

LAB-4 : STUDENT FACULTY DATABASEQuery 1 -

```
create database StudentFaculty;  
use StudentFaculty;
```

```
create table student(  
  snum int,  
  sname varchar(30),  
  major varchar(20),  
  lvl varchar(2),  
  age int,  
  primary key (snum));
```

```
create table stu Faculty(  
  fid int,  
  fname varchar(30),  
  deptid int,  
  primary key (fid));
```

```
create table class(  
  cname varchar(30),  
  meeksat timestamp,  
  room varchar(10),  
  fid int,  
  primary key (cname),  
  foreign key (fid) references Faculty(fid));
```

```

create table enrolled(
snum int,
cname varchar(30),
primary key (snum, cname) *
foreign key (snum) references student(snum)
foreign key (cname) references class(cname));

```

## Query 2 -

```

use studentfaculty;

```

```

insert into student values (1, 'Jhon', 'CS', 'Sr', 19);
insert into student values (2, 'Smith', 'CS', 'Sr', 20);
insert into student values (3, 'Jacob', 'CV', 'Sr', 20);
insert into student values (4, 'Tom', 'CS', 'Jr', 20);
insert into student values (5, 'Rahul', 'CS', 'Jr', 20);
insert into student values (6, 'Rita', 'CS', 'Sr', 21);
select * from student;

```

```

insert into faculty values (11, 'Hanish', 1000);
insert into faculty values (12, 'MV', 1000);
insert into faculty values (13, 'Mira', 1001);
insert into faculty values (14, 'Shiva', 1002);
insert into faculty values (15, 'Nupur', 1003);
select * from faculty;

```

```

insert into class values ('class 1', '12/11/15 10:15:16', 'R1', 14);
insert into class values ('class 10', '12/11/15 10:15:16', 'R10', 14);
insert into class values ('class 2', '12/11/15 10:15:20', 'R2', 12);
insert into class values ('class 3', '12/11/15 10:15:25', 'R3', 12);
insert into class values ('class 4', '12/11/15 20:15:20', 'R4', 14);
insert into class values ('class 5', '12/11/15 20:15:20', 'R5', 15);

```



```

insert into class values ('class 6', '12/11/15 13:20:20', 'P2', 14);
insert into class values ('class 7', '12/11/15 10:10:10', 'P3', 14);
select * from class;
insert into enrolled values (1, 'class 1');
insert into enrolled values (2, 'class 1');
insert into enrolled values (3, 'class 3');
insert into enrolled values (4, 'class 3');
insert into enrolled values (5, 'class 4');
insert into enrolled values (1, 'class 5');
insert into enrolled values (2, 'class 5');
insert into enrolled values (3, 'class 5');
insert into enrolled values (4, 'class 5');
insert into enrolled values (5, 'class 5');

```

### Query 3 -

use Student-Faculty;

- i) select distinct s.name from student s, class c, enrolled e,  
faculty f  
where s.snum = e.snum  
and e.cname = c.cname  
and c.hid = f.hid.  
and f.fname = 'Harish' and e.lvl = 'Tx'.
- ii) select ~~distinct~~ cname from class c  
where c.room = 'R128'  
or c.cname in (  
select e.cname from enrolled e  
group by e.cname  
having ~~count~~ COUNT (\*) >= 5);

- (iii) select distinct s.sname from student s  
 where s.snum in (  
 select E<sub>1</sub>.snum from enrolled E<sub>1</sub>, enrolled E<sub>2</sub>, class C<sub>1</sub>, class C<sub>2</sub>  
 where E<sub>1</sub>.snum = E<sub>2</sub>.snum  
 and E<sub>1</sub>.cname <> E<sub>2</sub>.cname  
 and E<sub>1</sub>.cname = C<sub>1</sub>.cname  
 and E<sub>2</sub>.cname = C<sub>2</sub>.cname  
 and C<sub>1</sub>.meetsat = C<sub>2</sub>.meetsat);
- (iv) select F.fname, F.fid from faculty F  
 where F.fid in (  
 select fid from class  
 group by fid having COUNT(\*) = (  
 select COUNT (distinct room) from class));
- (v) select distinct F.fname, F.fid from Faculty F  
 where 5 > (  
 select COUNT (E.snum) from class C, enrolled E  
 where C.cname = E.cname  
 and C.fid = F.fid);
- (vi) select distinct s.sname from student s  
 where s.snum not in (  
 select E.snum from enrolled E);
- (vii) select s.age, s.lvl from student s  
 group by s.age, s.lvl  
 having s.lvl in (  
 select s<sub>1</sub>.lvl from student s<sub>1</sub>  
 where s<sub>1</sub>.age = s.age  
 having COUNT(\*) >= all (

```
select COUNT (*)  
from student s2  
where s1.age = s2.age  
group by (s2.lvl, s2.age));
```

---