USING COOKIES

INDEX.HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Floral Themed Welcome Page</title>
    <style>
        body {
            background-image: url("floral.jpg");
            background-size: cover;
            font-family: Georgia, 'Times New Roman', Times, serif;
            font-size: xx-large;
            background-color: #fff8dc;
            margin: 0;
            padding: 0;
        }
        .container {
            text-align: center;
            padding: 50px;
        }
        .title {
            font-size: 2.5em;
            color: #1c0912;
            margin-bottom: 20px;
        }
        .link-button {
            display: inline-block;
            padding: 15px 25px;
            font-size: 1.2em;
            color: white;
            background-color: #e12c87;
            text-decoration: none;
            border-radius: 5px;
            margin-top: 20px;
        }
        .link-button:hover {
            background-color: #ff1493;
        }
        .image {
            width: 100%;
```

```
        max-width: 600px;
        height: auto;
        margin-top: 30px;
      }
    </style>
</head>
<body>
    <div class="container">
      <div class="title">Welcome to Our Floral Themed Page!</div>
      <a href="floralPage" class="link-button">Enter Floral Page</a>
    </div>
</body>
</html>
```

FloralPageServlet.java:

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

@WebServlet("/floralPage")
public class FloralPageServlet extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        String userName = null;
        String theme = "default";
        int visitCount = 0;


        Cookie[] cookies = request.getCookies();
        if (cookies != null) {
            for (Cookie cookie : cookies) {
```

```java
            switch (cookie.getName()) {
                case "userName":
                    userName = cookie.getValue();
                    break;
                case "theme":
                    theme = cookie.getValue();
                    break;
                case "visitCount":
                    visitCount = Integer.parseInt(cookie.getValue());
                    break;
            }
        }
    }

    visitCount++;

    Cookie visitCookie = new Cookie("visitCount", Integer.toString(visitCount));
    visitCookie.setMaxAge(60 * 60 * 24); // 1 day
    response.addCookie(visitCookie);

    response.setContentType("text/html");

    PrintWriter out = response.getWriter();
    out.println("<html><body>");
    out.println("<h1>Floral Themed Page</h1>");
    if (userName != null) {
        out.println("<p>Welcome back, " + userName + "!</p>");
    } else {
        out.println("<p>Welcome to our floral page!</p>");
    }
    out.println("<p>Number of visits: " + visitCount + "</p>");
    out.println("<p>Current theme: " + theme + "</p>");
    out.println("<form method='POST' action='floralPage'>");
    out.println("Name: <input type='text' name='userName'><br>");
    out.println("<input type='submit' value='Save Name'>");
    out.println("</form>");
    out.println("<a href='theme'>Change Theme</a>");
    out.println("</body></html>");
}

@Override
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    String userName = request.getParameter("userName");
```

```java
        if (userName != null && !userName.trim().isEmpty()) {
            Cookie userCookie = new Cookie("userName", userName);
            userCookie.setMaxAge(60 * 60 * 24 * 30); // 30 days
            response.addCookie(userCookie);
        }

        response.sendRedirect("floralPage");
    }
}
```

ThemeServlet.java:

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

@WebServlet("/theme")
public class ThemeServlet extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // Set response content type
        response.setContentType("text/html");

        // Display the theme selection form
        PrintWriter out = response.getWriter();
        out.println("<html><body>");
        out.println("<h1>Select Theme</h1>");
        out.println("<form method='POST' action='theme'>");
        out.println("<input type='radio' name='theme' value='light'> Light Theme<br>");
        out.println("<input type='radio' name='theme' value='dark'> Dark Theme<br>");
        out.println("<input type='radio' name='theme' value='floral'> Floral Theme<br>");
        out.println("<input type='submit' value='Save Theme'>");
        out.println("</form>");
        out.println("<a href='floralPage'>Back to Floral Page</a>");
```

```java
        out.println("</body></html>");
    }

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        String theme = request.getParameter("theme");

        if (theme != null) {
            Cookie themeCookie = new Cookie("theme", theme);
            themeCookie.setMaxAge(60 * 60 * 24 * 30); // 30 days
            response.addCookie(themeCookie);
        }

        response.sendRedirect("floralPage");
    }
}
```

Web.xml:

