

# UCS1601-INTERNET PROGRAMMING

EXERCISE: 4

NAME: V SREEDHAR

DATE: 25.03.2021

REGNO: 185001161

## Exercise 4: Java Servlets and MySQL

### Learning Objectives:

I. Create a HTML file with following form fields:

- a. Employee ID
- b. Employee Name
- c. Designation
- d. Department
- e. Basic Salary
- f. Phone Number
- g. Address
- h. Date of Birth
- i. Gender
- j. Marital Status
- k. Submit (Button, onclick submit the form details to a servlet)
- l. Reset (Button, onclick)

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.

### Program:

(HTML file index.html)

```
<html>
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width">
    <title>Registration Page</title>
    <link href="style.css" rel="stylesheet" type="text/css"/>
    <script src="script.js"></script>
    <style>
      #div1, #div2 {
        float: left;
        width: 150px;
        height: 150px;
        margin: 10px;
```

```

padding: 5px;
border: 2px solid black;
background-color: rgb(188, 224, 228);
}
select:invalid { color: gray; }
input[type=text]:focus {
background-color: lightblue;
}
input[type=text] {
width: 40%;
padding: 12px 20px;
margin: 8px 0;
box-sizing: border-box;
}
select{
width: 40%;
padding: 16px 20px;
border: none;
border-radius: 4px;
background-color: #f4f9f9;
}
fieldset{
background-color: #ccf2f4
}

legend {
background-color: gray;
color: white;
padding: 5px 10px;
}
input {
margin: 5px;
}
</style>
</head>
<body>
<form action="http://localhost:8080/Ex4/GetMtd" width="40%" method="GET" target="_blank">
<fieldset>
<legend>Employee Salary form:</legend>
<label for="id">Employee Id:</label>
<input type="text" id="id" name="id" pattern="[0-9]{4}"onblur="this.checkValidity();" onfocus="this.placeholder='';" placeholder="Your id.." oninvalid="alert('Name is invalid');"><br><br>
<label for="name">Name:</label>
<input type="text" id="name" name="name" pattern="[A-Za-z]{1,32}"onblur="this.checkValidity();" onfocus="this.placeholder='';" placeholder="Your name.." oninvalid="alert('ID is invalid');"><br><br>
<label for="desig">Designation</label>
<select name="desig" id="desig"> <br>

```

```

        <option value="" disabled selected hidden>Select your option</option>
on>

        <option value="HR">HR </option>
        <option value="MGR">Manager</option>
        <option value="FSR">Fresher</option>
    </select><br><br><br>
    <label for="dept">Department:</label>
    <select name="dept" id="dept"> <br>
        <option value="" disabled selected hidden>Select your option</option>
on>

        <option value="Software">Software </option>
        <option value="Hardware">Hardware</option>
    </select><br><br><br>
    <label for="salary">Salary:</label>
    <input type="text" id="salary" name="salary" pattern="[0-9,]{4,8}"onblur="this.checkValidity();" onfocus="this.placeholder='';" placeholder="Your Salary.." oninvalid="alert('Salary is invalid');"><br><br>
    <label for="address">Address:</label>
    <input type="text" id="address" name="address" pattern="[A-Za-z0-9\\.\.:]{1,100}"onblur="this.checkValidity();" oninvalid="alert('Address is invalid');" onfocus="this.placeholder='';" placeholder="Your address.." onselect="myFunction();"><br><br>
    <label for="birthday">Birthday:</label>
    <input type="date" id="birthday" name="birthday"><br><br>
    <label for="gender">Gender</label>
    <select name="gender" id="gender"> <br>
        <option value="" disabled selected hidden>Select your option</option>
on>

        <option value="Male">Male </option>
        <option value="Female">Female</option>
    </select><br><br><br>
    <label for="mstat">Marital Status:</label>
    <select name="mstat" id="mstat"> <br>
        <option value="" disabled selected hidden>Select your option</option>
on>

        <option value="Single">Single </option>
        <option value="Married">Married</option>
    </select><br><br><br>
    <label for="num">Contact Number:</label>
    <input type="tel" name="num" id="num" pattern="[0-9]{10}" oninvalid="alert('Please enter a valid phone number');"><br><br>
    <br><br><br><br>
    <input type="submit" value="Submit" onclick="display_table();">
    <input type="reset" value="Reset" >
    </fieldset>
</form>
</body>
</html>

```

(JAVA Servlet file MyServlet.java)

```
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;
public class MyServlet extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
String id = request.getParameter("id");
String name = request.getParameter("name");
String desig = request.getParameter("desig");
String dept = request.getParameter("dept");
int salary = Integer.parseInt(request.getParameter("salary"));
String address = request.getParameter("address");
String dob = request.getParameter("birthday");
String gender = request.getParameter("gender");
String mstat = request.getParameter("mstat");
String num = request.getParameter("num");
PrintWriter pw = response.getWriter();
response.setContentType("text/html");
if(desig.equals("HR"))salary *=2;
else if(desig.equals("MGR"))salary *=1.7;
else salary*=1.2;
pw.println("<html><head><link href=\"style.css\" rel=\"stylesheet\" type=\"text/css\"/><head>");
pw.println("<br><br><br><br><br><body>");
pw.println("<h1 style=\"text-align:center;\"><i>Form Details</i></h1>");
pw.println("<table border =\"1\"width = \"50%\">");
pw.println("<tr><th>ID</th><th>Value</th></tr>");
pw.println("<tr><td>NAME</td><td>"+name+"</td></tr>");
pw.println("<tr><td>ADDRESS</td><td>"+address+"</td></tr>");
pw.println("<tr><td>EMP ID</td><td>"+id+"</td></tr>");
pw.println("<tr><td>D.O.B</td><td>"+dob+"</td></tr>");
pw.println("<tr><td>MARITAL STATUS</td><td>"+mstat+"</td></tr>");
pw.println("<tr><td>GENDER</td><td>"+gender+"</td></tr>");
pw.println("<tr><td>CONTACT</td><td>"+num+"</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>GROSS PAY </td><td>"+salary+"</td></tr>");
pw.println("</table></body></head>");
pw.close();
}
}
```

*(CSS file style.css)*

```
table:hover {  
  
    transform: scale(1.2);  
}  
th {  
    padding: 15px;  
    text-align: centre;  
    background-color: #f2a154;  
    border: 2px solid black;  
}  
h1{  
    color: rgb(8, 42, 71);  
}  
tr:hover {background-color: #ffdcdd;}  
tr:nth-child(even) {background-color: #f2f2f2;}  
td{  
    padding: 15px;  
    text-align: centre;  
    border: 1px solid black;  
}  
table {  
    border: 1px solid black;  
    width : 40%;  
    border-collapse: collapse;  
    border: 1px solid black;  
    margin-left: auto;  
    margin-right: auto;  
    transition: transform 0.3s;  
}
```

