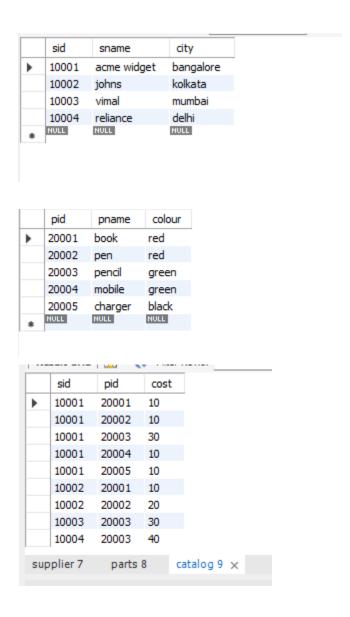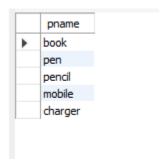# Week-7

Creating tables

```
create table supplier
(sid int, sname varchar(50), city varchar(50),
 primary key(sid));

 create table parts
 (pid int, pname varchar(50), colour varchar(50),
  primary key(pid));

create table catalog
(sid int, pid int, cost int,
 foreign key(sid) references supplier(sid),
 foreign key(pid) references parts(pid));
```

Inserting values

```
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'),(200
05,'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);
insert into catalog values(10003,20003,30),(10004,20003,40);
```

```
select * from supplier;
select * from parts;
select * from catalog;
```
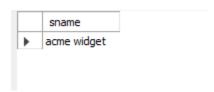
sid	sname	city
10001	acme widget	bangalore
10002	johns	kolkata
10003	vimal	mumbai
10004	reliance	delhi
NULL	NULL	NULL

pid	pname	colour
20001	book	red
20002	pen	red
20003	pencil	green
20004	mobile	green
20005	charger	black
NULL	NULL	NULL

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

supplier 7   parts 8   catalog 9 ×

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

select pname from parts where pid in (select pid from catalog);

pname
book
pen
pencil
mobile
charger

- Find the snames of suppliers who supply every part.

select sname from
(select c.sname,count(distinct a.pid) as cnt from catalog 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 catalog a
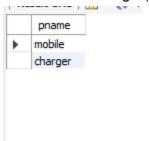left join parts b on a.pid=b.pid);

sname
▶ acme widget

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

select sname from supplier
where sid in(select sid from catalog where pid in(select pid from parts where colour='red'));

sname
▶ acme widget
johns

- Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.
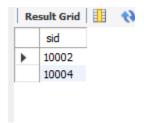
select pname from parts where pid in(
select pid from catalog where sid in(select sid from supplier where sname='acme widget'))
and pid not in(select pid from catalog where sid in(select sid from supplier where
sname!='acme widget'));

pname
▶ mobile
charger

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

select c.sid from catalog c

where c.cost >(select avg(cc.cost) from catalog cc where c.pid=cc.pid group by cc.pid);

Result Grid
sid
▶ 10002
10004

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

select sname from supplier
where sid in(select sid from catalog where cost in(select max(cost) from catalog group by pid));

sname
▶ acme widget
johns
reliance