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Computer and Information Sciences

Internet Application Development

Semester Project (Final Implementation)

Login.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
    <title>IMS Login</title>
```

```
    <script type="text/javascript">
```

```
function validatePasswordLength(source, args) {
```

```
    var password = args.Value;
```

```
    args.IsValid = (password.length >= 5 && password.length <= 14);
```

```
}
```

```
</script>
```

```
    <style>
```

```
body {
```

```
    font-family: 'Arial', sans-serif;
```

```
    background: #f5f5f5;
```

```
margin: 0;
padding: 20px;
display: flex;
justify-content: center;
align-items: center;
min-height: 100vh;
}
```

```
#form1 {
  background: white;
  padding: 30px;
  border-radius: 8px;
  box-shadow: 0 2px 10px rgba(0,0,0,0.1);
  width: 100%;
  max-width: 400px;
}
```

```
h2 {
  color: #333;
  text-align: center;
  margin-bottom: 25px;
}
```

```
.input-group {
```

```
width: 100%;  
padding: 12px;  
margin: 8px 0 15px;  
border: 1px solid #ddd;  
border-radius: 4px;  
font-size: 14px;  
box-sizing: border-box;  
}
```

```
.input-group:focus {  
    border-color: #4CAF50;  
    outline: none;  
}
```

```
.btn {  
    background: #3498db;  
    color: white;  
    border: none;  
    padding: 12px;  
    width: 100%;  
    border-radius: 4px;  
    cursor: pointer;  
    font-size: 16px;  
    margin-top: 10px;
```

```
    transition: background 0.3s;
}
```

```
.btn:hover {
    background: #0b7dda;
}
```

```
#blMsg {
    display: block;
    text-align: center;
    margin: 15px 0;
}
```

```
table {
    width: 100%;
    border-collapse: collapse;
    margin-top: 25px;
    font-size: 14px;
}
```

```
th {
    background: #2196F3;
    color: white;
    padding: 10px;
```

```
    text-align: left;
}
```

```
td {
    padding: 10px;
    border-bottom: 1px solid #ddd;
}
```

```
tr:nth-child(even) {
    background: #f9f9f9;
}
```

```
tr:hover {
    background: #f1f1f1;
}
```

```
.checkbox-container {
    margin: 15px 0;
}
```

```
.password-requirements {
    font-size: 12px;
    color: #666;
    margin: -10px 0 15px;
```

```

    }
</style>

</head>

<body>

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

        <h2>IMS Login</h2>

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

        Username:<br /> <asp:TextBox ID="txtUsername" runat="server" CssClass="input-group"
placeholder="Enter your username" /><br />

        Password:<br /> <asp:TextBox ID="txtPassword" runat="server" TextMode="Password"
CssClass="input-group" placeholder="Enter your Password" />

        <asp:CustomValidator ID="CValidator" runat="server" ControlToValidate="txtPassword"
ErrorMessage="Password length should be between 5 and 14 characters!" ForeColor="Red"
ClientValidationFunction="validatePasswordLength"></asp:CustomValidator><br />

        <asp:CheckBox ID="chkRemember" runat="server" Text="Remember me" />

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

        <table border="1" cellpadding="5" cellspacing="0" style="border-collapse: collapse; font-
family: Arial;">

            <tr style="background-color: #f2f2f2;">

                <th>Username</th>

                <th>Password</th>

```

```
        <th>Role</th>
    </tr>
    <tr>
        <td>bushra</td>
        <td>bushra123</td>
        <td>Admin</td>
    </tr>
    <tr>
        <td>fajar</td>
        <td>fajar123</td>
        <td>Manager</td>
    </tr>
    <tr>
        <td>noor</td>
        <td>noor123</td>
        <td>Viewer</td>
    </tr>
</table>
</form>
</body>
</html>
```

Login.aspx.vb

Imports System.Data.SqlClient

Imports System.Data

Partial Class Login

Inherits System.Web.UI.Page

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

 If Not IsPostBack Then

 If Request.Cookies("Username") IsNot Nothing Then

 txtUsername.Text = Request.Cookies("Username").Value

 chkRemember.Checked = True

 End If

 End If

End Sub

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

 Dim connStr As String = ConfigurationManager.ConnectionStrings("IMS").ConnectionString

 Dim con As New SqlConnection(connStr)

 Dim cmd As New SqlCommand("SELECT Role FROM [User] WHERE Username=@username
AND Password=@password", con)

 cmd.Parameters.AddWithValue("@username", txtUsername.Text)

 cmd.Parameters.AddWithValue("@password", txtPassword.Text)

Try


```
con.Open()
```

```
Dim roleObj = cmd.ExecuteScalar()
```

```
con.Close()
```

```
If roleObj IsNot Nothing Then
```

```
    Dim role As String = roleObj.ToString()
```

```
    If role = "Admin" Then
```

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

```
    ElseIf role = "Manager" Then
```

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

```
    ElseIf role = "Viewer" Then
```

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

