asp:Label>
            </div>

```

```

        <asp:Button ID="btnLogout" runat="server" Text="Logout"
        CssClass="btn btn-logout" OnClick="btnLogout_Click" style="float: right;" />
    </div>

    <div class="card">
        <h2>My Profile</h2>
        <div class="profile-info">
            <div class="profile-row">
                <div class="profile-label">Employee ID:</div>
                <div><asp:Label ID="lblEmployeeId"
runat="server"></asp:Label></div>
            </div>
            <div class="profile-row">
                <div class="profile-label">Name:</div>
                <div><asp:Label ID="lblName"
runat="server"></asp:Label></div>
            </div>
            <div class="profile-row">
                <div class="profile-label">Role:</div>
                <div><asp:Label ID="lblRole"
runat="server"></asp:Label></div>
            </div>
            <div class="profile-row">
                <div class="profile-label">Salary:</div>
                <div><asp:Label ID="lblSalary"
runat="server"></asp:Label></div>
            </div>
            <div class="profile-row">
                <div class="profile-label">Status:</div>
                <div><asp:Label ID="lblStatus"
runat="server"></asp:Label></div>
            </div>
            <div class="profile-row">
                <div class="profile-label">Joining Date:</div>
                <div><asp:Label ID="lblJoiningDate"
runat="server"></asp:Label></div>
            </div>
        </div>
    </div>

    <div class="card">
        <h2>My Event Assignments</h2>
        <asp:GridView ID="gvEvents" runat="server" CssClass="events-table"
        AutoGenerateColumns="False">
            <Columns>
                <asp:BoundField DataField="EVENT_NAME" HeaderText="Event
Name" />
                <asp:BoundField DataField="START_DATE" HeaderText="Start
Date" DataFormatString="{0:d}" />
                <asp:BoundField DataField="END_DATE" HeaderText="End Date"
DataFormatString="{0:d}" />
                <asp:BoundField DataField="EVENT_LOCATION"
HeaderText="Location" />
                <asp:BoundField DataField="EVENT_ROLE" HeaderText="My Role"
/>
                <asp:BoundField DataField="WORK_HOURS" HeaderText="Work
Hours" />
            </Columns>
        </asp:GridView>
    </div>

```

```

        <EmptyDataTemplate>
            <p>You are not currently assigned to any events.</p>
        </EmptyDataTemplate>
    </asp:GridView>
</div>
</div>
</form>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class EmployeeDashboard
    Inherits System.Web.UI.Page

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Employee"
Then
            Response.Redirect("Login.aspx")
        End If

        If Not IsPostBack Then
            lblWelcome.Text = "Welcome, " & Session("UserName").ToString()
            LoadEmployeeProfile()
            LoadEventAssignments()
        End If
    End Sub

```

```

    Private Sub LoadEmployeeProfile()
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;" &
            "Initial Catalog=ArtVault;Integrated
Security=SSPI"
        Dim query As String = "SELECT E.EMPLOYEE_ID, P.FIRST_NAME + ' ' +
P.LAST_NAME AS FULL_NAME, " &
            "E.ROLE, E.SALARY, E.STATUS, E.JOINING_DATE " &
            "FROM EMPLOYEE E " &
            "JOIN PERSON P ON E.EMPLOYEE_ID = P.PERSON_ID " &
            "WHERE E.EMPLOYEE_ID = @EmployeeId"

```

```

        Using conn As New SqlConnection(connStr)
            Using cmd As New SqlCommand(query, conn)
                cmd.Parameters.AddWithValue("@EmployeeId", Session("UserID"))
                Try
                    conn.Open()
                    Dim reader As SqlDataReader = cmd.ExecuteReader()
                    If reader.Read() Then
                        lblEmployeeId.Text = reader("EMPLOYEE_ID").ToString()
                        lblName.Text = reader("FULL_NAME").ToString()
                        lblRole.Text = reader("ROLE").ToString()
                        lblSalary.Text =
Convert.ToDecimal(reader("SALARY")).ToString("0.00")
                        lblStatus.Text = reader("STATUS").ToString()
                        lblJoiningDate.Text =
CDate(reader("JOINING_DATE")).ToString("d")
                    End If
                Catch ex As Exception

```

```

        ' Handle error
    End Try
End Using
End Using
End Sub

Private Sub LoadEventAssignments()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;" &
        "Initial Catalog=ArtVault;Integrated
Security=SSPI"
    Dim query As String = "SELECT E.EVENT_NAME, E.START_DATE, E.END_DATE,
E.EVENT_LOCATION, " &
        "EE.EVENT_ROLE, EE.WORK_HOURS " &
        "FROM EVENT E " &
        "JOIN EVENT_EMPLOYEE EE ON E.EVENT_NAME = EE.EVENT_NAME
AND E.START_DATE = EE.START_DATE " &
        "WHERE EE.EMPLOYEE_ID = @EmployeeId " &
        "ORDER BY E.START_DATE DESC"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@EmployeeId", Session("UserID"))
            Try
                conn.Open()
                Dim da As New SqlDataAdapter(cmd)
                Dim dt As New DataTable()
                da.Fill(dt)
                gvEvents.DataSource = dt
                gvEvents.DataBind()
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using
End Sub

Protected Sub btnLogout_Click(sender As Object, e As EventArgs)
    Session.Abandon()
    Response.Redirect("Login.aspx")
End Sub
End Class

```

Add Artwork:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="AddArtwork.aspx.vb"
Inherits="AddArtwork" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Add New Artwork</title>
    <style>

```

```

        body { font-family: Arial, sans-serif; margin: 20px; background-color:
#f5f5f5; }
        .container { max-width: 600px; margin: 0 auto; background: white; padding:
20px; border-radius: 5px; box-shadow: 0 0 10px rgba(0,0,0,0.1); }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 150px; font-weight: bold; }
        .form-control { padding: 8px; border: 1px solid #ddd; border-radius: 4px; }
        .btn { padding: 8px 15px; color: white; border: none; cursor: pointer;
border-radius: 4px; }
        .btn-save { background: #4CAF50; }
        .btn-save:hover { background: #45a049; }
        .btn-back { background: #333; }
        .btn-back:hover { background: #555; }
        .validation-error { color: red; font-size: 0.9em; }
        .progress-indicator { display: none; margin-top: 10px; }
        .artist-label { font-style: italic; color: #666; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h1>Add New Artwork</h1>

            <div class="form-group">
                <label for="txtTitle">Title:</label>
                <asp:TextBox ID="txtTitle" runat="server" CssClass="form-control"
Width="300px" required="required"></asp:TextBox>
                <asp:RequiredFieldValidator runat="server"
ControlToValidate="txtTitle"
CssClass="validation-error" ErrorMessage="Title is required"
Display="Dynamic" />
            </div>

            <asp:Panel ID="pnlArtistDropdown" runat="server" CssClass="form-group">
                <label for="ddlArtist">Artist:</label>
                <asp:DropDownList ID="ddlArtist" runat="server" CssClass="form-
control" Width="300px" required="required">
                    <asp:ListItem Text="-- Select Artist --" Value=""
Selected="True" />
                </asp:DropDownList>
                <asp:RequiredFieldValidator runat="server"
ControlToValidate="ddlArtist" InitialValue=""
CssClass="validation-error" ErrorMessage="Artist is required"
Display="Dynamic" />
            </asp:Panel>

            <asp:Panel ID="pnlArtistInfo" runat="server" CssClass="form-group"
Visible="false">
                <label>Artist:</label>
                <span class="artist-label" id="lblArtistName" runat="server"></span>
            </asp:Panel>

            <div class="form-group">
                <label for="txtPrice">Price:</label>
                <asp:TextBox ID="txtPrice" runat="server" TextMode="Number"
step="0.01"
CssClass="form-control" Width="100px"
required="required"></asp:TextBox>

```

```

        <asp:RequiredFieldValidator runat="server"
ControlToValidate="txtPrice"
        CssClass="validation-error" ErrorMessage="Price is required"
Display="Dynamic" />
        <asp:CompareValidator runat="server" ControlToValidate="txtPrice"
Operator="DataTypeCheck" Type="Currency"
        CssClass="validation-error" ErrorMessage="Invalid price format"
Display="Dynamic" />
    </div>

    <div class="form-group">
        <label for="txtCategory">Category:</label>
        <asp:TextBox ID="txtCategory" runat="server" CssClass="form-control"
Width="200px" required="required"></asp:TextBox>
        <asp:RequiredFieldValidator runat="server"
ControlToValidate="txtCategory"
        CssClass="validation-error" ErrorMessage="Category is required"
Display="Dynamic" />
    </div>

    <div class="form-group">
        <asp:Button ID="btnSave" runat="server" Text="Save Artwork"
CssClass="btn btn-save" OnClick="btnSave_Click" />
        <asp:Button ID="btnBack" runat="server" Text="Cancel" CssClass="btn
btn-back" OnClick="btnBack_Click" CausesValidation="false" />
        <div class="progress-indicator" id="progressIndicator"
runat="server">
             Saving
artwork...
        </div>
    </div>

    <asp:Label ID="lblMessage" runat="server" CssClass="validation-
error"></asp:Label>
</div>
</form>

<script type="text/javascript">
    function showProgress() {
        document.getElementById('<%= progressIndicator.ClientID
%>').style.display = 'block';
        return true;
    }
</script>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class AddArtwork
    Inherits System.Web.UI.Page

```

```

    ' Declare the controls that match your ASPX file

```

```

Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs)
Handles Me.Load
    If Session("UserID") Is Nothing OrElse (Session("UserRole").ToString() <>
"Admin" AndAlso Session("UserRole").ToString() <> "Artist") Then
        Response.Redirect("Login.aspx")
    End If

    If Not IsPostBack Then
        If Session("UserRole").ToString() = "Artist" Then
            ' Hide artist dropdown and show artist info for artists
            pnlArtistDropdown.Visible = False
            pnlArtistInfo.Visible = True
            lblArtistName.InnerText = Session("UserName").ToString()
        Else
            LoadArtists()
            pnlArtistDropdown.Visible = True
            pnlArtistInfo.Visible = False
        End If
    End If
End Sub

Private Sub LoadArtists()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query As String = "SELECT AR.ARTIST_ID, P.FIRST_NAME + ' ' + P.LAST_NAME
AS ARTIST_NAME " &
        "FROM ARTIST AR JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID
" &
        "WHERE AR.ARTIST_ID IS NOT NULL " &
        "ORDER BY ARTIST_NAME"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            Try
                conn.Open()
                ddlArtist.DataSource = cmd.ExecuteReader()
                ddlArtist.DataTextField = "ARTIST_NAME"
                ddlArtist.DataValueField = "ARTIST_ID"
                ddlArtist.DataBind()

                ' Only add the default item if we have artists to show
                If ddlArtist.Items.Count > 0 Then
                    ddlArtist.Items.Insert(0, New ListItem("-- Select Artist --
", ""))
                Else
                    lblMessage.Text = "No artists available. Please add artists
first."
                    btnSave.Enabled = False
                End If
            Catch ex As Exception
                lblMessage.Text = "Error loading artists: " & ex.Message
                btnSave.Enabled = False
            End Try
        End Using
    End Using
End Sub

```

```

Protected Sub btnSave_Click(ByVal sender As Object, ByVal e As EventArgs)
    If Not Page.IsValid Then
        lblMessage.Text = "Please fill in all required fields correctly."
        Return
    End If

    Dim artworkId As String = GenerateArtworkId()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"

    ' Get artist ID based on user role
    Dim artistId As String = Session("UserID").ToString()

    ' Verify the artist exists - with more detailed error checking
    If Not ArtistExists(artistId) Then
        ' Add debug information to help diagnose
        lblMessage.Text = "Artist verification failed. Please ensure: " &
            "1. Your account exists in the PERSON table (ID: " &
artistId & ") " &
            "2. You have a corresponding record in the ARTIST table " &
            "3. Both records use the same ID"

        Return
    End If

    ' Rest of your save logic...
End Sub
Private Function ArtistExists(artistId As String) As Boolean
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query As String = "SELECT COUNT(*) FROM ARTIST AR " &
        "INNER JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &
        "WHERE AR.ARTIST_ID = @ArtistId " &
        "AND P.PERSON_ID = @ArtistId"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@ArtistId", artistId)
            Try
                conn.Open()
                Dim count As Integer = CInt(cmd.ExecuteScalar())
                Return count > 0
            Catch ex As Exception
                Return False
            End Try
        End Using
    End Using
End Function

Private Function GenerateArtworkId() As String
    Dim rnd As New Random()
    Return "ART-" & DateTime.Now.ToString("yyyyMMddHHmmss") & "-" &
rnd.Next(100, 999).ToString()
End Function

Protected Sub btnBack_Click(ByVal sender As Object, ByVal e As EventArgs)
    Dim redirectPage As String = If(Session("UserRole").ToString() = "Artist",
"ArtistDashboard.aspx", "AdminDashboard.aspx")
    Response.Redirect(redirectPage)

