

Sales Data Warehouse Analysis Report

Period: 2024–2025 | Database: retail_dw | Model: Star Schema (MySQL Workbench)

1. Project Overview

- Built a Sales Data Warehouse using Star Schema design in MySQL Workbench.
- Fact table (Fact_Sales) connected with four dimensions: Dim_Time, Dim_OrgHierarchy, Dim_Employee, Dim_Product.
- Sales transactions include measures: Quantity, Revenue, and TargetAmount for performance tracking.

2. Data Validation & Model Check

- Validated table loads using record count checks.
- Verified relationships using JOIN queries across Fact_Sales and all dimensions.
- Confirmed keys and mappings for Date, Branch, Employee, and Product were working correctly.

3. Revenue vs Target Performance Analysis

- Calculated overall Revenue vs TargetAmount and achievement percentage.
- Measured gap between achieved Revenue and TargetAmount.
- Classified sales into Achieved vs Not Achieved based on target attainment.

4. Time-Based Trend Analysis

- Year-wise comparison (2024 vs 2025) for revenue and target achievement.
- Month-wise trend analysis to identify seasonality and performance changes over time.
- Weekend vs Weekday comparison to evaluate day-type performance.

5. Branch Performance Analysis

- Ranked branches by total Revenue.
- Calculated branch-wise achievement percentage against targets.
- Identified top-performing and underperforming branches.

6. Employee Performance Analysis

- Ranked sales employees by Revenue contribution.
- Computed employee-wise achievement percentage (Revenue vs TargetAmount).
- Supervisor/team performance analysis using employee hierarchy (SupervisorKey).

7. Product and Category Analysis

- Top products identified by Revenue contribution.
- Category-wise revenue analysis to understand product demand.
- Category-level target achievement comparison to identify strongest segments.

8. Region / Group Analysis

- Region-wise Revenue and target achievement evaluation.
- Group/cluster-wise performance comparison across organization hierarchy.
- Contribution analysis to identify regions driving overall sales results.

9. Conclusion

- The star schema supports performance evaluation across time, branch, employee, and product dimensions.
- Analysis highlights trends, achievements vs targets, and top contributors to overall revenue.
- Model is suitable for reporting and dashboarding (Power BI) for management decision-making.