**WEB TECHNOLOGY AND MOBILE APPLICATIONS**

**EXPERIMENT-7**

**AIM:**

The goal of this Servlet-based project is to store user preferences (such as theme and language) using cookies and retrieve and display them on subsequent visits.

**ALGORITHM:**

Step 1: Load Preferences Page → Browser checks for existing cookies.

Step 2 Retrieve Preferences (GET Request) → Servlet reads cookies and applies saved

settings.

Step 3: User Selects Preferences → User picks theme and language.

Step 4: Save Preferences (POST Request) → JavaScript sends data to Servlet.

Step 5: Servlet Stores Preferences → Cookies are updated and sent back to the browser.

Step 6: Preferences Applied on Next Visit → Browser loads saved settings automatically.

**CODE:**

**Index.html**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title>Set Preferences</title>**

**</head>**

**<body style="font-family:sans-serif; text-align:center; margin-top:80px;">**

**<h2>🌐 Set Your Preferences</h2>**

**<form action="PreferenceServlet" method="post">**

**<label>Choose Theme:</label>**

**<select name="theme">**

**<option value="light">Light 🌞</option>**

**<option value="dark">Dark 🌙</option>**

**</select><br><br>**

**<label>Choose Language:</label>**

**<select name="language">**

**<option value="english">English 🇬🇧</option>**

**<option value="french">French 🇫🇷</option>**

**<option value="spanish">Spanish 🇪🇸</option>**

**</select><br><br>**

**<input type="submit" value="Save Preferences">**

**</form>**

**</body>**

**</html>**

**Index.java**

**import java.io.*\**;**

**import javax.servlet.*\**;**

**import javax.servlet.http.*\**;**

**public class PreferenceServlet extends HttpServlet {**

**protected void doPost(HttpServletRequest request, HttpServletResponse response)**

**throws ServletException, IOException {**

**String theme = request.getParameter("theme");**

**String language = request.getParameter("language");**

**Cookie themeCookie = new Cookie("theme", theme);**

**Cookie languageCookie = new Cookie("language", language);**

***// Set cookies to expire in 7 days***

**themeCookie.setMaxAge(7 \* 24 \* 60 \* 60);**

**languageCookie.setMaxAge(7 \* 24 \* 60 \* 60);**

**response.addCookie(themeCookie);**

**response.addCookie(languageCookie);**

**response.sendRedirect("DisplayServlet");**

**}**

**}**

**Display.java**

**import java.io.*\**;**

**import javax.servlet.*\**;**

**import javax.servlet.http.*\**;**

**public class DisplayServlet extends HttpServlet {**

**protected void doGet(HttpServletRequest request, HttpServletResponse response)**

**throws ServletException, IOException {**

**String theme = "light";**

**String language = "english";**

**Cookie[] cookies = request.getCookies();**

**if (cookies != null) {**

**for (Cookie c : cookies) {**

**if (c.getName().equals("theme")) {**

**theme = c.getValue();**

**} else if (c.getName().equals("language")) {**

**language = c.getValue();**

**}**

**}**

**}**

***// Basic theme styling***

**String bgColor = theme.equals("dark") ? "#121212" : "#f9f9f9";**

**String textColor = theme.equals("dark") ? "#ffffff" : "#000000";**

**response.setContentType("text/html");**

**PrintWriter out = response.getWriter();**

**out.println("<html><body style='background-color:" + bgColor + "; color:" + textColor + "; text-align:center; font-family:sans-serif;'>");**

**out.println("<h2>🎯 Your Preferences</h2>");**

**out.println("<p><strong>Theme:</strong> " + theme + "</p>");**

**out.println("<p><strong>Language:</strong> " + language + "</p>");**

**out.println("<a href='preferences.html'>Change Preferences</a>");**

**out.println("</body></html>");**

**}**

**protected void doPost(HttpServletRequest request, HttpServletResponse response)**

**throws ServletException, IOException {**

**doGet(request, response);  *// allow POST to work like GET***

**}**

**}**

**Web.xml**

**<servlet>**

**<servlet-name>PreferenceServlet</servlet-name>**

**<servlet-class>PreferenceServlet</servlet-class>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>PreferenceServlet</servlet-name>**

**<url-pattern>/PreferenceServlet</url-pattern>**

**</servlet-mapping>**

**<servlet>**

**<servlet-name>DisplayServlet</servlet-name>**

**<servlet-class>DisplayServlet</servlet-class>**

**</servlet>**

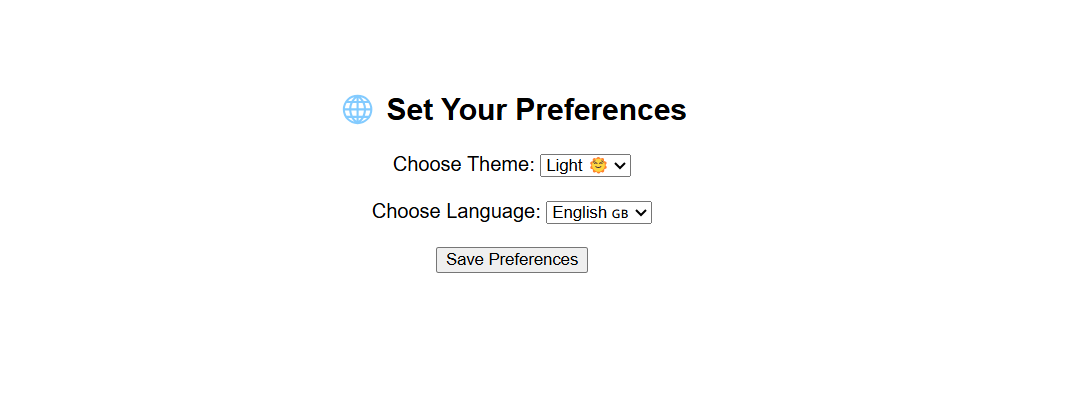
**<servlet-mapping>**

**<servlet-name>DisplayServlet</servlet-name>**

**<url-pattern>/DisplayServlet</url-pattern>**

**</servlet-mapping>**

**OUTPUT:**

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**Result**: : The Servlet-based project to store user preferences using cookies were executed successfu