Name: Sarthak Londhey
Task: Assignment
Topic: TechShop

ASSIGNMENT

TechShop

1) SQL Schema

```sql
CREATE DATABASE TechShop;
use TechShop;

CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY IDENTITY(1,1),
    FirstName VARCHAR(50) NOT NULL,
    LastName VARCHAR(50) NOT NULL,
    Email VARCHAR(100) NOT NULL,
    Phone VARCHAR(20),
    Address VARCHAR(255)
);

CREATE TABLE Products (
    ProductID INT PRIMARY KEY IDENTITY(10,1),
    ProductName VARCHAR(100) NOT NULL,
    Description VARCHAR(MAX),
    Price DECIMAL(10, 2) NOT NULL
);

CREATE TABLE Orders (
    OrderID INT PRIMARY KEY IDENTITY(100,1),
    CustomerID INT FOREIGN KEY REFERENCES Customers(CustomerID),
    OrderDate DATE NOT NULL,
    TotalAmount DECIMAL(10, 2) NOT NULL
);

CREATE TABLE OrderDetails (
    OrderDetailID INT PRIMARY KEY IDENTITY(150,1),
    OrderID INT FOREIGN KEY REFERENCES Orders(OrderID),
    ProductID INT FOREIGN KEY REFERENCES Products(ProductID),
    Quantity INT

);

CREATE TABLE Inventory (
    InventoryID INT PRIMARY KEY IDENTITY(300,1),
    ProductID INT FOREIGN KEY REFERENCES Products(ProductID),
    QuantityInStock INT NOT NULL,
    LastStockUpdate DATE NOT NULL
);
```

2) Menu:

```
MENU
----------------
1. Customer Registration
2. Product Catalog Management
3. Orders
4. Order Status
5. Inventory Management
6. Sales Report
7. Customer Account Update
8. Payment Processing
9. Search and Recommend a Product
10. Exit

Enter your Choice: █
```

3) Customer Registration:

```
MENU
----------------
1. Customer Registration
2. Product Catalog Management
3. Orders
4. Order Status
5. Inventory Management
6. Sales Report
7. Customer Account Update
8. Payment Processing
9. Search and Recommend a Product
10. Exit

Enter your Choice: 1
Enter your first name: Ayush
Enter your last name: Sharma
Enter your email: ayush@gmail.com
Enter your phone number: 5678901234
Enter your address: 66-A,Sudama Nagar,Indore
Customer created successfully.
```

4) Product Catalog Management:

- **Update Product Details (Price, Description, Product Name, Category):**

```
Enter your Choice: 2

1. Update Product Details
2. Show All Products
3. Search for product in stock
4. Exit
Enter your Choice: 1
Enter product ID: 10
What do you want to Update?
1)Price
2)Description
3)Product Name
4)Category
Enter Choice (eg; Price): Price
Enter Updated Price: 150000
Product information updated successfully
```

