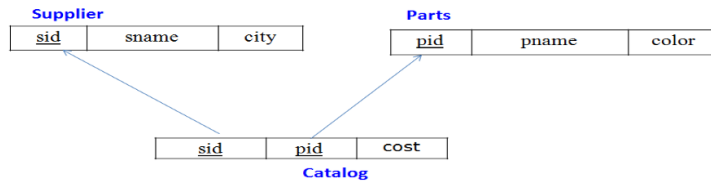


## 7. Supplier Database

### PROGRAM 7: Supplier Database



- i. Using Scheme diagram, create tables by properly specifying the primary keys and the foreign keys.
- ii. Insert appropriate records in each table.
- iii. Find the pnames of parts for which there is some supplier.
- iv. Find the snames of suppliers who supply every part.
- v. Find the snames of suppliers who supply every red part.
- vi. Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.
- vii. 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).
- viii. For each part, find the sname of the supplier who charges the most for that part.

#### Creating database and table:

```
create database supplier_141;
use supplier_141;
```

```
create table Supplier
(sid int primary key,
sname varchar(35),
city varchar(35));
```

```
create table parts
(pid int primary key,
pname varchar(35),
color varchar(35));
```

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

#### Inserting values to tables:

```
insert into Supplier values
(10001,"Acme Widget","Bangalore"),
```

sid	sname	city
10001	Acme Widget	Bangalore
10002	Johns	Kolkata
10003	Vimal	Mumbai
10004	Reliance	Delhi
NULL	NULL	NULL

```
(10002,"Johns","Kolkata"),
(10003,"Vimal","Mumbai"),
(10004,"Reliance","Delhi");
```

```
Select * from Supplier;
```

```
insert into parts values
```

```
(20001,"Book","Red"),
(20002,"Pen","Red"),
(20003,"Pencil","Green"),
(20004,"Mobile","Green"),
(20005,"Charger","Black");
```

```
Select * from parts;
```

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),
(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 catalog;
```

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

## Queries:

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

```
select distinct pname from parts p,catalog c where p.pid=c.pid;
```

pname
Book
Pen
Pencil
Mobile
Charger

### ii. Find the snames of suppliers who supply every part.

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

sname
Acme Widget

### iii. Find the snames of suppliers who supply every red part.

```
select s.sname
from Supplier s, Catalog c
where s.sid = c.sid
and pid in (select pid from Parts where color="Red")
group by c.sid
having count(distinct c.pid) >= (select count(distinct pid) from Parts where color="Red");
```

sname
Acme Widget
Johns

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

```
select pname
from Catalog c, Parts p, Supplier s
where c.sid = s.sid
and p.pid = c.pid
```

pname
Mobile
Charger

and s.sname = "Acme Widget"  
 and c.pid not in(select pid from Catalog c1 where c1.sid <> s.sid);

- V. 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 distinct sid from Catalog c where cost >  
 (select avg(cost) from Catalog c1 group by pid having c.pid = c1.pid);

sid
10002
10004

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

select pid, sname from Catalog c, Supplier s where s.sid = c.sid  
 and cost in  
 (select max(cost) from Catalog c1 group by pid having c.pid = c1.pid);

sname	pid	pname	cost
Acme Widget	20001	Book	10
Acme Widget	20004	Mobile	10
Acme Widget	20005	Charger	10
Johns	20001	Book	10
Johns	20002	Pen	20
Reliance	20003	Pencil	40