***Question 6: Implement a simple registration system using JSP and Servlets.***

* + ***JSP form: name, email, password, gender, etc.***
  + ***Servlet: save the data (can be stored in-memory or in a simple database).***
  + ***Display confirmation.***

**Step1;**

**Create a new JSP file** register.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

</head>

<body>

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

Name: <input name=*"name"*><br>

Email: <input name=*"email"*><br>

Password: <input type=*"password"* name=*"password"*><br>

Gender:

<input type=*"radio"* name=*"gender"* value=*"Male"*> Male

<input type=*"radio"* name=*"gender"* value=*"Female"*> Female<br>

<input type=*"submit"*>

</form>

</body>

</html>

**Step2:**

**Create a new Servlet package name** registerServlet **class name** RegisterServlet

package registerServlet;

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 java.io.PrintWriter;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.SQLException;

@WebServlet("/RegisterServlet")

public class RegisterServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

@Override

protected void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException {

String name = req.getParameter("name");

String email = req.getParameter("email");

String password = req.getParameter("password");

String gender = req.getParameter("gender");

String jdbcUrl = "jdbc:mysql://localhost:3306/Registration"; // Replace with your database details

String dbUser = "root";

String dbPassword = "0000";

res.setContentType("text/html");

PrintWriter out = res.getWriter();

try (Connection connection = DriverManager.getConnection(jdbcUrl, dbUser, dbPassword)) {

Class.forName("com.mysql.cj.jdbc.Driver");

String query = "INSERT INTO Users (name, email, password, gender) VALUES (?, ?, ?, ?)";

try (PreparedStatement ps = connection.prepareStatement(query)) {

ps.setString(1, name);

ps.setString(2, email);

ps.setString(3, password); // Ideally, hash the password before storing

ps.setString(4, gender);

int result = ps.executeUpdate();

if (result > 0) {

out.println("<h3>Registration Successful!</h3>");

out.println("<p>Welcome, " + name + " (" + gender + ")</p>");

} else {

out.println("<h3>Registration Failed. Please try again.</h3>");

}

}

} catch (SQLException | ClassNotFoundException e) {

e.printStackTrace();

out.println("<h3>Error: Unable to register. Please try again later.</h3>");

}

}

}

**Step3:**

**Create table**

CREATE TABLE Users (

id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(100) NOT NULL,

email VARCHAR(100) UNIQUE NOT NULL,

password VARCHAR(255) NOT NULL,

gender ENUM('Male', 'Female') NOT NULL

);

**Step4:Run register.jsp on server**