

1) Create Database

```
CREATE DATABASE retail_store;
USE retail_store;
```

Create Suppliers Table

```
CREATE TABLE Suppliers (
    SupplierID INT AUTO_INCREMENT PRIMARY KEY,
    SupplierName VARCHAR(100),
    ContactNumber VARCHAR(20)
);
```

Create Products Table

```
CREATE TABLE Products (
    ProductID INT AUTO_INCREMENT PRIMARY KEY,
    ProductName VARCHAR(100),
    Price DECIMAL(10,2),
    StockQuantity INT,
    SupplierID INT,
    FOREIGN KEY (SupplierID) REFERENCES Suppliers(SupplierID)
);
```

Create Sales Table

```
CREATE TABLE Sales (
    SaleID INT AUTO_INCREMENT PRIMARY KEY,
    ProductID INT,
    QuantitySold INT,
    SaleDate DATE,
    FOREIGN KEY (ProductID) REFERENCES Products(ProductID)
);
```

2) Add Category column

```
ALTER TABLE Products ADD Category VARCHAR(50);
```

3) Remove Category column

```
ALTER TABLE Products
DROP COLUMN Category;
```

4) Modify ContactNumber

```
ALTER TABLE Suppliers
MODIFY ContactNumber VARCHAR(15);
```

5) Add NOT NULL constraint

```
ALTER TABLE Products
MODIFY ProductName VARCHAR(100) NOT NULL;
```

6.

a) Insert Supplier

```
INSERT INTO Suppliers (SupplierName, ContactNumber)  
VALUES ('FreshFoods', '01001234567');
```

b) Insert Products

```
INSERT INTO Products (ProductName, Price, StockQuantity, SupplierID)
```

```
VALUES
```

```
('Milk', 15.00, 50, 1),  
('Bread', 10.00, 30, 1),  
('Eggs', 20.00, 40, 1);
```

c) Insert Sale

```
INSERT INTO Sales (ProductID, QuantitySold, SaleDate)
```

```
VALUES (1, 2, '2025-05-20');
```

7) Update Bread price

```
UPDATE Products
```

```
SET Price = 25.00
```

```
WHERE ProductName = 'Bread';
```

8) Delete Eggs product

```
DELETE FROM Products
```

```
WHERE ProductName = 'Eggs';
```

9) Total quantity sold per product

```
SELECT p.ProductName, SUM(s.QuantitySold) AS TotalSold  
FROM Products p  
LEFT JOIN Sales s ON p.ProductID = s.ProductID  
GROUP BY p.ProductName;
```

10) Product with highest stock

```
SELECT ProductName, StockQuantity  
FROM Products  
ORDER BY StockQuantity DESC LIMIT 1;
```

11) Suppliers starting with F

```
SELECT * FROM Suppliers  
WHERE SupplierName LIKE 'F%';
```

12) Products never sold

```
SELECT p.ProductName  
FROM Products p  
LEFT JOIN Sales s ON p.ProductID = s.ProductID  
WHERE s.ProductID IS NULL;
```

13) Sales with product name and date

```
SELECT p.ProductName, s.QuantitySold, s.SaleDate  
FROM Sales s  
JOIN Products p ON s.ProductID = p.ProductID;
```

14) Create user and grant permissions

```
CREATE USER 'store_manager'@'localhost' IDENTIFIED BY '1234';
```

```
GRANT SELECT, INSERT, UPDATE
```

```
ON retail_store.*
```

```
TO 'store_manager'@'localhost';
```

15) Revoke UPDATE permission

```
REVOKE UPDATE
```

```
ON retail_store.*
```

```
FROM 'store_manager'@'localhost';
```

16) Grant DELETE on Sales only

```
GRANT DELETE
```

```
ON retail_store.Sales
```

```
TO 'store_manager'@'localhost';
```
