Week-7

Supplier Database

```
create database supplier;
use supplier;
create table parts(pid int primary key, pname varchar (50), colour varchar (50));
create table supplier(sid int primary key, sname varchar (50), city varchar(50));
create table catalog ( sid int, pid int , cost int, primary key (sid, pid),
foreign key (sid) references supplier (sid),
foreign key (pid) references parts (pid));
insert into supplier values (10001, "Acme Widget", "Bangalore");
insert into supplier values(10002, "Johns", "Kolakata");
insert into supplier values(10003, "Vimal", "Mumbai");
insert into supplier values(10004, "Reliance", "Delhi");
select * from supplier;
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");
select * from parts;
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;
#3)
select distinct pname from parts where pid in (select pid from catalog);
#4)
select sname from supplier s where not exists (select p.pid from parts p
where not exists(select c.pid from catalog c where
c.pid = p.pid and c.sid= s.sid));
#5)
select sname from supplier s
where not exists (select p.pid from parts p where p.colour= 'Red' and
not exists(select c.pid from catalog c where c.pid = p.pid and c.sid = s.sid));
#6)
select p.pname from parts p join catalog c on p.pid=c.pid
join supplier s on c.sid= s.sid
where s.sname = 'Acme Widget'
and not exists( select * from catalog c1 where c1.pid = p.pid and c1.sid != s.sid);
#7)
select distinct s.sid from catalog c join supplier s on c.sid = s.sid
join parts p on c.pid = p.pid where c.cost > (select avg(cost) from catalog where pid = c.pid);
```

```
#8)
select p.pname, s.sname from parts p join catalog c on p.pid= c.pid
join supplier s on c.sid = s.sid
where c.cost = (select max(cost) from catalog where pid = c.pid);
```

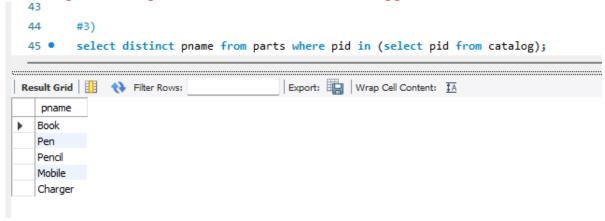
Output:

- 1. Using Scheme diagram, Create tables by properly specifying the primary keys and the foreign keys.
- 2. Insert appropriate records in each table.

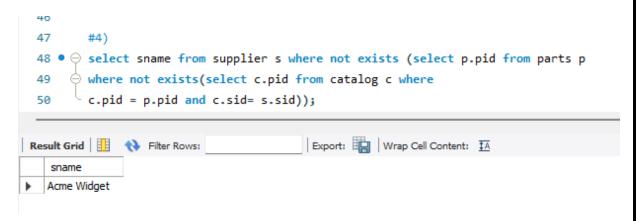
```
10
 11 •
         create table supplier(sid int primary key, sname varchar (50), city varchar(50));
 12
         insert into supplier values( 10001, "Acme Widget", "Bangalore");
 13 •
         insert into supplier values(10002, "Johns", "Kolakata");
 14 •
         insert into supplier values(10003, "Vimal", "Mumbai");
 15 •
         insert into supplier values(10004, "Reliance", "Delhi");
 16 •
 17
 18 •
         select * from supplier;
Edit: 🚄 🖶 Export/Import: 📳 🐻 Wrap Cell Content: 🖽
   sid
          sname
                      city
   10001
         Acme Widget
                     Bangalore
   10002
         Johns
                     Kolakata
   10003
         Vimal
                     Mumbai
   10004
         Reliance
                     Delhi
  NULL
         NULL
                     NULL
 19
 20 •
        create table parts( pid int primary key, pname varchar (50), colour varchar (50));
 21
        insert into parts values(20001, "Book", "Red");
 22 •
 23 •
        insert into parts values(20002, "Pen", "Red");
        insert into parts values(20003, "Pencil", "Green");
 25 •
        insert into parts values(20004, "Mobile", "Green");
 26 •
        insert into parts values(20005, "Charger", "Black");
 27
 28 •
        select * from parts;
                                       Edit: 🚄 🖶 Export/Import: 📳 🌄 Wrap Cell Content: 🖽
pid
         pname
                 colour
  20001
                 Red
         Book
  20002
                 Red
         Pen
  20003
                 Green
         Pencil
  20004
         Mobile
                 Green
         Charger
  20005
                 Black
                NULL
  NULL
        NULL
```

```
29
        foreign key (sid) references supplier (sid),
 30
        foreign key (pid) references parts (pid));
 31
 32 •
        insert into catalog values(10001, 20001, 10);
        insert into catalog values(10001, 20002, 10);
 33 •
        insert into catalog values(10001, 20003, 30);
 34 •
        insert into catalog values(10001, 20004, 10);
 35 •
        insert into catalog values(10001,20005, 10);
 36 •
        insert into catalog values(10002, 20001, 10);
 37 •
        insert into catalog values(10002, 20002, 20);
 38 •
        insert into catalog values(10003, 20003, 30);
 40 •
        insert into catalog values(10004, 20003, 40);
 41
 42 •
        select * from catalog;
Result Grid
                                      Edit: 🚄 🖶 🖶 Export/Import: 📳 👸 Wrap Cell Content:
             Filter Rows:
   sid
         pid
               cost
  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
```

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



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



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

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

7. 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).

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

