**Problem Statement 3: Develop Social Networking Website MyFriends**

**1.Registration**.**jsp**  
  
<!DOCTYPE html>

<html>

<head>

<title>User Registration</title>

</head>

<body>

<h1>User Registration Form</h1>

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

First Name: <input type=*"text"* name=*"firstName"* required /><br><br>

Last Name: <input type=*"text"* name=*"lastName"* required /><br><br>

Country:

<select name=*"country"*>

<option value=*"USA"*>USA</option>

<option value=*"India"*>India</option>

<option value=*"UK"*>UK</option>

</select><br><br>

Languages Known: <br>

<input type=*"checkbox"* name=*"languages"* value=*"English"*> English<br>

<input type=*"checkbox"* name=*"languages"* value=*"Spanish"*> Spanish<br>

<input type=*"checkbox"* name=*"languages"* value=*"French"*> French<br><br>

Gender:

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

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

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

<input type=*"reset"* value=*"Reset"*>

</form>

</body>

</html>

**2.Registrationservlet**

**import** java.io.IOException;

**import** jakarta.servlet.ServletException;

**import** jakarta.servlet.annotation.WebServlet;

**import** jakarta.servlet.http.HttpServlet;

**import** jakarta.servlet.http.HttpServletRequest;

**import** jakarta.servlet.http.HttpServletResponse;

@WebServlet("/RegistrationServlet")

**public** **class** RegistrationServlet **extends** HttpServlet {

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

String firstName = request.getParameter("firstName");

String lastName = request.getParameter("lastName");

String country = request.getParameter("country");

String[] languages = request.getParameterValues("languages");

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

**try** {

RegistrationBO registrationBO = **new** RegistrationBO();

registrationBO.validateRegistrationData(firstName, lastName, country, languages, gender);

RegisterDAO registerDAO = **new** RegisterDAO();

User user = registerDAO.saveUser(firstName, lastName, country, languages, gender);

request.setAttribute("registrationId", user.getRegistrationId());

request.getRequestDispatcher("success.jsp").forward(request, response);

} **catch** (Exception e) {

request.setAttribute("errorMessage", e.getMessage());

request.getRequestDispatcher("error.jsp").forward(request, response);

}

}

}  
  
**3.RegistrationBO**

public class RegistrationBO {

public void validateRegistrationData(String firstName, String lastName, String country, String[] languages, String gender) throws BusinessException {

if (firstName == null || firstName.isEmpty()) {

throw new BusinessException("First Name is required.");

}

if (lastName == null || lastName.isEmpty()) {

throw new BusinessException("Last Name is required.");

}

if (country == null || country.isEmpty()) {

throw new BusinessException("Country is required.");

}

if (languages == null || languages.length == 0) {

throw new BusinessException("At least one language must be selected.");

}

if (gender == null || gender.isEmpty()) {

throw new BusinessException("Gender is required.");

}

}

}

**4.RegistrationDAO**

import java.sql.\*;

import java.util.\*;

public class RegisterDAO {

private static final String *DB\_URL* = "jdbc:mysql://localhost:3306/myfriends";

private static final String *DB\_USER* = "root";

private static final String *DB\_PASS* = "Password@12";

public User saveUser(String firstName, String lastName, String country, String[] languages, String gender) throws SQLException, Exception {

String registrationId = "REG" + System.*currentTimeMillis*();

String languagesString = String.*join*(",", languages);

String query = "INSERT INTO users (registrationId, firstName, lastName, country, languages, gender) VALUES (?, ?, ?, ?, ?, ?)";

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

try (Connection conn = DriverManager.*getConnection*(*DB\_URL*, *DB\_USER*, *DB\_PASS*);

PreparedStatement stmt = conn.prepareStatement(query)) {

stmt.setString(1, registrationId);

stmt.setString(2, firstName);

stmt.setString(3, lastName);

stmt.setString(4, country);

stmt.setString(5, languagesString);

stmt.setString(6, gender);

int rowsAffected = stmt.executeUpdate();

if (rowsAffected > 0) {

return new User(firstName, lastName, country, languages, gender, registrationId);

} else {

throw new SQLException("Failed to insert user data into the database.");

}

}

}

}

**5.User.java**

**public** **class** User {

**private** String firstName;

**private** String lastName;

**private** String country;

**private** String[] languages;

**private** String gender;

**private** String registrationId;

**public** User(String firstName, String lastName, String country, String[] languages, String gender, String registrationId) {

**this**.firstName = firstName;

**this**.lastName = lastName;

**this**.country = country;

**this**.languages = languages;

**this**.gender = gender;

**this**.registrationId = registrationId;

}

**public** String getFirstName() {

**return** firstName;

}

**public** String getLastName() {

**return** lastName;

}

**public** String getCountry() {

**return** country;

}

**public** String[] getLanguages() {

**return** languages;

}

**public** String getGender() {

**return** gender;

}

**public** String getRegistrationId() {

**return** registrationId;

}

}

**6.Business exception**

public class BusinessException extends Exception {

public BusinessException(String message) {

super(message);

}

}

**7.error.jsp**

<!DOCTYPE html>

<html>

<head>

<title>Error</title>

<style>

*.error* {

color: *red*;

}

</style>

</head>

<body>

<h1>Error</h1>

<p class=*"error"*>${errorMessage}</p>

<a href=*"registration.jsp"*>Go back to registration form</a>

</body>

</html>

**8.success.jsp**

<!DOCTYPE html>

<html>

<head>

<title>Success</title>

</head>

<body>

<h1>Registration Successful</h1>

<p>Your registration ID is: ${registrationId}</p>

</body>

</html>