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CSE-4A

Question:-

Program 3:

Consider the following schema:

SUPPLIERS(sid: integer, sname: string, address: string) PARTS(pid: integer, pname: string, color: string) CATALOG(sid: integer, pid: integer, cost: real) The Catalog relation lists the prices charged for parts by Suppliers. Write the following queries in SQL: i) Find the pnames of parts for which there is some supplier. ii) Find the snames of suppliers who supply every part. iii) Find the snames of suppliers who supply every red part. iv) Find the pnames of parts supplied by Acme Widget

Suppliers and by no one else. v) Find the sides of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part). vi) For each part, find the sname of the supplier who charges the most for that part.

Program 3:

```
create database supplier;
```

```
use supplier;
```

```
CREATE TABLE suppliers(
```

```
    sid INT,
```

```
    sname VARCHAR(20),
```

```
    address VARCHAR(50),
```

```
    PRIMARY KEY (sid)
```

```
);
```

```
CREATE TABLE parts(  
    pid INT,  
    pname VARCHAR(20),  
    color VARCHAR(10),  
    PRIMARY KEY (pid)  
);
```

```
CREATE TABLE catalog(  
    sid INT,  
    pid INT,  
    cost REAL,  
    PRIMARY KEY(sid,pid),  
    FOREIGN KEY(sid) REFERENCES  
suppliers(sid)  
    ON delete CASCADE ON update  
CASCADE,
```

```
FOREIGN KEY(pid) REFERENCES  
parts(pid)
```

```
ON delete CASCADE ON update  
CASCADE
```

```
);
```

```
insert into suppliers values  
(10001,'Acme Widget','Bangalore'),  
(10002,'Johns','Kolkata'),  
(10003,'Vimal','Mumbai'),(10004,'Relia  
nce','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),(10
004,20003,40);
```

```
SELECT * FROM suppliers;
```

```
SELECT * FROM parts;
```

```
SELECT * FROM catalog;
```

```
SELECT DISTINCT p.pname FROM parts
p, catalog c WHERE p.pid = c.pid;
```

```
select suppliers.sname from suppliers
where suppliers.sid in(select catalog.sid
from catalog inner join
```

```
parts on catalog.pid=parts.pid group by
catalog.sid having count(*)=(select
count(parts.pid) from
```

parts));

select suppliers.sname from suppliers  
where suppliers.sid in (select  
catalog.sid from catalog inner join

parts on catalog.pid=parts.pid where  
catalog.pid in (select parts.pid from  
parts where

parts.color='Red') group by catalog.sid  
having count(\*)=(select  
count(parts.color) from parts where  
parts.color='Red'));

SELECT p.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');

```
SELECT DISTINCT c.sid FROM catalog c
WHERE c.cost > (SELECT AVG(C1.cost)
FROM catalog c1 WHERE c1.pid = c.pid)
;
```

```
SELECT p.pid, s.sname FROM parts p,
suppliers s, catalog c WHERE c.pid =
p.pid AND c.sid = s.sid AND c.cost =
(SELECT MAX(c1.cost) FROM catalog c1
WHERE c1.pid = p.pid);
```

Output:



Result Grid

Filter Rows:

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

suppliers 1 × parts catalog 3 Result 4

Output

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Result Grid

Filter Rows:

	pid	pname	color
▶	20001	Book	Red
	20002	Pen	Red
	20003	Pencil	Green
	20004	Mobile	Green
	20005	Charger	Black
*	NULL	NULL	NULL

suppliers 1 parts 2 × catalog 3

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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



suppliers 1 parts 2 catalog 3



**Result Grid**   Filter Rows:

	pname
▶	Book
	Pen
	Pencil
	Mobile
	Charger

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**Result Grid**   Filter Rows:

	sname
▶	Acme Widget

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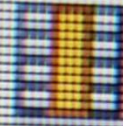
## Result Grid



	sname
▶	Acme Widget Johns





## Result Grid



	pname
▶	Mobile Charger





<

**Result Grid**   Filter Rows:

	sid
▶	10002
	10004

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**Result Grid**   Filter Rows:

	pid	sname
▶	20001	Acme Widget
	20004	Acme Widget
	20005	Acme Widget
	20001	Johns
	20002	Johns
	20003	Reliance

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