Foundation Technical Training

Assignment No. 1 - SQL - Task 1

Name: Niranjan Kolpe, Batch: C#-Batch 2

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.
3. Create an ERD (Entity Relationship Diagram) for the database.
4. Create appropriate Primary Key and Foreign Key constraints for referential integrity.
5. Insert at least 10 sample records into each of the following tables.
   a. Customers
   b. Products
   c. Orders
   d. Order Details
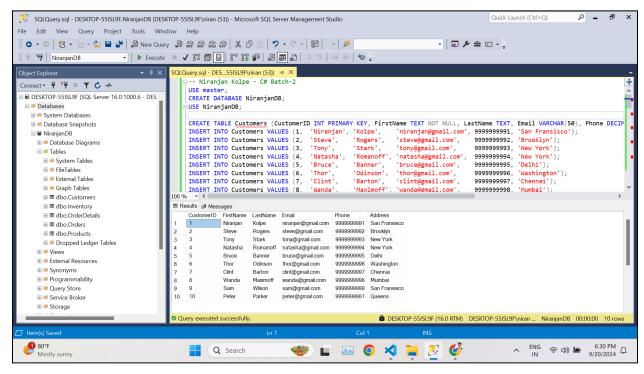   e. Inventory

Program Code in SQL:

```sql
-- Niranjan Kolpe - C# Batch-2

USE master;

CREATE DATABASE NiranjanDB;

USE NiranjanDB;


CREATE TABLE Customers (CustomerID INT PRIMARY KEY, FirstName TEXT NOT NULL,
LastName TEXT, Email VARCHAR(50), Phone DECIMAL NOT NULL, Address VARCHAR(100));

INSERT INTO Customers VALUES (1, 'Niranjan', 'Kolpe', 'niranjan@gmail.com',
9999999991, 'San Fransisco');

INSERT INTO Customers VALUES (2, 'Steve', 'Rogers', 'steve@gmail.com',
9999999992, 'Brooklyn');

INSERT INTO Customers VALUES (3, 'Tony', 'Stark', 'tony@gmail.com',
9999999993, 'New York');

INSERT INTO Customers VALUES (4, 'Natasha', 'Romanoff', 'natasha@gmail.com',
9999999994, 'New York');
```
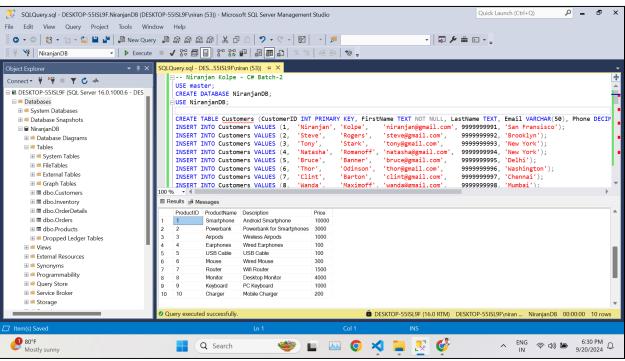
```sql
INSERT INTO Customers VALUES (5,   'Bruce',      'Banner',   'bruce@gmail.com',
9999999995, 'Delhi');

INSERT INTO Customers VALUES (6,   'Thor',       'Odinson',  'thor@gmail.com',
9999999996, 'Washington');

INSERT INTO Customers VALUES (7,   'Clint',      'Barton',   'clint@gmail.com',
9999999997, 'Chennai');

INSERT INTO Customers VALUES (8,   'Wanda',      'Maximoff', 'wanda@gmail.com',
9999999998, 'Mumbai');

INSERT INTO Customers VALUES (9,   'Sam',        'Wilson',   'sam@gmail.com',
9999999999, 'San Fransisco');

INSERT INTO Customers VALUES (10, 'Peter',      'Parker',   'peter@gmail.com',
9999999981, 'Queens');

SELECT * FROM Customers;


CREATE TABLE Products (ProductID INT PRIMARY KEY, ProductName TEXT NOT NULL,
Description VARCHAR(100), Price INT NOT NULL);

INSERT INTO Products VALUES (1,   'Smartphone', 'Android Smartphone',
10000);

INSERT INTO Products VALUES (2,   'Powerbank',  'Powerbank for Smartphones',
3000);

INSERT INTO Products VALUES (3,   'Airpods',    'Wireless Airpods',
1000);

INSERT INTO Products VALUES (4, 'Earphones', 'Wired Earphones',          100);

INSERT INTO Products VALUES (5, 'USB Cable', 'USB Cable',                100);

INSERT INTO Products VALUES (6, 'Mouse',     'Wired Mouse',              300);

INSERT INTO Products VALUES (7,   'Router',            'Wifi Router',
1500);

INSERT INTO Products VALUES (8,   'Monitor',           'Desktop Monitor',
4000);
```

```sql
INSERT   INTO   Products   VALUES   (9,      'Keyboard',          'PC   Keyboard',
1000);

INSERT INTO Products VALUES (10, 'Charger',    'Mobile Charger',          200);

SELECT * FROM Products;


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

INSERT INTO Orders VALUES (1,  5,  '2024-09-01', 1000);

INSERT INTO Orders VALUES (2,  7,  '2024-09-02', 3000);

INSERT INTO Orders VALUES (3,  6,  '2024-09-02', 10000);

