**Addition MS-SQL Questions**

CREATE TABLE Product (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(100),

Category VARCHAR(50),

Price DECIMAL(10,2),

StockQuantity INT );

CREATE TABLE Customer (

CustomerID INT PRIMARY KEY,

CustomerName VARCHAR(100),

LocationID INT,

Email VARCHAR(100) );

CREATE TABLE Location (

LocationID INT PRIMARY KEY,

City VARCHAR(50),

State VARCHAR(50),

Country VARCHAR(50) );

CREATE TABLE Sales (

SaleID INT PRIMARY KEY,

ProductID INT FOREIGN KEY REFERENCES Product(ProductID),

CustomerID INT FOREIGN KEY REFERENCES Customer(CustomerID),

SaleDate DATE,

Quantity INT,

UnitPrice DECIMAL(10,2),

TotalAmount DECIMAL(10,2) );

-- Insert into Product Table

INSERT INTO Product (ProductID, ProductName, Category, Price, StockQuantity) VALUES

(101, 'Laptop', 'Electronics', 1200.00, 50),

(102, 'Mouse', 'Accessories', 25.00, 200),

(103, 'Keyboard', 'Accessories', 45.00, 150),

(104, 'Monitor', 'Electronics', 300.00, 80);

-- Insert into Customer Table

INSERT INTO Customer (CustomerID, CustomerName, LocationID, Email) VALUES

(1001, 'Alice', 1, 'alice@example.com'),

(1002, 'Bob', 2, 'bob@example.com'),

(1003, 'Charlie', 3, 'charlie@example.com'),

(1004, 'David', 4, 'david@example.com');

-- Insert into Location Table

INSERT INTO Location (LocationID, City, State, Country) VALUES

(1, 'New York', 'NY', 'USA'),

(2, 'Los Angeles', 'CA', 'USA'),

(3, 'Chicago', 'IL', 'USA'),

(4, 'Houston', 'TX', 'USA');

-- Insert into Sales Table

INSERT INTO Sales (SaleID, ProductID, CustomerID, SaleDate, Quantity, UnitPrice, TotalAmount) VALUES

(1, 101, 1001, '2024-03-01', 2, 1200.00, 2400.00),

(2, 102, 1002, '2024-03-02', 3, 25.00, 75.00),

(3, 101, 1003, '2024-03-03', 1, 1200.00, 1200.00),

(4, 103, 1004, '2024-03-04', 5, 45.00, 225.00),

(5, 104, 1001, '2024-03-05', 2, 300.00, 600.00);

Questions

1. Find the total revenue generated per product category

2. Identify the top 3 highest spending customers

3. Rank customers based on their total purchase amount (using Window Function)

4. Find the product that has been sold the most

5. Find monthly sales trends (Using GROUPING SETS)

6. Identify which locations generate the highest revenue

7. Predict future stock needs by finding products with low stock but high sales

8. Find customers who bought more than one product category

9. Identify the percentage of total revenue contributed by each product

10. Find customers who haven't purchased in the last 3 months