

LAB 321 Assignment

Type:
Code:
Point:
Slot(s):

Long Assignment
J3.L.P0007
550
NA

Title: Quiz Online

Background

Build a website to take the quiz.

Program Specifications

Build a website that takes the multi-choice quiz. Each question has 4 answers, including 1 correct answer. The system is basically described as follows: there are many subjects in the system, corresponding to each subject, the number of questions and the time to take the quiz may vary. There is also question management for academic staff.

You must use Servlet as Controller and follow MVC2 model.

Example: There are 2 subjects in the system:

- Prj311- Java Desktop: there are 40 questions in each quiz and it takes 60 minutes for the exam.
- Prj321- Java Web: each quiz has 50 questions and the quiz time is 80 minutes.

Features:

This system contains the following functions:

- **Function 1: Registration - Create an account to take the quiz (50 points)**
 - o Registration a new account: email, name, password, role, status(email as ID).
 - o The default role of new account is student.
 - o The default status of new account is New.
 - o Password must be encrypted using SHA-256 before store in database.
- **Function 2: Login- Used to authenticate users who access the system is valid (50 Points)**
 - o The actor enters ID and password, the function checks if the ID with the password is in the available account list, then grant the access permission. If not, a message would appear to notify that account is not found.
 - o Login function includes logout and welcome functions.
- **Function 3: Search question - 50 Points**
 - o Only Admin role has permission to do this function.
 - o Admin can find the question based on question name, status of question or subject.
 - o List first 20 available items in the system order by item name. Paging is required.
 - o The interface must show a list of questions for each subject. For each question, the answers and the correct answer must be displayed.
- **Function 4: Create Question- 50 points:**
 - o Only Admin role has permission to do this function.
 - o Each question has an id, question_content, answer_content, answer_correct, createDate, subjectID, status...
 - o After do the action then the screen must refresh.

- **Function 5: Update Question- 50 points**
 - Only Admin role has permission to do this function.
 - User can update the information of question: update question_content, answer_content, answer_correct, subject, ...
 - After do the action then the screen must refresh.
- **Function 6: Delete Question- 50 points**
 - Only Admin role has permission to do this function.
 - User can delete the question (change its status to deActive).
 - After do the action then the screen must refresh.
- **Function 7: Take a quiz- 200 points**
 - After login and select the subject that you want to take a quiz then the quiz will start and start the counter on screen.
 - When starting the quiz, the system will randomly select n questions from the question bank. N is a number of question of the quiz.
 - The screen will show the question and the corresponding answers.
 - The user selects the answer and presses the Next button to go to the next question.
 - When the user presses the Finish button or the timer expires, the results will show includes: number of correct and point. Then the quiz detail and a result information will be saved to the database.
 - This function is used for student role only.
- **Function 8: Show history- 50 points**
 - User can take over the quiz history.
 - Support search function: search by category, subject name (paging is required)

* The above specifications are only basic information; you must perform a requirements analysis step and build the application according to real requirements.

* You have to build your own database.

* The lecturer will explain the requirement only once on the first slot of the assignment.