*(XML file web.xml)*

```
<web-app>  
<servlet>  
<servlet-name>GetMtd</servlet-name>  
<servlet-class>MyServlet</servlet-class>  
</servlet>  
<servlet-mapping>  
<servlet-name>GetMtd</servlet-name>  
<url-pattern>/GetMtd</url-pattern>  
</servlet-mapping>  
</web-app>
```

## II. Patient Management System (PMS)

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

Specifications:

- a. Admin only can access the patient records.
- b. Admin has to authenticate himself with the credentials to access the patient details.
- c. The first page is the login page (login.html) where the admin should enter the credentials .
- d. If login fails, display an alert "Login Failed, enter the correct details", clear the username and password textbox and focus the control back to the username of login.html
- e. Perform the authentication using JavaScript, use hardcoded username and password in login.html
- f. On successful login, it should be redirected to homepage (homepage.html) of PMS.
- g. The homepage.html should display the following:
- h. Clicking the links should invoke its corresponding html file from where the information is submitted to the corresponding Servlet. For example, The html file for Delete Record is:
- i. On Submit, it should invoke DeleteServlet. The DeleteServlet should delete the record from the Database and displays "Record Deleted" in a new webpage with a view button as follows:
- j. When "View" button is clicked it invokes the "ViewServlet" to display all the records in the database.
- k. Similarly, perform ADD, UPDATE, VIEW and SEARCH using **corresponding html and Servlet**
- l. UPDATE is invoked if phone number or Address of the patient is changed
- m. SEARCH for particular patient based on Patient ID
- n. After each operation ViewServlet should be invoked to view the changes in the Database

**Database Name:**Patient\_Details

**Table Schema:**Name, age, ID, gender, address, marital status, Date of Visit,

(HTML file index.html)

```
<html>
<head>
  <link rel="stylesheet" href="style.css">
  <link href="https://fonts.googleapis.com/css?family=Ubuntu" rel="stylesheet">
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <link rel="stylesheet" href="path/to/font-awesome/css/font-awesome.min.css">
  <title>Sign in</title>
</head>
<body>
  <div class="main">
    <p class="sign" align="center">Sign in</p>
    <form class="form1" id="form1">
      <input class="un" id="name" type="text" align="center" placeholder="Username"
">
      <input class="pass" id="pass" type="password" align="center" placeholder="Pa
ssword"><br><br>
      <a class="submit" align="center" onclick="signin();" >Sign in</a>
    </form>
  </div>
  <script src="script.js"></script>
</body>
</html>
```

(HTML file homepage.html)

```
<html>

<head>
  <link rel="stylesheet" href="style.css">
  <link href="https://fonts.googleapis.com/css?family=Ubuntu" rel="stylesheet">
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <link rel="stylesheet" href="path/to/font-awesome/css/font-awesome.min.css">
  <script src="script.js"></script>
  <title>Home Page</title>
</head>

<rom>
  <div class="main" >
    <p class="sign" align="center">Home Page</p>
    <ul>
      <li ><a href="add_user.html">Add User</a></li><br>
      <li ><a href="update_user.html">Update User</a></li><br>
      <li ><a href="delete_user.html">Delete User</a></li><br>
      <li ><a href="view_user.html">View User</a></li><br>
      <li ><a href="search_user.html">Search User</a></li>
    </ul>
  </div>
</body>
```

```
</html>
```

(HTML file `add_user.html`)

```
<html>
```

```
<head>
```

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

```
  <link href="https://fonts.googleapis.com/css?family=Ubuntu" rel="stylesheet">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1" />
```

```
  <link rel="stylesheet" href="path/to/font-awesome/css/font-awesome.min.css">
```

```
  <script src="script.js"></script>
```

```
  <title>Add User</title>
```

```
</head>
```

```
<body>
```

```
  <div class="main_home">
```

```
    <p class="sign" align="center">Add User</p>
```

```
    <form class="form1" id="add_form">
```

```
      <input class="un" id="name" name="name" type="text" align="center" placeholder="Name">
```

```
      <input class="un" id="age" name="age" type="text" align="center" placeholder="age">
```

```
      <input class="un" id="id" name="id" type="text" align="center" placeholder="id">
```

```
      <label class="container"> Male
```

```
        <input type="radio" name="gender" value="male">
```

```
        <span class="checkmark"></span>
```

```
    </label>
```

```
    <label class="container"> Female
```

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

```
      <span class="checkmark"></span>
```

```
    </label>
```

```
    <br><br>
```

```
    <input class="un" name="address" id="address" type="text" align="center" placeholder="address">
```

```
    <label class="container"> Single
```

```
      <input type="radio" name="mstat" value="single">
```

```
      <span class="checkmark"></span>
```

```
    </label>
```

```
    <label class="container"> Married
```

```
      <input type="radio" name="mstat" value="married">
```

```
      <span class="checkmark"></span>
```

```
    </label>
```

```
    <br><br>
```

```
    <input class="un" name="num" id="num" type="text" align="center" placeholder="phone number">
```

```
    <br>
```



```

    <label for="date" style="padding-left: 70px;padding-
right: 20px;">Date of Visit</label>
    <input id="date" name="date" type="date" align="centre">
    <br><br><br>
    <a class="submit" align="center" onclick="add();" >Add User</a>
  </form>
</div>
<script src="script.js"></script>
</body>

</html>

```

(HTML file delete\_user.html)

```

<html>

<head>
  <link rel="stylesheet" href="style.css">
  <link href="https://fonts.googleapis.com/css?family=Ubuntu" rel="stylesheet">
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <link rel="stylesheet" href="path/to/font-awesome/css/font-awesome.min.css">
  <title>Delete</title>
</head>

<body>
  <div class="main">
    <p class="sign" align="center">Delete User</p>
    <form class="form1" id="delete_form">
      <input class="un" id="id" name="id" type="text" align="center" placeholder="
Patient id"><br><br>
      <a class="submit" align="center" onclick="del();" >Delete</a>
    </form>
  </div>
  <script src="script.js"></script>
</body>
</html>

```

(HTML file search\_user.html)

```

<html>

<head>
  <link rel="stylesheet" href="style.css">
  <link href="https://fonts.googleapis.com/css?family=Ubuntu" rel="stylesheet">
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <link rel="stylesheet" href="path/to/font-awesome/css/font-awesome.min.css">
  <title>Search</title>
</head>

