

# SUPPLIER 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:

Result Grid	
	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:

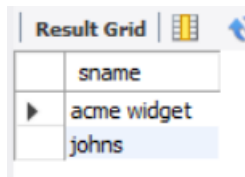
Result Grid	
	sname
▶	acme widget

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:



	sname
▶	acme widget
	johns

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:

Result Grid	
	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:

Result Grid	
	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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