```
CREATE TABLE STUDENT ( USN VARCHAR (10) PRIMARY KEY, SNAME VARCHAR (25),
ADDRESS VARCHAR (25), PHONE NUMBER (10), GENDER CHAR (1));

CREATE TABLE SEMSEC (SSID VARCHAR (5) PRIMARY KEY, SEM NUMBER (2), SEC
CHAR (1));

CREATE TABLE CLASS (USN VARCHAR (10), SSID VARCHAR (5), PRIMARY KEY (USN,
SSID), FOREIGN KEY (USN) REFERENCES STUDENT (USN), FOREIGN KEY (SSID)
REFERENCES SEMSEC (SSID));

CREATE TABLE SUBJECT (SUBCODE VARCHAR (8), TITLE VARCHAR (20), SEM
NUMBER (2), CREDITS NUMBER (2), PRIMARY KEY (SUBCODE));

CREATE TABLE IAMARKS (USN VARCHAR (10), SUBCODE VARCHAR (8), SSID
VARCHAR (5), TEST1 NUMBER (2), TEST2 NUMBER (2), TEST3 NUMBER (2), FINALIA
NUMBER (2), PRIMARY KEY (USN, SUBCODE, SSID), FOREIGN KEY (USN) REFERENCES
STUDENT (USN), FOREIGN KEY (SUBCODE) REFERENCES SUBJECT (SUBCODE),
FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));
```

Insertion of values to tables

```
INSERT INTO STUDENT VALUES ('1RN13CS020','AKSHAY','BELAGAVI', 8877881122,'M');
INSERT INTO SEMSEC VALUES ('CSE8A', 8,'A');
INSERT INTO SEMSEC VALUES ('CSE7A', 7, 'A');
INSERT INTO CLASS VALUES ('1SP14CS020','CSE8A');
INSERT INTO CLASS VALUES ('1SP15CS010','CSE7A');
INSERT INTO SUBJECT VALUES ('10CS81','ACA', 8, 4);
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES
('1SP14CS091','10CS81','CSE8C', 15, 16, 18);
```

Queries:

1. List all the student details studying in fourth semester 'C' section.

```
SELECT S.*, SS.SEM, SS.SEC
FROM STUDENT S, SEMSEC SS, CLASS C
WHERE S.USN = C.USN AND
SS.SSID = C.SSID AND
SS.SEM = 4 AND
SS.SEC='C';
```

2. Compute the total number of male and female students in each semester and in each section.

```
SELECT SS.SEM, SS.SEC, S.GENDER, COUNT (S.GENDER) AS COUNT
FROM STUDENT S, SEMSEC SS, CLASS C
WHERES.USN = C.USN AND
SS.SSID = C.SSID
GROUP BY SS.SEM, SS.SEC, S.GENDER
ORDER BY SEM;
```

3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.

```
CREATE VIEW STU_TEST1_MARKS_VIEW
AS
SELECT TEST1, SUBCODE
FROM IAMARKS
WHERE USN = '1BI15CS101' ;
```

4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students.

Query 4 : update iamarks set finalia=(test1+test2+test3-least(test1,test2,test3))/2;

5. Categorize students based on the following criterion:
If FinalIA = 17 to 20 then CAT = 'Outstanding'
If FinalIA = 12 to 16 then CAT = 'Average'
If FinalIA< 12 then CAT = 'Weak'
Give these details only for 8th semester A, B, and C section students.

```
SELECT S.USN,S.SNAME,S.ADDRESS,S.PHONE,S.GENDER,
(CASE
WHEN IA.FINALIA BETWEEN 17 AND 20 THEN 'OUTSTANDING'
WHEN IA.FINALIA BETWEEN 12 AND 16 THEN 'AVERAGE'
ELSE 'WEAK'
END) AS CAT
FROM STUDENT S, SEMSEC SS, IAMARKS IA, SUBJECT SUB
WHERE S.USN = IA.USN AND
SS.SSID = IA.SSID AND
SUB.SUBCODE = IA.SUBCODE AND
SUB.SEM = 8;
```