Develop a servlet application for implementing student grading system. In this system on first page student will enter his data (name, id and department). By clicking on next button he will be redirected to another page. On the second page he will enter marks of all 6 subjects. By clicking on "Generate result" he will be redirected to next page. On this page all information of student will be displayed along with the result (pass or fail) in appropriate color. Also display the name of student on each page he visits. (Use session management)

StudentForm.html

```html
<!DOCTYPE html>
<html>
<head>
  <title>Student Data Entry</title>
</head>
<body>
  <h1>Enter Student Details</h1>
  <form action="studentdata" method="post">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" required><br><br>
    <label for="id">ID:</label>
    <input type="text" id="id" name="id" required><br><br>
    <label for="department">Department:</label>
    <input type="text" id="department" name="department" required><br><br>
    <button type="submit">Next</button>
  </form>
```

```
</body>

</html>
```

StudentData.java

```java
package in.ga.backend;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;

import jakarta.servlet.http.*;

import java.io.IOException;

import java.io.PrintWriter;


@WebServlet("/studentdata")

public class StudentData extends HttpServlet {

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

        String name = request.getParameter("name");

        String id = request.getParameter("id");

        String department = request.getParameter("department");


        HttpSession session = request.getSession();

        session.setAttribute("name", name);

        session.setAttribute("id", id);

        session.setAttribute("department", department);


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

```java
        PrintWriter out = response.getWriter();

        out.println("<html><body>");

        out.println("<h1>Welcome, " + name + "!</h1>");

        out.println("<form action='marksentry' method='post'>");

        out.println("<button type='submit'>Next</button>");

        out.println("</form>");

        out.println("</body></html>");

    }

}
```

MarksEntry.java

```java
package in.ga.backend;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;

import jakarta.servlet.http.*;

import java.io.IOException;

import java.io.PrintWriter;


@WebServlet("/marksentry")

public class MarksEntry extends HttpServlet {

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

        HttpSession session = request.getSession();

        String name = (String) session.getAttribute("name");


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

```java
        PrintWriter out = response.getWriter();

        out.println("<html><body>");

        out.println("<h1>Enter Marks for " + name + "</h1>");

        out.println("<form action='result' method='post'>");

        for (int i = 1; i <= 6; i++) {

            out.println("Subject " + i + ": <input type='number' name='subject" + i +
"' required><br>");

        }

        out.println("<button type='submit'>Generate Result</button>");

        out.println("</form>");

        out.println("</body></html>");

    }
}
```

Result.java

```java
package in.ga.backend;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;

import jakarta.servlet.http.*;

import java.io.IOException;

import java.io.PrintWriter;


@WebServlet("/result")

public class Result extends HttpServlet {

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

```java
HttpSession session = request.getSession();

String name = (String) session.getAttribute("name");

String id = (String) session.getAttribute("id");

String department = (String) session.getAttribute("department");


int totalMarks = 0;

boolean isFail = false;

for (int i = 1; i <= 6; i++) {

    int marks = Integer.parseInt(request.getParameter("subject" + i));

    if (marks < 35) {

        isFail = true;

    }

    totalMarks += marks;

}


String result = isFail ? "Fail" : "Pass";


response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<html><body>");

out.println("<h1>Result for " + name + "</h1>");

out.println("<p>ID: " + id + "</p>");

out.println("<p>Department: " + department + "</p>");

out.println("<p>Total Marks: " + totalMarks + "</p>");

out.println("<h2 style='color:" + (isFail ? "red" : "green") + "'>Result: " +
result + "</h2>");
```

```
        out.println("</body></html>");
    }
}
```