SUPLLIER DATABASE

WEEK 7

INPUT:

```
create database supplier;
use supplier;
create table supplier
(sid varchar(20) primary key,
sname varchar(20),
city varchar(20));
create table parts
(pid varchar(20) primary key,
pname varchar(20),
color varchar(20));
create table catalog
(sid varchar(20),
pid varchar(20),
cost varchar(20),
primary key(sid,pid),
foreign key(pid)references parts(pid) on delete cascade on update cascade,
foreign key(sid)references supplier(sid) on delete cascade on update cascade);
```

```
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'),
(20005,'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),
(10003,20003,30),
(10004,20003,40);
```

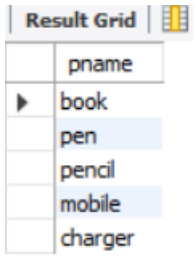
QUERIES:

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

INPUT:

```
select pname from parts where pid IN (select pid from
catalog);
```

OUTPUT:



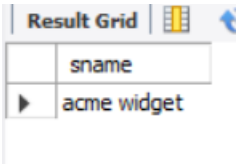
	pname
▶	book
	pen
	pencil
	mobile
	charger

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

INPUT:

```
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);
```

OUTPUT:



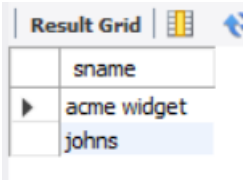
	sname
▶	acme widget

3) Find the snames of suppliers who supply every red part.

INPUT:

```
select distinct sname from
(select c.sname,b.pname,b.color from catalog a
left join parts b on a.pid=b.pid
left join supplier c on c.sid=a.sid )a
where color='red';
```

OUTPUT:

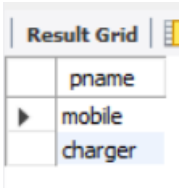


4) Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.

INPUT:

```
select A.pname from parts A
left join catalog B on A.pid=B.pid
left join supplier 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 catalog B on A.pid=B.pid
left join supplier C on B.sid=C.sid where
lower(c.sname)<>'acme widget');
```

OUTPUT:



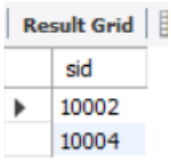
	pname
▶	mobile
	charger

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).

INPUT:

```
select a.sid from

(select A.pid,C.sid,cost from parts A

left join catalog B on A.pid=B.pid

left join supplier C on B.sid=C.sid )A

left join (select A.pid,avg(cost) as cost from parts A

left join catalog B on A.pid=B.pid left join supplier C on B.sid=C.sid  where cost is not null group by 1 )B on A.pid=B.pid where a.cost>b.cost;
```

OUTPUT:



	sid
▶	10002
	10004

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

INPUT:

```
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 catalog B on A.pid=B.pid left join supplier C on B.sid=C.sid)A where rnk=1 and cost is not null order by sname;
```

OUTPUT:

Result Grid | Filter

pid	sname
20001	acme widget
20004	acme widget
20005	acme widget
20001	johns
20002	johns
20003	reliance

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