


JSF Lab Program 2b

Enhance the EmpForm.jsp page to implement robust server-side validation using JSP for managing employee information.

- Ensure that all required fields (such as Employee ID, Name, Age, Department, and Email) are properly validated in EmpResult.jsp upon form submission.
- Implement server-side checks to verify that:
 - Employee ID is a non-empty string.
 - Name contains only letters and spaces.
 - Age is a valid numeric value between 18 and 65.
 - Department is selected from a predefined list of options.
 - Email follows a valid format (e.g., name@example.com).

Display clear and descriptive error messages directly on EmpResult.jsp next to each field if validation criteria are not met, guiding users to correct their input.

Output:

– Case 1: 

← → ↻ ⓘ localhost:8080/JSF_LAB_2b/EmpForm.jsp

Employee Information Form

Employee ID:

Employee Name:

Employee Age:

Employee Department: ▼

Employee Email:



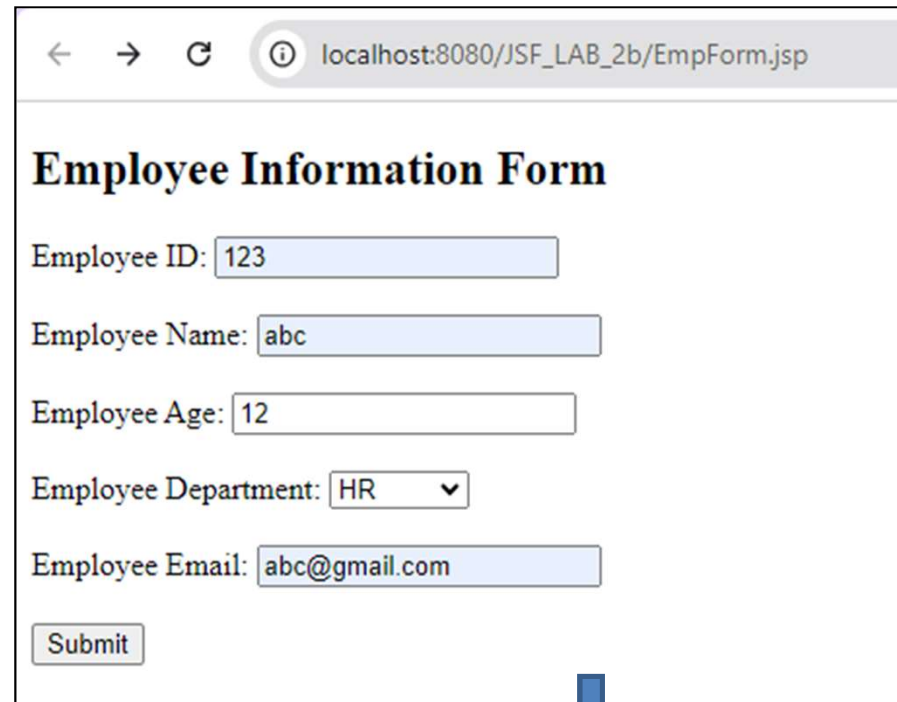
← → ↻ ⓘ localhost:8080/JSF_LAB_2b/EmpResult.jsp

Employee Information Result

| | |
|---------------------|---------------|
| Employee ID | 123 |
| Name and Department | abc (HR) |
| Birth Year | 2001 |
| Formatted Email | abc@gmail.com |

Output:

– Case 2:

A screenshot of a web browser showing a form titled 'Employee Information Form'. The form has five input fields: 'Employee ID' with value '123', 'Employee Name' with value 'abc', 'Employee Age' with value '12', 'Employee Department' with a dropdown menu showing 'HR', and 'Employee Email' with value 'abc@gmail.com'. There is a 'Submit' button at the bottom.

localhost:8080/JSF_LAB_2b/EmpForm.jsp

Employee Information Form

Employee ID:

Employee Name:

Employee Age:

Employee Department:

Employee Email:

