1b)

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Employee payroll Form</title>
</head>
<body>
 <h2>Employee Payroll Form</h2>
 <form action = "EmployeeServlet" method ="post">
  <label for="name"> Name:</label>
  <input type="text" id="name" name = "name"required><br><br>
  <label for="hours">Hours Worked in a Week: </label>
  <input type ="number" id ="hours" name = "hours" required><br><br>
  <label for="rate">Hourly Rate: </label>
  <input type="number" id="rate" name="rate" required><br><br>
  <input type="submit" value="Submit">
 </form>
</body>
</html>
```

```java
package cie2;
import jakarta.servlet.*;
import jakarta.servlet.http.*;
import java.io.*;
import java.sql.*;
public class EmployeeServlet extends HttpServlet{
 protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException,
IOException{
  resp.setContentType("text/html");
  String name = req.getParameter("name");
  int hours = Integer.parseInt(req.getParameter("hours"));
  double rate = Double.parseDouble(req.getParameter("rate"));
  double grosspay = hours*rate;
  double tax= grosspay*0.2;
  double netpay = grosspay-tax;

  PrintWriter out = resp.getWriter();
  out.println("<html><head><title>Payroll Statement</title></head><body>");
      out.println("<h2>Payroll Statement</h2>");
      out.println("<p><strong>Employee Name:</strong> " + name + "</p>");
      out.println("<p><strong>Hours Worked:</strong> " + hours + "</p>");
      out.println("<p><strong>Hourly Pay Rate:</strong> $" + rate + "</p>");
      out.println("<p><strong>Gross Pay:</strong> $" + String.format("%.2f", grosspay) + "</p>");
      out.println("<p><strong>Tax (20%):</strong> $" + String.format("%.2f", tax) + "</p>");
      out.println("<p><strong>Net Pay:</strong> $" + String.format("%.2f", netpay) + "</p>");
      out.println("<a href='employeeForm.html'>Go Back</a>");
      out.println("</body></html>");

 }
}
```

2b)

```html
<!DOCTYPE html>
<html>
<head>
   <title>Cookie Example</title>
</head>
<body>
   <h2>Cookie Management</h2>
   <a href="setCookies.jsp">Create Cookies</a><br><br>
   <a href="getCookies.jsp">Get Cookies</a>
</body>
</html>
```

```jsp
<%@ page import="jakarta.servlet.http.Cookie" %>
<!DOCTYPE html>
<html>
<head>
   <title>Create Cookies</title>
</head>
<body>
   <%
      Cookie cookie1 = new Cookie("User", "JohnDoe");
      Cookie cookie2 = new Cookie("Role", "Admin");
      Cookie cookie3 = new Cookie("SessionID", "123456");

      // Set expiration time (e.g., 1 day)
      cookie1.setMaxAge(10);
      cookie2.setMaxAge(20);
      cookie3.setMaxAge(30);

      // Add cookies to response
      response.addCookie(cookie1);
      response.addCookie(cookie2);
      response.addCookie(cookie3);

      out.println("<h3>Cookies Created Successfully!</h3>");
      out.println("<a href='2b.html'>Back to Home</a>");
   %>
</body>
</html>
```

```jsp
<%@ page import="jakarta.servlet.http.Cookie" %>
<!DOCTYPE html>
<html>
<head>
   <title>Get Cookies</title>
</head>
<body>
   <h3>Stored Cookies</h3>
   <%
      Cookie[] cookies = request.getCookies();
      if (cookies != null) {
```

```
            out.println("<ul>");
            for (Cookie cookie : cookies) {
                out.println("<li>" + cookie.getName() + ": " + cookie.getValue() + "</li>");
            }
            out.println("</ul>");
        } else {
            out.println("<p>No cookies found!</p>");
        }
    %>
    <a href="2b.html">Back to Home</a>
</body>
</html>
```

4b)

```
<!DOCTYPE html>
<html>
<head>
    <title>Student Information</title>
</head>
<body>
    <h2>Retrieve Student Information</h2>
    <form action="displayData.jsp" method="post">
        <label for="usn">Enter USN:</label>
        <input type="text" id="usn" name="usn" required>
        <button type="submit">Submit</button>
    </form>
</body>
</html>
```

