

```
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', 'New York'),  
(2, 'Best Parts Co', 'London'),  
(3, 'Quick Supplies', 'Paris'),  
(4, 'Global Hardware','Tokyo');
```

```
INSERT INTO Parts VALUES
```

```
(101, 'Bolt', 'Red'),  
(102, 'Nut', 'Blue'),  
(103, 'Screw', 'Red'),  
(104, 'Washer', 'Green');
```

```
INSERT INTO Catalog VALUES
```

```
(1, 101, 20.00),
```

```
(1, 102, 25.00),
```

```
(2, 101, 22.00),
```

```
(2, 103, 30.00),
```

```
(3, 101, 18.00),
```

```
(3, 104, 28.00);
```

```
SELECT DISTINCT pname
```

```
FROM Parts p,Catalog c
```

```
WHERE p.pid = c.pid;
```

	pname
▶	Bolt
▶	Nut
▶	Screw
▶	Washer

```
SELECT sname
```

```
FROM Supplier s
```

```
WHERE NOT EXISTS (
```

```
SELECT *
```

```
FROM Parts p
```

```
WHERE NOT EXISTS (
```

```
SELECT *
```

```
FROM Catalog c
```

```
WHERE s.sid = c.sid AND c.pid = p.pid));
```

	sname
	null

```

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

```

Result Grid	
	sname
▶	Best Parts Co

```

SELECT pname
FROM Parts p, Catalog c, Supplier s
WHERE p.pid = c.pid
AND s.sid = c.sid
AND s.sname = 'Acme Widget Suppliers'
AND NOT EXISTS (
    SELECT *
    FROM Catalog c2, Supplier s2
    WHERE c2.pid = p.pid
    AND s2.sid = c2.sid
    AND s2.sname <> 'Acme Widget Suppliers');

```

Result Grid	
	pname
▶	Nut

```

SELECT DISTINCT c.sid
FROM Catalog c
WHERE c.cost > (SELECT AVG(cost)
                  FROM Catalog c2
                 WHERE c.pid=c.pid);

```

The screenshot shows a MySQL query results window. The title bar says "SELECT * FROM Catalog". Below it is a toolbar with icons for "Result Grid", "SQL", and "Filter Rows". The main area is titled "Result Grid" and contains a table with one column labeled "sid". The data rows are 1, 2, and 3.

sid
1
2
3

```

SELECT p.pname, s.sname,c.cost
FROM Parts p, Supplier s, Catalog c
WHERE p.pid = c.pid
AND s.sid = c.sid
AND c.cost = (
    SELECT MAX(c2.cost)
    FROM Catalog c2
    WHERE c2.pid=c.pid);

```

The screenshot shows a MySQL query results window. The title bar says "SELECT * FROM Parts, Supplier, Catalog". Below it is a toolbar with icons for "Result Grid", "SQL", and "Filter Rows". The main area is titled "Result Grid" and contains a table with four columns: "pname", "sname", "cost", and another "cost" column. The data rows are Nut (Acme Widget Suppliers, 25), Bolt (Best Parts Co, 22), Screw (Best Parts Co, 30), and Washer (Quick Supplies, 28).

pname	sname	cost	cost
Nut	Acme Widget Suppliers	25	
Bolt	Best Parts Co	22	
Screw	Best Parts Co	30	
Washer	Quick Supplies	28	