```

```
End Sub
End Class
```

Edit artwork:

```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="EditArtwork.aspx.vb"
Inherits="EditArtwork" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Edit Artwork</title>
    <style>
        body { font-family: Arial; margin: 20px; background-color: #f5f5f5; }
        .container { max-width: 600px; margin: 0 auto; background: white; padding:
20px; border-radius: 5px; box-shadow: 0 0 10px rgba(0,0,0,0.1); }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 150px; font-weight: bold; }
        .artwork-image { max-width: 300px; max-height: 300px; border: 1px solid
#ddd; }
        .btn { padding: 8px 15px; color: white; border: none; cursor: pointer;
border-radius: 4px; }
        .btn-save { background: #4CAF50; }
        .btn-save:hover { background: #45a049; }
        .btn-back { background: #333; }
        .btn-back:hover { background: #555; }
        .validation-error { color: red; font-size: 0.9em; }
        .artist-label { font-style: italic; color: #666; }
        .readonly-info { padding: 5px; background-color: #f9f9f9; border: 1px solid
#ddd; border-radius: 4px; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h1>Edit Artwork</h1>

            <div class="form-group">
                <asp:Image ID="imgArtwork" runat="server" CssClass="artwork-image"
/>

                </div>

                <div class="form-group">
                    <label for="txtTitle">Title:</label>
                    <asp:TextBox ID="txtTitle" runat="server" CssClass="form-control"
Width="300px"></asp:TextBox>
                    <asp:RequiredFieldValidator runat="server"
ControlToValidate="txtTitle"
                        CssClass="validation-error" ErrorMessage="Title is required"
Display="Dynamic" />
                </div>
            </div>
        </form>
    </body>
</html>
```

```

        </div>

        <asp:Panel ID="pnlArtistDropdown" runat="server" CssClass="form-group">
            <label for="ddlArtist">Artist:</label>
            <asp:DropDownList ID="ddlArtist" runat="server" CssClass="form-
control" Width="300px"></asp:DropDownList>
        </asp:Panel>

        <asp:Panel ID="pnlArtistInfo" runat="server" CssClass="form-group"
Visible="false">
            <label>Artist:</label>
            <div class="readonly-info" id="lblArtistName" runat="server"></div>
        </asp:Panel>

        <div class="form-group">
            <label for="txtPrice">Price:</label>
            <asp:TextBox ID="txtPrice" runat="server" TextMode="Number"
step="0.01"
                CssClass="form-control" Width="100px"></asp:TextBox>
            <asp:RequiredFieldValidator runat="server"
ControlToValidate="txtPrice"
                CssClass="validation-error" ErrorMessage="Price is required"
Display="Dynamic" />
            <asp:CompareValidator runat="server" ControlToValidate="txtPrice"
Operator="DataTypeCheck" Type="Currency"
                CssClass="validation-error" ErrorMessage="Invalid price format"
Display="Dynamic" />
        </div>

        <div class="form-group">
            <label for="ddlStatus">Status:</label>
            <asp:DropDownList ID="ddlStatus" runat="server" CssClass="form-
control" Width="150px">
                <asp:ListItem Text="Available" Value="Available"></asp:ListItem>
                <asp:ListItem Text="Sold" Value="Sold"></asp:ListItem>
                <asp:ListItem Text="Hidden" Value="Hidden"></asp:ListItem>
            </asp:DropDownList>
        </div>

        <div class="form-group">
            <asp:Button ID="btnSave" runat="server" Text="Save Changes"
CssClass="btn btn-save" OnClick="btnSave_Click" />
            <asp:Button ID="btnBack" runat="server" Text="Cancel" CssClass="btn
btn-back" OnClick="btnBack_Click" CausesValidation="false" />
            <asp:Label ID="lblMessage" runat="server" CssClass="validation-
error"></asp:Label>
        </div>
    </div>
</form>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

Partial Class EditArtwork

```

```

Inherits System.Web.UI.Page

Private artworkId As String

Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
    If Session("UserID") Is Nothing OrElse (Session("UserRole").ToString() <>
"Admin" AndAlso Session("UserRole").ToString() <> "Artist") Then
        Response.Redirect("Login.aspx")
    End If

    artworkId = Request.QueryString("id")
    If String.IsNullOrEmpty(artworkId) Then
        RedirectToDashboard()
    End If

    If Not IsPostBack Then
        LoadArtworkDetails()

        ' Show appropriate controls based on user role
        If Session("UserRole").ToString() = "Admin" Then
            pnlArtistDropdown.Visible = True
            pnlArtistInfo.Visible = False
            LoadArtists()
        Else
            pnlArtistDropdown.Visible = False
            pnlArtistInfo.Visible = True
            lblArtistName.InnerText = Session("UserName").ToString()
        End If
    End If
End Sub

Private Sub LoadArtworkDetails()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    ' Removed IMAGE column from query
    Dim query As String = "SELECT A.TITLE, A.STATUS, AP.PRICE, A.ARTIST_ID " &
        "FROM ARTWORK A " &
        "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID = AP.ARTWORK_ID
" &
        "WHERE A.ARTWORK_ID = @ArtworkId"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
            Try
                conn.Open()
                Dim reader As SqlDataReader = cmd.ExecuteReader()
                If reader.Read() Then
                    ' Check if artist is editing their own artwork
                    If Session("UserRole").ToString() = "Artist" AndAlso
reader("ARTIST_ID").ToString() <> Session("UserID").ToString() Then
                        lblMessage.Text = "You can only edit your own artworks."
                        btnSave.Enabled = False
                        Return
                    End If

                    txtTitle.Text = reader("TITLE").ToString()

```

```

        txtPrice.Text =
Convert.ToDecimal(reader("PRICE")).ToString("0.00")
        ddlStatus.SelectedValue = reader("STATUS").ToString()

        ' Store the original artist ID for validation
ViewState("OriginalArtistId") =
reader("ARTIST_ID").ToString()
    Else
        RedirectToDashboard()
    End If
Catch ex As Exception
    lblMessage.Text = "Error loading artwork details: " & ex.Message
End Try
End Using
End Using
End Sub

Private Sub LoadArtists()
    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim query As String = "SELECT AR.ARTIST_ID, P.FIRST_NAME + ' ' + P.LAST_NAME
AS ARTIST_NAME " &
        "FROM ARTIST AR JOIN PERSON P ON AR.ARTIST_ID =
P.PERSON_ID " &
        "ORDER BY ARTIST_NAME"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            Try
                conn.Open()
                ddlArtist.DataSource = cmd.ExecuteReader()
                ddlArtist.DataTextField = "ARTIST_NAME"
                ddlArtist.DataValueField = "ARTIST_ID"
                ddlArtist.DataBind()

                ' Select the original artist if available
                If ViewState("OriginalArtistId") IsNot Nothing Then
                    ddlArtist.SelectedValue =
ViewState("OriginalArtistId").ToString()
                End If
            Catch ex As Exception
                lblMessage.Text = "Error loading artists: " & ex.Message
            End Try
        End Using
    End Using
End Sub

Protected Sub btnSave_Click(sender As Object, e As EventArgs)
    If String.IsNullOrEmpty(txtTitle.Text) OrElse
String.IsNullOrEmpty(txtPrice.Text) Then
        lblMessage.Text = "Please fill in all required fields."
        Return
    End If

    Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
    Dim artistId As String = If(Session("UserRole").ToString() = "Artist",
Session("UserID").ToString(), ddlArtist.SelectedValue)

```

```

Using conn As New SqlConnection(connStr)
    conn.Open()
    Dim transaction As SqlTransaction = conn.BeginTransaction()

    Try
        ' For artists, verify they're not trying to change the artist
        If Session("UserRole").ToString() = "Artist" AndAlso
ViewState("OriginalArtistId").ToString() <> Session("UserID").ToString() Then
            Throw New Exception("You can only edit your own artworks.")
        End If

        ' Update artwork
        Dim updateQuery As String = "UPDATE ARTWORK SET TITLE = @Title,
ARTIST_ID = @ArtistId, STATUS = @Status " &
"WHERE ARTWORK_ID = @ArtworkId"

        Using cmd As New SqlCommand(updateQuery, conn, transaction)
            cmd.Parameters.AddWithValue("@Title", txtTitle.Text)
            cmd.Parameters.AddWithValue("@ArtistId", artistId)
            cmd.Parameters.AddWithValue("@Status", ddlStatus.SelectedValue)
            cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
            cmd.ExecuteNonQuery()
        End Using

        ' Update price (targeting the most recent price record)
        Dim priceQuery As String = "UPDATE ARTWORK_PRICE SET PRICE = @Price,
EFFECTIVE_DATE = GETDATE() " &
"WHERE ARTWORK_ID = @ArtworkId AND
EFFECTIVE_DATE = " &
"(SELECT MAX(EFFECTIVE_DATE) FROM
ARTWORK_PRICE WHERE ARTWORK_ID = @ArtworkId)"

        Using cmd As New SqlCommand(priceQuery, conn, transaction)
            cmd.Parameters.AddWithValue("@Price",
Decimal.Parse(txtPrice.Text))
            cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
            cmd.ExecuteNonQuery()
        End Using

        transaction.Commit()

        Dim redirectPage As String = If(Session("UserRole").ToString() =
"Artist", "ArtistDashboard.aspx", "AdminDashboard.aspx")
        Response.Redirect(redirectPage & "?success=Artwork updated
successfully")
    Catch ex As Exception
        Try
            transaction.Rollback()
        Catch
            ' Ignore rollback errors
        End Try
        lblMessage.Text = "Error saving artwork: " & ex.Message
    End Try
End Using
End Sub

Protected Sub btnBack_Click(sender As Object, e As EventArgs)

```

```

        RedirectToDashboard()
    End Sub

    Private Sub RedirectToDashboard()
        Dim redirectPage As String = If(Session("UserRole").ToString() = "Artist",
"ArtistDashboard.aspx", "AdminDashboard.aspx")
        Response.Redirect(redirectPage)
    End Sub
End Class

```

Add Employee:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="RegisterEmployee.aspx.vb"
Inherits="RegisterEmployee" %>

```

```

<!DOCTYPE html>

```

```

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Register User</title>
    <style>
        body { font-family: Arial; margin: 20px; background: #f5f5f5; }
        .container { max-width: 600px; margin: 0 auto; background: white; padding:
20px; border-radius: 5px; box-shadow: 0 0 10px rgba(0,0,0,0.1); }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 150px; font-weight: bold; }
        .form-control { padding: 8px; border: 1px solid #ddd; border-radius: 4px;
width: 300px; }
        .btn { padding: 8px 15px; color: white; border: none; cursor: pointer;
border-radius: 4px; }
        .btn-save { background: #4CAF50; }
        .btn-save:hover { background: #45a049; }
        .btn-back { background: #333; }
        .btn-back:hover { background: #555; }
        .validation-error { color: red; font-size: 0.9em; }
        .role-panel { margin-top: 15px; padding: 10px; border: 1px solid #ddd;
border-radius: 4px; background: #f9f9f9; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h1>Register New Employee</h1>

            <div class="form-group">
                <label for="txtCNIC">CNIC:</label>
                <asp:TextBox ID="txtCNIC" runat="server" CssClass="form-control"
required="true" placeholder="12345-1234567-1"></asp:TextBox>
                <asp:RegularExpressionValidator runat="server"
ControlToValidate="txtCNIC"
ValidationExpression="\d{5}-\d{7}-\d$" CssClass="validation-
error"

```

```

        ErrorMessage="CNIC must be in format 12345-1234567-1"
Display="Dynamic" />
    </div>

    <div class="form-group">
        <label for="txtFirstName">First Name:</label>
        <asp:TextBox ID="txtFirstName" runat="server" CssClass="form-
control" required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtLastName">Last Name:</label>
        <asp:TextBox ID="txtLastName" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtEmail">Email:</label>
        <asp:TextBox ID="txtEmail" runat="server" CssClass="form-control"
TextMode="Email" required="true"></asp:TextBox>
        <asp:RegularExpressionValidator runat="server"
ControlToValidate="txtEmail"
ValidationExpression="^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-
Z]{2,}$"
CssClass="validation-error" ErrorMessage="Invalid email format"
Display="Dynamic" />
    </div>

    <div class="form-group">
        <label for="txtPhone">Phone:</label>
        <asp:TextBox ID="txtPhone" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
        <asp:RegularExpressionValidator runat="server"
ControlToValidate="txtPhone"
ValidationExpression="^\d{10,15}$" CssClass="validation-error"
ErrorMessage="Phone must be 10-15 digits" Display="Dynamic" />
    </div>

    <div class="form-group">
        <label for="ddlGender">Gender:</label>
        <asp:DropDownList ID="ddlGender" runat="server" CssClass="form-
control" required="true">
            <asp:ListItem Text="-- Select Gender --"
Value=""></asp:ListItem>
            <asp:ListItem Text="Male" Value="M"></asp:ListItem>
            <asp:ListItem Text="Female" Value="F"></asp:ListItem>
            <asp:ListItem Text="Other" Value="O"></asp:ListItem>
        </asp:DropDownList>
        <asp:RequiredFieldValidator runat="server"
ControlToValidate="ddlGender" InitialValue=""
CssClass="validation-error" ErrorMessage="Gender is required"
Display="Dynamic" />
    </div>

    <div class="form-group">
        <label for="txtCity">City:</label>
        <asp:TextBox ID="txtCity" runat="server" CssClass="form-control"
required="true"></asp:TextBox>

```

```

</div>

<div class="form-group">
    <label for="txtState">State:</label>
    <asp:TextBox ID="txtState" runat="server" CssClass="form-control"
required="true" MaxLength="2"></asp:TextBox>
</div>

<div class="form-group">
    <label for="txtPostalCode">Postal Code:</label>
    <asp:TextBox ID="txtPostalCode" runat="server" CssClass="form-
control" required="true"></asp:TextBox>
    <asp:RegularExpressionValidator runat="server"
ControlToValidate="txtPostalCode"
ValidationExpression="^\d{5}(-\d{4})?$" CssClass="validation-
error"
ErrorMessage="Invalid postal code format" Display="Dynamic" />
</div>

<div class="form-group">
    <label for="txtCountry">Country:</label>
    <asp:TextBox ID="txtCountry" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
</div>

<div class="form-group">
    <label for="txtPassword">Password:</label>
    <asp:TextBox ID="txtPassword" runat="server" CssClass="form-control"
TextMode="Password" required="true"></asp:TextBox>
    <asp:RegularExpressionValidator runat="server"
ControlToValidate="txtPassword"
ValidationExpression="^(?=.*[a-z])(?=.*[A-Z])(?=.*\d){8,}$"
CssClass="validation-error"
ErrorMessage="Password must be at least 8 characters with
uppercase, lowercase and number"
Display="Dynamic" />
</div>