A screenshot of a web browser showing a page titled 'Employee Information Result'. It displays a 'Validation Errors' section with a bulleted message: 'Age: Age must be between 18 and 65.' Below the message is a link that says 'Go back to the form'.

localhost:8080/JSF_LAB_2b/EmpResult.jsp

Employee Information Result

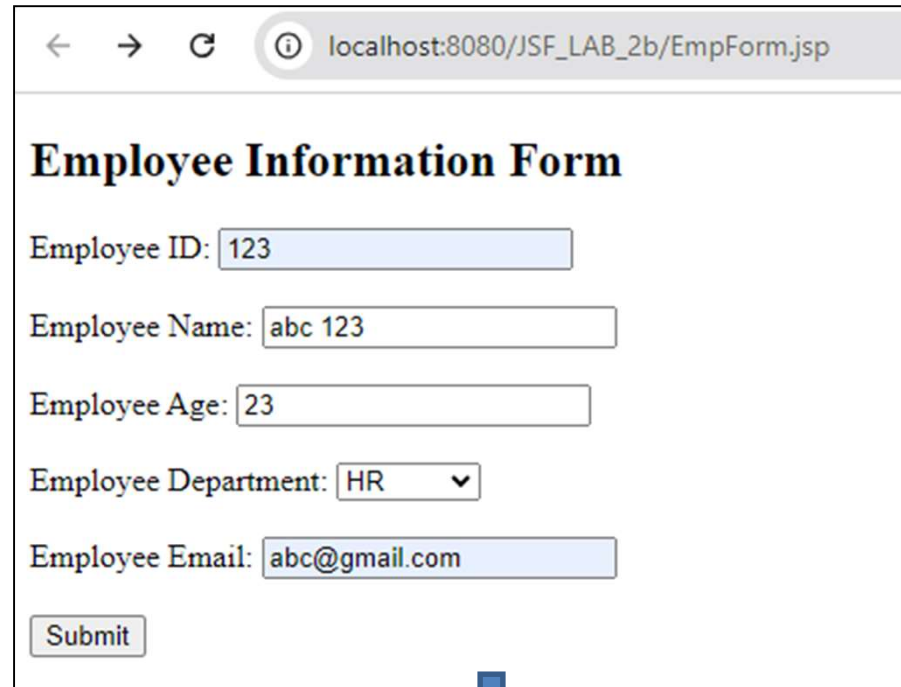
Validation Errors

- Age: Age must be between 18 and 65.

[Go back to the form](#)

Output:

– Case 3:

A screenshot of a web browser showing a form titled 'Employee Information Form'. The browser's address bar shows 'localhost:8080/JSF_LAB_2b/EmpForm.jsp'. The form contains several input fields: 'Employee ID' with the value '123', 'Employee Name' with the value 'abc 123', 'Employee Age' with the value '23', 'Employee Department' with a dropdown menu showing 'HR', and 'Employee Email' with the value 'abc@gmail.com'. There is a 'Submit' button at the bottom of the form.

localhost:8080/JSF_LAB_2b/EmpForm.jsp

Employee Information Form

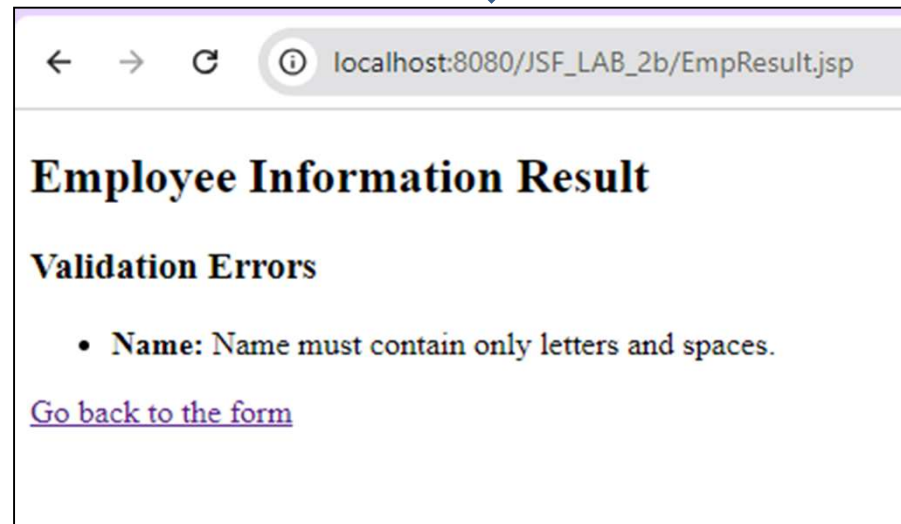
Employee ID:

Employee Name:

Employee Age:

Employee Department:

Employee Email:

A screenshot of a web browser showing a page titled 'Employee Information Result'. The browser's address bar shows 'localhost:8080/JSF_LAB_2b/EmpResult.jsp'. The page has a section titled 'Validation Errors' which contains a single bullet point: 'Name: Name must contain only letters and spaces.' Below this, there is a link that says 'Go back to the form'.

localhost:8080/JSF_LAB_2b/EmpResult.jsp

Employee Information Result

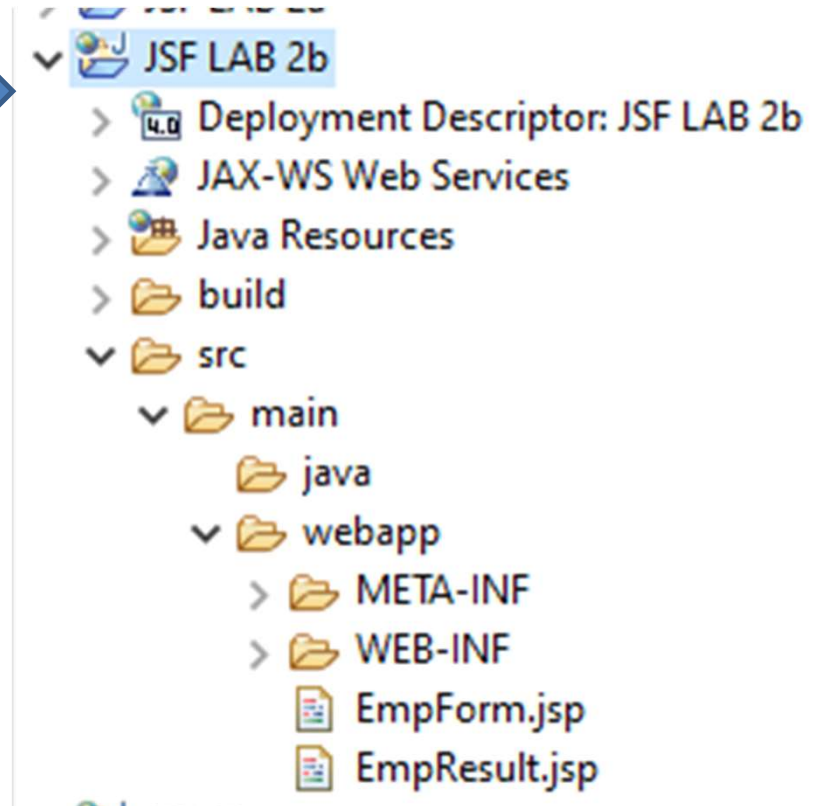
Validation Errors

- **Name:** Name must contain only letters and spaces.

[Go back to the form](#)

Project Structure

- **Create two files**
 - EmpForm.jsp
 - EmpResult.jsp



```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Employee Form</title>
</head>
<body>
    <h2>Employee Information Form</h2>
    <form action="EmpResult.jsp" method="POST">
        Employee ID: <input type="text" name="empid" required><br><br>
        Employee Name: <input type="text" name="ename" required><br><br>
        Employee Age: <input type="number" name="eage" required><br><br>
        Employee Department:
        <select name="edept" required>
            <option value="">Select</option>
            <option value="HR">HR</option>
            <option value="Finance">Finance</option>
            <option value="IT">IT</option>
            <option value="Sales">Sales</option>
        </select><br><br>
        Employee Email: <input type="email" name="email" required><br><br>
        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

EmpForm.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ page import="java.util.regex.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<h2>Employee Information Result</h2>
<%
    // Retrieve form data
    String employeeId = request.getParameter("empid");
    String name = request.getParameter("ename");
    String ageStr = request.getParameter("eage");
    String department = request.getParameter("edept");
    String email = request.getParameter("email");

    // Initialize error messages
    String employeeIdError = "";
    String nameError = "";
    String ageError = "";
    String departmentError = "";
    String emailError = "";

    // Validation flags
    boolean isValid = true;
```