```

```

<body>
  <div class="main">
    <p class="sign" align="center">Search User</p>
    <form class="form1" id="search_form">
      <input class="un" id="id" name="id" type="text" align="center" placeholder="
Patient id"><br><br>
      <a class="submit" align="center" onclick="sh();" >Search</a>
    </form>
  </div>
  <script src="script.js"></script>
</body>
</html>

```

(HTML file update\_user.html)

```

<html>

<head>
  <link rel="stylesheet" href="style.css">
  <link href="https://fonts.googleapis.com/css?family=Ubuntu" rel="stylesheet">
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <link rel="stylesheet" href="path/to/font-awesome/css/font-awesome.min.css">
  <title>Update</title>
</head>

<body>
  <div class="main">
    <p class="sign" align="center">Update User</p>
    <form class="form1" id="update_form">
      <input class="un" name="id" id="id" type="text" align="center" placeholder="
Patient id"><br><br>
      <a class="submit" align="center" onclick="update();" >update</a>
    </form>
  </div>
  <script src="script.js"></script>
</body>
</html>

```

(HTML file view\_user.html)

```

<html>

<head>
  <link rel="stylesheet" href="style.css">
  <link href="https://fonts.googleapis.com/css?family=Ubuntu" rel="stylesheet">
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <link rel="stylesheet" href="path/to/font-awesome/css/font-awesome.min.css">

```

```

    <title>View</title>
</head>

<body>
    <div class="main">
        <p class="sign" align="center">View all entries</p>
        <form class="form1" id="view_form"><br><br>
            <a class="submit" align="center" onclick="view();">Click here</a>
        </form>
    </div>
    <script src="script.js"></script>
</body>
</html>

```

(JAVA file add.java)

```

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

public class add extends HttpServlet {
    public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

        response.setContentType("text/html");
        PrintWriter pw=response.getWriter();
        Connection con;
        PreparedStatement ps;
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try
            {
                con =DriverManager.getConnection("jdbc:mysql://localhost:3306/patient_details","sree","sree");

                try
                {
                    String insert = "INSERT INTO patients(name,age,id,gender,address,mstat,phone_no,date_of_visit) 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("address"));
                    ps.setString(6,request.getParameter("mstat"));
                    ps.setString(7,request.getParameter("num"));

```

```

        ps.setDate(8, java.sql.Date.valueOf(request.getParameter("date
    ")));

    ps.execute();
    pw.println("<script>");
    pw.println("alert(\"Inserted Successfully \");");
    pw.println("location='http://localhost:8080/ex4sql/homepage.ht
ml';");

    pw.println("</script>");
}
catch(SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Could not Insert data"+e+" \");");
    pw.println("location='http://localhost:8080/ex4sql/add_user.ht
ml';");

    pw.println("</script>");
}
}
catch (SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Failed to establish connection.Try again Later
. Error Code :1 \");");
    pw.println("location='http://localhost:8080/ex4sql/index.html';");
    pw.println("</script>");
}
}
catch(ClassNotFoundException e)
{
    pw.println("<script>");
    pw.println("alert(\"Driver class not found.Error Code :0 \");");
    pw.println("location='http://localhost:8080/ex4sql/index.html';");
    pw.println("</script>");
}
pw.close();
}
}

```

*(JAVA file delete.java)*

```

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

public class delete extends HttpServlet {
    public void doGet(HttpServletRequest request,HttpServletResponse response) thr
ows ServletException, IOException {

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

```

```

PrintWriter pw=response.getWriter();
Connection con;
Statement st;
PreparedStatement ps;
try
{
    Class.forName("com.mysql.cj.jdbc.Driver");
    try
    {
        con =DriverManager.getConnection("jdbc:mysql://localhost:3306/pati
ent_details","sree","sree");

        try
        {
            int id = Integer.parseInt(request.getParameter("id"));
            String srch = "DELETE FROM patients where id =?";
            ps = con.prepareStatement(srch);
            ps.setInt(1,id);
            ps.execute();

            pw.println("<script>");
            pw.println("alert(\"Deleted \");");
            pw.println("location='http://localhost:8080/ex4sql/view_user.h
tml';");

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

        }
        catch(SQLException e)
        {
            pw.println("<script>");
            pw.println("alert(\"Retrive the data"+e+" \");");
            pw.println("location='http://localhost:8080/ex4sql/delete.html
';");

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

        }
    }
    catch (SQLException e)
    {
        pw.println("<script>");
        pw.println("alert(\"Failed to establish connection.Try again Later
. Error Code :1 \");");
        pw.println("location='http://localhost:8080/ex4sql/index.html';");
        pw.println("</script>");

    }
}
catch(ClassNotFoundException e)
{
    pw.println("<script>");
    pw.println("alert(\"Driver class not found.Error Code :0 \");");
    pw.println("location='http://localhost:8080/ex4sql/index.html';");
    pw.println("</script>");
}

```

```

    }
    pw.close();
}

}

```

(JAVA file update.java)

```

import java.sql.*;
import java.io.*;
import jakarta.servlet.*;
import jakarta.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();
        Connection con;
        Statement st;
        ResultSet rs;
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try
            {
                con =DriverManager.getConnection("jdbc:mysql://localhost:3306/patient_details","sree","sree");

                try
                {
                    String id = request.getParameter("id");
                    String srch = "SELECT * FROM patients where id ="+id+"";
                    st = con.createStatement();
                    rs=st.executeQuery(srch);
                    if(rs.next()){
                        pw.println("<html><head><link rel=\"stylesheet\" href=\"style.css\"><link href=\"https://fonts.googleapis.com/css?family=Ubuntu\" rel=\"stylesheet\">");
                        pw.println("<meta name=\"viewport\" content=\"width=device-width, initial-scale=1\" /> <link rel=\"stylesheet\" href=\"path/to/font-awesome/css/font-awesome.min.css\">");
                        pw.println("<script src=\"script.js\"></script><title>Update User</title></head><body><div class=\"main_home\"><p class=\"sign\" align=\"center\">Update User</p>");
                        pw.println("<form class=\"form2\" id=\"update\">");
                        pw.println("<input class=\"un\" id=\"name\" name =\"name\" type=\"text\" align=\"center\" placeholder=\"Name\" value=\"\"+rs.getString(2)+\"\" readonly>");