<!-- Employee Fields Panel -->
<asp:Panel ID="pnlEmployeeFields" runat="server" CssClass="role-panel"
Visible="false">
    <h3>Employee Details</h3>
    <div class="form-group">
        <label for="txtRole">Employee Role:</label>
        <asp:TextBox ID="txtRole" runat="server" CssClass="form-
control"></asp:TextBox>
    </div>
    <div class="form-group">
        <label for="txtSalary">Salary:</label>
        <asp:TextBox ID="txtSalary" runat="server" CssClass="form-
control" TextMode="Number" step="0.01"></asp:TextBox>
    </div>
    <div class="form-group">
        <label for="ddlStatus">Status:</label>
        <asp:DropDownList ID="ddlStatus" runat="server" CssClass="form-
control">
            <asp:ListItem Text="-- Select Status --"
Value=""></asp:ListItem>

```

```

                <asp:ListItem Text="Active" Value="Active"></asp:ListItem>
                <asp:ListItem Text="Inactive"
Value="Inactive"></asp:ListItem>
            </asp:DropDownList>
        </div>
    </asp:Panel>

    <div class="form-group">
        <asp:Button ID="btnSave" runat="server" Text="Register User"
CssClass="btn btn-save" OnClick="btnSave_Click" />
        <asp:Button ID="btnBack" runat="server" Text="Cancel" CssClass="btn
btn-back" OnClick="btnBack_Click" CausesValidation="false" />
        <asp:Label ID="lblMessage" runat="server" CssClass="validation-
error"></asp:Label>
    </div>
</div>
</form>
</body>
</html>

```

```
Imports System.Data
```

```
Imports System.Data.SqlClient
```

```
Imports System.Net.NetworkInformation
```

```
Imports System.Security.Cryptography
```

```
Partial Class RegisterEmployee
```

```
    Inherits System.Web.UI.Page
```

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

```
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Admin" Then
            Response.Redirect("Login.aspx?error=You must be logged in as admin to
access this page")
        End If
    End Sub

```

```
    If Not IsPostBack Then
```

```
        pnlArtistFields.Visible = (ddlRole.SelectedValue = "Artist")
```

```
        pnlEmployeeFields.Visible = (ddlRole.SelectedValue = "Employee")
```

```
        pnlCustomerFields.Visible = (ddlRole.SelectedValue = "Customer")
```

```
    End If
```

```
End Sub
```

```
Protected Sub ddlRole_SelectedIndexChanged(sender As Object, e As EventArgs)
Handles ddlRole.SelectedIndexChanged
```

```
    pnlArtistFields.Visible = (ddlRole.SelectedValue = "Artist")
```

```
    pnlEmployeeFields.Visible = (ddlRole.SelectedValue = "Employee")
```

```
    pnlCustomerFields.Visible = (ddlRole.SelectedValue = "Customer")
```

```
End Sub
```

```
Protected Sub btnSave_Click(sender As Object, e As EventArgs)
```

```
    ' Clear previous messages
```

```
    lblMessage.Text = ""
```

```
    lblMessage.CssClass = "text-danger"
```

```
    ' Validate CNIC format
```

```
    If Not IsValidCNIC(txtCNIC.Text.Trim()) Then
```

```
        lblMessage.Text = "Invalid CNIC format. Please use format: 12345-1234567-1"
```

```
        Return
```

```
    End If
```

```
    ' Validate required fields
```

```
    Dim missingFields As New List(Of String)
```

```
    If String.IsNullOrEmpty(txtFirstName.Text.Trim()) Then
missingFields.Add("First Name")
```

```
    If String.IsNullOrEmpty(txtLastName.Text.Trim()) Then
missingFields.Add("Last Name")
```

```
    If String.IsNullOrEmpty(txtEmail.Text.Trim()) Then
missingFields.Add("Email")
```

```
    If String.IsNullOrEmpty(txtPhone.Text.Trim()) Then missingFields.Add("Phone
Number")
```

```
    If String.IsNullOrEmpty(txtCity.Text.Trim()) Then missingFields.Add("City")
```

```
    If String.IsNullOrEmpty(txtState.Text.Trim()) Then
missingFields.Add("State")
```

```
    If String.IsNullOrEmpty(txtPostalCode.Text.Trim()) Then
missingFields.Add("Postal Code")
```

```

        If String.IsNullOrEmpty(txtCountry.Text.Trim()) Then
missingFields.Add("Country")

        If ddlGender.SelectedValue = "" Then missingFields.Add("Gender")

        If ddlRole.SelectedValue = "" Then missingFields.Add("Role")

        If String.IsNullOrEmpty(txtPassword.Text.Trim()) Then
missingFields.Add("Password")

' Role-specific validations
Select Case ddlRole.SelectedValue
    Case "Employee"
        If String.IsNullOrEmpty(txtEmpRole.Text.Trim()) Then
missingFields.Add("Employee Role")

        If String.IsNullOrEmpty(txtSalary.Text.Trim()) Then
missingFields.Add("Salary")

        If ddlStatus.SelectedValue = "" Then missingFields.Add("Status")

        If Not Decimal.TryParse(txtSalary.Text, Nothing) Then
            lblMessage.Text = "Salary must be a valid number (e.g., 50000 or
50000.50)"

            Return
        End If

    Case "Artist"
        If String.IsNullOrEmpty(txtStyle.Text.Trim()) Then
missingFields.Add("Artistic Style")

    Case "Customer"
        ' No additional required fields for customer
End Select

' Show all missing fields at once
If missingFields.Count > 0 Then
    lblMessage.Text = "Please fill in the following required fields: " &
String.Join(", ", missingFields)

    Return

```

```

End If

' Validate email format
If Not IsValidEmail(txtEmail.Text.Trim()) Then
    lblMessage.Text = "Please enter a valid email address (e.g.,
user@example.com)"
    Return
End If

' Validate password strength
If txtPassword.Text.Trim().Length < 8 Then
    lblMessage.Text = "Password must be at least 8 characters long"
    Return
End If

Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"

Dim transaction As SqlTransaction = Nothing

Using conn As New SqlConnection(connStr)
    Try
        conn.Open()
        transaction = conn.BeginTransaction()

        ' Check if person already exists with more detailed message
        Dim checkQuery As String = "SELECT COUNT(*) FROM PERSON WHERE
PERSON_ID = @PersonId OR EMAIL = @Email"

        Using cmdCheck As New SqlCommand(checkQuery, conn, transaction)
            cmdCheck.Parameters.AddWithValue("@PersonId",
txtCNIC.Text.Trim())
            cmdCheck.Parameters.AddWithValue("@Email", txtEmail.Text.Trim())
            Dim count As Integer = Convert.ToInt32(cmdCheck.ExecuteScalar())

            If count > 0 Then

```

```

        ' Check which field caused the conflict

        Dim conflictQuery = "SELECT CASE WHEN EXISTS(SELECT 1 FROM
PERSON WHERE PERSON_ID = @PersonId) THEN 'CNIC' " &

                                "WHEN EXISTS(SELECT 1 FROM PERSON WHERE
EMAIL = @Email) THEN 'Email' ELSE '' END AS ConflictField"

        Using cmdConflict As New SqlCommand(conflictQuery, conn,
transaction)

            cmdConflict.Parameters.AddWithValue("@PersonId",
txtCNIC.Text.Trim())

            cmdConflict.Parameters.AddWithValue("@Email",
txtEmail.Text.Trim())

            Dim conflictField =
cmdConflict.ExecuteScalar().ToString()

            Select Case conflictField

                Case "CNIC"

                    Throw New Exception("A user with this CNIC
already exists. Please use a different CNIC.")

                Case "Email"

                    Throw New Exception("This email address is
already registered. Please use a different email.")

                Case Else

                    Throw New Exception("This user appears to
already exist in the system.")

            End Select

        End Using

    End If

End Using

' Insert into PERSON table

Dim personQuery As String = "INSERT INTO PERSON (PERSON_ID,
FIRST_NAME, LAST_NAME, EMAIL, PHONE_NO, " &

                                "GENDER, CITY, STATE, POSTAL_CODE, COUNTRY,
ROLE, PASSWORD) " &

                                "VALUES (@PersonId, @FirstName, @LastName,
@Email, @Phone, " &

```

```
@Gender, @City, @State, @PostalCode, @Country,  
@Role, @Password)"
```

```
Using cmd As New SqlCommand(personQuery, conn, transaction)  
    cmd.Parameters.AddWithValue("@PersonId", txtCNIC.Text.Trim())  
    cmd.Parameters.AddWithValue("@FirstName",  
txtFirstName.Text.Trim())  
    cmd.Parameters.AddWithValue("@LastName",  
txtLastName.Text.Trim())  
    cmd.Parameters.AddWithValue("@Email", txtEmail.Text.Trim())  
    cmd.Parameters.AddWithValue("@Phone", txtPhone.Text.Trim())  
    cmd.Parameters.AddWithValue("@Gender", ddlGender.SelectedValue)  
    cmd.Parameters.AddWithValue("@City", txtCity.Text.Trim())  
    cmd.Parameters.AddWithValue("@State", txtState.Text.Trim())  
    cmd.Parameters.AddWithValue("@PostalCode",  
txtPostalCode.Text.Trim())  
    cmd.Parameters.AddWithValue("@Country", txtCountry.Text.Trim())  
    cmd.Parameters.AddWithValue("@Role", ddlRole.SelectedValue)  
    cmd.Parameters.AddWithValue("@Password",  
HashPassword(txtPassword.Text.Trim()))  
    cmd.ExecuteNonQuery()  
End Using
```

```
' Insert into appropriate role table  
Select Case ddlRole.SelectedValue  
    Case "Employee"  
        Dim employeeQuery As String = "INSERT INTO EMPLOYEE  
(EMPLOYEE_ID, ROLE, SALARY, STATUS, JOINING_DATE) " &  
        "VALUES (@EmployeeId, @EmpRole,  
@Salary, @Status, @JoiningDate)"
```

```
Using cmd As New SqlCommand(employeeQuery, conn,  
transaction)  
    cmd.Parameters.AddWithValue("@EmployeeId",  
txtCNIC.Text.Trim())  
    cmd.Parameters.AddWithValue("@EmpRole",  
txtEmpRole.Text.Trim())
```

```

                                cmd.Parameters.AddWithValue("@Salary",
Decimal.Parse(txtSalary.Text))
                                cmd.Parameters.AddWithValue("@Status",
ddlStatus.SelectedValue)
                                cmd.Parameters.AddWithValue("@JoiningDate",
DateTime.Now)
                                cmd.ExecuteNonQuery()
                                End Using

                                Case "Artist"
                                    Dim artistQuery As String = "INSERT INTO ARTIST (ARTIST_ID,
STYLE) " &
                                                "VALUES (@ArtistId, @Style)"

                                    Using cmd As New SqlCommand(artistQuery, conn, transaction)
                                        cmd.Parameters.AddWithValue("@ArtistId",
txtCNIC.Text.Trim())
                                        cmd.Parameters.AddWithValue("@Style",
txtStyle.Text.Trim())
                                        cmd.ExecuteNonQuery()
                                    End Using

                                Case "Customer"
                                    Dim customerQuery As String = "INSERT INTO CUSTOMER
(CUSTOMER_ID, ACCOUNT_CREATION_DATE) " &
                                                "VALUES (@CustomerId,
@CreationDate)"

                                    Using cmd As New SqlCommand(customerQuery, conn,
transaction)
                                        cmd.Parameters.AddWithValue("@CustomerId",
txtCNIC.Text.Trim())
                                        cmd.Parameters.AddWithValue("@CreationDate",
DateTime.Now)
                                        cmd.ExecuteNonQuery()
                                    End Using
                                End Select

```

```

        transaction.Commit()

        lblMessage.Text = $"{ddlRole.SelectedValue} registered
successfully!"

        lblMessage.CssClass = "text-success"

        ' Optionally clear form or redirect after success
        '
Response.Redirect($"AdminDashboard.aspx?success={Server.UrlEncode(ddlRole.SelectedVa
lue & " registered successfully)}")

Catch ex As SqlException
    If transaction IsNot Nothing Then
        Try
            transaction.Rollback()
        Catch rollbackEx As Exception
            lblMessage.Text = "Failed to undo changes after an error.
Please contact support."
        Return
    End Try
End If

Select Case ex.Number
    Case 2627 ' Unique constraint error
        lblMessage.Text = "This user appears to already exist in the
system. Please verify the CNIC and email."
    Case 547 ' Constraint check violation
        lblMessage.Text = "Data validation failed. Please check all
fields and try again."
    Case Else
        lblMessage.Text = "A database error occurred. Please try
again or contact support."
    End Select

Catch ex As Exception

```

```

        If transaction IsNot Nothing Then
            Try
                transaction.Rollback()
            Catch rollbackEx As Exception
                lblMessage.Text = "Failed to undo changes after an error.
Please contact support."
            Return
        End Try
    End If

```

```

        lblMessage.Text = ex.Message
    End Try
End Using
End Sub

```

```

Private Function IsValidCNIC(cnic As String) As Boolean
    Return System.Text.RegularExpressions.Regex.IsMatch(cnic, "^\\d{5}-\\d{7}-
\\d$")
End Function

```

```

Private Function IsValidEmail(email As String) As Boolean
    Try
        Dim addr = New System.Net.Mail.MailAddress(email)
        Return addr.Address = email
    Catch
        Return False
    End Try
End Function

```

```

Private Function HashPassword(password As String) As String
    Using sha256 As SHA256 = SHA256.Create()
        Dim bytes = sha256.ComputeHash(Encoding.UTF8.GetBytes(password))
        Dim builder = New StringBuilder()
    End Using

```

```

        For Each b In bytes
            builder.Append(b.ToString("x2"))
        Next
        Return builder.ToString()
    End Using
End Function

Protected Sub btnBack_Click(sender As Object, e As EventArgs)
    Response.Redirect("Homepage.aspx")
End Sub
End Class

```

Edit Employee:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="EditEmployee.aspx.vb"
Inherits="EditEmployee" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Edit Employee</title>
    <style>
        body { font-family: Arial; margin: 20px; background: #f5f5f5; }
        .container { max-width: 600px; margin: 0 auto; background: white; padding:
20px; border-radius: 5px; box-shadow: 0 0 10px rgba(0,0,0,0.1); }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 150px; font-weight: bold; }
        .form-control { padding: 8px; border: 1px solid #ddd; border-radius: 4px;
width: 300px; }
        .btn { padding: 8px 15px; color: white; border: none; cursor: pointer;
border-radius: 4px; }
        .btn-save { background: #4CAF50; }
        .btn-save:hover { background: #45a049; }
        .btn-back { background: #333; }
        .btn-back:hover { background: #555; }
        .validation-error { color: red; font-size: 0.9em; }
        .read-only { background-color: #f5f5f5; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h1>Edit Employee</h1>

            <div class="form-group">
                <label for="txtCNIC">CNIC:</label>

