	Marwadi University **Faculty of Engineering and Technology** **Department of Information and Communication Technology**
Subject: Advance Java (01CT1623)	**Aim:** Create one user login registration page in jsp with all required form fields and insert into database. insertion of data done at servlet level where connection method is created in servlet. Accept the client httpServletRequest. (JDBC-Servlet-JSP)
Experiment No: 14	**Date: 21/4/2025** **Enrolment No: 92200133003**

Step 1: Create a new Project with Webapp Configuration.

Step 2: Add necessary configurations in the POM.XML file

Registration.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1" pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Registration</title>
</head>
<body>
  <h2>User Registration</h2>
  <form action="register" method="post">
    <label for="username">Username:</label>
    <input type="text" id="username" name="username" required /><br>

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

    <label for="email">Email:</label>
    <input type="email" id="email" name="email" required /><br>

    <label for="fullname">Full Name:</label>
    <input type="text" id="fullname" name="fullname" required /><br>

    <input type="submit" value="Register">
  </form>
</body>
</html>
```

Registerservlet.java

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

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```java
public class RegisterServlet extends HttpServlet {
    private static final String DB_URL = "jdbc:mysql://localhost:3306/aj_practicals";
    private static final String DB_USER = "root";
    private static final String DB_PASSWORD = "";

    // JDBC connection method
    private Connection getConnection() throws SQLException {
        return DriverManager.getConnection(DB_URL, DB_USER, DB_PASSWORD);
    }

    // Handle POST request to register a user
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        String username = request.getParameter("username");
        String password = request.getParameter("password");
        String email = request.getParameter("email");
        String fullname = request.getParameter("fullname");

        // Insert user into the database
        try (Connection connection = getConnection()) {
            String sql = "INSERT INTO users (username, password, email, fullname) VALUES (?, ?, ?, ?)";
            try (PreparedStatement stmt = connection.prepareStatement(sql)) {
                stmt.setString(1, username);
                stmt.setString(2, password);  // In real applications, hash the password
                stmt.setString(3, email);
                stmt.setString(4, fullname);

                int rowsInserted = stmt.executeUpdate();
                if (rowsInserted > 0) {
                    response.sendRedirect("login.jsp"); // Redirect to login page after successful registration
                } else {
                    response.getWriter().println("Error registering user.");
                }
            }
        } catch (SQLException e) {
            e.printStackTrace();
            response.getWriter().println("Error: " + e.getMessage());
        }
    }
}
```

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login.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=ISO-8859-1" pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Login</title>
</head>
<body>
  <h2>User Login</h2>
  <form action="login" method="post">
    <label for="username">Username:</label>
    <input type="text" id="username" name="username" required /><br>

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

    <input type="submit" value="Login">
  </form>
</body>
</html>
```

LoginServlet.java

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

public class LoginServlet extends HttpServlet {
    private static final String DB_URL = "jdbc:mysql://localhost:3306/aj_practicals";
    private static final String DB_USER = "root";
    private static final String DB_PASSWORD = "";

    private Connection getConnection() throws SQLException {
        return DriverManager.getConnection(DB_URL, DB_USER, DB_PASSWORD);
    }

    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
```

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```java
ServletException, IOException {
    String username = request.getParameter("username");
    String password = request.getParameter("password");

    try (Connection connection = getConnection()) {
        String sql = "SELECT * FROM users WHERE username = ? AND password = ?";
        try (PreparedStatement stmt = connection.prepareStatement(sql)) {
            stmt.setString(1, username);
            stmt.setString(2, password);

            try (ResultSet rs = stmt.executeQuery()) {
                if (rs.next()) {
                    // User authenticated successfully
                    response.sendRedirect("welcome.jsp");
                } else {
                    response.getWriter().println("Invalid username or password.");
                }
            }
        }
    } catch (SQLException e) {
        e.printStackTrace();
        response.getWriter().println("Error: " + e.getMessage());
    }
  }
}
```

web.xml
```xml
<!DOCTYPE web-app PUBLIC
    "-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
    "http://java.sun.com/dtd/web-app_2_3.dtd">

<web-app>
 <display-name>Archetype Created Web Application</display-name>

 <!-- All <servlet> elements first -->
 <servlet>
  <servlet-name>RegisterServlet</servlet-name>
  <servlet-class>RegisterServlet</servlet-class>
 </servlet>

 <servlet>
```

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```xml
    <servlet-name>LoginServlet</servlet-name>
    <servlet-class>LoginServlet</servlet-class>
  </servlet>

  <!-- All <servlet-mapping> elements after -->
  <servlet-mapping>
    <servlet-name>RegisterServlet</servlet-name>
    <url-pattern>/register</url-pattern>
  </servlet-mapping>

  <servlet-mapping>
    <servlet-name>LoginServlet</servlet-name>
    <url-pattern>/login</url-pattern>
  </servlet-mapping>
</web-app>
```

Welcome.jsp
```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%
   String username = (String) session.getAttribute("username");
   if (username == null) {
     response.sendRedirect("login.jsp");
     return;
   }
%>
<!DOCTYPE html>
<html>
<head>
   <title>Welcome</title>
</head>
<body>
   <h1>Welcome, <%= username %>!</h1>
   <p>You have successfully logged in.</p>
   <a href="logout.jsp">Logout</a>
</body>
</html>
```

Logout.jsp
```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%
```

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```
    session.invalidate();
    response.sendRedirect("login.jsp");
%>
```

Output:

User Registration

Username: Prashant Sarvaiya
Password: •••
Email: prashant@gmail.com
Full Name: Prashant Sarvaiya
Register

☐   🖉 Edit   Copy   ⊖ Delete   2   Prashant Sarvaiya   123   prashant@gmail.com   Prashant Sarvaiya

User Login

Username: Prashant Sarvaiya
Password: •••
Login

Welcome, Prashant Sarvaiya!

You have successfully logged in.

Logout