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EX-NO: 3

EX-NAME: Java Servlets and MySQL

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AIM:

- I. Create a HTML file with following form fields:

Write a servlet program which reads all form details, finds the gross pay based on basic pay and designation. The servlet returns all details (a-j, gross pay) in table format to the client.

- II. Patient Management System (PMS)

Develop a Patient Management System (PMS) in a Hospital that maintains the patient records.

CODE:

Db_upd.java

```
import java.sql.*;
```

```
import java.io.*;
```

```
import javax.servlet.*;
```

```
import javax.servlet.http.*;
```

```
public class db_upd extends HttpServlet {
```

```
    public void doGet(HttpServletRequest request, HttpServletResponse response) throws  
ServletException, IOException {
```

```
        response.setContentType("text/html");
```

```
        PrintWriter pw=response.getWriter();
```

```
        int flag=0;
```

```
        Connection con;
```

```
        PreparedStatement ps;
```

```
        Statement st;
```

```
        CallableStatement cs;
```

```
        ResultSet rs;
```

```

try
{
    Class.forName("com.mysql.cj.jdbc.Driver");

    try
    {
        flag=1;

        con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/patient","root","Sun@0097");

        //Name, age, ID, gender, address, marital status, Date of Visit
(Name,Age,ID,gender,address,marital_status,DateOfVisit)

        try
        {
            String srch = " SELECT * FROM Patient_Details WHERE
ID="+((String)request.getParameter("id"));

            st=con.createStatement();

            rs=st.executeQuery(srch);

            if(rs.next())
            {

                String update = "UPDATE Patient_Details SET age=?,address=? where id
="+request.getParameter("id");

                ps=con.prepareStatement(update);

                ps.setInt(1,Integer.parseInt(request.getParameter("age")));

                ps.setString(2,request.getParameter("addr"));

                ps.execute();

                pw.println("<script>");

                pw.println("alert(\"Updated Successfully \");");

                pw.println("location='http://localhost:8080/LabEX4/update.html';");

                pw.println("</script>");

            }

            else

            {

```

```

        pw.println("<script>");
        pw.println("alert(\"Not found \");");
        pw.println("location='http://localhost:8080/LabEX4/update.html';");
        pw.println("</script>");
    }
}
catch(SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Could not Update data"+e+" \");");
    pw.println("location='http://localhost:8080/LabEX4/update.html';");
    pw.println("</script>");
}
}
catch (SQLException e)
{
    flag=2;
}
}
catch(ClassNotFoundException e)
{
    flag=3;
}

if(flag==2)
{
    pw.println("<script>");
    pw.println("alert(\"Failed to establish connection.Try again Later. Error Code :1 \");");
    pw.println("location='http://localhost:8080/LabEX4/login.html';");
    pw.println("</script>");
    //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
}

```

```

    }
    else if(flag==3)
    {
        pw.println("<script>");
        pw.println("alert(\"Driver class not found.Error Code :0 \");");
        pw.println("location='http://localhost:8080/LabEX4/login.html';");
        pw.println("</script>");
        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }
    pw.close();
}

}

```

Delete.html

```

<!DOCTYPE html>

<html>

<head>

    <title>Lab Ex4</title>

    <link rel="stylesheet" href="formstyle.css">

</head>

<body>

    <div class="formblock centre" style="height:50%;">

        <form class="centre" name="delete" action="./del">

            <h1> DELETE</h1><br><br>

            <input type="text" name="id" id="id" placeholder="ID"><br><br>

            <input style="float:left;width:33%;" type="submit" value="Delete">

            <input style="float:left;width:32%;" type="button" value="View"
onclick='window.location.href="http://localhost:8080/LabEX4/view";'>

            <input style="float:left;width:32%;margin:5px 2px;" type="button" value="Home"
onclick='window.location.href="http://localhost:8080/LabEX4/home.html";'>

        </form>

    </div>

```

</body>

</html>

Delete.java

```
import java.sql.*;
```

```
import java.io.*;
```

```
import javax.servlet.*;
```

```
import javax.servlet.http.*;
```

```
public class delete extends HttpServlet {
```

```
    public void doGet(HttpServletRequest request,HttpServletResponse response) throws  
ServletException, IOException {
```

```
        response.setContentType("text/html");
```

```
        PrintWriter pw=response.getWriter();
```

```
        int flag=0;
```

```
        Connection con;
```

```
        PreparedStatement ps;
```

```
        Statement st;
```

```
        CallableStatement cs;
```

```
        ResultSet rs;
```

```
        try
```

```
        {
```

```
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```
            try
```

```
            {
```

```
                flag=1;
```

```
                con
```

```
=DriverManager.getConnection("jdbc:mysql://localhost:3306/patient","root","Sun@0097");
```

```
                //Name, age, ID, gender, address, marital status, Date of Visit  
(Name,Age,ID,gender,address,marital_status,DateOfVisit)
```

```
            try
```

```

{
    String del = " DELETE FROM Patient_Details WHERE
ID="+ (String)request.getParameter("id");
    ps=con.prepareStatement(del);
    int af_rows = ps.executeUpdate();
    if(af_rows==1){
        pw.println("<script>");
        pw.println("alert(\"deleted Successfully \");");
        pw.println("location='http://localhost:8080/LabEX4/delete.html';");
        pw.println("</script>");
    }
    else
    {
        pw.println("<script>");
        pw.println("alert(\"Not found \");");
        pw.println("location='http://localhost:8080/LabEX4/delete.html';");
        pw.println("</script>");
    }
}

catch(SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Could not delete data"+e+" \");");
    pw.println("location='http://localhost:8080/LabEX4/delete.html';");
    pw.println("</script>");
}

}

catch (SQLException e)
{
    flag=2;
}

```

```

    }
    catch(ClassNotFoundException e)
    {
        flag=3;
    }
    if(flag==2)
    {
        pw.println("<script>");
        pw.println("alert(\"Failed to establish connection.Try again Later. Error Code :1 \");");
        pw.println("location='http://localhost:8080/LabEX4/login.html'");
        pw.println("</script>");
        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }
    else if(flag==3)
    {
        pw.println("<script>");
        pw.println("alert(\"Driver class not found.Error Code :0 \");");
        pw.println("location='http://localhost:8080/LabEX4/login.html'");
        pw.println("</script>");
        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }
    pw.close();
}

```

```

}

```

Employee.html

```

<!DOCTYPE html>

<html>

<head>

    <title>Employee</title>

    <link rel="stylesheet" href="style.css">

```

```

</head>

<body>

    <h1 class="centre">Employee Details</h1>

    <form action="http://localhost:8080/LabEX4/EX">

        <input type="number" id="eid" name="eid" min="2016000" max="2025000"
onblur="this.checkValidity();" placeholder="ID" required><br>

        <input type="text" id="ename" oninvalid="alert('Name must be only alphabets and between
1 and 32 characters');" pattern="[A-Za-z ]{1,32}" onblur="this.checkValidity();" name="ename"
placeholder="Name" required><br>

        <input type="text" id="desig" name="desig" pattern="[A-Za-z ]{1,40}"
onblur="this.checkValidity();" placeholder="Designation" required><br>

        <select name="dept" id="dept" required>

            <option value="Developement">Developement</option>

            <option value="Research">Research</option>

            <option value="Production">Production</option>

        </select>

        <br>

        <input type="number" id="sal" name="sal" min="20000" max="100000"
onblur="this.checkValidity();" placeholder="Basic Salary" required><br>

        <input type="tel" id="phone" name="phone" pattern="[0-9]{5}-[0-9]{5}"
onblur="this.checkValidity();" placeholder="Contact Number" oninvalid="alert('match the pattern
properly');" required><br>

        <p style="color:grey;text-align: center;">example : 12345-67890</p><br>

        <textarea id="addr" name="addr" rows="4" cols="50" onfocus="this.value = '";"
onselect="document.getElementById('adr').innerHTML = 'You have entered      address';"
oninvalid="alert('address must be only alphanumeric');" pattern="[A-Za-z 0-9]{1,}"
onblur="this.checkValidity();" required> Enter your permanent address </textarea><br>

        <p id="adr"></p>

        <label for="dob">Date of Birth:</label>

        <input type="date" id="dob" name="dob" required><br><br>

        <input type="radio" id="male" name="gender" value="male" required>

        <label for="male">Male </label>

        <input type="radio" id="female" name="gender" value="female">

        <label for="female">Female </label>

```



```
        <input type="radio" id="other" name="gender" value="other">
        <label for="other">Other</label><br><br>
        <select name="ms" id="ms" required>
            <option value="Bachelor">Bachelor</option>
            <option value="Married">Married</option>
            <option value="Spinster">Spinster</option>
            <option value="Widow">Widow</option>
        </select>
        <br>
        <input type="reset" value="Reset">
        <input type="submit" value="Submit">
    </body>
</html>
```

