DATA ANALYST PORTFOLIO PROJECT

POWER BI + MY SQL

MySQL

START TO END

COFFEE SHOP SALES Data Range: 01-01-2023 to 30-06-2023

Data Tutorials
Developed by

Sales Report

FILTERS

Month May 2023

May 2023

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Total Sales
$157K
+31.8% | +37.8K vs LM

Total Orders
33527
+32.3% | +8.2K vs LM

Total Quantity Sold
48233
+32.3% | +11.8K vs LM

Sales Trend over the period

Sales by Weekday/Weekend

Sales by Product Category

Sales by Products (Top 10)

Sales by Days | Hours

Sales by Store Location

```
 1 •  SELECT
 2         MONTH(transaction_date) AS month,
 3         ROUND(SUM(unit_price * transaction_qty)) AS total_sales,
 4         (SUM(unit_price * transaction_qty) - LAG(SUM(unit_price * transaction_qty), 1)
 5         OVER (ORDER BY MONTH(transaction_date))) / LAG(SUM(unit_price * transaction_qty), 1)
 6         OVER (ORDER BY MONTH(transaction_date)) * 100 AS mom_increase_percentage
 7  FROM
 8         coffee_shop_sales
 9  WHERE
10         MONTH(transaction_date) IN (4, 5) -- for months of April and May
11  GROUP BY
12         MONTH(transaction_date)
13  ORDER BY
14         MONTH(transaction_date);
```

month	total_sales	mom_increase_percentage
4	118941	NULL
5	156728	31.769242384551315

FIRING SQL QUERIES TO SOLVE THE BUSINESS PROBLEMS

```
Don't Limit

1 ● SELECT
2       MONTH(transaction_date) AS month,
3       ROUND(SUM(unit_price * transaction_qty)) AS total_sales,
4 ⊖     (SUM(unit_price * transaction_qty) - LAG(SUM(unit_price * transaction_qty), 1)
5       OVER (ORDER BY MONTH(transaction_date))) / LAG(SUM(unit_price * transaction_qty), 1)
6       OVER (ORDER BY MONTH(transaction_date)) * 100 AS mom_increase_percentage
7  FROM
8       coffee_shop_sales
9  WHERE
10      MONTH(transaction_date) IN (4, 5) -- for months of April and May
11 GROUP BY
12      MONTH(transaction_date)
13 ORDER BY
14      MONTH(transaction_date);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ‡A

| month	total_sales	mom_increase_percentage
4	118941	NULL
5	156728	31.769242384551315

You can use the data in any DB to fire queries. Just Minor Changes Needed

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**

MY SQL
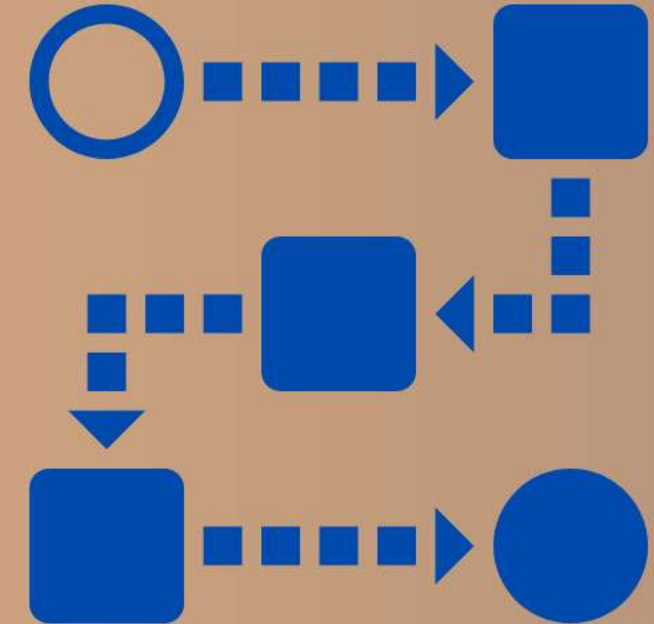
FUNCTIONALITIES YOU LEARN

- 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
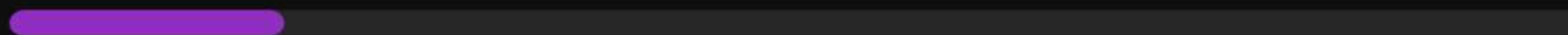- WINDOW FUNCTIONS
- JOINS
- SUBQUERIES

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Data is the new oil

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LINK AVAILABLE IN DESCRIPTION OF VIDEO

PROBLEM STATEMENT

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.**