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;

1. list all employees with sal >1200 and < 2000

Select \*

-> From emp

-> Where sal between 1201 and 1499;

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

Select \*

-> From emp

-> Where sal in(1600,800,1900);

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

Ans. Select \*

-> From emp

-> Where ename like '%r\_';

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

Ans. Select \*

-> From emp

-> Where ename like 'a%n';

Q2. Solve following

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

Ans. Select \*

-> From emp

-> Where sal > 1250 and deptno = 30;

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

Ans. Select \*

-> From emp

-> Where sal between 1250 and 3000;

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

Select \*

-> From emp

-> Where sal between 1251 and 4001;

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

Select \*

-> From emp

-> Where sal in (3000,1250,2500);

1. list all employee with name=SMITH

Ans.Select \*

-> From emp

-> Where ename ='smith';

1. list all employees with name starting with S

Ans. select \*

-> From emp

-> Where ename like ‘S%’;

1. list all employees with name ending with S

Ans. select \*

-> From emp

-> Where ename like ‘%s’;

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

Ans. select \*

-> From emp

-> Where ename like ‘\_l%’;

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

Ans. select \*

-> From emp

-> Where ename like 'A%L%N';

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

Ans. select \*

-> From emp

-> Where ename like 'a\_b%s\_';

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

Ans. select \* from emp

-> where ename regexp '^[a,s,w]';

practice Aggregate functions

1. find max sal and min sal for each job
2. find how many employess have not received commission
3. find sum of sal of all employees working in dept no 10
4. find maximum salary,average sal for each job in every department
5. find max salary for every department if deptno is > 15 and arrange data in deptno order.
6. find sum salary for every department if sum is > 3000
7. list all department which has minimum 5 employees
8. count how many employees earn salary more than 2000 in each job
9. list all enames and jobs in small case letter
10. list all names and jobs so that the length of name should be 15 if it is smaller then add spaces to left
11. display min sal,max sal, average sal for all employees working under same manager
12. 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

1. list all employees who joined in Aug 1980 and salary is >1500 and < 2500
2. list all employees joined in either aug or may or dec
3. display name and hiredate in dd/mm/yy format for all employees whose job is clerk and they earn some commission
4. list empcode,empno,name and job for each employee. (note :empcode is 3 to 5 characters from name and last 2 characters of job)

Ans. select empno, ename, job, concat(substr(ename,3,3),

substr(job,length(job)-1,2)) empcode

from emp;

1. 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

Ans. select concat('$', format(ifnull(comm,0), 2))

from emp

where ename like 'A%N';

1. 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"

Ans. select empno , ename , sal, comm,

case when comm >= 600 then "excellent Keep it up"

when comm >= 0 then "good"

else "need improvement"

end remak

from emp;

1. 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

Ans. select empno , ename , deptno,

case when deptno = 10 then "HR"

when deptno = 20 then "Admin"

when deptno = 30 then "Accounts"

else "purchase"

end deptartment

from emp;

Topic create Table, DML , subquery and joins

1. Practice creating following tables

Ans. create table mydept\_DBDA (

deptid int primary key,

dname varchar(20) not null unique, dloc varchar(20)

insert into mydept\_DBDA values(30,'Purchase','Mumbai');

create table myemployee (

empno int primary key, fname varchar(15) not null, mname varchar(15),

lname varchar(15) not null,

sal float(9,2) check(sal >=1000), doj date,

passportnum varchar(15) unique, deptno int,

constraint fk\_deptno foreign key(deptno) references mydept\_DBDA(deptid) on delete set null

on update cascade

)

1. 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 if not exists student (

sid int primary key,

sname varchar(50) not null);

create table if not exists course(

cid int primary key,

cname varchar(50) not null);

create table if not exists marks (

studid int,

courseid int,

mark float,

primary key (studid,courseid),

constraint fk\_st foreign key marks(studid) references student(sid),

constraint fk\_cid foreign key marks(courseid) references course(cid)

);

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

Ans. create table emp10

-> as

-> select \* from emp

-> where 1 = 2;

1. Solve following using alter table

add primary key constraint on emp,dept,salgrade emp ---- empno

alter table emp

add primary key(empno);

**dept--- deptno**

alter table dept

add primary key(deptno );

**salgrade---grade**

alter table salgrade

add primary key(grade);

**add foreign key constarint in emp** deptno --->> dept(deptno)

alter table emp

add constraint fk\_3 foreign key (deptno) references dept(deptno);

**add new column in emp table netsal with constraint default 1000**

**Ans.** alter table emp

add column netsal int default 1000;

1. 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.

