### **DBMS LAB CIE-2 REPORT**

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**USN: 1BM19CS074** 

**SEC: 4-B** 

**BATCH NO: B2** 

LAB-IN-CHARGE: DR. K. PANIMOZHI

**PROGRAM NOS: 6-10** 

**REPORT:** 

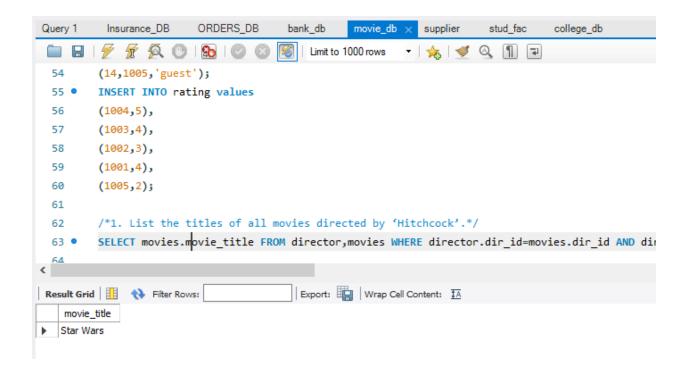
# **DBMS WEEK-6**

Consider the schema for Movie Database: ACTOR(Act\_id, Act\_Name, Act\_Gender) DIRECTOR(Dir\_id, Dir\_Name, Dir\_Phone) MOVIES(Mov\_id, Mov\_Title, Mov\_Year, Mov\_Lang, Dir\_id) MOVIE\_CAST(Act\_id, Mov\_id, Role) RATING(Mov\_id, Rev\_Stars) Write SQL queries to:

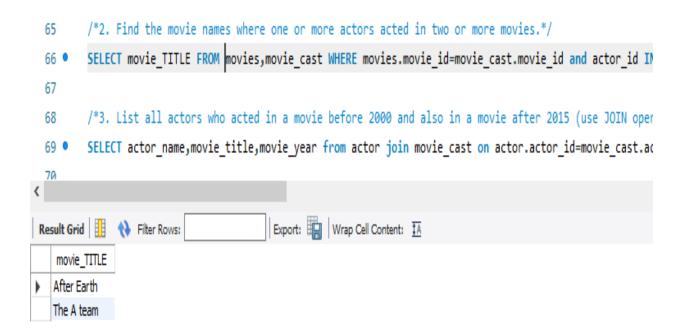
- 1. List the titles of all movies directed by 'Hitchcock'.
- 2. Find the movie names where one or more actors acted in two or more movies.
- 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation).
- 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title.
- 5. Update rating of all movies directed by 'Steven Spielberg' to 5.

### **OUTPUT:**

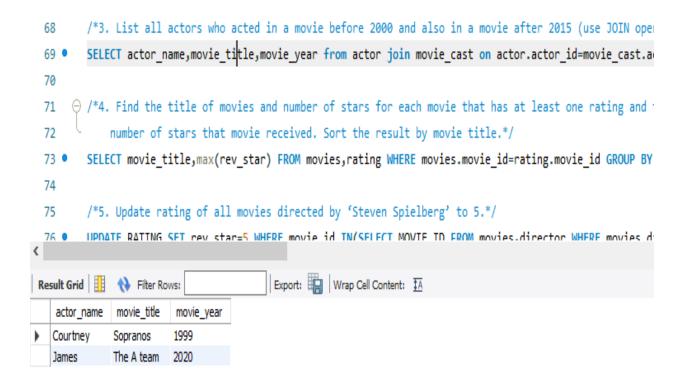
#### 1. List the titles of all movies directed by 'Hitchcock'.



