

Week 7 Supplier database

1BM21CS044

```
create database 44_supplier;
use 44_supplier;

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 catalog(
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)
on update cascade on delete cascade
);

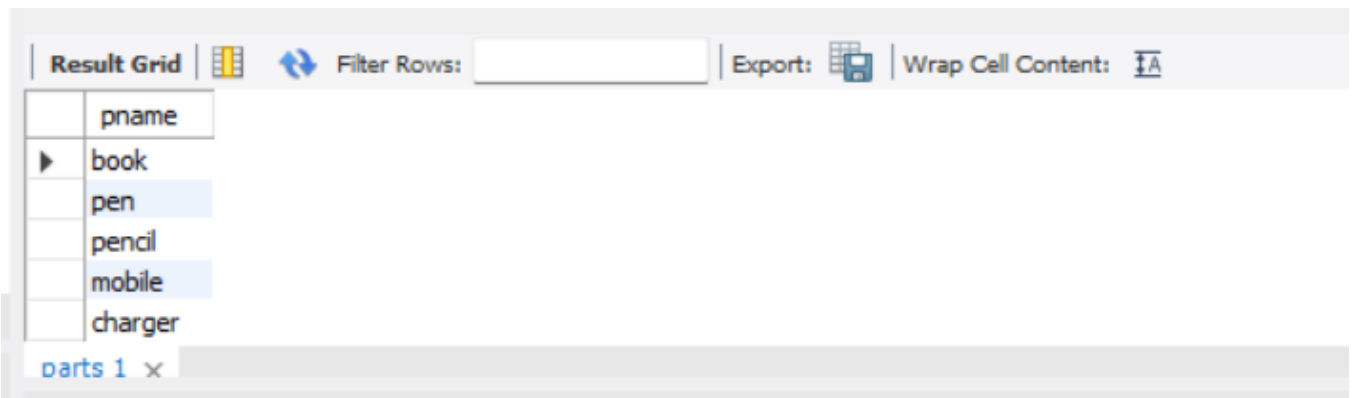
insert into supplier values(10001,'acme widget','bangalore');
insert into supplier values(10002,'johns','kolkata');
insert into supplier values(10003,'vimal','mumbai');
insert into supplier values(10004,'reliance','delhi');

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 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);
```

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

```
select p.pname
from parts p
where p.pid in(select distinct pid from catalog);
```



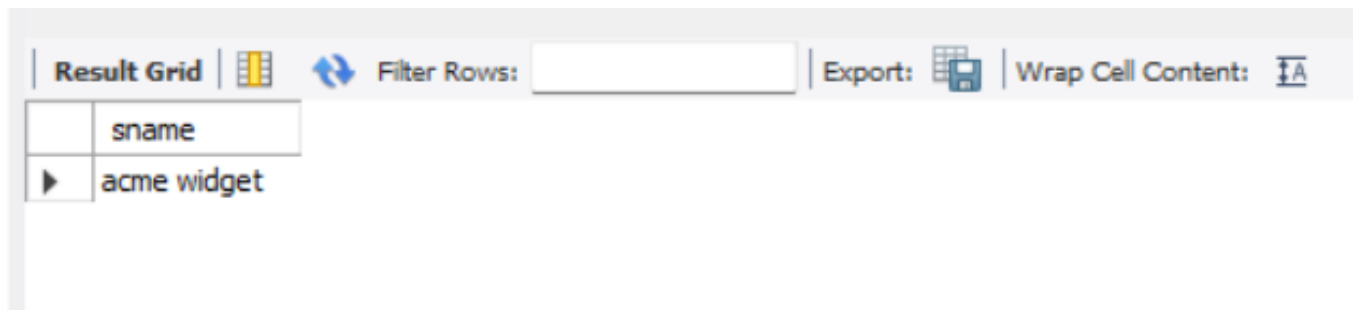
The screenshot shows a database interface with a toolbar at the top containing 'Result Grid', 'Filter Rows', 'Export', and 'Wrap Cell Content'. Below the toolbar is a table with the following data:

	pname
▶	book
	pen
	pencil
	mobile
	charger

At the bottom left, there is a tab labeled 'parts 1' with a close button (x).

