

WEEK 7

VIBHA HUGAR CS255

QUERY 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(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) on delete cascade);
```

QUERY 2

Insert appropriate records in each table.

```
insert into supplier values
```

```
(10001,'acmewidget','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);
```




```
select * from supplier;
```

```
select * from parts;
```

```
select * from catalog;
```

Result Grid		Filter Rows:
sid	sname	city
10001	acnewidget	bangalore
10002	johns	kolkata
10003	vimal	mumbai
10004	reliance	delhi
NULL	NULL	NULL

Result Grid			 Filter Rows
	pid	pname	colour
▶	20001	book	red
	20002	pen	red
	20003	pencil	green
	20004	mobile	green
	20005	charger	black
*	NULL	NULL	NULL

Result Grid			 Filter Rows:
	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

QUERY 3

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

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

Result Grid	
	pname
▶	book
	pen
	pencil
	mobile
	charger

QUERY 4

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);
```

Result Grid	
	sname
▶	acmewidget

QUERY 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 colour='red'));
```

Result Grid	
	sname
▶	acmewidget
	johns

QUERY 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='acmewidget'))
and pid not in( select pid from catalog where sid in( select sid from
supplier where
sname!='acmewidget'));

```

Result Grid	
	pname
▶	mobile
	charger

QUERY 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

QUERY 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	
	sname
▶	acmewidget
	johns
	reliance