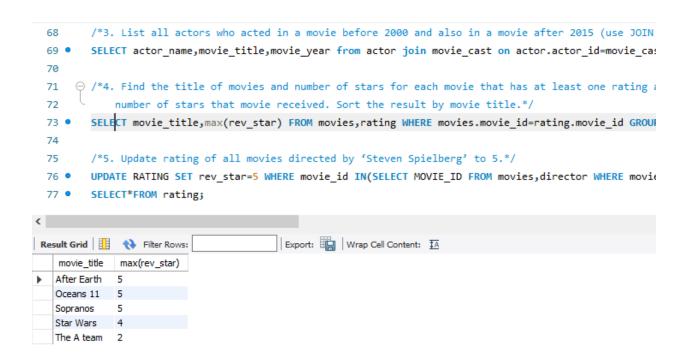
## 2. Find the movie names where one or more actors acted in two or more movies.



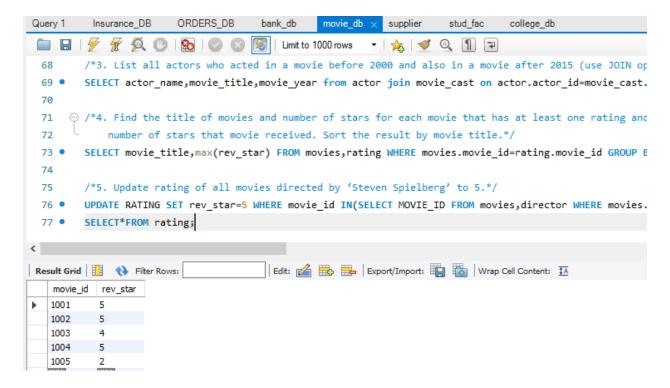
## 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation).



4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title.



#### 5. Update rating of all movies directed by 'Steven Spielberg' to 5.



\*\*\*\*\*\*\*\*\*\*\*\*WEEK 6 ENDS\*\*\*\*\*\*\*

# **DBMS WEEK-7**

Consider the following database that keeps track of airline flight information:

FLIGHTS (flno: integer, from: string, to: string, distance: integer, departs: time,

arrives: time, price: integer)

AIRCRAFT (aid: integer, aname: string, cruisingrange: integer)

**CERTIFIED** (eid: integer, aid: integer)

**EMPLOYEE** (eid: integer, ename: string, salary: integer)

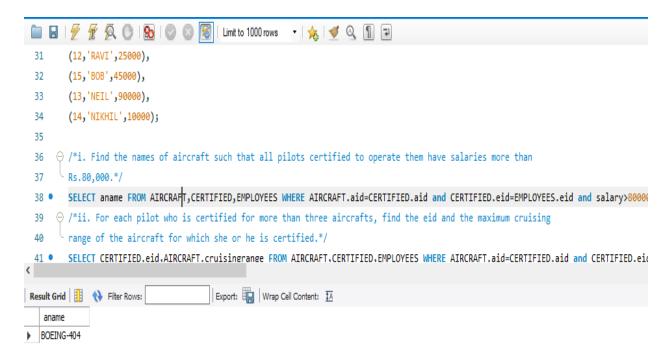
Note that the Employees relation describes pilots and other kinds of employees as well; Every pilot is certified for some aircraft, and only pilots are certified to fly.

Write each of the following queries in SQL.

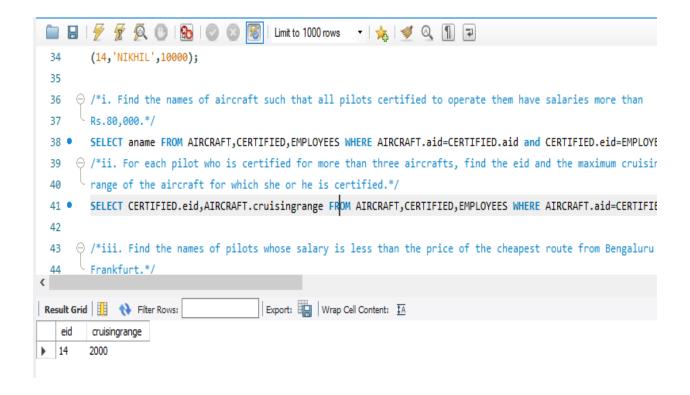
- i. Find the names of aircraft such that all pilots certified to operate them have salaries more than Rs.80,000.
- ii. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruising range of the aircraft for which she or he is certified.
- iii. Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Frankfurt.
- iv. For all aircraft with cruising range over 1000 Kms, find the name of the aircraft and the average salary of all pilots certified for this aircraft.
- v. Find the names of pilots certified for some Boeing aircraft.
- vi. Find the aids of all aircraft that can be used on routes from Bengaluru to New Delhi.
- vii. A customer wants to travel from Madison to New York with no more than two changes of flight. List the choice of departure times from Madison if the customer wants to arrive in New York by 6 p.m.
- viii. Print the name and salary of every non-pilot whose salary is more than the average salary for pilots.