```xml
<web-app>
    <servlet>
        <servlet-name>FloralPageServlet</servlet-name>
        <servlet-class>FloralPageServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>FloralPageServlet</servlet-name>
        <url-pattern>/floralPage</url-pattern>
    </servlet-mapping>
    <servlet>
        <servlet-name>ThemeServlet</servlet-name>
        <servlet-class>ThemeServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>ThemeServlet</servlet-name>
        <url-pattern>/theme</url-pattern>
    </servlet-mapping>
</web-app>
```

USING HTTP SESSION

INDEX.HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Session Handling Example</title>
    <style>
      body {
          font-family: Arial, sans-serif;
          background-color: #f0f0f0;
          margin: 0;
          padding: 0;
      }
      .container {
          text-align: center;
          padding: 50px;
      }
      .title {
          font-size: 2.5em;
          color: #333;
          margin-bottom: 20px;
      }
      .link-button {
          display: inline-block;
          padding: 15px 25px;
          font-size: 1.2em;
          color: white;
          background-color: #007bff;
          text-decoration: none;
          border-radius: 5px;
          margin-top: 20px;
      }
      .link-button:hover {
          background-color: #0056b3;
      }
    </style>
</head>
<body>
    <div class="container">
      <div class="title">Welcome to the Session Handling Example!</div>
```

```html
      <a href="session" class="link-button">Enter Session Page</a>
   </div>
</body>
</html>
```

SessionServlet.java:

```java
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;
import java.io.IOException;
import java.io.PrintWriter;

@WebServlet("/session")
public class SessionServlet extends HttpServlet {

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

        HttpSession session = request.getSession(true);


        String userName = (String) session.getAttribute("userName");
        Integer visitCount = (Integer) session.getAttribute("visitCount");


        if (visitCount == null) {
            visitCount = 0;
        }


        visitCount++;

        session.setAttribute("visitCount", visitCount);
        response.setContentType("text/html");


        PrintWriter out = response.getWriter();
        out.println("<html><body>");
        out.println("<h1>Session Information</h1>");
```

```java
        if (userName != null) {
            out.println("<p>Welcome back, " + userName + "!</p>");
        } else {
            out.println("<p>Welcome to our site!</p>");
        }
        out.println("<p>Number of visits: " + visitCount + "</p>");
        out.println("<form method='POST' action='session'>");
        out.println("Name: <input type='text' name='userName'><br>");
        out.println("<input type='submit' value='Save Name'>");
        out.println("</form>");
        out.println("</body></html>");
    }

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

        String userName = request.getParameter("userName");
        HttpSession session = request.getSession(true);

        if (userName != null && !userName.trim().isEmpty()) {
            session.setAttribute("userName", userName);
        }

        // Redirect back to the GET method to display the session information
        response.sendRedirect("session");
    }
}
```

Web.xml:

```xml
<web-app>
    <servlet>
        <servlet-name>SessionServlet</servlet-name>
        <servlet-class>SessionServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>SessionServlet</servlet-name>
        <url-pattern>/session</url-pattern>
    </servlet-mapping>
</web-app>
```

USING URL REWRITING:

INDEX.HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Floral Themed Welcome Page</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #fff8dc;
            margin: 0;
            padding: 0;
        }
        .container {
            text-align: center;
            padding: 50px;
        }
        .title {
            font-size: 2.5em;
            color: #ff69b4;
            margin-bottom: 20px;
        }
        .link-button {
            display: inline-block;
            padding: 15px 25px;
            font-size: 1.2em;
            color: white;
            background-color: #ff69b4;
            text-decoration: none;
            border-radius: 5px;
            margin-top: 20px;
        }
        .link-button:hover {
            background-color: #ff1493;
        }
        .image {
            width: 100%;
            max-width: 600px;
            height: auto;
            margin-top: 30px;
        }
```

```html
    </style>
</head>
<body>
    <div class="container">
        <div class="title">Welcome to Our Floral Themed Page!</div>
        <a href="floralPage" class="link-button">Enter Floral Page</a>
        <img src="images/floral.jpg" alt="Beautiful Floral Image" class="image">
    </div>
</body>
</html>
```

JAVA:

```java
package com.example;

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;
import java.io.IOException;
import java.io.PrintWriter;

@WebServlet("/floralPage")
public class FloralPageServlet extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // Retrieve the current session or create a new one if it doesn't exist
        HttpSession session = request.getSession(true);

        // Retrieve session attributes
        String userName = (String) session.getAttribute("userName");
        Integer visitCount = (Integer) session.getAttribute("visitCount");

        // If visitCount is null, initialize it to 0
        if (visitCount == null) {
            visitCount = 0;
        }

        // Increment visit count
        visitCount++;
```

```java
        // Update session attributes
        session.setAttribute("visitCount", visitCount);

        // Generate the URL with the session ID
        String sessionIdUrl = response.encodeURL("floralPage");