Formstyle.css

```
.formblock{
    display: flex;
    border-radius: 50px;
    background: #191919;
    width: 30%;
    height: 90%;
    text-align: center;
}

.centre{
    margin: 0;
    position: absolute;
    top: 50%;
    left: 50%;
    -ms-transform: translate(-50%, -50%);
    transform: translate(-50%, -50%);
    color: white;
}
```

```

}

.centre input[type='text'],.centre input[type='number'],.centre input[type='password'],.centre
input[type='date'],.centre textarea,.centre input[type='submit']{

    background:none;

    display:block;

    margin:5px auto;

    text-align:center;

    border:2px solid blue;

    width:110%;

    transform:translateX(-6%);

    padding-top:10px;

    padding-bottom: 10px;

    outline:none;

    color:white;

    border-radius:20px;

}

body{

    background: #34495e;

}

.centre input[type='text']:focus,.centre input[type='number']:focus,.centre
input[type='date']:focus,.centre textarea:focus,.centre input[type='password']:focus{

    width:130%;

    transform:translateX(-12%);

}

.slct{

    background:none;

    display:block;

    margin:5px auto;

    text-align-last:center;

    border:2px solid blue;

    width:110%;

    transform:translateX(-6%);

```

```
padding-top:10px;
padding-bottom: 10px;
outline:none;
color:white;
border-radius:20px;
}
.slct option{
    background: none;
    color:black;
}
.centre input[type='submit']{
    border:2px solid green;
    width:50%;
}

.centre input[type='submit']:hover{
    border:2px solid green;
    cursor:pointer;
    background: #2ecc71;
}
.centre input[type='button']{
    background:none;
    display:block;
    margin:5px auto;
    text-align:center;
    border:2px solid green;
    width:50%;
    padding-top:10px;
    padding-bottom: 10px;
    outline:none;
    color:white;
```

```

        border-radius:20px;
    }
    .centre input[type='button']:hover{
        border:2px solid green;
        cursor:pointer;
        background: #2ecc71;
    }

```

Grosscal.java

```

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class grosscal extends HttpServlet
{
    public float calgross(float sal, String desig)
    {
        if(desig.equalsIgnoreCase("Manager"))
            return sal+5000;
        else if(desig.equalsIgnoreCase("Consultant"))
            return sal+3000;
        else if(desig.equalsIgnoreCase("developer"))
            return sal+2000;
        else
            return sal+1000;
    }

    public void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        String eid = request.getParameter("eid");
        String ename = request.getParameter("ename");
        String desig = request.getParameter("desig");
        String dept = request.getParameter("dept");

```

```

String sal = request.getParameter("sal");
String phone = request.getParameter("phone");
String addr = request.getParameter("addr");
String dob = request.getParameter("dob");
String gender = request.getParameter("gender");
String ms = request.getParameter("ms");
float s=Float.parseFloat(sal);
float gross = calgross(s,desig);
response.setContentType("text/html");
PrintWriter pw = response.getWriter();
pw.println("<link rel=\"stylesheet\" href=\"style.css\">");
pw.println("<table border='1px'>");
pw.println("<thead>");
pw.println("<tr><th>Attribute</th><th>Value</th></tr>");
pw.println("</thead>");
pw.println("<tbody>");
pw.println("<tr><td>Name</td><td>"+ename+"</td></tr>");
pw.println("<tr><td>ID</td><td>"+eid+"</td></tr>");
pw.println("<tr><td>Designation</td><td>"+desig+"</td></tr>");
pw.println("<tr><td>Department</td><td>"+dept+"</td></tr>");
pw.println("<tr><td>Salary</td><td>"+sal+"</td></tr>");
pw.println("<tr><td>Phone Number</td><td>"+phone+"</td></tr>");
pw.println("<tr><td>Address</td><td>"+addr+"</td></tr>");
pw.println("<tr><td>Date of Birth</td><td>"+dob+"</td></tr>");
pw.println("<tr><td>Gender</td><td>"+gender+"</td></tr>");
pw.println("<tr><td>Marital Status</td><td>"+ms+"</td></tr>");
pw.println("<tr><td>Gross Pay</td><td>"+gross+"</td></tr>");
pw.println("</tbody>");
pw.println("</table>");
pw.close();

```

```

}

```

```

        public void destroy()
        {

        }
    }
}

```

Home.html

```

<!DOCTYPE html>

<html>

<head>

    <title>Lab Ex4</title>

    <link rel="stylesheet" href="indexstyle.css">

</head>

<body>

    <div class="block" style="height:70%;">

        <button style="height:15%;transform: translateY(50%);"
onclick='window.location.href="http://localhost:8080/LabEX4/update.html";'>Update
Record</button>

        <button style="height:15%;transform: translateY(50%);"
onclick='window.location.href="http://localhost:8080/LabEX4/delete.html";'>Delete
Record</button>

        <button style="height:15%;transform: translateY(50%);"
onclick='window.location.href="http://localhost:8080/LabEX4/insert.html";'>Insert Record</button>

        <button style="height:15%;transform: translateY(50%);"
onclick='window.location.href="http://localhost:8080/LabEX4/view";'>View Record</button>

        <button style="height:15%;transform: translateY(50%);"
onclick='window.location.href="http://localhost:8080/LabEX4/search.html";'>Search
Record</button>

    </div>

</body>

</html>

```

Home.java

```

import java.sql.*;

import java.io.*;

import javax.servlet.*;

```

```
import javax.servlet.http.*;
```

```
public class Home extends HttpServlet {
```

```
    public void doGet(HttpServletRequest request, HttpServletResponse response) throws  
ServletException, IOException {
```

```
        response.setContentType("text/html");
```

```
        PrintWriter pw=response.getWriter();
```

```
        int flag=0;
```

```
        Connection con;
```

```
        PreparedStatement ps;
```

```
        Statement st;
```

```
        CallableStatement cs;
```

```
        ResultSet rs;
```

```
        try
```

```
        {
```

```
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```
            try
```

```
            {
```

```
                flag=1;
```

```
                con
```

```
=DriverManager.getConnection("jdbc:mysql://localhost:3306/patient","root","Sun@0097");
```

```
            }
```

```
            catch (SQLException e)
```

```
            {
```

```
                flag=2;
```

```
            }
```

```
        }
```

```
        catch(ClassNotFoundException e)
```

```
        {
```

```

        flag=3;
    }
    if(flag==2)
    {
        pw.println("<script>");
        pw.println("alert(\"Failed to establish connection.Try again Later. Error Code :1 \");");
        pw.println("location='http://localhost:8080/LabEX4/login.html'");
        pw.println("</script>");
        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }
    else if(flag==3)
    {
        pw.println("<script>");
        pw.println("alert(\"Driver class not found.Error Code :0 \");");
        pw.println("location='http://localhost:8080/LabEX4/login.html'");
        pw.println("</script>");
        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }
    else
    {
        //response.sendRedirect("http://localhost:8080/LabEX4/home.html");
        pw.println("<script>");
        pw.println("alert(\"Successfully established connection. \");");
        pw.println("location='http://localhost:8080/LabEX4/home.html'");
        pw.println("</script>");
    }
}
}

```

Index.html

```
<!DOCTYPE html>
```



```
<html>

<head>

    <title>Lab Ex4</title>

    <link rel="stylesheet" href="indexstyle.css">

</head>

<body>

    <div class="block">

        <button
onclick='location.replace("http://localhost:8080/LabEX4/Employee.html");'>Employee
details</button><br>

        <button
onclick='location.replace("http://localhost:8080/LabEX4/login.html");'>Patient record</button>

    </div>

</body>

</html>
```

Indexstyle.css

```
body{

    background: #34495e;

}

.block{

    border-radius:50px;

    background:#191919;

    width:30%;

    height:50%;

    text-align:center;

    margin: 0;

    position: absolute;

    top: 50%;

    left: 50%;

    -ms-transform: translate(-50%, -50%);

    transform: translate(-50%, -50%);

}
```

```
button{
    background:none;
    display:block;
    margin:5px auto;
    text-align:center;
    border:2px solid green;
    width:50%;
    height:20%;
    padding-top:10px;
    padding-bottom: 10px;
    outline:none;
    color:white;
    transform: translateY(100%);
    border-radius:20px;
}
button:hover{
    border:2px solid green;
    cursor:pointer;
    background: #2ecc71;
}
```

Insert.html

```
<!DOCTYPE html>
<html>
<head>
    <title>Lab Ex4</title>
    <link rel="stylesheet" href="formstyle.css">
</head>
<body>
    <div class="formblock centre">
        <form class="centre" name="insert" action="./ins">
            <h1> INSERT </h1>
```

```

<input type="text" name="id" id="id" placeholder="ID"><br>
<input type="text" name="name" id="name" placeholder="Name"><br>
<input type="number" name="age" id="age" placeholder="Age"><br>
<input type="radio" id="male" name="gender" value="male" required>
<label for="male">Male </label>
<input type="radio" id="female" name="gender" value="female">
<label for="female">Female </label>
<input type="radio" id="other" name="gender" value="other">
<label for="other">Other</label><br>
<textarea id="addr" name="addr" rows="4" cols="50" onfocus="this.value =";"
required>Address </textarea><br>
<select class="slct" name="ms" id="ms" required>
    <option value="Bachelor">Bachelor</option>
    <option value="Married">Married</option>
    <option value="Spinster">Spinster</option>
    <option value="Widow">Widow</option>
</select><br>
<label for="dov">Date of Visit:</label>
<input type="date" id="dov" name="dov" required><br>
<input style="float:left;width:33%;" type="submit" value="Insert">
<input style="float:left;width:32%;" type="button" value="View"
onclick='window.location.href="http://localhost:8080/LabEX4/view";'>
<input style="float:left;width:32%;margin:5px 3px;" type="button" value="Home"
onclick='window.location.href="http://localhost:8080/LabEX4/home.html";'>

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