```
<%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
    <title>Student Information</title>
</head>
<body>
    <%
        // Get USN from the form
        String usn = request.getParameter("usn");
        String dbUrl = "jdbc:mysql://localhost:3306/cie2"; // Replace with your database URL
        String dbUser = "root"; // Replace with your database username
        String dbPassword = ""; // Replace with your database password
        Connection conn = null;
        PreparedStatement pstmt = null;
        ResultSet rs = null;

        try {
            // Load JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            // Connect to the database
            conn = DriverManager.getConnection(dbUrl, dbUser, dbPassword);
```

```java
      // Prepare SQL query
      String query = "SELECT USN, Name FROM students WHERE USN = ?";
      pstmt = conn.prepareStatement(query);
      pstmt.setString(1, usn);

      // Execute query
      rs = pstmt.executeQuery();

      if (rs.next()) {
         // If USN exists, display details
         out.println("<h3>Student Details</h3>");
         out.println("<p>USN: " + rs.getString("USN") + "</p>");
         out.println("<p>Name: " + rs.getString("Name") + "</p>");
      } else {
         // If USN does not exist
         out.println("<h3>Invalid USN</h3>");
      }
   } catch (Exception e) {
      out.println("<p>Error: " + e.getMessage() + "</p>");
   } finally {
      // Close resources
      if (rs != null) try { rs.close(); } catch (Exception ignored) {}
      if (pstmt != null) try { pstmt.close(); } catch (Exception ignored) {}
      if (conn != null) try { conn.close(); } catch (Exception ignored) {}
   }
%>
<a href="index.html">Back to Home</a>
</body>
</html>
```

6b)
```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Police Station  Details</title>
</head>
<body>
 <h2>Police Station Details</h2>
 <form action = "PoliceStation" method = "POST">
  <label for="phone">Phone number: </label>
  <input type = "text" name = "phone" pattern="[0-9]{10}" required><br><br>

  <input type = "submit" value = "Submit">

 </form>

</body>
</html>
```

```java
package cie2;
import jakarta.servlet.*;
import jakarta.servlet.http.*;
```

```java
import java.io.*;
import java.sql.*;

public class PoliceStation extends HttpServlet{
 protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException,
IOException{
  resp.setContentType("text/html");
  PrintWriter out = resp.getWriter();

  String phone = req.getParameter("phone");
  String url  ="jdbc:mysql://localhost:3306/cie2practice";
  String user = "root";
  String pass = "";
  try {
   Class.forName("com.mysql.jdbc.Driver");
   Connection conn = DriverManager.getConnection(url,user,pass);
   String sql = "SELECT * FROM policestation where phone = ?";
   PreparedStatement pst = conn.prepareStatement(sql);
   pst.setString(1, phone);
   ResultSet rs = pst.executeQuery();

   if (rs.next()) {
    out.println("<h2>Police Station Details: ");
    out.println("<p>Phone Number: "+rs.getString("phone")+"</p>");
    out.println("<p>Area: "+rs.getString("area")+"</p>");
   }
   else {
    out.println("<h3>Invalid phone number!</h3>");
   }
  }catch(Exception e) {e.getMessage();}
 }
}
```

7b)
```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
   <title>Book Details Form</title>
</head>
<body>
   <h2>Enter Book Details</h2>
   <form action="addbook.jsp" method="post">
      <label for="book_no">Book No:</label>
      <input type="number" id="book_no" name="book_no" required><br><br>

      <label for="title">Title:</label>
      <input type="text" id="title" name="title" required><br><br>

      <label for="author">Author:</label>
      <input type="text" id="author" name="author" required><br><br>

      <label for="publication">Publication:</label>
      <input type="text" id="publication" name="publication" required><br><br>
```

```html
      <label for="price">Price:</label>
      <input type="number" step="0.01" id="price" name="price" required><br><br>

      <button type="submit">Submit</button>
   </form>
   <br>
   <h2>Retrieve Book Details</h2>
   <form action="getbook.jsp" method="get">
      <label for="title">Enter Title:</label>
      <input type="text" id="title" name="title" required>
      <button type="submit">Search</button>
   </form>
</body>
</html>


