Assignment-1

Execute the following queries in your WORKBENCH

```
CREATE DATABASE ORG;
USE ORG;

CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    Name VARCHAR(255),
    Email VARCHAR(255),
    JoinDate DATE
);

CREATE TABLE Products (
    ProductID INT PRIMARY KEY,
    Name VARCHAR(255),
    Category VARCHAR(255),
    Price DECIMAL(10, 2)
);

CREATE TABLE Orders (
    OrderID INT PRIMARY KEY,
    CustomerID INT,
    OrderDate DATE,
    TotalAmount DECIMAL(10, 2),
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);
```

```
CREATE TABLE OrderDetails (
    OrderDetailID INT PRIMARY KEY,
    OrderID INT,
    ProductID INT,
    Quantity INT,
    PricePerUnit DECIMAL(10, 2),
    FOREIGN KEY (OrderID) REFERENCES Orders(OrderID),
    FOREIGN KEY (ProductID) REFERENCES Products(ProductID)
);
```

SAMPLE DATA

```
INSERT INTO Customers (CustomerID, Name, Email, JoinDate) VALUES
(1, 'John Doe', 'johndoe@example.com', '2020-01-10'),
(2, 'Jane Smith', 'janesmith@example.com', '2020-01-15'),
-- ... Additional 7 records ...
(10, 'Alice Johnson', 'alicejohnson@example.com', '2020-03-05');
```

```
INSERT INTO Products (ProductID, Name, Category, Price) VALUES
(1, 'Laptop', 'Electronics', 999.99),
(2, 'Smartphone', 'Electronics', 499.99),
-- ... Additional 7 records ...
(10, 'Desk Lamp', 'Home Decor', 29.99);
```

```
INSERT INTO Orders (OrderID, CustomerID, OrderDate, TotalAmount)
VALUES
(1, 1, '2020-02-15', 1499.98),
(2, 2, '2020-02-17', 499.99),
-- ... Additional 7 records ...
(10, 25, '2020-03-21', 78.99);
```

```
INSERT INTO OrderDetails (OrderDetailID, OrderID, ProductID, Quantity,
PricePerUnit) VALUES
(1, 1, 1, 1, 999.99),
(2, 1, 2, 1, 499.99),
-- ... Additional 7 records ...
(10, 25, 50, 2, 29.99);
```

Sample Database Schema: E-Commerce Sales

Tables:

Customers

CustomerID (int)
Name (varchar)
Email (varchar)
JoinDate (date)

OrderDetails

OrderDetailID (int)
OrderID (int)
ProductID (int)
Quantity (int)
PricePerUnit (decimal)

Orders

OrderID (int)
CustomerID (int)
OrderDate (date)
TotalAmount (decimal)

Products

ProductID (int)
Name (varchar)
Category (varchar)
Price (decimal)

Structured Query Language

After Executing the above query, Answer the following questions with writing the appropriate queries.

1. Basic Queries:
- **1.1. List all customers.**
- **1.2. Show all products in the 'Electronics' category.**
- **1.3. Find the total number of orders placed.**
- **1.4. Display the details of the most recent order.**

2. Joins and Relationships:
- **2.1. List all products along with the names of the customers who ordered them.**
- **2.2. Show orders that include more than one product.**
- **2.3. Find the total sales amount for each customer.**

3. Aggregation and Grouping:
- **3.1. Calculate the total revenue generated by each product category.**
- **3.2. Determine the average order value.**
- **3.3. Find the month with the highest number of orders.**

4. Subqueries and Nested Queries:
- **4.1. Identify customers who have not placed any orders.**
- **4.2. Find products that have never been ordered.**
- **4.3. Show the top 3 best-selling products.**

5. Date and Time Functions:
- **5.1. List orders placed in the last month.**
- **5.2. Determine the oldest customer in terms of membership duration.**

6. Advanced Queries:
- **6.1. Rank customers based on their total spending.**
- **6.2. Identify the most popular product category.**
- **6.3. Calculate the month-over-month growth rate in sales.**

7. Data Manipulation and Updates:
- **7.1. Add a new customer to the Customers table.**
- **7.2. Update the price of a specific product.**

Submission: The Entire assignment should be submitted by the end of the week (Friday,12/01/2024),You have to Submit one SQL Script in which all the Answer Queries included.

Upload the script in your GitHub Account.