        // Set response content type
        response.setContentType("text/html");

        // Display the session information
        PrintWriter out = response.getWriter();
        out.println("<html><body>");
        out.println("<h1>Floral Themed Page</h1>");
        if (userName != null) {
            out.println("<p>Welcome back, " + userName + "!</p>");
        } else {
            out.println("<p>Welcome to our floral page!</p>");
        }
        out.println("<p>Number of visits: " + visitCount + "</p>");
        out.println("<form method='POST' action='" + sessionIdUrl + "'>");
        out.println("Name: <input type='text' name='userName'><br>");
        out.println("<input type='submit' value='Save Name'>");
        out.println("</form>");
        out.println("</body></html>");
    }

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // Retrieve the user name from the request
        String userName = request.getParameter("userName");

        // Retrieve the current session or create a new one if it doesn't exist
        HttpSession session = request.getSession(true);

        // Store the user name in the session
        if (userName != null && !userName.trim().isEmpty()) {
            session.setAttribute("userName", userName);
        }

        // Redirect back to the GET method to display the session information
        response.sendRedirect(response.encodeRedirectURL("floralPage"));
    }
```

```
}
```

WEB.XML:

```xml
<web-app>
  <servlet>
    <servlet-name>FloralPageServlet</servlet-name>
    <servlet-class>com.example.FloralPageServlet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>FloralPageServlet</servlet-name>
    <url-pattern>/floralPage</url-pattern>
  </servlet-mapping>
</web-app>
```

USING HIDDEN FORM FIELDS:

INDEX.HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Floral Themed Welcome Page</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #fff8dc;
      margin: 0;
      padding: 0;
    }
    .container {
      text-align: center;
      padding: 50px;
    }
    .title {
      font-size: 2.5em;
      color: #ff69b4;
      margin-bottom: 20px;
    }
    .link-button {
      display: inline-block;
      padding: 15px 25px;
```

```css
        font-size: 1.2em;
        color: white;
        background-color: #ff69b4;
        text-decoration: none;
        border-radius: 5px;
        margin-top: 20px;
    }
    .link-button:hover {
        background-color: #ff1493;
    }
    .image {
        width: 100%;
        max-width: 600px;
        height: auto;
        margin-top: 30px;
    }
  </style>
</head>
<body>
  <div class="container">
    <div class="title">Welcome to Our Floral Themed Page!</div>
    <a href="floralPage" class="link-button">Enter Floral Page</a>
    <img src="images/floral.jpg" alt="Beautiful Floral Image" class="image">
  </div>
</body>
</html>
```

JAVA:

```java
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 java.io.IOException;
import java.io.PrintWriter;

@WebServlet("/floralPage")
public class FloralPageServlet extends HttpServlet {

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

```java
    String userName = request.getParameter("userName");
    String visitCountStr = request.getParameter("visitCount");

    int visitCount = 0;
    if (visitCountStr != null && !visitCountStr.isEmpty()) {
        visitCount = Integer.parseInt(visitCountStr);
    }


    visitCount++;


    response.setContentType("text/html");


    PrintWriter out = response.getWriter();
    out.println("<html><body>");
    out.println("<h1>Floral Themed Page</h1>");
    if (userName != null) {
        out.println("<p>Welcome back, " + userName + "!</p>");
    } else {
        out.println("<p>Welcome to our floral page!</p>");
    }
    out.println("<p>Number of visits: " + visitCount + "</p>");
    out.println("<form method='POST' action='floralPage'>");
    out.println("Name: <input type='text' name='userName' value='" + (userName != null ? userName :
"") + "'><br>");
    out.println("<input type='hidden' name='visitCount' value='" + visitCount + "'>");
    out.println("<input type='submit' value='Save Name'>");
    out.println("</form>");
    out.println("</body></html>");
  }

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

    String userName = request.getParameter("userName");
    String visitCountStr = request.getParameter("visitCount");

    int visitCount = 0;
    if (visitCountStr != null && !visitCountStr.isEmpty()) {
        visitCount = Integer.parseInt(visitCountStr);
    }
```

```java
        String url = "floralPage?userName=" + userName + "&visitCount=" + visitCount;
        response.sendRedirect(url);
    }
}
```

Web.xml:

```xml
<web-app>
    <servlet>
        <servlet-name>FloralPageServlet</servlet-name>
        <servlet-class>FloralPageServlet</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>FloralPageServlet</servlet-name>
        <url-pattern>/floralPage</url-pattern>
    </servlet-mapping>
</web-app>
```