### **OUTPUT:**

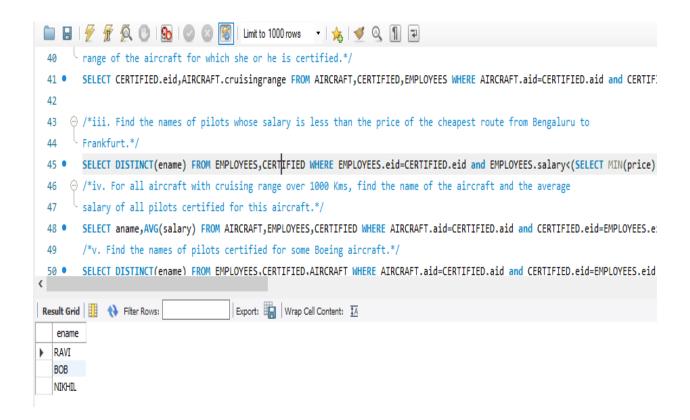
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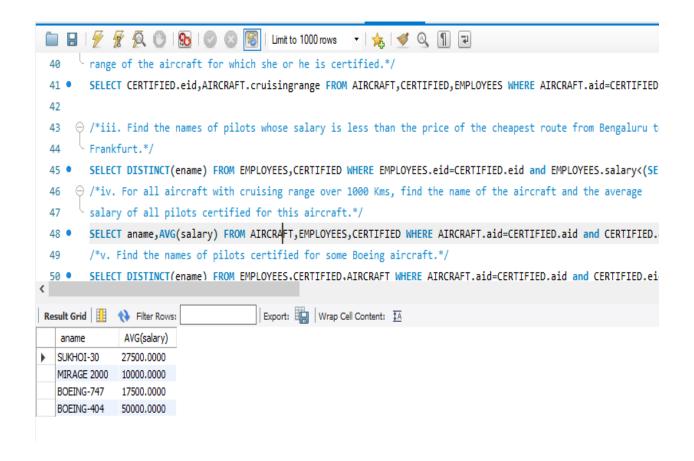
ii. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruising range of the aircraft for which she or he is certified.



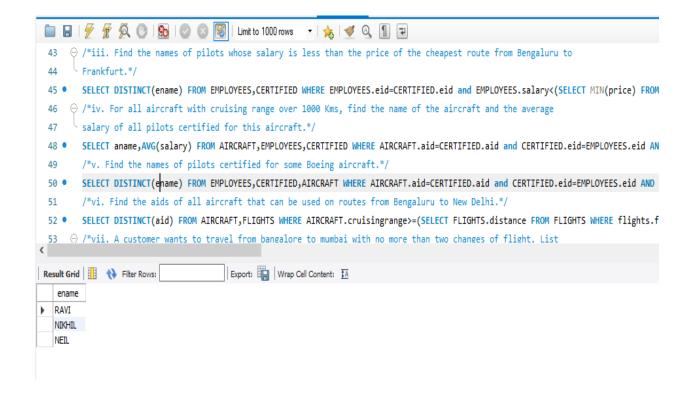
## iii. Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Frankfurt.



