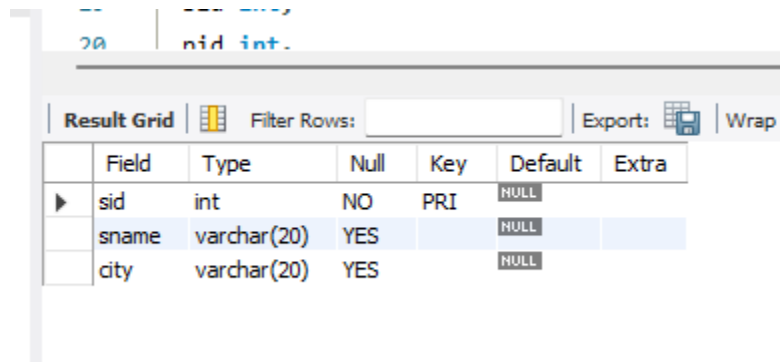


WEEK 7

1. Using Scheme diagram, Create tables by properly specifying the primary keys and the foreign keys.

```
create database supplier;  
use supplier;  
create table supplier(  
sid int,  
sname varchar(20),  
city varchar(20),  
primary key(sid)  
);  
DESC supplier;
```



	Field	Type	Null	Key	Default	Extra
▶	sid	int	NO	PRI	NULL	
	sname	varchar(20)	YES		NULL	
	city	varchar(20)	YES		NULL	

```
create table parts(  
pid int,  
pname varchar(20),  
color varchar(20),  
primary key(pid)  
);  
DESC parts;
```

20 | nid int;

Field	Type	Null	Key	Default	Extra
pid	int	NO	PRI	NULL	
pname	varchar(20)	YES		NULL	
color	varchar(20)	YES		NULL	

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

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39 • insert into catalog values(10001,20001,10);

Field	Type	Null	Key	Default	Extra
sid	int	NO	PRI	NULL	
pid	int	NO	PRI	NULL	
cost	int	YES		NULL	

2. Insert appropriate records in each table.

```
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');
select * from supplier;
```

51 • `select * from parts;`



Result Grid   Filter Rows:

	sid	sname	city
▶	10001	acme widget	bangalore
	10002	johns	kolkata
	10003	vimal	mumbai
	10004	reliance	delhi
✱	NULL	NULL	NULL

```

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;

```

Result Grid   Filter Rows:

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

```

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;

```

Result Grid			
	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
✱	NULL	NULL	NULL

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

select p.pname

from parts p

where exists(select c.pid

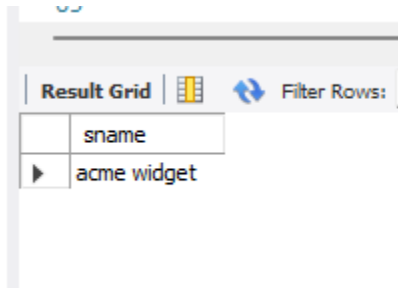
from catalog c

where c.pid=p.pid);

Result Grid	
	pname
▶	book
	pen
	pencil
	mobile
	charger

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

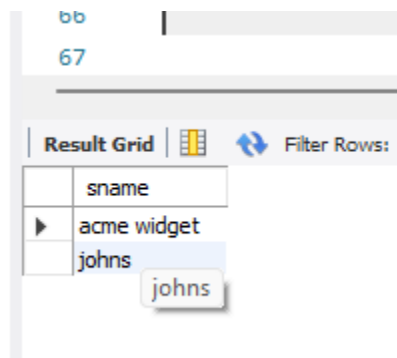
```
select sname from supplier
where sid in( select sid from catalog
group by sid having count(sid)=( select count(pid) from parts));
```



Result Grid		Filter Rows:
sname	acme widget	

5. 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
color='Red'));
```



Result Grid		Filter Rows:
sname	acme widget	
sname	johns	

6. 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'));
```

Result Grid	
	pname
▶	mobile
	charger

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).

```
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

8. 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));
```

Result Grid



Filter Rows:

	sname
▶	acme widget
	johns
	reliance