INTERNET APPLICATION DEVELOPMENT
LAB: 5B
LAB REPORT

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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?

1. Registration.aspx

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

<!DOCTYPE html>
<html>
```

```
<head>
    <title>Customer Registration</title>
</head>
<body>
    <h2>Register New Customer</h2>
    <form runat="server">
        <label>Customer Name:</label><br />
        <asp:TextBox ID="txtName" runat="server" /><br /><br />

        <label>Username:</label><br />
        <asp:TextBox ID="txtUsername" runat="server" /><br /><br />

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

        <label>Address (House No, Street No, City):</label><br />
        <asp:TextBox ID="txtAddress" runat="server" TextMode="MultiLine" Rows="3"
Columns="30" /><br /><br />

        <asp:Button ID="btnRegister" runat="server" Text="Register"
OnClick="btnRegister_Click" />
    </form>
</body>
</html>
```

CODE BEHIND:

```
Imports System.Data.SqlClient

Partial Class Registration
    Inherits System.Web.UI.Page

    Protected Sub btnRegister_Click(sender As Object, e As EventArgs)
        Dim name As String = txtName.Text.Trim()
        Dim username As String = txtUsername.Text.Trim()
        Dim password As String = txtPassword.Text.Trim()
        Dim address As String = txtAddress.Text.Trim()

        Dim connectionString As String = "workstation
id=groceryst.mssql.somee.com;packet size=4096;user
id=hafsa_SQLLogin_2;pwd=ygmkekb7yj;data source=groceryst.mssql.somee.com;persist
security info=False;initial catalog=groceryst;TrustServerCertificate=True"

        Dim query As String = "INSERT INTO CUSTOMER (customer_name, username,
password, address) VALUES (@Name, @Username, @Password, @Address)"

        Try
            Using conn As New SqlConnection(connectionString)
                Using cmd As New SqlCommand(query, conn)
                    cmd.Parameters.AddWithValue("@Name", name)
                    cmd.Parameters.AddWithValue("@Username", username)
                    cmd.Parameters.AddWithValue("@Password", password)
                    cmd.Parameters.AddWithValue("@Address", address)

                    conn.Open()
                    cmd.ExecuteNonQuery()
                    conn.Close()
```

```
                    Response.Write("<script>alert('Customer registered
successfully.')</script>")
                End Using
            End Using
        Catch ex As Exception
            Response.Write("<script>alert('Error: " & ex.Message.Replace("'", "\'")
& "')</script>")
        End Try
    End Sub
End Class
```

OUTPUT:

2. Search.aspx:

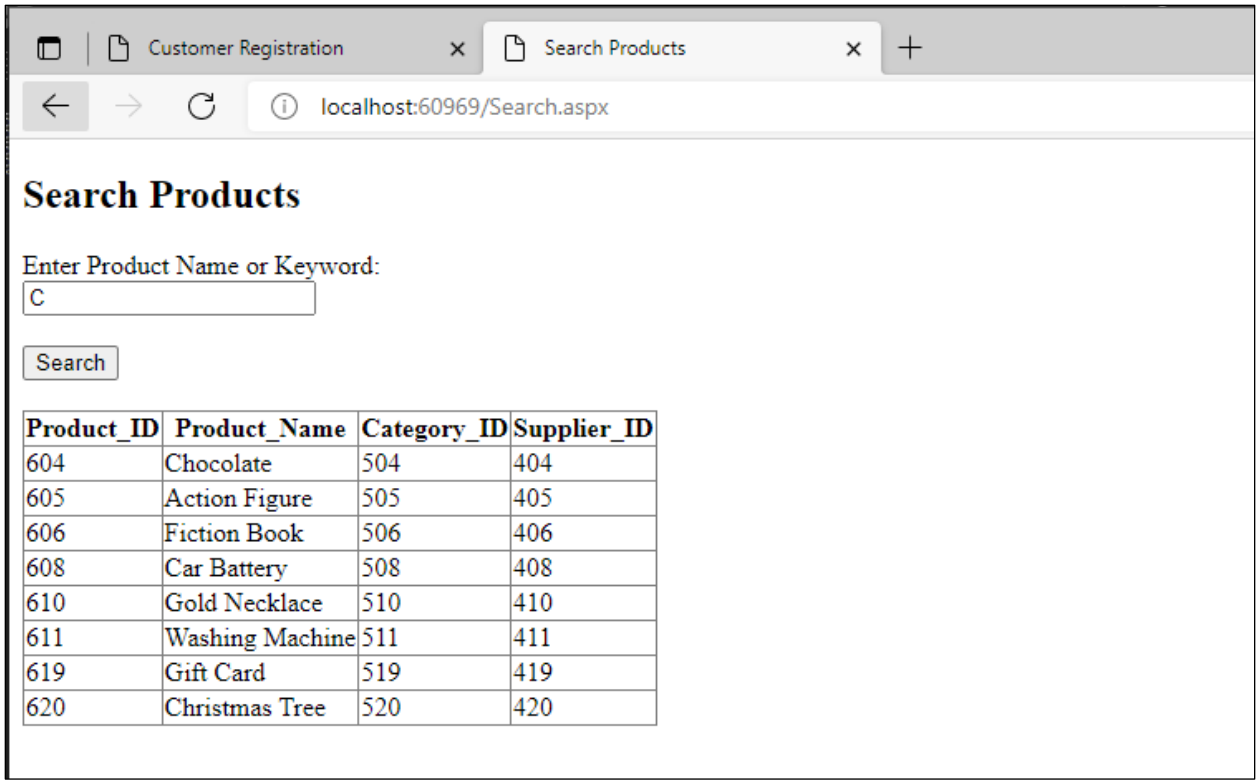
```
<%@ Page Language="VB" AutoEventWireup="false" CodeFile="Search.aspx.vb"
Inherits="Search" %>