```

```
        <asp:TextBox ID="txtCNIC" runat="server" CssClass="form-control
read-only" ReadOnly="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtFirstName">First Name:</label>
        <asp:TextBox ID="txtFirstName" runat="server" CssClass="form-
control" required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtLastName">Last Name:</label>
        <asp:TextBox ID="txtLastName" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtEmail">Email:</label>
        <asp:TextBox ID="txtEmail" runat="server" CssClass="form-control"
TextMode="Email" required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtPhone">Phone:</label>
        <asp:TextBox ID="txtPhone" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="ddlGender">Gender:</label>
        <asp:DropDownList ID="ddlGender" runat="server" CssClass="form-
control" required="true">
            <asp:ListItem Text="Male" Value="M"></asp:ListItem>
            <asp:ListItem Text="Female" Value="F"></asp:ListItem>
            <asp:ListItem Text="Other" Value="O"></asp:ListItem>
        </asp:DropDownList>
    </div>

    <div class="form-group">
        <label for="txtCity">City:</label>
        <asp:TextBox ID="txtCity" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtState">State:</label>
        <asp:TextBox ID="txtState" runat="server" CssClass="form-control"
required="true" MaxLength="2"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtPostalCode">Postal Code:</label>
        <asp:TextBox ID="txtPostalCode" runat="server" CssClass="form-
control" required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtCountry">Country:</label>
```

```

        <asp:TextBox ID="txtCountry" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
    </div>

    <h3>Employment Details</h3>

    <div class="form-group">
        <label for="txtRole">Role:</label>
        <asp:TextBox ID="txtRole" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="txtSalary">Salary:</label>
        <asp:TextBox ID="txtSalary" runat="server" CssClass="form-control"
TextMode="Number" step="0.01" required="true"></asp:TextBox>
    </div>

    <div class="form-group">
        <label for="ddlStatus">Status:</label>
        <asp:DropDownList ID="ddlStatus" runat="server" CssClass="form-
control" required="true">
            <asp:ListItem Text="Active" Value="Active"></asp:ListItem>
            <asp:ListItem Text="Inactive" Value="Inactive"></asp:ListItem>
            <asp:ListItem Text="On Leave" Value="On Leave"></asp:ListItem>
        </asp:DropDownList>
    </div>

    <div class="form-group">
        <label for="txtJoiningDate">Joining Date:</label>
        <asp:TextBox ID="txtJoiningDate" runat="server" CssClass="form-
control read-only" ReadOnly="true"></asp:TextBox>
    </div>

    <asp:Button ID="btnSave" runat="server" Text="Save Changes"
CssClass="btn btn-save" OnClick="btnSave_Click" />
    <asp:Button ID="btnBack" runat="server" Text="Cancel" CssClass="btn btn-
back" OnClick="btnBack_Click" CausesValidation="false" />
    <asp:Label ID="lblMessage" runat="server" CssClass="validation-
error"></asp:Label>
</div>
</form>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class EditEmployee
    Inherits System.Web.UI.Page

```

```

    Private employeeId As String

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Admin" Then
            Response.Redirect("Login.aspx")
        End If
    End Sub

```

```

        employeeId = Request.QueryString("id")
        If String.IsNullOrEmpty(employeeId) Then
            Response.Redirect("AdminDashboard.aspx")
        End If

        If Not IsPostBack Then
            LoadEmployeeDetails()
        End If
    End Sub

    Private Sub LoadEmployeeDetails()
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
        Dim query As String = "SELECT P.PERSON_ID, P.FIRST_NAME, P.LAST_NAME,
P.EMAIL, P.PHONE_NO, " &
                                "P.GENDER, P.CITY, P.STATE, P.POSTAL_CODE, P.COUNTRY, "
&
                                "E.ROLE, E.SALARY, E.STATUS, E.JOINING_DATE " &
                                "FROM PERSON P " &
                                "JOIN EMPLOYEE E ON P.PERSON_ID = E.EMPLOYEE_ID " &
                                "WHERE E.EMPLOYEE_ID = @EmployeeId"

        Using conn As New SqlConnection(connStr)
            Using cmd As New SqlCommand(query, conn)
                cmd.Parameters.AddWithValue("@EmployeeId", employeeId)
                Try
                    conn.Open()
                    Dim reader As SqlDataReader = cmd.ExecuteReader()
                    If reader.Read() Then
                        txtCNIC.Text = reader("PERSON_ID").ToString()
                        txtFirstName.Text = reader("FIRST_NAME").ToString()
                        txtLastName.Text = reader("LAST_NAME").ToString()
                        txtEmail.Text = reader("EMAIL").ToString()
                        txtPhone.Text = reader("PHONE_NO").ToString()
                        ddlGender.SelectedValue = reader("GENDER").ToString()
                        txtCity.Text = reader("CITY").ToString()
                        txtState.Text = reader("STATE").ToString()
                        txtPostalCode.Text = reader("POSTAL_CODE").ToString()
                        txtCountry.Text = reader("COUNTRY").ToString()
                        txtRole.Text = reader("ROLE").ToString()
                        txtSalary.Text =
Convert.ToDecimal(reader("SALARY")).ToString("0.00")
                        ddlStatus.SelectedValue = reader("STATUS").ToString()
                        txtJoiningDate.Text =
Convert.ToDateTime(reader("JOINING_DATE")).ToString("d")
                    Else
                        Response.Redirect("AdminDashboard.aspx")
                    End If
                Catch ex As Exception
                    lblMessage.Text = "Error loading employee details: " &
ex.Message
                End Try
            End Using
        End Using
    End Sub

    Protected Sub btnSave_Click(sender As Object, e As EventArgs)

```

```

If Not Page.IsValid Then
    Return
End If

Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
Dim redirectUrl As String = "AdminDashboard.aspx?success=Employee updated
successfully"
Dim errorOccurred As Boolean = False

Using conn As New SqlConnection(connStr)
    conn.Open()
    Dim transaction As SqlTransaction = conn.BeginTransaction()

    Try
        ' Update PERSON table
        Dim personQuery As String = "UPDATE PERSON SET " &
            "FIRST_NAME = @FirstName, " &
            "LAST_NAME = @LastName, " &
            "EMAIL = @Email, " &
            "PHONE_NO = @Phone, " &
            "GENDER = @Gender, " &
            "CITY = @City, " &
            "STATE = @State, " &
            "POSTAL_CODE = @PostalCode, " &
            "COUNTRY = @Country " &
            "WHERE PERSON_ID = @PersonId"

        Using cmd As New SqlCommand(personQuery, conn, transaction)
            cmd.Parameters.AddWithValue("@PersonId", employeeId)
            cmd.Parameters.AddWithValue("@FirstName",
txtFirstName.Text.Trim())
            cmd.Parameters.AddWithValue("@LastName",
txtLastName.Text.Trim())
            cmd.Parameters.AddWithValue("@Email", txtEmail.Text.Trim())
            cmd.Parameters.AddWithValue("@Phone", txtPhone.Text.Trim())
            cmd.Parameters.AddWithValue("@Gender", ddlGender.SelectedValue)
            cmd.Parameters.AddWithValue("@City", txtCity.Text.Trim())
            cmd.Parameters.AddWithValue("@State", txtState.Text.Trim())
            cmd.Parameters.AddWithValue("@PostalCode",
txtPostalCode.Text.Trim())
            cmd.Parameters.AddWithValue("@Country", txtCountry.Text.Trim())
            cmd.ExecuteNonQuery()
        End Using

        ' Update EMPLOYEE table
        Dim employeeQuery As String = "UPDATE EMPLOYEE SET " &
            "ROLE = @Role, " &
            "SALARY = @Salary, " &
            "STATUS = @Status " &
            "WHERE EMPLOYEE_ID = @EmployeeId"

        Using cmd As New SqlCommand(employeeQuery, conn, transaction)
            cmd.Parameters.AddWithValue("@EmployeeId", employeeId)
            cmd.Parameters.AddWithValue("@Role", txtRole.Text.Trim())
            cmd.Parameters.AddWithValue("@Salary",
Decimal.Parse(txtSalary.Text))
            cmd.Parameters.AddWithValue("@Status", ddlStatus.SelectedValue)

```

```

        cmd.ExecuteNonQuery()
    End Using

    transaction.Commit()
Catch ex As Exception
    transaction.Rollback()
    lblMessage.Text = "Error updating employee: " & ex.Message
    errorOccurred = True
End Try
End Using

' Only redirect if no error occurred
If Not errorOccurred Then
    Response.Redirect(redirectUrl)
End If
End Sub

Protected Sub btnBack_Click(sender As Object, e As EventArgs)
    Response.Redirect("AdminDashboard.aspx")
End Sub
End Class

```

Admin Order Details:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="AdminOrderDetails.aspx.vb"
Inherits="AdminOrderDetails" %>

```

```

<!DOCTYPE html>

```

```

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Order Details</title>
    <style>
        body { font-family: Arial; margin: 20px; }
        .container { max-width: 800px; margin: 0 auto; }
        .order-header { background: #f0f0f0; padding: 15px; border-radius: 5px;
margin-bottom: 20px; }
        .artwork-item { display: flex; margin-bottom: 15px; padding-bottom: 15px;
border-bottom: 1px solid #eee; }
        .artwork-image { width: 100px; height: 100px; object-fit: cover; margin-
right: 15px; }
        .btn { padding: 8px 15px; background: #4CAF50; color: white; border: none;
cursor: pointer; }
        .btn-back { background: #333; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h1>Order Details</h1>

            <div class="order-header">
                <h2>Order #<asp:Label ID="lblOrderId"
runat="server"></asp:Label></h2>
                <p><strong>Customer:</strong> <asp:Label ID="lblCustomer"
runat="server"></asp:Label></p>
                <p><strong>Date:</strong> <asp:Label ID="lblOrderDate"
runat="server"></asp:Label></p>

```

```

                <p><strong>Status:</strong> <asp:Label ID="lblStatus"
runat="server"></asp:Label></p>
                <p><strong>Payment Method:</strong> <asp:Label ID="lblPayment"
runat="server"></asp:Label></p>
                <p><strong>Total:</strong> $<asp:Label ID="lblTotal"
runat="server"></asp:Label></p>
            </div>

            <h3>Artworks in this Order</h3>
            <asp:Repeater ID="rptArtworks" runat="server">
                <ItemTemplate>
                    <div class="artwork-item">

                        <div>
                            <h4><%# Eval("TITLE") %></h4>
                            <p><strong>Artist:</strong> <%# Eval("ARTIST_NAME")
%></p>
                            <p><strong>Price:</strong> $<%# Eval("PRICE",
"{0:0.00}") %></p>
                        </div>
                    </div>
                </ItemTemplate>
            </asp:Repeater>

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

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class AdminOrderDetails
    Inherits System.Web.UI.Page

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Admin" Then
            Response.Redirect("Login.aspx")
        End If

```

```

        If Not IsPostBack Then
            Dim orderId As String = Request.QueryString("id")
            If String.IsNullOrEmpty(orderId) Then
                Response.Redirect("AdminDashboard.aspx")
            End If

            LoadOrderDetails(orderId)
        End If
    End Sub

```

```

    Private Sub LoadOrderDetails(orderId As String)
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"

```

```

        ' Load order header

```

```

        Dim headerQuery As String = "SELECT O.ORDER_ID, O.ORDER_DATE,
O.ORDER_STATUS, O.PAYMENT_METHOD, " &
        "P.FIRST_NAME + ' ' + P.LAST_NAME AS
CUSTOMER_NAME " &
        "FROM ORDER_T O " &
        "JOIN CUSTOMER C ON O.CUSTOMER_ID = C.CUSTOMER_ID
" &
        "JOIN PERSON P ON C.CUSTOMER_ID = P.PERSON_ID " &
        "WHERE O.ORDER_ID = @OrderId"

Using conn As New SqlConnection(connStr)
    Using cmd As New SqlCommand(headerQuery, conn)
        cmd.Parameters.AddWithValue("@OrderId", orderId)
        Try
            conn.Open()
            Dim reader As SqlDataReader = cmd.ExecuteReader()
            If reader.Read() Then
                lblOrderId.Text = reader("ORDER_ID").ToString()
                lblCustomer.Text = reader("CUSTOMER_NAME").ToString()
                lblOrderDate.Text =
CDate(reader("ORDER_DATE")).ToString("d")
                lblStatus.Text = reader("ORDER_STATUS").ToString()
                lblPayment.Text = reader("PAYMENT_METHOD").ToString()
            Else
                Response.Redirect("AdminDashboard.aspx")
            End If
        Catch ex As Exception
            ' Handle error
        End Try
    End Using
End Using

' Load order items (removed IMAGE column)
Dim itemsQuery As String = "SELECT A.ARTWORK_ID, A.TITLE, AP.PRICE, " &
        "P.FIRST_NAME + ' ' + P.LAST_NAME AS ARTIST_NAME "
&
        "FROM ORDERLINE OL " &
        "JOIN ARTWORK A ON OL.ARTWORK_ID = A.ARTWORK_ID "
&
        "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID =
AP.ARTWORK_ID " &
        "JOIN ARTIST AR ON A.ARTIST_ID = AR.ARTIST_ID " &
        "JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &
        "WHERE OL.ORDER_ID = @OrderId"

Using conn As New SqlConnection(connStr)
    Using cmd As New SqlCommand(itemsQuery, conn)
        cmd.Parameters.AddWithValue("@OrderId", orderId)
        Try
            conn.Open()
            Dim da As New SqlDataAdapter(cmd)
            Dim dt As New DataTable()
            da.Fill(dt)
            rptArtworks.DataSource = dt
            rptArtworks.DataBind()

