King Fahd University of Petroleum & Minerals

Information and Computer Science Department

ICS 102: Introduction to Computing I

Term 161

Lab Project

We want to make an Online Test System to provide to an already registered set of students.

Project Outline:

- Online Test System
- Students are already registered.
- Questions are all multiple choices.
- The system should take a subset of 10m questions from the test bank randomly.
- Test Bank and the students' data will be provided.
- The project should contain a Student class, a Question Class, an array of students, and an array of questions (test bank).
- Each question has: question text, the choices, and the correct answer.
- Each student has: ID, name, password, highest score, and number of attempts. These details should be updated to the array after every test – including the leader board.
- Leader Board: The system should show a leader board that shows the details of the top 10 students and their respective scores and attempts.
- Once started, the system should read the test bank and the students' data from the files into the arrays.
- Program Functionality:
    o Login:
        ▪ Show Menu:
            • Take a Test.
                o Start a timer.
                o Duration is fixed to 10 mins for example.
                o Once the time reaches the limit, the rest of unsolved answers are left unanswered. The program should terminate the test.
                o The program should not provide feedback per question. Only the final score is printed, saved, and updated the order after the test is taken.
            • View Leader board (Sorted by the score top 10).
                o Show the id, name, highest score, and the number of attempts for the top 10 students.
                o Last row should display the average of all students' scores, and average number of attempts.
            • View my profile.
            • Logout
        o Exit (The program should terminate and save the students' data to the file).

Notes:

- Demos will be done on Wednesday January 4, 2017
- Submit the project (java files + data files + report) .
- The report is a document that has the description of your program and how you implemented it. After that, the report should have snapshots of your program while running .
- Copying will result in a grade of F in the course.