Step 4.1: Staging Tables

Ensure these staging tables are available to source data into the data mart:

staging\_orders

staging\_order\_details

Step 4.2: Dimension Tables

We’ll use the following dimension tables to analyze sales data by date, customer, product, employee, and other dimensions.

DimDate, DimCustomer, DimProduct, DimEmployee, DimCategory, DimShipper, DimSupplier

These tables should be structured as follows:

DimDate for date-related attributes

DimCustomer for customer-related attributes

DimProduct for product-related attributes

DimEmployee for employee-related attributes

DimCategory, DimShipper, and DimSupplier for category, shipping, and supplier attributes, respectively

Each table should already exist or be created with the necessary attributes as referenced in the lesson "Data modeling for DWH."

Step 4.3: Fact Table

The main fact table, FactSales, will store transactional data for each sale.

FactSales

Step 4.4: Populating the Fact Table

The following query aggregates data from the staging tables and inserts it into FactSales.

Step 4.5: Querying the Data Mart

These example queries provide insights into sales performance and trends.

1. Aggregate Sales by Month and Category

This query provides monthly sales totals for each category.

2. Top-Selling Products per Quarter

This query identifies the top products by sales quantity for each quarter.

3. Sales Performance by Employee

This query provides sales totals by employee, useful for performance tracking.

4. Customer Sales Overview

This query gives an overview of customer spending and transaction count.

5. Monthly Sales Growth Rate

This query calculates the month-over-month growth rate in sales.