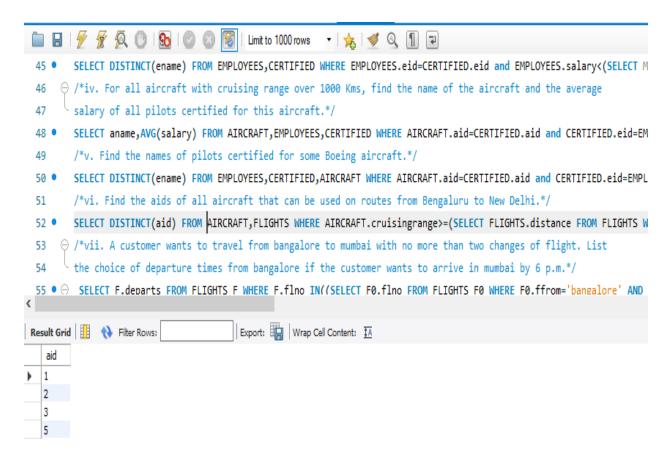
### iv. For all aircraft with cruising range over 1000 Kms, find the name of the aircraft and the average salary of all pilots certified for this aircraft.



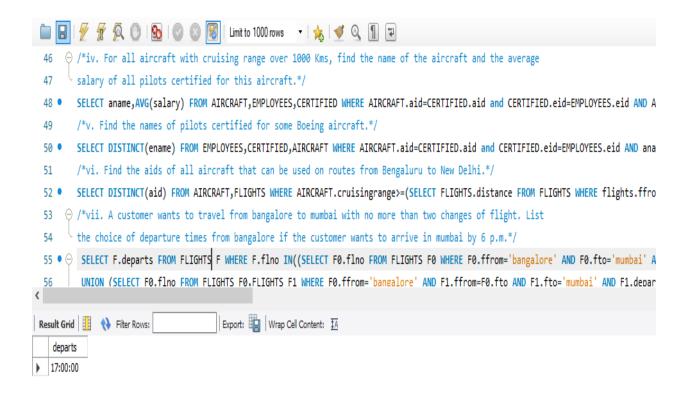
#### v. Find the names of pilots certified for some Boeing aircraft.



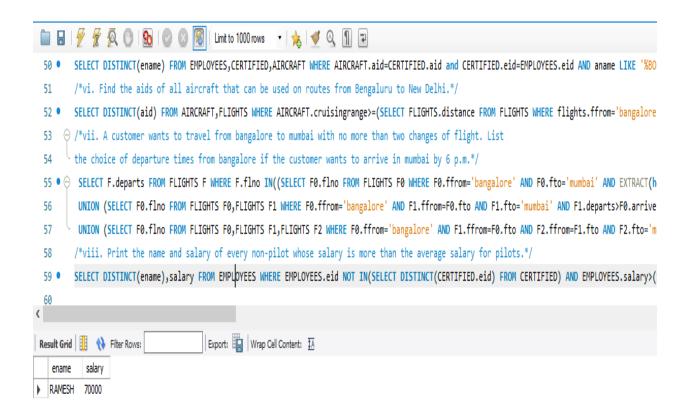
### vi. Find the aids of all aircraft that can be used on routes from Bengaluru to New Delhi.



vii. A customer wants to travel from Madison to New York with no more than two changes of flight. List the choice of departure times from Madison if the customer wants to arrive in New York by 6 p.m.



## viii. Print the name and salary of every non-pilot whose salary is more than the average salary for pilots.



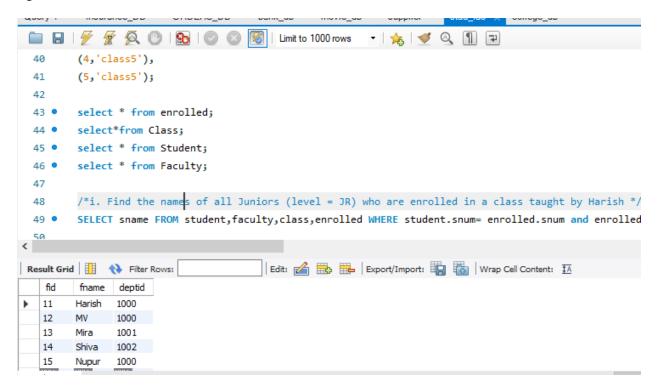
# **DBMS WEEK 8**

Consider the following database for student enrollment for course: STUDENT (snum: integer, sname: string, major: string, level: string, age: integer) CLASS (name: string, meets at: 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 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.

