Department of Computer Science and Engineering

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UCS1611 - Internet Programming Lab

Ex 04: Java Servlets and MySQL

Objective:

Write a servlet program whichreads 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.

Code:

HTML:

```html
<!DOCTYPE html>
<html>
<head>
```

```html
    <title>Employee Registration</title>
    <meta charset="utf-8">
    <link rel="stylesheet" href="styles.css">
</head>

<body>
    <h1>Employee Registration</h1>
    <hr><br>
    <table>
        <form name="regform" id="regform" action="http://
localhost:8080/employee/Servlet" >
            <tr>
                <td><label for="id">Employee ID: </label></td
>
                <td><input name="id" id="id" type="number"
required></td>
            </tr>
            <tr>
                <td><label for="name">Employee Name: </label>
</td>
                <td><input name="name" id="name" type="text"
required></td>
            </tr>
            <tr>
                <td><label for="designation">Designation: </
label></td>
                <td><select name="designation" id="
designation" required>
                    <option value="none"></option>
                    <option value="RA">Research Assistant</
option>
                    <option value="TA">Teaching Assistant</
option>
                    <option value="AP">Associate Professor</
option>
                    <option value="Prof">Professor</option>
                </select></td>
            </tr>
            <tr>
                <td><label for="dept">Department: </label></
td>
                <td><select name="dept" id="dept">
                    <option value="none"></option>
                    <option value="CSE">CSE</option>
                    <option value="IT">IT</option>
```

```html
                    <option value="ECE">ECE</option>
                    <option value="Mech">Mech</option>
                    <option value="Chem">Chem</option>
                    <option value="BME">BME</option>
                    <option value="EEE">EEE</option>
                    <option value="Civil">Civil</option>
                </select></td>
            </tr>
            <tr>
                <td><label for="salary">Basic Salary: </label></td>
                <td><input name="salary" id="salary" type="number" required></td>
            </tr>
            <tr>
                <td><label for="phone">Contact number: </label></td>
                <td><input name="phone" id="phone" type="tel" required></td>
            </tr>
            <tr>
                <td><label for="address">Address: </label></td>
                <td><textarea name="address" id="address" required>Enter full address</textarea></td>
            </tr>
            <tr>
                <td><label for="dob">Date of Birth: </label></td>
                <td><input name="dob" id="dob" type="date" placeholder="dd/mm/yyyy"></td>
            </tr>
            <tr>
            <td><label >Gender: </label></td>
                <td><input id="male" type="radio" value="Male" name="gender"><label for="male">Male</label>
                <input id="female" type="radio" value="Female" name="gender"><label for="female">Female</label>
                <input id="other" type="radio" value="Other" name="gender"><label for="other">Other</label>
                </td>
            </tr>
            <tr>
                <td><label for="status">Marital Status: </label></td>
```

```
71              <td><select name="status" id="status">
72                  <option value="none"></option>
73                  <option value="Married">Married</option>
74                  <option value="single">Single</option>
75              </select></td>
76          </tr>
77          <tr>
78              <td><input type="submit" value="Submit" id="
    submit" ></td>
79              <td><input type="button" value="Reset" id="
    resetBtn" onclick="myReset()"></td>
80          </tr>
81      </form>
82    </table>
83    <script src="script.js"></script>
84 </body>
85 </html>
```

Stylesheet:

```
1 body{
2     font-size: 16pt;
3     font-family: -apple-system, BlinkMacSystemFont, 'Segoe UI
    ', 'Roboto', 'Oxygen',
4     'Ubuntu', 'Cantarell', 'Fira Sans', 'Droid Sans', '
    Helvetica Neue',
5     sans-serif;
6     background: rgb(133,30,18);
7     background: linear-gradient(135deg, rgba(133,30,18,1)
    32%, rgba(27,41,10,1) 62%);
8     color: white;
9 }
10
11 h1{
12     font-size: 50pt;
13     text-align: center;
14     color: white;
15 }
16
17 table{
18     width: 100%;
19     text-align: center;
```

```
20      border-spacing: 15px;
21 }
```

