

# **16/SP\_CSCI\_6623\_82 Database Systems**

## **Project Part-II**

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1. Give me the GEM\_NO of all gems that have been appraised for an amount greater than 5000 and we have no information about a first sale.

```
select * GEM_NO from A
where AMOUNT>5000
and GEM_NO not in
(select GEM_NO from F);
```

2. What are the total amount and the average amount that all the gems cost DAF from each contact whose reliable rating is lower than 6 as long as the contact sold at least 3 gems?

```
select FROM_CONTACT,sum(AMOUNT),avg(AMOUNT) from B,C
where C.CONTACT_NO = B.FROM_CONTACT
and RELIABLE<6
group by FROM_CONTACT
having count(*)>=3;
```

3. Find all gems that have had appraisals done by raters whose name begins with the upper case letter "V" and does not end with a lower case letter "k" nor the lower case letter "p" and has the lower case letter "d" in the name and the quality of the rater is unknown.

```
select GEM_NO from G
where GEM_NO =
(select GEM_NO from A
where RATER_NO =
(select RATER_NO from R
where NAME like 'V%'
and (NAME not like '%k'
and NAME not like '%p')
and NAME like '%d%'
and QUALITY is null));
```

4. Find the name and number of all miners who have discovered the most gems. (Hint: use views)

```
create view ViewD(MINER_NO,M_COUNT)
as select MINER_NO,count(*)
from D
group by MINER_NO;
```

```
select M.MINER_NO,NAME from ViewD,M
where M.MINER_NO = ViewD.MINER_NO
and M_COUNT =
(select max(M_COUNT) from viewD);
```

5. Find the names and numbers of all contacts from whom we have never bought any gem.

```
select CONTACT_NO,NAME from C
where CONTACT_NO not in
(select FROM_CONTACT from B);
```

6. Find the name and number of all miners who have sold at least one gem to each contact.

```
select MINER_NO,NAME from M
where not exists
(select * from C
where not exists
(select * from F
where F.MINER_NO = M.MINER_NO
and F.CONTACT_NO = C.CONTACT_NO));
```

7. We are offered to buy a valuable diamond (type) of size 4 and weight 5 for \$50,000. This is an excellent price and we agree to buy it. We call this gem G88. However, the contact wishes to remain anonymous so we will never know who sells it to us. We go ahead and buy it and have two existing appraisers evaluate the diamond. A44 appraises it for \$80,000 while A77 appraises it for \$90,000. Since we believe that we probably bought a stolen gem, I do not wish to record the dates of appraisal. Insert this information into tables B, and A.

```
insert into G
values(88,'D',4,5,null);
```

```
insert into A
values(44,null,null,88,80000);
```

```
insert into A
values(77,null,null,88,90000);
```

```
insert into B
values(88,'2 '04/25/2016;',50000,null);
```

8. Find the gem\_no of gems that have never been appraised.

```
select GEM_NO from G
where GEM_NO not in
(select GEM_NO from A);
```

9. Find all gems that DAF sold (table S) exactly twice. NOTE: if a gem was sold more than twice or only once we are not interested in that gem. Hint: views can help.

```
create V view ViewS(GEM_NO,S_COUNT)
as select GEM_NO,count(*)
from S
group by GEM_NO;
```

```
select GEM_NO from ViewS
where S_COUNT=2;
```

**For the executed queries and the outputs please refer to the outputs.log file**