WEEK 7

SUPPLIER DATABASE

```
create database Supplier;
use Supplier;

create table supplier
(sid int,
sname varchar(20),
city varchar(20),
primary key(sid));

create table Parts
(pid int,
pname varchar(20),
color varchar(20),
primary key(pid));

create table Catalog
(sid int,
pid int,
cost float,
primary key(sid,pid),
foreign key(sid) references supplier(sid) on delete cascade,
foreign key(pid) references Parts(pid) on delete cascade
);

show tables;

insert into supplier 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:
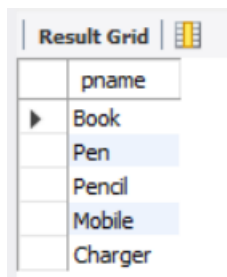
- **Find the pnames of parts for which there is some supplier.**

select distinct pname

from parts p, catalog c,supplier s

where c.sid=s.sid and p.pid=c.pid;

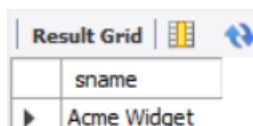| Result Grid |
| --- |
| pname |
| Book |
| Pen |
| Pencil |
| Mobile |
| Charger |

- **Find the snames of suppliers who supply every part.**

select s.sname

from supplier s

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

Result Grid
sname
Acme Widget

- **Find the snames of suppliers who supply every red part.**

select distinct s.sname

from catalog c,parts p,supplier s

where s.sid=c.sid and p.pid=c.pid and color="Red";

sname
Acme Widget
Johns

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

select pname

from parts P,Catalog c,supplier s

where p.pid=c.pid and c.sid=s.sid and s.sname ="Acme Widget"

and not exists(select *from catalog c1,supplier s1 where p.pid=c1.pid and c1.sid=s1.sid and s1.sname <> "Acme Widget");

pname
Mobile
Charger

- **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);

sid
10002
10004

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

select p.pid,s.sname

from supplier 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

pid	sname
20001	Acme Widget
20004	Acme Widget
20005	Acme Widget
20001	Johns
20002	Johns
20003	Reliance