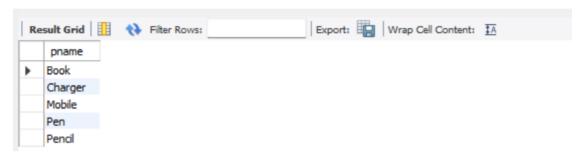
```
create database Suppliervck;
use Suppliervck;
create table Suppliers(
sid integer,
sname varchar(20),
city varchar(20),
primary key(sid));
create table Parts(
pid integer,
pname varchar(20),
color varchar(20),
primary key(pid));
create table Catalog(
sid integer,
pid integer,
cost integer,
primary key(sid,pid),
foreign key(sid) references Suppliers(sid) on delete cascade on update cascade,
foreign key(pid) references Parts(pid) on delete cascade on update cascade);
insert into Suppliers values (10001, 'Acme
Widget', 'Bangalore'), (10002, 'Johns', 'Kolkata'), (10003, 'Vimal', 'Mumbai'), (10004, 'Reliance', 'Delhi');
insert into Parts values
(20001, 'Book', 'Red'), (20002, 'Pen', 'Red'), (20003, 'Pencil', 'Green'), (20004, 'Mobile', 'Green'), (20005, 'Cha
rger','Black');
insert into Catalog values
(10001,20001,10),(10001,20002,10),(10001,20003,30),(10001,20004,10),(10001,20005,10),(10002,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(10001,20005,10),(100
0001,10),(10002,20002,20),(10003,20003,30),(10004,20003,40);
```

## Query1

Find pname for parts for which there is supplier

select pname from Parts p where exists(select sid from Catalog c where c.pid=p.pid) order by pname;



### Query 2

Find names of suppliers who supply every part

select sname from Suppliers where sid in (select sid from Catalog group by sid having count(distinct pid)=(select count(pid) from Parts));



#### Query 3

Find names of Suppliers who supply all red parts

select sname from Suppliers where sid in (select sid from Catalog c,Parts p where c.pid=p.pid and p.color='Red' group by sid having count(distinct p.pid)=(select count(\*) from Parts where color='Red'));



# Query 4

Find pname of parts supplied only by Acme widget

select pname from parts where pid in (select w.pid from (select pid from Catalog group by pid having count(distinct sid)=1) w, Catalog c1,Suppliers s1 where w.pid=c1.pid and c1.sid=s1.sid and s1.sname='Acme widget');



### Query 5

Find sid of suppliers who charge more for a part than avg cost

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



### Query 6

Find sname of supplier who charges most for a part

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