- **Show All Productd:**

```
1. Update Product Details
2. Show All Products
3. Search for product in stock
4. Exit
Enter your Choice: 2
Product details:
(10, 'iPhone 14 Pro', '6.1-inch Super Retina XDR display, A16 Bionic chip, 12MP dual camera system', Decimal('150000.00'), 'Smartphones')
(11, 'Samsung Galaxy S23 Ultra', '6.8-inch Dynamic AMOLED 2X display, Snapdragon 8 Gen 2, 200MP camera', Decimal('131998.90'), 'Smartphones')
(12, 'OnePlus 11', '6.7-inch Fluid AMOLED display, Snapdragon 8 Gen 2, 50MP camera', Decimal('65998.90'), 'Smartphones')
(13, 'Xiaomi 13 Pro', '6.7-inch AMOLED display, Snapdragon 8 Gen 2, 50MP camera', Decimal('76998.90'), 'Smartphones')
(14, 'Google Pixel 7 Pro', '6.7-inch LTPO OLED display, Google Tensor G2, 50MP camera', Decimal('93498.90'), 'Smartphones')
(15, 'MacBook Pro M2', '13.3-inch Liquid Retina XDR display, M2 chip, 8GB RAM, 256GB SSD', Decimal('164998.90'), 'Laptops')
(16, 'Dell XPS 13', '13.4-inch InfinityEdge display, Intel Core i7-13700H, 16GB RAM, 512GB SSD', Decimal('142998.90'), 'Laptops')
(17, 'Lenovo ThinkPad X1 Carbon', '14-inch OLED display, Intel Core i7-13600H, 16GB RAM, 512GB SSD', Decimal('153998.90'), 'Laptops')
(18, 'HP Spectre x360', '13.3-inch AMOLED display, Intel Core i7-13600H, 16GB RAM, 512GB SSD', Decimal('142998.90'), 'Laptops')
(19, 'Acer Predator Helios 16', '16-inch IPS display, Intel Core i9-13900HX, 32GB RAM, 2TB SSD', Decimal('197998.90'), 'Laptops')
(20, 'Smartwatch X200', 'A high-end smartwatch with various health tracking features and a sleek design.', Decimal('21998.90'), 'Smartwatches')
```

- **Search for product in stock:**

```
1. Update Product Details
2. Show All Products
3. Search for product in stock
4. Exit
Enter your Choice: 3
Enter product ID: 15
Product in stock: 12
```

5) Orders:

- **Create Order:**

```
Enter your Choice: 3

1. Create Order
2. Get Order Details
3. Cancel Order
4. Delete Orders which are Cancelled
5. Exit
Enter your Choice: 1
Enter Customer ID: 4
Enter product ID: 13
Enter quantity: 2
Order Created Successfully
```

- **Get Order Details:**

```
Enter your Choice: 2
Enter Customer ID: 4

You've ordered 2 times, below are those order details:

Order Detail ID: 153
Order ID: 103
Product ID: 13
Quantity: 1
Order Date: 2023-11-15
Status: Delivered
Total Order Price: 76998.90


Order Detail ID: 163
Order ID: 113
Product ID: 13
Quantity: 2
Order Date: 2024-10-12
Status: Pending
Total Order Price: 153997.80
```

- **Cancel Order:**

```
Enter Customer ID: 4

You've ordered 2 times, below are those order details:

Order Detail ID: 153
Order ID: 103
Product ID: 13
Quantity: 1
Order Date: 2023-11-15
Status: Delivered
Total Order Price: 76998.90


Order Detail ID: 163
Order ID: 113
Product ID: 13
Quantity: 2
Order Date: 2024-10-12
Status: Pending
Total Order Price: 153997.80

Write an OrderID you want to Cancel: 103
Order Cancelled...
```

- **Delete Orders which are Cancelled:**

```
1. Create Order
2. Get Order Details
3. Cancel Order
4. Delete Orders which are Cancelled
5. Exit
Enter your Choice: 4
Cancelled Orders Deleted!
```

6) Order Status:

- **Display Order Status:**

```
Enter your Choice: 4
Enter Order ID: 100

1. Display Order Status
2. Change Order Status
3. Exit
Enter your Choice: 1
Your order status:  Shipped
```

- **Change Order Status:**

```
1. Display Order Status
2. Change Order Status
3. Exit
Enter your Choice: 2
Enter Status (Shipped/Pending/Delivered/Cancelled): Delivered
Status Updated


1. Display Order Status
2. Change Order Status
3. Exit
Enter your Choice: 1
Your order status:  Delivered
```

7) Inventory Management:

- **Add a New Product:**

```
Enter your Choice: 5

1. Add New Product
2. Update Product Stock
3. Remove Discontinued Product
4. Exit
Enter your Choice: 1
Enter Product Name: Iphone 16 Pro-Max
Enter Product Description: The all new Apple Iphone 16 with some new features.
Enter Product Price: 175000
Enter Product Category: Smartphones
Enter Quantity in Stock: 5
Product Added Succesfully
```

