

## WEEK 7 DBMS LAB

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### Supplier Database

```
create database Shop;  
use Shop;
```

```
create table suppliers  
(  
sid int primary key,  
sname varchar(20),  
city varchar(20)  
);
```

```
create table parts  
(  
pid int primary key,  
pname varchar(20),  
color varchar(10)  
);
```

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

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

```
(10002, "Johns", "Kolkata"),  
(10003, "Vimal", "Mumbai"),  
(10004, "Reliance", "Delhi"),  
(10005, "Mahindra", "Mumbai");
```

```
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);
```

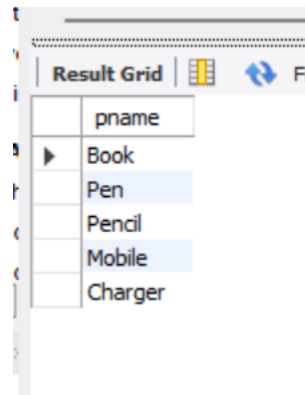
## QUERIES

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

select distinct pname

from parts p, catalog c,suppliers s

where c.sid=s.sid and p.pid=c.pid;



A screenshot of a database query result grid. The grid has a header row with the column name 'pname'. Below the header, there are five rows of data: 'Book', 'Pen', 'Pencil', 'Mobile', and 'Charger'. The 'Pen' and 'Mobile' rows are highlighted in blue.

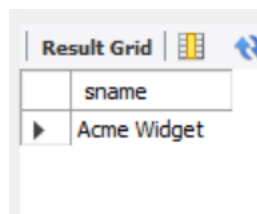
pname
Book
Pen
Pencil
Mobile
Charger

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

select s.sname

from suppliers s

where((select count(p.pid)from parts p)=(select count(c.pid)from catalog c  
where c.sid=s.sid));



A screenshot of a database query result grid. The grid has a header row with the column name 'sname'. Below the header, there is one row of data: 'Acme Widget'. The row is highlighted in blue.

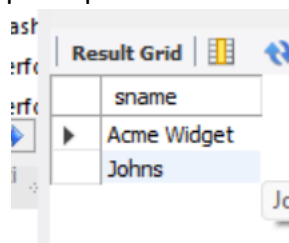
sname
Acme Widget

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

select distinct s.sname

from catalog c,parts p,suppliers s

where s.sid=c.sid and p.pid=c.pid and color="Red";



A screenshot of a database query result grid. The grid has a header row with the column name 'sname'. Below the header, there are two rows of data: 'Acme Widget' and 'Johns'. The 'Johns' row is highlighted in blue.

sname
Acme Widget
Johns

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

select pname

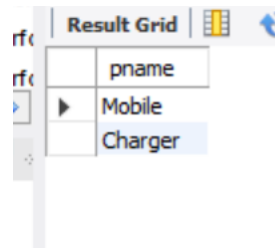
from parts P,Catalog c,suppliers s

where p.pid=c.pid and c.sid=s.sid and s.sname ="Acme Widget"

and not exists(select \*

from catalog c1,suppliers s1

where p.pid=c1.pid and c1.sid=s1.sid and s1.sname <> "Acme Widget");



	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).

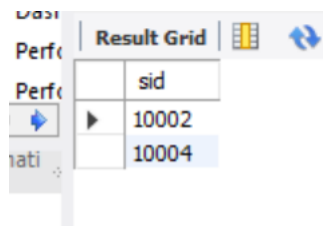
select distinct c.sid

from catalog c

where c.cost>(select avg(c1.cost)

from catalog c1

where c1.pid=c.pid);



	sid
	10002
	10004

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

select p.pid,s.sname



from suppliers s,catalog c,parts p

where c.pid=p.pid and s.sid=c.sid and c.cost=(select max(c1.cost)

from catalog c1

where c1.pid=p.pid)

order by s.sname;

art		
rv	Result Grid	  Filter Rows
pti	pid	sname
MA	20001	Acme Widget
ast	20004	Acme Widget
rfc	20005	Acme Widget
rfc	20001	Johns
rfc	20002	Johns
rfc	20003	Reliance