COFFEE SALES ANALYSIS

BY: UPASANA BARA | DATA ANALYST

TOOL: EXCEL | POWER QUERY EDITOR | PIVOT TABLES | CHARTS | SLICER

PROJECT OVERVIEW

The Coffee Sales Analysis project explores **customer purchasing trends** and **business performance** for a coffee shop. The analysis identifies key sales drivers such as **peak hours, top products, and monthly trends**, using **Excel** as the primary tool for **data cleaning, modeling, and visualization.**

. **<u>OBJECTIVES</u>**

- Understand which products generate the **highest sales** and **revenue.**
- To analyze customer **purchasing behavior**.
- Identify the **busiest times** and **days** for the coffee shop.
- Monitor overall **sales trends** across months.
- Present the findings through an interactive **Excel dashboard.**

DATASET DESCRIPTION

The dataset includes transactional data with attributes such as:

- **Coffee Type**
- **Date and Time of Sale**
- **Money**
- **Hour of day**
- **Weekday and Month**
- **Cash type**
- **Monthsort and Weeksort**

Data was cleaned and standardized in Excel using Power Query.

TOOLS AND SKILLS USED

- **Tool:** Microsoft Excel

- **Features Used:** Power Query, Pivot Table, Charts, Slicers, Conditional Formatting

- **Skills**: Data Cleaning, KPI Design, Time-based Trend Analysis, Visualization

METHODOLOGY

Data Cleaning:
Removed missing values and duplicates, formatted dates, and categorized time of day.

Data Analysis:
Created Pivot Tables to calculate total revenue, quantity, and sales frequency by:

1. Coffee Type

Row Labels	Count of money
Americano with Milk	809
Latte	757
Americano	564
Cappuccino	486
Cortado	287
Hot Chocolate	276
Cocoa	239
Espresso	129
Grand Total	**3547**

Row Labels	Sum of money
Latte	26875.3
Americano with Milk	24751.12
Cappuccino	17439.14
Americano	14650.26
Hot Chocolate	9933.46
Cocoa	8521.16
Cortado	7384.86
Espresso	2690.28
Grand Total	**112245.58**

- Coffee type based on quantity is 3547 and based on revenue is $ 112245.58.

2. Time of Day

Row Labels	Sum of money
Afternoon	38130.04
Morning	35929.2
Night	38186.34
Grand Total	112245.58

- Maximum revenue generated from **night** and **afternoon** → **38186.34, 38130.04,** respectively.

3. Hour of Day

Row Labels	Sum of money
6	149.4
7	2846.02
8	7017.88
9	7264.28
10	10198.52
11	8453.1
12	7419.62
13	7028.76
14	7173.8
15	7476.02
16	9031.84
17	7659.76
18	7162.6
19	7751.96
20	5578.92
21	6397.94
22	3635.16
Grand Total	112245.58

- According to the dataset table, the hours of the day are divided into three groups: **Morning 12 AM- 12 PM, Afternoon 12 PM-6 PM and Night 6 PM-12 PM**

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- **Morning 8 AM - 12 PM** and **3 PM - 7 PM** rush at coffee shop.

4. Month

Row Labels	Sum of money
Jan	6398.86
Feb	13215.48
Mar	15891.64
Apr	5719.56
May	8164.42
Jun	7617.76
Jul	6915.94
Aug	7613.84
Sep	9988.64
Oct	13891.16
Nov	8590.54
Dec	8237.74
Grand Total	**112245.58**

- Sales increase in **Feb-March** and **Sep-Oct** but drop in **Jan** and **Apr**.