<!DOCTYPE html>
<html>
<head>
    <title>Search Products</title>
</head>
<body>
    <h2>Search Products</h2>
    <form runat="server">
```

```
        <label>Enter Product Name or Keyword:</label><br />
        <asp:TextBox ID="txtSearch" runat="server" /><br /><br />
        <asp:Button ID="btnSearch" runat="server" Text="Search"
OnClick="btnSearch_Click" /><br /><br />
        <asp:GridView ID="gvResults" runat="server" AutoGenerateColumns="True" />
    </form>
</body>
</html>
```

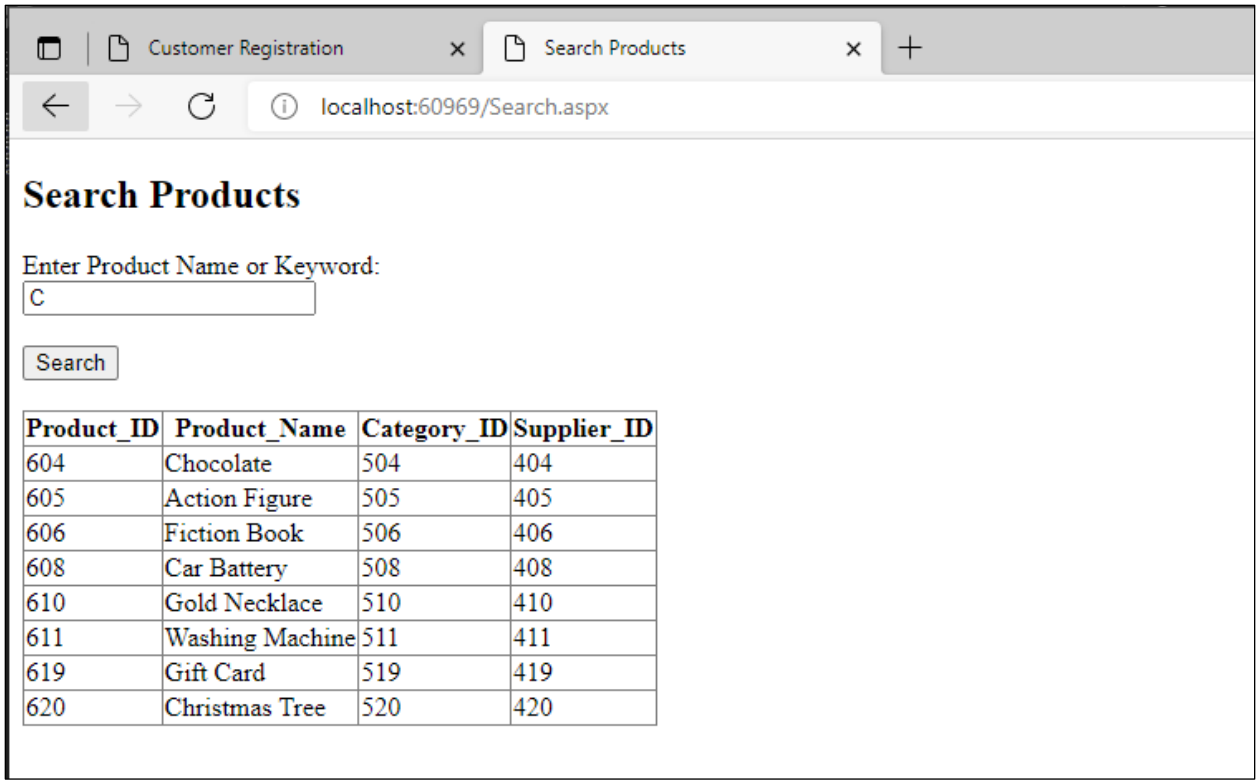
CODE BEHIND:

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

Partial Class Search
    Inherits System.Web.UI.Page

    Protected Sub btnSearch_Click(sender As Object, e As EventArgs)
        Dim connString As String = "workstation id=groceryst.mssql.somee.com;packet
size=4096;user id=hafsa_SQLLogin_2;pwd=ygmkekb7yj;data
source=groceryst.mssql.somee.com;persist security info=False;initial
catalog=groceryst;TrustServerCertificate=True"
        Dim query As String = "SELECT * FROM PRODUCT WHERE product_name LIKE '%' +
@product + '%'"

        Try
            Using con As New SqlConnection(connString)
                Using cmd As New SqlCommand(query, con)
                    cmd.Parameters.AddWithValue("@product", txtSearch.Text.Trim())

                    Using da As New SqlDataAdapter(cmd)
                        Dim dt As New DataTable()
                        da.Fill(dt)

                        gvResults.DataSource = dt
                        gvResults.DataBind()
                    End Using
                End Using
            End Using
        Catch ex As Exception
            Response.Write("<script>alert('Error: " & ex.Message.Replace("'", "\'")
& "')</script>")
        End Try
    End Sub
End Class
```

OUTPUT:



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


Customer Registration
Search Products
localhost:60969/Search.aspx
Search Products
Enter Product Name or Keyword:
C
Search
Product_ID Product_Name Category_ID Supplier_ID
604 Chocolate 504 404
605 Action Figure 505 405
606 Fiction Book 506 406
608 Car Battery 508 408
610 Gold Necklace 510 410
611 Washing Machine 511 411
619 Gift Card 519 419
620 Christmas Tree 520 420