

```
create database Supplier;
```

```
use Supplier;
```

```
CREATE TABLE Supplier (
```

```
    sid INT PRIMARY KEY,
```

```
    sname VARCHAR(50),
```

```
    city VARCHAR(50));
```

```
CREATE TABLE Parts (
```

```
    pid INT PRIMARY KEY,
```

```
    pname VARCHAR(50),
```

```
    color VARCHAR(20));
```

```
CREATE TABLE Catalog (
```

```
    sid INT,
```

```
    pid INT,
```

```
    cost INT,
```

```
    PRIMARY KEY (sid, pid),
```

```
    FOREIGN KEY (sid) REFERENCES Supplier(sid),
```

```
    FOREIGN KEY (pid) REFERENCES Parts(pid));
```

```
INSERT INTO Supplier VALUES
```

```
(1, 'Acme Widget Suppliers', 'Delhi'),
```

```
(2, 'Universal Parts', 'Mumbai'),
```

```
(3, 'Prime Supplies', 'Chennai');
```

```
INSERT INTO Parts VALUES
```

```
(101, 'Bolt', 'Red'),
```

```
(102, 'Nut', 'Blue'),
```

```
(103, 'Screw', 'Red'),  
(104, 'Washer', 'Green');
```

```
INSERT INTO Catalog VALUES
```

```
(1, 101, 50),  
(1, 102, 70),  
(2, 101, 55),  
(2, 103, 80),  
(3, 101, 60),  
(3, 102, 65),  
(3, 103, 75);
```

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

```
SELECT DISTINCT pname  
FROM Parts  
WHERE pid IN (SELECT pid FROM Catalog);
```

Result Grid	
	pname
▶	Bolt
	Nut
	Screw

```
-- Find the snames of suppliers who supply every part
```

```
SELECT s.sname  
FROM Supplier s  
WHERE NOT EXISTS (  
    SELECT pid FROM Parts  
    WHERE pid NOT IN (
```

```
SELECT c.pid  
FROM Catalog c  
WHERE c.sid = s.sid  
));
```

sname

-- Find the snames of suppliers who supply every red part

```
SELECT s.sname  
FROM Supplier s  
WHERE NOT EXISTS (  
    SELECT pid FROM Parts WHERE color = 'Red'  
    AND pid NOT IN (  
        SELECT pid FROM Catalog WHERE sid = s.sid  
    ));
```

sname
Universal Parts
Prime Supplies

-- Find pnames of parts supplied by “Acme Widget Suppliers” and by no one else.

```
SELECT p.pname
```

```
FROM Parts p
JOIN Catalog c1 ON p.pid = c1.pid
JOIN Supplier s ON s.sid = c1.sid
WHERE s.sname = 'Acme Widget Suppliers'
AND p.pid NOT IN (
    SELECT pid FROM Catalog
    WHERE sid <> (SELECT sid FROM Supplier WHERE sname = 'Acme Widget
Suppliers'));
```

Result Grid	
	pname