Experiment 9

AIM: Implement the following web applications using(a) PHP, (b) Servlets and (c) JSP.

9(i) (a). A web application that takes a name as input and on submit it shows a hello <name>page where name is taken from the request. It shows the start time at the righttop corner of the page and provides a logout button. On clicking this button,it should show a logout page with Thank You <name > message with theduration of usage (hint: Use session to store name and time).

AIM: To designan application that use sessionto store data.

```php
<?php
session_start();
if ($_SERVER['REQUEST_METHOD'] == 'POST') {
    $_SESSION['name'] = $_POST['name'];
    $_SESSION['start_time'] = time();
    header('Location: hello.php');
    exit();
}
?>
<!DOCTYPE html>
<html>
<head>
    <title>Login Page</title>
</head>
<body>
    <form method="post" action="">
        <label for="name">Enter your name:</label>
        <input type="text" name="name" required>
        <button type="submit">Submit</button>
    </form>
</body>
</html>
```

```php
<!-- hello.php -->
<?php
session_start();
if (!isset($_SESSION['name'])) {
    header('Location: index.php');
    exit();
}
$name = $_SESSION['name'];
$start_time = date('H:i:s', $_SESSION['start_time']);
?>
<!DOCTYPE html>
<html>
<head>
    <title>Logout Page</title>
</head>
<body>
    <h1>Thank You, <?php echo htmlspecialchars($name); ?>!</h1>
    <p>Duration of usage: <?php echo $duration; ?> seconds</p>
</body>
</html>
```

9 (ii) (a). Write a PHP Program to display currentDate, Time and Day using PHPScript.

```php
<?php
    date_default_timezone_set("Asia/Kolkata"); // Set timezone
    $currentDate = date("Y-m-d"); // Get current date
    $currentTime = date("h:i:s A"); // Get current time in 12-hour format
    $currentDay = date("l"); // Get current day
?>

<!DOCTYPE html>
<html lang="en">
<head>
```

```html
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Current Date, Time, and Day</title>
</head>
<body>
    <h2>Current Date, Time, and Day</h2>
    <p><strong>Date:</strong> <?php echo $currentDate; ?></p>
    <p><strong>Time:</strong> <?php echo $currentTime; ?></p>
    <p><strong>Day:</strong> <?php echo $currentDay; ?></p>
</body>
</html>
```

9(iii) (a). A web application that takes name and age from an HTML page. If theage is less than 18, it should send a page with "Hello \<name\>, you arenot authorized to visit the site" message, where \<name\> should bereplaced with the entered name. Otherwise it should send "Welcome \<name\>to this site" message.

```php
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $name = htmlspecialchars($_POST["name"]);
    $age = (int)$_POST["age"];
    if ($age < 18) {
        echo "<h1>Hello $name, you are not authorized to visit the site.</h1>";
    } else {
        echo "<h1>Welcome $name to this site.</h1>";
    }
    exit();
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
```

```html
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Age Verification</title>
</head>
<body>
    <h2>Enter Your Details</h2>
    <form method="POST">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name" required><br><br>
        <label for="age">Age:</label>
        <input type="number" id="age" name="age" required><br><br>
        <button type="submit">Submit</button>
    </form>
</body>
</html>
```

9(iv) (a). A web application that lists all cookies stored in the browser onclicking "List Cookies" button. Add cookies if necessary.

AIM: To designan application to develop cookiesusing PHP.

```php
<?php
// Set a cookie if not already set
if (!isset($_COOKIE['user'])) {
    setcookie("user", "Guest", time() + (86400 * 7), "/"); // Cookie valid for 7 days
}?>
```

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Cookie Manager</title>
```

```
</head>
<body>
  </form>
  <script>
    function listCookies() {
        let cookies = document.cookie.split('; ');
        let list = document.getElementById("cookieList");
        list.innerHTML = "";
        cookies.forEach(cookie => {
           let li = document.createElement("li");
           li.textContent = cookie;
           list.appendChild(li);
        });
    }
  </script>
</body>
</html>
```

9 (i) (b). A web application that takes a name as input and on submitit shows a hello
<name> page where name is taken from the request. It shows the start time at the righttop corner of the
page and provides a logout button. On clicking this button,it should show a logoutpage with ThankYou
<name > message with the durationof usage (hint: Use session to store name andtime).

USING SERVLET// Servlet Code for a Web Application with Session Tracking

```
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;
```

```java
import javax.servlet.http.HttpSession;
import java.time.LocalTime;

@WebServlet("/hello")
public class HelloServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        out.println("<html><head><title>Hello Page</title></head><body>");
        out.println("<div style='position:relative;'>");
        out.println("<span style='position:absolute; top:10px; right:10px;'>Start Time: " +
session.getAttribute("startTime") + "</span>");
        out.println("<h1>Hello, " + name + "!</h1>");
        out.println("<form action='logout' method='POST'>");
        out.println("<button type='submit'>Logout</button>");
        out.println("</form></div></body></html>");
    }
}

@WebServlet("/logout")
public class LogoutServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter()
            out.println("<html><head><title>Logout Page</title></head><body>");
            out.println("<h1>Thank You, " + name + "!</h1>");
            out.println("<p>Duration of usage: " + java.time.Duration.between(startTime, endTime).getSeconds() + "
seconds</p>");
            out.println("</body></html>");
    }
}
```

}

9 (ii) (b). Write a Servletapplication to print the currentdate and time. Aim: To print Current date and timeusing Servlet.

USING SERVLET

```java
// Servlet Code to Print Current Date and Time

import java.io.IOException;
import java.io.PrintWriter;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

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

        LocalDateTime now = LocalDateTime.now();
        DateTimeFormatter formatter = DateTimeFormatter.ofPattern("yyyy-MM-dd HH:mm:ss")       String
formattedDateTime = now.format(formatter);

        out.println("<html><head><title>Current Date & Time</title></head><body>");
        out.println("<h1>Current Date and Time</h1>");
        out.println("<p>" + formattedDateTime + "</p>");
        out.println("</body></html>");
```

```
    }
}
```

9(iii) (b). A web application that takes name and age from an HTML page. If theage is less than 18, it should send a page with "Hello <name>, you arenot authorized to visit the site" message, where <name> should bereplaced with the entered name. Otherwise it should send "Welcome <name>to this site" message.

AIM: To designan application to validate age are less than 18 or more than 18 usingSERVLET.

<u>**USING SERVLET**</u>

```
// Servlet Code to Validate Age Using a Web Application

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;

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

        String name = request.getParameter("name");
        int age = Integer.parseInt(request.getParameter("age"));

        out.println("<html><head><title>Age Validation</title></head><body>");
        if (age < 18) {
            out.println("<h1>Hello " + name + ", you are not authorized to visit the site.</h1>");
```

```
        } else {
            out.println("<h1>Welcome " + name + " to this site.</h1>");
        }
        out.println("</body></html>");
    }
}
```

9(iv) (b). A web application that lists all cookies stored in the browser onclicking "List Cookies" button. Add cookies if necessary.

AIM: To designan application to develop cookiesusing Servlet.

USING SERVLET

```
// Servlet Code to Manage and List Cookies

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

@WebServlet("/cookieManager")
public class CookieManagerServlet extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter()
            out.println("<button type='submit'>Add Cookie</button>");
        out.println("</form>");

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

```
    }

    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
        String cookieName = request.getParameter("cookieName");
        String cookieValue = request.getParameter("cookieValue");
        if (cookieName != null && cookieValue != null) {
            Cookie newCookie = new Cookie(cookieName, cookieValue);
            newCookie.setMaxAge(7 * 24 * 60 * 60); // Cookie expires in 7 days
            response.addCookie(newCookie);
        }

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

9 (i) (c). A web application that takes a name as input and on submit it shows a hello <name> page where name istaken from the request. It shows the start time at the righttop corner of the page and provides a logout button. On clicking this button,it should show a logout page with Thank You <name > message with theduration of usage (hint: Use sessionto store name and time).

