practice DQL statement

Write SQL statement for the following

1. To find all managers with salary >1500

```
select *
from emp
where job='MANAGER' AND sal >1500;
```

2. list all employees with sal >=1200 and <= 2000

```
select *
from emp
where sal between 1200 and 2000;
```

3. list all employees with sal is 1600 or sal is 800 or sal is 1900

```
select *
from emp
where sal in (1600,800,1900);
```

4. list all employees with R at second last position in name

```
select *
from emp
where ename like '_R%'
```

oracle syntax

```
select *
from emp where REGEXP_LIKE (ename,'.R')
```

MySQL syntax

```
select *
```

from emp where ename REGEXP ('.R')

5. List all employees with name starts with A and ends with N

```
select *
from emp
where ename  like 'A%N'
```

oracle syntax

```
selct *
from emp
where REGEXP_LIKE('^A.*N$')
```

MySQL syntax

```
selct *
from emp
where ename REGEXP ('^A.*N$')
```

Q2. Solve following

1. list all employees with salary > 1250 and dept no=30

```
select *
from emp
where sal >1250 and deptno=30;
```

2. list all employees with salary >=1250 and <= 3000

```
select *
from emp
where sal between 1250 and 3000;
```

3. list all employees with salary >1250 and < 3000

```
select *
from emp
```

where sal between 1149 and 2999;

4. list all employees with salary either equal to 3000 or 1250 or 2500

```
select *
from emp
where sal in (3000,1250,2500);
```

5. list all employee with name=SMITH

```
select *
from emp
where ename='SMITH';
```

6. list all employees with name starting with S

```
Select *
from emp
where ename like 'S%'
```

Oracle syntax

```
selct *
from emp
where  REGEXP_LIKE('^S');
```

MySQL syntax

```
selct *
from emp
where ename REGEXP('^S')
```

7. list all employees with name ending with S

```
Select *
from emp
```

where ename like '%S'

Oracle syntax

```
selct *
from emp
where  REGEXP_LIKE('S$');
```

MySQL syntax

```
selct *
from emp
where ename REGEXP('S$')
```

8. list all employees with name contains I at 2nd position

```
Select *
from emp
where ename like '_I%';
```

Oracle syntax

```
selct *
from emp
where  REGEXP_LIKE('^.I');
```

MySQL syntax

```
selct *
from emp
where ename REGEXP('^.I')
```

9. list all employees with name starts with A ends with N and somewhere in between L is there

```
Select *
from emp
where ename like 'A%L%N'
```

Oracle syntax

```
selct *
from emp
where  REGEXP_LIKE('^A.*L.*N$');
```

MySQL syntax

```
selct *
from emp
where ename REGEXP('^A.*L.*N$')
```

10. list all employees with name starts with A and B at 3 rd position and P at second last position

```
Select *
from emp
where ename like 'A_B%P_';
```

Oracle syntax

```
selct *
from emp
where  REGEXP_LIKE('^A.B.*p.$');
```

MySQL syntax

```
selct *
from emp
where ename REGEXP('^A.B.*P.$')
```

11. List all employees with name starts with either A or starts with S or starts with W

```
select *
```

```
from emp
where ename like 'A%' or ename like 'S%' or ename like 'W%';
```

Mysql syntax

```
select *
from emp
where ename REGEXP ('^A|^S|^W)
```

Oracle syntax

```
select *
from emp
where REGEXP_LIKE (ename,'^A|^S|^W)
```

practice Aggregate functions

12. find max sal and min sal for each job

```
select job,max(sal),min(sal)
from emp
group by job;
```

13. find how many employess have not received commission

```
select count(*)
from emp
where comm is null;
```

14. find sum of sal of all employees working in dept no 10

```
select sum(sal)
from emp
```

where deptno=10;

15. find maximum salary,average sal for each job in every department

```
select deptno,job,max(sal),avg(sal)
from emp
group by deptno,job;
```

16. find max salary for every department if deptno is > 15 and arrange data in deptno order.

```
select deptno,max(sal)
from emp
where deptno >15
group by deptno
order by deptno;
```

17. find sum salary for every department if sum is > 3000

```
select deptno,sum(sal)
from emp
group by deptno
having sum(sal)>3000;
```

