Name – Khushi Joshi
Topic – TechShop, an Electronic Gadgets Shop

ASSIGNMENT – Implement OOPs

TechShop, an electronic gadgets shop

Questions:

Q1) Schema –

```sql
CREATE TABLE Customers(
CustomerID INT Identity(1,1) PRIMARY KEY,
FirstName VARCHAR(50) NOT NULL,
LastName VARCHAR(50) NOT NULL,
Email VARCHAR(100)NOT NULL,
Phone VARCHAR(10),
Address VARCHAR(255) NOT NULL
);


CREATE TABLE Products (
    ProductID INT PRIMARY KEY IDENTITY(1000,1),
    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(10000,1),
    OrderID INT FOREIGN KEY REFERENCES Orders(OrderID),
    ProductID INT FOREIGN KEY REFERENCES Products(ProductID),
    Quantity INT
);


CREATE TABLE Inventory (
    InventoryID INT PRIMARY KEY IDENTITY(100000,1),
    ProductID INT FOREIGN KEY REFERENCES Products(ProductID),
    QuantityInStock INT NOT NULL,
    LastStockUpdate DATE NOT NULL);
```

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Q2) 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:
```

Q3) 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: Khushi
Enter your Last Name: Menaria
Enter your Email: khushijoshi123@gmail.com
Enter your Phone Number: 8770122722
Enter your Address: Surat,Gujrat
Customer Created Successfully.
```

Q4) Product Catalog Management –

```
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: 2

1. Update Product Details
2. Show All Products
3. Search for Product in Stock
4. Exit
Enter your Choice: 
```

- **Update Product Details –**

```
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: 1001
What do you want to Update?
1)Price
2)Description
3)Product Name
4)Category
Enter Choice (eg; Price): Price
Enter Updated Price: 1000456
Product Information Updated Successfully
```

- **Show All Products –**

```
1. Update Product Details
2. Show All Products
3. Search for Product in Stock
4. Exit
Enter your Choice: 2
Product Details:
(1000, 'iPhone 16 Pro', '6.1-inch Super Retina XDR display, A16 Bionic chip, 12MP dual camera system', Decimal('157298.79'), 'Smartphones')
(1001, 'Samsung Galaxy S24 Ultra', '6.8-inch Dynamic AMOLED 2X display, Snapdragon 8 Gen 2, 200MP camera', Decimal('1000456.00'), 'Smartphones')
(1002, 'OnePlus 11', '6.7-inch Fluid AMOLED display, Snapdragon 8 Gen 2, 50MP camera', Decimal('72598.79'), 'Smartphones')
(1003, 'Xiaomi 13 Pro', '6.7-inch AMOLED display, Snapdragon 8 Gen 2, 50MP camera', Decimal('84698.79'), 'Smartphones')
(1004, 'Google Pixel 7 Pro', '6.7-inch LTPO OLED display, Google Tensor G2, 50MP camera', Decimal('102848.79'), 'Smartphones')
(1005, 'MacBook Pro M2', '13.3-inch Liquid Retina XDR display, M2 chip, 8GB RAM, 256GB SSD', Decimal('181498.79'), 'Laptops')
(1006, 'Dell XPS 13', '13.4-inch InfinityEdge display, Intel Core i7-13700H, 16GB RAM, 512GB SSD', Decimal('157298.79'), 'Laptops')
(1007, 'Lenovo ThinkPad X1 Carbon', '14-inch OLED display, Intel Core i7-13600H, 16GB RAM, 512GB SSD', Decimal('169398.79'), 'Laptops')
(1008, 'HP Spectre x360', '13.3-inch AMOLED display, Intel Core i7-13600H, 16GB RAM, 512GB SSD', Decimal('157298.79'), 'Laptops')
(1009, 'Acer Predator Helios 16', '16-inch IPS display, Intel Core i9-13900HX, 32GB RAM, 2TB SSD', Decimal('217798.79'), 'Laptops')
(1010, '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: 1000
Product in Stock: 10
```

Q5) Orders –

```
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:
```

- **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: 6
Enter Product ID: 1000
Enter Quantity: 2
Order Created Successfully
```

- **Get Order Details –**

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

You've ordered 2 times, below are those Order Details:

Order Detail ID: 10000
Order ID: 100
Product ID: 1000
Quantity: 1
Order Date: 2023-11-25
Status: Shipped
Total Order Price: 142998.90


Order Detail ID: 10010
Order ID: 110
Product ID: 1009
Quantity: 1
Order Date: 2024-09-20
Status: Shipped
Total Order Price: 197998.90
```

