

LAB 6

SUPPLIER DATABASE

```
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 DECIMAL(10,2),  
    PRIMARY KEY (sid, pid),  
    FOREIGN KEY (sid) REFERENCES Supplier(sid),  
    FOREIGN KEY (pid) REFERENCES Parts(pid)  
);
```

```
INSERT INTO Supplier (sid, sname, city) VALUES  
(1, 'Acme Widget Suppliers','Bengaluru'),  
(2, 'Global Parts Ltd','Mumbai'),  
(3, 'Sunrise Traders','Chennai'),  
(4, 'NorthStar Components','Hyderabad'),  
(5, 'RapidSupply Co', 'Pune');
```

```
INSERT INTO Parts (pid, pname, color) VALUES  
(101, 'Bolt', 'Red'),  
(102, 'Nut', 'Blue'),  
(103, 'Screw', 'Red'),  
(104, 'Washer', 'Green'),  
(105, 'Gear', 'Blue');
```

```
INSERT INTO Catalog (sid, pid, cost) VALUES  
(1, 101, 12.50),  
(1, 102, 10.00),  
(2, 101, 11.00),  
(2, 103, 9.50),  
(3, 104, 8.00),  
(3, 103, 9.00),  
(4, 105, 15.75),  
(4, 101, 13.25),  
(5, 102, 10.50),  
(5, 105, 14.00);
```

3.

```
select distinct p.pname  
from parts p  
join Catalog c  
on c.pid=p.pid;
```

The screenshot shows a database query editor interface. At the top, there is a code editor with numbered lines 49 through 53. Lines 49, 50, 51, and 52 contain valid SQL code, while line 53 is a blank line. The code is as follows:

```
49 •      select distinct p.pname  
50      from parts p  
51      join Catalog c  
52      on c.pid=p.pid;  
53
```

Below the code editor is a result grid. The grid has a header row with a single column labeled "pname". The data rows are as follows:

pname
Bolt
Nut
Screw
Washer
Gear

4.

```
SELECT s.sname  
FROM Supplier s  
JOIN Catalog c  
ON s.sid = c.sid  
GROUP BY s.sname  
HAVING COUNT(DISTINCT c.pid) = (  
    SELECT COUNT(*)  
    FROM Parts  
);
```

```
56 •   SELECT s.sname
57     FROM Supplier s
58     JOIN Catalog c
59       ON s.sid = c.sid
60     GROUP BY s.sname
61     HAVING COUNT(DISTINCT c.pid) = (
62       SELECT COUNT(*)
63         FROM Parts
64     );
65
```

| Result Grid | Filter Rows: | Export: Wrap Cell Content:

sname

5.

```
SELECT s.sname
FROM Supplier s
JOIN Catalog c ON s.sid = c.sid
JOIN Parts p  ON c.pid = p.pid AND p.color = 'Red'
GROUP BY s.sname
HAVING COUNT(DISTINCT p.pid) = (
  SELECT COUNT(*)
    FROM Parts
   WHERE color = 'Red'
);
```

```

67 •   SELECT s.sname
68     FROM Supplier s
69     JOIN Catalog c ON s.sid = c.sid
70     JOIN Parts p  ON c.pid = p.pid AND p.color = 'Red'
71     GROUP BY s.sname
72     HAVING COUNT(DISTINCT p.pid) = (
73         SELECT COUNT(*)
74         FROM Parts
75         WHERE color = 'Red'
76     );
77

```

Result Grid		<input type="button" value="Filter Rows:"/>	Export:	Wrap Cell Content:
	sname			
▶	Global Parts Ltd			

6.

```

select p.pname
from parts p
join catalog c on p.pid=c.pid
join supplier s on p.pid=s.sid
where s.sname='ACME widget suppliers' and not exists (
    select 1
    from catalog c2
    join supplier s2 on c2.sid=s2.sid
    where c2.pid=p.pid
    and s2.sname<>'ACME Widget suppliers');

```

```
77 •   select p.pname
78     from parts p
79     join catalog c on p.pid=c.pid
80     join supplier s on p.pid=s.sid
81     where s.sname='ACME widget suppliers' and not exists (
82         select 1
83         from catalog c2
84         join supplier s2 on c2.sid=s2.sid
85         where c2.pid=p.pid
86         and s2.sname<>'ACME Widget suppliers');
87
88
```

| Result Grid | Filter Rows: | Export: Wrap Cell Content:

pname

7.

SELECT DISTINCT c.sid

FROM Catalog c

WHERE c.cost > (

SELECT AVG(c2.cost)

FROM Catalog c2

WHERE c2.pid = c.pid

);

```

99 •      SELECT DISTINCT c.sid
100     FROM Catalog c
101     WHERE c.cost > (
102         SELECT AVG(c2.cost)
103         FROM Catalog c2
104         WHERE c2.pid = c.pid
105     );
106
107

```

Result Grid		<input type="button" value="Filter Rows:"/>	Export:	Wrap Cell Content:
	sid			
▶	1			
	2			
	4			
	5			

8.

```

SELECT P.pname,
       S.sname
  FROM Parts P
 JOIN Catalog C ON P.pid = C.pid
 JOIN Supplier S ON C.sid = S.sid
 WHERE C.cost = (
    SELECT MAX(C2.cost)
   FROM Catalog C2
  WHERE C2.pid = P.pid
);

```

```
110 •   SELECT P.pname,  
111       S.sname  
112   FROM Parts P  
113   JOIN Catalog C  ON P.pid = C.pid  
114   JOIN Supplier S ON C.sid = S.sid  
115   WHERE C.cost = (  
116       SELECT MAX(C2.cost)  
117       FROM Catalog C2  
118       WHERE C2.pid = P.pid  
119   );  
120
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	pname	sname
▶	Bolt	NorthStar Components
	Nut	RapidSupply Co
	Screw	Global Parts Ltd
	Washer	Sunrise Traders
	Gear	NorthStar Components