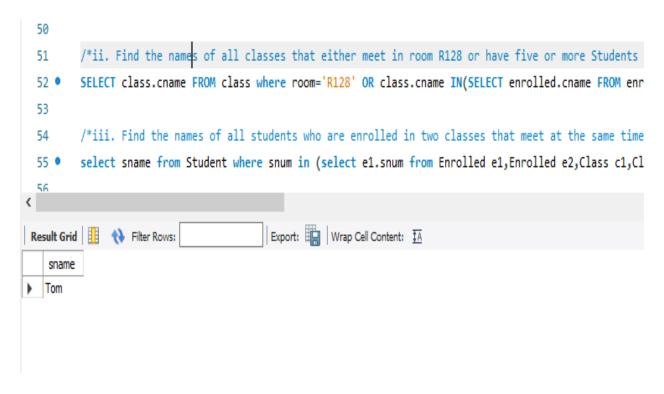
- i. Find the names of all Juniors (level = JR) who are enrolled in a class taught by
- ii. Find the names of all classes that either meet in room R128 or have five or more Students enrolled.
- iii. Find the names of all students who are enrolled in two classes that meet at the same time.
- iv. Find 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).

### **OUTPUT:**

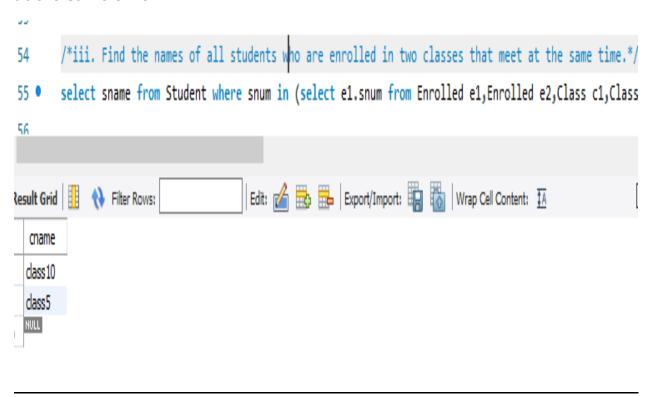
i. Find the names of all Juniors (level = JR) who are enrolled in a class taught by



## ii. Find the names of all classes that either meet in room R128 or have five or more Students enrolled.



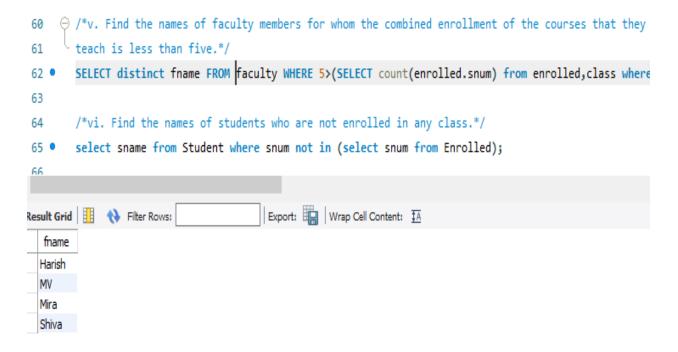
## iii. Find the names of all students who are enrolled in two classes that meet at the same time.



