**Foxodd Schema**

**School(school\_id, school\_name, address, dean\_name)**

**Faculty(faculty\_id, faculty\_name, salary, *dept\_id*)**

FK(dept\_id) references Department(dept\_id)

**Department(dept\_id, dept\_name, dept\_location, *school\_id*, *chair\_id*)**

FK(school\_id) references School(school\_id)

FK(chair\_id) references Faculty(faculty\_id)

**Major(major\_id, major\_name, *dept\_id*)**

FK(dept\_id) references Department(dept\_id)

**Student(stud\_id, stud\_name,total\_credits, *dept\_id*, *advisor\_id*)**

FK(dept\_id) references Department(dept\_id)

FK(advisor\_id) references Faculty(faculty\_id)

**Course(course\_id, course\_name, credits, *dept\_id*)**

FK(dept\_id) references Department(dept\_id)

**Section(*course\_id,* section\_id, semester, year)**

FK(course\_id) references Course(course\_id)

**Prerequisite(*course\_id*, *prereq\_id*)**

FK(course\_id) references Course(course\_id)

FK(prereq\_id) references Course(course\_id)

**Enrol(*student\_id, course\_id, section\_id* semester, year grade)**

FK(course\_id,section\_id ) references Section(course\_id,section\_id)

FK(student\_id) references Student(student\_id)

**Room(room\_id, floor\_no, building\_no, capacity)**

**Class(*room\_id, course\_id, section\_id, faculty\_id*, date, time, duration)**

FK(course\_id,section\_id) references Section(course\_id,section\_id)

FK(faculty\_id) references Faculty(faculty\_id)

FK(room\_id) references Room(room\_id)

Write relational algebra expressions and tuple relational formulas for following retrievals pertaining to Foxodd University:

1. Retrieve all faculty information from physics department.
2. Retrieve all female faculty information from physics department, whose salary is more than 50000.
3. Display the department names, location and school name for those departments whose location is same as their name.
4. Display faculty names for those faculty who are teaching section 2 of CS101scheduled in morning half in a room on first floor.
5. Display the student names for all students who are enrolled for section 2 of CS101.
6. Display the faculty names who are teaching various sections of courses CS101 and CS105
7. Display all courses offered in even semester of year 2020 or in odd semester of year 2021 or both.
8. Display all the prerequisites required by the course CS201.
9. Display all the courses where CS201 is required as prerequisite.
10. Find all the students who have completed all the courses required by CS201.
11. Find name of faculty and course if the course is offered in year 2022, and is scheduled in even semester.
12. Give the name of the youngest student for course CS101
13. Give the name, id and Date of birth of oldest student
14. Give the name, id and Date of birth of students who are not among the oldest students
15. Give the name, id of students who have registered for atleast one section of a course, which has been registered by Amit.
16. Get the student id, name of the oldest student from computer science department
17. Get the name and id of the faculties who are department chairs.
18. Get the three highest enrolled courses/sections
19. Get the name of the courses which do not have any pre-requisites.
20. Get the name of the course which is pre-requisite to most number of courses.
21. Get the name of the course which has more than one pre-requisites.

v) get the details of all the courses successfully completed by Amit

w) get the name of each student who has registered for more than one section of a course

Now that you have learnt SQL queries, translate these RA/TRC expressions into SQL queries.