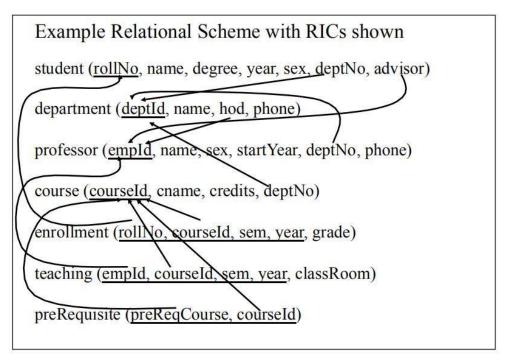# Introduction to Database Systems(CS3700)
Tutorial-4
Topic: Structured Query Language(SQL)

Date: 29-09-2021

Write SQL queries for the following data retrieval requests on the Academic Institute Relational Database Schema and run them on the data supplied to you in the Moodle page of the course. Please do not modify the given data.

1. Name the senior most professor(s) from each department along with their department.
2. Display the names and IDs of professors who only taught courses in 2018.
3. Display the names of students who failed (U grade) all their 4 credit courses in every attempt.
4. Find the name and roll number of students who have taken courses in at least 5 departments.
5. Find the top 5 most popular courses - courses that have been registered for by the most number of students, across all years
6. Find the names of the students who got the highest number of S grades.
7. List name and ids of courses whose prerequisites do not have any prerequisites.
8. Show department-wise, the number of students whose advisor has taught them at least one course.
9. Display the names and IDs of professors along with the number of students advised by them who got only S grades so far.
10. Find the name of the CSE department professor who is advising the most number of students.

Example Relational Scheme with RICs shown

student (rollNo, name, degree, year, sex, deptNo, advisor)

department (deptId, name, hod, phone)

professor (empId, name, sex, startYear, deptNo, phone)

course (courseId, cname, credits, deptNo)

enrollment (rollNo, courseId, sem, year, grade)

teaching (empId, courseId, sem, year, classRoom)

preRequisite (preReqCourse, courseId)

Academic Institute Relational Scheme with RICs