```

```

        pw.println("<input class=\"un\" id=\"age\" name=\"age\" type=\"\n"
"text\" align=\"center\" placeholder=\"age\" value=\""+rs.getString(3)+"\"readonly\n"
">");

        pw.println("<input class=\"un\" id=\"id\" name=\"id\" type=\"t\n"
ext\" align=\"center\" placeholder=\"id\" value=\""+rs.getString(1)+"\"readonly>")
;

        pw.println("<input class=\"un\" id=\"gender\" name=\"gender\" \n"
type=\"text\" align=\"center\" placeholder=\"id\" value=\""+rs.getString(4)+"\"rea\n"
donly>");

        pw.println("<input class=\"un\" id=\"mstat\" name=\"mstat\" ty\n"
pe=\"text\" align=\"center\" placeholder=\"id\" value=\""+rs.getString(6)+"\"reado\n"
nly>");

        pw.println("<input class=\"un\" id=\"date\" name=\"date\" type\n"
= \"text\" align=\"center\" placeholder=\"id\" value=\""+rs.getString(8)+"\"readonl\n"
y>");

        pw.println("<input class=\"un\" style=\"background-\n"
color: #3CBC8D;color: white;\" name=\"address\" id=\"address\" type=\"text\" align\n"
= \"center\" placeholder=\"address\" value=\""+rs.getString(5)+"\">");

        pw.println("<input class=\"un\" style=\"background-\n"
color: #3CBC8D;color: white;\" name=\"num\" id=\"num\" type=\"text\" align=\"cente\n"
r\" placeholder=\"phone number\" value=\""+rs.getString(7)+"\">");

        pw.println("<a class=\"submit\" align=\"center\" onclick=\"up(\n"
);\n" >Update User</a></form></div><script src=\"script.js\"></script></body></html\n"
>");

        pw.println("<script>");

        pw.println("function up(){document.getElementById(\"update\").\n"
action = \"http://localhost:8080/ex4sql/updatenew\";document.getElementById(\"upda\n"
te\").submit()});");

        pw.println("</script>");
    }
    else
    {
        pw.println("<script>");
        pw.println("alert(\"No data exist in main update\");");
        pw.println("location='http://localhost:8080/ex4sql/view_us\n"
er.html';");

        pw.println("</script>");
    }
}
catch(SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Can't Retrive the data"+e+" \");");
    pw.println("location='http://localhost:8080/ex4sql/view_user.h\n"
tml';");

    pw.println("</script>");
}
}
catch (SQLException e)

```

```

        {
            pw.println("<>");
            pw.println("alert(\"Failed to establish connection.Try again Later  

. Error Code :1 \");");
            pw.println("location='http://localhost:8080/ex4sql/index.html'");
            pw.println("</>");
        }
    }
    catch(ClassNotFoundException e)
    {
        pw.println("<>");
        pw.println("alert(\"Driver class not found.Error Code :0 \");");
        pw.println("location='http://localhost:8080/ex4sql/index.html'");
        pw.println("</>");
    }
    pw.close();
}
}

```

(JAVA file update\_details.java)

```

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

public class update_details extends HttpServlet {
    public void doGet(HttpServletRequest request,HttpServletResponse response) throws ServletException, IOException {

        response.setContentType("text/html");
        PrintWriter pw=response.getWriter();
        Connection con;
        Statement st;
        PreparedStatement ps;
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try
            {
                con =DriverManager.getConnection("jdbc:mysql://localhost:3306/patient_details","sree","sree");

                try
                {
                    int id = Integer.parseInt(request.getParameter("id"));
                    String phone = request.getParameter("num");
                    String address = request.getParameter("address");
                    String srch="update patients set phone_no=? ,address=? where id=?";

```



```

        ps = con.prepareStatement(srch);
        ps.setInt(3,id);
        ps.setString(1,phone);
        ps.setString(2,address);
        ps.execute();
        pw.println("<script>");
        pw.println("alert(\"Updated! \");");
        pw.println("location='http://localhost:8080/ex4sql/view_user.h
tml';");

        pw.println("</script>");
    }
    catch(SQLException e)
    {
        pw.println("<script>");
        pw.println("alert(\"Retrive the data"+e+" \");");
        pw.println("location='http://localhost:8080/ex4sql/delete.html
';");

        pw.println("</script>");
    }
}
catch (SQLException e)
{
    pw.println("<script>");
    pw.println("alert(\"Failed to establish connection.Try again Later
. Error Code :1 \");");
    pw.println("location='http://localhost:8080/ex4sql/index.html';");
    pw.println("</script>");
}
}
catch(ClassNotFoundException e)
{
    pw.println("<script>");
    pw.println("alert(\"Driver class not found.Error Code :0 \");");
    pw.println("location='http://localhost:8080/ex4sql/index.html';");
    pw.println("</script>");
}
pw.close();
}
}

```

*(JAVA file search.java)*

```

import java.sql.*;
import java.io.*;
import jakarta.servlet.*;
import jakarta.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();
    Connection con;
    PreparedStatement ps;
    Statement st;
    ResultSet rs;
    try
    {
        Class.forName("com.mysql.cj.jdbc.Driver");
        try
        {
            con =DriverManager.getConnection("jdbc:mysql://localhost:3306/patient_details","sree","sree");
            try
            {
                String id = request.getParameter("id");
                String srch = "SELECT * FROM patients where id =" +id+"";
                st = con.createStatement();
                rs=st.executeQuery(srch);
                if(rs.next()){
                    pw.println("<html><head><link href=\"table_style.css\" rel=\"stylesheet\" type=\"text/css\"/><head>");
                    pw.println("<br><br><br><br><br><body>");
                    pw.println("<table>");
                    pw.println("<thead>");
                    pw.println("<tr><th>ID</th><th>Name</th><th>Age</th><th>Gender</th><th>Address</th><th>Marital status</th><th>Phone No</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><td>" +rs.getString(8)+"</td></tr>");
                    }while(rs.next());
                    pw.println("</tbody>");
                    pw.println("</table></body></html>");
                }
                else
                {
                    pw.println("<script>");
                    pw.println("alert(\"No data exists in that id \");");
                    pw.println("location='http://localhost:8080/ex4sql/search.html';");
                    pw.println("</script>");
                }
            }
        }
    }
}

```

```

        catch(SQLException e)
        {
            pw.println("<script>");
            pw.println("alert(\"Can't Retrive the data"+e+" \");");
            pw.println("location='http://localhost:8080/ex4sql/search.html
';");

            pw.println("</script>");
        }
    }
    catch (SQLException e)
    {
        pw.println("<script>");
        pw.println("alert(\"Failed to establish connection.Try again Later
. Error Code :1 \");");
        pw.println("location='http://localhost:8080/ex4sql/index.html'");
        pw.println("</script>");
    }
}
catch(ClassNotFoundException e)
{
    pw.println("<script>");
    pw.println("alert(\"Driver class not found.Error Code :0 \");");
    pw.println("location='http://localhost:8080/ex4sql/index.html'");
    pw.println("</script>");
}
pw.close();
}
}
}

