

1st create the database

2-Create Dimension Tables

-- Creating DimCustomer Table

```
CREATE TABLE DimCustomer (  
    CustomerID INT PRIMARY KEY,  
    CustomerName NVARCHAR(100),  
    Email NVARCHAR(100),  
    Phone NVARCHAR(20),  
    Address NVARCHAR(255)  
);  
GO
```

-- Creating DimProduct Table

```
CREATE TABLE DimProduct (  
    ProductID INT PRIMARY KEY,  
    ProductName NVARCHAR(100),  
    Category NVARCHAR(50),  
    Price DECIMAL(10, 2)  
);  
GO
```

-- Creating DimTime Table

```
CREATE TABLE DimTime (  
    TimeID INT PRIMARY KEY,  
    Date DATE,  
    Month INT,  
    Year INT  
);  
GO
```

3- Create Fact Tables

-- Creating FactSales Table

```
CREATE TABLE FactSales (  
    SaleID INT PRIMARY KEY,  
    CustomerID INT FOREIGN KEY REFERENCES DimCustomer(CustomerID),  
    ProductID INT FOREIGN KEY REFERENCES DimProduct(ProductID),  
    TimeID INT FOREIGN KEY REFERENCES DimTime(TimeID),  
    Quantity INT,  
    TotalAmount DECIMAL(10, 2)  
);  
GO
```

4-Fill Data

```
INSERT INTO DimCustomer (CustomerID, CustomerName, Email, Phone, Address) VALUES  
(1, 'Michael', 'michael@example.com', '123', '1 St, City, Country'),  
(2, 'Ahmed', 'ahmed@example.com', '234', '2 St, City, Country'),  
(3, 'Mohamed', 'mohamed@example.com', '345', '3 St, City, Country'),  
(4, 'Mostafa', 'mostafa@example.com', '456', '4 St, City, Country'),  
(5, 'Marawan', 'marawan@example.com', '567', '5 St, City, Country'),  
(6, 'Youssef', 'youssef@example.com', '678', '6 St, City, Country'),  
(7, 'Salah', 'salah@example.com', '789', '7 St, City, Country'),  
(8, 'Omar', 'omar@example.com', '890', '8 St, City, Country');  
GO
```

```
INSERT INTO DimProduct (ProductID, ProductName, Category, Price) VALUES  
(1, 'Smartphone A', 'Electronics', 299.99),  
(2, 'Laptop B', 'Electronics', 799.99),  
(3, 'Headphones C', 'Accessories', 59.99),  
(4, 'Smartwatch D', 'Accessories', 199.99),  
(5, 'Tablet E', 'Electronics', 399.99),  
(6, 'Camera F', 'Electronics', 499.99),  
(7, 'Speaker G', 'Accessories', 89.99),  
(8, 'Keyboard H', 'Accessories', 49.99);  
GO
```

```
INSERT INTO DimTime (TimeID, Date, Month, Year) VALUES  
(1, '2024-01-01', 1, 2024),  
(2, '2024-02-01', 2, 2024),  
(3, '2024-03-01', 3, 2024),  
(4, '2024-04-01', 4, 2024),  
(5, '2024-05-01', 5, 2024),  
(6, '2024-06-01', 6, 2024),  
(7, '2024-07-01', 7, 2024),  
(8, '2024-08-01', 8, 2024);  
GO
```

```
INSERT INTO FactSales (SaleID, CustomerID, ProductID, TimeID, Quantity, TotalAmount) VALUES  
(1, 1, 1, 1, 1, 299.99),  
(2, 2, 2, 2, 2, 1599.98),  
(3, 3, 3, 3, 3, 179.97),  
(4, 4, 4, 4, 1, 199.99),  
(5, 5, 5, 5, 1, 399.99),  
(6, 6, 6, 6, 1, 499.99),  
(7, 7, 7, 7, 2, 179.98),  
(8, 8, 8, 8, 1, 49.99);  
GO
```

5- Schema

