

CS241 - Questions for Lab Assignment 5

1 INSTRUCTIONS

- (1) This lab is **graded**.
- (2) Use the student database that was created in Lab2.
- (3) Each question carries 5 marks.

2 QUESTION 1

Consider the following relations:

Student(snum: integer, sname: string, major: string, level: string, age: integer)

Class(name: string, meets_at: time, room: string, fid: integer)

Enrolled(snum: integer, cname: string)

Faculty (fid: integer, fname: string, deptid: integer)

The meaning of these relations is straightforward; for example, Enrolled has one record per student-class pair such that the student is enrolled in the class.

Write the following queries in SQL. No duplicates should be printed in any of the answers.

- (1) List the students who are older than 18 years and have a level of SR and whose major is not a branch of Engineering.
- (2) Find the classes for which no student has enrolled.
- (3) Find the names of students who have enrolled for classes by those faculty members whose combined enrollment of the courses that they teach is less than five.
- (4) List all faculty members, showing their id, name and the number of classes they teach. The number of classes of those who teach no classes must be shown as 0.
- (5) List all the courses with their names, where they are taught and the number of students enrolled for each. If no students are enrolled, show the number of students as 0.