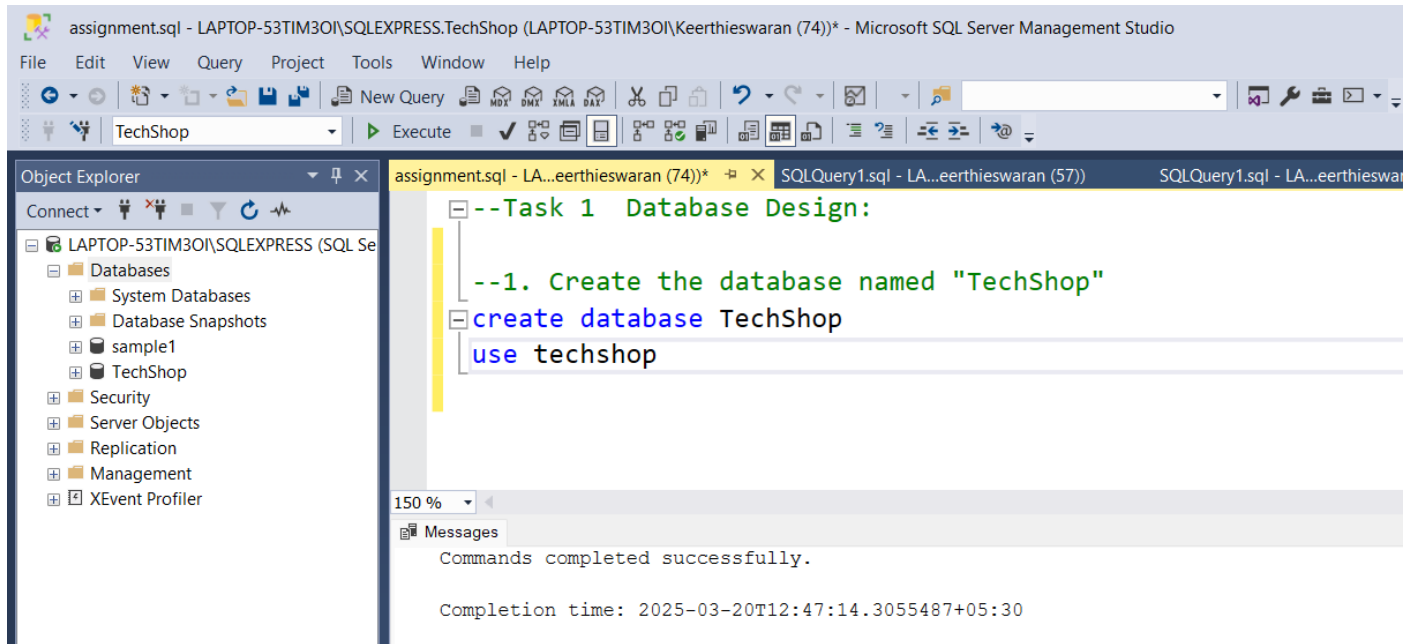


TASK 1: DATABASE DESIGN

1. Create the database named "TechShop"



2. Define the schema for the Customers, Products, Orders, OrderDetails and Inventory tables based on the provided schema.

```
create table Customers(
  CustomerID int Primary Key,
  FirstName varchar(30),
  LastName varchar(30),
  Email varchar(30),
  Phone varchar(11),
  Address varchar(40))
create table Products(
  ProductID int Primary Key,
  ProductName varchar(30),
  Description varchar(40),
  Price int)
create table Orders(
  OrderID int Primary Key,
  CustomerID int Foreign Key references Customers(customerID),
  OrderDate date,
  TotalAmount int)
create table OrderDetails(
  OrderDetailID int Primary Key,
  OrderID int Foreign Key references Orders(OrderID),
  ProductID int Foreign Key references Products(ProductID),
  Quantity int)
create table Inventory(
  InventoryID int Primary key,
  ProductID int Foreign Key references Products(ProductID),
  QuantityInStock int,
  LastStockUpdate date)
```

OUTPUT:

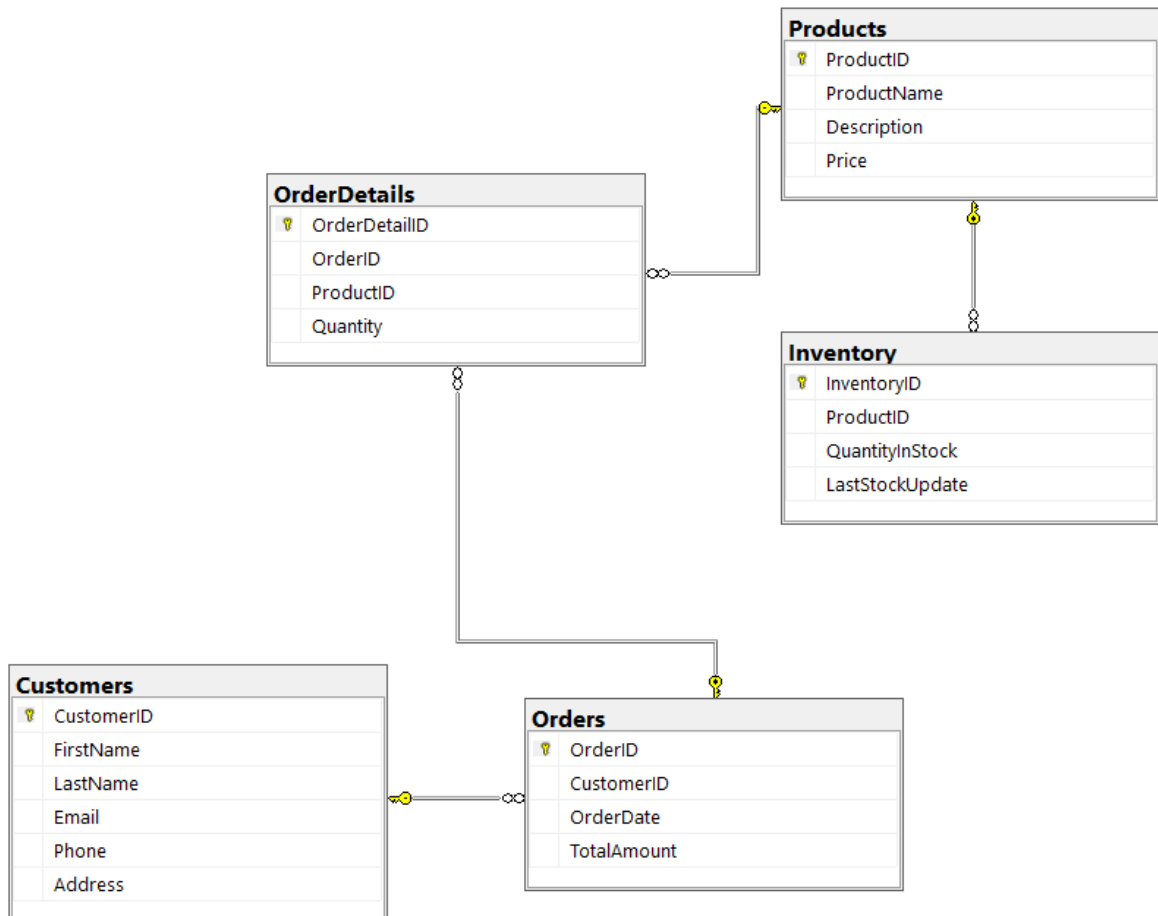


Messages

Commands completed successfully.

Completion time: 2025-03-20T14:27:09.3729424+05:30

3. Create an ERD (Entity Relationship Diagram) for the database.



4. Create appropriate Primary Key and Foreign Key constraints for referential integrity.

```
create table Customers(  
    CustomerID int Primary Key,  
    FirstName varchar(30),  
    LastName varchar(30),  
    Email varchar(30),  
    Phone varchar(11),  
    Address varchar(40))  
create table Products(  
    ProductID int Primary Key,  
    ProductName varchar(30),  
    Description varchar(40),  
    Price int)  
create table Orders(  
    OrderID int Primary Key,  
    CustomerID int Foreign Key references Customers(customerID),  
    OrderDate date,  
    TotalAmount int)  
create table OrderDetails(  
    OrderDetailID int Primary Key,  
    OrderID int Foreign Key references Orders(OrderID),  
    ProductID int Foreign Key references Products(ProductID),  
    Quantity int)  
create table Inventory(  
    InventoryID int Primary key,  
    ProductID int Foreign Key references Products(ProductID),  
    QuantityInStock int,  
    LastStockUpdate date)
```