Script file:

```
1 function myReset(){
2     document.getElementById("regform").reset();
3 }
```

Java file:

```
1 import java.io.*;
2 import javax.servlet.*;
3 import javax.servlet.http.*;
4 public class Servlet extends HttpServlet{
5     public void doGet(HttpServletRequest request,
    HttpServletResponse response)
6         throws ServletException, IOException{
7             response.setContentType("text/html");
8
9             PrintWriter out = response.getWriter();
10            String id= request.getParameter("id");
11            String name = request.getParameter("name");
12            String designation = request.getParameter("
    designation");
13            String dept = request.getParameter("dept");
14            String salary = request.getParameter("salary");
15            String phone = request.getParameter("phone");
16            String address = request.getParameter("address");
17            String dob = request.getParameter("dob");
18            String gender = request.getParameter("gender");
19            String status = request.getParameter("status");
20
21            int sal = Integer.parseInt(salary);
22            if ("RA".equals(designation)) {
23                designation = "Research Assistant";
24                sal *= 1;
25            }
26            else if ("TA".equals(designation)) {
```

```
27              designation = "Teaching Assistant";
28              sal *= 1.25;
29          }
30          else if ("AP".equals(designation)) {
31              designation = "Associate Professor";
32              sal *= 2;
33          }
34          else if ("Prof".equals(designation)) {
35              designation = "Professor";
36              sal *= 2.5;
37          }
38
39          out.println("<html>");
40          out.println("<head><title>Details Obtained</title
    ><link rel='stylesheet' href='styles_servlet.css'></head>"
    );
41          out.println("<body><h1>Employee Details</h1>");
42          out.println("<hr><br>");
43          out.println(
44              "<table align='center'><tr><th>ID</th><td
    >" + id + "</td></tr><tr><th>Name</th><td>" + name + "</td
    ></tr><tr><th>Designation</th><td>" + designation + "</td
    ></tr><tr><th>Department</th><td>" + dept + "</td></tr><tr
    ><th>Basic Pay:</th><td>" + salary + "</td></tr><tr><th>
    Gross Pay:</th><td>" + sal + "</td></tr><tr><th>Contact</
    th><td>" + phone + "</td></tr><tr><th>Address</th><td>" +
    address + "</td></tr><tr><th>DOB</th><td>" + dob + "</td
    ></tr><tr><th>Gender</th><td>" + gender + "</td></tr><tr><
    th>Marital Status</th><td>" + status + "</td></tr></table>
    ");
45          out.println("</body></html>");
46          out.close();
47      }
48 }
```

Java stylesheet:

```
1 body{
2     font-family: -apple-system, BlinkMacSystemFont, 'Segoe UI
    ', 'Roboto', 'Oxygen',
3               'Ubuntu', 'Cantarell', 'Fira Sans', 'Droid
    Sans', 'Helvetica Neue',sans-serif;
```

```
4       background: rgb (133 ,30 ,18);
5       background: linear-gradient (135deg, rgba (133,30,18,1)
    32%, rgba (27,41,10,1) 62%);
6       color:white;
7       padding:2rem;
8  }
9
10 h1{
11      text-align: center;
12      font-size: 50pt;
13 }
14
15 table {
16      border: 2px solid black;
17      font-size: 25px;
18      border-spacing: 25px;
19 }
```

XML file:

```
1  <web-app>
2      <servlet>
3          <servlet-name>Servlet</servlet-name>
4          <servlet-class>Servlet</servlet-class>
5      </servlet>
6
7      <servlet-mapping>
8          <servlet-name>Servlet</servlet-name>
9          <url-pattern>/Servlet</url-pattern>
10     </servlet-mapping>
11 </web-app>
```

Output:

Learning Outcomes:

– Learnt to build a servlet with Apache Tomcat and Java.

- Learnt to use servlets to control behaviour of forms.

- Learnt to use **action** tag for loading servlet.

- Learnt the different types of getting info from HTML forms in Java.

- Learnt to use styling, and behaviour of HTML items in Java.