            ' Calculate total
            Dim total As Decimal = 0

```

```

        For Each row As DataRow In dt.Rows
            total += Convert.ToDecimal(row("PRICE"))
        Next
        lblTotal.Text = total.ToString("0.00")
    Catch ex As Exception
        ' Handle error
    End Try
End Using
End Using
End Sub

Protected Sub btnBack_Click(sender As Object, e As EventArgs)
    Response.Redirect("AdminDashboard.aspx")
End Sub
End Class

```

Add Events:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="AddEvent.aspx.vb"
Inherits="AddEvent" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Create New Event</title>
    <style>
        body { font-family: Arial; margin: 20px; background: #f5f5f5; }
        .container { max-width: 600px; margin: 0 auto; background: white; padding:
20px; border-radius: 5px; box-shadow: 0 0 10px rgba(0,0,0,0.1); }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 150px; font-weight: bold; }
        .form-control { padding: 8px; border: 1px solid #ddd; border-radius: 4px;
width: 300px; }
        .btn { padding: 8px 15px; color: white; border: none; cursor: pointer;
border-radius: 4px; }
        .btn-save { background: #4CAF50; }
        .btn-save:hover { background: #45a049; }
        .btn-back { background: #333; }
        .btn-back:hover { background: #555; }
        .validation-error { color: red; font-size: 0.9em; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">
            <h1>Create New Event</h1>

            <div class="form-group">
                <label for="txtEventName">Event Name:</label>
                <asp:TextBox ID="txtEventName" runat="server" CssClass="form-
control" required="true"></asp:TextBox>
            </div>

```

```

        <div class="form-group">
            <label for="txtStartDate">Start Date:</label>
            <asp:TextBox ID="txtStartDate" runat="server" CssClass="form-
control" TextMode="Date" required="true"></asp:TextBox>
        </div>

        <div class="form-group">
            <label for="txtEndDate">End Date:</label>
            <asp:TextBox ID="txtEndDate" runat="server" CssClass="form-control"
TextMode="Date" required="true"></asp:TextBox>
        </div>

        <div class="form-group">
            <label for="txtLocation">Location:</label>
            <asp:TextBox ID="txtLocation" runat="server" CssClass="form-control"
required="true"></asp:TextBox>
        </div>

        <div class="form-group">
            <label for="ddlOrganizer">Organizer:</label>
            <asp:DropDownList ID="ddlOrganizer" runat="server" CssClass="form-
control" required="true">
            </asp:DropDownList>
        </div>

        <asp:Button ID="btnSave" runat="server" Text="Create Event"
CssClass="btn btn-save" OnClick="btnSave_Click" />
        <asp:Button ID="btnCancel" runat="server" Text="Cancel" CssClass="btn
btn-back" OnClick="btnCancel_Click" CausesValidation="false" />
        <asp:Label ID="lblMessage" runat="server" CssClass="validation-
error"></asp:Label>
    </div>
</form>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class AddEvent
    Inherits System.Web.UI.Page

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Admin" Then
            Response.Redirect("Login.aspx")
        End If

```

```

        If Not IsPostBack Then
            LoadOrganizers()
        End If
    End Sub

```

```

    Private Sub LoadOrganizers()
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"

```

```

        Dim query As String = "SELECT E.EMPLOYEE_ID, P.FIRST_NAME + ' ' +
P.LAST_NAME AS FULL_NAME " &
        "FROM EMPLOYEE E " &
        "JOIN PERSON P ON E.EMPLOYEE_ID = P.PERSON_ID " &
        "WHERE E.STATUS = 'Active'"

        Using conn As New SqlConnection(connStr)
            Using cmd As New SqlCommand(query, conn)
                Try
                    conn.Open()
                    Dim reader = cmd.ExecuteReader()
                    ddlOrganizer.DataSource = reader
                    ddlOrganizer.DataTextField = "FULL_NAME"
                    ddlOrganizer.DataValueField = "EMPLOYEE_ID"
                    ddlOrganizer.DataBind()
                    ddlOrganizer.Items.Insert(0, New ListItem("-- Select Organizer -
--", ""))
                Catch ex As Exception
                    lblMessage.Text = "Error loading organizers: " & ex.Message
                End Try
            End Using
        End Using

        Protected Sub btnSave_Click(sender As Object, e As EventArgs)
            If Not Page.IsValid Then
                Return
            End If

            Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"

            Using conn As New SqlConnection(connStr)
                Try
                    conn.Open()
                    Dim query As String = "INSERT INTO EVENT (EVENT_NAME, START_DATE,
END_DATE, EVENT_LOCATION, EMPLOYEE_ID) " &
                    "VALUES (@EventName, @StartDate, @EndDate,
@Location, @EmployeeId)"

                    Using cmd As New SqlCommand(query, conn)
                        cmd.Parameters.AddWithValue("@EventName",
txtEventName.Text.Trim())
                        cmd.Parameters.AddWithValue("@StartDate",
DateTime.Parse(txtStartDate.Text))
                        cmd.Parameters.AddWithValue("@EndDate",
DateTime.Parse(txtEndDate.Text))
                        cmd.Parameters.AddWithValue("@Location",
txtLocation.Text.Trim())
                        cmd.Parameters.AddWithValue("@EmployeeId",
ddlOrganizer.SelectedValue)
                        cmd.ExecuteNonQuery()
                    End Using

                    Response.Redirect("AdminDashboard.aspx?success=Event created
successfully")
                Catch ex As Exception
                    lblMessage.Text = "Error creating event: " & ex.Message
                End Try
            End Using
        End Sub
    End Class

```

```

        End Try
    End Using
End Sub

Protected Sub btnCancel_Click(sender As Object, e As EventArgs)
    Response.Redirect("AdminDashboard.aspx")
End Sub
End Class

```

Manage Events:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="ManageEvent.aspx.vb"
Inherits="ManageEvent" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Manage Event</title>
    <style>
        body { font-family: Arial; margin: 20px; background: #f5f5f5; }
        .container { max-width: 800px; margin: 0 auto; background: white; padding:
20px; border-radius: 5px; box-shadow: 0 0 10px rgba(0,0,0,0.1); }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 200px; font-weight: bold; }
        .form-control { padding: 8px; border: 1px solid #ddd; border-radius: 4px;
width: 300px; }
        .btn { padding: 8px 15px; color: white; border: none; cursor: pointer;
border-radius: 4px; }
        .btn-primary { background: #4CAF50; }
        .btn-primary:hover { background: #45a049; }
        .btn-secondary { background: #2196F3; }
        .btn-secondary:hover { background: #0b7dda; }
        .btn-back { background: #333; }
        .btn-back:hover { background: #555; }
        .validation-error { color: red; font-size: 0.9em; }
        .grid-view { width: 100%; margin-top: 15px; border-collapse: collapse; }
        .grid-view th { background: #333; color: white; padding: 10px; text-align:
left; }
        .grid-view td { padding: 10px; border-bottom: 1px solid #ddd; }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="container">

```

```

        <h1>Manage Event: <asp:Label ID="lblEventName"
runat="server"></asp:Label></h1>
        <p>Start Date: <asp:Label ID="lblStartDate"
runat="server"></asp:Label></p>

        <h2>Assign Employees</h2>
        <div class="form-group">
            <label for="ddlEmployee">Employee:</label>
            <asp:DropDownList ID="ddlEmployee" runat="server" CssClass="form-
control"></asp:DropDownList>
        </div>
        <div class="form-group">
            <label for="txtWorkHours">Work Hours:</label>
            <asp:TextBox ID="txtWorkHours" runat="server" CssClass="form-
control" TextMode="Number"></asp:TextBox>
        </div>
        <div class="form-group">
            <label for="txtEventRole">Role:</label>
            <asp:TextBox ID="txtEventRole" runat="server" CssClass="form-
control"></asp:TextBox>
        </div>
        <asp:Button ID="btnAssign" runat="server" Text="Assign Employee"
CssClass="btn btn-primary" OnClick="btnAssign_Click" />

        <h2>Assigned Employees</h2>
        <asp:GridView ID="gvAssignedEmployees" runat="server" CssClass="grid-
view" AutoGenerateColumns="False">
            <Columns>
                <asp:BoundField DataField="EMPLOYEE_NAME" HeaderText="Employee"
/>
                <asp:BoundField DataField="EVENT_ROLE" HeaderText="Role" />
                <asp:BoundField DataField="WORK_HOURS" HeaderText="Work Hours"
/>
                <asp:TemplateField HeaderText="Actions">
                    <ItemTemplate>
                        <asp:Button ID="btnRemove" runat="server" Text="Remove"
CssClass="btn btn-secondary"
                        CommandArgument='<%# Eval("EMPLOYEE_ID") %>'
OnClick="btnRemove_Click" CausesValidation="false" />
                    </ItemTemplate>
                </asp:TemplateField>
            </Columns>
        </asp:GridView>

        <h2>Event Artworks</h2>
        <div class="form-group">
            <label for="ddlArtwork">Artwork:</label>
            <asp:DropDownList ID="ddlArtwork" runat="server" CssClass="form-
control"></asp:DropDownList>
        </div>
        <asp:Button ID="btnAddArtwork" runat="server" Text="Add Artwork"
CssClass="btn btn-primary" OnClick="btnAddArtwork_Click" />

        <asp:GridView ID="gvEventArtworks" runat="server" CssClass="grid-view"
AutoGenerateColumns="False">
            <Columns>
                <asp:BoundField DataField="TITLE" HeaderText="Artwork" />
                <asp:BoundField DataField="ARTIST_NAME" HeaderText="Artist" />

```

```

        <asp:BoundField DataField="PRICE" HeaderText="Price"
DataFormatString="{0:C}" />
        <asp:TemplateField HeaderText="Actions">
            <ItemTemplate>
                <asp:Button ID="btnRemoveArtwork" runat="server"
Text="Remove" CssClass="btn btn-secondary"
                CommandArgument='<%# Eval("ARTWORK_ID") %>'
OnClick="btnRemoveArtwork_Click" CausesValidation="false" />
            </ItemTemplate>
        </asp:TemplateField>
    </Columns>
</asp:GridView>

<h2>Ticket Pricing</h2>
<div class="form-group">
    <label for="txtNewTicketPrice">New Ticket Price ($):</label>
    <asp:TextBox ID="txtNewTicketPrice" runat="server" CssClass="form-
control" TextMode="Number" min="1" step="1"></asp:TextBox>
    <asp:RequiredFieldValidator runat="server"
ControlToValidate="txtNewTicketPrice"
    ErrorMessage="Price is required" CssClass="validation-error"
Display="Dynamic"
    ValidationGroup="TicketPriceGroup" />
    <asp:RangeValidator runat="server"
ControlToValidate="txtNewTicketPrice"
    Type="Integer" MinimumValue="1" MaximumValue="99999"
    ErrorMessage="Price must be between $1 and $99,999"
CssClass="validation-error"
    Display="Dynamic" ValidationGroup="TicketPriceGroup" />
</div>
<div class="form-group">
    <label for="txtEffectiveDate">Effective Date:</label>
    <asp:TextBox ID="txtEffectiveDate" runat="server" CssClass="form-
control" TextMode="Date"></asp:TextBox>
    <asp:RequiredFieldValidator runat="server"
ControlToValidate="txtEffectiveDate"
    ErrorMessage="Effective date is required" CssClass="validation-
error"
    Display="Dynamic" ValidationGroup="TicketPriceGroup" />
    <asp:CompareValidator runat="server"
ControlToValidate="txtEffectiveDate"
    Operator="DataTypeCheck" Type="Date"
    ErrorMessage="Please enter a valid date" CssClass="validation-
error"
    Display="Dynamic" ValidationGroup="TicketPriceGroup" />
</div>
<asp:Button ID="btnAddTicketPrice" runat="server" Text="Add Price
Option"
    CssClass="btn btn-primary" OnClick="btnAddTicketPrice_Click"
    ValidationGroup="TicketPriceGroup" CausesValidation="true" />

    <asp:GridView ID="gvTicketPrices" runat="server" CssClass="grid-view"
AutoGenerateColumns="False">
        <Columns>
            <asp:BoundField DataField="TICKET_PRICE" HeaderText="Price"
DataFormatString="{0:C}" />
            <asp:BoundField DataField="EFFECTIVE_DATE" HeaderText="Effective
Date" DataFormatString="{0:d}" />

```

```

        <asp:TemplateField HeaderText="Actions">
            <ItemTemplate>
                <asp:Button ID="btnRemovePrice" runat="server"
Text="Remove" CssClass="btn btn-secondary"
                CommandArgument='<%# Eval("TICKET_PRICE") & "|" &
Eval("EFFECTIVE_DATE", "{0:yyyy-MM-dd}") %>'
                OnClick="btnRemovePrice_Click"
CausesValidation="false"
                OnClientClick="return confirm('Are you sure you want
to remove this price option?');" />
            </ItemTemplate>
        </asp:TemplateField>
    </Columns>
    <EmptyDataTemplate>
        No ticket prices defined for this event.
    </EmptyDataTemplate>
</asp:GridView>

    <asp:Button ID="btnBack" runat="server" Text="Back to Dashboard"
        CssClass="btn btn-back" OnClick="btnBack_Click"
CausesValidation="false"
        OnClientClick="return confirm('Any unsaved changes will be lost.
Continue?');" />
    <asp:Label ID="lblMessage" runat="server" CssClass="validation-
error"></asp:Label>
</div>
</form>
</body>
</html>

```

