

Data Analysis Portfolio Project

Power BI & My SQL

STEPS FOR MY SQL

- **Data Walkthrough**
- **Raw data file preparation**
- **Creating Database**
- **Importing File**
- **Cleaning Imported File**
- **Changing Data Types**
- **Firing SQL Queries for Business Requirements**
- **Storing Results**
- **Preparing SQL Documents**

FUNCTIONALITIES YOU LEARN

- STR_TO_DATE
- ROUND
- SUM
- COUNT
- AVG
- LAG
- MONTH
- DAY
- DAYOFWEEK
- SELECT
- ALIAS
- MAX/ MIN
- HOUR
- ALTER TABLE
- UPDATE TABLE
- CHANGE COLUMN
- WHERE
- GROUP BY
- CASE
- ORDER BY
- LIMIT
- WINDOW FUNCTIONS
- JOINS
- SUBQUERIES

KPI'S REQUIREMENTS

1. Total Sales Analysis:

- Calculate the total sales for each respective month.
- Determine the month-on-month increase or decrease in sales.
- Calculate the difference in sales between the selected month and the previous month.

2. Total Orders Analysis:

- Calculate the total number of orders for each respective month.
- Determine the month-on-month increase or decrease in the number of orders.
- Calculate the difference in the number of orders between the selected month and the previous month.

3. Total Quantity Sold Analysis:

- Calculate the total quantity sold for each respective month.
- Determine the month-on-month increase or decrease in the total quantity sold.
- Calculate the difference in the total quantity sold between the selected month and the previous month.

CHARTS REQUIREMENTS

1. Calendar Heat Map:

- Implement a calendar heat map that dynamically adjusts based on the selected month from a slicer.
- Each day on the calendar will be color-coded to represent sales volume, with darker shades indicating higher sales.
- Implement tooltips to display detailed metrics (Sales, Orders, Quantity) when hovering over a specific day.

2. Sales Analysis by Weekdays and Weekends:

- Segment sales data into weekdays and weekends to analyze performance variations.
- Provide insights into whether sales patterns differ significantly between weekdays and weekends.

3. Sales Analysis by Store Location:

- Visualize sales data by different store locations.
- Include month-over-month (MoM) difference metrics based on the selected month in the slicer.
- Highlight MoM sales increase or decrease for each store location to identify trends.

CHARTS REQUIREMENTS

4. Daily Sales Analysis with Average Line:

- Display daily sales for the selected month with a line chart.
- Incorporate an average line on the chart to represent the average daily sales.
- Highlight bars exceeding or falling below the average sales to identify exceptional sales days.

5. Sales Analysis by Product Category:

- Analyze sales performance across different product categories.
- Provide insights into which product categories contribute the most to overall sales.

6. Top 10 Products by Sales:

- Identify and display the top 10 products based on sales volume.
- Allow users to quickly visualize the best-performing products in terms of sales.

7. Sales Analysis by Days and Hours:

- Utilize a heat map to visualize sales patterns by days and hours.
- Implement tooltips to display detailed metrics (Sales, Orders, Quantity) when hovering over a specific day-hour.