INSERT INTO Orders VALUES (4,  4,  '2024-09-03', 4000);

INSERT INTO Orders VALUES (5,  9,  '2024-09-04', 2000);

INSERT INTO Orders VALUES (6,  2,  '2024-09-06', 500);

INSERT INTO Orders VALUES (7,  1,  '2024-09-15', 200);

INSERT INTO Orders VALUES (8,  3,  '2024-09-16', 10000);

INSERT INTO Orders VALUES (9,  8,  '2024-09-17', 6000);

INSERT INTO Orders VALUES (10, 10, '2024-09-18', 7000);

SELECT * FROM Orders;


CREATE TABLE OrderDetails (OrderDetailID INT PRIMARY KEY, OrderID INT FOREIGN KEY
REFERENCES Orders(OrderID),

                                   ProductID  INT  FOREIGN  KEY  REFERENCES
Products(ProductID), Quantity INT);

INSERT INTO OrderDetails VALUES (1,  1,  3,  1);

INSERT INTO OrderDetails VALUES (2,  2,  2,  1);

INSERT INTO OrderDetails VALUES (3,  3,  1,  1);

INSERT INTO OrderDetails VALUES (4,  4,  8,  1);

INSERT INTO OrderDetails VALUES (5,  5,  9,  2);
```

```sql
INSERT INTO OrderDetails VALUES (6,  6,  4,  5);

INSERT INTO OrderDetails VALUES (7,  7,  10, 1);

INSERT INTO OrderDetails VALUES (8,  8,  9,  10);

INSERT INTO OrderDetails VALUES (9,  9,  7,  4);

INSERT INTO OrderDetails VALUES (10, 10, 3,  7);

SELECT * FROM OrderDetails;


CREATE TABLE Inventory (InventoryID INT PRIMARY KEY, ProductID INT FOREIGN KEY
REFERENCES Products(ProductID), QuantityInStock INT, LastStockUpdate DATETIME);

INSERT INTO Inventory VALUES (1,  1,  23, '2024-09-19');

INSERT INTO Inventory VALUES (2,  2,  26, '2024-09-19');

INSERT INTO Inventory VALUES (3,  3,  63, '2024-09-19');

INSERT INTO Inventory VALUES (4,  4,  52, '2024-09-19');

INSERT INTO Inventory VALUES (5,  5,  92, '2024-09-19');

INSERT INTO Inventory VALUES (6,  6,  12, '2024-09-19');

INSERT INTO Inventory VALUES (7,  7,  38, '2024-09-19');

INSERT INTO Inventory VALUES (8,  8,  84, '2024-09-20');

INSERT INTO Inventory VALUES (9,  9,  97, '2024-09-20');

INSERT INTO Inventory VALUES (10, 10, 14, '2024-09-20');

SELECT * FROM Inventory;
```

Output:

Screenshot 1 — SQLQuery.sql - DESKTOP-55ISL9F.NiranjanDB (DESKTOP-55ISL9F\niran (53)) - Microsoft SQL Server Management Studio

```sql
-- Niranjan Kolpe - C# Batch-2
USE master;
CREATE DATABASE NiranjanDB;
USE NiranjanDB;

CREATE TABLE Customers (CustomerID INT PRIMARY KEY, FirstName TEXT NOT NULL, LastName TEXT, Email VARCHAR(50), Phone DECIM
INSERT INTO Customers VALUES (1, 'Niranjan', 'Kolpe',    'niranjan@gmail.com', 9999999991, 'San Fransisco');
INSERT INTO Customers VALUES (2, 'Steve',    'Rogers',   'steve@gmail.com',    9999999992, 'Brooklyn');
INSERT INTO Customers VALUES (3, 'Tony',     'Stark',    'tony@gmail.com',     9999999993, 'New York');
INSERT INTO Customers VALUES (4, 'Natasha',  'Romanoff', 'natasha@gmail.com',  9999999994, 'New York');
INSERT INTO Customers VALUES (5, 'Bruce',    'Banner',   'bruce@gmail.com',    9999999995, 'Delhi');
INSERT INTO Customers VALUES (6, 'Thor',     'Odinson',  'thor@gmail.com',     9999999996, 'Washington');
INSERT INTO Customers VALUES (7, 'Clint',    'Barton',   'clint@gmail.com',    9999999997, 'Chennai');
INSERT INTO Customers VALUES (8, 'Wanda',    'Maximoff', 'wanda@gmail.com',    9999999998, 'Mumbai');
```