# iv. Find the names of faculty members who teach in every room in which some class is taught.

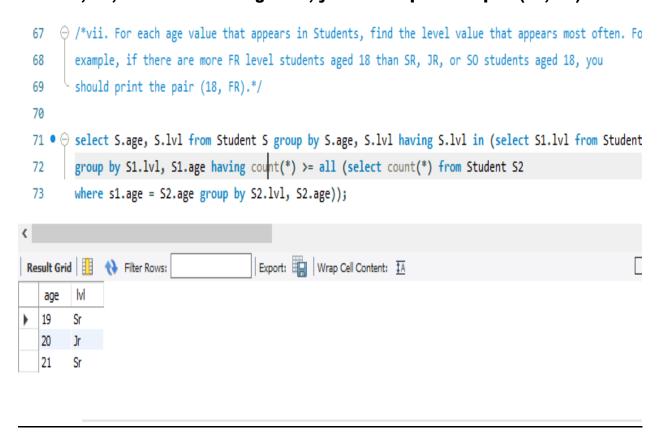
57	/*iv. Find the n	ames of faculty	members who teach	in every roo	m in which some	class is ta	ught.*/
58 •	SELECT fname FRO	M faculty WHERE	NOT EXISTS(select	room from cl	ass where room	not in(selec	t disti
59							
60 ⊝	/*v. Find the na	mes of faculty m	embers for whom th	e combined e	nrollment of th	ne courses th	at they
61	teach is less th	an five.*/					
62 •	SFIFCT distinct	fname FROM facul	tv WHERE 55/SFLECT	count/enrol	led snum) from	enrolled.cla	ss wher
Result Grid	I N Filter Rows		Export: Wrap Cell C	Content: ‡A			
sname							
Rahul							

### 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).



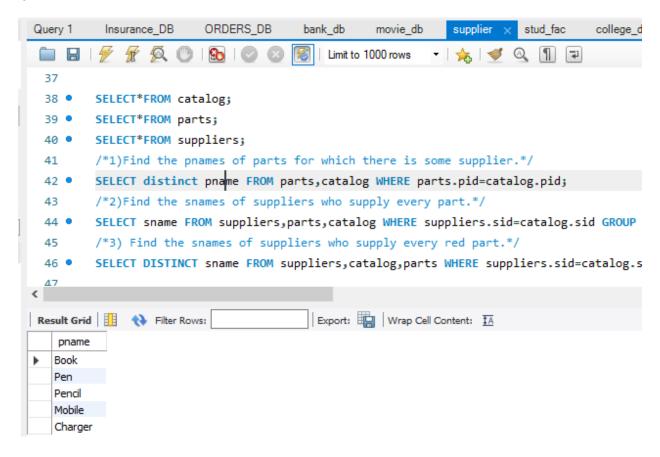
# **DBMS WEEK 9**

Consider the following schema: SUPPLIERS (sid: integer, sname: string, address: string) PARTS (pid: integer, pname: string, color: string) CATALOG (sid: integer, pid: integer, cost: real) The Catalog relation lists the prices charged for parts by Suppliers. Write the following queries in SQL:

- i) Find the pnames of parts for which there is some supplier.
- ii) Find the snames of suppliers who supply every part.
- iii) Find the snames of suppliers who supply every red part.
- iv) Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.
- v) Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).
- vi) For each part, find the sname of the supplier who charges the most for that part.

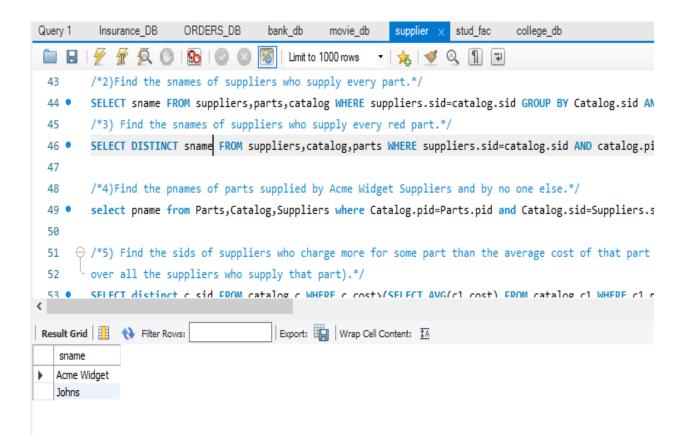
**OUTPUT:** 

i) Find the pnames of parts for which there is some supplier.