```
    End If
```

```
If chkRemember.Checked Then
```

```
    Dim rememberCookie As New HttpCookie("Username", txtUsername.Text)
```

```
    rememberCookie.Expires = DateTime.Now.AddDays(7)
```

```
    Response.Cookies.Add(rememberCookie)
```

```
Else
```

```
    If Request.Cookies("Username") IsNot Nothing Then
```

```
        Response.Cookies("Username").Expires = DateTime.Now.AddDays(-1)
```

```
    End If
```

```
End If
```

Else

lblMsg.Text = "Invalid Username or Password!"

End If

Catch ex As SqlException

lblMsg.Text = "Database error occurred: " & ex.Message

Catch ex As Exception

lblMsg.Text = "An unexpected error occurred: " & ex.Message

Finally

If con.State = ConnectionState.Open Then

con.Close()

End If

End Try

End Sub

End Class

Admin.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Admin Controls</title>
```

```
  <style>
```

```
    body {
```

```
      font-family: 'Arial', sans-serif;
```

```
      background-color: #f8f9fa;
```

```
      margin: 0;
```

```
      padding: 20px;
```

```
      display: flex;
```

```
      flex-direction: column;
```

```
      align-items: center;
```

```
      min-height: 100vh;
```

```
    }
```

```
    h2 {
```

```
      color: #2c3e50;
```

```
      margin-bottom: 30px;
```

```
      font-weight: 600;
```

```
      text-align: center;
```

```
    }
```

```
    #form1 {
```

```
      background-color: white;
```

```
padding: 30px;

border-radius: 8px;

box-shadow: 0 2px 10px rgba(0, 0, 0, 0.05);

width: 100%;

max-width: 500px;

}
```

```
.button-container {

  display: flex;

  flex-direction: column;

  gap: 15px;

}
```

```
.btn {

  color: white;

  border: none;

  padding: 12px 20px;

  border-radius: 6px;

  cursor: pointer;

  font-size: 16px;

  font-weight: 500;

  transition: all 0.2s ease;

  text-align: center;

  width: 100%;

}
```

```
}
```

```
.btn:hover {  
    transform: translateY(-2px);  
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);  
}
```

```
#btnProduct {  
    background-color: #2196F3;  
}
```

```
#btnProduct:hover {  
    background-color: #0b7dda;  
}
```

```
#btnCustomer {  
    background-color: #2196F3;  
}
```

```
#btnCustomer:hover {  
    background-color: #0b7dda;  
}
```

```
@media (max-width: 600px) {
```

```
#form1 {  
    padding: 20px;  
}  
  
h2 {  
    font-size: 24px;  
    margin-bottom: 20px;  
}  
}  
  
</style>  
</head>  
<body>  
    <h2>Admin Controls</h2>  
    <form id="form1" runat="server">  
        <div>  
            <asp:Button ID="btnProduct" runat="server" Text="Manage Products" CssClass="btn"  
OnClick="btnProduct_Click" /> <br /> <br />  
            <asp:Button ID="btnCustomer" runat="server" Text="Manage Customers" CssClass="btn"  
OnClick="btnCustomer_Click" />  
  
        </div>  
    </form>  
</body>  
</html>
```

Admin.aspx.vb

Partial Class Admin

Inherits System.Web.UI.Page

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

Response.Redirect("ProductManagement.aspx")

End Sub

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

Response.Redirect("CustomerManagement.aspx")

End Sub

End Class

CustomerManagement.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Customer Management</title>
```

```
<style>
```

```
.btn {
```

```
background-color: #17a2b8;
```

```
color: white;

border: none;

padding: 10px 20px;

margin: 5px;

border-radius: 4px;

cursor: pointer;

font-size: 16px;

}
```

```
.gridview {

margin-top: 20px;

width: 100%;

border-collapse: collapse;

}
```

```
.gridview th, .gridview td {

border: 1px solid #ddd;

padding: 8px;

}
```

```
</style>
```

```
</head>
```

```
<body>
```

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

```
<h2>Customer Management</h2>
```



```

        <asp:GridView ID="gvCustomers" runat="server" AutoGenerateColumns="True"
        CssClass="gridview" ></asp:GridView>

        <br />

        <asp:Button ID="btnInsertCustomer" runat="server" Text="Insert Customer" CssClass="btn"
        />

        <asp:Button ID="btnUpdateCustomer" runat="server" Text="Update Customer"
        CssClass="btn" />

        <asp:Button ID="btnDeleteCustomer" runat="server" Text="Delete Customer"
        CssClass="btn" />

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

    </form>

</body>

</html>

```

CustomerManagement.aspx.vb

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

```
Imports System.Data
```

```
Partial Class CustomerManagement
```

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

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

```
        Try
```

```
            LoadCustomers()
```

Catch ex As Exception

lblMsg.Text = "Error loading customers: " & ex.Message

End Try

End Sub

Protected Sub LoadCustomers()

Dim con As New

SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)

Dim cmd As New SqlCommand("SELECT * FROM Customer", con)

Try

con.Open()

Dim reader As SqlDataReader = cmd.ExecuteReader()

gvCustomers.DataSource = reader

gvCustomers.DataBind()

Catch ex As SqlException

lblMsg.Text = "Database error: " & ex.Message

Catch ex As Exception

lblMsg.Text = "An unexpected error occurred: " & ex.Message

Finally

If con.State = ConnectionState.Open Then

con.Close()

End If

End Try

End Sub

Protected Sub btnInsertCustomer_Click(sender As Object, e As EventArgs) Handles
btnInsertCustomer.Click

Response.Redirect("InsertCustomer.aspx")

End Sub

Protected Sub btnUpdateCustomer_Click(sender As Object, e As EventArgs) Handles
btnUpdateCustomer.Click

Response.Redirect("UpdateCustomer.aspx")

End Sub

Protected Sub btnDeleteCustomer_Click(sender As Object, e As EventArgs) Handles
btnDeleteCustomer.Click

Response.Redirect("DeleteCustomer.aspx")

End Sub

End Class

InsertCustomer.aspx

<%@ Page Language="VB" AutoEventWireup="true" CodeFile="InsertCustomer.aspx.vb"
Inherits="InsertCustomer" %>

<!DOCTYPE html>

<html>

<head>

<title>Insert Customer</title>

<style>

