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CSE-4A

Question:-

Program 4:

Consider the following database for student enrollment for course : STUDENT(snum: integer, sname:string, major: string, lvl: string, age: integer) CLASS(cname: string, meetsat: time, room: string, fid: integer) ENROLLED(snum: integer, cname:string) FACULTY(fid: integer, fname:string, deptid: integer) The meaning of these relations is straightforward; for example, Enrolled has one record per student-class pair such that the student is enrolled in the class. Level(lvl) is a two character code

with 4 different values (example: Junior: JR etc) Write the following queries in SQL. No duplicates should be printed in any of the answers. i.Find the names of all Juniors (level = JR) who are enrolled in a class taught by "name" ii.Find the names of all classes that either meet in room R128 or have five or more Students enrolled. iii.Find the names of all students who are enrolled in two classes that meet at the same time. iv.Find the names of faculty members who teach in every room in which some class is taught. v.Find the names of faculty members for whom the combined enrollment of the courses that they teach is less than five. vi.Find the names of students who are not enrolled in any class. vii.For each age value that appears in Students, find the level value that appears most often. For example, if

there are more FR level students aged 18 than SR, JR, or SO students aged 18, you should print the pair (18, FR).

Program 4:

```
create database studentfaculty2;

use studentfaculty2;


create table STUDENT(

snum int,

sname varchar(60),

major varchar(50),

lvl varchar(50),

age int,

primary key(snum)

);
```

```sql
create table CLASS(
cname varchar(60),
meetsat timestamp,
room varchar(60),
fid int,
primary key (cname)
);

create table enrolled(
snum int,
cname varchar(60),
primary key(snum,cname),
foreign key(snum) references
STUDENT(snum)
```

```sql
    on update cascade on delete cascade,

    foreign key(cname) references
    CLASS(cname)

    on update cascade on delete cascade

    );


    create table FACULTY(

    fid int,

    fname varchar(60),

    deptid int,

    primary key(fid)

    );


    insert into STUDENT values
    (1,'Jhon','CS','Sr',19), (
```

```
2,'Smith','CS','Jr',20),
(3,'Jacob','CV','Sr',20),
(4,'Tom','CS','Jr',20),
(5,'Rahul','CS','Jr',20),
(6,'Rita','CS','Sr',21);


insert into CLASS values
('Class1',"12/11/15
10:15:16.00000",'R1',14);

select * from CLASS;

delete from CLASS where
cname='Class1';

select * from CLASS;

insert into CLASS values
('Class1',"15/11/12
10:15:16.00000",'R1',14);

select * from CLASS;
```

```sql
insert into CLASS values
('Class10',"15/11/12
10:15:16.00000",'R128',14),
('Class2',"15/11/12
10:15:20.00000",'R2',12),

('Class3',"15/11/12
10:15:25.00000",'R3',11),
('Class4',"15/11/12
10:15:20.00000",'R4',14),
('Class5',"15/11/12
10:15:20.00000",'R3',15),

('Class6',"15/11/12
13:20:20.00000",'R2',14),
('Class7',"15/11/12
10:10:10.00000",'R3',14);
```

```sql
insert into ENROLLED values
(1,'Class1'),(2,'Class1'),(3,'Class3'),(4,'Class3'),(5,'Class4');


insert into FACULTY values
(11,'Harish',1000),(12,'MV',1000),(13,'Mira',1001),(14,'Shiva',1002),(15,'Nupur',1000);


select * from STUDENT;

select * from CLASS;

select * from ENROLLED;

select * from FACULTY;


select s.sname, f.fname from STUDENT s, CLASS c, FACULTY f,ENROLLED e
```

where s.snum=e.snum and s.lvl='Jr' and e.cname=c.cname and f.fid=c.fid;

select c.cname from class c where c.room = 'R128'

or c.cname in (select e.cname from enrolled e group by e.cname having count(e.snum)>5);

select distinct s.sname from student s where s.snum in

(select e1.snum from enrolled e1, enrolled e2, class c1, class c2

where e1.snum = e2.snum and e1.cname != e2.cname and e1.cname = c1.cname

and e2.cname = c2.cname and
c1.meetsat = c2.meetsat);

select distinct f.fname from faculty f
where 5>(select COUNT(e.snum) from
Class c, enrolled e

where c.cname = e.cname and c.fid =
f.fid);

select distinct s.sname from student s

where s.snum not in(select e.snum
from enrolled e);

Output:

Result Grid | Filter Rows: | | Edit:

cname	meetsat	room	fid
Class1	2012-11-15 10:15:16	R1	14
NULL	NULL	NULL	NULL

CLASS 1 × CLASS 2 CLASS 3 STUDENT 4 CLASS 5

Output

Result Grid | Filter Rows:

cname	meetsat	room	fid
NULL	NULL	NULL	NULL

CLASS 1 CLASS 2 × CLASS 3 STUD

Output

Result Grid | | Filter Rows: [   ]

	cname	meetsat	room	fid
▶	Class1	2015-11-12 10:15:16	R1	14
*	NULL	NULL	NULL	NULL

CLASS 1   CLASS 2   CLASS 3 ×   STUDENT 4

Output

Result Grid | | Filter Rows: [   ]

	snum	sname	major	lvl	age
▶	1	Jhon	CS	Sr	19
	2	Smith	CS	Jr	20
	3	Jacob	CV	Sr	20
	4	Tom	CS	Jr	20
	5	Rahul	CS	Jr	20
	6	Rita	CS	Sr	21
*	NULL	NULL	NULL	NULL	NULL

CLASS 1   CLASS 2   CLASS 3   STUDENT 4 >

Output

Action Output

Result Grid — Filter Rows:

cname	meetsat	room	fid
Class1	2015-11-12 10:15:16	R1	14
Class10	2015-11-12 10:15:16	R128	14
Class2	2015-11-12 10:15:20	R2	12
Class3	2015-11-12 10:15:25	R3	11
Class4	2015-11-12 10:15:20	R4	14
Class5	2015-11-12 10:15:20	R3	15
Class6	2015-11-12 13:20:20	R2	14
Class7	2015-11-12 10:10:10	R3	14
NULL	NULL	NULL	NULL

CLASS 1   CLASS 2   CLASS 3   STUDENT 4

Output

Action Output

Result Grid — Filter Rows:

snum	cname
1	Class1
2	Class1
3	Class3
4	Class3
5	Class4
NULL	NULL

CLASS 1   CLASS 2   CLASS 3   STUDENT

Output

Result Grid | Filter Rows:

fid	fname	deptid
11	Harish	1000
12	MV	1000
13	Mira	1001
14	Shiva	1002
15	Nupur	1000
NULL	NULL	NULL

CLASS 1   CLASS 2   CLASS 3   STUDE

Output

Result Grid | Filter Rows:

sname	fname
Smith	Shiva
Tom	Harish
Rahul	Shiva

CLASS 1   CLASS 2   CLASS 3   STUDENT 4

Output

Result Grid | Filter Rows:

	cname
▶	Class 10
	NULL

CLASS 1   CLASS 2   CLASS 3   S

Output

Result Grid | Filter Rows:

	sname

CLASS 1   CLASS 2   CLASS 3   STU

Output

Action Output

Result Grid | ▦ | ↻ Filter Rows:

	sname
▶	Rita

SS 1   CLASS 2   CLASS 3   STUDENT 4

Output

▢ Action Output

\#   Time   Action