EX:NO:5	**Write a Servlet to demonstrate the difference between HTTP GET and POST methods by creating a form and handling requests accordingly.**

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:**
   o The form will have two buttons: one for sending a **GET** request and one for sending a **POST** request.
   o The form will also contain an input field for the user to enter some text.
2. **Handle GET Request:**
   o In the servlet, when a **GET** request is received, retrieve the parameter sent via the **URL (query string)**.
   o Display the received data on the webpage.
3. **Handle POST Request:**
   o In the servlet, when a **POST** request is received, retrieve the data sent in the **request body**.
   o Display the received data on the webpage.
4. **Result:**
   o The user will see different outputs depending on whether they submit the form using **GET** or **POST**.
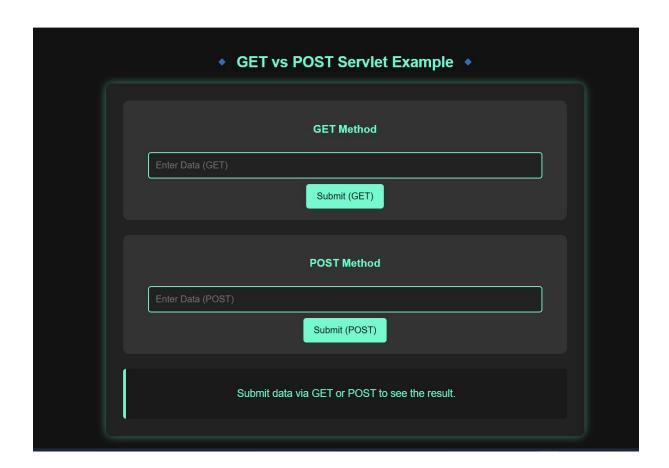
CODE:

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 Servlet</title>

  <style>   body {   font-

family: 'Arial',   sans-serif;

background-color: #121212;

      color: #ffffff;

text-align: center;

```css
            margin: 0;          padding:
0;
        }
        h2 {              color:
#00ffcc;            margin-
top: 40px;            font-
size: 26px;
        }


        .container {          width: 50%;          margin:
auto;          background: #222;          padding: 30px;
border-radius: 10px;          box-shadow: 0px 0px 15px
rgba(0, 255, 204, 0.5);
        }


        .form-container {
margin-bottom: 25px;
padding: 20px;
background: #333;          border-
radius: 10px;
        }


        input[type="text"] {
width: 90%;          padding:
12px;          margin: 10px 0;
border: 2px solid #00ffcc;
background: #222;          color:
#ffffff;          border-radius:
5px;          font-size: 16px;
        }


        button                    {
background:          #00ffcc;
color:                #121212;
padding:     12px     18px;
```

```html
      border: none;            font-
size: 16px;            border-
radius: 5px;            cursor:
pointer;          transition:
0.3s;
    }

    button:hover {
background: #00b38f;
color: #fff;
    }

    .result {        margin-top: 20px;
padding: 15px;            background:
#1a1a1a;        border-left: 5px solid
#00ffcc;            color: #00ffcc;
font-size: 18px;        border-radius:
5px;
    }
  </style>
</head>
<body>
  <h2>◆ GET vs POST Servlet Example ◆</h2>

  <div class="container">
    <!-- Form to demonstrate GET method -->
    <div class="form-container">
      <h3 style="color:#00ffcc;">GET Method</h3>
      <form action="DemoServlet" method="GET">
        <input type="text" name="data" placeholder="Enter Data (GET)" required>
        <button type="submit">Submit (GET)</button>
      </form>
    </div>

    <!-- Form to demonstrate POST method -->
```

```html
    <div class="form-container">
        <h3 style="color:#00ffcc;">POST Method</h3>
        <form action="DemoServlet" method="POST">
            <input type="text" name="data" placeholder="Enter Data (POST)" required>
            <button type="submit">Submit (POST)</button>
        </form>
    </div>


    <!-- Result Display Section -->
    <div class="result">
        <p>Submit data via GET or POST to see the result.</p>
    </div>
    </div>
</body>
</html>
```

Servlet.java:

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

@WebServlet("/DemoServlet")
public class DemoServlet extends HttpServlet {
private static final long serialVersionUID = 1L;

    // Handle GET request
    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 style='background-color:#121212; color:#00ffcc;
textalign:center;'>");

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

        if (data != null && !data.isEmpty()) {
            out.println("<p>Data received via <strong>GET</strong>: " + data + "</p>");
```

```java
        } else {
            out.println("<p>No data received in GET request.</p>");
        }

        out.println("<a href='index.html' style='color:#00ffcc;'>Go Back</a>");
out.println("</body></html>");
    }

    // Handle POST request
    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 style='background-color:#121212; color:#00ffcc;
textalign:center;'>");
        out.println("<h2>POST Request Received</h2>");

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

        out.println("<a href='index.html' style='color:#00ffcc;'>Go Back</a>");
out.println("</body></html>");
    }
}
```

web.xml :
```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
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 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.