Week-7 Supplier Database

```sql
create database sup;

use sup;

CREATE TABLE Supplier (
    sid INT PRIMARY KEY,
    sname VARCHAR(50),
    address VARCHAR(100)
);

CREATE TABLE Part (
    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 Part(pid)
);

INSERT INTO Supplier VALUES
(10001, 'Acme Widget', 'Delhi'),
(10002, 'Johns', 'Mumbai'),
(10003, 'Reliance', 'Chennai'),
(10004, 'Kraft', 'Kolkata');
```

```
INSERT INTO Part VALUES

(20001, 'Book', 'red'),

(20002, 'Charger', 'blue'),

(20003, 'Mobile', 'red'),

(20004, 'Pen', 'red'),

(20005, 'Pencil', 'green');


INSERT INTO Catalog VALUES

-- Acme Widget

(10001, 20001, 50),

(10001, 20002, 60),

(10001, 20003, 55),

(10001, 20004, 40),

(10001, 20005, 20),


-- Johns

(10002, 20001, 45),

(10002, 20003, 50),

(10002, 20004, 35),

(10002, 20002, 70),


-- Reliance

(10003, 20003, 30),

(10003, 20002, 65),

(10003, 20005, 15),


-- Kraft

(10004, 20001, 70),     -- high cost to satisfy query 7

(10004, 20005, 25);
```

```sql
SELECT DISTINCT p.pname
FROM Part p
JOIN Catalog c ON p.pid = c.pid;
```


pname
Book
Charger
Mobile
Pen
Pencil

```sql
SELECT s.sname
FROM Supplier s
WHERE NOT EXISTS (
    SELECT p.pid
    FROM Part p
    WHERE NOT EXISTS (
        SELECT 1
        FROM Catalog c
        WHERE c.sid = s.sid AND c.pid = p.pid
    )
);
```


sname
Acme Widget

```sql
SELECT s.sname
FROM Supplier s
WHERE NOT EXISTS (
    SELECT p.pid
    FROM Part p
    WHERE p.color = 'red'
```

```
    AND NOT EXISTS (

        SELECT 1

        FROM Catalog c

        WHERE c.sid = s.sid AND c.pid = p.pid

    )

);
```

Result Grid | Filter Ro

sname
Acme Widget
Johns

```
SELECT p.pname

FROM Part p

JOIN Catalog c1 ON p.pid = c1.pid

JOIN Supplier s ON c1.sid = s.sid

WHERE s.sname = 'Acme Widget'

AND NOT EXISTS (

    SELECT 1

    FROM Catalog c2

    WHERE c2.pid = p.pid AND c2.sid <> c1.sid

);
```

Result Grid

pname

```
SELECT DISTINCT c.sid

FROM Catalog c

JOIN (
```

```
    SELECT pid, AVG(cost) AS avg_cost

    FROM Catalog

    GROUP BY pid

) a ON c.pid = a.pid

WHERE c.cost > a.avg_cost;
```

sid
10001
10002
10004

```
SELECT c.pid, s.sname

FROM Catalog c

JOIN Supplier s ON c.sid = s.sid

WHERE c.cost = (

    SELECT MAX(c2.cost)

    FROM Catalog c2

    WHERE c2.pid = c.pid

)

ORDER BY c.pid;
```

pid	sname
20001	Kraft
20002	Johns
20003	Acme Widget
20004	Acme Widget
20005	Kraft