CREATE DATABASE ENROLLMENT;

USE ENROLLMENT;

CREATE TABLE STUDENT(SNUM INT(10),SNAME VARCHAR2(20),MAJOR VARCHAR2(20),LVL VARCHAR2(3),AGE INT(2),PRIMARY KEY(SNUM));

CREATE TABLE FACULTY(FID INT(10),FNAME VARCHAR2(20),DEPTID INT(1),PRIMARY KEY(FID));

CREATE TABLE CLASS(CNAME VARCHAR2(5),MEETS\_AT TIMESTAMP,ROOM INT(3),FID INT(10),PRIMARY KEY(CNAME),FOREIGN KEY(FID) REFERENCES FACULTY(FID));

CREATE TABLE ENROLLED(SNUM INT(10),CNAME VARCHAR2(5),PRIMARY KEY(SNUM),FOREIGN KEY(SNUM) REFERENCES STUDENT(SNUM),FOREIGN KEY(CNAME) REFERENCES CLASS(CNAME));

INSERT INTO STUDENT VALUES(1,'RAHUL','CSE','SR',20);

INSERT INTO STUDENT VALUES(2,'LOHITH','ISE','JR',19);

INSERT INTO STUDENT VALUES(3,'KEERTHAN','ETE','JR',19);

INSERT INTO STUDENT VALUES(4,'PATIL','CSE','SR',20);

INSERT INTO STUDENT VALUES(5,'PRIYANKA','ISE','SR',20);

INSERT INTO STUDENT VALUES(6,'HEMANTH','CSE','SR',20);

INSERT INTO STUDENT VALUES(7,'YAMINI','ISE','JR',19);

INSERT INTO STUDENT VALUES(8,'SNEHA','ETE','JR',19);

INSERT INTO STUDENT VALUES(9,'SARANYA','CSE','SR',20);

INSERT INTO STUDENT VALUES(10,'ANIL','ISE','SR',20);

INSERT INTO FACULTY VALUES(10,'PROF. MURTHY',10);

INSERT INTO FACULTY VALUES(20,'PROF. SUDHA',20);

INSERT INTO FACULTY VALUES(30,'PROF. LATHA',30);

INSERT INTO CLASS VALUES('4A','2011-10-20 09:50:00',301,10);

INSERT INTO CLASS VALUES('4B','2013-11-02 10:45:30',302,20);

INSERT INTO CLASS VALUES('4C','2014-11-22 11:15:02',303,10);

INSERT INTO CLASS VALUES('3A','2015-10-11 12:50:01',304,10);

INSERT INTO CLASS VALUES('3B','2016-10-16 01:05:05',305,10);

INSERT INTO ENROLLED VALUES(1,'4B');

INSERT INTO ENROLLED VALUES(2,'4B');

INSERT INTO ENROLLED VALUES(3,'4C');

INSERT INTO ENROLLED VALUES(4,'4B');

INSERT INTO ENROLLED VALUES(5,'4A');

INSERT INTO ENROLLED VALUES(6,'4B');

INSERT INTO ENROLLED VALUES(7,'3B');

INSERT INTO ENROLLED VALUES(8,'3B');

INSERT INTO ENROLLED VALUES(9,'3B');

INSERT INTO ENROLLED VALUES(10,'3A');

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 = 301 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='11:15:02');

SELECT DISTINCT F.FNAME FROM FACULTY F WHERE NOT EXISTS((SELECT C.ROOM FROM CLASS C) MINUS (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));