Subject Code : AI23431 WEB TECHNOLOGY AND MOBILE APPLICATION REGISTER
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Artifcial Intelligence Data Science and Artifcial Intelligence & Machine Learning

LAB EXPERIMENT : 05

Write a Servlet to demonstrate the difference between HTTP GET and POST methods by creating a form and handling requests accordingly

Aim:

The aim of this experiment is to create a servlet that demonstrates the difference between the HTTP GET and POST methods by handling requests accordingly. This involves creating a simple HTML form that uses both GET and POST methods and handling the respective requests in the servlet.

Algorithm:

Create an HTML Form:

The HTML form will have two buttons that use the GET and POST methods respectively.

Create a Java Servlet:

The servlet will handle both GET and POST requests and demonstrate how data is passed differently between the two methods.

GET Method Handling:
When the GET method is used, the servlet will retrieve parameters from the query string and display them.

POST Method Handling:
When the POST method is used, the servlet will retrieve parameters from the request body and display them.

Deploy and Test:
Deploy the servlet on a servlet container (like Apache Tomcat) and test the form by submitting it using both GET and POST methods.

Steps:

Create the HTML Form:

Create an HTML fle that includes a form with two buttons. One button uses the GET method and the other uses the POST method

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>GET and POST Example</title>
</head>
```

```
<body>
<h2>Servlet HTTP GET and POST Methods</h2>


<!-- Form with GET method -->
<form action="MethodServlet" method="GET">
<label for="name">Enter Name (GET method): </label>
<input type="text" id="name" name="name" required>
<input type="submit" value="Submit GET">
</form>
<br><br>


<!-- Form with POST method -->
<form action="MethodServlet" method="POST">
<label for="name">Enter Name (POST method): </label>
<input type="text" id="name" name="name" required>
<input type="submit" value="Submit POST">
</form>
</body>
</html>
```

2 Create the servlet :

create a Java Servlet (MethodServlet) that handles both GET and POST requests.

```
import javax.servlet.*;


import javax.servlet.http.*;
import java.io.*;


public class MethodServlet extends HttpServlet {
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
// Set response content type
```

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


// Get the parameter from the request
String name = request.getParameter("name");


// Get the PrintWriter to send a response to the browser
PrintWriter out = response.getWriter();
out.println("<html><body>");
out.println("<h2>GET Method Response</h2>");
out.println("<p>Your name (GET): " + name + "</p>");
out.println("</body></html>");
}


protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
// Set response content type
response.setContentType("text/html");


// Get the parameter from the request
String name = request.getParameter("name");


// Get the PrintWriter to send a response to the browser


PrintWriter out = response.getWriter();
out.println("<html><body>");
out.println("<h2>POST Method Response</h2>");
out.println("<p>Your name (POST): " + name + "</p>");
out.println("</body></html>");
```

}
}
3
Confgure the Servlet in web.xml
:
Confgure the servlet in the web.xml deployment descriptor so that it maps to the correct URL patterns.

```
<web-app xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_4_0.xsd"
version="4.0">
<servlet>
<servlet-name>MethodServlet</servlet-name>
<servlet-class>MethodServlet</servlet-class>
</servlet>


<servlet-mapping>
<servlet-name>MethodServlet</servlet-name>
<url-pattern>/MethodServlet</url-pattern>
</servlet-mapping>
</web-app>
```

Deploy the Application:
Package your servlet as a WAR fle and deploy it to a servlet container like Apache Tomcat.
Ensure that the servlet container is running and accessible.

Test the Application:

Open a web browser and access the HTML page.

Submit the form using both GET and POST methods.

Observe the output for each request type.

GET method: The parameters are visible in the URL as part of the query string (e.g., ?name=John).

POST method: The parameters are sent in the body of the HTTP request and are not visible in the URL.

Result :
This experiment helps demonstrate the differences between the GET and POST methods in HTTP:
The GET method sends parameters in the URL, making them visible to the user.
The POST method sends parameters in the body of the HTTP request, making them more secure for sensitive data.
Output: