

# Coffee Shop Sales Dashboard

## Project Overview

This project presents a **Coffee Shop Sales Dashboard**, designed using **Power BI** with advanced **DAX functions** and integrated SQL data from **MySQL Workbench**. The dashboard provides an interactive and insightful representation of key sales metrics, helping business owners and analysts monitor performance trends, identify peak selling hours, and make data-driven decisions for optimizing sales strategies.

## Dashboard Description

The **Coffee Shop Sales Dashboard** offers a comprehensive overview of the business's performance for April 2023, visualizing key indicators such as total sales, orders, and quantities sold across different locations and times. The dashboard is divided into various sections to deliver maximum insights:

### 1. Sales Report & Filter Panel:

- A filter panel allows users to select the sales month (currently set to **April 2023**) and adjust the report view dynamically.
- A **calendar heatmap** provides an overview of sales by day, helping users spot the busiest days of the week.
- It breaks down total sales by weekday/weekend, providing a quick comparison of the sales contributions on weekdays (\$80K) versus weekends (\$39K).

### 2. Key Performance Indicators (KPIs):

- **Total Sales:** \$119K with an increase of **20.3%** compared to the last month.
- **Total Orders:** 25K, marking a **19.3%** rise.
- **Total Quantity Sold:** 36K, reflecting a **19.9%** increase. These KPIs show both absolute numbers and percentage growth vs. the last month (LM).

3. **Sales Trend Over the Period:** A trend line chart captures daily sales fluctuations over April, with values peaking around \$4.6K on specific days and displaying an overall positive growth trajectory.

4. **Sales by Store Location:** The dashboard breaks down sales by location, showcasing top-performing stores such as **Hell's Kitchen** (\$40.30K, +21.7%) and **Astoria** (\$39.48K, +20.2%), highlighting areas of growth and the overall store contribution to total sales.

5. **Sales by Product:** Detailed metrics on products such as **Coffee** (\$45.97K, +20.0%), **Tea** (\$33.36K, +19.5%), and **Drinking Chocolate** (\$12.27K, +19.6%) are available, revealing the best-selling items and the percentage increase in sales from the last month.

6. **Sales by Day & Hour:** The heatmap visualizes sales distributions across each day of the week and different hours of the day. The peak sales hours (from 10 AM to 2 PM) are easily identifiable, allowing business owners to optimize staffing and resource allocation during these times.

7. **Product Category Breakdown:** Categories such as **Branded Items**, **Loose Tea**, **Flavors**, and **Packaged Chocolate** are also tracked, with significant percentage increases, making it easier to identify profitable items.

## Technologies Used

- **Power BI:** Created interactive visuals and KPIs to summarize and present sales data.
- **DAX Functions:** Employed for calculating month-on-month sales growth, sales trends, and dynamic measures (such as total sales by day and product).
- **MySQL Workbench:** SQL coding was used for managing and extracting the underlying sales data, ensuring seamless integration with Power BI for real-time updates and queries.

## Key Insights & Use Cases

- **Store Performance:** The dashboard highlights top-performing store locations and product categories, providing actionable insights for inventory and marketing efforts.
- **Peak Sales Periods:** It identifies peak hours and days, helping store managers allocate resources efficiently.
- **Trend Analysis:** Month-over-month and daily sales trend tracking enables users to monitor overall business growth and spot any patterns in consumer behavior.

## Future Scope

In future iterations, the dashboard can be enhanced by adding **forecasting models** to predict future sales trends, **customer segmentation analysis** to personalize marketing strategies, and more granular data on **customer demographics** to tailor services to customer preferences.