

Worksheet 1.1

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Branch: MCA (AI & ML)

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Subject Name: Advanced Internet Programming

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1. Aim/Overview of the practical:

Experiment-1:

To create a client–server communication application using HTML forms and a Java Servlet, where the client collects user data (First Name and Last Name) and submits it to the server using both GET and POST methods. The servlet retrieves the submitted data and displays it in the browser.

2. Coding:

```
<!index.html>
<!DOCTYPE html>
<html>
<head>
<title>Client Server Communication</title>
</head>
<body>
  <h2>GET Method</h2>
  <form action="UserServlet" method="get">
    First Name: <input type="text" name="fname"><br><br>
    Last Name: <input type="text" name="lname"><br><br>
    <input type="submit" value="Submit using GET">
  </form>
  <hr>
```

```
<h2>POST Method</h2>
<form action="UserServlet" method="post">
  First Name: <input type="text" name="fname"><br><br>
  Last Name: <input type="text" name="lname"><br><br>
  <input type="submit" value="Submit using POST">
</form>
</body>
</html>
```

#NewServlet.java

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

@WebServlet("/NewServlet")
public class NewServlet extends HttpServlet {

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

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

        String method = request.getMethod(); // GET or POST
        String fname = request.getParameter("fname");
        String lname = request.getParameter("lname");

        out.println("<html><body>");
        out.println("<h2>Data received using " + method + " method</h2>");
        out.println("First Name: " + fname + "<br>");
```

```
out.println("Last Name: " + lname);  
out.println("</body></html>");  
}  
}
```

OUTPUT:-

GET Method

First Name:

Last Name:

POST Method

First Name:

Last Name:

Data received using GET method

First Name: Ayush

Last Name: Yadav

Data received using POST method

First Name: Ayush

Last Name: Yadav

3. Learning outcomes (What I have learnt):

- **Understand client–server architecture** by implementing communication between an HTML client and a Java Servlet server.
- **Learn how to create and design HTML forms** with input fields and configure them to send data using **GET and POST methods**.
- **Differentiate between GET and POST requests** by observing how data is transmitted and handled on the server side.
- **Gain hands-on experience in servlet programming**, including handling `HttpServletRequest` and `HttpServletResponse`.
- **Develop the ability to retrieve, process, and display user input** dynamically using server-side Java technologies.