```
Imports System.Data
```

```
Imports System.Data.SqlClient
```

```
Partial Class ManageEvent
```

```
    Inherits System.Web.UI.Page
```

```
    Private Property eventName As String
```

```
        Get
```

```
            Return ViewState("eventName").ToString()
```

```
        End Get
```

```
        Set(value As String)
```

```
            ViewState("eventName") = value
```

```
        End Set
```

```
    End Property
```

```
Private Property StartDate As DateTime
```

```
    Get
```

```
        Return CDate(ViewState("StartDate"))
```

```
    End Get
```

```
    Set(value As DateTime)
```

```
        ViewState("StartDate") = value
```

```
    End Set
```

```
End Property
```

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

```
    If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Admin" Then
```

```
        Response.Redirect("Login.aspx")
```

```
    End If
```

```
    If Not IsPostBack Then
```

```
        lblMessage.Text = ""
```

```
        If String.IsNullOrEmpty(Request.QueryString("name")) OrElse
```

```
            String.IsNullOrEmpty(Request.QueryString("startDate")) Then
```

```
            lblMessage.Text = "Event information missing from URL"
```

```
            DisableControls()
```

```
            Return
```

```
        End If
```

```
        EventName = Server.UrlDecode(Request.QueryString("name"))
```

```
        Dim dateString As String = Request.QueryString("startDate")
```

```
        If Not DateTime.TryParse(dateString, StartDate) Then
```

```
            lblMessage.Text = "Invalid event date format"
```

```
            DisableControls()
```

```
            Return
```

```

End If

lblEventName.Text = EventName
lblStartDate.Text = StartDate.ToString("MM/dd/yyyy")

LoadData()
LoadTicketPrices()
End If
End Sub

Private Sub DisableControls()
    btnAssign.Enabled = False
    btnAddArtwork.Enabled = False
    btnAddTicketPrice.Enabled = False
End Sub

Private Sub LoadData()
    LoadAvailableEmployees()
    LoadAssignedEmployees()
    LoadAvailableArtworks()
    LoadEventArtworks()
End Sub

Private Sub LoadAvailableEmployees()
    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Dim query As String = "SELECT E.EMPLOYEE_ID, P.FIRST_NAME + ' ' +
P.LAST_NAME AS FULL_NAME " &
        "FROM EMPLOYEE E " &
        "JOIN PERSON P ON E.EMPLOYEE_ID = P.PERSON_ID " &
        "WHERE E.STATUS = 'Active' AND E.EMPLOYEE_ID NOT IN " &
        "(SELECT EMPLOYEE_ID FROM EVENT_EMPLOYEE " &

```

```

        "WHERE EVENT_NAME = @EventName AND START_DATE =
@StartDate)"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@EventName", EventName)
            cmd.Parameters.AddWithValue("@StartDate", StartDate)
            Try
                conn.Open()
                Dim reader = cmd.ExecuteReader()
                ddlEmployee.DataSource = reader
                ddlEmployee.DataTextField = "FULL_NAME"
                ddlEmployee.DataValueField = "EMPLOYEE_ID"
                ddlEmployee.DataBind()
                ddlEmployee.Items.Insert(0, New ListItem("-- Select Employee --
", ""))
            Catch ex As Exception
                lblMessage.Text = "Error loading available employees: " &
ex.Message
            End Try
        End Using
    End Using
End Sub

Private Sub LoadAssignedEmployees()
    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Dim query As String = "SELECT EE.EMPLOYEE_ID, P.FIRST_NAME + ' ' +
P.LAST_NAME AS EMPLOYEE_NAME, " &
        "EE.EVENT_ROLE, EE.WORK_HOURS " &
        "FROM EVENT_EMPLOYEE EE " &
        "JOIN EMPLOYEE E ON EE.EMPLOYEE_ID = E.EMPLOYEE_ID " &
        "JOIN PERSON P ON E.EMPLOYEE_ID = P.PERSON_ID " &

```

```
        "WHERE EE.EVENT_NAME = @EventName AND EE.START_DATE =  
@StartDate"
```

```
    Using conn As New SqlConnection(connStr)  
        Using cmd As New SqlCommand(query, conn)  
            cmd.Parameters.AddWithValue("@EventName", EventName)  
            cmd.Parameters.AddWithValue("@StartDate", StartDate)  
            Try  
                conn.Open()  
                Dim da As New SqlDataAdapter(cmd)  
                Dim dt As New DataTable()  
                da.Fill(dt)  
                gvAssignedEmployees.DataSource = dt  
                gvAssignedEmployees.DataBind()  
            Catch ex As Exception  
                lblMessage.Text = "Error loading assigned employees: " &  
ex.Message  
            End Try  
        End Using  
    End Using  
End Sub
```

```
Private Sub LoadAvailableArtworks()  
    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet  
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data  
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial  
catalog=ARTVAULT_DB;TrustServerCertificate=True"  
    Dim query As String = "SELECT A.ARTWORK_ID, A.TITLE + ' by ' + P.FIRST_NAME  
+ ' ' + P.LAST_NAME AS DISPLAY_NAME " &  
        "FROM ARTWORK A " &  
        "JOIN ARTIST AR ON A.ARTIST_ID = AR.ARTIST_ID " &  
        "JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &  
        "WHERE A.STATUS = 'Available' AND A.ARTWORK_ID NOT IN " &  
        "(SELECT ARTWORK_ID FROM EVENT_ARTWORK " &
```

```

        "WHERE EVENT_NAME = @EventName AND START_DATE =
@StartDate)"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@EventName", EventName)
            cmd.Parameters.AddWithValue("@StartDate", StartDate)
            Try
                conn.Open()
                Dim reader = cmd.ExecuteReader()
                ddlArtwork.DataSource = reader
                ddlArtwork.DataTextField = "DISPLAY_NAME"
                ddlArtwork.DataValueField = "ARTWORK_ID"
                ddlArtwork.DataBind()
                ddlArtwork.Items.Insert(0, New ListItem("-- Select Artwork --",
""))
            Catch ex As Exception
                lblMessage.Text = "Error loading available artworks: " &
ex.Message
            End Try
        End Using
    End Using
End Sub

Private Sub LoadEventArtworks()
    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Dim query As String = "SELECT A.ARTWORK_ID, A.TITLE, P.FIRST_NAME + ' ' +
P.LAST_NAME AS ARTIST_NAME, AP.PRICE " &
        "FROM EVENT_ARTWORK EA " &
        "JOIN ARTWORK A ON EA.ARTWORK_ID = A.ARTWORK_ID " &
        "JOIN ARTIST AR ON A.ARTIST_ID = AR.ARTIST_ID " &
        "JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &

```

```

&                                "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID = AP.ARTWORK_ID "
                                "WHERE EA.EVENT_NAME = @EventName AND EA.START_DATE =
@StartDate"

```

```

Using conn As New SqlConnection(connStr)
    Using cmd As New SqlCommand(query, conn)
        cmd.Parameters.AddWithValue("@EventName", EventName)
        cmd.Parameters.AddWithValue("@StartDate", StartDate)
        Try
            conn.Open()
            Dim da As New SqlDataAdapter(cmd)
            Dim dt As New DataTable()
            da.Fill(dt)
            gvEventArtworks.DataSource = dt
            gvEventArtworks.DataBind()
        Catch ex As Exception
            lblMessage.Text = "Error loading event artworks: " & ex.Message
        End Try
    End Using
End Using
End Sub

```

```

Protected Sub btnAssign_Click(sender As Object, e As EventArgs) Handles
btnAssign.Click
    If ddlEmployee.SelectedIndex <= 0 Then
        lblMessage.Text = "Please select an employee"
        Return
    End If

    Dim workHours As Decimal
    If Not Decimal.TryParse(txtWorkHours.Text, workHours) OrElse workHours <= 0
Then
        lblMessage.Text = "Please enter valid work hours (positive number)"
    End If
End Sub

```

```

        Return
    End If

    If String.IsNullOrEmpty(txtEventRole.Text.Trim()) Then
        lblMessage.Text = "Please enter a role for the employee"
        Return
    End If

    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Using conn As New SqlConnection(connStr)
        conn.Open()

        Dim transaction As SqlTransaction = conn.BeginTransaction()

        Try
            Dim query As String = "INSERT INTO EVENT_EMPLOYEE (EVENT_NAME,
START_DATE, EMPLOYEE_ID, WORK_HOURS, EVENT_ROLE) " &
                "VALUES (@EventName, @StartDate, @EmployeeId,
@WorkHours, @EventRole)"

            Using cmd As New SqlCommand(query, conn, transaction)
                cmd.Parameters.AddWithValue("@EventName", EventName)
                cmd.Parameters.AddWithValue("@StartDate", StartDate)
                cmd.Parameters.AddWithValue("@EmployeeId",
ddlEmployee.SelectedValue)
                cmd.Parameters.AddWithValue("@WorkHours", workHours)
                cmd.Parameters.AddWithValue("@EventRole",
txtEventRole.Text.Trim())

                cmd.ExecuteNonQuery()
            End Using
        Catch
        End Try
    End Using

```

```

        transaction.Commit()

        txtWorkHours.Text = ""
        txtEventRole.Text = ""
        LoadAvailableEmployees()
        LoadAssignedEmployees()
        lblMessage.Text = "Employee assigned successfully"

    Catch ex As Exception
        transaction.Rollback()
        lblMessage.Text = "Error assigning employee: " & ex.Message
    End Try
End Using
End Sub

Protected Sub btnRemove_Click(sender As Object, e As EventArgs)

    Dim btn As Button = CType(sender, Button)
    Dim employeeId = btn.CommandArgument

    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Using conn As New SqlConnection(connStr)
        Try
            conn.Open()

            Dim query As String = "DELETE FROM EVENT_EMPLOYEE " &
                "WHERE EVENT_NAME = @EventName AND START_DATE =
@StartDate AND EMPLOYEE_ID = @EmployeeId"

            Using cmd As New SqlCommand(query, conn)
                cmd.Parameters.AddWithValue("@EventName", EventName)
                cmd.Parameters.AddWithValue("@StartDate", StartDate)

```

```

        cmd.Parameters.AddWithValue("@EmployeeId", employeeId)
        cmd.ExecuteNonQuery()
    End Using

    LoadAvailableEmployees()
    LoadAssignedEmployees()
    lblMessage.Text = "Employee removed from event"
Catch ex As Exception
    lblMessage.Text = "Error removing employee: " & ex.Message
End Try
End Using
End Sub

```

```

Protected Sub btnAddArtwork_Click(sender As Object, e As EventArgs) Handles
btnAddArtwork.Click

```

```

    If ddlArtwork.SelectedIndex <= 0 Then
        lblMessage.Text = "Please select an artwork"
        Return
    End If

```

```

        Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

```

```

    Using conn As New SqlConnection(connStr)
        conn.Open()
        Dim transaction As SqlTransaction = conn.BeginTransaction()

        Try
            Dim query As String = "INSERT INTO EVENT_ARTWORK (EVENT_NAME,
START_DATE, ARTWORK_ID) " &
                "VALUES (@EventName, @StartDate, @ArtworkId)"

```

```

        Using cmd As New SqlCommand(query, conn, transaction)
            cmd.Parameters.AddWithValue("@EventName", EventName)
            cmd.Parameters.AddWithValue("@StartDate", StartDate)
            cmd.Parameters.AddWithValue("@ArtworkId",
ddlArtwork.SelectedValue)
            cmd.ExecuteNonQuery()
        End Using

        Dim updateQuery As String = "UPDATE ARTWORK SET STATUS = 'On
Display' WHERE ARTWORK_ID = @ArtworkId"

        Using cmd As New SqlCommand(updateQuery, conn, transaction)
            cmd.Parameters.AddWithValue("@ArtworkId",
ddlArtwork.SelectedValue)
            cmd.ExecuteNonQuery()
        End Using

        transaction.Commit()

        LoadAvailableArtworks()
        LoadEventArtworks()
        lblMessage.Text = "Artwork added to event successfully"

    Catch ex As Exception
        transaction.Rollback()
        lblMessage.Text = "Error adding artwork: " & ex.Message
    End Try
End Using
End Sub

Protected Sub btnRemoveArtwork_Click(sender As Object, e As EventArgs)
    Dim btn As Button = CType(sender, Button)
    Dim artworkId = btn.CommandArgument

```

```
Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet  
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data  
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial  
catalog=ARTVAULT_DB;TrustServerCertificate=True"
```

```
Using conn As New SqlConnection(connStr)
```

```
    conn.Open()
```

```
    Dim transaction As SqlTransaction = conn.BeginTransaction()
```

```
    Try
```

```
        Dim query As String = "DELETE FROM EVENT_ARTWORK " &
```

```
            "WHERE EVENT_NAME = @EventName AND START_DATE =  
@StartDate AND ARTWORK_ID = @ArtworkId"
```

```
        Using cmd As New SqlCommand(query, conn, transaction)
```

```
            cmd.Parameters.AddWithValue("@EventName", EventName)
```

```
            cmd.Parameters.AddWithValue("@StartDate", StartDate)
```

```
            cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
```

```
            cmd.ExecuteNonQuery()
```

```
        End Using
```

```
        Dim updateQuery As String = "UPDATE ARTWORK SET STATUS = 'Available'  
WHERE ARTWORK_ID = @ArtworkId"
```

```
        Using cmd As New SqlCommand(updateQuery, conn, transaction)
```

```
            cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
```

```
            cmd.ExecuteNonQuery()
```

```
        End Using
```

```
    transaction.Commit()
```

```
    LoadAvailableArtworks()
```

```
    LoadEventArtworks()
```

```
    lblMessage.Text = "Artwork removed from event"
```

```

        Catch ex As Exception
            transaction.Rollback()
            lblMessage.Text = "Error removing artwork: " & ex.Message
        End Try
    End Using
End Sub

Private Sub LoadTicketPrices()
    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Dim query As String = "SELECT TICKET_PRICE, EFFECTIVE_DATE " &
        "FROM TICKET " &
        "WHERE EVENT_NAME = @EventName AND START_DATE =
@StartDate " &
        "ORDER BY EFFECTIVE_DATE DESC"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@EventName", EventName)
            cmd.Parameters.AddWithValue("@StartDate", StartDate)
            Try
                conn.Open()
                Dim da As New SqlDataAdapter(cmd)
                Dim dt As New DataTable()
                da.Fill(dt)
                gvTicketPrices.DataSource = dt
                gvTicketPrices.DataBind()
            Catch ex As Exception
                lblMessage.Text = "Error loading ticket prices: " & ex.Message
            End Try
        End Using
    End Using
End Using

```

End Sub

Protected Sub btnAddTicketPrice_Click(sender As Object, e As EventArgs) Handles
btnAddTicketPrice.Click

lblMessage.Text = ""

Dim ticketPrice As Decimal

If Not Decimal.TryParse(txtNewTicketPrice.Text, ticketPrice) Then

lblMessage.Text = "Please enter a valid number for ticket price"

Return

End If

If ticketPrice <= 0 Then

lblMessage.Text = "Ticket price must be a positive number"

Return

End If

Dim effectiveDate As DateTime

If Not DateTime.TryParse(txtEffectiveDate.Text, effectiveDate) Then

lblMessage.Text = "Please enter a valid effective date"

Return

End If

Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

Using conn As New SqlConnection(connStr)

conn.Open()

Dim checkQuery As String = "SELECT COUNT(*) FROM TICKET " &

"WHERE EVENT_NAME = @EventName AND START_DATE =
@StartDate " &

```
"AND TICKET_PRICE = @TicketPrice"
```

```
Using checkCmd As New SqlCommand(checkQuery, conn)
    checkCmd.Parameters.AddWithValue("@EventName", EventName)
    checkCmd.Parameters.AddWithValue("@StartDate", StartDate)
    checkCmd.Parameters.AddWithValue("@TicketPrice", ticketPrice)

    Dim exists As Integer = Convert.ToInt32(checkCmd.ExecuteScalar())
    If exists > 0 Then
        lblMessage.Text = "This ticket price already exists for the
event"

        Return
    End If
End Using

Dim insertQuery As String = "INSERT INTO TICKET (EVENT_NAME, START_DATE,
TICKET_PRICE, EFFECTIVE_DATE) " &
    "VALUES (@EventName, @StartDate, @TicketPrice,
@EffectiveDate)"

Using cmd As New SqlCommand(insertQuery, conn)
    cmd.Parameters.AddWithValue("@EventName", EventName)
    cmd.Parameters.AddWithValue("@StartDate", StartDate)
    cmd.Parameters.AddWithValue("@TicketPrice", ticketPrice)
    cmd.Parameters.AddWithValue("@EffectiveDate", effectiveDate)

    Try
        cmd.ExecuteNonQuery()
        txtNewTicketPrice.Text = ""
        txtEffectiveDate.Text = ""
        LoadTicketPrices()
    Catch ex As Exception
        lblMessage.Text = "Error adding ticket price: " & ex.Message
    End Try
```

```
End Using
End Using
End Sub
```

```
Protected Sub btnRemovePrice_Click(sender As Object, e As EventArgs)
```

```
Dim btn As Button = CType(sender, Button)
```

```
lblMessage.Text = ""
```

```
Try
```

```
Dim args = btn.CommandArgument.Split("|"c)
```

```
If args.Length <> 2 Then
```

```
    lblMessage.Text = "Invalid arguments for removing ticket price"
```

```
    Return
```

```
End If
```

```
Dim ticketPrice As Decimal
```

```
If Not Decimal.TryParse(args(0), ticketPrice) Then
```

```
    lblMessage.Text = "Invalid ticket price format"
```

```
    Return
```

```
End If
```

```
Dim effectiveDate As DateTime
```

```
If Not DateTime.TryParse(args(1), effectiveDate) Then
```

```
    lblMessage.Text = "Invalid date format"
```

```
    Return
```

```
End If
```

```
Dim connStr As String = "workstation
id=ARTVAULT_DB.mssql.somee.com;packet size=4096;user
id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"
```

```
Using conn As New SqlConnection(connStr)
```

```

conn.Open()

Dim checkQuery As String = "SELECT COUNT(*) FROM TICKET " &
    "WHERE EVENT_NAME = @EventName AND START_DATE =
@StartDate " &
    "AND TICKET_PRICE = @TicketPrice AND
EFFECTIVE_DATE = @EffectiveDate"

Dim exists As Integer = 0
Using checkCmd As New SqlCommand(checkQuery, conn)
    checkCmd.Parameters.AddWithValue("@EventName", EventName)
    checkCmd.Parameters.AddWithValue("@StartDate", StartDate)
    checkCmd.Parameters.AddWithValue("@TicketPrice", ticketPrice)
    checkCmd.Parameters.AddWithValue("@EffectiveDate",
effectiveDate)
    exists = Convert.ToInt32(checkCmd.ExecuteScalar())
End Using

If exists = 0 Then
    lblMessage.Text = "Ticket price not found or already removed"
    Return
End If

Dim deleteQuery As String = "DELETE FROM TICKET " &
    "WHERE EVENT_NAME = @EventName AND START_DATE =
@StartDate " &
    "AND TICKET_PRICE = @TicketPrice AND
EFFECTIVE_DATE = @EffectiveDate"

Using cmd As New SqlCommand(deleteQuery, conn)
    cmd.Parameters.AddWithValue("@EventName", EventName)
    cmd.Parameters.AddWithValue("@StartDate", StartDate)
    cmd.Parameters.AddWithValue("@TicketPrice", ticketPrice)
    cmd.Parameters.AddWithValue("@EffectiveDate", effectiveDate)

```

```

        Dim rowsAffected As Integer = cmd.ExecuteNonQuery()

        If rowsAffected > 0 Then
            LoadTicketPrices()
        Else
            lblMessage.Text = "Failed to remove ticket price"
        End If
    End Using
End Using

Catch ex As Exception
    Dim errorDetails As String = "Error removing ticket price: " &
ex.Message
    If ex.InnerException IsNot Nothing Then
        errorDetails += " (Inner: " & ex.InnerException.Message & ")"
    End If
    lblMessage.Text = errorDetails
End Try
End Sub

Protected Sub btnBack_Click(sender As Object, e As EventArgs) Handles
btnBack.Click
    Response.Redirect("AdminDashboard.aspx")
End Sub
End Class

```

Order Confirmation:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="OrderConfirmation.aspx.vb"
Inherits="OrderConfirmation" %>

<!DOCTYPE html>

```

```

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Order Confirmation</title>
    <style>
        body { font-family: Arial; margin: 20px; }
        .container { max-width: 800px; margin: 0 auto; text-align: center; }
        .confirmation-box { border: 1px solid #4CAF50; padding: 20px; margin: 20px
0; }
        .btn { padding: 8px 15px; background: #4CAF50; color: white; border: none;
cursor: pointer; text-decoration: none; }
    </style>
</head>
<body>
    <div class="container">
        <h1>Order Confirmation</h1>

        <div class="confirmation-box">
            <h2>Thank you for your purchase!</h2>
            <p>Your order number is: <strong><asp:Label ID="lblOrderId"
runat="server"></asp:Label></strong></p>

        </div>

        <a href="CustomerDashboard.aspx" class="btn">Back to Dashboard</a>
    </div>
</body>
</html>

```

```

Partial Class OrderConfirmation
    Inherits System.Web.UI.Page

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Customer"
Then
            Response.Redirect("Login.aspx")
        End If

        If Not IsPostBack Then
            Dim orderId As String = Request.QueryString("orderId")
            If String.IsNullOrEmpty(orderId) Then
                Response.Redirect("CustomerDashboard.aspx")
            End If

            lblOrderId.Text = orderId
        End If
    End Sub
End Class

```

Order Detail (For Customer):

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="OrderDetails.aspx.vb"
Inherits="OrderDetails" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Order Details</title>

```

```

<style>
    body { font-family: Arial; margin: 20px; }
    .container { max-width: 800px; margin: 0 auto; }
    .order-box { border: 1px solid #ddd; padding: 20px; margin-bottom: 20px; }
    .artwork-image { max-width: 200px; max-height: 200px; }
    .btn { padding: 8px 15px; background: #4CAF50; color: white; border: none;
cursor: pointer; text-decoration: none; }
</style>
</head>
<body>
    <div class="container">
        <h1>Order Details</h1>

        <div class="order-box">
            <h2>Order #<asp:Label ID="lblOrderId" runat="server"></asp:Label></h2>
            <p><strong>Date:</strong> <asp:Label ID="lblOrderDate"
runat="server"></asp:Label></p>
            <p><strong>Status:</strong> <asp:Label ID="lblOrderStatus"
runat="server"></asp:Label></p>
            <p><strong>Payment Method:</strong> <asp:Label ID="lblPaymentMethod"
runat="server"></asp:Label></p>
            <p><strong>Recipient:</strong> <asp:Label ID="lblRecipient"
runat="server"></asp:Label></p>
        </div>

        <h3>Artwork in this Order</h3>
        <asp:Repeater ID="rptOrderArtworks" runat="server">
            <ItemTemplate>
                <div style="border-bottom: 1px solid #eee; padding: 10px 0;">

                    <h4><%# Eval("TITLE") %></h4>
                    <p><strong>Artist:</strong> <%# Eval("ARTIST_NAME") %></p>
                    <p><strong>Price:</strong> $<%# Eval("PRICE", "{0:0.00}") %></p>
                </div>
            </ItemTemplate>
        </asp:Repeater>

        <br />
        <a href="CustomerDashboard.aspx" class="btn">Back to Dashboard</a>
    </div>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class OrderDetails
    Inherits System.Web.UI.Page

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Customer"
Then
            Response.Redirect("Login.aspx")
        End If

        If Not IsPostBack Then
            Dim orderId As String = Request.QueryString("id")

```

```

        If String.IsNullOrEmpty(orderId) Then
            Response.Redirect("CustomerDashboard.aspx")
        End If

        LoadOrderDetails(orderId)
    End If
End Sub

Private Sub LoadOrderDetails(orderId As String)
    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Dim orderQuery As String = "SELECT ORDER_ID, ORDER_DATE, ORDER_STATUS,
PAYMENT_METHOD, RECIPIENT " &
                                "FROM ORDER_T WHERE ORDER_ID = @OrderId AND
CUSTOMER_ID = @CustomerId"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(orderQuery, conn)
            cmd.Parameters.AddWithValue("@OrderId", orderId)
            cmd.Parameters.AddWithValue("@CustomerId", Session("UserID"))

            Try
                conn.Open()
                Dim reader As SqlDataReader = cmd.ExecuteReader()
                If reader.Read() Then
                    lblOrderId.Text = reader("ORDER_ID").ToString()
                    lblOrderDate.Text =
CDate(reader("ORDER_DATE")).ToString("d")
                    lblOrderStatus.Text = reader("ORDER_STATUS").ToString()
                    lblPaymentMethod.Text = reader("PAYMENT_METHOD").ToString()
                    lblRecipient.Text = reader("RECIPIENT").ToString()
                Else
                    Response.Redirect("CustomerDashboard.aspx")
                End If
            Catch ex As Exception
                ' Handle error
            End Try
        End Using
    End Using

    Dim itemsQuery As String = "SELECT A.ARTWORK_ID, A.TITLE, AP.PRICE, " &
                                "P.FIRST_NAME + ' ' + P.LAST_NAME AS ARTIST_NAME
" &
                                "FROM ORDERLINE OL " &
                                "JOIN ARTWORK A ON OL.ARTWORK_ID = A.ARTWORK_ID "
    &
                                "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID =
AP.ARTWORK_ID " &
                                "JOIN ARTIST AR ON A.ARTIST_ID = AR.ARTIST_ID " &
                                "JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &
                                "WHERE OL.ORDER_ID = @OrderId " &
                                "ORDER BY A.TITLE"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(itemsQuery, conn)

```

```

        cmd.Parameters.AddWithValue("@OrderId", orderId)
    Try
        conn.Open()
        Dim da As New SqlDataAdapter(cmd)
        Dim dt As New DataTable()
        da.Fill(dt)
        rptOrderArtworks.DataSource = dt
        rptOrderArtworks.DataBind()
    Catch ex As Exception
        ' Handle error
    End Try
End Using
End Using
End Sub
End Class

```

Purchase Artwork:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="PurchaseArtwork.aspx.vb"
Inherits="PurchaseArtwork" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Purchase Artwork</title>
    <style>
        body { font-family: Arial; margin: 20px; }
        .container { max-width: 800px; margin: 0 auto; }
        .artwork-box { border: 1px solid #ddd; padding: 20px; margin-bottom: 20px; }
        .artwork-image { max-width: 300px; max-height: 300px; }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 150px; }
        .btn { padding: 8px 15px; background: #4CAF50; color: white; border: none;
cursor: pointer; }
        .btn:hover { background: #45a049; }
    </style>
</head>
<body>
    <div class="container">
        <h1>Purchase Artwork</h1>

        <form id="form1" runat="server">
            <asp:Panel ID="pnlArtworkInfo" runat="server" CssClass="artwork-box">
                <asp:Image ID="imgArtwork" runat="server" CssClass="artwork-image"
/>

                <h2><asp:Label ID="lblTitle" runat="server"></asp:Label></h2>
                <p><strong>Artist:</strong> <asp:Label ID="lblArtist"
runat="server"></asp:Label></p>
                <p><strong>Price:</strong> $<asp:Label ID="lblPrice"
runat="server"></asp:Label></p>
            </asp:Panel>

            <div class="form-group">
                <h3>Shipping Information</h3>

```

```

        <label for="txtRecipient">Recipient Name:</label>
        <asp:TextBox ID="txtRecipient" runat="server"
Width="300px"></asp:TextBox>
        <br />

        <label for="ddlPayment">Payment Method:</label>
        <asp:DropDownList ID="ddlPayment" runat="server" Width="300px">
            <asp:ListItem Text="Credit Card" Value="Credit
Card"></asp:ListItem>
            <asp:ListItem Text="PayPal" Value="PayPal"></asp:ListItem>
            <asp:ListItem Text="Bank Transfer" Value="Bank
Transfer"></asp:ListItem>
        </asp:DropDownList>
    </div>

    <asp:Button ID="btnPurchase" runat="server" Text="Complete Purchase"
CssClass="btn" OnClick="btnPurchase_Click" />
    <asp:Label ID="lblMessage" runat="server" ForeColor="Red"></asp:Label>
</form>
</div>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class PurchaseArtwork
    Inherits System.Web.UI.Page

