HTTP POST AND GET METHODS

Aim:

To demonstrate the difference between the HTTP GET and POST methods using a Java Servlet, where a form will be created and requests will be handled accordingly by the GET and POST methods.

Algorithm

1. **Create an HTML Form**:
   - The form will have two buttons: one for sending a GET request and one for sending a POST request. The form will also contain a field to input some text.
2. **Handle GET Request**:
   - In the servlet, when a GET request is received, display the value of the parameter sent via the URL (query string) on the webpage.
3. **Handle POST Request**:
   - When a POST request is received, retrieve and display the data sent in the body of the request.
4. **Result**:
   - The user will see different results depending on whether they use the GET or POST method to submit the form.

CODE:

HTML :

```html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>GET vs POST Example</title>
<style>
body {
font-family: Arial, sans-serif; background-color: #f4f4f9; color: #333;

margin: 0;
padding: 0;
}


h2 {
color: #4CAF50; text-align: center; margin-top: 50px;
}
```

```css
.container { width: 50%;
margin: 0 auto; background-color: #fff; padding: 30px;
border-radius: 8px;
box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
}


.form-group {
margin-bottom: 20px;
}


label {
font-size: 16px; color: #555;
}


input[type="text"] { width: 100%;

padding: 10px; margin-top: 5px; border-radius: 4px;
border: 1px solid #ccc; box-sizing: border-box;
}


button {
background-color: #4CAF50; color: white;
padding: 10px 20px; border: none;
border-radius: 4px; cursor: pointer; font-size: 16px;
}


button:hover {
background-color: #45a049;
}


.form-container { margin-bottom: 30px;
}


hr {
border: 1px solid #ddd;
}


.result {

background-color: #f9f9f9; border-left: 4px solid #4CAF50; padding: 20px;
margin-top: 20px; font-size: 16px; border-radius: 4px;
}
</style>
</head>
```
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```html
<body>
<div class="container">
<h2>GET vs POST Request Demonstration</h2>


<!-- Form to demonstrate GET method -->
<div class="form-container">
<h3>GET Method</h3>
<form action="DemoServlet" method="GET">
<div class="form-group">
<label for="data">Enter Data (GET):</label>
<input type="text" name="data" required>
</div>
<button type="submit">Submit (GET)</button>
</form>
</div>


<hr>


<!-- Form to demonstrate POST method -->
<div class="form-container">
<h3>POST Method</h3>

<form action="DemoServlet" method="POST">
<div class="form-group">
<label for="data">Enter Data (POST):</label>
<input type="text" name="data" required>
</div>
<button type="submit">Submit (POST)</button>
</form>
</div>


<!-- Result section will be dynamically updated -->
<div class="result" id="result">
<!-- Display GET or POST request result here -->
</div>
</div>
</body>
</html>
```

Servlet.java:

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

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```java
public class DemoServlet extends HttpServlet {




@Override
    protected void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String data = request.getParameter("data");

        out.println("<html><body>");
        out.println("<h2>GET Request Received</h2>");

        if (data != null && !data.isEmpty()) {
            out.println("<p>Data received via GET method: " + data + "</p>");
        } else {
            out.println("<p>No data received in GET request.</p>");
        }

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

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String data = request.getParameter("data");

        out.println("<html><body>");
        out.println("<h2>POST Request Received</h2>");

        if (data != null && !data.isEmpty()) {
            out.println("<p>Data received via POST method: " + data + "</p>");
        } else {
            out.println("<p>No data received in POST request.</p>");
        }

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

Web.xml config
```xml
<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
```
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```xml
            http://java.sun.com/xml/ns/javaee/web-app_3_1.xsd"
            version="3.1">

    <servlet>
        <servlet-name>DemoServlet</servlet-name>
        <servlet-class>DemoServlet</servlet-class>
    </servlet>

    <servlet-mapping>
        <servlet-name>DemoServlet</servlet-name>
        <url-pattern>/DemoServlet</url-pattern>
    </servlet-mapping>

</web-app>
```

OUTPUT :

GET vs POST Request Demonstration

GET Method
Enter Data (GET):
2023

Submit (GET)

POST Method
Enter Data (POST):
355

Submit (POST)

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GET Request Received

Data received via GET method: 2023

POST Request Received

Data received via POST method: 355

RESULT :

Thus the give program is executed successfully.