```
// Servlet Code for a Web Application with Session Tracking

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;
import java.time.LocalTime;
```

```java
import java.time.Duration;

@WebServlet("/hello")
public class HelloServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
@WebServlet("/logout")
public class LogoutServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();\
            out.println("<html><head><title>Logout Page</title></head><body>");
            out.println("<h1>Thank You, " + name + "!</h1>");
            out.println("<p>Duration of usage: " + duration + " seconds</p>");
            out.println("</body></html>");
        }
    }
}
```

9 (ii) (b). Write a JSP application to print the current date and time. Aim: To print Current date and timeusing JSP.

```jsp
<%@ page import="java.util.Date" %>
<%@ page import="java.text.SimpleDateFormat" %>
<html>
<head>
    <title>Current Date and Time</title>
</head>
<body>
```

```html
    <h1>Current Date and Time</h1>
    <p>
        <%
            Date now = new Date();
            SimpleDateFormat formatter = new SimpleDateFormat("yyyy-MM-dd HH:mm:ss");
            String formattedDate = formatter.format(now);
            out.println(formattedDate);
        %>
    </p>
</body>
</html>
```

9(iii) (c). A web application that takes name and age from an HTML page. If theage is less than 18, it should send a page with "Hello <name>, you arenot authorized to visit the site" message, where <name> should bereplaced with the entered name. Otherwise it should send "Welcome <name>to this site" message.

AIM: To designan application to validate age are less than 18 or more than18 using JSP.

```html
<html>
<head>
    <title>Age Validation</title>
</head>
<body>
    <form action="ageValidation.jsp" method="post">
        <label for="name">Name:</label>
        <input type="text" name="name" required>
        <br>
        <label for="age">Age:</label>
        <input type="number" name="age" required>
        <br>
        <button type="submit">Submit</button>
    </form>
</body>
```

```html
<head>
    <title>Validation Result</title>
</head>
<body>
    <% if (age < 18) { %>
        <h1>Hello <%= name %>, you are not authorized to visit the site.</h1>
    <% } else { %>
        <h1>Welcome <%= name %> to this site.</h1>
    <% } %>
</body>
</html>
```

9(iv) (c). A web application that lists all cookies stored in the browser onclicking "List Cookies" button. Add cookies if necessary.

AIM: To designan application to develop cookiesusing JSP.

USING JSP

```html
<html>
<head>
    <title>Cookie Management</title>
</head>
<body>
    <h2>Manage Cookies</h2>
    <form action="cookieManager.jsp" method="post">
        <label for="cookieName">Cookie Name:</label>
        <input type="text" name="cookieName" required>
        <br>
        <label for="cookieValue">Cookie Value:</label>
        <input type="text" name="cookieValue" required>
        <br>
        <button type="submit">Add Cookie</button>
```

```
    </form>
    <br>
    <form action="listCookies.jsp" method="get">
       <button type="submit">List Cookies</button>
    </form>
</body>
</html>
<!-- cookieManager.jsp -->
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<%
   String cookieName = request.getParameter("cookieName");
   String cookieValue = request.getParameter("cookieValue");
   if (cookieName != null && cookieValue != null) {
      javax.servlet.http.Cookie newCookie = new javax.servlet.http.Cookie(cookieName, cookieValue);
      newCookie.setMaxAge(7 * 24 * 60 * 60); // 7 days
      response.addCookie(newCookie);
   }
   response.sendRedirect("index.jsp");
%>

<!-- listCookies.jsp -->
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<%
   javax.servlet.http.Cookie[] cookies = request.getCookies();
%>
<html>
<head>
   <title>List of Cookies</title>
</head>
<body>
   <h2>Stored Cookies</h2>
   <% if (cookies != null) { %>
      <ul>
```
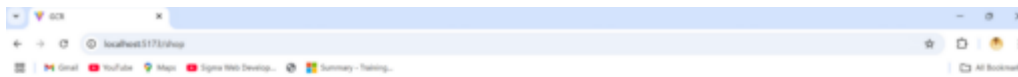
```
        <% for (javax.servlet.http.Cookie cookie : cookies) { %>
            <li><%= cookie.getName() %>: <%= cookie.getValue() %></li>
        <% } %>
    </ul>
    <% } else { %>
        <p>No cookies found.</p>
    <% } %>
    <br>
    <a href="index.jsp">Back</a>
</body>
</html>
```