```

Insert.java

```

import java.sql.*;
import java.io.*;
import javax.servlet.*;

```

```
import javax.servlet.http.*;
```

```
public class Insert extends HttpServlet {
```

```
    public void doGet(HttpServletRequest request, HttpServletResponse response) throws  
ServletException, IOException {
```

```
        response.setContentType("text/html");
```

```
        PrintWriter pw=response.getWriter();
```

```
        int flag=0;
```

```
        Connection con;
```

```
        PreparedStatement ps;
```

```
        Statement st;
```

```
        CallableStatement cs;
```

```
        ResultSet rs;
```

```
        try
```

```
        {
```

```
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```
            try
```

```
            {
```

```
                flag=1;
```

```
                con
```

```
=DriverManager.getConnection("jdbc:mysql://localhost:3306/patient","root","Sun@0097");
```

```
                //Name, age, ID, gender, address, marital status, Date of Visit
```

```
(Name, Age, ID, gender, address, marital_status, DateOfVisit)
```

```
            try
```

```
            {
```

```
                String insert = "INSERT INTO
```

```
Patient_Details(Name, Age, ID, gender, address, marital_status, DateOfVisit) VALUES(?,?,?, ?, ?, ?, ?)";
```

```
                ps=con.prepareStatement(insert);
```

```
                ps.setString(1,request.getParameter("name"));
```

```
                ps.setInt(2,Integer.parseInt(request.getParameter("age")));
```

```

        ps.setInt(3,Integer.parseInt(request.getParameter("id")));
        ps.setString(4,request.getParameter("gender"));
        ps.setString(5,request.getParameter("addr"));
        ps.setString(6,request.getParameter("ms"));
        ps.setDate(7, java.sql.Date.valueOf(request.getParameter("dov")));
        ps.execute();
        pw.println("<script>");
        pw.println("alert(\"Inserted Successfully \");");
        pw.println("location='http://localhost:8080/LabEX4/insert.html';");
        pw.println("</script>");
    }
    catch(SQLException e)
    {
        pw.println("<script>");
        pw.println("alert(\"Could not Insert data"+e+" \");");
        pw.println("location='http://localhost:8080/LabEX4/insert.html';");
        pw.println("</script>");
    }
}
catch (SQLException e)
{
    flag=2;
}
}
catch(ClassNotFoundException e)
{
    flag=3;
}

if(flag==2)
{

```

```

        pw.println("<script>");

        pw.println("alert(\"Failed to establish connection.Try again Later. Error Code :1 \");");

        pw.println("location='http://localhost:8080/LabEX4/login.html'");

        pw.println("</script>");

        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }

    else if(flag==3)
    {
        pw.println("<script>");

        pw.println("alert(\"Driver class not found.Error Code :0 \");");

        pw.println("location='http://localhost:8080/LabEX4/login.html'");

        pw.println("</script>");

        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }

    pw.close();
}

}

```

Login.html

```

<!DOCTYPE html>

<html>

<head>

    <title>Login</title>

    <script>

        function validate(){

            var id=document.getElementById("id").value;

            var pass=document.getElementById("pass").value;

            var flag='0';

            if(id=="user")

            {

                if(pass=="1234")

```

```

        {
            flag='1';
        }
    }
    if(flag=='1')
    {
        location.replace("http://localhost:8080/LabEX4/valid");
    }
    else
    {
        alert('Invalid user ID /Password');
        document.getElementById("id").value="";
        document.getElementById("pass").value="";
    }
}
</script>
<link rel="stylesheet" href="formstyle.css">
</head>
<body>
    <div class="formblock centre" style="height:50%;">
        <form class="centre" name="login">
            <input type='text' id="id" name="id" placeholder="User ID"><br><br>
            <input type='password' id="pass" name="pass" placeholder="Password"><br><br>
            <input type="button" value="Login" onclick="validate();">
        </form>
    </div>
</body>
</html>

```

Search.html

```
<!DOCTYPE html>
```

```

<html>
<head>
    <title>Lab Ex4</title>
    <link rel="stylesheet" href="formstyle.css">
</head>
<body>
    <div class="formblock centre" style="height:50%;">

        <form class="centre" name="search" action="./srch">

            <h1> SEARCH</h1><br><br>

            <input type="text" name="id" id="id" placeholder="ID"><br><br>

            <input style="float:left;width:49%;" type="submit" value="Search">

            <input style="float:left;width:49%;" type="button" value="Home"
onclick='window.location.href="http://localhost:8080/LabEX4/home.html";'>

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

```

Search.java

```

import java.sql.*;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class search extends HttpServlet {

    public void doGet(HttpServletRequest request,HttpServletResponse response) throws
ServletException, IOException {

        response.setContentType("text/html");

        PrintWriter pw=response.getWriter();

        int flag=0;

```



```

Connection con;

PreparedStatement ps;

Statement st;

CallableStatement cs;

ResultSet rs;

try
{
    Class.forName("com.mysql.cj.jdbc.Driver");

    try
    {
        flag=1;

        con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/patient","root","Sun@0097");

        //Name, age, ID, gender, address, marital status, Date of Visit
(Name,Age,ID,gender,address,marital_status,DateOfVisit)

        try
        {
            String srch = " SELECT * FROM Patient_Details WHERE
ID="+(String)request.getParameter("id");

            st=con.createStatement();

            rs=st.executeQuery(srch);

            if(rs.next()){

                pw.println("<link rel=\"stylesheet\" href=\"viewstyle.css\">");

                pw.println("<div class=\"formblock centre\">");

                pw.println("<table border='1px'>");

                pw.println("<thead>");

                pw.println("<tr><th>Attribute</th><th>Value</th></tr>");

                pw.println("</thead>");

                pw.println("<tbody>");

                pw.println("<tr><td>Name</td><td>" +rs.getString(1)+"</td></tr>");

                pw.println("<tr><td>Age</td><td>" +rs.getString(2)+"</td></tr>");

```

```

        pw.println("<tr><td>ID</td><td>" + rs.getString(3) + "</td></tr>");
        pw.println("<tr><td>Gender</td><td>" + rs.getString(4) + "</td></tr>");
        pw.println("<tr><td>Address</td><td>" + rs.getString(5) + "</td></tr>");
        pw.println("<tr><td>Marital Status</td><td>" + rs.getString(6) + "</td></tr>");
        pw.println("<tr><td>Date of visit</td><td>" + rs.getString(7) + "</td></tr>");
        pw.println("</tbody>");
        pw.println("</table>");

        pw.println("<br><br><button style=\"height:10%;\" "
onclick=\"window.location.href=\"http://localhost:8080/LabEX4/home.html\";\">Home</button>");

        pw.println("</div>");
        pw.println("<script>");
        pw.println("alert(\"Found!! \");");
        pw.println("</script>");
    }
    else
    {
        pw.println("<script>");
        pw.println("alert(\"Not found \");");
        pw.println("location='http://localhost:8080/LabEX4/search.html';");
        pw.println("</script>");
    }
}

catch(SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Could not delete data\"+e+" \");");
    pw.println("location='http://localhost:8080/LabEX4/search.html';");
    pw.println("</script>");
}

}

catch (SQLException e)

```

```

        {
            flag=2;
        }
    }
    catch(ClassNotFoundException e)
    {
        flag=3;
    }
    if(flag==2)
    {
        pw.println("<script>");
        pw.println("alert(\"Failed to establish connection.Try again Later. Error Code :1 \");");
        pw.println("location='http://localhost:8080/LabEX4/login.html'");
        pw.println("</script>");
        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }
    else if(flag==3)
    {
        pw.println("<script>");
        pw.println("alert(\"Driver class not found.Error Code :0 \");");
        pw.println("location='http://localhost:8080/LabEX4/login.html'");
        pw.println("</script>");
        //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
    }
    pw.close();
}
}

```

Style.css

```

input[type='text'],input[type='number'],input[type='tel'],input[type='date'],select,textarea {
    background:none;
    display:block;

```

```

margin:5px auto;
text-align:center;
border:2px solid blue;
width:50%;
padding-top:10px;
padding-bottom: 10px;
outline:none;
color:white;
border-radius:20px;
}
input:hover,textarea:hover,select:hover{
    background-color:#CED4D4;
}
.centre {
    text-align: center;
}
h1{
    color:red;
    font-size:24px;
    letter-spacing: 1.5px;
    text-shadow: 2px 2px black;
    font-family: Arial, Helvetica, sans-serif;
}