```
.btn {  
    background-color: #17a2b8;  
    color: white;  
    border: none;  
    padding: 10px 20px;  
    margin: 5px;  
    border-radius: 4px;  
    cursor: pointer;  
    font-size: 16px;  
}
```

```
.form-group {  
    margin-bottom: 15px;  
}
```

```
.form-group label {  
    display: inline-block;  
    width: 100px;  
}
```

```
.input-group {  
    width: 25%;  
    padding: 10px;  
    border: 1px solid #ddd;  
    border-radius: 4px;  
    font-size: 14px;
```

```
    box-sizing: border-box;

    margin-top: 5px;

}
```

```
</style>
```

```
</head>
```

```
<body>
```

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

```
<h2>Insert Customer</h2>
```

```
<div class="form-group">
```

```
<label for="txtCustomerName">Name:</label>
```

```
<asp:TextBox ID="txtCustomerName" runat="server" CssClass="input-group" />
```

```
</div>
```

```
<div class="form-group">
```

```
<label for="txtCustomerEmail">Email:</label>
```

```
<asp:TextBox ID="txtCustomerEmail" runat="server" CssClass="input-group" />
```

```
<asp:RegularExpressionValidator ID="revEmail" runat="server"
```

```
ControlToValidate="txtCustomerEmail" ValidationExpression="\S+@\S+\.\S+"
```

```
ErrorMessage="Invalid Email Format!" ForeColor="Red" />
```

```
</div>
```

```
<div class="form-group">
```

```
<label for="txtCustomerPhone">Phone:</label>
```

```
        <asp:TextBox ID="txtCustomerPhone" runat="server" CssClass="input-group" />

    </div>

    <asp:Button ID="btnInsert" runat="server" Text="Insert" CssClass="btn"
OnClick="btnInsert_Click" />

</form>

</body>

</html>
```

InsertCustomer.aspx.vb

Imports System.Data.SqlClient

Partial Class InsertCustomer

Inherits System.Web.UI.Page

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

Dim newCustomerID As Integer = GenerateUniqueCustomerID()

Dim con As New

SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)

Dim cmd As New SqlCommand("INSERT INTO Customer (CustomerID, CustomerName, CustomerEmail, CustomerPhoneNumber) VALUES (@id, @name, @email, @phone)", con)

cmd.Parameters.AddWithValue("@id", newCustomerID)

cmd.Parameters.AddWithValue("@name", txtCustomerName.Text)

cmd.Parameters.AddWithValue("@email", txtCustomerEmail.Text)

```
cmd.Parameters.AddWithValue("@phone", txtCustomerPhone.Text)
```

```
Try
```

```
    con.Open()
```

```
    cmd.ExecuteNonQuery()
```

```
    Response.Write("Customer inserted successfully!")
```

```
Catch ex As Exception
```

```
    Response.Write("Error: " & ex.Message)
```

```
Finally
```

```
    con.Close()
```

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

```
End Try
```

```
End Sub
```

```
Private Function GenerateUniqueCustomerID() As Integer
```

```
    Dim rnd As New Random()
```

```
    Dim uniqueID As Integer
```

```
    Dim isUnique As Boolean = False
```

```
    Dim con As New
```

```
SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)
```

```
    While Not isUnique
```

```
        uniqueID = rnd.Next(1000, 9999)
```

```
        Dim checkCmd As New SqlCommand("SELECT COUNT(*) FROM Customer WHERE  
CustomerID = @id", con)
```

```
checkCmd.Parameters.AddWithValue("@id", uniqueID)

con.Open()

Dim count As Integer = Convert.ToInt32(checkCmd.ExecuteScalar())

con.Close()
```

```
If count = 0 Then

    isUnique = True

End If

End While
```

```
Return uniqueID
```

```
End Function
```

```
End Class
```

UpdateCustomer.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Update Customer</title>
```

```
<style>
```

```
.btn {

    background-color: #3498db;

    color: white;
```



```
border: none;

padding: 10px 20px;

margin: 5px;

border-radius: 4px;

cursor: pointer;

font-size: 16px;
}

.form-group {

    margin-bottom: 15px;
}

.form-group label {

    display: inline-block;

    width: 120px;
}

.input-group {

    width: 25%;

    padding: 10px;

    border: 1px solid #ddd;

    border-radius: 4px;

    font-size: 14px;

    box-sizing: border-box;

    margin-top: 5px;
}
```

```
</style>

</head>

<body>

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

        <h2>Update Customer</h2>

        <div class="form-group">

            <label for="txtCustomerID">Customer ID:</label>

            <asp:TextBox ID="txtCustomerID" runat="server" CssClass="input-group" /><br />

            <label for="txtCustomerName">Name:</label>

            <asp:TextBox ID="txtCustomerName" runat="server" CssClass="input-group" /><br />

            <label for="txtCustomerEmail">Email:</label>

            <asp:TextBox ID="txtCustomerEmail" runat="server" CssClass="input-group" /><br />

            <label for="txtCustomerPhone">Phone:</label>

            <asp:TextBox ID="txtCustomerPhone" runat="server" CssClass="input-group" />

        </div>

        <asp:Button ID="btnUpdate" runat="server" Text="Update" CssClass="btn"
OnClick="btnUpdate_Click" />

    </form>

</body>

</html>
```