<%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
   <title>Insert Book</title>
</head>
<body>
   <%
      // Retrieve form data
      int bookNo = Integer.parseInt(request.getParameter("book_no"));
      String title = request.getParameter("title");
      String author = request.getParameter("author");
      String publication = request.getParameter("publication");
      double price = Double.parseDouble(request.getParameter("price"));

      // Database connection details
      String dbUrl = "jdbc:mysql://localhost:3306/cie2";
      String dbUser = "root";
      String dbPassword = "";

      Connection conn = null;
      PreparedStatement pstmt = null;

      try {
         // Load JDBC driver and establish connection
         Class.forName("com.mysql.jdbc.Driver");
         conn = DriverManager.getConnection(dbUrl, dbUser, dbPassword);

         // Insert query
         String query = "INSERT INTO books (Book_No, Title, Author, Publication, Price) VALUES (?, ?, ?,
?, ?)";
         pstmt = conn.prepareStatement(query);
         pstmt.setInt(1, bookNo);
         pstmt.setString(2, title);
         pstmt.setString(3, author);
         pstmt.setString(4, publication);
         pstmt.setDouble(5, price);
```

```jsp
            int rows = pstmt.executeUpdate();

            if (rows > 0) {
                out.println("<h3>Book details added successfully!</h3>");
            }
        } catch (Exception e) {
            out.println("<h3>Error: " + e.getMessage() + "</h3>");
        } finally {
            if (pstmt != null) pstmt.close();
            if (conn != null) conn.close();
        }
    %>
    <a href="7b.jsp">Back to Home</a>
</body>
</html>


<%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
    <title>Retrieve Book</title>
</head>
<body>

    <%
        String title = request.getParameter("title");

        if (title != null && !title.trim().isEmpty()) {
            String dbUrl = "jdbc:mysql://localhost:3306/cie2";
            String dbUser = "root";
            String dbPassword = "";

            Connection conn = null;
            PreparedStatement pstmt = null;
            ResultSet rs = null;

            try {
                Class.forName("com.mysql.jdbc.Driver");
                conn = DriverManager.getConnection(dbUrl, dbUser, dbPassword);

                String query = "SELECT * FROM books WHERE Title = ?";
                pstmt = conn.prepareStatement(query);
                pstmt.setString(1, title);

                rs = pstmt.executeQuery();

                if (rs.next()) {
                    out.println("<h3>Book Details:</h3>");
                    out.println("<p>Book No: " + rs.getInt("Book_No") + "</p>");
                    out.println("<p>Title: " + rs.getString("Title") + "</p>");
                    out.println("<p>Author: " + rs.getString("Author") + "</p>");
                    out.println("<p>Publication: " + rs.getString("Publication") + "</p>");
                    out.println("<p>Price: " + rs.getDouble("Price") + "</p>");
                } else {
```

```
                out.println("<p style='color: red;'>No book found with the title '" + title + "'</p>");
            }
        } catch (Exception e) {
            out.println("<p style='color: red;'>Error: " + e.getMessage() + "</p>");
        } finally {
            if (rs != null) rs.close();
            if (pstmt != null) pstmt.close();
            if (conn != null) conn.close();
        }
    }
%>
    <a href="7b.jsp">Back to Home</a>

</body>
</html>
```

8b)

```
<!DOCTYPE html>
<html>
<head>
   <title>Cookie Example</title>
</head>
<body>
   <h2>Cookie Management</h2>
   <form action="CookieServlet" method="get">
      <p>Click the button below to create cookies and view their status:</p>
      <input type="submit" value="Create and View Cookies">
   </form>
   <p>Refresh the page after 1 minute to check which cookies remain.</p>
</body>
</html>

package cie2;

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;


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

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

        // Create 4 cookies
```

```java
        Cookie cookie1 = new Cookie("cookie1", "value1");
        Cookie cookie2 = new Cookie("cookie2", "value2");
        Cookie cookie3 = new Cookie("cookie3", "value3");
        Cookie cookie4 = new Cookie("cookie4", "value4");

        // Set expiry time for two cookies (1 minute)
        cookie1.setMaxAge(60); // 1 minute
        cookie2.setMaxAge(60); // 1 minute