```

```

input[type=submit] {
    width: 25%;
    background-color: #4CAF50;
    color: white;
    padding: 14px 20px;
    margin-left:auto;
    margin-right:auto;
}

```

```

        border: none;

        border-radius: 4px;

        cursor: pointer;
    }

    input[type=reset] {

        width: 25%;

        background-color: #4CAF50;

        color: white;

        padding: 14px 20px;

        margin-left:auto;

        margin-right:auto;

        border: none;

        border-radius: 4px;

        cursor: pointer;
    }

    input[type=submit]:hover {

        background-color: #45a049;
    }

    input[type=reset]:hover {

        background-color: #45a049;
    }

    body{

        background-color:#191919;

        padding-left:50px;

        color:white;

        text-align:center;
    }

    table{

        border:2px solid blue;

        border-collapse:collapse;

```

```

        margin-left :auto;
        margin-right :auto;
        table-layout:auto;
        width:60%;
        color:white;
    }
thead
{
    background:none;
}
td{
    margin-left :auto;
    margin-right: auto;
    padding-left: 15px;
    border:2px solid blue;
    border-collapse:collapse;
    background:none;
}

td:hover
{
    background:#2ecc71 ;
}
select
{
    text-align-last:center;
}

```

Update.html

```

<!DOCTYPE html>
<html>
<head>

```

```

<title>Lab Ex4</title>

<link rel="stylesheet" href="formstyle.css">
</head>
<body>
    <div class="formblock centre" style="height:50%;">
        <form class="centre" name="delete" action="./upd">
            <h1> UPDATE</h1><br><br>
            <input type="text" name="id" id="id" placeholder="ID"><br><br>
            <input style="float:left;width:33%;" type="submit" value="Update">
            <input style="float:left;width:32%;" type="button" value="View"
onclick='window.location.href="http://localhost:8080/LabEX4/view";'>
            <input style="float:left;width:32%;margin:5px 2px;" type="button" value="Home"
onclick='window.location.href="http://localhost:8080/LabEX4/home.html";'>
        </form>
    </div>
</body>
</html>

```

update.java

```

import java.sql.*;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class update extends HttpServlet {

    public void doGet(HttpServletRequest request,HttpServletResponse response) throws
ServletException, IOException {

        response.setContentType("text/html");

        PrintWriter pw=response.getWriter();

        int flag=0;

        Connection con;

```

```

PreparedStatement ps;

Statement st;

CallableStatement cs;

ResultSet rs;

try
{
    Class.forName("com.mysql.cj.jdbc.Driver");

    try
    {
        flag=1;

        con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/patient","root","Sun@0097");

        //Name, age, ID, gender, address, marital status, Date of Visit
(Name,Age,ID,gender,address,marital_status,DateOfVisit)


        try
        {

            String srch = " SELECT * FROM Patient_Details WHERE
ID="+((String)request.getParameter("id"));

            st=con.createStatement();

            rs=st.executeQuery(srch);

            if(rs.next())
            {

                pw.println("<link rel=\"stylesheet\" href=\"formstyle.css\">");

                pw.println("<div class=\"formblock centre\" style=\"height:95%;>");

                pw.println("  <form class=\"centre\" name=\"insert\" action=\"./upd1\">");

                pw.println("    <h1> UPDATE </h1>");

                pw.println("    <input type=\"text\" name=\"id\" id=\"id\"
value=\""+((String)request.getParameter("id"))+"\" readonly><br>");

                pw.println("    <input type=\"text\" name=\"name\" id=\"name\"
value=\""+rs.getString(1)+"\" readonly><br>");

                pw.println("    <input type=\"number\" name=\"age\" id=\"age\"
value=\""+rs.getString(2)+"\" ><br>");

```



```

        pw.println("    <input type=\"text\" id=\"gender\" name=\"gender\"
value=\""+rs.getString(4)+"\" ' readonly><br>");

        pw.println("    <textarea id=\"addr\" name=\"addr\" rows=\"4\" cols=\"50\"
required> "+rs.getString(5)+" </textarea><br>");

        pw.println("    <input type=\"text\" id=\"ms\" name=\"ms\"
value=\""+rs.getString(6)+"\" ' readonly><br>");

        pw.println("    <label for=\"dov\">Date of Visit:</label>");

        pw.println("    <input type=\"date\" id=\"dov\" name=\"dov\"
value=\""+rs.getString(7)+"\" ' readonly><br>");

        pw.println("    <input style=\"float:left;width:33%;\" type=\"submit\"
value=\"Update\">");

        pw.println("    <input style=\"float:left;width:32%;\" type=\"button\" value=\"View\"
onclick='window.location.href=\"http://localhost:8080/LabEX4/view\";'>");

        pw.println("    <input style=\"float:left;width:32%;margin:5px 3px;\" type=\"button\"
value=\"Home\" onclick='window.location.href=\"http://localhost:8080/LabEX4/home.html\";'>");

        pw.println(" </form>");

        pw.println("</div>");

        /*pw.println("<form name=\"insert\" action=\"./upd1\">");

        pw.println("<input type=\"number\" id='id' name='id' style='display:hidden;'
value=\""+(String)request.getParameter("id")+"\">");

        pw.println("    <label>Name:</label>");

        pw.println("    <input type=\"text\" name=\"name\" id=\"name\"
value=\""+rs.getString(1)+"\"><br><br>");

        pw.println("    <label>Age:</label>");

        pw.println("    <input type=\"number\" name=\"age\" id=\"age\"
value=\""+rs.getString(2)+"\"><br><br>");

        pw.println("    <label>Gender:</label>");

        pw.println("    <input type=\"radio\" id=\"male\" name=\"gender\" value=\"male\"
required>");

        pw.println("    <label for=\"male\">Male</label><br>");

        pw.println("    <input type=\"radio\" id=\"female\" name=\"gender\"
value=\"female\">");

        pw.println("    <label for=\"female\">Female</label><br>");

        pw.println("    <input type=\"radio\" id=\"other\" name=\"gender\"
value=\"other\">");

        pw.println("    <label for=\"other\">Other</label><br><br>");

```

```

        pw.println("    <label for =\"addr\">Address:</label><br><br>");
        pw.println("    <textarea id=\"addr\" name=\"addr\" rows=\"4\" cols=\"50\" required>"
+rs.getString(5)+" </textarea><br><br>");
        pw.println("    <label for=\"ms\">Marital Status:</label>");
        pw.println("    <select name=\"ms\" id=\"ms\" value=\""+rs.getString(6)+"'required>");
        pw.println("        <option value=\"Bachelor\">Bachelor</option>");
        pw.println("        <option value=\"Married\">Married</option>");
        pw.println("        <option value=\"Spinster\">Spinster</option>");
        pw.println("        <option value=\"Widow\">Widow</option>");
        pw.println("    </select><br><br>");
        pw.println("    <label for=\"dov\">Date of Visit:</label>");
        pw.println("    <input type=\"date\" id=\"dov\" name=\"dov\" "
value=\""+rs.getString(7)+"' required><br><br>");
        pw.println("    <input type=\"submit\" value=\"Update\">");
        pw.println("</form>");
        pw.println("<script>");
        pw.println("document.getElementById(\""+rs.getString(4)+"\").checked=true;");
        pw.println("</script>");*/
    }
    else
    {
        pw.println("<script>");
        pw.println("alert(\"Not found \");");
        pw.println("location='http://localhost:8080/LabEX4/search.html';");
        pw.println("</script>");
    }
}
catch(SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Could not Update data"+e+" \");");
    pw.println("location='http://localhost:8080/LabEX4/insert.html';");
}

```

```

        pw.println("</script>");
    }
}
catch (SQLException e)
{
    flag=2;
}
}
catch(ClassNotFoundException e)
{
    flag=3;
}

if(flag==2)
{
    pw.println("<script>");
    pw.println("alert(\"Failed to establish connection.Try again Later. Error Code :1 \");");
    pw.println("location='http://localhost:8080/LabEX4/login.html'");
    pw.println("</script>");
    //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
}
else if(flag==3)
{
    pw.println("<script>");
    pw.println("alert(\"Driver class not found.Error Code :0 \");");
    pw.println("location='http://localhost:8080/LabEX4/login.html'");
    pw.println("</script>");
    //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
}    pw.close();
}
}

