

ASSIGNMENT NO 1

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Q. 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.

Queries :

```
create table PROFESSORS(SIN int(10) Primary Key,NAME varchar(20),ADDRESS  
varchar(20),PHONE_NUMBER varchar(10));
```

```
Create table COURSES_FROM_SEMESTER_1(COURSE_ID int(5),COURSE_NAME  
varchar(20),COURSE_DURATION varchar(20),SIN int(10));
```

```
Alter table COURSES_FROM_SEMESTER_1 add constraint Foreign Key(SIN) references from  
PROFESSORS(SIN);
```

```
insert into PROFESSORS values(111021,"Mr. SADHU SRINIVAS",'AMEERPETH  
HYD','9876543210'); insert into PROFESSORS values(111022,"Ms. SUSHMITA  
MEENA",'NIZAMPETH HYD','8765432945'),(111023,"Mr. SAMIR",'CDAC  
HYD','9665437689'),(111024,"Mr. SRINIVAS KARTIK",'CDAC CAMP_HYD','9876568767');
```

```
insert into PROFESSORS values(111025,"Mr. UDAY  
KUMAR",'NEAR_BIRLA_TEMP','8767548934'); Update COURSES_FROM_SEMESTER_1 set SIN  
= 111026 where COURSE_ID = 02467;
```

```
Update table COURSES_FROM_SEMESTER_1 set SIN = 111021 where COURSE_ID = 2462;
```

```
insert into COURSES_FROM_SEMESTER_1 values(02463,'DBMS','2 WEEKS',111022);
```

```
insert into COURSES_FROM_SEMESTER_1 values(02464,'DATA STRUCTURE','2  
WEEKS',111023),values(02465,'ADVANCE JAVA','3  
WEEKS',111024),values(02466,'OPERATINGSYSTEM','3  
WEEKS',111024),values(02467,'.NET','2 WEEKS',111025);
```

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Output

MySQL 8.0 Command Line Client

```
mysql> desc professors;
```

Field	Type	Null	Key	Default	Extra
SIN	int	NO	PRI	NULL	
NAME	varchar(20)	YES		NULL	
ADDRESS	varchar(20)	YES		NULL	
PHONE_NUMBER	varchar(10)	YES		NULL	

4 rows in set (0.02 sec)

```
mysql> desc Courses_from_semester_1;
```

Field	Type	Null	Key	Default	Extra
COURSE_ID	int	YES		NULL	
COURSE_NAME	varchar(20)	YES		NULL	
COURSE_DURATION	varchar(20)	YES		NULL	
SIN	int	YES		NULL	

4 rows in set (0.00 sec)