

## Case Study: Online Feedback Collection System

🔍 **Objective:** An educational institution needs an online system to collect student feedback on courses or instructors. Students will fill out a form, and the data will be processed by a backend Java servlet hosted on a Tomcat 10+ server using Jakarta EE 9+ APIs.

🔍 **Scenario Description:** The institute offers various technical and non-technical courses. They want to capture feedback from students after course completion. The feedback form includes fields like:

- Student Name
- Email Address
- Course Attended
- Feedback or Suggestions

The institution also wants to:

- Display a confirmation page showing submitted data.
- Optionally store this feedback in a database for future reference.
- Track if a student has already submitted feedback using session/cookie-based mechanisms.

🔍 **System Design Overview:**

### 1. Frontend (User Interface):

- A JSP (or HTML) page with a form that asks students to enter their feedback.
- The form uses HTTP POST to submit data to the server.

### 2. Servlet Processing (Backend):

- A Java servlet receives the form data through a POST request.
- The servlet:
  - Extracts parameters (e.g., name, email, feedback).
  - Validates the input (e.g., non-empty fields).
  - Generates a response page thanking the student and echoing back the submitted data.
  - Optionally, stores the feedback in a database or writes it to a file.

### 3. Optional Enhancements:

- Use cookies to track if a student has already submitted feedback.
- Use HTTP sessions to temporarily store user data across requests.

- Redirect to different pages based on whether the feedback was already submitted.

#### 🔗 Tools & Technologies:

- Jakarta EE 9+ (Servlet 5.0) — For writing the HttpServlet
- Apache Tomcat 10+ — Web server and servlet container
- JSP/HTML — Frontend form
- Eclipse IDE / IntelliJ — Development environment
- Maven or manual .war deployment — For packaging and deployment

#### 🔗 Workflow:

1. Student accesses the feedback form via a browser (index.jsp or feedback.html).
2. Student submits the form after filling out the details.
3. Servlet receives the POST request, processes data, and optionally stores it.
4. Response page is generated by the servlet, confirming submission.
5. Cookie or session tracking prevents duplicate submissions.

#### 🔗 Key Servlet Concepts Demonstrated:

- HttpServlet usage (doPost() method)
- Request parameter extraction (getParameter)
- Response generation using PrintWriter or JSP forwarding
- @WebServlet annotation (alternative to web.xml mapping)
- Session and cookie handling (optional advanced part)
- Deployment on Tomcat 10+ with Jakarta namespace

### **CODE:**

#### **index.jsp:**

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
```

```
<head>

<meta charset="UTF-8">

<title>Student Feed Back</title>

</head>

<body>

<h1>Student Feed Back Form</h1>

<a href="feedback.jsp">Click here to submit feedback</a>

</body>

</html>
```

### **Feedback.jsp:**

```
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Student Feedback Form</title>

</head>

<body>

<h1 style="text-align:center">Student Feedback</h1>


<form action="confirmation.jsp" method="post" style="text-align:center">

    <label for="name">Name:</label>

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


    <label for="email">e-Mail:</label>

    <input type="email" name="email" id="email"><br><br>


    <label for="courses">Select Course:</label>

    <select id="courses" name="courses">

        <option value="Java">Java</option>

        <option value="Python">Python</option>
```

```

        <option value="ReactJS">ReactJS</option>
        <option value="Data Science">Data Science</option>
    </select><br><br>

    <label for="feedback">Feedback:</label><br>
    <textarea id="feedback" name="feedback" rows="5" cols="30" placeholder="Enter your feedback here..."></textarea><br><br>

    <input type="submit" value="Submit Feedback">
</form>

</body>
</html>

```

### **Confirmation.jsp**

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Confirm Your Feedback</title>
</head>
<body>

<%
    String name = request.getParameter("name");
    String email = request.getParameter("email");
    String course = request.getParameter("courses");
    String feedback = request.getParameter("feedback");
%>

```

<h2>Please confirm your feedback details</h2>

<p><strong>Name:</strong> <%= name %></p>

<p><strong>Email:</strong> <%= email %></p>

<p><strong>Course:</strong> <%= course %></p>

<p><strong>Feedback:</strong> <%= feedback %></p>

<!-- Form to submit final confirmation to servlet -->

<form action="*FeedbackServlet*" method="*post*">

    <input type="*hidden*" name="*name*" value="<%= name %>">

    <input type="*hidden*" name="*email*" value="<%= email %>">

    <input type="*hidden*" name="*courses*" value="<%= course %>">

    <input type="*hidden*" name="*feedback*" value="<%= feedback %>">

    <input type="*submit*" value="Confirm & Submit">

    <a href="*feedback.jsp*"><button type="*button*">Go Back</button></a>

</form>

</body>

</html>

### **FeedbackServlet.java**

**package** com.example.servlet;

**import** jakarta.servlet.\*;

**import** jakarta.servlet.http.\*;

**import** jakarta.servlet.annotation.\*;

**import** java.io.\*;

@WebServlet("/FeedbackServlet")