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

```
</form>
```

```
</body>
```

```
</html>
```

UpdateCustomer.aspx.vb

```
Imports System.Data
```

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

```
Partial Class UpdateCustomer
```

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

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

```
        Dim con As New
```

```
SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)
```

```
        Dim cmd As New SqlCommand("UPDATE Customer SET CustomerName=@name,  
CustomerEmail=@email, CustomerPhoneNumber=@phone WHERE CustomerID=@cid", con)
```

```
        cmd.Parameters.AddWithValue("@cid", txtCustomerID.Text)
```

```
        cmd.Parameters.AddWithValue("@name", txtCustomerName.Text)
```

```
        cmd.Parameters.AddWithValue("@email", txtCustomerEmail.Text)
```

```
        cmd.Parameters.AddWithValue("@phone", txtCustomerPhone.Text)
```

```
        Try
```

```
            con.Open()
```

```
            cmd.ExecuteNonQuery()
```

```
            con.Close()
```

```
        Response.Write("Customer updated successfully!")

        Response.Redirect("CustomerManagement.aspx")

    Catch ex As Exception

        lblMsg.Text = "Error: " & ex.Message

    Finally

        If con.State = ConnectionState.Open Then

            con.Close()

        End If

    End Try

End Sub

End Class
```

DeleteCustomer.aspx

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

<!DOCTYPE html>

<html>

<head>

    <title>Delete Customer</title>

    <style>

        .btn {

            background-color: #3498db;

            color: white;

            border: none;

            padding: 10px 20px;
```

```
margin: 5px;

border-radius: 4px;

cursor: pointer;

font-size: 16px;

}
```

```
.input-group {

width: 25%;

padding: 10px;

border: 1px solid #ddd;

border-radius: 4px;

font-size: 14px;

box-sizing: border-box;

margin-top: 5px;

}
```

```
</style>

</head>

<body>

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

<h2>Delete Customer</h2>

Customer ID: <asp:TextBox ID="txtCustomerID" runat="server" CssClass="input-group" />

<asp:Button ID="btnDelete" runat="server" Text="Delete" CssClass="btn"

OnClick="btnDelete_Click" />
```

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

```
</form>
```

```
</body>
```

```
</html>
```

DeleteCustomer.aspx.vb

```
Imports System.Data
```

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

```
Partial Class DeleteCustomer
```

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

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

```
        Dim con As New
```

```
SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)
```

```
        Dim cmd As New SqlCommand("DELETE FROM Customer WHERE CustomerID=@cid", con)
```

```
        cmd.Parameters.AddWithValue("@cid", txtCustomerID.Text)
```

```
        Try
```

```
            con.Open()
```

```
            cmd.ExecuteNonQuery()
```

```
            con.Close()
```

```
            Response.Write("Customer deleted successfully!")
```

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

Catch ex As SqlException

lblMsg.Text = "Database error: " & ex.Message

Catch ex As Exception

lblMsg.Text = "An unexpected error occurred: " & ex.Message

Finally

If con.State = ConnectionState.Open Then

con.Close()

End If

End Try

End Sub

End Class

ProductManagement.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Product Management</title>
```

```
<style>
```

```
.btn {
```

```
background-color: #17a2b8;
```

```
color: white;
```

```
border: none;
```

```
padding: 10px 20px;
```

```
margin: 5px;

border-radius: 4px;

cursor: pointer;

font-size: 16px;

}

.gridview {

margin-top: 20px;

width: 100%;

border-collapse: collapse;

}

.gridview th, .gridview td {

border: 1px solid #ddd;

padding: 8px;

}

</style>

</head>

<body>

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

<h2>Product Management</h2>

<asp:GridView ID="gvProducts" runat="server" AutoGenerateColumns="True"

CssClass="gridview"></asp:GridView>

<br />

<asp:Button ID="btnInsertProduct" runat="server" Text="Insert Product" CssClass="btn"

OnClick="btnInsertProduct_Click"/>
```



```
<asp:Button ID="btnUpdateProduct" runat="server" Text="Update Product" CssClass="btn"
OnClick="btnUpdateProduct_Click"/>
```

```
<asp:Button ID="btnDeleteProduct" runat="server" Text="Delete Product" CssClass="btn"
OnClick="btnDeleteProduct_Click"/>
```

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

```
</form>
```

```
</body>
```

```
</html>
```

ProductManagement.aspx.vb

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

```
Imports System.Data
```

```
Partial Class ProductManagement
```

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

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

```
        LoadProducts()
```

```
    End Sub
```

```
    Protected Sub LoadProducts()
```

```
        Dim con As New
```

```
SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)
```

```
        Dim cmd As New SqlCommand("SELECT * FROM Product", con)
```