- **Cancel Order –**

```
1. Create Order
2. Get Order Details
3. Cancel Order
4. Delete Orders which are Cancelled
5. Exit
Enter your Choice: 3
FOR YOUR ALL ORDERS:

Enter Customer ID: 2

You've ordered 1 times, below are those Order Details:

Order Detail ID: 10001
Order ID: 101
Product ID: 1001
Quantity: 1
Order Date: 2023-12-01
Status: shipped
Total Order Price: 131998.90

Write an OrderID you want to Cancel: 101
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!
```

Q6) Order Status –

```
Enter your Choice: 4
Enter Order ID: 303

1. Display Order Status
2. Change Order Status
3. Exit
Enter your Choice: ▮
```

- **Display Order Status –**

```
Enter your Choice: 4
Enter Order ID: 111

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

- **Change Order Status –**

```
Enter your Choice: 4
Enter Order ID: 111

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

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

Q7) Inventory Management –

```
Enter your Choice: 5

1. Add New Product
2. Update Product Stock
3. Remove Discontinued Product
4. Exit
Enter your Choice: █
```

- **Add 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 15 pro max
Enter Product Description: it is a smartphone from iphone
Enter Product Price: 100000
Enter Product Category: Smaertphones
Enter Quantity in Stock: 11
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: 1002
Enter Quantity to be Added: 25
Quantity in Stock:  20
Quantity Updated for Product ID 1002: 45
```

- **Remove Discontinued Product –**

```
Enter your Choice: 5

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): 1011
Removed Items Successfully!!
```

Q8) Sales Report –

```
Enter your Choice: 6

1. Retrieve Sales Data
2. Generate Sales Report
3. Exit
Enter your Choice: 
```

- **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
1000 | iPhone 16 Pro | 3
1003 | Xiaomi 13 Pro | 1
1004 | Google Pixel 7 Pro | 1
1006 | Dell XPS 13 | 1
1007 | Lenovo ThinkPad X1 Carbon | 1
1009 | Acer Predator Helios 16 | 1
```

- **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
1000 | iPhone 16 Pro | 3
1003 | Xiaomi 13 Pro | 1
1004 | Google Pixel 7 Pro | 1
1006 | Dell XPS 13 | 1
1007 | Lenovo ThinkPad X1 Carbon | 1
1009 | Acer Predator Helios 16 | 1
```

Q9) Customer Account Update –

```
Enter your Choice: 7

1. Update Customer Details
2. Get Customer Details
3. Exit
Enter your Choice:
```

- **Update Customer Details –**

```
Enter your Choice: 7

1. Update Customer Details
2. Get Customer Details
3. Exit
Enter your Choice: 1
Enter Customer ID: 6
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: 5
Enter New Address: Bestan,Surat,Gujrat
Customer Details Updated!
```

- **Get Customer Details –**

```
1. Update Customer Details
2. Get Customer Details
3. Exit
Enter your Choice: 2
Enter Customer ID: 1
Customer ID:  1
First Name:  Khushi
Last Name:  Joshi
Email:  khushijoshi@gmail.com
Phone:  9876543210
Address:  123, Sector 17, Indore, Madhya Pradesh
```

Q10) Payment Processing –

```
Enter your Choice: 8

1. Process Payment
2. Add Discount
3. Exit
Enter your Choice:
```

- **Process Payment –**

```
Enter your Choice: 8

1. Process Payment
2. Add Discount
3. Exit
Enter your Choice:1
Enter Order ID: 100
OrderID | ProductID | Quantity | TotalAmount
-----------------------------------------
  100   |   1000    |    1    |  157298.79
```

- **Add Discount –**

```
1. Process Payment
2. Add Discount
3. Exit
Enter your Choice:2
Enter Order ID: 100
Total Amount: Rs. 157298.79
Discount of 10 percent will be added...
Total Amount: Rs. 141568.91100000002
```

Q11) Search and Recommend a Product –

```
Enter your Choice: 9

1. Search Product
2. Recommend Product
3. Exit
Enter your Choice:
```

- **Search Product –**

```
Enter your Choice: 9

1. Search Product
2. Recommend Product
3. Exit
Enter your Choice: 1
Enter a Product ID: 1001
Product Found!

Product ID:  1001
Product Name:  Samsung Galaxy S24 Ultra
Product Description:  6.8-inch Dynamic AMOLED 2X display, Snapdragon 8 Gen 2, 200MP camera
Product Price:  1000456.00
Product Category:  Smartphones
```

- **Recommend Product –**

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

MacBook Pro M2
Dell XPS 13
Lenovo ThinkPad X1 Carbon
HP Spectre x360
Acer Predator Helios 16
```

- **Exit –**

```
1. Search Product
2. Recommend Product
3. Exit
Enter your Choice: 3
Redirecting to Main Menu...
```

Q 12) Exit –

```
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: 10
Exiting...
PS E:\hexa tech training assig\TechShop>
```