```

*(JAVA file view.java)*

```

import java.sql.*;
import java.io.*;
import jakarta.servlet.*;
import jakarta.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();
        Connection con;
        Statement st;
        ResultSet rs;
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try
            {

```

```

        con =DriverManager.getConnection("jdbc:mysql://localhost:3306/pati
ent_details","sree","sree");

        try
        {
            String srch = " SELECT * FROM patients;";
            st=con.createStatement();
            rs=st.executeQuery(srch);
            if(rs.next()){
                pw.println("<html><head><link href=\"table_style.css\" rel
=\"stylesheet\" type=\"text/css\"/><head>");
                pw.println("<br><br><br><br><br><body>");
                pw.println("<table>");
                pw.println("<thead>");
                pw.println("<tr><th>ID</th><th>Name</th><th>Age</th><th>Ge
nder</th><th>Address</th><th>Marital status</th><th>Phone No</th><th>Date of Visit
</th></tr>");
                pw.println("</thead>");
                pw.println("<tbody>");
                do{
                    pw.println("<tr><td>"+rs.getString(1)+"</td><td>"+rs.g
etString(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><td>"+
rs.getString(8)+"</td></tr>");
                }while(rs.next());
                pw.println("</tbody>");
                pw.println("</table></body></html>");
            }
            else
            {
                pw.println("<script>");
                pw.println("alert(\"No data exist \");");
                pw.println("location='http://localhost:8080/ex4sql/view.ht
ml';");
                pw.println("</script>");
            }
        }
        catch(SQLException e)
        {
            pw.println("<script>");
            pw.println("alert(\"Retrive the data"+e+" \");");
            pw.println("location='http://localhost:8080/ex4sql/view.html';
");
            pw.println("</script>");
        }
    }
    catch (SQLException e)
    {
        pw.println("<script>");
        pw.println("alert(\"Failed to establish connection.Try again Later
. Error Code :1 \");");
    }
}

```

```

        pw.println("location='http://localhost:8080/ex4sql/index.html'");
        pw.println("</script>");
    }
}
catch(ClassNotFoundException e)
{
    pw.println("<script>");
    pw.println("alert(\"Driver class not found.Error Code :0 \");");
    pw.println("location='http://localhost:8080/ex4sql/index.html'");
    pw.println("</script>");
}
pw.close();
}
}

```

(JAVA file Home.java)

```

import java.sql.*;

import java.io.*;
import jakarta.servlet.*;
import jakarta.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;
        JDBC_CON db=new JDBC_CON();
        db.establish();
        flag=db.valid();
        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/ex4sql/index.html'");
            pw.println("</script>");
        }
        else if(flag==3)
        {
            pw.println("<script>");
            pw.println("alert(\"Driver class not found! \");");
            pw.println("location='http://localhost:8080/ex4sql/index.html'");
            pw.println("</script>");
        }
        else
        {
            pw.println("<script>");

```

```

        pw.println("alert(\"Connection esablished successfully! \");");
        pw.println("location='http://localhost:8080/ex4sql/homepage.html'");
        pw.println("</script>");
    }
}

}

class JDBC_CON{
    Connection con;
    PreparedStatement ps;
    Statement st;
    CallableStatement cs;
    ResultSet rs;
    int flag;
    public void establish(){
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try
            {
                flag=1;
                con =DriverManager.getConnection("jdbc:mysql://localhost:3306/pati
ent_details","sree","sree");
            }
            catch (SQLException e)
            {
                flag=2;
            }
        }
        catch(ClassNotFoundException e)
        {
            flag=3;
        }
    }
    public int valid(){
        return flag;
    }
}

```

(XML file web.xml)

```

<web-app>
<servlet>
<servlet-name>dbcheck</servlet-name>
<servlet-class>Home</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>dbcheck</servlet-name>
<url-pattern>/dbcheck</url-pattern>
</servlet-mapping>

```

```
<servlet>
<servlet-name>adduser</servlet-name>
<servlet-class>add</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>adduser</servlet-name>
<url-pattern>/adduser</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>viewuser</servlet-name>
<servlet-class>view</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>viewuser</servlet-name>
<url-pattern>/viewuser</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>searchuser</servlet-name>
<servlet-class>search</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>searchuser</servlet-name>
<url-pattern>/searchuser</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>deleteuser</servlet-name>
<servlet-class>delete</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>deleteuser</servlet-name>
<url-pattern>/deleteuser</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>updateuser</servlet-name>
<servlet-class>update</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>updateuser</servlet-name>
<url-pattern>/updateuser</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>updatenew</servlet-name>
<servlet-class>update_details</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>updatenew</servlet-name>
<url-pattern>/updatenew</url-pattern>
</servlet-mapping>
</web-app>
```