5. Insert at least 10 sample records into each of the following tables.

a. Customers b. Products c. Orders d. OrderDetails e. Inventory

```
-- Insert into Customers Table  
insert into customers(CustomerID, FirstName, LastName, Email, Phone, Address) values  
(1, 'John', 'smith', 'john@abc.com', '9898452312', '123 ram St'),  
(2, 'William', 'Smith', 'jane12@abc.com', '9876512340', '456 Oak St'),  
(3, 'Scott', 'johnson', 'johnson@abc.com', '9655874123', '789 Pine St'),  
(4, 'King', 'blake', 'blake@abc.com', '9632541870', '321 Maple St'),  
(5, 'Alan', 'Richy', 'richy@abc.com', '6378925425', '654 Cedar St'),  
(6, 'David', 'Raj', 'david@abc.com', '8852674139', '987 Walnut St'),  
(7, 'Martin', 'Adams', 'martin@abc.com', '8050486253', '246 Birch St'),  
(8, 'Allen', 'Jones', 'jones@abc.com', '9997755368', '369 Spruce St'),  
(9, 'Jenny', 'Fransis', 'jenny@abc.com', '9841298541', '753 Ash St'),  
(10, 'Henry', 'Adams', 'henry@abc.com', '9999952521', '159 Willow St')  
-- Insert into Products Table  
INSERT INTO Products (ProductID, ProductName, Description, Price) VALUES  
(1, 'Laptop', '15-inch screen', 7500),  
(2, 'Smartphone', '64GB storage', 5000),  
(3, 'Headphones', 'wireless', 1000),  
(4, 'Smartwatch', 'Waterproof', 2000),  
(5, 'Tablet', '128GB storage', 3000),  
(6, 'Keyboard', 'RGB lighting', 500),  
(7, 'Mouse', 'Wireless', 300),  
(8, 'Monitor', '4K resolution', 4000),  
(9, 'Router', 'Dual-band Wi-Fi support', 1200),  
(10, 'External SSD', '1TB capacity', 1500)
```


```

insert into Orders(OrderID, CustomerID, OrderDate, TotalAmount) values
(1, 1, '2025-03-01', 8500),
(2, 2, '2025-03-05', 5000),
(3, 3, '2025-03-07', 2000),
(4, 4, '2025-03-10', 6000),
(5, 5, '2025-03-12', 7500),
(6, 6, '2025-03-15', 10000),
(7, 7, '2025-03-18', 4000),
(8, 8, '2025-03-20', 1500),
(9, 9, '2025-03-22', 3000),
(10, 10, '2025-03-25', 4500)
--Insert into OrderDetails Table
insert into OrderDetails(OrderDetailID, OrderID, ProductID, Quantity) values
(1, 1, 1, 1),
(2, 1, 3, 1),
(3, 2, 2, 1),
(4, 3, 4, 1),
(5, 4, 5, 2),
(6, 5, 6, 3),
(7, 6, 7, 5),
(8, 7, 8, 1),
(9, 8, 9, 2),
(10, 9, 10, 1)

insert into Inventory(InventoryID, ProductID, QuantityInStock, LastStockUpdate) values
(1, 1, 15, '2025-03-01'),
(2, 2, 25, '2025-03-02'),
(3, 3, 30, '2025-03-03'),
(4, 4, 10, '2025-03-04'),
(5, 5, 20, '2025-03-05'),
(6, 6, 18, '2025-03-06'),
(7, 7, 22, '2025-03-07'),
(8, 8, 12, '2025-03-08'),
(9, 9, 8, '2025-03-09'),
(10, 10, 14, '2025-03-10')


```

OUTPUT:

 Messages

(10 rows affected)
(10 rows affected)
(10 rows affected)
(10 rows affected)
(10 rows affected)
Completion time: 2025-03-20T14:40:24.5384387+05:30

124 %

 Query executed successfully.