

WEEK 7 DBMS LAB

Swastik Srivastava

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);
```

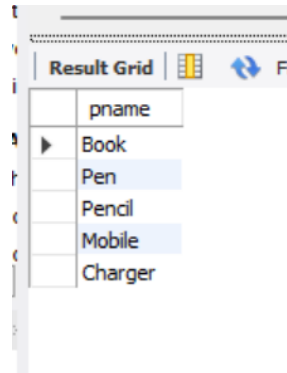
QUERIES

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 six rows of data: 'Book', 'Pen', 'Pencil', 'Mobile', and 'Charger'. The 'Pen' and 'Mobile' rows are highlighted in blue. The grid is titled 'Result Grid' and has a refresh icon to its right.

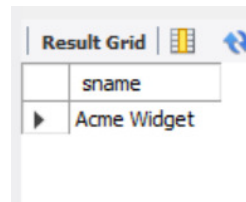
| pname |
|---------|
| Book |
| Pen |
| Pencil |
| Mobile |
| Charger |

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
cwhere 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 grid is titled 'Result Grid' and has a refresh icon to its right.

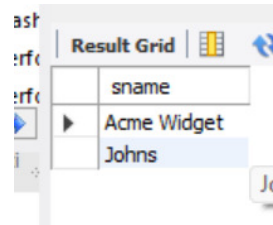
| sname |
|-------------|
| Acme Widget |

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

select distinct s.sname

from catalog c,partsp,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. The grid is titled 'Result Grid' and has a refresh icon to its right.

| sname |
|-------------|
| Acme Widget |
| Johns |

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

select pname

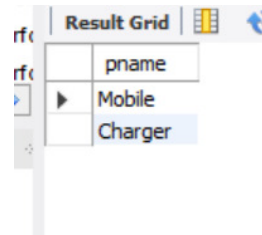
from parts P,Catalogc,suppliers s

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");



A screenshot of a database query result grid. The grid has a header row with the column name 'pname'. Below the header, there are two rows of data: 'Mobile' and 'Charger'. The grid is titled 'Result Grid' and has a small icon of a document with a checkmark next to it.

| 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).

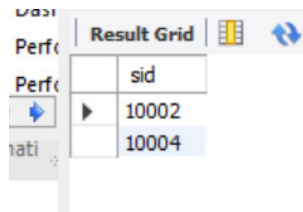
select distinct c.sid

from catalog c

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

from catalog c1

where c1.pid=c.pid);



A screenshot of a database query result grid. The grid has a header row with the column name 'sid'. Below the header, there are two rows of data: '10002' and '10004'. The grid is titled 'Result Grid' and has a small icon of a document with a checkmark next to it.

| 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,catalogc,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 | Result Grid   Filter Rows | |
| inv | | |
| pti | pid | sname |
| AA | 20001 | Acme Widget |
| 35h | 20004 | Acme Widget |
| rfe | 20005 | Acme Widget |
| rfe | 20001 | Johns |
| rfe | 20002 | Johns |
| ▶ | 20003 | Reliance |