

**Q1****Sol:**

- a. **SELECT** Dname, **COUNT**(\*)  
**FROM** DEPARTMENT, EMPLOYEE  
**WHERE** Dnumber = Dno  
**GROUPBY** DName  
**HAVING AVG** (Salary) > 30000
- b. Yes we can by using sex = 'Male' as gender of the person is available as an attribute of a table. we can add in WHERE clause after avg.salary in part a.

```
SELECT Dname, COUNT(*)  
FROM DEPARTMENT, EMPLOYEE  
WHERE Dnumber = Dno AND Sex = 'Male' AND DNO IN (  
SELECT Dno  
FROM EMPLOYEE  
GROUPBY Dno  
HAVING AVG (Salary) > 30000 )
```

**Q2****Sol:**

- a. **SELECT** Fname, LName  
**FROM** Employee  
**WHERE** Dno IN (  
**SELECT** Dnumber  
**FROM** EMPLOYEE  
**WHERE** Salary IN (  
**SELECT MAX**( Salary)  
**FROM** EMPLOYEE  
)  
);
- b. **SELECT** Fname, Lname  
**FROM** EMPLOYEE  
**WHERE** Salary + '10000' < ALL (  
**SLECT MIN** ( Salary)  
**FROM** EMPLOYEE  
);
- c. **SELECT** Fname, LName  
**FROM** EMPLOYEE  
**WHERE** SuperSperSSN in (  
**SELECT** ssn  
**FROM** EMPLOYEE  
**WHERE** SuperSSN = '888665555'  
);

Q3.

Sol:

- a. **SELECT** Name, Major  
**FROM** STUDENT  
**WHERE NOT EXISTS** (  
**SELECT** \*  
**FROM** GRADE\_REPORT  
**WHERE** Student\_number = Student\_number AND Grade = 'A' )
- b. **SELECT** Name, Major  
**FROM** STUDENT  
**WHERE NOT EXISTS** (  
**SELECT** \*  
**FROM** GRADE\_REPORT  
**WHERE** Student\_number = Student\_number AND **NOT**(Grade = 'A' ) )

Q4

Sol:

- a. Allowed

D	C	Total_s	Average_s
1	1	55000	55000
4	3	93000	31000
5	4	133000	33250

- b. Allowed

D	C
5	4

- c. Allowed

D	Average_s
5	33250

- d. No, view is a virtual table. An “update” is not permitted on aggregate views.

- e. No.