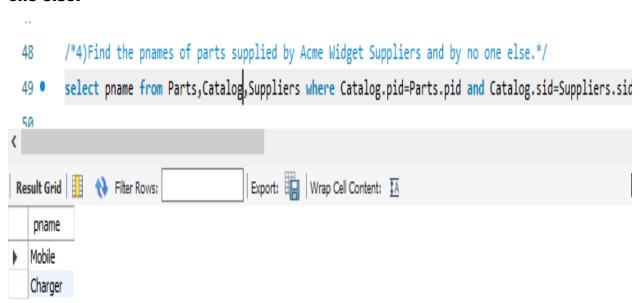


ii) Find the snames of suppliers who supply every part.

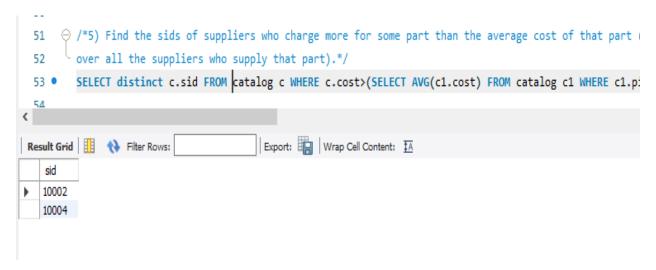
```
/*1)Find the pnames of parts for which there is some supplier.*/
 41
         SELECT distinct pname FROM parts, catalog WHERE parts.pid=catalog.pid;
 42 •
         /*2)Find the snames of suppliers who supply every part.*/
 43
         SELECT sname FROM suppliers, parts, catalog WHERE suppliers.sid=catalog.sid GROUP BY Catalog.sid AND
 44 •
         /*3) Find the snames of suppliers who supply every red part.*/
 45
         SELECT DISTINCT sname FROM suppliers, catalog, parts WHERE suppliers.sid=catalog.sid AND catalog.pid
 46 •
 47
         /*4)Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.*/
 48
         select pname from Parts, Catalog, Suppliers where Catalog.pid=Parts.pid and Catalog.sid=Suppliers.sic
 49 •
                                          Export: Wrap Cell Content: $\overline{1}{4}
Result Grid Filter Rows:
   sname
Acme Widget
```



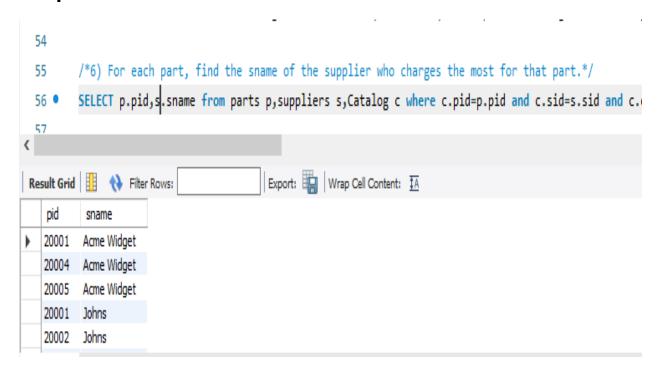
# iv) Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.



v) Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).



# vi) For each part, find the sname of the supplier who charges the most for that part.



# **DBMS WEEK-10**

Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to:

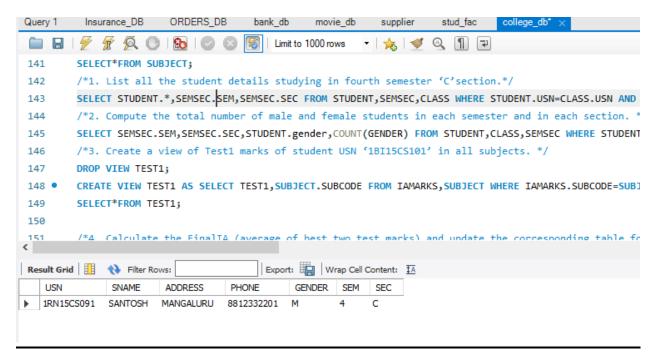
- 1. List all the student details studying in fourth semester 'C'section.
- 2. Compute the total number of male and female students in each semester and in each section.
- 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.
- 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students.
- 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.