Try

con.Open()

Dim reader As SqlDataReader = cmd.ExecuteReader()

gvProducts.DataSource = reader

gvProducts.DataBind()

Catch ex As SqlException

lblMsg.Text = "Database error: " & ex.Message

Catch ex As Exception

lblMsg.Text = "An unexpected error occurred: " & ex.Message

Finally

If con.State = ConnectionState.Open Then

con.Close()

End If

End Try

End Sub

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

Response.Redirect("InsertProduct.aspx")

End Sub

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

Response.Redirect("UpdateProduct.aspx")

End Sub

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

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

```
End Sub
```

```
End Class
```

InsertProduct.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
    <title>Insert Product</title>
```

```
    <style>
```

```
        .btn {
```

```
            background-color: #17a2b8;
```

```
            color: white;
```

```
            border: none;
```

```
            padding: 10px 20px;
```

```
            margin: 5px;
```

```
            border-radius: 4px;
```

```
            cursor: pointer;
```

```
            font-size: 16px;
```

```
        }
```

```
.input-group {  
    width: 25%;  
    padding: 10px;  
    border: 1px solid #ddd;  
    border-radius: 4px;  
    font-size: 14px;  
    box-sizing: border-box;  
    margin-top: 5px;  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

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

```
<h2>Insert Product</h2>
```

```
Name: <asp:TextBox ID="txtProductName" runat="server" CssClass="input-group" /><br />
```

```
Category: <asp:TextBox ID="txtCategory" runat="server" CssClass="input-group" /><br />
```

```
Price: <asp:TextBox ID="txtPrice" runat="server" CssClass="input-group" /><br />
```

```
<asp:Button ID="btnInsert" runat="server" Text="Insert" CssClass="btn"
```

```
OnClick="btnInsert_Click" />
```

```
</form>
```

```
</body>
```

```
</html>
```

InsertProduct.aspx.vb

Imports System.Data.SqlClient

Partial Class InsertProduct

Inherits System.Web.UI.Page

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

Dim newProductID As Integer = GenerateRandomID()

Dim con As New

SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)

Dim cmd As New SqlCommand("INSERT INTO Product (ProductID, ProductName, Category, Price) VALUES (@id, @name, @category, @price)", con)

cmd.Parameters.AddWithValue("@id", newProductID)

cmd.Parameters.AddWithValue("@name", txtProductName.Text)

cmd.Parameters.AddWithValue("@category", txtCategory.Text)

cmd.Parameters.AddWithValue("@price", txtPrice.Text)

Try

con.Open()

cmd.ExecuteNonQuery()

Response.Redirect("ProductManagement.aspx")

Catch ex As Exception

If ex.Message.Contains("PRIMARY KEY constraint") Then

```

        newProductID = GenerateRandomID()

        cmd.Parameters("@id").Value = newProductID

        cmd.ExecuteNonQuery()

        Response.Redirect("ProductManagement.aspx")

    Else

        Response.Write("Error: " & ex.Message)

    End If

Finally

    con.Close()

    Response.Redirect("ProductManagement.aspx")

End Try

End Sub

```

```

Private Function GenerateRandomID() As Integer

    Dim rnd As New Random()

    Return rnd.Next(100000, 999999)

End Function

```

End Class

UpdateProduct.aspx

```

<%@ Page Language="VB" AutoEventWireup="true" CodeFile="UpdateProduct.aspx.vb"
Inherits="UpdateProduct" %>

<!DOCTYPE html>

<html>

```

```
<head>
```

```
<title>Update Product</title>
```

```
<style>
```

```
.btn {
```

```
    background-color: #17a2b8;
```

```
    color: white;
```

```
    border: none;
```

```
    padding: 10px 20px;
```

```
    margin: 5px;
```

```
    border-radius: 4px;
```

```
    cursor: pointer;
```

```
    font-size: 16px;
```

```
}
```

```
.input-group {
```

```
    width: 25%;
```

```
    padding: 10px;
```

```
    border: 1px solid #ddd;
```

```
    border-radius: 4px;
```

```
    font-size: 14px;
```

```
    box-sizing: border-box;
```

```
    margin-top: 5px;
```

```
}
```

```
</style>

</head>

<body>

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

        <h2>Update Product</h2>

        Product ID: <asp:TextBox ID="txtProductID" runat="server" CssClass="input-group" /><br />

        Name: <asp:TextBox ID="txtProductName" runat="server" CssClass="input-group" /><br />

        Category: <asp:TextBox ID="txtCategory" runat="server" CssClass="input-group" /><br />

        Price: <asp:TextBox ID="txtPrice" runat="server" CssClass="input-group" /><br />

        <asp:Button ID="btnUpdate" runat="server" Text="Update" CssClass="btn"
        OnClick="btnUpdate_Click" />

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

    </form>

</body>

</html>
```