18. list all department which has minimum 5 employees

```
select deptno,count(*)
from emp
group by deptno
having count(*)>5;
```

19. count how many employees earn salary more than 2000 in each job

```
select job,count(*)
from emp
where sal>2000
group by job;
```

20. list all enames and jobs in small case letter

```
select lower(ename),lower(job)
from emp;
```

21. list all names and jobs so that the length of name should be 15 if it is smaller then add spaces to left

```
select ename,lpad(jobs,15,' ')
from emp;
```

22. display min sal,max sal, average sal for all employees working under same manager

```
select mgr,min(sal),max(sal),avg(sal)
from emp
group by mgr;
```

23. find sum of total earnings(sal+comm), average of sal+comm for all employees who earn sal > 2000 and work in either dept no 10 or 20

mysql syntax

```
select sum(sal+ifnull(comm,0)),avg(sal+ifnull(comm,0))
from emp
where sal >2000 and deptno in (10,20);
```

oracle syntax

```
select sum(sal+nvl(comm,0)),avg(sal+nvl(comm,0))
from emp
where sal >2000 and deptno in (10,20);
```

24. list all employees who joined in Aug 1980 and salary is >1500 and < 2500

```
select *
from emp
where hiredate between '1-AUG-1980' and '31-aug-1980 and sal between 1500 and 2500
```

25. list all employees joined in either aug or may or dec

MySQL syntax

```
select *
from emp
where month(hiredate) in (8,5,12);
```

Oracle syntax(works in mysql also)

```
select *
from emp
where extract(month from hiredate) in (8,5,12);
```

26. display name and hiredate in dd/wmm/yy format for all employees whose job is clerk and they earn some commission

```
select ename, to_char(hiredate,'dd/mm/yy')
from emp
where job='CLERK' and comm is not null;
```

27. list empcode,empno,name and job for each employee. (note :empcode is 3 to 5 characters from name and last 2 characters of job)

Oracle and mysql syntax

```
select concat(substr(ename,3,3),substr(job,length(job)-1,2)) ecode, empno,ename
from emp
```

28. display thousand separator and $ symbol for commission if it is null then display it as 0 for all employees whose name starts with A and ends with N

```
select empno,comm,to_char(nvl(comm,0),'$99,999.00')
from emp
where ename like 'A%N'
```

Oracle syntax

```
select empno,comm,to_char(nvl(comm,0),'$99,999.00')
from emp
where  REGEXP_LIKE (ename, '^A.*N$')
```

MySQL syntax

```
select empno,comm,CONCAT('$',format(ifnull(comm,0),2))
from emp
where ename  REGEXP ( '^A.*N$')
```

29. Display empid,name,sal,comm,remark Remark should base on following conditions

comm >= 600 "excellent Keep it up"

if it < 600 or not null "good"

otherwise "Need improvement"

```
select empid,ename,sal,comm,case when comm>=600 then 'excellent Keep it up'
when comm>=600 or comm not null then 'good'
else "Need improvement" end "Remark"
from emp;
```

30. Display empid, name, deptno and department name by using following conditions.

dept 10 then "Hr"

if 20 then "Admin"

if 30 then "accounts"

otherwise purchase

```
select empno,ename,case deptno when 10 then 'HR'
                                   when 20 then 'Admin'
                                  when 30 then 'accounts'
else 'purchase' end "dname"
```

from emp;

Topic ---------- create Table, DML , subquery and joins

31. Practice creating following tables

```
create table mydept_DBDA
(
deptid number primary key,
dname varchar2(20) not null unique,
dloc varchar2(20)
)

insert into mydept_DBDA values(30,'Purchase','Mumbai');

create table myemployee
(
empno number(5) primary key,
fname varchar2(15) not null,
mname varchar2(15),
lname varchar2(15) not null,
sal number(9,2) check(sal >=1000),
doj date default sysdate,
passportnum varchar2(15) unique,
deptno number constraint fk_deptno references mydept_DBDA(deptid) on delete cascade
)
```

32. Create following tables Student, Course

Student (sid,sname) ---------- sid ---primary key

Course(cid,cname)---------- cid ---primary key

Marks(studid,courseid,marks)

