create database q12;

use q12;

CREATE TABLE supplier (

supplierid INT PRIMARY KEY,

sname VARCHAR(100),

saddress VARCHAR(200)

);

CREATE TABLE parts (

part\_id INT PRIMARY KEY,

part\_name VARCHAR(100),

color VARCHAR(50)

);

CREATE TABLE catalog (

supplierid INT,

part\_id INT,

cost DECIMAL(10, 2),

PRIMARY KEY (supplierid, part\_id),

FOREIGN KEY (supplierid) REFERENCES supplier(supplierid),

FOREIGN KEY (part\_id) REFERENCES parts(part\_id)

);

-- Inserting data into the supplier table

INSERT INTO supplier (supplierid, sname, saddress) VALUES

(1, 'Supplier A', '1234 Elm St'),

(2, 'Supplier B', '5678 Oak Ave'),

(3, 'Supplier C', '91011 Pine Rd');

-- Inserting data into the parts table

INSERT INTO parts (part\_id, part\_name, color) VALUES

(1, 'Part X', 'green'),

(2, 'Part Y', 'blue'),

(3, 'Part Z', 'green'),

(4, 'Part W', 'red'),

(5, 'Part V', 'blue');

-- Inserting data into the catalog table

INSERT INTO catalog (supplierid, part\_id, cost) VALUES

(1, 1, 50.00),

(1, 2, 60.00),

(2, 3, 40.00),

(2, 4, 30.00),

(3, 5, 70.00),

(3, 1, 55.00);

SELECT DISTINCT s.sname

FROM supplier s

JOIN catalog c ON s.supplierid = c.supplierid

JOIN parts p ON c.part\_id = p.part\_id

WHERE p.color = 'green';

SELECT DISTINCT s.sname

FROM supplier s

JOIN catalog c ON s.supplierid = c.supplierid

JOIN parts p ON c.part\_id = p.part\_id

WHERE p.color IN ('blue', 'green')

GROUP BY s.supplierid

HAVING COUNT(DISTINCT p.color) = 2;

SELECT s.sname

FROM supplier s

WHERE NOT EXISTS (

SELECT p.part\_id

FROM parts p

WHERE NOT EXISTS (

SELECT c.supplierid

FROM catalog c

WHERE c.supplierid = s.supplierid

AND c.part\_id = p.part\_id

)

);

SELECT SUM(c.cost) AS total\_cost\_of\_red\_parts

FROM catalog c

JOIN parts p ON c.part\_id = p.part\_id

WHERE p.color = 'red';

SELECT s.sname

FROM supplier s

JOIN catalog c ON s.supplierid = c.supplierid

JOIN parts p ON c.part\_id = p.part\_id

WHERE p.color = 'green'

AND c.cost = (

SELECT MIN(c1.cost)

FROM catalog c1

JOIN parts p1 ON c1.part\_id = p1.part\_id

WHERE p1.color = 'green'

);

UPDATE parts

SET color = 'yellow'

WHERE part\_id = 4;