1BM21CS244
VISHWAS G C

WEEK- 7

DBMS LAB

Supplier Database

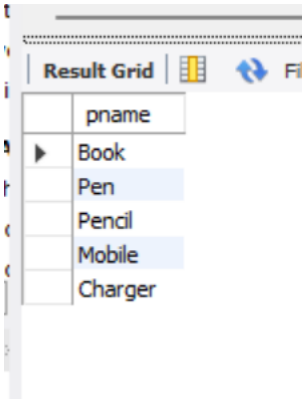
```
create database Supplier;
use Supplier;

create table suppliers
(
sid int primary key,
sname varchar(20),
city varchar(20)
);
create table parts
(
pid int primary key,
pname varchar(20),
color varchar(10)
);
create table catalog
(
sid int,
pid int,
foreign key(sid)references suppliers(sid),
foreign key(pid) references parts(pid),
cost float,
primary key(sid, pid)
);

insert into suppliers values(10001, "Acme Widget","Bangalore"),
```

```
        (10002, "Johns","Kolkata"),
        (10003,"Vimal","Mumbai"),
        (10004,"Reliance","Delhi"),
        (10005,"Mahindra","Mumbai");

 insert into parts values(20001,"Book","Red"),
        (20002,"Pen","Red"),
        (20003,"Pencil","Green"),
        (20004,"Mobile","Green"),
        (20005,"Charger","Black");

insert into catalog values(10001, 20001,10),
        (10001, 20002,10),
        (10001, 20003,30),
        (10001, 20004,10),
        (10001, 20005,10),
        (10002, 20001,10),
        (10002, 20002,20),
        (10003, 20003,30),
        (10004, 20003,40);
```

QUERIES

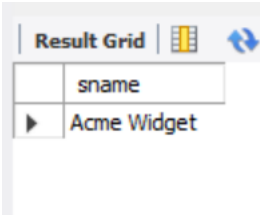
1. Find the pnames of parts for which there is some supplier.

```
select distinct pname
    from parts p, catalog c,suppliers s
    where c.sid=s.sid and p.pid=c.pid;
```



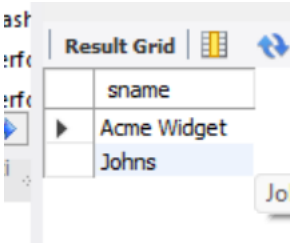
2. Find the snames of suppliers who supply every part.

```
select s.sname
    from suppliers s
    where((select count(p.pid)from parts p)=(select count(c.pid)from catalog c
where c.sid=s.sid));
```



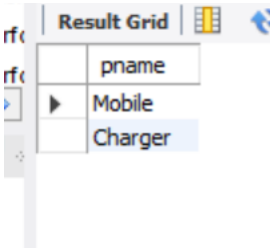
3. Find the snames of suppliers who supply every red part.

```
select distinct s.sname
    from catalog c,parts p,suppliers s
    where s.sid=c.sid and p.pid=c.pid and color="Red";
```



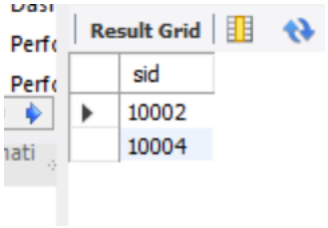
4. Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.

```
select pname
        from parts P,Catalog c,suppliers s
        where p.pid=c.pid and c.sid=s.sid and s.sname ="Acme Widget"
        and not exists(select *
          from catalog c1,suppliers s1
          where p.pid=c1.pid and c1.sid=s1.sid and s1.sname <> "Acme Widget");
```



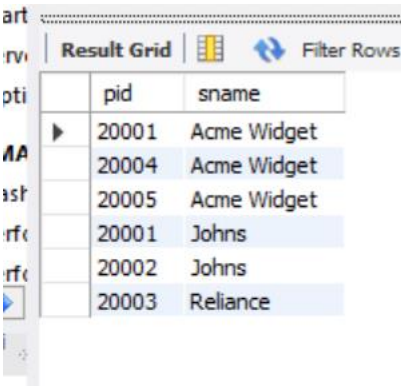
5. Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).

```
select distinct c.sid
        from catalog c
        where c.cost>(select avg(c1.cost)
         from catalog c1
         where c1.pid=c.pid);
```



6. For each part, find the sname of the supplier who charges the most for that part.

```
select p.pid,s.sname
        from suppliers s,catalog c,parts p
        where c.pid=p.pid and s.sid=c.sid and c.cost=(select max(c1.cost)
                        from catalog c1
                        where c1.pid=p.pid)
                        order by s.sname;
```


Result Grid
Filter Rows
pid
sname
20001
Acme Widget
20004
Acme Widget
20005
Acme Widget
20001
Johns
20002
Johns
20003
Reliance