UpdateProduct.aspx.vb

Imports System.Data

Imports System.Data.SqlClient

Partial Class UpdateProduct

Inherits System.Web.UI.Page


```

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

    Dim con As New
SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)

    Dim cmd As New SqlCommand("UPDATE Product SET ProductName=@name,
Category=@category, Price=@price WHERE ProductID=@pid", con)

    cmd.Parameters.AddWithValue("@pid", txtProductID.Text)

    cmd.Parameters.AddWithValue("@name", txtProductName.Text)

    cmd.Parameters.AddWithValue("@category", txtCategory.Text)

    cmd.Parameters.AddWithValue("@price", txtPrice.Text)

    Try

        con.Open()

        cmd.ExecuteNonQuery()

        con.Close()

        Response.Redirect("ProductManagement.aspx")

    Catch ex As Exception

        lblMsg.Text = "Error: " & ex.Message

    Finally

        If con.State = ConnectionState.Open Then

            con.Close()

        End If

    End Try

End Sub

End Class

```

DeleteProduct.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Delete Product</title>
```

```
<style>
```

```
.btn {
    background-color: #17a2b8;
    color: white;
    border: none;
    padding: 10px 20px;
    margin: 5px;
    border-radius: 4px;
    cursor: pointer;
    font-size: 16px;
}
```

```
.input-group {
    width: 25%;
    padding: 10px;
    border: 1px solid #ddd;
    border-radius: 4px;
    font-size: 14px;
```

```
        box-sizing: border-box;

        margin-top: 5px;
    }

</style>
</head>
<body>
    <form id="form1" runat="server">
        <h2>Delete Product</h2>

        Product ID: <asp:TextBox ID="txtProductID" runat="server" CssClass="input-group" /><br />

        <asp:Button ID="btnDelete" runat="server" Text="Delete" CssClass="btn"
        OnClick="btnDelete_Click" />

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

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

DeleteProduct.aspx.vb

Imports System.Data

Imports System.Data.SqlClient

Partial Class DeleteProduct

Inherits System.Web.UI.Page

```

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

    Dim con As New
SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)

    Dim cmd As New SqlCommand("DELETE FROM Product WHERE ProductID=@pid", con)

    cmd.Parameters.AddWithValue("@pid", txtProductID.Text)

    Try

        con.Open()

        cmd.ExecuteNonQuery()

        con.Close()

        Response.Redirect("ProductManagement.aspx")

    Catch ex As SqlException

        lblMsg.Text = "Database error: " & ex.Message

    Catch ex As Exception

        lblMsg.Text = "An unexpected error occurred: " & ex.Message

    Finally

        If con.State = ConnectionState.Open Then

            con.Close()

        End If

    End Try

End Sub

End Class

```

Manager.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Admin Controls</title>
```

```
  <style>
```

```
    body {
```

```
      font-family: 'Arial', sans-serif;
```

```
      background-color: #f8f9fa;
```

```
      margin: 0;
```

```
      padding: 20px;
```

```
      display: flex;
```

```
      flex-direction: column;
```

```
      align-items: center;
```

```
      min-height: 100vh;
```

```
    }
```

```
    h2 {
```

```
      color: #2c3e50;
```

```
      margin-bottom: 30px;
```

```
      font-weight: 600;
```

```
      text-align: center;
```

```
    }
```

```
#form1 {  
    background-color: white;  
    padding: 30px;  
    border-radius: 8px;  
    box-shadow: 0 2px 10px rgba(0, 0, 0, 0.05);  
    width: 100%;  
    max-width: 500px;  
}
```

```
.button-container {  
    display: flex;  
    flex-direction: column;  
    gap: 15px;  
}
```

```
.btn {  
    color: white;  
    border: none;  
    padding: 12px 20px;  
    border-radius: 6px;  
    cursor: pointer;  
    font-size: 16px;  
    font-weight: 500;
```

```
    transition: all 0.2s ease;

    text-align: center;

    width: 100%;
}
```

```
.btn:hover {

    transform: translateY(-2px);

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

```
#btnOrders {

    background-color: #2196F3;
}
```

```
#btnOrders:hover {

    background-color: #0b7dda;
}
```

```
@media (max-width: 600px) {

    #form1 {

        padding: 20px;
    }
}
```

```
h2 {
```

```

        font-size: 24px;

        margin-bottom: 20px;
    }

}

</style>
</head>
<body>

    <h2>Manager Controls</h2>

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

        <div>

            <asp:Button ID="btnOrders" runat="server" Text="Manage Orders" CssClass="btn"
OnClick="btnOrders_Click" />

        </div>

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

```

Manager.aspx.vb

Partial Class Manager

Inherits System.Web.UI.Page

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


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

```
End Sub
```

```
End Class
```

ManageOrders.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Manage Orders</title>
```

```
  <style>
```

```
    .btn {
```

```
      background-color: #3498db;
```

```
      color: white;
```

```
      border: none;
```

```
      padding: 10px 20px;
```

```
      margin: 5px;
```

```
      border-radius: 4px;
```

```
      cursor: pointer;
```

```
      font-size: 16px;
```

```
    }
```

```
    .gridview {
```

```
      margin-top: 20px;
```

```

        width: 100%;

        border-collapse: collapse;
    }

    .gridview th, .gridview td {

        border: 1px solid #ddd;

        padding: 8px;

    }

</style>
</head>
<body>

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

        <h2>Order Details</h2>

        <asp:GridView ID="gvOrders" runat="server" AutoGenerateColumns="True"
        CssClass="gridview" />

        <br />

        <asp:Button ID="btnUpdate" runat="server" Text="Update Order" CssClass="btn"
        OnClick="btnUpdate_Click" />

