-- Drop existing tables to avoid conflicts

DROP TABLE IF EXISTS Customers;

DROP TABLE IF EXISTS Products;

DROP TABLE IF EXISTS Orders;

DROP TABLE IF EXISTS OrderDetails;

-- Create Customers table

CREATE TABLE Customers (

CustomerID INTEGER PRIMARY KEY,

Region TEXT

);

-- Create Products table

CREATE TABLE Products (

ProductID INTEGER PRIMARY KEY,

Category TEXT

);

-- Create Orders table

CREATE TABLE Orders (

OrderID INTEGER PRIMARY KEY,

CustomerID INTEGER,

FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)

);

-- Create OrderDetails table

CREATE TABLE OrderDetails (

OrderID INTEGER,

ProductID INTEGER,

Quantity INTEGER,

FOREIGN KEY (OrderID) REFERENCES Orders(OrderID),

FOREIGN KEY (ProductID) REFERENCES Products(ProductID)

);

-- Insert data into Customers

INSERT INTO Customers VALUES (1, 'North');

INSERT INTO Customers VALUES (2, 'South');

-- Insert data into Products

INSERT INTO Products VALUES (1, 'Electronics');

INSERT INTO Products VALUES (2, 'Furniture');

-- Insert data into Orders

INSERT INTO Orders VALUES (1, 1);

INSERT INTO Orders VALUES (2, 2);

-- Insert data into OrderDetails

INSERT INTO OrderDetails VALUES (1, 1, 2); -- Customer 1 bought 2 of Electronics

INSERT INTO OrderDetails VALUES (2, 2, 3); -- Customer 2 bought 3 of Furniture

-- Aggregation: Total quantity sold by Region and Category

SELECT

c.Region,

p.Category,

SUM(od.Quantity) AS TotalQuantity

FROM Orders o

JOIN OrderDetails od ON o.OrderID = od.OrderID

JOIN Customers c ON o.CustomerID = c.CustomerID

JOIN Products p ON od.ProductID = p.ProductID

GROUP BY c.Region, p.Category;

