

Assignment 4 – Implementing Student Assessment Portal using JSP, Servlets, JPA, Hibernate, JPQL and MySQL

- Please create this whole project using Maven
- Please create all GUIs in JSP
- The servlet should be used to get requests for processing some information in/to the server
- It is advised to create separate packages for different roles (as illustrated below) for handling relevant functionality
- You need to submit a single zip file named “Assignment4-YourName.zip”. This folder should have two folders inside: 1- full project code, 2- db-script- this folder should contain mysql db script that your project will be using.
- Deadline (strict): Sunday, 3rd April, 23:59. Late submission only with a medical certificate.
- Please note that the graders are advised to check all submissions for plagiarism. Assignments need to be solved individually.
- If you have questions about the assignment or need help with it, the best approach is to ask a tutor during one of the lab sessions (it is recommended to visit all lab sessions).
- Use Java comments to explain your code.
- Finally, your submitted project should be error-free and properly executable.

This assignment is marked out of **12%** of the overall grade for the module.

Description

In this assignment, you will develop a demo project that we refer to as Student Assessment System. This system will consist of a typical scenario of a University Management System. Your application should have the following functionalities at minimal. We can conceptualize this application from the perspective of different stakeholders. We have three major stakeholders in this system, i.e., Students, Teachers, and Administration (we refer to this as HODs). This system should have a proper authentication system. Therefore, you need to provide a Login screen for the roles such as Students, Instructors, and HODs. All the Roles will have separate dashboards. And none of the Roles will be allowed to access each other dashboards. Below you can find the list of functionalities you need to provide to each Role:

HOD

- 1- After login, list of course will be displayed to an HOD. For sake of simplicity, we are not going into details of programs/semester etc.
- 2- Hod will assign courses to an instructor.

NOTE: You can pre-populate Instrcutor and Course tables with some entries. So, the objective is to design a screen that allow the HODs to effectively assign a course to an instructor.

Instructors

- 1- After Login on the dashboard, instructor will see the list of assigned courses by the HOD.
- 2- The system will allow him/her to create an assessment criterion for each assigned course.
- 3- In the assessment criteria, system will allow the instructor to assign weightage to each of the activities, i.e., Quizzes, Assignments, Mid-Term, and Final exam. The detail of each activity is given below:
 - a. Quizzes – it will allow the instructors to define its weightage in between 10% to 20%.
 - i. Then, Instructor can take 5 Quizzes at most to utilize the allocated marks.
 - ii. For each Quiz, instructor can define its weightage out the total allocated weightage.
 - b. Assignments - it will allow the instructors to define its weightage in between 10% to 20%.
 - i. Then, Instructor can take 3 Assignments at most to utilize the allocated marks.
 - ii. For each Quiz, instructor can define its weightage out the total allocated weightage.
 - c. Mid --- Mid must be 30% (Instructor are allowed to give a single Mid)
 - d. Final – Final must be 50% (Instructor are allowed to give a single Final)
- 4- The system should all allow the instructor to enter marks of the students in each activity.
- 5- There would be consolidated view of the whole assessment as shown below. In this case, two quizzes and three assignments are given.

StdNo	Quizzes (10%)		Assignment (10%)			Mid (30%)	Final (50%)	Total
	Q1(4)	Q2(6)	A-1(3)	A-2(2)	A-3(5)	Mid (30)	Final (50)	100%
0001	2	4	2	2	3	15	23	51
0002	4	5	3	2	3	20	40	77

NOTE: the same consolidate view can be accessed at any stage. For example, if single Quiz was given, so rest of cell values will be blank.

Student

- 1- On the student dashboard, list of courses will be displayed where he/she can register for any number courses.
- 2- If the student has already registered, then the list of registered courses will be displayed.
- 3- Students will be able to see their assessment (at any stage) in each activity marked by the instructor in his registered courses. You can use the above consolidate view to display it students.