(CSS file style.css)

```
body {
  background-color: #F3EBF6;
  font-family: 'Ubuntu', sans-serif;
}

.main {
  background-color: #FFFFFF;
  width: 400px;
  height: 400px;
  margin: 7em auto;
  border-radius: 1.5em;
  box-shadow: 0px 11px 35px 2px rgba(0, 0, 0, 0.14);
}

.sign {
  padding-top: 40px;
  color: #8C55AA;
  font-family: 'Ubuntu', sans-serif;
  font-weight: bold;
  font-size: 23px;
}

.un {
  width: 76%;
  color: rgb(38, 50, 56);
  font-weight: 700;
  font-size: 14px;
  letter-spacing: 1px;
  background: rgba(136, 126, 126, 0.04);
  padding: 10px 20px;
  border: none;
  border-radius: 20px;
  outline: none;
  box-sizing: border-box;
  border: 2px solid rgba(0, 0, 0, 0.02);
  margin-bottom: 50px;
  margin-left: 46px;
  text-align: center;
  margin-bottom: 27px;
  font-family: 'Ubuntu', sans-serif;
}

form.form1 {
  padding-top: 40px;
}

.pass {
  width: 76%;
  color: rgb(38, 50, 56);
```



```
font-weight: 700;
font-size: 14px;
letter-spacing: 1px;
background: rgba(136, 126, 126, 0.04);
padding: 10px 20px;
border: none;
border-radius: 20px;
outline: none;
box-sizing: border-box;
border: 2px solid rgba(0, 0, 0, 0.02);
margin-bottom: 50px;
margin-left: 46px;
text-align: center;
margin-bottom: 27px;
font-family: 'Ubuntu', sans-serif;
}

.un:focus, .pass:focus {
  border: 2px solid rgba(0, 0, 0, 0.18) !important;
}

.submit {
  cursor: pointer;
  border-radius: 5em;
  color: #fff;
  background: linear-gradient(to right, #9C27B0, #E040FB);
  border: 0;
  padding-left: 40px;
  padding-right: 40px;
  padding-bottom: 10px;
  padding-top: 10px;
  font-family: 'Ubuntu', sans-serif;
  margin-left: 35%;
  font-size: 13px;
  box-shadow: 0 0 20px 1px rgba(0, 0, 0, 0.04);
}

.forgot {
  text-shadow: 0px 0px 3px rgba(117, 117, 117, 0.12);
  color: #E1BEE7;
  padding-top: 15px;
}

a {
  text-shadow: 0px 0px 3px rgba(117, 117, 117, 0.12);
  color: #E1BEE7;
  text-decoration: none
}

.container {
```

```
display: inline-block;
position: relative;
padding-left: 40px;
margin-left: 60px;
cursor: pointer;
font-size: 18px;
-webkit-user-select: none;
-moz-user-select: none;
-ms-user-select: none;
user-select: none;
}

.container input {
position: absolute;
opacity: 0;
cursor: pointer;
}

.checkmark {
position: absolute;
top: 0;
left: 0;
height: 25px;
width: 25px;
background-color: #eee;
border-radius: 50%;
}

.container:hover input ~ .checkmark {
background-color: #ccc;
}

.container input:checked ~ .checkmark {
background-color: #2196F3;
}

.checkmark:after {
content: "";
position: absolute;
display: none;
}

.container input:checked ~ .checkmark:after {
display: block;
}
```

```

.container .checkmark:after {
    top: 9px;
    left: 9px;
    width: 8px;
    height: 8px;
    border-radius: 50%;
    background: white;
}
@media (max-width: 600px) {
    .main {
        border-radius: 0px;
    }
}
.main_home {
    background-color: #FFFFFF;
    width: 400px;
    height: 700px;
    margin: 7em auto;
    border-radius: 1.5em;
    box-shadow: 0px 11px 35px 2px rgba(0, 0, 0, 0.14);
}
.form2 {
    background-color: #FFFFFF;
    width: 500px;
    height: 1000px;
    margin: 7em auto;
    border-radius: 1.5em;
    box-shadow: 0px 11px 35px 2px rgba(0, 0, 0, 0.14);
}
ul {
    list-style-type: none;
    margin:auto;
    padding:0;
    width: 160px;
    background-color: #f1f1f1;
}

li a {
    display: block;
    color: #000;
    padding: 10px 10px;
    text-decoration: none;
}

/* Change the link color on hover */
li a:hover {
    background-color: #555;
    color: white;
}

```

*(CSS file table\_style.css)*

```
table:hover {
    transform: scale(1.2);
}
th {
    padding: 15px;
    text-align: centre;
    background-color: #e84545;
    border: 2px solid black;
    color: white;
}
h1{
    color: rgb(89, 228, 238);
}
tr:hover {background-color: #edffec;}
tr:nth-child(even) {background-color: #ffefaf;}
td{
    padding: 15px;
    text-align: centre;
    border: 1px solid black;
}
table {
    border: 1px solid black;
    width : 50%;
    border-collapse: collapse;
    border: 1px solid black;
    margin-left: auto;
    margin-right: auto;
    transition: transform 0.3s;
}
```

*(JAVASCRIPT file script.js)*

```
function signin(){
    var pass="1234";
    var user="admin";
    var user_entered = document.getElementById("name").value;
    var pass_entered = document.getElementById("pass").value;
    if(pass==pass_entered && user==user_entered)
    {
        document.getElementById("form1").reset();
        window.alert("Welcome back Admin !\nRedirecting to homepage...");
        window.location.href="./dbcheck";
    }
    else
    {
        document.getElementById("form1").reset();
        window.alert("Invalid User Name or Password!");
    }
}
```

```
        document.getElementById("name").focus();
    }
}
function add(){
    document.getElementById("add_form").action = "http://localhost:8080/ex4sql/adduser";
    document.getElementById("add_form").submit();
}
function view(){
    document.getElementById("view_form").action = "http://localhost:8080/ex4sql/viewuser";
    document.getElementById("view_form").submit();
}
function sh(){
    document.getElementById("search_form").action = "http://localhost:8080/ex4sql/searchuser";
    document.getElementById("search_form").submit();
}
function del(){
    document.getElementById("delete_form").action = "http://localhost:8080/ex4sql/deleteuser";
    document.getElementById("delete_form").submit();
}
function update(){
    document.getElementById("update_form").action = "http://localhost:8080/ex4sql/updateuser";
    document.getElementById("update_form").submit();
}
```

## SNAPSHOT OF THE OUTPUT:

(Index.html)

A screenshot of a web browser displaying a form titled "Employee Salary form:". The form is set against a light blue background. It contains several input fields and dropdown menus. The fields are: Employee Id (2222), Name (sreedhar), Designation (HR), Department (Software), Salary (20000), Address (erode), Birthday (25-03-2021), Gender (Male), Marital Status (Single), and Contact Number (9578042266). At the bottom, there are "Submit" and "Reset" buttons. The browser's address bar shows "localhost:8080/Ex4/".

Employee Salary form:

Employee Id: 2222

Name: sreedhar

Designation: HR

Department: Software

Salary: 20000

Address: erode

Birthday: 25-03-2021

Gender: Male

Marital Status: Single

Contact Number: 9578042266

Submit Reset

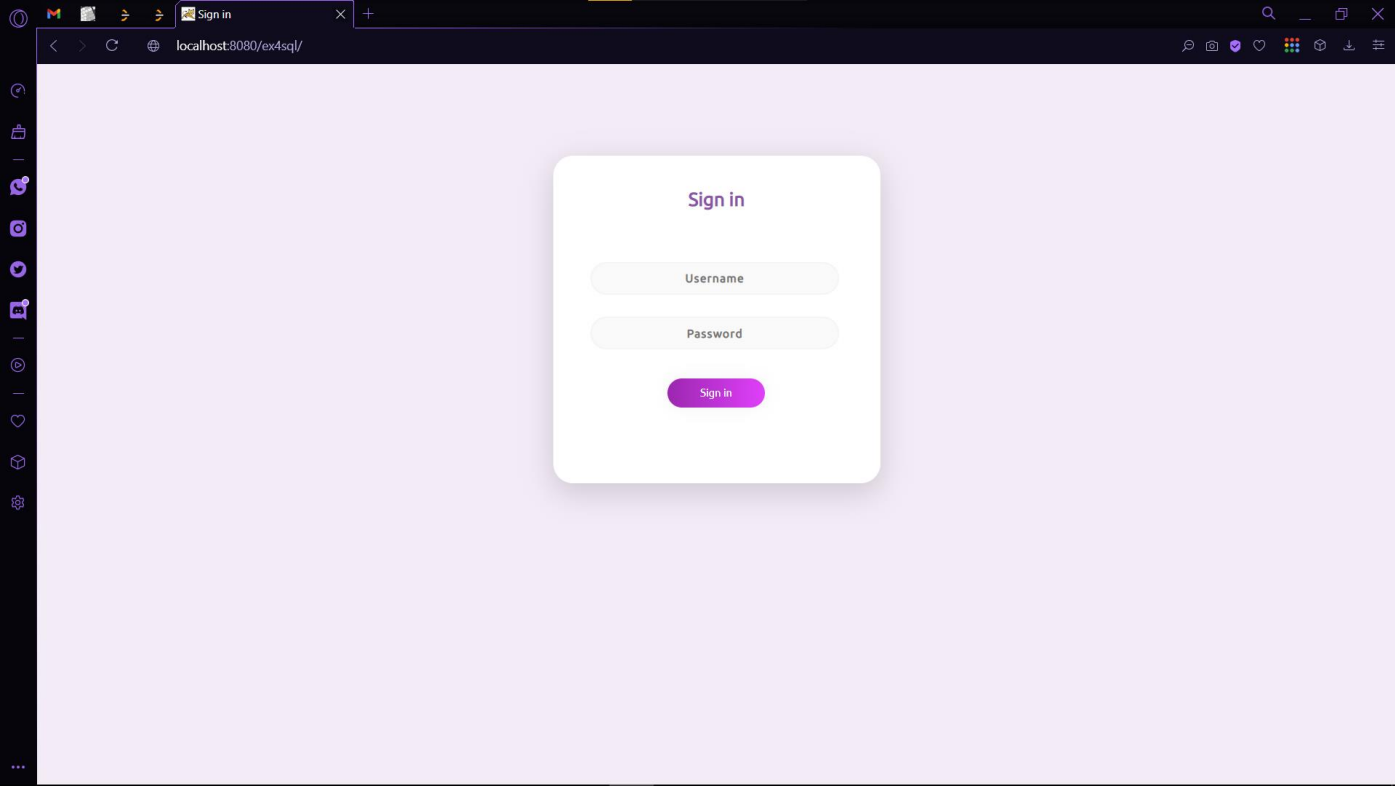
(Form output)

A screenshot of a web browser displaying a table titled "Form Details". The table has two columns: "ID" and "Value". The rows contain the following data: NAME (sreedhar), ADDRESS (erode), EMP ID (2222), D.O.B (2021-03-25), MARITAL STATUS (Single), GENDER (Male), CONTACT (9578042266), DESIGNATION (HR), DEPARTMENT (Software), and GROSS PAY (40000). The table is centered on a light blue background. The browser's address bar shows "localhost:8080/Ex4/GetMtd".

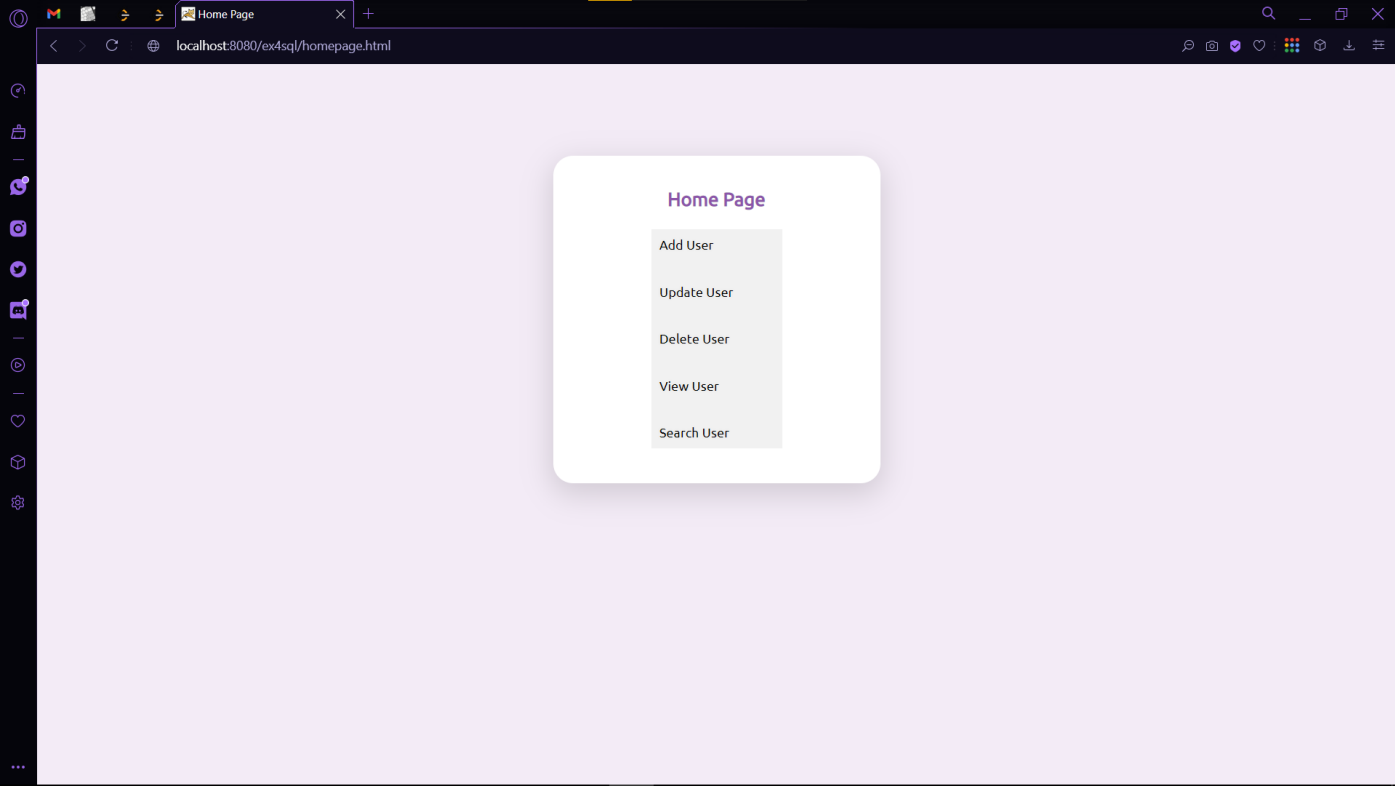
Form Details

ID	Value
NAME	sreedhar
ADDRESS	erode
EMP ID	2222
D.O.B	2021-03-25
MARITAL STATUS	Single
GENDER	Male
CONTACT	9578042266
DESIGNATION	HR
DEPARTMENT	Software
GROSS PAY	40000