        // Add cookies to response
        response.addCookie(cookie1);
        response.addCookie(cookie2);
        response.addCookie(cookie3);
        response.addCookie(cookie4);

        // Display cookies
        out.println("<h2>Cookies Information:</h2>");
        Cookie[] cookies = request.getCookies();
        if (cookies != null) {
            for (Cookie cookie : cookies) {
                out.println("<p>" + cookie.getName() + ": " + cookie.getValue() + "</p>");
            }
        } else {
            out.println("<p>No cookies found</p>");
        }

        out.println("<br><p>Refresh the page to see which cookies remain after 1 minute.</p>");
        out.close();
    }
}
```

9b)
```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Visitor Counter</title>
</head>
<body>
    <h2>Welcome to the Visitor Counter Page</h2>
    <p>This page will display how many times you have visited it.</p>
    <form action="Visitor" method="get">
        <p>Click the button below to see your visit count:</p>
        <input type="submit" value="Check Visit Count">
    </form>
</body>
</html>
```

```java
package week6;

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
```

```java
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;

import java.io.*;

/**
 * Servlet implementation class Visitor
 */
public class Visitor extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        // Retrieve or create a session object
        HttpSession session = request.getSession();

        // Get the visit count from session, initialize if null
        Integer visitCount = (Integer) session.getAttribute("visitCount");
        if (visitCount == null) {
            visitCount = 1; // First visit
            session.setAttribute("visitCount", visitCount);
            out.println("<h2>Welcome! You are visiting this page for the first time.</h2>");
        } else {
            visitCount++; // Increment visit count
            session.setAttribute("visitCount", visitCount);
            out.println("<h2>Welcome back!</h2>");
            out.println("<p>You have visited this page " + visitCount + " times.</p>");
        }

        // Additional message
        out.println("<br><p>Refresh the page or visit again to increase the count.</p>");
        out.close();
    }
}
```

10b)
```html
<!DOCTYPE html>
<html>
<head>
    <title>Movie Ticket Price</title>
</head>
<body>
<center>
    <h1>Enter Your Details</h1>
    <form action="moviePrice.jsp" method="post">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name" required><br><br>

        <label for="age">Age:</label>
        <input type="text" id="age" name="age" required><br><br>

        <button type="submit">Check Price</button>
    </form>
```

```
</center>
</body>
</html>


<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
   <title>Movie Ticket Price</title>
</head>
<body>
   <h1>Movie Ticket Price</h1>
   <%
      try {
         // Get user inputs from the form
         String name = request.getParameter("name");
         int age = Integer.parseInt(request.getParameter("age"));

         // Determine the ticket price based on age
         int price;
         if (age > 62) {
            price = 50;
         } else if (age < 10) {
            price = 30;
         } else {
            price = 80;
         }

         // Display the result
   %>
         <p>Hello, <b><%= name %></b>!</p>
         <p>Your age is: <b><%= age %></b></p>
         <p>The movie ticket price for you is: <b>Rs. <%= price %></b></p>
   <%
      } catch (NumberFormatException e) {
         out.println("<p>Error: Please enter a valid age.</p>");
      }
   %>
</body>
</html>


12b)

<!DOCTYPE html>
<html>
<head>
   <title>User Registration</title>
</head>
<body>
   <h2>Register</h2>
   <form action="welcome.jsp" method="post">
      <label for="username">Username:</label>
      <input type="text" id="username" name="username" required><br><br>
```

```html
        <label for="password">Password:</label>
        <input type="password" id="password" name="password" required><br><br>

        <button type="submit">Register</button>
    </form>
</body>
</html>


<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%@ page import="jakarta.servlet.http.*" %>
<!DOCTYPE html>
<html>
<head>
    <title>Welcome</title>
</head>
<body>
    <%
        String username = request.getParameter("username");
        String password = request.getParameter("password");

        // Basic validation (replace with actual validation if needed)
        if (username != null && password != null && !username.isEmpty() && !password.isEmpty()) {
            HttpSession s = request.getSession();
            s.setAttribute("username", username);

    %>
        <h2>Welcome, <%= username %>!</h2>
    <%
        } else {
    %>
        <h2>Invalid Username or Password</h2>
        <a href="register.html">Try Again</a>
    <%
        }
    %>
</body>
</html>
;)
```