```

View.java

```
import java.sql.*;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class view extends HttpServlet {

    public void doGet(HttpServletRequest request,HttpServletResponse response) throws
ServletException, IOException {

        response.setContentType("text/html");
        PrintWriter pw=response.getWriter();
        int flag=0;
        Connection con;
        PreparedStatement ps;
        Statement st;
        CallableStatement cs;
        ResultSet rs;
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try
            {
                flag=1;
                con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/patient","root","Sun@0097");
                //Name, age, ID, gender, address, marital status, Date of Visit
(Name,Age,ID,gender,address,marital_status,DateOfVisit)

                try
                {
```

```

String srch = " SELECT * FROM Patient_Details;";

st=con.createStatement();

rs=st.executeQuery(srch);

if(rs.next()){

    pw.println("<link rel=\"stylesheet\" href=\"viewstyle.css\">");

    pw.println("<div class=\"formblock centre\">");

    pw.println("<table border='1px'>");

    pw.println("<thead>");

pw.println("<tr><th>Name</th><th>Age</th><th>ID</th><th>Gender</th><th>Address</th><th>Marital status</th><th>Date of Visit</th></tr>");

    pw.println("</thead>");

    pw.println("<tbody>");

    do{

pw.println("<tr><td>" +rs.getString(1)+"</td><td>" +rs.getString(2)+"</td><td>" +rs.getString(3)+"</td><td>" +rs.getString(4)+"</td><td>" +rs.getString(5)+"</td><td>" +rs.getString(6)+"</td><td>" +rs.getString(7)+"</td></tr>");

    }while(rs.next());

    pw.println("</tbody>");

    pw.println("</table>");

    pw.println("<br><br><button style=\"height:10%;\" onclick=\"\`window.location.href=\"http://localhost:8080/LabEX4/home.html\";\`>Home</button>");

    pw.println("</div>");

    pw.println("<script>");

    pw.println("alert(\"Found!! \");");

    pw.println("</script>");

}

else

{

    pw.println("<script>");

    pw.println("alert(\"No data exist \");");

    pw.println("location='http://localhost:8080/LabEX4/home.html'");

```

```

        pw.println("</script>");
    }
}
catch(SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Could not find data"+e+" \");");
    pw.println("location='http://localhost:8080/LabEX4/home.html'");
    pw.println("</script>");
}
}
catch (SQLException e)
{
    flag=2;
}
}
catch(ClassNotFoundException e)
{
    flag=3;
}
if(flag==2)
{
    pw.println("<script>");
    pw.println("alert(\"Failed to establish connection.Try again Later. Error Code :1 \");");
    pw.println("location='http://localhost:8080/LabEX4/login.html'");
    pw.println("</script>");
    //response.sendRedirect("http://localhost:8080/LabEX4/login.html");
}
else if(flag==3)
{
    pw.println("<script>");

```

```
pw.println("alert(\"Driver class not found.Error Code :0 \");");
pw.println("location='http://localhost:8080/LabEX4/login.html'");
pw.println("</script>");
//response.sendRedirect("http://localhost:8080/LabEX4/login.html");
}
pw.close();
}
}
```

Viewstyle.css

```
.formblock{
    display: flex;
    border-radius: 50px;
    background: #191919;
    width: 60%;
    height: 90%;
    text-align: center;
}

.centre{
    margin: 0;
    position: absolute;
    top: 50%;
    left: 50%;
    -ms-transform: translate(-50%, -50%);
    transform: translate(-50%, -50%);
    color: white;
}

.centre button{
    background: none;
    display: block;
    margin: 5px auto;
```

```

        text-align:center;

        border:2px solid green;

        width:20%;

        padding-top:10px;

        padding-bottom: 10px;

        outline:none;

        color:white;

        border-radius:20px;
    }

    .centre button:hover{

        border:2px solid green;

        cursor:pointer;

        background: #2ecc71;
    }

    body{

        background: #34495e;
    }

    table{

        border:2px solid blue;

        border-collapse:collapse;

        margin-left :auto;

        margin-right :auto;

        transform: translateY(100%);

        table-layout:auto;

        width:60%;

        color:white;
    }

    thead

    {

        background:none;
    }

```



```
td{  
    margin-left :auto;  
    margin-right: auto;  
    padding-left: 15px;  
    border:2px solid blue;  
    border-collapse:collapse;  
    background:none;  
}
```

```
td:hover  
{  
    background:#2ecc71 ;  
}
```

Web.xml

```
<web-app>
```

```
<servlet>
```

```
    <servlet-name>EX</servlet-name>
```

```
    <servlet-class>grosscal</servlet-class>
```

```
</servlet>
```

```
<servlet-mapping>
```

```
    <servlet-name>EX</servlet-name>
```

```
    <url-pattern>/EX</url-pattern>
```

```
</servlet-mapping>
```

```
<servlet>
```

```
    <servlet-name>valid</servlet-name>
```

```
    <servlet-class>Home</servlet-class>
```

```
</servlet>
```

```
<servlet-mapping>
```

```
    <servlet-name>valid</servlet-name>
```

```
        <url-pattern>/valid</url-pattern>
    </servlet-mapping>
```

```
<servlet>
    <servlet-name>insert</servlet-name>
    <servlet-class>Insert</servlet-class>
</servlet>
```

```
<servlet-mapping>
    <servlet-name>insert</servlet-name>
    <url-pattern>/ins</url-pattern>
</servlet-mapping>
```

```
<servlet>
    <servlet-name>delete</servlet-name>
    <servlet-class>delete</servlet-class>
</servlet>
```

```
<servlet-mapping>
    <servlet-name>delete</servlet-name>
    <url-pattern>/del</url-pattern>
</servlet-mapping>
```

```
<servlet>
    <servlet-name>search</servlet-name>
    <servlet-class>search</servlet-class>
</servlet>
```

```
<servlet-mapping>
    <servlet-name>search</servlet-name>
    <url-pattern>/srch</url-pattern>
</servlet-mapping>
```

```
<servlet>
```

```
        <servlet-name>view</servlet-name>
        <servlet-class>view</servlet-class>
</servlet>
<servlet-mapping>
    <servlet-name>view</servlet-name>
    <url-pattern>/view</url-pattern>
</servlet-mapping>

<servlet>
    <servlet-name>update</servlet-name>
    <servlet-class>update</servlet-class>
</servlet>
<servlet-mapping>
    <servlet-name>update</servlet-name>
    <url-pattern>/upd</url-pattern>
</servlet-mapping>

<servlet>
    <servlet-name>db_upd</servlet-name>
    <servlet-class>db_upd</servlet-class>
</servlet>
<servlet-mapping>
    <servlet-name>db_upd</servlet-name>
    <url-pattern>/upd1</url-pattern>
</servlet-mapping>
</web-app>
```

OUTPUT SCREENSHOTS:

The first screenshot shows a web browser window with the URL `localhost:8080/LabEX4/`. The page has a dark blue background and a central dark grey rounded rectangle containing two buttons: 'Employee details' and 'Patient record'.

The second screenshot shows the 'Employee Details' form. The title 'Employee Details' is in red. The form fields are:

- ID
- Name
- Designation
- Development (dropdown menu)
- Basic Salary
- Contact Number

Below the 'Contact Number' field, there is an example: `example : 12345-67890`. At the bottom, there is a field labeled 'Enter your permanent address'.

localhost:8080/LabEX4/EX?eid=2020546&username=Sudharshan+R&desig=Manager&dept=Development&sal=80000&phone=12345-67890&addr=abcd&dob=2021-03-19&gender=male&ms=B...

Attribute	Value
Name	Sudharshan R
ID	2020546
Designation	Manager
Department	Development
Salary	80000
Phone Number	12345-67890
Address	abcd
Date of Birth	2021-03-19
Gender	male
Marital Status	Bachelor
Gross Pay	85000.0