Sample data for marks table

studid,courseid,marks

1 1 99

1 3 98

2 1 95

2 2 97

```
create table marks(
studid number,
courseid number,
marks number,
constraint pk primary key(studid,courseid),
constraint fk_sid foreign key (studid) references student(sid) on delete cascade,
constraint fk_cid foreign key (courseid) references course(cid)
)
```

33. Create empty table emp10 with table structure same as emp table.

```
create table emp10 as
(
select *
from emp
where 1=2;
)
```

34. Solve following using alter table

add primary key constraint on emp,dept,salgrade

emp ----□ empno

dept---□ deptno

salgrade---□ grade

add foreign key constarint in emp

deptno --->> dept(deptno)

add new column in emp table netsal with constraint default 1000

35. Update employee sal ---- increase sal of each employee by 15 % sal +comm, change the job to manager and mgr to 7777 for all employees in deptno 10.

```
update emp
set sal=sal*1.15+nvl(comm,0),job='MANAGER',mgr=7777
where deptno =10;
```

36. change job of smith to senior clerk

```
update empset job='Senior Clerk'
where ename='SMITH';
```

37. increase salary of all employees by 15% if they are earning some commission

```
update emp
set sal=1.15*sal
where com is not null;
```

38. list all employees with sal>smith's sal

```
select *
from emp
where sal > (select sal
        from emp
                        where ename='SMITH';
```

39. list all employees who are working in smith's department

```
select *
from emp
where deptno = (select deptno
        from emp
```

where ename='SMITH');

40. list all employees with sal < rajan's sal and salary > revati's sal

```
slect *
from emp
where sal between (select sal from emp where ename='rajan') and (select sal from emp where ename='revati');
```

41. delete all employees working in alan's department

```
delete
from emp
where deptno=(select deptno
        from emp
                where ename='ALLEN');
```

42. change salary of Alan to the salary of Miller.

```
  update emp
        set sal=(select sal from emp where ename='MILLER')
        where ename='ALLEN';
```

43. change salary of all emplees who working in Wall's department to the salary of Miller.

```
  update emp
        set sal=(select sal from emp where ename='MILLER')
        where deptno=(select deptno
                from emp
                        where ename='WALL');
```

44. list all employees with salary > either Smith's salary or alan's sal

```
select *
```

```
from emp
where sal in (select sal
        from emp
                where ename in ('SMITH','ALLEN'));
```

45. list all employees who earn more than average sal of dept 10

```
select *
drom emp
where sal > (select avg(sal)
        from emp
                where deptno=10);
```

46. list all employees who earn more than average sal of Allen's department

```
  select *
        from emp
        where sal >(select avg(sal)
                from emp
                        where deptno= (select deptno
                                from emp
                                        where enae='ALLEN'));
```

47. list all employees who are working in purchase department

```
select *
from emp
where deptno =(select deptno
         from dept
                where dname='purchase');
```

48. list all employees who earn more than average salary of their own department

```
select *
from emp e
where sal > (select avg(sal)
```

```
        from emp d
                        where e,deptno=d.deptno);
```

49. list all employees who earn sal < than their managers salary

```
select *
from emp e
where sal < (select sal
        from emp m
                        where m.mgr=e.mgr);
```

50. list all employees who are earning more than average salary of their job

```
select *
from emp e
where sal > (select avg(sal)
        from emp m
                        where m.job=e.job);
```

51. display employee name and department name

```
selct ename,dname
from emp e inner join dept d on e.deptno=d.deptno;
```

52. display empno,name,department name and grade (use emp,dept and salgrade table)

```
select emapno,ename,dname,grade
from emp e inner join dept d on e.deptno=d.deptno inner join salgrade s
on e.sal between s.losal and s.hisal;
```

53. list all employees number,name, mgrno and manager name

```
select e.empno,e.ename,m.empno "mgr number",m.ename "mgr name"
from emp e ineer join emp m on e.mgr=m.empno;
```

54. create following tables and solve following questions(primary keys are marked in yellow) foreign keys are marked in green

product(pid,pname,price,qty,cid,sid)

salesman (sid,sname,address)

category(cid,cnam,descritpion)

```
create table category(
 cid number primary key,
 cname varchar2(20),
 description varchar2(20)
);
create table salesman(
 sid int primary key,
 sname varchar2(20),
 address varchar2(20)
);

create table product(
 pid number primary key,
 pname varchar2(20) not null,
 qty number check (qty>0) ,
 cid int references category(cid) on delete cascade,
 sid int references salesman(sid) on delete cascade
);
```

