CSE 4410

DATABASE MANAGEMENT SYSTEMS II LAB

SWE 21

CSE
IUT

Contents

Lab 1 Introduction

Welcome to CSE 4410.

1 Marks Distribution

Module	Mark (%)
Attendance	10
Lab Evaluation	40
Lab Report	20
Project	30

2 Approximate Course Outline

1. (Intro) + Basics of Relational Database Model
2. Tablespace
3. JDBC Connection + (Project Proposal Submission)
4. PL/SQL
    a. Function/Procedure
    b. Cursor
    c. Trigger
5. Project Progress Presentation
6. NoSQL [MongoDB]
    a. Theory
    b. Sessional
7. Graph-based Database [Neo4j]
    a. Theory
    b. Sessional
8. Project Presentation

3 Task - Group A

Consider the schema shown in Figure 1.1 for the database of a university:

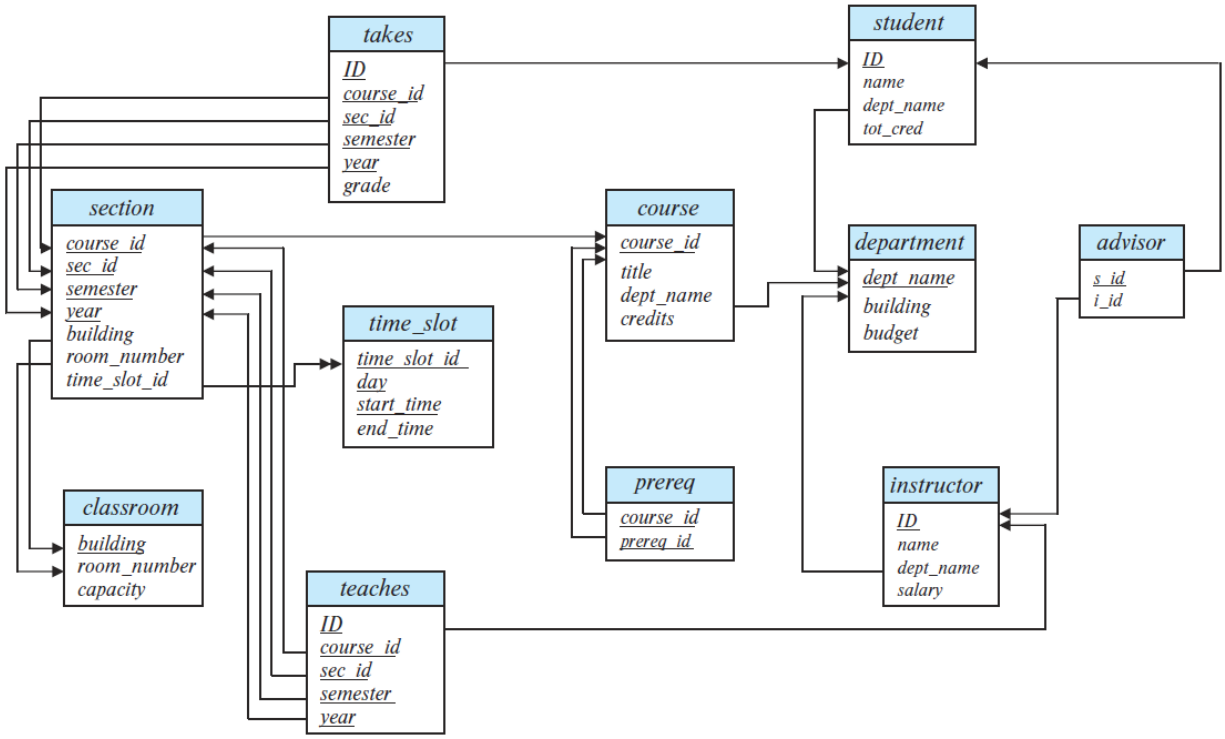

Figure 1.1. Schema diagram for a university database

Write the command `@"<file_path>\<file_name>.sql"` in your sql command line to execute the provided .sql files. Now, write SQL statements to answer each of the following queries:

1. Find the names of courses offered by the 'Comp. Sci.' department which has 3 credits.
2. For each student, list their ID, name, and total credits s/he has taken. Do not include the students who did not register for any course.
3. Find the names and the department names of all instructors who have not taught a course.
4. Find all the course titles that do not have any prerequisites.
5. Find the name of the student who takes 2nd, 3rd, and 5th maximum total credits.
6. Find the names of the instructors who are taking courses with no students enrolled. Also, show the name of the courses.
7. Retrieve the course titles and the percentage of students who earned an 'A' grade in each course.
8. Find the number of instructors who have taught the same course in consecutive years.
9. Insert each student as a student with total credit set to 0 in the same department they are teaching.
10. Update the 'tot_cred' for each student based on the credits taken.
11. Update the salary of each instructor to 10000 times the number of course sections they have taught.
12. Find all rooms that have been assigned to more than one section at the same time.
13. Create a view that will show the instructor-wise time slot for 'Fall, 2017' sorted by the instructor_Id, course_ID, section_ID (Instructor_ID, name, his/her course information, section_ID, count of students in that section for the course, and time_slot).