EmpResult.jsp


```
// Validate Employee ID
if (employeeId == null || employeeId.trim().isEmpty())
{
    employeeIdError = "Employee ID is required.";
    isValid = false;
}

// Validate Name
if (name == null || !name.matches("^[a-zA-Z\\s]+$"))
{
    nameError = "Name must contain only letters and spaces.";
    isValid = false;
}

// Validate Age
int age = 0;
try {
    age = Integer.parseInt(ageStr);
    if (age < 18 || age > 65)
    {
        ageError = "Age must be between 18 and 65.";
        isValid = false;
    }
}
catch (NumberFormatException e) {
    ageError = "Age must be a valid numeric value.";
    isValid = false;
}
```

EmpResult.jsp

```

// Validate Department
if (department == null || department.trim().isEmpty())
{
    departmentError = "Department is required.";
    isValid = false;
}
else if (!department.matches("HR|Finance|IT|Sales")) {
    departmentError = "Invalid department selected.";
    isValid = false;
}
// Validate Email
if (email == null || !email.matches("^[\\w.-]+@[\\w.-]+\\. [a-zA-Z]{2,}$")) {
    emailError = "Email must be in a valid format (e.g., name@example.com).";
    isValid = false;
}
if (isValid)
{
    // Process data
    int currentYear = java.util.Calendar.getInstance().get(java.util.Calendar.YEAR);
    int birthYear = currentYear - age;
    String nameAndDepartment = name + " (" + department + ")";
    // Format email
    String formattedEmail = email.toLowerCase();
}
%>

```

EmpResult.jsp

```

    }
    if (isValid)
    {
        // Process data
        int currentYear = java.util.Calendar.getInstance().get(java.util.Calendar.YEAR);
        int birthYear = currentYear - age;
        String nameAndDepartment = name + " (" + department + ")";
        // Format email
        String formattedEmail = email.toLowerCase();
    }
    %>
    <table border="1">
    <tr>
        <th>Employee ID</th>
        <td><%= employeeId %></td>
    </tr>
    <tr>
        <th>Name and Department</th>
        <td><%= nameAndDepartment %></td>
    </tr>
    <tr>
        <th>Birth Year</th>
        <td><%= birthYear %></td>
    </tr>
    <tr>
        <th>Formatted Email</th>
        <td><%= formattedEmail %></td>
    </tr>
    </table>
    <%
    }

```

EmpResult.jsp

```

else {
    // Display error messages and guide the user
    %>
    <h3>Validation Errors</h3>
    <ul>
        <% if (!employeeIdError.isEmpty()) { %>
            <li><b>Employee ID:</b> <%= employeeIdError %></li>
        <% } %>
        <% if (!nameError.isEmpty()) { %>
            <li><b>Name:</b> <%= nameError %></li>
        <% } %>
        <% if (!ageError.isEmpty()) { %>
            <li><b>Age:</b> <%= ageError %></li>
        <% } %>
        <% if (!departmentError.isEmpty()) { %>
            <li><b>Department:</b> <%= departmentError %></li>
        <% } %>
        <% if (!emailError.isEmpty()) { %>
            <li><b>Email:</b> <%= emailError %></li>
        <% } %>
    </ul>
    <!--<a href="employeeForm.jsp">Go back to the form</a-->
    <a href="EmployeeForm.jsp">Go back to the form</a>
    <%
    }
    %>
</body>
</html>

```

EmpResult.jsp