CS2801T – Database Management System Lab

Exercise with answers:

Insert values into the relations created based on the data mentioned and write queries for the following questions.

- Get the EmpId, Name of the senior-most professors.
  Select p.EmpId, p.Name from Professors p where p.StartYear<= ALL (select distinct StartYear from Professor);

- Get the RollNo and Name of the students whose gender is same as their advisor's.
  Select s.RollNo, s.Name from Student s where s.Sex = ALL (select f.Sex from Professor f where f.EmpId = s.Advisor);

- Get the EmpId and Name of professors who advise at least one women student.
  Select f.EmpId, f.Name from Professor f where exists (select s.RollNo from Student s where s.Advisor = f.EmpId and s.Sex = 'F');

- Obtain the department Id and Name of departments that do not offer any 4 credit courses.
  Select d.DeptId, d.Name from Department d where NOT exists (select CourseId from course c where c.DeptNo = d.DeptId and c.Credits = 4);

- Determine the students who are enrolled for every course taught by Prof. Ramanujam. Assume that Prof. Ramanujam teaches at least one course.
  Select s.RollNo, s.Name from Student s where not exists (select t.* from Teaching t, Professor p where t.EmpId = p.EmpId and p.Name = "Ramanujam" and not exists (select e.* from Enrollment e where e.CourseId = t.CourseId and e.RollNo = s.RollNo));

- Determine the students who have obtained either 'S' or 'A' grade in all the pre-requisite courses of a specific course (CS7890). It is known that CS7890 has at least one pre-requisite.
  Select s.RollNo, s.name from Student s where not exists (select * from Prerequisite p where p.CourseId = "CS7890" and not exists (select * from Enrollment e where e.CourseId = p.PreReqCourse and e.RollNo = s.RollNo and e.Grade ="S" or e.Grade = "A"));

- Obtain the Roll Numbers of students who are currently enrolled for either CS2300 or CS2320 courses.
  (Select RollNo from Enrollment where CourseId = 'CS2300' and Sem = 'odd' and Year = '2019') UNION (select RollNo from Enrollment where CourseId = 'CS2320' and Sem = 'odd' and Year = '2019');

- Obtain the Roll Numbers of students who are currently enrolled for both CS2320 and CS232 courses.
  (select RollNo from Enrollment where CourseId = 'CS2300' and Sem = 'odd' and Year = '2019') INTERSECT (select RollNo from Enrollment where CourseId = 'CS2320' and Sem = 'odd' and Year = '2019';

- Obtain the Roll Numbers of students who are currently not enrolled for CS2300 course.
  (select RollNo from Enrollment where Sem='odd' and Year = '2019') EXCEPT (select RollNo from Enrollment where CourseId = 'CS2300' and Sem = 'odd' and Year = '2019');