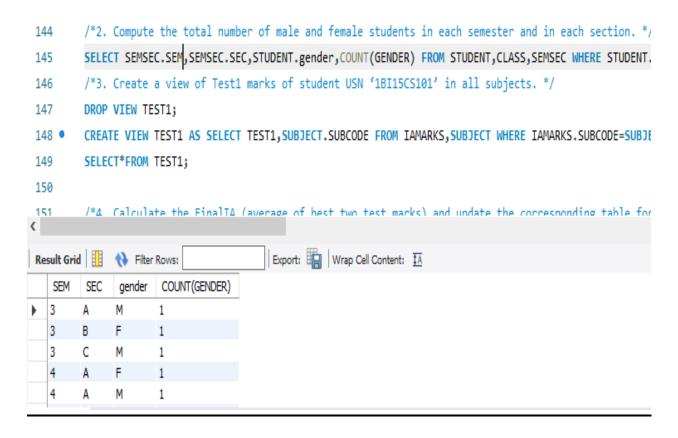
### **OUTPUT:**

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

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



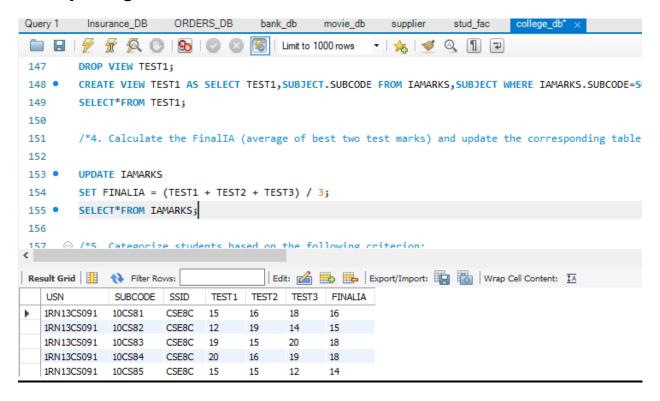
## 2. Compute the total number of male and female students in each semester and in each section.



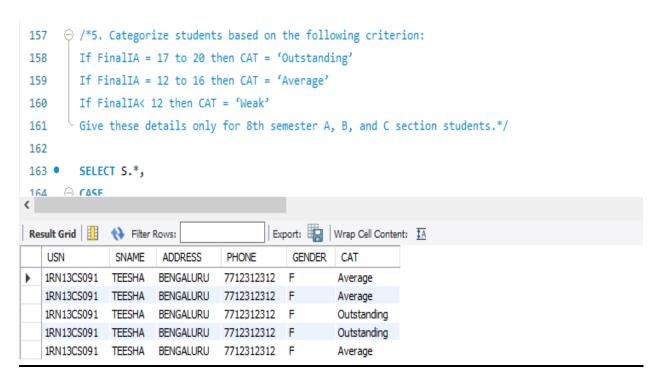
#### 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.

```
/*3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. */
146
147
        DROP VIEW TEST1;
        CREATE VIEW TEST1 AS SELECT TEST1, SUBJECT.SUBCODE FROM IAMARKS, SUBJECT WHERE IAMARKS.SUBCODE=SUBJI
148 •
149
        SELECT*FROM TEST1;
150
        /*4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for
151
152
153 •
        UPDATE IAMARKS
        SFT FTNALTA = (TFST1 + TFST2 + TFST3) / 3:
154
Export: Wrap Cell Content: 1A
   TEST1 SUBCODE
15
         10CS81
  12
         10CS82
   19
         10CS83
   20
         10CS84
   15
         10CS85
```

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



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.



\*\*\*\*\*\*\*WEEK 10 ENDS\*\*\*\*\*