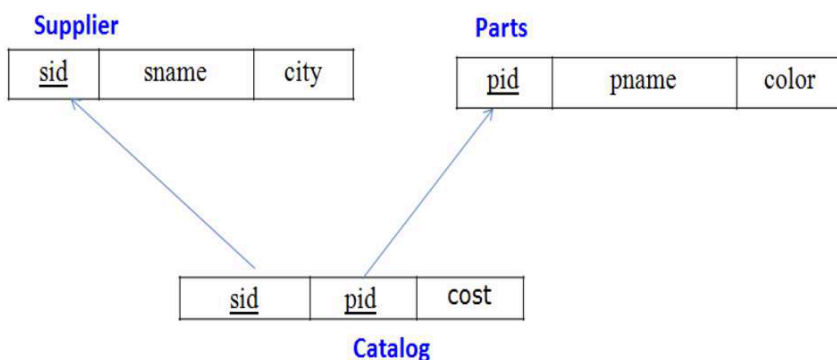


Supplier Database

Question: (Week 7)

1. Using Scheme diagram, Create tables by properly specifying the primary keys and the foreign keys.
2. Insert appropriate records in each table.
3. Find the pnames of parts for which there is some supplier.
4. Find the snames of suppliers who supply every part.
5. Find the snames of suppliers who supply every red part.
6. Find the pnames of parts supplied by Acme Widget Suppliers and by no one else
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)
8. For each part, find the sname of the supplier who charges the most for that part

Schema Diagram:



Create Database:

```
create database supp;
use supp;
```

Create Tables:

```
create table Supplier(
  s_id int primary key,
  s_name varchar(30),
```

```

city varchar(20));
create table Parts( p_id int primary key, p_name varchar(30), color varchar(30));
create table Catalog( s_id int,
p_id int, cost float,
foreign key(s_id) references Supplier(s_id), foreign key(p_id) references Parts(p_id));

```

Structure of the Table:

```

desc Supplier;
desc Parts;
desc Catalog;

```

Inserting Values to the tables:

```

insert into Supplier values
(10001, 'Acme_Widget', 'Bangalore'),
(10002, 'Johns', 'Kolkata'),
(10003, 'Vimal', 'Mumbai'),
(10004, 'Reliance', 'Delhi'); select * from Supplier;

```

	SID	Sname	City
▶	10001	Acme Widget	Bangalore
	10002	Johns	Kolkata
	10003	Vimal	Mumbai
	10004	Reliance	Delhi
•	HULL	HULL	HULL

```

insert into Parts values (20001, 'Book', 'Red'),
(20002, 'Pen', 'Red'),
(20003, 'Pencil', 'Green'),
(20004, 'Mobile', 'Green'),
(20005, 'Charger', 'Black');

```

	PID	Pname	Color
▶	20001	Book	Red
	20002	Pen	Red
	20003	Pencil	Green
	20004	Mobile	Green
	20005	Charger	Black
•	HULL	HULL	HULL

```

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);

	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
•	HULL	HULL	HULL

Queries:

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

```
select distinct p.p_name
from Supplier s, Catalog c, Parts p where s.s_id = c.s_id and
p.p_id = c.p_id and c.s_id is not null;
```

	Pname
▶	Book
	Pen
	Pencil
	Mobile
	Charger

Find the snames of suppliers who supply every part.

```
select distinct s_name
from Supplier s, Catalog c, Parts p where s.s_id = c.s_id
group by s.s_id, s.s_name
having count(distinct c.p_id)=(select count(*) from Parts p);
```

	sname
▶	Acme Widget
	Johns
	Vimal
	Reliance

Find the snames of suppliers who supply every red part.

```
select distinct s_name
from Supplier s, Catalog c, Parts p where s.s_id = c.s_id and
c.p_id in (select p_id from Parts p where p.color = 'Red')
```

	sname
▶	Acme Widget
	Johns

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

```
select distinct p_name from Supplier s, Parts p, Catalog c where p.p_id in (select c.p_id
from Catalog c, Supplier s where
s.s_id = c.s_id and s.s_name = 'Acme_Widget') and
p.p_id not in (select c.p_id from Catalog c, Supplier s where s.s_id = c.s_id and s.s_name
!= 'Acme_Widget');
```

	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)

```
create view Average(p_id, Average_Product_Cost) as select c.p_id, avg(cost)
from Catalog c group by c.p_id;
select c.s_id from Catalog c, Average a where c.p_id = a.p_id and
c.cost > (a.Average_Product_Cost)
group by c.p_id, c.s_id;
```

	sid
▶	10002
	10004

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

```
select distinct s.s_name, c.cost, c.p_id from Catalog c, Supplier s where s.s_id = c.s_id
and
c.cost in (select max(cost) from Catalog c group by c.p_id);
```

	sname
▶	Acme Widget
	Johns
	Reliance