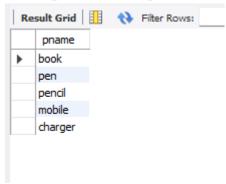
Week-7

```
create database supplier_cs058;
use supplier_cs058;
create table supplier(
sid varchar(20),
sname varchar(20),
city varchar(20),
primary key(sid)
);
create table parts(
pid varchar(20),
pname varchar(20),
color varchar(20),
primary key(pid)
);
create table catlog(
sid varchar(20),
pid varchar(20),
cost varchar(20),
primary key(sid,pid),
foreign key(pid)references parts(pid),
foreign key(sid)references supplier(sid)
);
insert into supplier values(10001, 'acme widget', 'bangalore');
insert into supplier values(10002, 'johns', 'kolkata');
insert into supplier values(10003,'vimal','mumbai');
insert into supplier values(10004, 'reliance', 'delhi');
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 catlog values(10001,20001,10);
```

```
insert into catlog values(10001,20002,10); insert into catlog values(10001,20003,30); insert into catlog values(10001,20004,10); insert into catlog values(10001,20005,10); insert into catlog values(10002,20001,10); insert into catlog values(10002,20002,20); insert into catlog values(10003,20003,30); insert into catlog values(10004,20003,40);
```

1. Find the pnames of parts for which there is some Supplier.

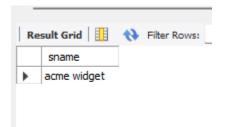
select pname from parts where pid IN (select pid from catlog);



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

select sname from

(select c.sname,count(distinct a.pid) as cnt from catlog a left join parts b on a.pid=b.pid left join supplier c on c.sid=a.sid group by 1) a where cnt=(select count(distinct a.pid) from catlog a left join parts b on a.pid=b.pid);



3.Find the snames of suppliers who supply every red part. select distinct sname from

(select c.sname,b.pname,b.color from catlog a left join parts b on a.pid=b.pid left join supllier c on c.sid=a.sid)a where color='red';

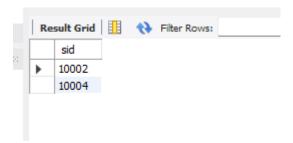


4. Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.

select A.pname from parts A
left join catlog B on A.pid=B.pid
left join supllier C on B.sid=C.sid where lower(c.sname)='acme widget'
and a.pname not in (select A.pname from parts A
left join catlog B on A.pid=B.pid
left join supllier C on B.sid=C.sid where lower(c.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).



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

select pid,sname from (select A.pid,C.sname,cost,rank() over(partition by pid order by cost desc) as rnk from parts A left join catlog B on A.pid=B.pid left join supllier C on B.sid=C.sid)A where rnk=1 and cost is not null order by sname;

