

1. Overview

- Purpose: Enrich raw transactions with unit price and compute key metrics before loading into the model.
- Tool: **Power BI Desktop (Power Query)**.

2. Data Sources

- Dim Customers
- Dim Product
- Dim Promotion
- Fact Table

3. Power Query Steps

- Import all four sheets; rename “Sheet 3” → **Fact Table**.
- **Promotion Table Prep**
 - Promote Headers on **Dim Promotion** (first row → column names).
 - Add a Conditional Column “Percentage” to compute numeric discount rates.
- **Product Table Prep**
 - Rename Price (INR) → **Price Per Unit (INR)** in **Dim Product**.
- **Enrich the Fact Table with Price**
 - Merge **Fact Table** ← **Dim Product** on Product ID (Left Outer).
 - Expand only **Price Per Unit (INR)** into **Fact Table**.
 - Remove the original blank Price Per Unit column.
 - Rename the new column to **Price Per Unit**.
- **Calculate Total Sales**
 - Add Custom Column **Total Sales** = [Units Sold] * [Price Per Unit].
 - **Remove Column**: if Power Query auto-added a blank “Total Sales” stub, delete it.
 - Change Type of **Total Sales** → Decimal Number.
- **Enrich the Fact Table with Discount**
 - Merge **Fact Table** ← **Dim Promotion** on Promotion ID (Left Outer).
 - Expand only the “Percentage” column into **Fact Table**.
 - Remove the original blank Discount Percentage column.
 - Rename the new column to **Discount Percentage**.
 - Replace nulls in **Discount Percentage** → 0.
- **Calculate Discount Value & Net Sales**
 - Add Custom Column **Discount Value** = [Total Sales] * [Discount Percentage] / 100.
 - Change Type of **Discount Value** → Decimal Number.
 - Add Custom Column **Net Sales** = [Total Sales] – [Discount Value].
 - **Remove Column**: delete any blank “Net Sales” stub.
 - Change Type of **Net Sales** → Decimal Number.

- **Calculate Profit**
 - Add Custom Column **Profit** = $0.1 * [\text{Net Sales}]$.
 - Change Type of **Profit** → Decimal Number.
- **Order ID**
 - Add Index Column **Order ID** starting from 1.
 - Reorder next to **CustomerID**.
- **Finalize Schema**
 - Reorder columns: Date, CustomerID, PromotionID, ProductID, Units Sold, Price Per Unit, Total Sales, Discount Percentage, Discount Value, Net Sales.
 - Ensure Data Types: Date → Date; Units Sold → Whole Number; Discount Percentage → Percentage.

4. Validation

- Confirmed **3,510** rows in **Fact Table** before and after the transformations (no data lost).
- Spot-checked 5 sample transactions to verify **Total Sales**, **Discount Value**, and **Net Sales** calculations.