Experiment No. 7

Problem stmt1:

Create a login page where users enter credentials are verified, and session variables are used to maintain login status until the user logs out.

Problem stmt2:

Store user information in session variables upon successful login and retained until the user checks out or logs out.

Problem stmt3:

Design a web page where users can select a theme (light/dark mode), and their choice is saved using cookies so that the theme remains the same on their next visit.

Problem stmt4:

Create a login page with a "Remember Me" option that uses cookies to keep users logged in even after closing the browser.

Code:

LoginServlet.java:

```java
package vaish;

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class LoginServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

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

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

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

    // Dummy check
    if ("Vaishnawi".equals(username) && "password".equals(password)) {
        // Create session and store user
```

```java
        HttpSession session = request.getSession();
        session.setAttribute("username", username);

        // Remember Me logic
        if ("on".equals(remember)) {
            Cookie loginCookie = new Cookie("user", username);
            loginCookie.setMaxAge(7 * 24 * 60 * 60); // 7 days
            response.addCookie(loginCookie);
        }

        out.println("<html><body>");
        out.println("<h2>Welcome, " + username + "!</h2>");
        out.println("<p>Session is active. <a href='logout'>Logout</a></p>");
        out.println("</body></html>");
    } else {
        out.println("<html><body>");
        out.println("<p style='color:red;'>Invalid credentials.</p>");
        out.println("<a href='index.html'>Try Again</a>");
        out.println("</body></html>");
    }
}

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

    Cookie[] cookies = request.getCookies();
    String rememberedUser = null;

    if (cookies != null) {
        for (Cookie c : cookies) {
            if ("user".equals(c.getName())) {
                rememberedUser = c.getValue();
                break;
            }
        }
    }

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

    if (rememberedUser != null) {
        out.println("<html><body>");
        out.println("<h2>Welcome back, " + rememberedUser + "! (from cookie)</h2>");
        out.println("<a href='logout'>Logout</a>");
```

```java
        out.println("</body></html>");
    } else {
        response.sendRedirect("index.html");
    }
  }
}
```

LogoutServlet.java:

```java
package vaish;

import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class LogoutServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

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

        // Invalidate session
        HttpSession session = request.getSession(false);
        if (session != null) {
            session.invalidate();
        }

        // Remove the cookie
        Cookie loginCookie = new Cookie("user", "");
        loginCookie.setMaxAge(0); // Delete cookie
        response.addCookie(loginCookie);

        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        out.println("<html><body>");
        out.println("<h3>You are successfully logged out.</h3>");
        out.println("<a href='index.html'>Login Again</a>");
        out.println("</body></html>");
    }
}
```

Index.html:

```html
<!DOCTYPE html>
<html>
<head>
  <title>Login Page</title>
```

```html
<script>
  window.onload = function() {
    let theme = getCookie("theme");
    if (theme) document.body.className = theme;
  };

  function setTheme(theme) {
    document.body.className = theme;
    document.cookie = "theme=" + theme + "; path=/; max-age=31536000"; // 1 year
  }

  function getCookie(name) {
    let cookies = document.cookie.split(';');
    for (let i = 0; i < cookies.length; i++) {
      let c = cookies[i].trim();
      if (c.indexOf(name + "=") == 0)
        return c.substring(name.length + 1, c.length);
    }
    return "";
  }
</script>
<style>
  body.light { background-color: white; color: black; }
  body.dark { background-color: black; color: white; }
</style>
</head>
<body class="light">
  <h2>Login</h2>
  <form action="login" method="post">
    Username: <input type="text" name="username" required><br><br>
    Password: <input type="password" name="password" required><br><br>
    <input type="checkbox" name="remember"> Remember Me<br><br>
    <input type="submit" value="Login">
  </form>

  <br>
  <label>Choose Theme:</label>
  <button onclick="setTheme('light')">Light</button>
  <button onclick="setTheme('dark')">Dark</button>
</body>
</html>
```
Output:

Login

Username: Vaishnawi

Password: ••••

☑ Remember Me

Login

Choose Theme: Light Dark

Login

Username: Vaishnawi

Password: ••••

☑ Remember Me

Login

Choose Theme: Light Dark