CODE:

```
CREATE TABLE student1(
snum INT,
sname VARCHAR(10),
major VARCHAR(10),
lvl VARCHAR(2),
age INT, primary key(snum));
CREATE TABLE faculty(
fid INT,fname VARCHAR(20),
deptid INT,
PRIMARY KEY(fid));
CREATE TABLE class(
cname VARCHAR(20),
metts_at TIMESTAMP,
room VARCHAR(10),
fid INT,
PRIMARY KEY(cname),
FOREIGN KEY(fid) REFERENCES faculty(fid));
CREATE TABLE enrolled(
snum INT,
cname VARCHAR(20),
PRIMARY KEY(snum,cname),
FOREIGN KEY(snum) REFERENCES student1(snum),
FOREIGN KEY(cname) REFERENCES class(cname));
INSERT INTO STUDENT1 VALUES('&snum', '&sname', '&major', '&lvl', '&age');
select * from student;
-- INSERT INTO FACULTY VALUES(&FID, '&FNAME', &DEPTID);
select * from faculty;
commit;
```

```
insert into class values('&cname', '&meets_at', '&room', '&fid');
select * from class;
commit;
insert into enrolled values('&snum','&cname');
select * from enrolled;

SELECT DISTINCT sname
FROM Student S, Class C, Enrolled E, Faculty F
WHERE S.snum = E.snum AND E.cname = C.cname AND C.fid = F.fid AND
F.fname ='prof.Murthy' AND S.lvl ='JR';
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(*) >= 5);

SELECT DISTINCT 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 = C1.cname
AND E2.cname = C2.cname AND C1.meets_at = C2.meets_at);
SELECT DISTINCT F.fname
FROM Faculty F
WHERE NOT EXISTS ((SELECT C.room FROM Class C )
except
(SELECT C1.room
```

```
FROM Class C1
WHERE C1.fid = F.fid ));
SELECT DISTINCT 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 sname
FROM student s WHERE s.snum NOT IN(SELECT e.snum from enrolled e);
SELECT S.age,S.lvl
FROM student S
GROUP BY S.age,S.lvl
HAVING S.lvl IN(SELECT S1.lvl FROM student S1 WHERE S1.age=S.age
GROUP BY S1.lvl,S1.age
HAVING COUNT(*)>=ALL(SELECT COUNT(*)
FROM student S2 WHERE S1.age=S2.age GROUP BY S2.lvl,S2.age));
```

Tables:

faculty

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

class

cname	meets_at	room	fid
class1	2012-11-15 10:15:16	R1	14
class10	2012-11-15 10:15:16	R128	14
class2	2012-11-15 10:15:20	R2	12
class3	2012-11-15 10:15:25	R3	12
class4	2012-11-15 20:15:20	R4	14
class5	2012-11-15 20:15:20	R3	15
class6	2012-11-15 13:20:20	R2	14

class 2

enrolled

snum	cname
1	class1
1	class5
2	class1
2	class5
3	class3
3	class5
4	class3
4	class5
5	class4
5	class5
NULL	NULL

student

snum	sname	major	lvl	age
0	&sname	&major	&l	0
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

Query1

age	lvl
0	&l
19	sr
20	jr
21	sr

Query 2

cname
class10
class5
NULL

Query 3

sname
jhon
smith
jacob
tom
rahul

Query 4

fname
Shiva

Query 5

sname
&sname
rita

Query 6

age	lvl
0	&l
19	sr
20	jr
21	sr