1. list all product name,their category name and name of a person, who sold that product

```
selct pname,cname,sname
from product p inner join category c on p.cid=c.cid inner join salesman s on p.sid=s.sid);
```

2. list all product name and salesman name for all salesman who stays in pune

```
select pname,sname
from product p inner join slaesman s on p.sid=s.sid
where s.address ='pune';
```

3. list all product name and category name

```
select pname,cname
from product p inner join category c on p.cid=c.cid;
```

55. create following tables and solve following questions

(primary keys are marked in yellow)

foreign keys are marked in green

faculty(fid,fname,sp.skill1,sp.skill2)

courses(cid,cname,rid,fid)

room(roomid,rname,rloc)

faculty

fid	fname	spskill1	spskill2
10	kjzhcjhz	a	b
11	sdd	x	z
12	lksjk	a	x
13	ksdjlkj	a	b

courses

cid	cname	rid	fid
121	DBDA	100	10
131	DAC	101	

141 DTISS

151 DIOT 105 12

Room

roomid rname rloc

100 jasmin 1st floor

101 Rose 2nd floor

105 Lotus 1st floor

103 Mogra 1st floor

```
create table room(
 rid number primary key,
 rname varchar2(20),
 rloc varchar2(20)
);
create table faculty(
 fid int primary key,
 fname varchar2(20) not null,
 spskill1 varchar2(20),
 spskill1 varchar2(20)
);

create table course(
 cid number primary key,
 cname varchar2(20) not null,
 rid int references room(rid) on delete cascade,
 fid int references faculty(fid) on delete cascade
);
```

1. list all courses for which no room is assigned and all rooms which are available

```
select rname,rid,cid,cname
from room r full join course c on c.rid=r.rid
```

where c.cname is null or r.rname is null;

2. list all faculties who are not allocated to any course and rooms which are not allocated to any course

```
select fid,fname,rname,rid
from faculty f left join course c on f.cid=c.cid full join room r on c.rid=r.rid;
```

3. list all rooms which are allocated or not allocated to any courses

```
selct rid,rname,cid,cname
from room r left join course c on r.cid=c.cid;
```

4. list all rooms which are not allocated to any courses

```
selct rid,rname
from room
where not exists (select *
        from course
                where c.rid=r.rid);
```

5. display courses and faculty assigned to those courses whose special skill is database

```
select *
form courses c inner join faculty f on c.fid=f.fid
where spskill1='database' or spskill2='database'
```

6. display time table --- it should contain course details , faculty and room details

```
select cid,cname ,rid,rname,fid,fname
```

from room r inner join course c on c.rid=r.rid inner join faculty f on c.fid=f.fid;

56. create following tables with given constraints

product---- qty >0, price default 20.00,pname not null and unique

prodid	pname	qty	price	catid	sid
123	lays	30	30.00	1	12
111	pepsi	40	50.00	4	11
134	nachos	50	50.00	1	12
124	dairy milk	40	60.00	2	14
124	pringles	40	60.00	1	14

saleman ----- sname -----not null

sid	sname	city
11	Rahul	Pune
12	Kirti	Mumbai
13	Prasad	Nashik
14	Arnav	Amaravati

category ---- cname unique and not null

cid	cname	description
1	chips	very crunchy
2	chocolate	very chocolaty
3	snacks	yummy
4	cold drinks	thanda thanda cool cool

1. List all products with category chips

```
select *
from product p inner join category c on p.cid=c.cid
where cname='chips';
```

2. display all products sold by kirti

```
select *
```

```
from product p inner join salesman s on p.sid=s.sid
where sname='kirti';
```

3. display all salesman who do not sold any product

```
select sid,sname
from salesman s
where not exists (select * from product
        where p.sid=s.sid );
```

4. display all category for which no product is there

```
select cid,cname
from category c
where not exists (select * from product
        where p.cid=c.cid );
```

5. display all products with no category assigned

```
select *
from product
where cid is null;
```

6. list all salesman who stays in city with name starts with P or N

```
selct *
from salesman
where  REGEXP_LIKE (address,'^[PN]');
```

7. add new column in salesman table by name credit limit

```
alter table salesman
add creadit_limit number(9,2);
```
