

EXP 6 Demonstrate Session Tracking using HttpSession

AIM:

To implement a simple login system using **HttpSession** to track user sessions in a Java Servlet.

ALGORITHM:

Step 1: Create an HTML **Login Form** to take **username & password** as input.

Step 2: Develop a **Servlet** (`LoginServlet.java`) to handle login requests.

Step 3: Validate the user credentials and start an **HttpSession**.

Step 4: Redirect users to the **DashboardServlet**, where session details are displayed.

Step 5: Provide a **LogoutServlet** to end the session.

Step 6: Run the server and test session tracking.

PROGRAM:

index.html (Login Page)

```
html
CopyEdit
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Login Page</title>
    <link rel="stylesheet" href="styles.css"> </head>
<body>
    <div class="container">
        <h2>Login System with Session Tracking</h2>
        <form action="LoginServlet" method="POST">
            <input type="text" name="username" placeholder="Enter Username"
required>
            <input type="password" name="password" placeholder="Enter
Password" required>
            <button type="submit">Login</button>
        </form>
    </div>
</body>
</html>
```

```
css CopyEdit
body {
font-family:
```

styles.css

```

'Poppins',
sans-serif;
    background: linear-gradient(to right, #fbc2eb, #a6c1ee);
text-align: center;    display: flex;    justify-content:
center;    align-items: center;    height: 100vh;
margin: 0;
}

.container {
background: #fff;
padding: 20px;
border-radius: 15px;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);
width: 300px;
}
h2 {
    color: #5B86E5;
}
input {
    width: 90%;
padding: 10px;
margin: 10px 0;
border: 1px solid #5B86E5;
border-radius: 8px;
text-align: center;
}
button {
    background: #36D1DC;
color: white;
border: none;
padding: 10px 15px;
border-radius: 8px;
cursor: pointer;
transition: 0.3s;
}
button:hover {
    background: #1e6e8c;
}

```

LoginServlet.java (Login & Session Creation)

```

java CopyEdit
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; import
javax.servlet.http.HttpSession;
@WebServlet("/LoginServlet")
public class LoginServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
response.setContentType("text/html");
        PrintWriter out =
response.getWriter();

        String username = request.getParameter("username");
String password = request.getParameter("password");

        // Simple validation (In real apps, use a database)
if(username.equals("admin") && password.equals("password")) {

```

```

        HttpSession session = request.getSession();
        session.setAttribute("user", username);
        response.sendRedirect("DashboardServlet"); // Redirect to
Dashboard
    } else {
        out.println("<h3>Invalid Credentials! Try Again.</h3>");
        request.getRequestDispatcher("index.html").include(request, response);
    }
}
}

```

DashboardServlet.java (Session Tracking & Dashboard)

```

java CopyEdit
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; import
javax.servlet.http.HttpSession;

@WebServlet("/DashboardServlet")
public class DashboardServlet extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
        response.setContentType("text/html");          PrintWriter out =
response.getWriter();

        HttpSession session = request.getSession(false); // Get session
without creating a new one
        if (session != null && session.getAttribute("user") != null) {
            String username = (String) session.getAttribute("user");
            out.println("<h2>Welcome, " + username + "!</h2>");
            out.println("<a href='LogoutServlet'>Logout</a>");
        } else {
            out.println("<h3>Session expired! Please login again.</h3>");
            request.getRequestDispatcher("index.html").include(request, response);
        }
    }
}
}

```

LogoutServlet.java (Session Invalidation)

```

java CopyEdit
import
java.io.IOExc
eption;
import
java.io.Print
Writer;
import
javax.servlet
.ServletExcep
tion; import
javax.servlet
.annotation.W
ebServlet;

```

```

import
javax.servlet
.http.HttpServlet;
import
javax.servlet
.http.HttpServlet
ServletRequest;
import
javax.servlet
.http.HttpServlet
ServletResponse;
import
javax.servlet
.http.HttpServlet
Session;

@WebServlet("/LogoutServlet")
public class LogoutServlet extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
response.setContentType("text/html");        PrintWriter out =
response.getWriter();

        HttpSession session = request.getSession(false);
if (session != null) {
        session.invalidate(); // Destroy session
        }
        out.println("<h3>You have been logged out successfully.</h3>");
request.getRequestDispatcher("index.html").include(request, response);
    }
}