```

```

    Dim artworkId As String
    Dim price As Decimal

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Customer"
Then
            Response.Redirect("Login.aspx")
        End If

        If Not IsPostBack Then
            artworkId = Request.QueryString("id")
            If String.IsNullOrEmpty(artworkId) Then
                Response.Redirect("CustomerDashboard.aspx")
            End If

            LoadArtworkDetails()
        End If
    End Sub

```

```

    Private Sub LoadArtworkDetails()
        Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"
        Dim query As String = "SELECT A.TITLE, AP.PRICE, P.FIRST_NAME + ' ' +
P.LAST_NAME AS ARTIST_NAME " &
            "FROM ARTWORK A " &

```

```

        "JOIN ARTWORK_PRICE AP ON A.ARTWORK_ID = AP.ARTWORK_ID
" &
        "JOIN ARTIST AR ON A.ARTIST_ID = AR.ARTIST_ID " &
        "JOIN PERSON P ON AR.ARTIST_ID = P.PERSON_ID " &
        "WHERE A.ARTWORK_ID = @ArtworkId AND A.STATUS =
'Available'"

    Using conn As New SqlConnection(connStr)
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
            Try
                conn.Open()
                Dim reader As SqlDataReader = cmd.ExecuteReader()
                If reader.Read() Then
                    lblTitle.Text = reader("TITLE").ToString()
                    lblArtist.Text = reader("ARTIST_NAME").ToString()
                    price = Convert.ToDecimal(reader("PRICE"))
                    lblPrice.Text = price.ToString("0.00")
                Else
                    lblMessage.Text = "Artwork not found or no longer
available."

                    btnPurchase.Enabled = False
                End If
            Catch ex As Exception
                lblMessage.Text = "Error loading artwork details: " & ex.Message
            End Try
        End Using
    End Using
End Sub

Protected Sub btnPurchase_Click(sender As Object, e As EventArgs)
    If String.IsNullOrEmpty(txtRecipient.Text) Then
        lblMessage.Text = "Please enter recipient name."
        Return
    End If

    artworkId = Request.QueryString("id")
    Dim customerId As String = Session("UserID").ToString()
    Dim orderId As String = GenerateOrderId()
    Dim orderDate As DateTime = DateTime.Now

    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

    Dim transaction As SqlTransaction = Nothing
    Using conn As New SqlConnection(connStr)
        Try
            conn.Open()
            transaction = conn.BeginTransaction()

            Dim orderQuery As String = "INSERT INTO ORDER_T (ORDER_ID,
CUSTOMER_ID, RECIPIENT, ORDER_DATE, ORDER_STATUS, PAYMENT_METHOD) " &
                "VALUES (@OrderId, @CustomerId, @Recipient,
@OrderDate, 'Processing', @PaymentMethod)"

            Using cmd As New SqlCommand(orderQuery, conn, transaction)

```

```

        cmd.Parameters.AddWithValue("@OrderId", orderId)
        cmd.Parameters.AddWithValue("@CustomerId", customerId)
        cmd.Parameters.AddWithValue("@Recipient", txtRecipient.Text)
        cmd.Parameters.AddWithValue("@OrderDate", orderDate)
        cmd.Parameters.AddWithValue("@PaymentMethod",
ddlPayment.SelectedValue)
        cmd.ExecuteNonQuery()
    End Using

    Dim orderLineQuery As String = "INSERT INTO ORDERLINE (ORDER_ID,
ARTWORK_ID) " &
        "VALUES (@OrderId, @ArtworkId)"

    Using cmd As New SqlCommand(orderLineQuery, conn, transaction)
        cmd.Parameters.AddWithValue("@OrderId", orderId)
        cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
        cmd.ExecuteNonQuery()
    End Using

    Dim updateArtworkQuery As String = "UPDATE ARTWORK SET STATUS =
'Sold' WHERE ARTWORK_ID = @ArtworkId"
    Using cmd As New SqlCommand(updateArtworkQuery, conn, transaction)
        cmd.Parameters.AddWithValue("@ArtworkId", artworkId)
        cmd.ExecuteNonQuery()
    End Using

    transaction.Commit()
    Response.Redirect("OrderConfirmation.aspx?orderId=" & orderId)

Catch ex As Exception
    If transaction IsNot Nothing Then
        Try
            transaction.Rollback()
        Catch rollbackEx As Exception
            lblMessage.Text &= " (Rollback failed: " &
rollbackEx.Message & ")"
        End Try
    End If

    lblMessage.Text = "Error processing your order: " & ex.Message
End Try
End Using
End Sub

Private Function GenerateOrderId() As String
    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"
    Using conn As New SqlConnection(connStr)
        Dim query As String = "SELECT COUNT(*) FROM ORDER_T WHERE CONVERT(DATE,
ORDER_DATE) = @Today"
        Using cmd As New SqlCommand(query, conn)
            cmd.Parameters.AddWithValue("@Today", DateTime.Today)
            conn.Open()
            Dim count As Integer = Convert.ToInt32(cmd.ExecuteScalar())
            Return String.Format("ORD-{0}-{1:0000}",
DateTime.Now.ToString("yyMMdd"), count + 1)

```

```

        End Using
    End Using
End Function
End Class

```

Purchase Ticket:

```

<%@ Page Language="VB" AutoEventWireup="false" CodeFile="PurchaseTickets.aspx.vb"
Inherits="PurchaseTickets" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Purchase Tickets</title>
    <style>
        body { font-family: Arial; margin: 20px; }
        .container { max-width: 600px; margin: 0 auto; }
        .event-box { border: 1px solid #ddd; padding: 20px; margin-bottom: 20px; }
        .form-group { margin-bottom: 15px; }
        label { display: inline-block; width: 150px; }
        .btn { padding: 8px 15px; background: #4CAF50; color: white; border: none;
cursor: pointer; }
    </style>
</head>
<body>
    <div class="container">
        <h1>Purchase Tickets</h1>

        <div class="event-box">
            <h2><asp:Label ID="lblEventName" runat="server"></asp:Label></h2>
            <p><strong>Date:</strong> <asp:Label ID="lblEventDate"
runat="server"></asp:Label></p>
            <p><strong>Location:</strong> <asp:Label ID="lblEventLocation"
runat="server"></asp:Label></p>
            <p><strong>Ticket Price:</strong> $<asp:Label ID="lblTicketPrice"
runat="server"></asp:Label></p>
        </div>

        <form id="form1" runat="server">
            <div class="form-group">
                <label for="txtQuantity">Number of Tickets:</label>
                <asp:TextBox ID="txtQuantity" runat="server" TextMode="Number"
min="1" value="1" Width="50px"></asp:TextBox>
                <asp:RequiredFieldValidator ID="rfvQuantity" runat="server"
ControlToValidate="txtQuantity" ErrorMessage="Please enter
quantity"
ForeColor="Red" Display="Dynamic"></asp:RequiredFieldValidator>
                <asp:RangeValidator ID="rvQuantity" runat="server"
ControlToValidate="txtQuantity" Type="Integer" MinimumValue="1"
MaximumValue="10"
ErrorMessage="Max 10 tickets per order" ForeColor="Red"
Display="Dynamic"></asp:RangeValidator>
            </div>

            <div class="form-group">
                <label for="ddlPayment">Payment Method:</label>
                <asp:DropDownList ID="ddlPayment" runat="server" Width="200px">

```

```

        <asp:ListItem Text="Credit Card" Value="Credit
Card"></asp:ListItem>
        <asp:ListItem Text="PayPal" Value="PayPal"></asp:ListItem>
        <asp:ListItem Text="Bank Transfer" Value="Bank
Transfer"></asp:ListItem>
    </asp:DropDownList>
</div>

    <div class="form-group" style="margin-top: 20px;">
        <asp:Button ID="btnPurchase" runat="server" Text="Purchase Tickets"
CssClass="btn btn-primary" OnClick="btnPurchase_Click" />
        <asp:Button ID="btnBack" runat="server" Text="Back to Dashboard" CssClass="btn
btn-secondary" OnClick="btnBack_Click"
style="margin-left: 10px;" CausesValidation="false" />
        <asp:Label ID="lblMessage" runat="server" style="margin-left:
10px;"></asp:Label>
    </div>
</form>
</div>
</body>
</html>

```

```

Imports System.Data
Imports System.Data.SqlClient

```

```

Partial Class PurchaseTickets
    Inherits System.Web.UI.Page

```

```

    Dim eventName As String = String.Empty
    Dim eventDate As String = String.Empty
    Dim ticketPrice As Decimal = 0

```

```

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Session("UserID") Is Nothing OrElse Session("UserRole") <> "Customer"
Then
            Response.Redirect("Login.aspx")
        End If

        If Not IsPostBack Then
            eventName = Server.UrlDecode(Request.QueryString("event"))
            eventDate = Server.UrlDecode(Request.QueryString("date"))
            ViewState("EventName") = eventName
            ViewState("EventDate") = eventDate
            ViewState("TicketPrice") = ticketPrice
            LoadEventDetails()
        Else
            eventName = ViewState("EventName").ToString()
            eventDate = ViewState("EventDate").ToString()
            ticketPrice = CDec(ViewState("TicketPrice"))
        End If
    End Sub

    Private Sub LoadEventDetails()
        Dim connStr As String = "Data Source=Eman\SQLEXPRESS;Initial
Catalog=ArtVault;Integrated Security=SSPI"
        Dim query As String = "SELECT E.EVENT_NAME, E.START_DATE, E.EVENT_LOCATION,
MIN(T.TICKET_PRICE) AS MIN_PRICE " &

```

```

"FROM EVENT E JOIN TICKET T ON E.EVENT_NAME =
T.EVENT_NAME AND E.START_DATE = T.START_DATE " &
"WHERE E.EVENT_NAME = @EventName AND E.START_DATE =
@EventDate " &
"GROUP BY E.EVENT_NAME, E.START_DATE, E.EVENT_LOCATION"

```

```

Using conn As New SqlConnection(connStr)
Using cmd As New SqlCommand(query, conn)
    cmd.Parameters.AddWithValue("@EventName", eventName)
    cmd.Parameters.AddWithValue("@EventDate", eventDate)
    Try
        conn.Open()
        Dim reader As SqlDataReader = cmd.ExecuteReader()
        If reader.Read() Then
            lblEventName.Text = reader("EVENT_NAME").ToString()
            lblEventDate.Text =
CDate(reader("START_DATE")).ToString("d")
            lblEventLocation.Text = reader("EVENT_LOCATION").ToString()
            ticketPrice = Convert.ToDecimal(reader("MIN_PRICE"))
            lblTicketPrice.Text = ticketPrice.ToString("0.00")
            ViewState("TicketPrice") = ticketPrice
        Else
            lblMessage.Text = "Event not found or no tickets available"
            DisablePurchaseControls()
        End If
    Catch ex As Exception
        lblMessage.Text = "Error loading event details: " & ex.Message
        DisablePurchaseControls()
    End Try
End Using
End Using
End Sub

```

```

Protected Sub btnPurchase_Click(sender As Object, e As EventArgs)
    If Not Page.IsValid Then
        Return
    End If

    Dim quantity As Integer = Integer.Parse(txtQuantity.Text)
    Dim totalAmount As Decimal = quantity * ticketPrice
    Dim customerId As String = Session("UserID").ToString()
    Dim paymentMethod As String = ddlPayment.SelectedValue

    Dim orderId As String = "TK" & DateTime.Now.ToString("yyMMdd") & New
Random().Next(100, 999).ToString()

    Dim connStr As String = "workstation id=ARTVAULT_DB.mssql.somee.com;packet
size=4096;user id=emanshafqat_SQLLogin_1;pwd=yydlbxvc4u;data
source=ARTVAULT_DB.mssql.somee.com;persist security info=False;initial
catalog=ARTVAULT_DB;TrustServerCertificate=True"

```

```

Using conn As New SqlConnection(connStr)
    conn.Open()
    Dim transaction As SqlTransaction = conn.BeginTransaction()

    Try
        Dim orderQuery As String = "INSERT INTO ORDER_T (ORDER_ID,
CUSTOMER_ID, RECIPIENT, ORDER_DATE, ORDER_STATUS, PAYMENT_METHOD) " &

```

```

VALUES (@OrderId, @CustomerId,
@Recipient, @OrderDate, 'Completed', @PaymentMethod)"

    Using cmd As New SqlCommand(orderQuery, conn, transaction)
        cmd.Parameters.AddWithValue("@OrderId", orderId)
        cmd.Parameters.AddWithValue("@CustomerId", customerId)
        cmd.Parameters.AddWithValue("@Recipient", "Ticket for " &
eventName)
        cmd.Parameters.AddWithValue("@OrderDate", DateTime.Now)
        cmd.Parameters.AddWithValue("@PaymentMethod", paymentMethod)
        cmd.ExecuteNonQuery()
    End Using

    Dim ticketQuery As String = "INSERT INTO ORDERLINE (ORDER_ID,
ARTWORK_ID) " &
VALUES (@OrderId, @DummyArtworkId)"

    Using cmd As New SqlCommand(ticketQuery, conn, transaction)
        cmd.Parameters.AddWithValue("@OrderId", orderId)
        cmd.Parameters.AddWithValue("@DummyArtworkId", "TKT-" &
eventName.Replace(" ", "").Substring(0, Math.Min(11, eventName.Replace(" ",
").Length)))
        cmd.ExecuteNonQuery()
    End Using

    transaction.Commit()

    ScriptManager.RegisterStartupScript(Me, Me.GetType(),
"purchaseSuccess",
        "alert('Ticket purchase successful! Order ID: " & orderId & "');
window.location='CustomerDashboard.aspx';", True)

    Catch ex As Exception
        transaction.Rollback()
        lblMessage.Text = "Error processing your ticket purchase: " &
ex.Message
        lblMessage.ForeColor = Drawing.Color.Red
    End Try
End Using
End Sub

Private Sub DisablePurchaseControls()
    btnPurchase.Enabled = False
    txtQuantity.Enabled = False
    ddlPayment.Enabled = False
End Sub

Protected Sub btnBack_Click(sender As Object, e As EventArgs)
    Response.Redirect("CustomerDashboard.aspx")
End Sub
End Class

```