Results:

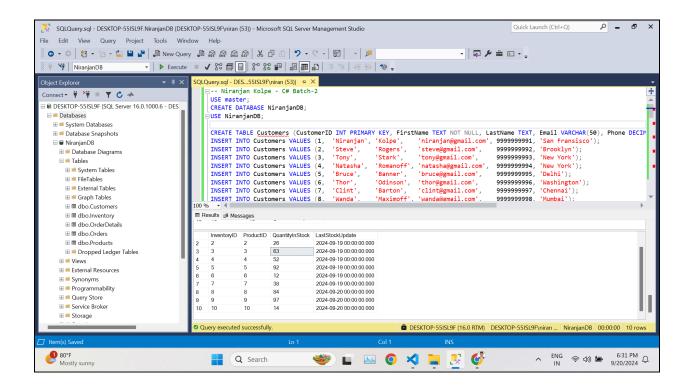|	OrderID	CustomerID	OrderDate	TotalAmount
1	1	5	2024-09-01	1000
2	2	7	2024-09-02	3000
3	3	6	2024-09-02	10000
4	4	4	2024-09-03	4000
5	5	9	2024-09-04	2000
6	6	2	2024-09-06	500
7	7	1	2024-09-15	200
8	8	3	2024-09-16	10000
9	9	8	2024-09-17	6000
10	10	10	2024-09-18	7000

Query executed successfully.   DESKTOP-55ISL9F (16.0 RTM)   DESKTOP-55ISL9F\niran ...   NiranjanDB   00:00:00   10 rows

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Screenshot 2 — SQLQuery.sql - DESKTOP-55ISL9F.NiranjanDB (DESKTOP-55ISL9F\niran (53)) - Microsoft SQL Server Management Studio

```sql
-- Niranjan Kolpe - C# Batch-2
USE master;
CREATE DATABASE NiranjanDB;
USE NiranjanDB;

CREATE TABLE Customers (CustomerID INT PRIMARY KEY, FirstName TEXT NOT NULL, LastName TEXT, Email VARCHAR(50), Phone DECIM
INSERT INTO Customers VALUES (1, 'Niranjan', 'Kolpe',    'niranjan@gmail.com', 9999999991, 'San Fransisco');
INSERT INTO Customers VALUES (2, 'Steve',    'Rogers',   'steve@gmail.com',    9999999992, 'Brooklyn');
INSERT INTO Customers VALUES (3, 'Tony',     'Stark',    'tony@gmail.com',     9999999993, 'New York');
INSERT INTO Customers VALUES (4, 'Natasha',  'Romanoff', 'natasha@gmail.com',  9999999994, 'New York');
INSERT INTO Customers VALUES (5, 'Bruce',    'Banner',   'bruce@gmail.com',    9999999995, 'Delhi');
INSERT INTO Customers VALUES (6, 'Thor',     'Odinson',  'thor@gmail.com',     9999999996, 'Washington');
INSERT INTO Customers VALUES (7, 'Clint',    'Barton',   'clint@gmail.com',    9999999997, 'Chennai');
INSERT INTO Customers VALUES (8, 'Wanda',    'Maximoff', 'wanda@gmail.com',    9999999998, 'Mumbai');
```

Results:

	OrderDetailID	OrderID	ProductID	Quantity
1	1	1	3	1
2	2	2	2	1
3	3	3	1	1
4	4	4	8	1
5	5	5	9	2
6	6	6	4	5
7	7	7	10	1
8	8	8	9	10
9	9	9	7	4
10	10	10	3	7

Query executed successfully.   DESKTOP-55ISL9F (16.0 RTM)   DESKTOP-55ISL9F\niran ...   NiranjanDB   00:00:00   10 rows

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Entity Relationship Diagram (ERD):