COFFEE SHOP SALES.

ANALYSIS

Power BI

MySQL

COFFEE SALES ANALYSIS

STEPS FOR MYSQL

- 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

COFFEE SALES ANALYSIS

PROBLEM STATEMENT

KPI'S REQUIREMENTS

- 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.

- 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.

- 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.

COFFEE SALES ANALYSIS

PROBLEM STATEMENT

CHARTS REQURIMENTS

- Calendar Heat Map

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

- Sales Analysis by Weekdays and Weekends:

This chart will segment sales data into weekdays and weekends to analyze performance variations.
It will provide insights into whether sales patterns differ significantly between weekdays and weekends.

- Sales Analysis by Store Location:

This chart will visualize sales data by different store locations.
It will include month-over-month (MoM) difference metrics based on the selected month in the slicer.
It will highlight MoM sales increase or decrease for each store location to identify trends.

CONT...

- 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.

- Sales Analysis by Product Category:

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

- 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.

- 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.

DAX CALCULATION IN POWERBI

1.Calculate the difference in sales between the selected month and the previous month.

```
MoM Growth & Diff Sales =
VAR month_diff = [CM Sales] - [PM Sales]
VAR mom = IF(NOT(ISBLANK([PM Sales]) && [PM Sales] <> 0), month_diff / [PM Sales], BLANK())
VAR _sign = IF(month_diff > 0, "+", "")
VAR _sign_trend = IF(month_diff > 0, "▲", "▼")
RETURN
IF(
    ISBLANK([PM Sales]) || [PM Sales] = 0,
    "No Previous sales",
    _sign_trend & " " & _sign & FORMAT(mom, "#0.0%") & " | " & _sign & FORMAT(month_diff / 1000, "0.0K") & " vs LM"
)

```

2.Calculate the difference in the total quantity sold between the selected month and the previous month.

```
MoM Growth & Diff Quantity =
VAR month_diff = [CM Quantity] - [PM Quantity]
VAR mom = IF(NOT(ISBLANK([PM Quantity]) && [PM Quantity] <> 0), month_diff / [PM Quantity], BLANK())
VAR _sign = IF(month_diff > 0, "+", "")
VAR _sign_trend = IF(month_diff > 0, "▲", "▼")
RETURN
IF(
    ISBLANK([PM Quantity]) || [PM Quantity] = 0,
    "No Previous Quantity",
    _sign_trend & " " & _sign & FORMAT(mom, "#0.0%") & " | " & _sign & FORMAT(month_diff / 1000, "0.0K") & " vs LM"
)

```

DAX CALCULATION IN POWERBI

3.Daily Sales Analysis with Average Line

```
Daily Avg Sales = AVERAGEX(ALLSELECTED(coffee_sale_shop[transaction_date]),[Total Sales])
```

4.Calculate the previous month total sales,total orders and total quantity

```
PM Sales =
CALCULATE(
    [CM Sales],
    DATEADD('Date Table'[Date], -1, MONTH)
)
```

```
PM Quantity =
CALCULATE(
    [CM Quantity],
    DATEADD('Date Table'[Date], -1, MONTH)
)
```

```
PM Orders =
CALCULATE(
    [CM orders],
    DATEADD('Date Table'[Date], -1, MONTH)
)
```

DAX CALCULATION IN POWERBI

3.Sales Analysis by Store Location

```
Label fro Store Location =
    SELECTEDVALUE(coffee_sale_shop[store_location])
    & " | "
    & FORMAT([Total Sales] / 1000, "$0.00K")

```

4.Sales Analysis by Product Category

```
Label Product category =
    SELECTEDVALUE(coffee_sale_shop[product_category])
    & " | "
    & FORMAT([Total Sales] / 1000, "$0.00K")

```

INSIGHTS

Key Performance Indicators (KPIs):

- Highest Sales: June 2023
- Lowest Sales: February 2023
- The same trend is observed for orders and quantity.

Calendar:

- Hovering over the calendar displays total sales, total orders, and total quantity for the day.
- It also shows month-over-month increases or decreases, aiding in revenue analysis.
- Light colors represent higher sales; dark colors represent lower sales.

Donut Chart:

- Sales are higher on weekdays compared to weekends.

INSIGHTS

Sales Trends Analysis:

- Analyzes daily revenue generation within a month.
- Lighter colors indicate sales above the average for the month; darker colors indicate sales below average.
- Example: From May 15 to May 27, sales were above average; from May 1 to May 7, sales were below average.

Bar Chart:

- Hell's Kitchen store location has generated more revenue compared to the other two stores.
- Emphasis should be placed on stocking coffee products and necessary services at Hell's Kitchen to maximize profits.

Sales by Product Category:

- The best-selling product is coffee, followed by tea and other products.
- Top 10 selling product categories are displayed along with their revenue.

INSIGHTS

Heat Map Analysis:

- Shows the correlation between hours and days within a selected month.
- Tooltips provide exact values for total sales, orders, and quantity by hour and day.
- Color differentiation on the right side shows total sales by hour.
- The top of the chart shows sales based on day.

CONCLUSION

- The dashboard provides a comprehensive view of a coffee shop’s sales performance.
- Significant growth is observed in overall sales, orders, and quantity compared to the last month.
- Weekdays outperform weekends in sales, and Hell's Kitchen is the leading store location.
- Coffee remains the best-selling product category, with specific products like Barista
- Espresso and Brewed Chai Tea contributed notably to the revenue.
- The heat map highlights peak sales hours, primarily in the mornings on weekdays.
- This analysis can help in strategic decision-making to maintain stock levels, optimize store operations, and enhance marketing efforts to further boost sales and profitability.

THANK YOU.