        <asp:Button ID="btnDelete" runat="server" Text="Delete Order" CssClass="btn"
        OnClick="btnDelete_Click" />

    </form>

</body>
</html>

```

ManageOrders.aspx.vb

Imports System.Data.SqlClient

Imports System.Configuration

Imports System.Data

Partial Class ManageOrders

Inherits System.Web.UI.Page

Dim connStr As String = ConfigurationManager.ConnectionStrings("IMS").ConnectionString

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

If Not IsPostBack Then

LoadOrders()

End If

End Sub

Private Sub LoadOrders()

Using con As New SqlConnection(connStr)

Dim query As String = "SELECT * FROM OrderDEtails"

Dim cmd As New SqlCommand(query, con)

Dim da As New SqlDataAdapter(cmd)

Dim dt As New DataTable()

da.Fill(dt)

gvOrders.DataSource = dt

gvOrders.DataBind()

End Using

End Sub

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

 Response.Redirect("UpdateOrder.aspx")

End Sub

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

 Response.Redirect("DeleteOrder.aspx")

End Sub

End Class

UpdateOrder.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
    <title>Update Order</title>
```

```
    <style>
```

```
        .btn {
```

```
            background-color: #3498db;
```

```
            color: white;
```

```
            border: none;
```

```
            padding: 10px 20px;
```

```
            margin: 5px;
```

```
        border-radius: 4px;

        cursor: pointer;

        font-size: 16px;
    }

    .form-group {

        margin-bottom: 15px;
    }

    .form-group label {

        display: inline-block;

        width: 120px;
    }


    .input-group {

        width: 25%;

        padding: 10px;

        border: 1px solid #ddd;

        border-radius: 4px;

        font-size: 14px;

        box-sizing: border-box;

        margin-top: 5px;
    }
</style>
</head>
<body>
```

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

    <h2>Update Order Details</h2>

    <div class="form-group">

        Order ID: <asp:TextBox ID="txtOrderID" runat="server" CssClass="input-group" /><br />

        Product ID: <asp:TextBox ID="txtProductID" runat="server" CssClass="input-group" /><br />

        Item Name: <asp:TextBox ID="txtItemName" runat="server" CssClass="input-group" /><br />

        Item Quantity: <asp:TextBox ID="txtItemQty" runat="server" CssClass="input-group" /><br />

        Item Price: <asp:TextBox ID="txtItemPrice" runat="server" CssClass="input-group" /><br />

    </div>

    <asp:Button ID="btnUpdate" runat="server" Text="Update" CssClass="btn"
OnClick="btnUpdate_Click" />

    <br />

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

</form>

</body>

</html>
```

UpdateOrder.aspx.vb

Imports System.Data.SqlClient

Imports System.Configuration

Partial Class UpdateOrder

Inherits System.Web.UI.Page

```

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

    Dim con As New
SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)

    Dim cmd As New SqlCommand("UPDATE OrderDetails SET ItemName=@iname,
ItemQuantity=@qty, ItemPrice=@price WHERE OrderID=@oid AND ProductID=@pid", con)

    cmd.Parameters.AddWithValue("@oid", txtOrderID.Text)

    cmd.Parameters.AddWithValue("@pid", txtProductID.Text)

    cmd.Parameters.AddWithValue("@iname", txtItemName.Text)

    cmd.Parameters.AddWithValue("@qty", txtItemQty.Text)

    cmd.Parameters.AddWithValue("@price", txtItemPrice.Text)

    Try

        con.Open()

        Dim rowsAffected As Integer = cmd.ExecuteNonQuery()

        If rowsAffected > 0 Then

            lblMsg.Text = "Order updated successfully"

            Response.Redirect("CustomerManagement.aspx")

        Else

            lblMsg.Text = "Order not found"

        End If

    Catch ex As Exception

        lblMsg.Text = "Error: " & ex.Message

    Finally

        con.Close()

    End Try

```

End Sub

End Class

DeleteOrder.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Delete Order</title>
```

```
  <style>
```

```
    .btn {
```

```
      background-color: #3498db;
```

```
      color: white;
```

```
      border: none;
```

```
      padding: 10px 20px;
```

```
      margin: 5px;
```

```
      border-radius: 4px;
```

```
      cursor: pointer;
```

```
      font-size: 16px;
```

```
    }
```

```
    .form-group {
```

```
      margin-bottom: 15px;
```

```
    }
```

```
    .form-group label {
```



```
display: inline-block;

width: 120px;

}
```

```
.input-group {

width: 25%;

padding: 10px;

border: 1px solid #ddd;

border-radius: 4px;

font-size: 14px;

box-sizing: border-box;

margin-top: 5px;

}
```

```
</style>
```

```
</head>
```

```
<body>
```

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

```
<h2>Delete Order</h2>
```

```
<div class="form-group">
```

```
Order ID: <asp:TextBox ID="txtOrderID" runat="server" CssClass="input-group" /><br />
```

```
</div>
```

```
<asp:Button ID="btnDelete" runat="server" Text="Delete" OnClick="btnDelete_Click"
CssClass="btn" /><br />
```

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

```
</form>

</body>

</html>
```

DeleteOrder.aspx.vb

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

```
Imports System.Configuration
```

```
Partial Class DeleteOrder
```

