## Introduction to Database Systems(CS3700) Tutorial-3

**Topic: Tuple Relational Calculus(TRC)** 

Date: 21/09/2021

## Write TRC queries for the following data retrieval requests on the Academic Institute Relational Schema:

- 1. List the courseId(s) of courses with no prerequisites.
- 2. List Id of the courses of CSE dept that are being taught in the current semester
- 3. Find the name and roll no. of the student(s) who are enrolled for courses offered by a department which is not his/her parent department in the current semester.
- 4. List the rollNo and name of student(s) who have enrolled for at least one course offered by their advisor.
- 5. Find the name and rollNo of all the CSE students who never scored a grade lower than C. (Assume that a student enrolls for at least one course)
- 6. Find the name(s) of the CSE professors who joined the department in the same year.
- 7. Find the list of roll numbers of students who got S grade in all the prerequisites of CS6700. (Assume that CS6700 has at least one pre-requisite)
- 8. List the name, Id of the department(s) with the senior most professor(s) of the institute.

## 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