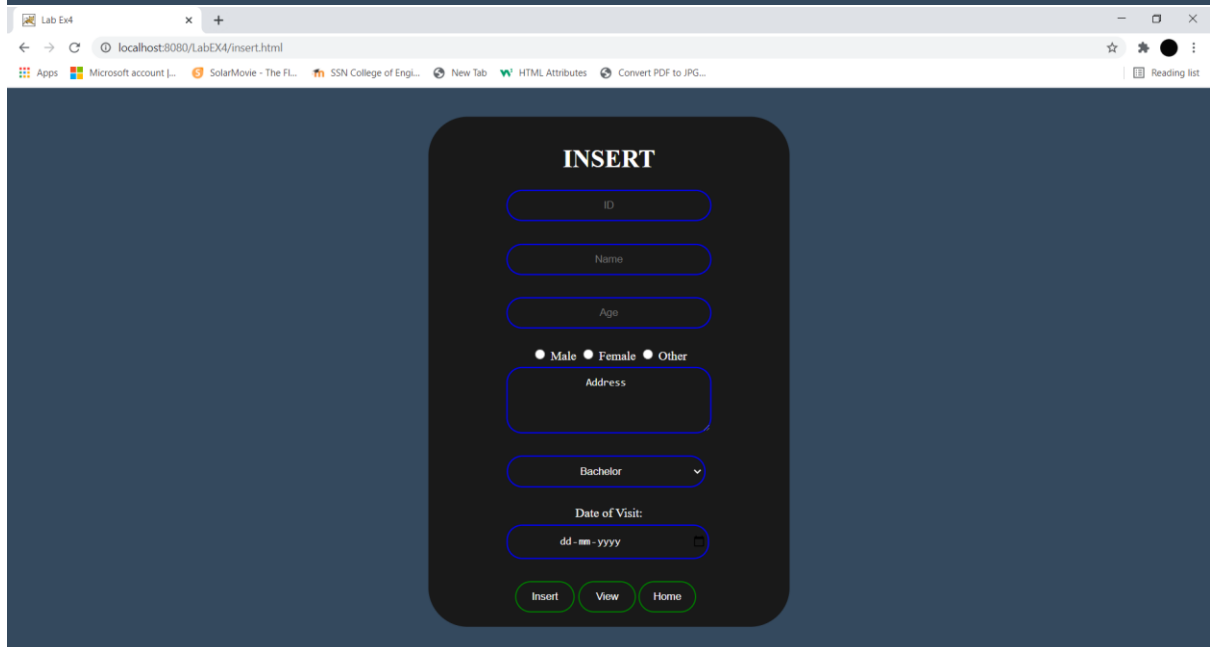
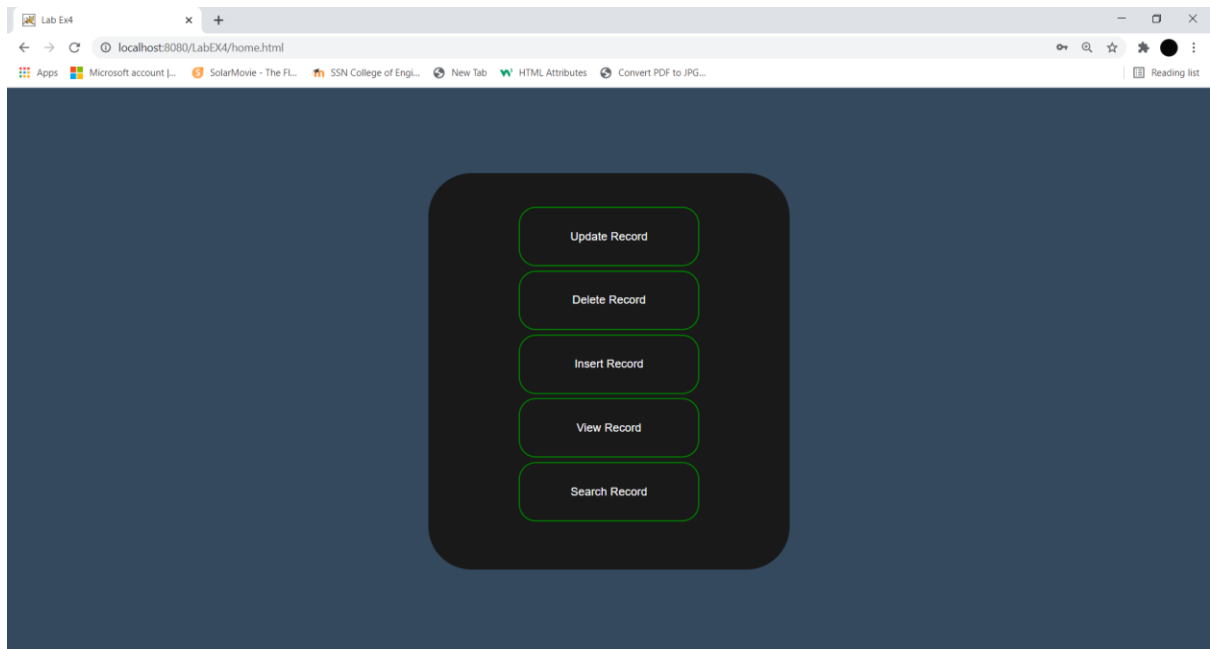
Login

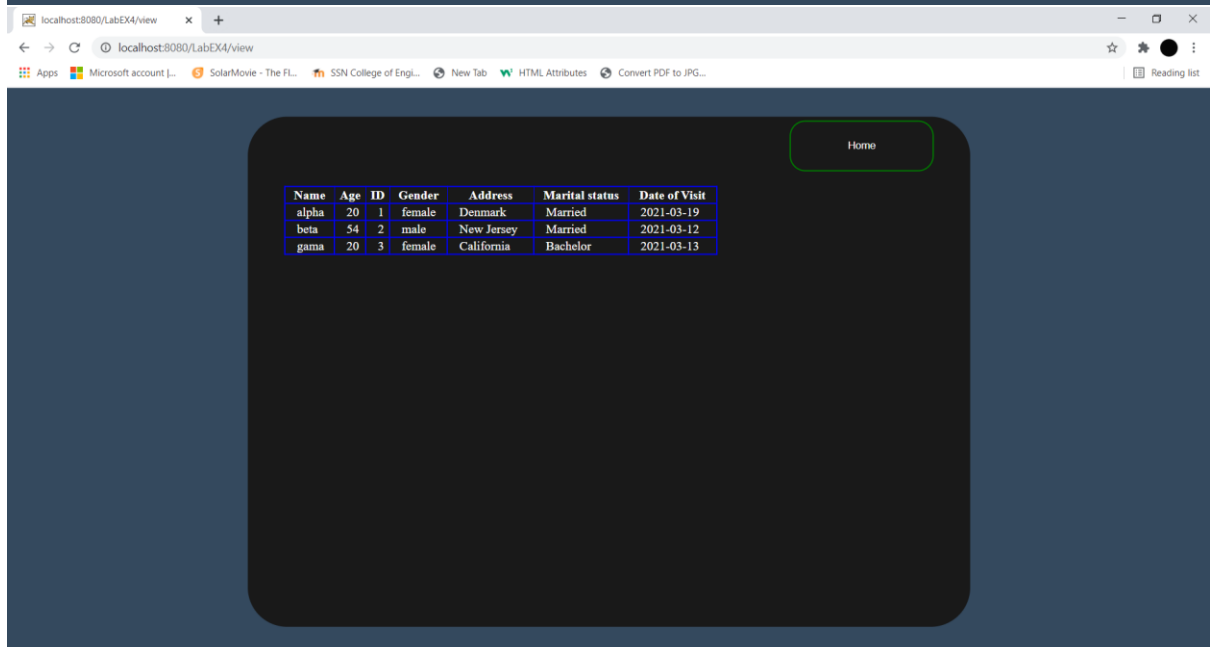
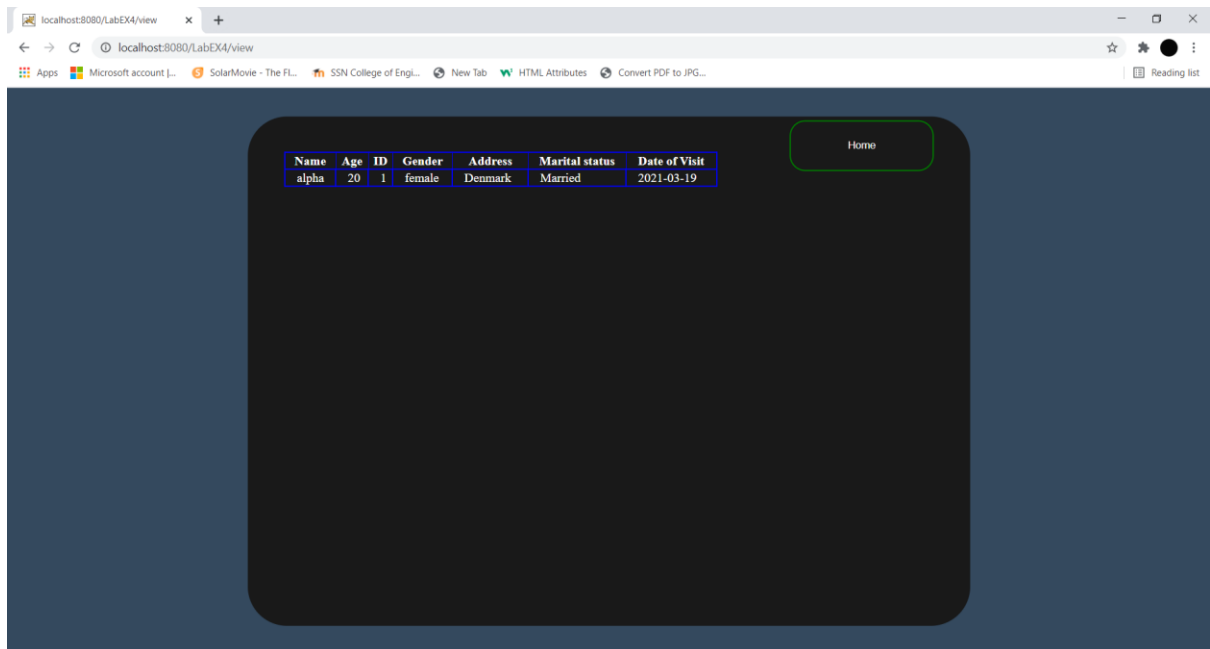
localhost:8080/LabEX4/login.html