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

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

```
        Dim con As New
        SqlConnection(ConfigurationManager.ConnectionStrings("IMS").ConnectionString)
```

```
        Dim deleteDetails As New SqlCommand("DELETE FROM OrderDetails WHERE OrderID =
        @oid", con)
```

```
        deleteDetails.Parameters.AddWithValue("@oid", txtOrderID.Text)
```

```
    Try
```

```
        con.Open()
```

```
        Dim rowsAffected As Integer = deleteDetails.ExecuteNonQuery()
```

```
        If rowsAffected > 0 Then
```

```
            lblMsg.Text = "Order deleted successfully."
```

```
        Else
```

```
        lblMsg.Text = "Order not found."

    End If

Catch ex As Exception

    lblMsg.Text = "Error: " & ex.Message

Finally

    con.Close()

End Try

End Sub

End Class
```

Viewer.aspx

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

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
    <title>Viewer</title>
```

```
    <style>
```

```
body {
```

```
    font-family: 'Arial', sans-serif;
```

```
    background-color: #f8f9fa;
```

```
    margin: 0;
```

```
    padding: 20px;
```

```
    display: flex;
```

```
flex-direction: column;

align-items: center;

min-height: 100vh;
}
```

```
h2 {

color: #2c3e50;

margin-bottom: 30px;

font-weight: 600;

text-align: center;
}
```

```
#form1 {

background-color: white;

padding: 30px;

border-radius: 8px;

box-shadow: 0 2px 10px rgba(0, 0, 0, 0.05);

width: 100%;

max-width: 500px;
}
```

```
.gridview {

margin-top: 20px;

width: 100%;

border-collapse: collapse;
```

```
}  
  
.gridview th, .gridview td {  
  
    border: 1px solid #ddd;  
  
    padding: 8px;  
  
}
```

```
.button-container {  
  
    display: flex;  
  
    flex-direction: column;  
  
    gap: 15px;  
  
    margin-bottom: 20px;  
  
}
```

```
.btn {  
  
    color: white;  
  
    border: none;  
  
    padding: 12px 20px;  
  
    border-radius: 6px;  
  
    cursor: pointer;  
  
    font-size: 16px;  
  
    font-weight: 500;  
  
    transition: all 0.2s ease;  
  
    text-align: center;  
  
    width: 100%;
```

```
}
```

```
.btn:hover {  
    transform: translateY(-2px);  
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);  
}
```

```
#btnViewProducts {  
    background-color: #2196F3;  
}
```

```
#btnViewProducts:hover {  
    background-color: #0b7dda;  
}
```

```
#btnOrder {  
    background-color: #2196F3;  
}
```

```
#btnOrder:hover {  
    background-color: #0b7dda;  
}
```

```
.input-group {
```

```
width: 100%;  
padding: 10px;  
border: 1px solid #ddd;  
border-radius: 4px;  
margin: 8px 0 15px 0;  
box-sizing: border-box;  
}
```

```
#PlaceOrder {  
    margin-top: 20px;  
    padding: 15px;  
    background-color: #f8f9fa;  
    border-radius: 6px;  
}
```

```
#lblMsg {  
    color: #e74c3c;  
    display: block;  
    margin: 10px 0;  
}
```

```
#lblOrderMessage {  
    color: #2ecc71;  
    display: block;
```

```
margin: 10px 0;
}
```

```
@media (max-width: 600px) {
    #form1 {
        padding: 20px;
    }
}
```

```
h2 {
    font-size: 24px;
    margin-bottom: 20px;
}
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

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

```
<h2>Viewer Controls</h2>
```

```
<asp:Button ID="btnViewProducts" runat="server" Text="View Products" CssClass="btn"
OnClick="btnViewProducts_Click" /><br />
```

```
<asp:GridView ID="GVProducts" runat="server" AutoGenerateColumns="True"
Visible="True" CssClass="gridview"></asp:GridView><br />
```



```
<asp:Button ID="btnOrder" runat="server" Text="Place Order" CssClass="btn"
OnClick="btnOrder_Click" /><br /><br />
```

```
<div id="PlaceOrder" runat="server" visible="false">
```

```
<b>Order Details:</b><br />
```

```
Product ID: <asp:TextBox ID="txtProductID" runat="server" CssClass="input-group"/><br
/>
```

```
Quantity: <asp:TextBox ID="txtQuantity" runat="server" CssClass="input-group"/><br
/><br />
```

```
</div>
```

```
</form>
```

```
</body>
```

```
</html>
```

Viewer.aspx.vb

```
Imports System.Data
```

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

```
Partial Class Viewer
```

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

```
Dim con As New SqlConnection("workstation
id=Inventory_Management.mssql.somee.com;packet size=4096;user
id=Bushra_07_SQLLogin_1;pwd=jtms3n1gb9;data
source=Inventory_Management.mssql.somee.com;persist security info=False;initial
catalog=Inventory_Management;TrustServerCertificate=True")
```

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

```
Dim cmd As New SqlCommand("SELECT * FROM Product", con)
```

```
Dim da As New SqlDataAdapter(cmd)
```

```
Dim dt As New DataTable()
```

```
da.Fill(dt)
```

```
GVProducts.DataSource = dt
```

```
GVProducts.DataBind()
```

```
GVProducts.Visible = True
```

```
End Sub
```

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

```
PlaceOrder.Visible = True
```

```
End Sub
```

```
End Class
```