USE OlapDEMO;

GO

-- Dimension Tables

CREATE TABLE Product (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(50),

CategoryID INT,

Brand VARCHAR(50),

Price DECIMAL(10, 2),

StockQuantity INT,

-- Add more product attributes

);

CREATE TABLE Category (

CategoryID INT PRIMARY KEY,

CategoryName VARCHAR(50),

Description TEXT,

-- Add more category attributes

);

CREATE TABLE Customer (

CustomerID INT PRIMARY KEY,

CustomerName VARCHAR(50),

Email VARCHAR(100),

Address VARCHAR(255),

-- Add more customer attributes

);

CREATE TABLE Time (

TimeID INT PRIMARY KEY,

Date DATE,

Year INT,

Quarter INT,

Month INT,

DayOfWeek VARCHAR(10),

-- Add more time attributes

);

-- Measure Table

CREATE TABLE Sales (

SaleID INT PRIMARY KEY,

ProductID INT,

CustomerID INT,

TimeID INT,

Quantity INT,

Amount DECIMAL(10, 2),

Discount DECIMAL(5, 2),

Tax DECIMAL(5, 2),

-- Add more sales-related measures

FOREIGN KEY (ProductID) REFERENCES Product(ProductID),

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),

FOREIGN KEY (TimeID) REFERENCES Time(TimeID)

);

-- Insert random data into Product table

INSERT INTO Product (ProductID, ProductName, CategoryID, Brand, Price, StockQuantity)

VALUES

(1, 'Laptop', 1, 'BrandX', 1200.00, 50),

(2, 'Smartphone', 1, 'BrandY', 800.00, 100);

-- Add more products

-- Insert random data into Category table

INSERT INTO Category (CategoryID, CategoryName, Description)

VALUES

(1, 'Electronics', 'Electronic devices and gadgets'),

(2, 'Clothing', 'Fashion and apparel');

-- Add more categories

-- Insert random data into Customer table

INSERT INTO Customer (CustomerID, CustomerName, Email, Address)

VALUES

(1, 'John Doe', 'john.doe@email.com', '123 Main St, City'),

(2, 'Jane Smith', 'jane.smith@email.com', '456 Oak Ave, Town');

-- Add more customers

-- Insert random data into Time table

INSERT INTO Time (TimeID, Date, Year, Quarter, Month, DayOfWeek)

VALUES

(1, '2023-01-01', 2023, 1, 1, 'Monday'),

(2, '2023-02-15', 2023, 1, 2, 'Wednesday');

-- Add more time entries

-- Insert random data into Sales table

INSERT INTO Sales (SaleID, ProductID, CustomerID, TimeID, Quantity, Amount, Discount, Tax)

VALUES

(1, 1, 1, 1, 5, 600.00, 0.05, 0.1),

(2, 2, 2, 2, 8, 620.00, 0.02, 0.08);

-- Add more sales entries