- **Update Product Stock:**

```
1. Add New Product
2. Update Product Stock
3. Remove Discontinued Product
4. Exit
Enter your Choice: 2
Enter Product ID: 21
Enter Quantity to be Added: 10
Quantity in Stock:  5
Quantity Updated for Product ID 21: 15
```

- **Remove Discontinued Product:**

```
1. Add New Product
2. Update Product Stock
3. Remove Discontinued Product
4. Exit
Enter your Choice: 3
Enter Product you want to Discontinue (Product ID): 21
Removed Items Successfully!!
```

8) Sales Report:

- **Retrieve Sales Data:**

```
Enter your Choice: 6

1. Retrieve Sales Data
2. Generate Sales Report
3. Exit
Enter your Choice: 1
Sales Report:
Product ID | Product Name | Total Quantity Sold
10 | iPhone 14 Pro | 1
11 | Samsung Galaxy S23 Ultra | 1
12 | OnePlus 11 | 1
13 | Xiaomi 13 Pro | 2
16 | Dell XPS 13 | 1
19 | Acer Predator Helios 16 | 2
```

- **Generate Sales Report:**

```
1. Retrieve Sales Data
2. Generate Sales Report
3. Exit
Enter your Choice: 2
Sales Report:
Product ID | Product Name | Total Quantity Sold
10 | iPhone 14 Pro | 1
11 | Samsung Galaxy S23 Ultra | 1
12 | OnePlus 11 | 1
13 | Xiaomi 13 Pro | 2
16 | Dell XPS 13 | 1
19 | Acer Predator Helios 16 | 2
```

9) Customer Account Update:

- **Update Customer Details:**

```
Enter your Choice: 7

1. Update Customer Details
2. Get Customer Details
3. Exit
Enter your Choice: 1
Enter Customer ID: 13
What do you want to Update?
1)First Name
2)Last Name
3)Email
4)Phone Number
5)Address
6)Want to Update All Details
Enter Choice: 4
Enter New Phone Number: 7778889990
Customer Details Updated!
```

- **Get Customer Details:**

```
1. Update Customer Details
2. Get Customer Details
3. Exit
Enter your Choice: 2
Enter Customer ID: 13
Customer ID:  13
First Name:  Ayush
Last Name:  Sharma
Email:  ayush@gmail.com
Phone:  7778889990
Address:  66-A,Sudama Nagar,Indore
```

10) Payment Processing:

- **Process Payment:**

```
Enter your Choice: 8

1. Process Payment
2. Add Discount
3. Exit
Enter your Choice:1
Enter Order ID: 102
OrderID | ProductID | Quantity | TotalAmount
-------------------------------------------
  102   |    12    |    1    |    65998.90
```

- **Add Discount:**

```
1. Process Payment
2. Add Discount
3. Exit
Enter your Choice:2
Enter Order ID: 102
Total Amount: Rs. 65998.9
Discount of 10 percent will be added...
Total Amount: Rs. 59399.009999999995
```

11) Search and Recommend a Product:

- **Search Product:**

```
Enter your Choice: 9

1. Search Product
2. Recommend Product
3. Exit
Enter your Choice: 1
Enter a Product ID: 15
Product Found!

Product ID:  15
Product Name:  MacBook Pro M2
Product Description:  13.3-inch Liquid Retina XDR display, M2 chip, 8GB RAM, 256GB SSD
Product Price:  164998.90
Product Category:  Laptops
```

- **Recommend Product:**

```
Enter your Choice: 9

1. Search Product
2. Recommend Product
3. Exit
Enter your Choice: 2
Enter a Product Category: Smartphones
Here are the Recommeded Products:

iPhone 14 Pro
Samsung Galaxy S23 Ultra
OnePlus 11
Xiaomi 13 Pro
Google Pixel 7 Pro
```