ADVANCED DATABASE MANAGEMENT SYSTEM PRACTICAL LAB REPORT - I

COURSE CODE : MCC541

Submitted by
Ashutosh Singh Kushwaha
22MT0084

Under the guidance of
Prof. Kartikay Gupta
Assistant Professor

DEPARTMENT OF MATHEMATICS AND COMPUTING
IIT ISM DHANBAD

LAB DATE : 16-Jan-2023

Question 1.1 :

```
1  create database ADBMS;
2
3  create table instructor
4  (ID int primary key,
5   name varchar(20),
6   dept_name varchar(20),
7   salary int
8  );
9
10 insert into instructor values
11 (10101 ,'Srinivasan ','Comp Sci',65000),
12 (12121 ,' Wu', 'Finance', 90000),
13 (15151 , 'Mozart', 'Music', 40000),
14 (22222 , 'Einstein', 'Physics', 95000),
15 (32343 ,'El Said', 'History' ,60000),
16 (33456 ,'Gold', 'Physics', 87000),
17 (45565 ,'Katz', 'Comp. Sci.' ,75000),
18 (58583 ,'Califieri', 'History', 62000),
19 (76543 ,'Singh', 'Finance', 80000),
20 (76766 ,'Crick', 'Biology', 72000),
21 (83821 ,"Brandt", 'Comp. Sci.',92000),
22 (98345 ,'Kim' ,'Elec. Eng.', 80000);
23
```

Output table

Result Grid | Filter Rows:

ID	name	dept_name	salary
10101	Srinivasan	Comp Sci	65000
12121	Wu	Finance	90000
15151	Mozart	Music	40000
22222	Einstein	Physics	95000
32343	El Said	History	60000
33456	Gold	Physics	87000
45565	Katz	Comp. Sci.	75000
58583	Califieri	History	62000
76543	Singh	Finance	80000
76766	Crick	Biology	72000
83821	Brandt	Comp. Sci.	92000
98345	Kim	Elec. Eng.	80000
NULL	NULL	NULL	NULL

Question 1.2:

```
24 •  create table teaches
25    (ID int ,
26     Course_id varchar(20),
27     sec_id varchar(20),
28     semester varchar(20),
29     year int
30    );
31
32 •  insert into teaches values
33    (10101,'CS-101',1,'Fall',2017),
34    (10101,'CS-315',1,'Spring',2018),
35    (10101,'CS-347',1,'Fall',2017),
36    (12121,'FIN-201',1,'Spring',2018),
37    (15151,'MU-199',1,'Spring',2018),
38    (22222,'PHY-101',1,'Fall',2017),
39    (32343,'HIS-351',1,'Spring',2018),
40    (45565,'CS-101',1,'Spring',2018),
41    (45565,'CS-319',1,'Spring',2018),
42    (76766,'BIO-101',1,'Summer',2017),
43    (76766,'BIO-301',1,'Summer',2018),
44    (83821,'CS-190',1,'Spring',2017),
45    (83821,'CS-190',2,'Spring',2017),
46    (83821,'CS-319',2,'Spring',2018),
47    (98345,'EE-181',1,'Spring',2017);
48
```

Output Table :

Result Grid | Filter Rows: | Export: | Wra

ID	Course_id	sec_id	semester	year
10101	CS-101	1	Fall	2017
10101	CS-315	1	Spring	2018
10101	CS-347	1	Fall	2017
12121	FIN-201	1	Spring	2018
15151	MU-199	1	Spring	2018
22222	PHY-101	1	Fall	2017
32343	HIS-351	1	Spring	2018
45565	CS-101	1	Spring	2018
45565	CS-319	1	Spring	2018
76766	BIO-101	1	Summer	2017
76766	BIO-301	1	Summer	2018
83821	CS-190	1	Spring	2017
83821	CS-190	2	Spring	2017
83821	CS-319	2	Spring	2018
98345	EE-181	1	Spring	2017

Question 2 :
Query :

```
insert into instructor value('10211', 'Smith', 'Biology', 66000);
Select * from instructor;
```

Output

Result Grid | Filter Rows:

ID	name	dept_name	salary
10101	Srinivasan	Comp Sci	65000
10211	Smith	Biology	66000
12121	Wu	Finance	90000
15151	Mozart	Music	40000
22222	Einstein	Physics	95000
32343	El Said	History	60000
33456	Gold	Physics	87000
45565	Katz	Comp. Sci.	75000
58583	Califieri	History	62000
76543	Singh	Finance	80000
76766	Crick	Biology	72000
83821	Brandt	Comp. Sci.	92000
98345	Kim	Elec. Eng.	80000
NULL	NULL	NULL	NULL

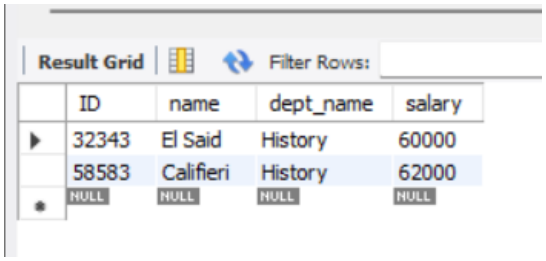
Question 3 :
Query

```
delete from instructor where ID=10211;
```

Question 4: Select tuples from instructor where dept_name = 'History'
Query

```
select * from instructor where dept_name='History';
```

Output :



Result Grid | Filter Rows:

ID	name	dept_name	salary
32343	El Said	History	60000
58583	Califieri	History	62000
NULL	NULL	NULL	NULL

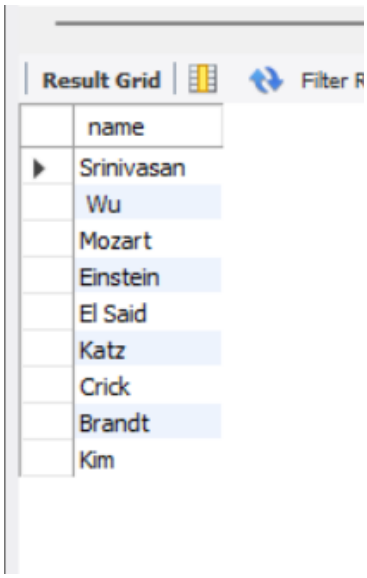
Question 5 : Cartesian product instructor x teaches.

```
select * from instructor cross join teaches;
```

Question 6 : Find the names of all instructors who have taught some course and the course_id

```
select A.name from instructor A where A.ID in (select B.ID from teaches B);
```

Output :



Result Grid | Filter R

name
Srinivasan
Wu
Mozart
Einstein
El Said
Katz
Crick
Brandt
Kim

Question 7 : Find the names of all instructors whose name includes the substring "dar".

```
select name from instructor where name like '%dar%';
```

Question 8 : Find the names of all instructors with salary between 90,000 and 100,000 (that is, ≥ 90,000 and ≤ 100,000)

```
select name from instructor where salary between 90000 and 100000;
```