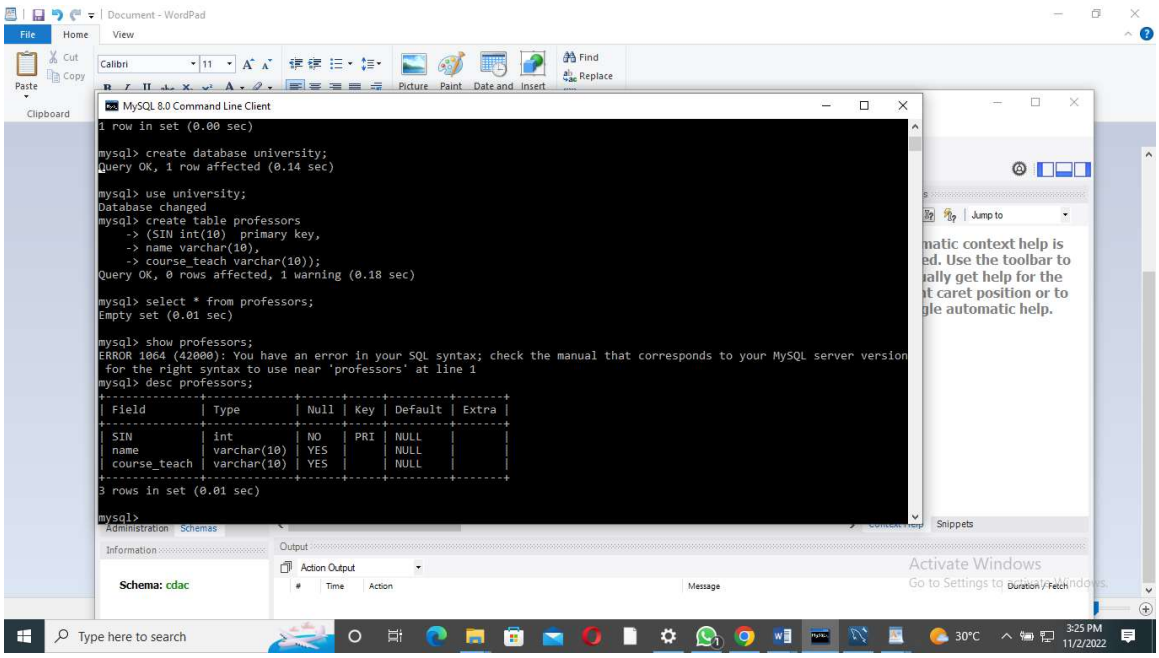
Exercise 1

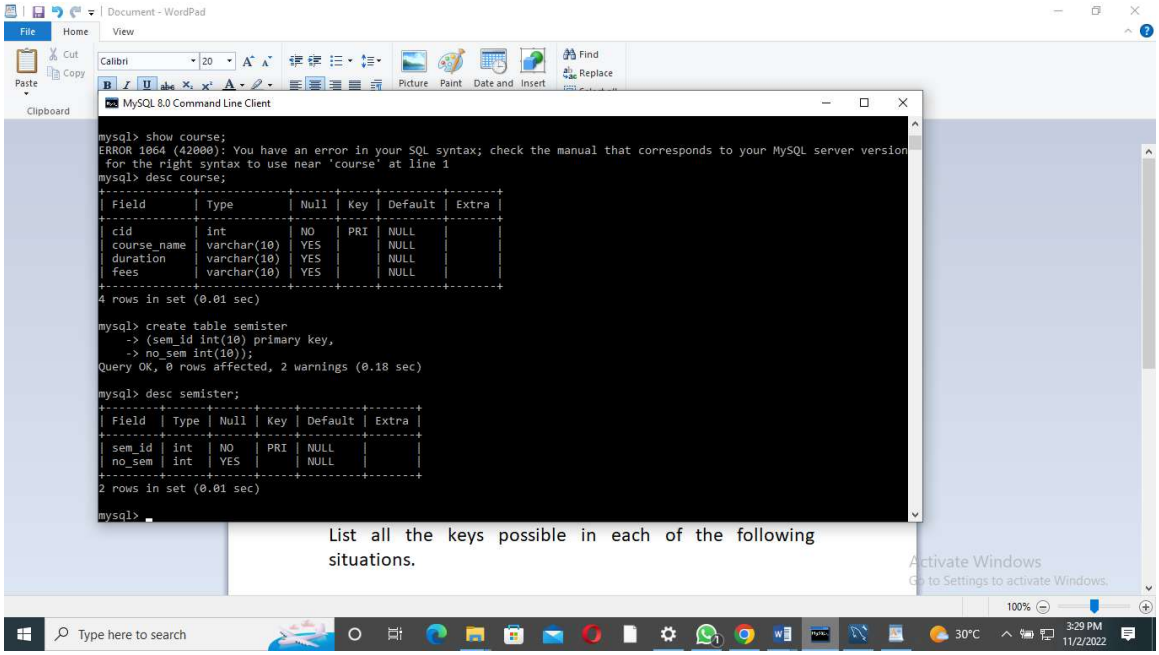
A university DB contains information about professors (identified by SIN) and courses (identified by course ID). Professors teach courses; each of the following situations concerns the Teaches relationship set.

List all candidate keys of the Teaches relationship set. a. Professors can teach the same course in several semesters, and each offering must be recorded. b. Professors can teach the same course in several semesters, but only the most recent such offering needs to be records. Assume the above Situation (b) applies in all subsequent situations.

List all the keys possible in each of the following situations.

a. Every professor teaches a course, and every course is taught by some professor. b. Every professor teaches exactly one course, and every course is taught by exactly one professor.





FLOWCHART:

1.start

2.create database name as university.

3.use university database.

4.create table name as professors with SIN is primary key

```
 create table professors
   -> (SIN int(10)  primary key,
   -> name varchar(10),
   -> course_teach varchar(10));
```

5.create table name as course with cid as primary key

```
create table course
   -> (cid int(10) primary key,
   -> course_name varchar(10),
   -> duration varchar(10),
   -> fees varchar(10));
```

6.create table semister sem_id is primary key

```
 create table semister
   -> (sem_id int(10) primary key,
   -> no_sem int(10));
```

7.exit

1.

CANDIDATE KEY (SIN ,cid ,sem_id)

2.

primary key are SIN,Cid,Sem_id.

foreign key cid,sem_id.

Alternate key (SIN,Course_teach),(cid,fees),(sem_id,no_sem)