Task 1:

ALL ATTRIBUTES ARE ASSUMED TO BE "NOT NULL"

```
create database universitydb;
   use universitydb;

    create table department (

    dept_name varchar(20),
    building varchar(15),
    budget numeric(10,2),
    Primary key (dept_name));

    create table course (

    course_id varchar(8),
   title varchar(50),
    dept_name varchar(20),
    credits numeric(2,0),
    primary key (course_id),
   foreign key (dept_name) references department (dept_name));

    create table instructor (

    instructor id varchar(10),
    instructor name varchar(30),
    dept_name varchar(20),
    salary numeric(10,2),
    primary key (instructor_id),
   foreign key(dept_name) references department (dept_name));

    create table section (

    course id varchar(8),
    section_id varchar(8),
    semester varchar(10),
    section_year int,
    building varchar(50),
    room number varchar(10),
    primary key (course_id, section_id, semester, section_year),
   foreign key (course_id) references course (course_id));
• create table teaches (
    instructor_id varchar(10),
    course_id varchar(8),
    section id varchar(8),
    semester varchar(10),
    section year int,
    primary key (instructor_id, course_id, section_id, semester, section_year),
    foreign key (instructor_id) references instructor (instructor_id),
    foreign key (course_id, section_id, semester, section_year) references section(course_id,
    section_id, semester, section_year));
```

```
    create table student (
        student_id varchar(10),
        student_name varchar(30),
        dept_name varchar(20),
        total_credits numeric(5,2),
        primary key (student_id),
        foreign key(dept_name) references department(dept_name));
```

Insertion:

- Department
 - INSERT INTO department (dept_name, building, budget)
 VALUES ('CMPSC', 'Sutherland', '52000.00'), ('ART', 'Woodland', '568000.00'), ('Law', 'Cloverly', '37500.00');



- Course
 - INSERT INTO course (course_id, title, dept_name, credits)
 VALUES ('CMPSC462', 'Data Structures', 'CMPSC', '3'), ('CMPSC463', 'Algorithms', 'CMPSC', '3'), ('CMPSC430', 'Database Design', 'CMPSC', '3');



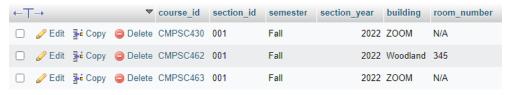
- Instructor
 - INSERT INTO instructor (instructor_id, instructor_name, dept_name, salary)
 VALUES ('vue9', 'Vinayak Elangovan', 'CMPSC', '70000.00'), ('msh5850', 'MD Hossain', 'CMPSC', '90000.00'), ('aet5496', 'Alejandro Trofimoff', 'CMPSC', '50000.00');



Section

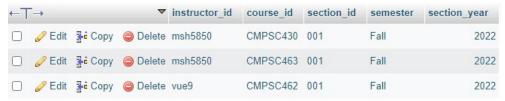
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INSERT INTO section (course_id, section_id, semester, section_year, building, room_number)
 VALUES ('CMPSC462', '001', 'Fall', '2022', 'Woodland', '345'), ('CMPSC463', '001', 'Fall', '2022', 'ZOOM', 'N/A'), ('CMPSC430', '001', 'Fall', '2022', 'ZOOM', 'N/A');



Teaches

INSERT INTO teaches (instructor_id, course_id, section_id, semester, section_year)
 VALUES ('vue9', 'CMPSC462', '001', 'Fall', '2022'), ('msh5850', 'CMPSC463', '001', 'Fall', '2022'), ('msh5850', 'CMPSC430', '001', 'Fall', '2022');



Student

0

INSERT INTO student (student_id, student_name, dept_name, total_credits)
 VALUES ('gkn5075', 'Gabriel Nulman', 'CMPSC', '95.50'), ('pns5075', 'Parth Shah', 'CMPSC', '90.00'), ('jag6611', 'Jacob Gampa', 'CMPSC', '100.00');



Task 2:

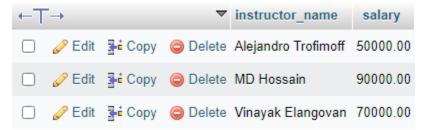
1) UPDATE department
 SET budget = (0.05 * budget) + budget
 WHERE dept name = "Law";



SELECT budget FROM department WHERE dept_name = "cmpsc";



3) SELECT instructor_name, salary FROM instructor
 WHERE dept_name = "cmpsc";



4) SELECT student_name, total_credits FROM student;

← T→				student_name	total_credits
	Edit	≩- Сору	Delete	Gabriel Nulman	95.50
		≩ € Copy	Delete	Jacob Gampa	100.00
	<i></i>	≩- Copy	Delete	Parth Shah	90.00