create database  1BM21CS185\_supplier;

use 1BM21CS185\_supplier;

show tables;

create table supplier(

sid int,

sname varchar(20),

city varchar(20),

primary key (sid)

);

select \* from supplier;

create table parts(

pid int,

pname varchar(20),

color varchar(20),

primary key (pid)

);

select \* from parts;

create table catalog(

sid int,

pid int,

cost int,

primary key (sid,pid),

foreign key (sid) references supplier(sid)

on delete cascade on update cascade,

foreign key (pid) references parts(pid)

on delete cascade on update cascade

);

select \* from catalog;

insert into supplier

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,'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);

#q3

select distinct p.pname

from parts p,catalog c

where sid is not null;

#q4

select distinct s.sname

from supplier s, catalog c

where s.sid = c.sid and (select distinct count(c1.pid) from catalog c1 where c1.sid = s.sid group by c1.sid) = (select distinct count(\*) from parts);

#q5

select s.sname

from supplier s

where (select count(\*) from catalog c1, supplier s1, parts p1 where c1.pid = p1.pid and c1.sid = s1.sid and color = "Red" and c1.sid = s.sid group by color) = (select count(\*) from parts where color="Red" group by color);

#q6

select p.pname

from parts p, catalog c

where p.pid = c.pid and c.sid = (select sid from supplier where sname ="Acme Widget") and not exists(select \* from catalog c1 where c1.pid = c.pid and c1.sid != c.sid);

#q7

select s.sid

from supplier s, catalog c

where s.sid = c.sid and c.cost > (select avg(c1.cost)

                                  from catalog c1

                                  where c1.pid = c.pid

                                  group by c1.pid);

#q8

select s.sname, c.pid

from supplier s, catalog c

where s.sid = c.sid and c.cost = (select max(c1.cost)

                                  from catalog c1

                                  where c1.pid = c.pid