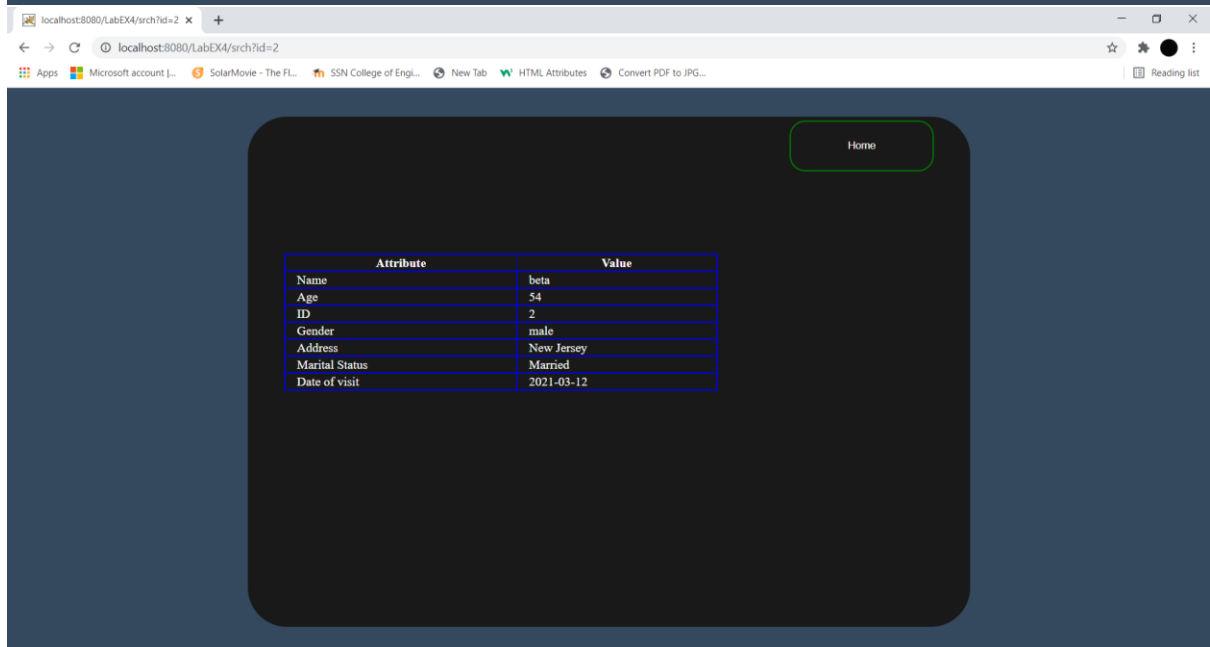
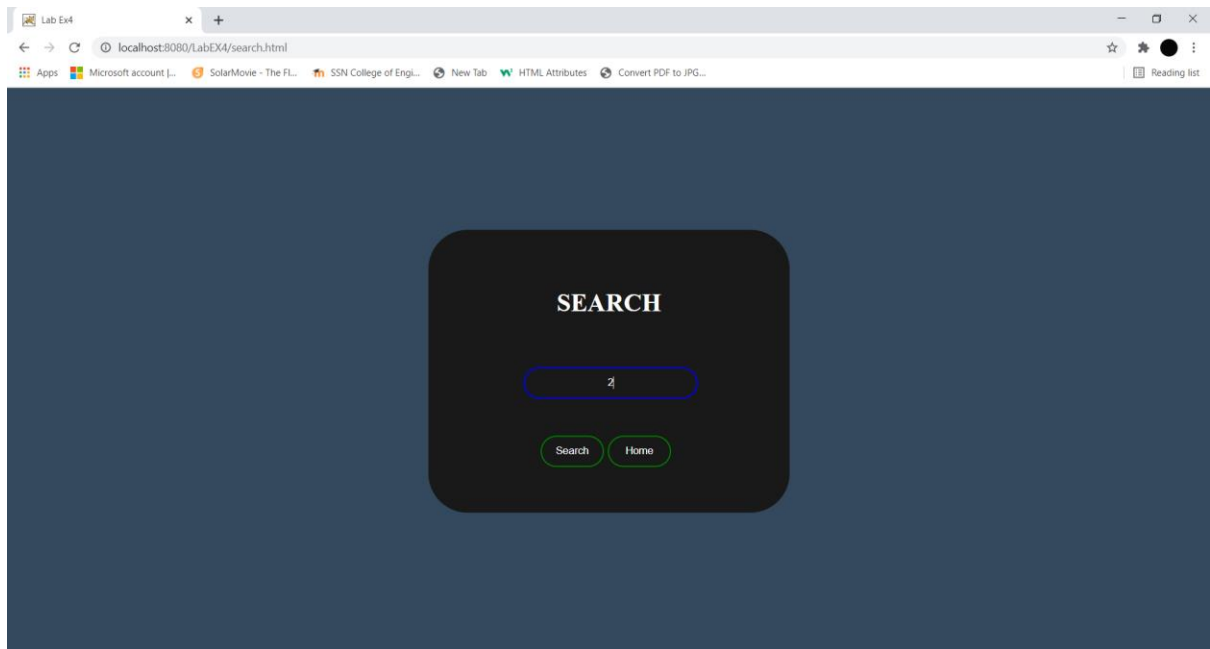
User ID

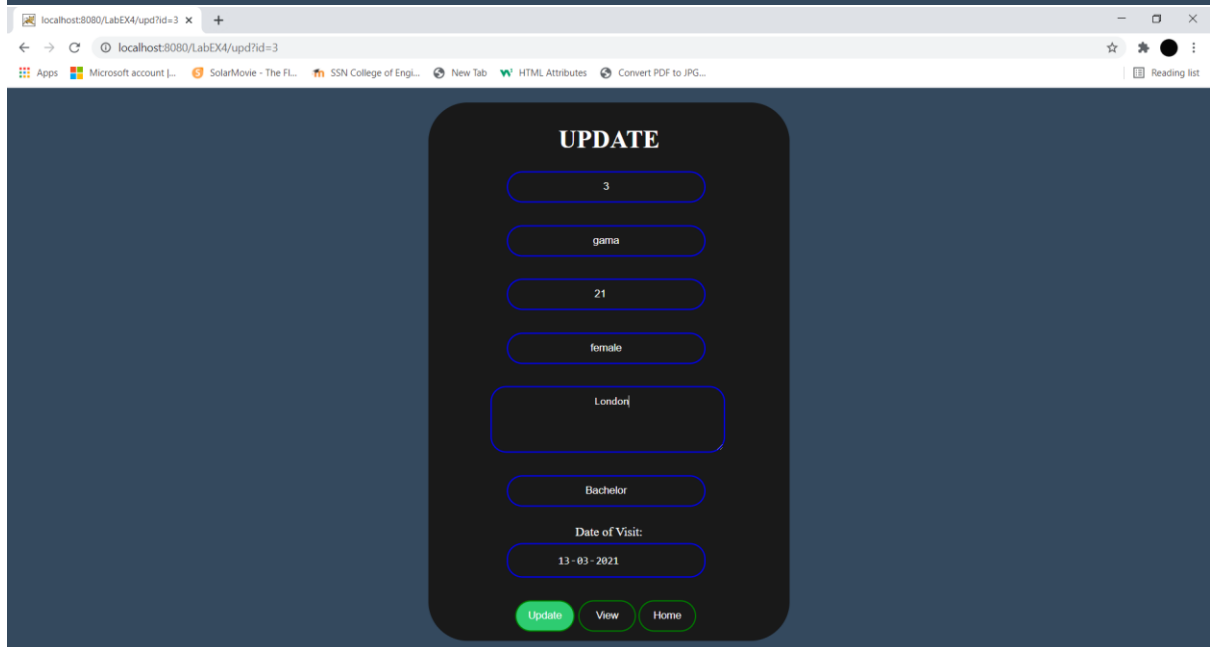
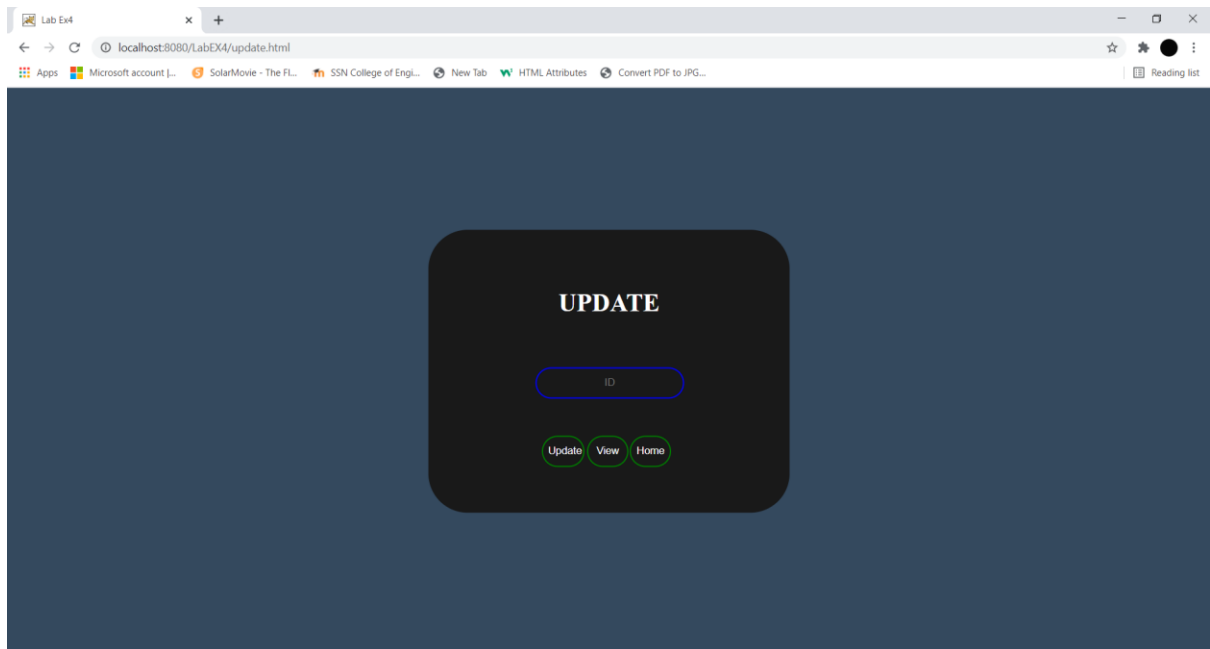
Password

