create database supplier;

use supplier;

create table SUPPLIERS(sid integer(5) primary key, sname varchar(20), city

varchar(20));

create table PARTS(pid integer(5) primary key, pname varchar(20), color varchar(10));

create table CATALOG(sid integer(5), pid integer(5),

foreign key(sid) references SUPPLIERS(sid) on delete cascade on update cascade

, foreign key(pid) references PARTS(pid) on delete cascade on update cascade

, cost float(6), primary key(sid, pid));

-- Inserting values

insert into suppliers values(10001, 'Acme Widget','Bangalore');

insert into suppliers values(10002, 'Johns','Kolkata');

insert into suppliers values(10003, ' Vimal','Mumbai');

insert into suppliers values(10004, 'Reliance','Delhi');

insert into suppliers values(10005, 'Mahindra','Mumbai');

insert into PARTS values(20001,' Book','Red');

insert into PARTS values(20002, 'Pen','Red');

insert into PARTS values(20003, 'Pencil','Green');

insert into PARTS values(20004, 'Mobile','Green');

insert into PARTS values(20005, 'Charger','Black');

insert into CATALOG values(10001, 20001,10);

insert into CATALOG values(10001, 20002,10);

insert into CATALOG values(10001, 20003,30);

insert into CATALOG values(10001, 20004,10);

insert into CATALOG values(10001, 20005,10);

insert into CATALOG values(10002, 20001,10);

insert into CATALOG values(10002, 20002,20);

insert into CATALOG values(10003, 20003,30);

insert into CATALOG values(10004, 20003,40);

select \* from CATALOG;

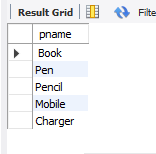
-- Queries

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

select distinct p.pname

from SUPPLIERS s,PARTS p,CATALOG c

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

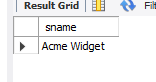


-- 2) Find the snames of suppliers who supply every part.

select s.sname

from SUPPLIERS s

where s.sid in ( select c.sid from CATALOG c group by c.sid having count(c.pid) = (select count(pid) from PARTS));

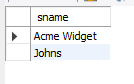


-- 3) Find the snames of suppliers who supply every red part.

select distinct sname

from SUPPLIERS s,PARTS p,CATALOG c

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



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

select p.pname

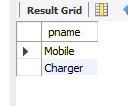
from CATALOG c, PARTS p

where c.sid=(select sid from SUPPLIERS where sname='Acme Widget') and p.pid=c.pid and c.pid

not in (select c.pid

from catalog c

where c.sid!=(select sid from SUPPLIERS where sname='Acme Widget'));



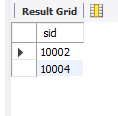
-- 5)Find the sids of suppliers who charge more for some part than the average cost of that part

(averaged over all the suppliers who supply that part).

select c.sid

from CATALOG c

where c.cost > (select avg(cost) from CATALOG c1 where c.pid = c1.pid );



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

select s.sname from SUPPLIERS s where s.sid in (

select c.sid

from CATALOG c

where c.cost = (select max(cost) from CATALOG c1 where c.pid = c1.pid ));

