Project Proposal: Superstore Sales Performance Analysis

Project Overview:

The purpose of this project is to analyze sales performance, profit margins, and sales targets for the years 2011 to 2014. This analysis will identify underperforming and high-performing categories and segments within the dataset. The project also includes data cleaning, transformation, and consolidation of multiple datasets for accurate and meaningful insights.

Objectives:

Data Preparation & Transformation

- Create a new Superstore Sales Dataset with correctly formatted and structured columns.
- Convert sales and profit values from string format to numeric format.
- Format the "Order Date" column to a standard date format.
- Validate the structure and integrity of the new dataset.

Sales Target Data Preparation

- Create a new Sales Target Table with updated columns.
- Ensure consistency in date formatting between datasets.
- Validate the new Sales Target dataset.

Sales, Profit, and Target Analysis

- Compute total sales for each category and segment for the years 2011 to 2014.
- Calculate total profit for each category and segment within the same period.
- Compute total sales target values by category and segment.
- Merge sales, profit, and target data into a single consolidated table for comparative analysis.

Regional Performance Analysis

- Assess sales and profit performance across different regions.
- Identify trends and disparities in regional performance over the four years.

Key Skills Demonstrated:

- Data Cleaning & Transformation: Used SQL functions to replace and cast values, ensuring proper data formatting.
- Table Creation & Management: Created new tables, restructured datasets, and dropped unnecessary tables to maintain database efficiency.
- Date Formatting & Standardization: Applied substring and conditional logic to transform inconsistent date formats into a standard structure.
- Aggregation & Grouping: Summarized sales, profit, and targets using aggregate functions such as SUM() and GROUP BY.
- Conditional Logic: Used CASE statements to handle date transformations and numerical conversions.
- Joins & Data Consolidation: Combined multiple datasets using LEFT JOINs to generate a comprehensive performance report.
- Performance Evaluation: Analyzed key performance metrics across categories, segments, and regions to derive actionable insights.

Expected Outcomes:

- A structured and cleaned dataset ready for further business intelligence applications.
- Clear insights into high-performing and underperforming categories and segments.
- Identification of trends in sales, profit, and target achievement over four years.
- Regional analysis to highlight strengths and weaknesses in different market areas.

- This SQL-based approach provides a robust framework for assessing business performance and guiding strategic decision-making.