DBMS LAB 3 :-

```
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,'Reliance','Delhi');
insert into parts values
(20001,'Book','Red'),(20002,'Pen','Red'),(20003,'Pencil','Green'),(20004,'Mobile','Green'),(20
005,'Charger','Black');insert into catalog
values(10001,20001,10),(10001,20002,10),(10001,20003,30),(10001,20004,10),(10001,2000
```

5,10),(10002,20001,10),(10002,20002,20),(10003,20003,30),(10004,20003,40);

SELECT * FROM suppliers;

```
10001|Acme Widget|Bangalore
10002|Johns|Kolkata
10003|Vimal|Mumbai
10004|Reliance|Delhi

[Program exited with exit code 0]
```

SELECT * FROM parts;

```
20001|Book|Red
20002|Pen|Red
20003|Pencil|Green
20004|Mobile|Green
20005|Charger|Black

[Program exited with exit code 0]
```

SELECT * FROM catalog;

```
10001|20001|10.0
10001|20002|10.0
10001|20003|30.0
10001|20004|10.0
10001|20005|10.0
10002|20001|10.0
10002|20002|20.0
10003|20003|30.0
10004|20003|40.0

[Program exited with exit code 0]
```

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

```
Book
Pen
Pencil
Mobile
Charger

[Program exited with exit code 0]
```

SELECT s.sname FROM suppliers s WHERE NOT EXISTS(SELECT p.pid FROM parts p EXCEPT SELECT c.pid FROM catalog c WHERE c.sid = s.sid);

```
Acme Widget

[Program exited with exit code 0]
```

SELECT s.sname FROM suppliers s WHERE NOT EXISTS (SELECT p.pid FROM parts p WHERE p.color = 'Red' EXCEPT SELECT c.pid FROM catalog c, parts p WHERE c.sid = s.sid AND c.pid = p.pid AND p.color = 'Red');

```
Acme Widget
Johns

[Program exited with exit code 0]
```

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');

```
Mobile
Charger

[Program exited with exit code 0]
```

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

```
10002
10004

[Program exited with exit code 0]
```

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);

```
20001|Acme Widget
20004|Acme Widget
20005|Acme Widget
20001|Johns
20002|Johns
20003|Reliance

[Program exited with exit code 0]
```