```

web.xml (Servlet Configuration)

```

xml CopyEdit
<web-app xmlns="http://java.sun.com/xml/ns/javaee" version="3.0">
    <servlet>
        <servlet-name>LoginServlet</servlet-name>        <servlet-
class>LoginServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>LoginServlet</servlet-name>        <url-
pattern>/LoginServlet</url-pattern>
    </servlet-mapping>

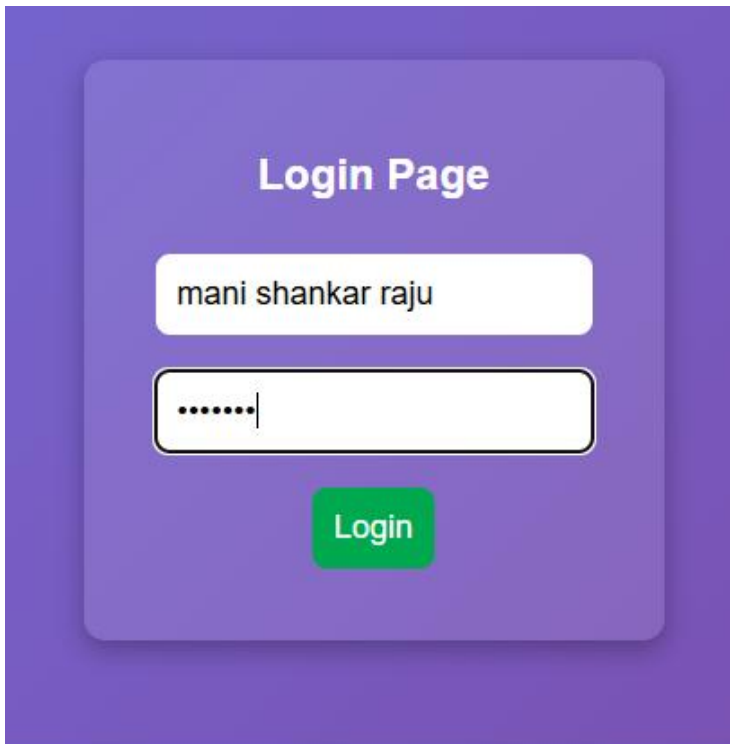
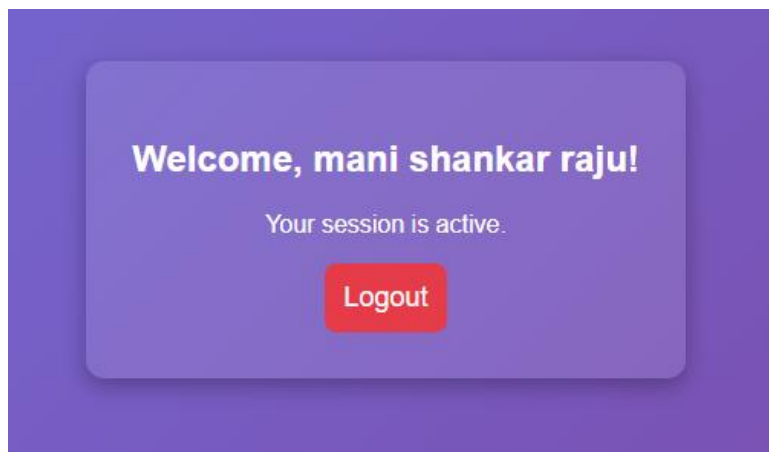
    <servlet>
        <servlet-name>DashboardServlet</servlet-name>
<servlet-class>DashboardServlet</servlet-class>    </servlet>
    <servlet-mapping>
        <servlet-name>DashboardServlet</servlet-name>
        <url-pattern>/DashboardServlet</url-pattern>
    </servlet-mapping>

    <servlet>
        <servlet-name>LogoutServlet</servlet-name>        <servlet-
class>LogoutServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>LogoutServlet</servlet-name>

```

```
        <url-pattern>/LogoutServlet</url-pattern>  
    </servlet-mapping>  
</web-app>
```

OUTPUT:

A screenshot of a login page with a purple gradient background. In the center is a white rounded rectangle containing the text "Login Page" in bold. Below it are two input fields: the first contains the text "mani shankar raju" and the second contains seven dots, indicating a password. Below the input fields is a green button with the text "Login" in white.A screenshot of a welcome page with a purple gradient background. In the center is a white rounded rectangle containing the text "Welcome, mani shankar raju!" in bold. Below it is the text "Your session is active." and a red button with the text "Logout" in white.

RESULT: The Session Tracking using HttpSession were executed successfully.