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
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
  <title>Login App</title>
  <link rel="stylesheet" href="style.css" />
</head>
<body>
  <div class="container" id="login-container">
    <div class="card">
      <h2>Welcome Back! ☺</h2>
      <input type="text" id="username" placeholder="Enter your name" />
      <button onclick="login()">Login ❤</button>
    </div>
  </div>

  <div class="container hidden" id="welcome-container">
    <div class="card">
      <h2 id="welcome-message">Welcome, User! ❄</h2>
      <p>We are happy to see you! Enjoy your session.</p>
      <button class="logout" onclick="logout()">Logout ✕</button>
    </div>
  </div>

  <script>
```

```
    function login() {
      const username = document.getElementById('username').value.trim();
      if (username) {
        document.getElementById('welcome-message').textContent = `Welcome, ${username}!
🌿`;

        document.getElementById('login-container').classList.add('hidden');
        document.getElementById('welcome-container').classList.remove('hidden');
      }
    }

    function logout() {
      document.getElementById('username').value = '';
      document.getElementById('welcome-container').classList.add('hidden');
      document.getElementById('login-container').classList.remove('hidden');
    }
  </script>
</body>
</html>
```

styles.css

```css
body {
  margin: 0;
  font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
  background: linear-gradient(to right, #a0eacb, #6ed2b7);
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
}

.container {
  display: flex;
  justify-content: center;
  align-items: center;
}

.card {
  background-color: white;
  padding: 30px 40px;
  border-radius: 15px;
  box-shadow: 0 5px 15px rgba(0,0,0,0.1);
  text-align: center;
  min-width: 300px;
}

.card h2 {
  color: #008f7a;
  margin-bottom: 20px;
}

.card input {
  width: 100%;
```

```css
  padding: 10px;
  border: 2px solid #8ee2cd;
  border-radius: 8px;
  margin-bottom: 15px;
  font-size: 16px;
}

.card button {
  background-color: #20c997;
  color: white;
  border: none;
  padding: 10px 20px;
  border-radius: 10px;
  cursor: pointer;
  font-size: 16px;
  transition: background 0.3s;
}

.card button:hover {
  background-color: #17a589;
}

.logout {
  background-color: #20c997;
}

.hidden {
  display: none;
}
```

LoginServlet.java (Login & Session Creation)

```java
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
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
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("/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,
```
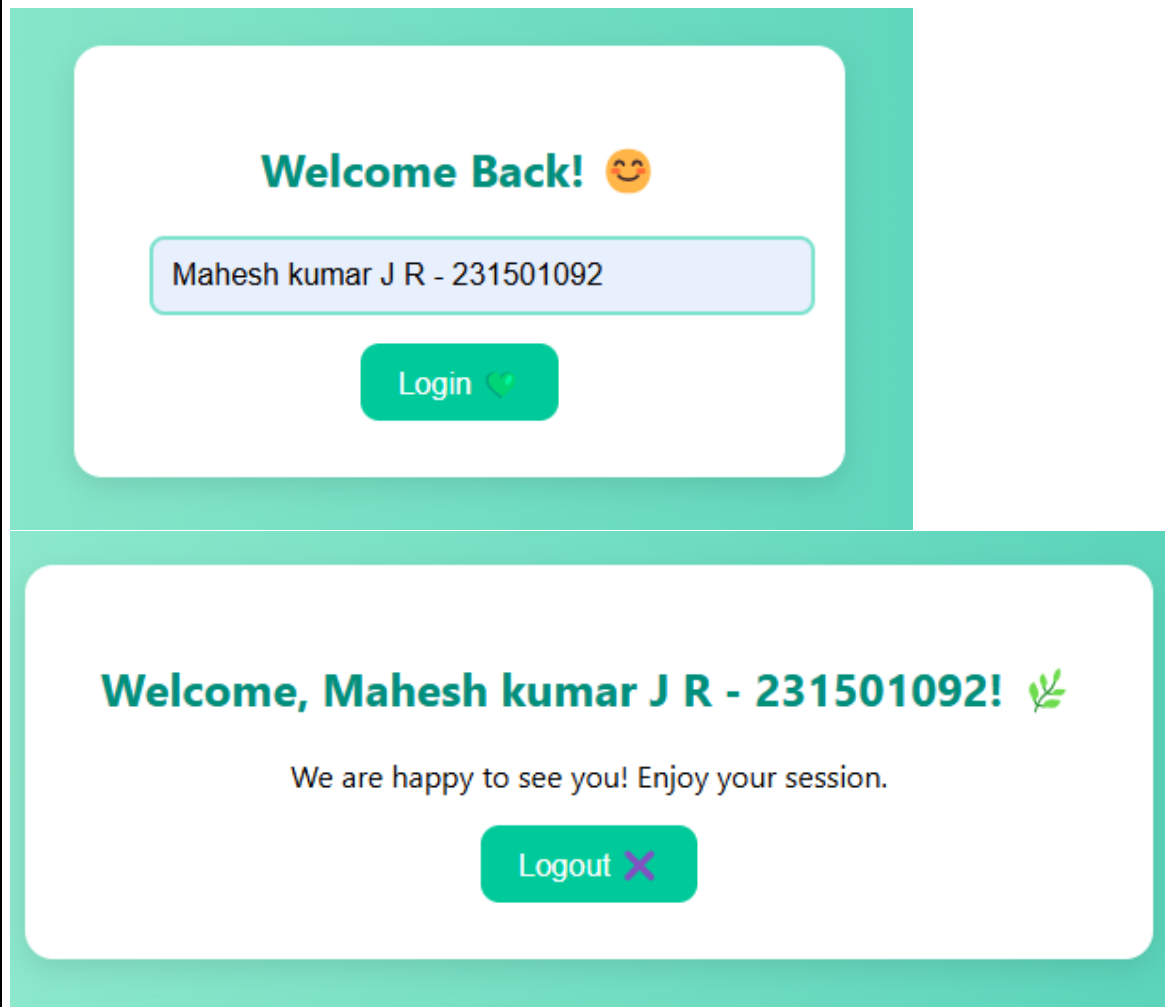
```
response);
}
}
```

web.xml (Servlet Configuration)

```xml
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:

RESULT: The Session Tracking using HttpSession were executed successfully.