

Assignment Question

■ 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. Feedback form fields: • Student Name • Email Address • Course Attended • Feedback or Suggestions Requirements: • Display a confirmation page showing submitted data. • Optionally store feedback in a file or DB. • Track if feedback was already submitted using session/cookie. ■ Technologies: • Jakarta EE 9+ (Servlet 5.0) • Apache Tomcat 10+ • JSP/HTML for frontend • Java Servlet for backend

1. index.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Student Feedback Form</title>
</head>
<body>
  <h2>Course Feedback Form</h2>
  <form method="POST" action="feedback">
    Name: <input type="text" name="studentName" required><br><br>
    Email: <input type="email" name="email" required><br><br>
    Course Attended: <input type="text" name="course" required><br><br>
    Feedback: <br>
    <textarea name="feedback" rows="5" cols="30" required></textarea><br><br>
    <input type="submit" value="Submit Feedback">
  </form>
</body>
</html>
```

2. FeedbackServlet.java

```
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;

import java.io.*;
import java.util.HashSet;

@WebServlet("/feedback")
public class FeedbackServlet extends HttpServlet {
    private static final HashSet<String> submittedEmails = new HashSet<>();

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

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

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

        // Check if user already submitted using session or cookie
        HttpSession session = request.getSession();
        if (session.getAttribute("submitted") != null || submittedEmails.contains(email)) {
            out.println("<h2>You have already submitted feedback!</h2>");
            return;
        }

        // Store submission in memory (or write to file)
        submittedEmails.add(email);
        session.setAttribute("submitted", true);

        // Optional: Save to a file
        try (FileWriter fw = new FileWriter("feedback_storage.txt", true);
            BufferedWriter bw = new BufferedWriter(fw)) {
```

```

        bw.write(name + "," + email + "," + course + "," + feedback);
        bw.newLine();
    }

    // Generate confirmation
    out.println("<h2>Thank You for Your Feedback!</h2>");
    out.println("<p><strong>Name:</strong> " + name + "</p>");
    out.println("<p><strong>Email:</strong> " + email + "</p>");
    out.println("<p><strong>Course:</strong> " + course + "</p>");
    out.println("<p><strong>Feedback:</strong> " + feedback + "</p>");
}
}

```

3. web.xml (optional)

```

<web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee
        https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
    version="5.0">

    <servlet>
        <servlet-name>FeedbackServlet</servlet-name>
        <servlet-class>FeedbackServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>FeedbackServlet</servlet-name>
        <url-pattern>/feedback</url-pattern>
    </servlet-mapping>
</web-app>

```