

# Internet Application Development Lab 05B

Dated: Wednesday, 5<sup>th</sup> April 2025

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Consider the database development project developed during previous semester. A complete database design and development was carried out in previous semester project as detailed in your project report in printed form.

In addition during one of previous labs (see reference below) you were required to develop web interfaces on paper and then develop html prototypes for various functionalities of your database project mentioned as above.

Now the next task is to transform paper based and html based prototype interfaces into full scale working web forms for realization of various functionalities of your project. Ideally you are required to develop all web forms for implementing various project functionalities.

**Reference: Lab 3 Q1)** Consider the project database designed and implemented during previous semester i.e. Fall 2024. Its implementation was done using structured query language during previous semester. Try to recall major relations in your project database. You already have its report in printed form.

There is a need to implement a web based solution for above mentioned database. The web based solution must incorporate various functionalities of your project.

- (1) Registration of Student/Patient/Passenger/Customer, or whatever is applicable in your project.
- (2) Search facilities including partial matches
- (3) Any other project specific functionalities
- (4) Role based access control
- (5) Payment system (if required)

As a first step design above mentioned (i) to (v) user interfaces using paper and pencil.

Next write appropriate html for creating (i) to (v) user interface prototypes.

Create links for navigation among above pages.

Design a menu using list and styles.

Add help pages for user guidance.

Either use table for layout or may opt for flow based layout.

Test user interface prototypes in browser.

Experiment with style sheets.

**You are strictly advised to refrain from using any AI tool during lab work. (0 score will be given for any such effort). Just follow codes as listed in book or as demonstrated in class from time to time.**

**Q1) Write code (*code behind only*) for any two of the interfaces below?**

**Q2) Draw corresponding graphical user interface as rendered in browser?**

**Q3) Write a few test cases for testing user interfaces?**

## CODE : CUSTOMERS.ASPX

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

<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Customer List</title>
    <style>
        .table {
            width: 100%;
            border-collapse: collapse;
        }
        .table th, .table td {
            border: 1px solid black;
            padding: 8px;
            text-align: left;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <h2>Customer List</h2>

            <!-- GridView to display customer data -->
            <asp:GridView ID="GridView1" runat="server" AutoGenerateColumns="True"
                CssClass="table" EmptyDataText="No records found"
                Width="100%" AllowPaging="True" PageSize="5">

            </asp:GridView>

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

## CUSTOMERS.ASPX.VB

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

Public Class Customers
    Inherits System.Web.UI.Page

    Private conStr As String = "workstation id=movierentalsystem1.mssql.somee.com;packet
size=4096;user id=zainabtariq_SQLLogin_1;pwd=9n1ha3okxt;data
source=movierentalsystem1.mssql.somee.com;persist security info=False;initial
catalog=movierentalsystem1;TrustServerCertificate=True"

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

        LoadCustomers()

    End Sub

    Private Sub LoadCustomers()
        Using con As New SqlConnection(conStr)
            Try
                con.Open()
```

```

Dim query As String = "SELECT Customer_ID, Name, Address, Phone_Number, Email
FROM Customer"

Using cmd As New SqlCommand(query, con)
    Dim da As New SqlDataAdapter(cmd)
    Dim dt As New DataTable()

    da.Fill(dt)

    If dt.Rows.Count > 0 Then

        GridView1.DataSource = dt
        GridView1.DataBind()
    Else
        GridView1.EmptyDataText = "No customer records found."
        GridView1.DataBind()
    End If
End Using

Catch ex As Exception
    Response.Write("Error: " & ex.Message)
End Try
End Using
End Sub
End Class

```

## STAFF.ASPX

```

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

<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Staff Management</title>
    <style>
        .staff-list {
            width: 80%;
            margin: 20px auto;
            padding: 20px;
            border: 1px solid #ccc;
            border-radius: 10px;
        }
        .staff-list table {
            width: 100%;
            border-collapse: collapse;
        }
        .staff-list table, th, td {
            border: 1px solid black;
        }
        .staff-list th, td {
            padding: 8px;
            text-align: left;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
        <div class="staff-list">
            <h2>Staff Details</h2>
            <asp:GridView ID="gvStaff" runat="server" AutoGenerateColumns="True" />
        </div>
    </form>
</body>

```

</html>

## STAFF.ASPX.VB

```
Imports System.Data.SqlClient

Public Class Staff
    Inherits System.Web.UI.Page

    Private conStr As String =
        "Server=movierentalsystem1.mssql.somee.com;Database=movierentalsystem1;User
        Id=zainabtariq_SQLLogin_1;Password=9n1ha3okxt;"

    Protected Sub Page_Load(sender As Object, e As EventArgs) Handles Me.Load
        If Not IsPostBack Then
            LoadStaff()
        End If
    End Sub

    Private Sub LoadStaff()

        Using con As New SqlConnection(conStr)
            Try
                con.Open()
                Dim query As String = "SELECT * FROM Staff"
                Using cmd As New SqlCommand(query, con)

                    Using reader As SqlDataReader = cmd.ExecuteReader()

                        gvStaff.DataSource = reader
                        gvStaff.DataBind()
                    End Using
                End Using
            Catch ex As SqlException
                Response.Write("Database Error: " & ex.Message)
            Catch ex As Exception
                Response.Write("Error: " & ex.Message)
            Finally
                con.Close()
            End Try
        End Using
    End Sub
End Class
```