Find the snames of suppliers who supply every part.

```
select s.sname
from supplier s
where s.sid=(select sid from catalog
group by sid having count(sid)>=5 );
```



The screenshot shows a database interface with a toolbar at the top containing 'Result Grid', 'Filter Rows', 'Export', and 'Wrap Cell Content'. Below the toolbar is a table with the following data:

	sname
▶	acme widget



Find the snames of suppliers who supply every red part.

```
select s.sname
from supplier s
where s.sid in (select distinct c.sid
                from catalog c
                where c.pid in (select p.pid from parts P
                               where p.color='red'));
```

Result Grid		Filter Rows:	
	sname		
▶	acme widget		
	johns		

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

```
select p.pname from parts p,supplier s
where s.sname='acme widget' and pid in (select
distinct c.pid from catalog c group by c.pid
having count(c.pid)<=1);
```

Result Grid			 Filter Rows: <input type="text"/>
	pname		
▶	mobile		
	charger		

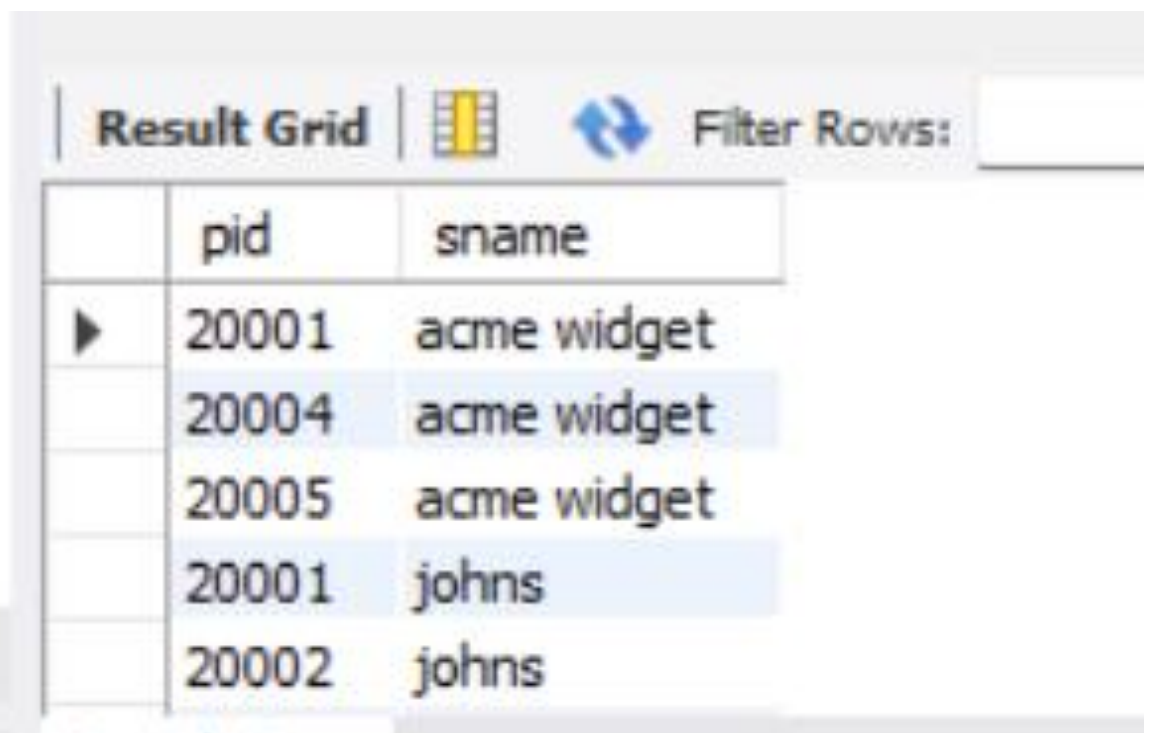
Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).

```
select s.sname,s.sid
from catalog cat,supplier s
where cat.sid=s.sid and cat.cost>any( select
avg(c.cost)  from catalog c
where c.pid=cat.pid  group by c.pid);
```

Result Grid			Filter Rows:	
	sname	sid		
▶	johns	10002		
	reliance	10004		

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

```
select c.pid,s.sname
from supplier s,catalog c
where c.sid=s.sid and c.cost in( select max(c1.cost)
                                from catalog c1
                                where c1.pid=c.pid
                                group by c1.pid);
```



The screenshot shows a database interface with a 'Result Grid' tab. The grid contains two columns: 'pid' and 'sname'. There are six rows of data. The first three rows show 'acme widget' for pids 20001, 20004, and 20005. The next two rows show 'johns' for pids 20001 and 20002. The last row is empty. The interface includes a 'Filter Rows' button and a search input field.

	pid	sname
▶	20001	acme widget
	20004	acme widget
	20005	acme widget
	20001	johns
	20002	johns