**public class** FeedbackServlet **extends** HttpServlet {

```

/**
 *
 */
private static final long serialVersionUID = 1L;

protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

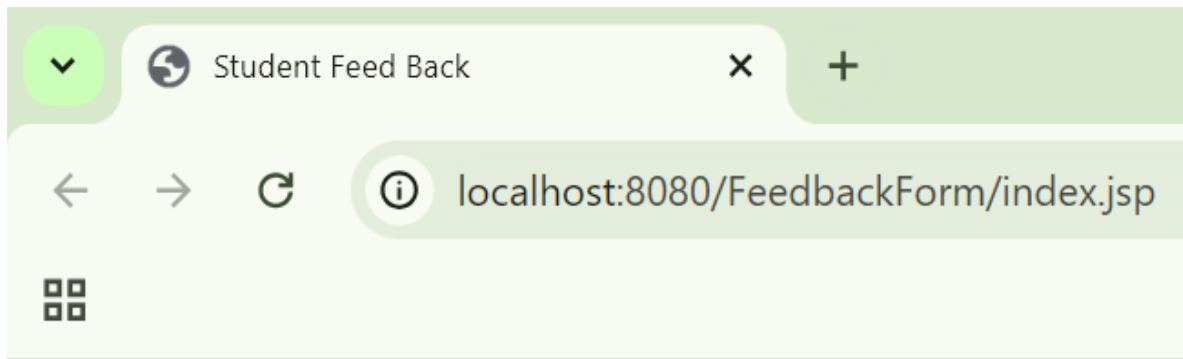
String name = request.getParameter("name");
String email = request.getParameter("email");
String course = request.getParameter("courses");
String feedback = request.getParameter("feedback");

response.setContentType("text/html");
PrintWriter out = response.getWriter();

out.println("<h2>Thank you for your feedback!</h2>");
out.println("<h2>SUBmitted Details:</h2>");
out.println("<p>Name: "+name+"</p>");
out.println("<p>email: "+email+"</p>");
out.println("<p>Course attended: "+course+"</p>");
out.println("<p>Feedback: "+feedback+"</p>");
out.println("<p>*****</P>");

}
}

```



# Student Feed Back Form

[Click here to submit feedback](#)

Click On “click here to submit feedback” to open the form

## Student Feedback

Name:

e-Mail:

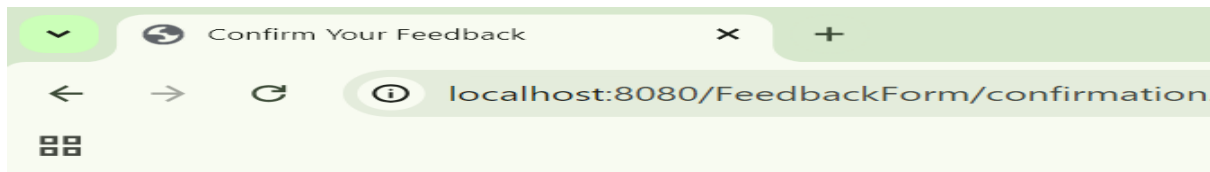
Select Course:

Feedback:

Awesome .|

Submit Feedback

Fill the details and click on “Submit feedback “ button then it will navigate to the confirmation page



## Please confirm your feedback details

**Name:** Jonnalagadda Hari Babu

**Email:** jhbc899@gmail.com

**Course:** Java

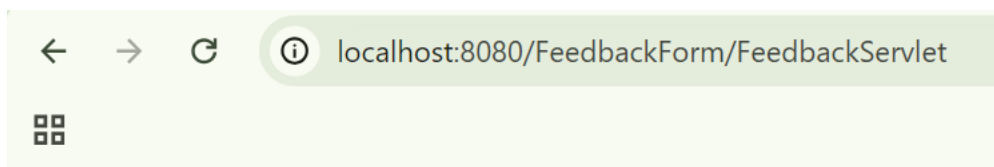
**Feedback:** Awesome.

[Confirm & Submit](#)

[Go Back](#)

Click here on “**Confirm&Submit**” if there is no changes required and to submit the form

Incase of any changes you want to do then click on “**Go Back**”.



## Thank you for your feedback!

### SUBMITTED DETAILS:

Name: Jonnalagadda Hari Babu

email: jhbc899@gmail.com

Course attended: Java

Feedback: Awesome

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