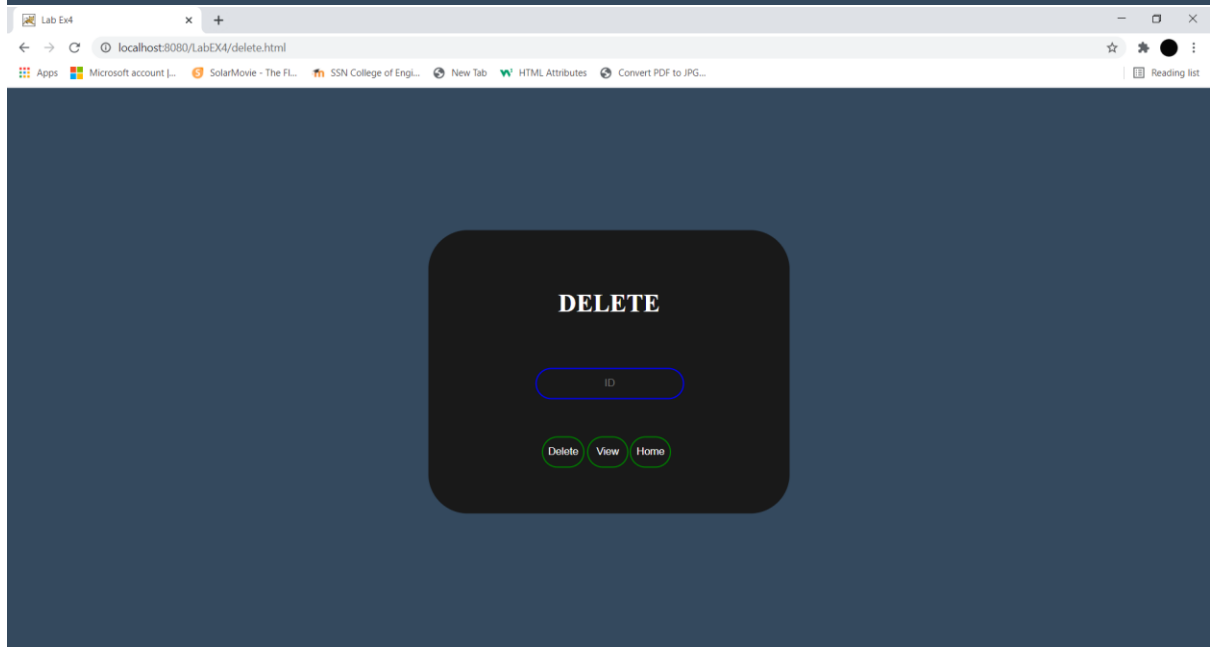
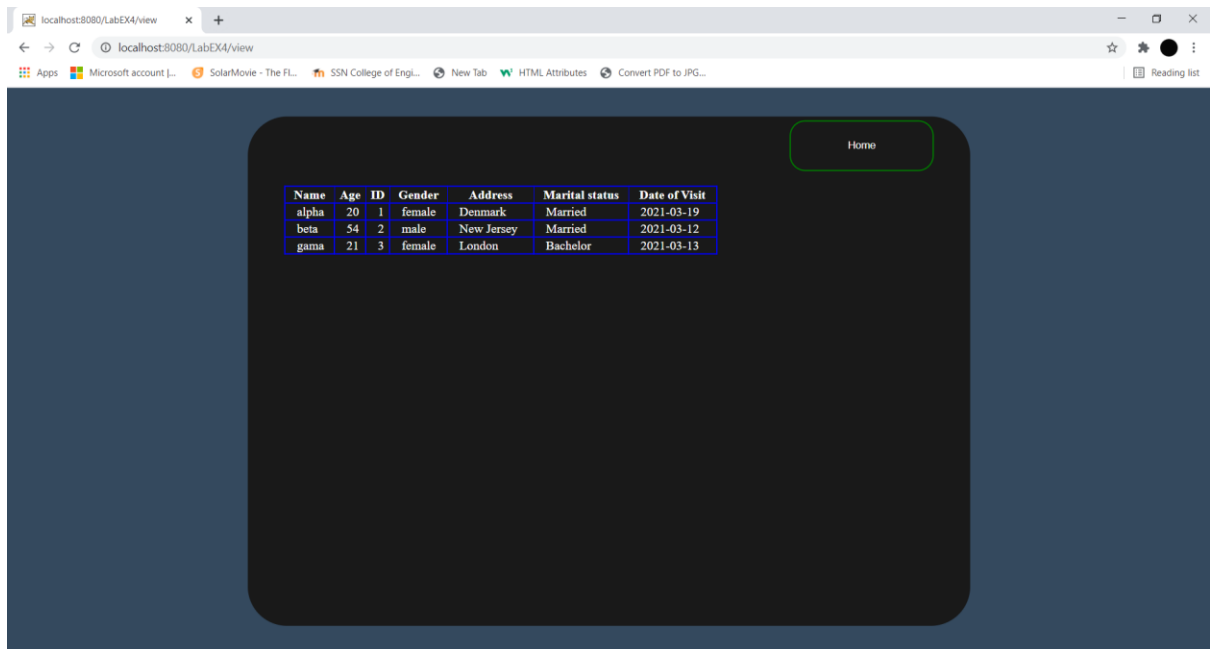
Login

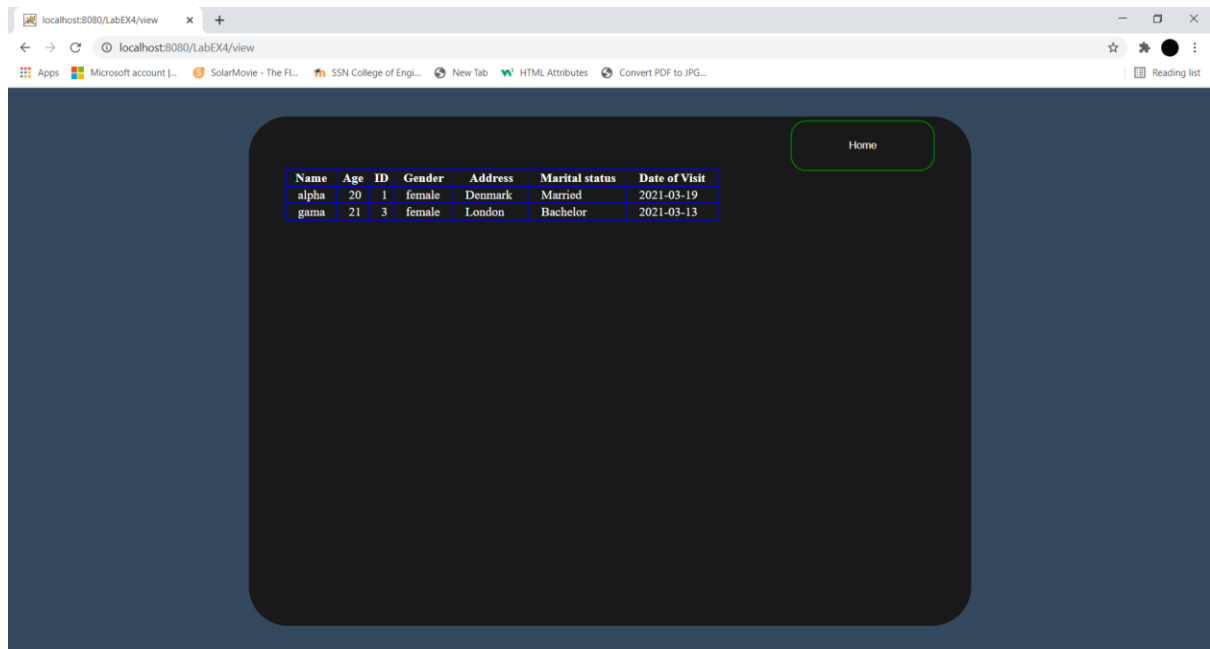












Learning Outcome:

- I learnt about servlets and servlet mapping.
- Also learnt to implement JDBC and how to add it to code.
- Understood the usage of JDBC connection statement and event elements.
- Understood HTML input read-only and flex-style display.
- Learnt about absolute and relative positioning.
- Learnt on how to validate form elements and pass them on a servlet.