(Index.html)



(Homepage.html)



(add.html)

The screenshot shows a web browser window with the title 'Add User' and the URL 'localhost:8080/ex4sql/add\_user.html'. The browser's address bar and tabs are visible. The main content area displays a light purple background with a white rounded rectangle in the center containing the 'Add User' form. The form has a title 'Add User' in purple. It includes several input fields: a text field with 'sreedhar', a number field with '20', another number field with '2', a radio button group for 'Male' (selected) and 'Female', a text field with 'erode', another radio button group for 'Single' (selected) and 'Married', and a text field with '9095466636'. Below these is a 'Date of Visit' field with a date range '25-03-2021' and a calendar icon. At the bottom of the form is a purple 'Add User' button.

Add User

sreedhar

20

2

☒ Male ☐ Female

erode

☒ Single ☐ Married

9095466636

Date of Visit 25-03-2021

Add User

(update.html)

The screenshot shows a web browser window with the title 'Update' and the URL 'localhost:8080/ex4sql/update\_user.html'. The browser's address bar and tabs are visible. The main content area displays a light purple background with a white rounded rectangle in the center containing the 'Update User' form. The form has a title 'Update User' in purple. It includes a text field with 'Patient id' and a purple 'update' button at the bottom.

Update User

Patient id

update



Update User

localhost:8080/ex4sql/updateuser

Update User

sreedhar

20

1

male

single

2021-03-25

India

9095466635

Update User

(delete.html)

Delete

localhost:8080/ex4sql/delete\_user.html

Delete User

4

Delete

(search.html)

Search

localhost:8080/ex4sql/search\_user.html

Search User

Patient id

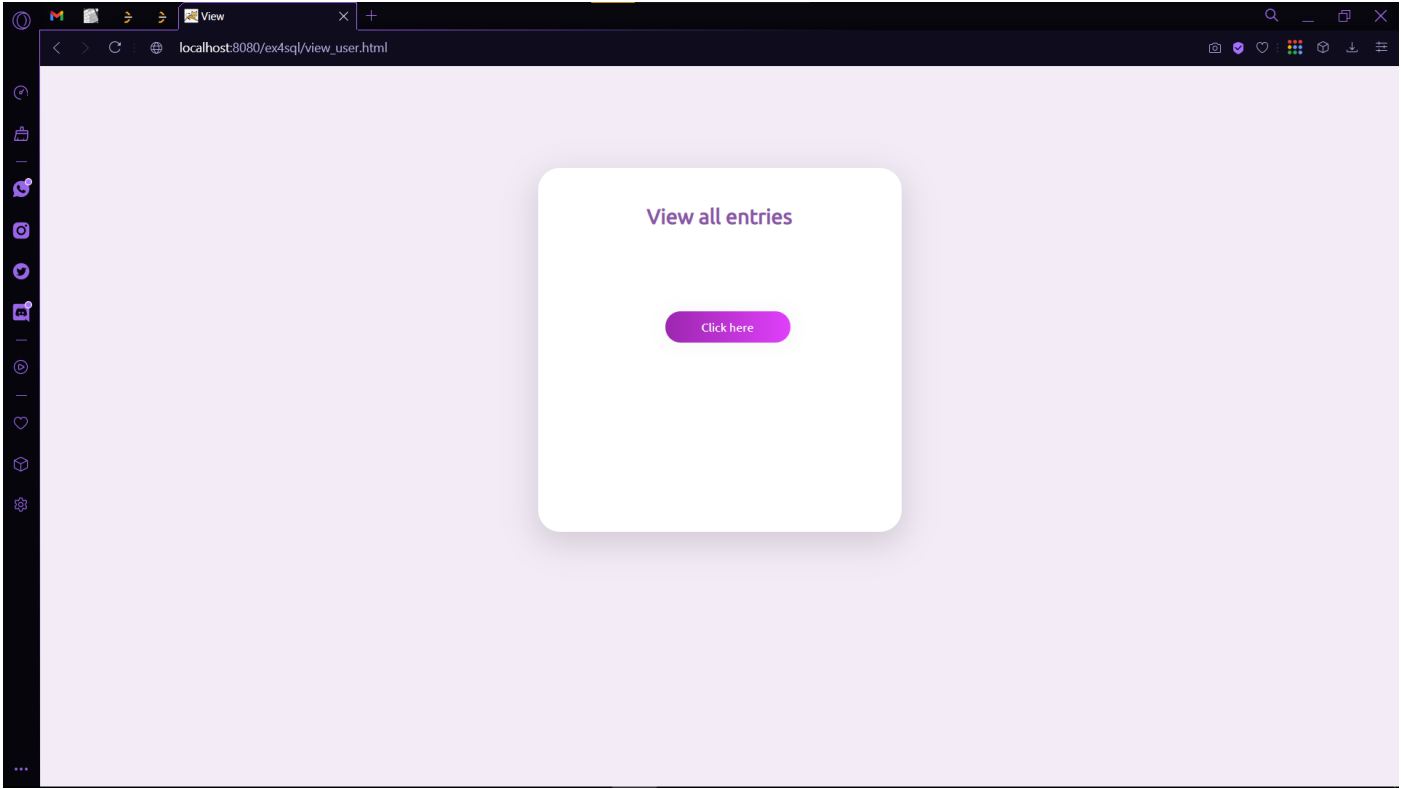
Search

localhost:8080/ex4sql/sear...

localhost:8080/ex4sql/searchuser

ID	Name	Age	Gender	Address	Marital status	Phone No	Date of Visit
2	sreedhar	20	male	erode	single	9095466636	2021-03-25

(view.html)



A screenshot of a web browser window. The address bar shows 'localhost:8080/ex4sql/viewuser?'. The page displays a table with 8 columns: ID, Name, Age, Gender, Address, Marital status, Phone No, and Date of Visit. The table contains 4 rows of data. The first row has a white background, and the subsequent three rows have a yellow background. The browser's developer tools are open on the left side.

ID	Name	Age	Gender	Address	Marital status	Phone No	Date of Visit
1	sreedhar	20	male	india	single	9095466635	2021-03-25
2	sreedhar	20	male	erode	single	9095466636	2021-03-25
3	sreedhar	20	male	erode	single	9095466636	2021-03-25
4	sreedhar	20	male	erode	single	9095466636	2021-03-25