Ans. Update table emp

set sal = (sal + ifnull(comm,0))\*1.15,

job = 'Manager',

mgr = 7777

where deptno =10;

1. change job of smith to senior clerk

Ans. update emp

-> set job = 'senior clerk'

-> where ename = 'smith';

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

Ans.update emp

-> set sal = (sal\*1.15)

-> where comm is not null and comm > 0;

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

Ans. select \*

-> from emp

-> where sal > (select sal from emp where ename = 'smith');

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

Ans. select \*

-> from emp

-> where deptno = (select deptno from emp where ename = 'smith');

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

Ans. select \*

-> from emp

-> where sal

-> between (select sal from emp where ename = 'revati')

-> and (select sal from emp where ename = 'rajan');

1. delete all employees working in alan's department

Ans. delete from emp

-> where deptno = (select deptno from (select \* from emp) e where e.ename ='allen');

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

Ans. update emp

set sal = (select sal from (select \* from emp) e where e.ename= 'allen')where ename= 'miller'

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

Ans. update emp

set sal = (select sal from (select \* from emp) e where e.ename='miller')

where ename = 'ward';

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

Ans. select \* from emp

where sal > (select sal from emp where ename = 'smith') or

sal > (select sal from emp where ename = 'miller');

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

Ans. select \* from emp

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

1. list all employees who earn more than average sal of Alan's department

Ans. select \* from emp

where sal > (select avg(sal) from emp where ename = 'allen');

1. list all employees who are working in purchase department

Ans. select \* from emp e

inner join dept d

on e.deptno = d.deptno

where dname = 'sales';

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

Ans. select \* from emp e

inner join (select avg(sal) average, deptno

from emp

group by deptno) a

on e.deptno = a.deptno

where e.sal > a.average;

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

Ans. select \* from emp p

-> inner join

-> (select e.mgr, m.empno, m.sal

-> from emp e

-> inner join

-> emp m

-> on e.mgr = m.empno) ms

-> on p.mgr = ms.mgr

-> where p.sal > ms.sal;

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

Ans. select \*

-> from emp e

-> inner join

-> (select avg(sal), job from emp

-> group by job) a

-> on e.job = a.job;

1. display employee name and department

Ans. select e.ename, d.dname

-> from emp e

-> inner join

-> dept d

-> on

-> e.deptno = d.deptno;

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

Ans. select e.empno, e.ename, e.deptno, d.dname, s.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;

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

Ans. select e.empno, e.ename, e.mgr, m.ename

from emp e

inner join

emp m

on

e.mgr = m.empno;

1. 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)

Ans. create table salesman(

sid int primary key,

sname varchar(100),

address varchar(100)

);

create table category(

cid int primary key,

cname varchar(100),

description varchar(100)

);

create table product(

pid int primary key,

pname varchar(50),

price int,

qty int,

cid int,

sid int,

constraint fk\_s foreign key product(sid) references salesman(sid),

constraint fk\_c foreign key product(cid) references category(cid)

);

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

Ans. select pname, cname, sname

from product p

inner join

category c

on

p.cid=c.cid

inner join

salesman s

on

s.sid=p.sid;

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

Ans. select pname, sname, address

from salesman s

inner join

product p

on

s.sid = p.sid

where address = 'pune';

* 1. list all product name and category name

Ans. select pname, cname

from product p

inner join

category c

on

c.cid=p.cid;

1. 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

1. kjzhcjhz a b
2. sdd x z
3. lksjk a x
4. 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

1. list all courses for which no room is assigned and all rooms for which are available
2. list all faculties who are not allocated to any course and rooms which are not allocated to any course
3. list all rooms which are allocated or not allocated to any courses
4. list all rooms which are not allocated to any courses
5. display courses and faculty assigned to those courses whose special skill is database
6. display time table --- it should contain course details , faculty and room details
7. create following tables with given constraints

product qty >0, 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

1. Rahul Pune
2. Kirti Mumbai
3. Prasad Nashik
4. 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
5. List all products with category chips
6. display all products sold by kirti
7. display all salesman who do not sold any product
8. display all category for which no product is there
9. display all products with no category assigned
10. list all salesman who stays in city with name starts with P or N
11. add new column in salesman table by name credit limit