5. Weekday

Row Labels	Sum of money
Mon	17363.1
Tue	18168.38
Wed	15750.46
Thu	16091.4
Fri	16802.66
Sat	14733.52
Sun	13336.06
Grand Total	**112245.58**

- Maximum sales in **Tuesday** then **Monday and Friday**

6. Total Orders, Revenue And Avg. of Orders

Total orders	Revenue	Average of order
3547	112245.58	31.65

- Total orders is **3547**, total revenue **$112245.58** and avg .of ordes - **$31.45(per order)** in one year of coffee shop
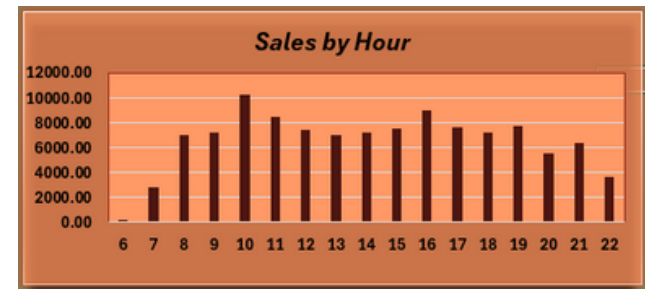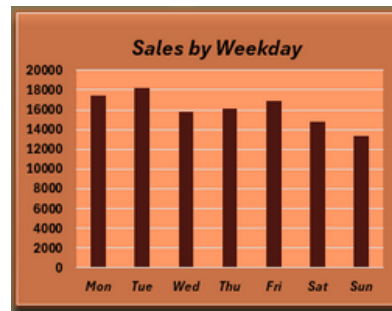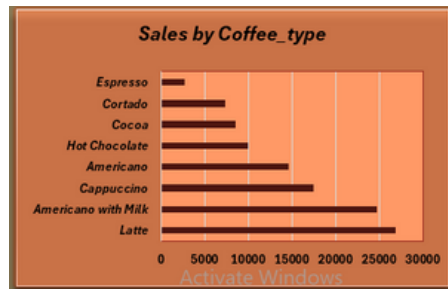
DASHBOARD CREATIONS:

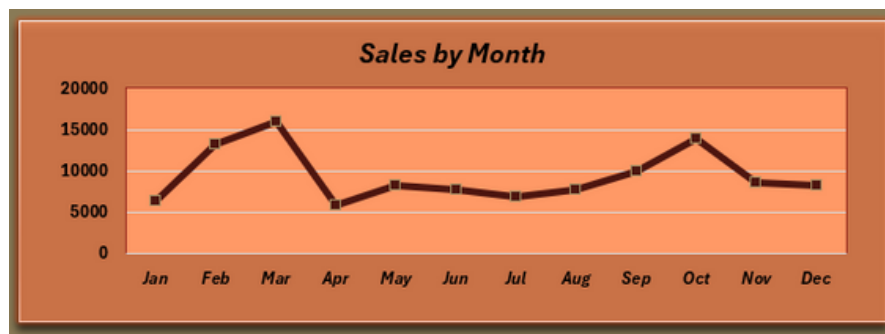Designed an interactive Excel dashboard using:

- **KPI Cards (Total Revenue, Total Orders, Average per order, Top Popular Product, Top Product based on revenue)**
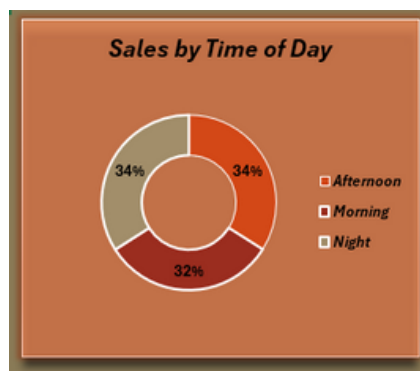
Revenue
112245.58

No. of Orders
3547

Avg. of Orders
31.65

Popular Coffee
Americano with Milk

Max Revenue Coffee
Latte

- **Bar Charts**

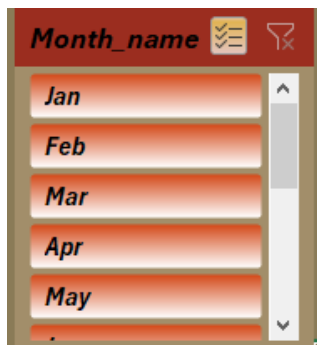**(Sales by coffee types, weekday , hours)**

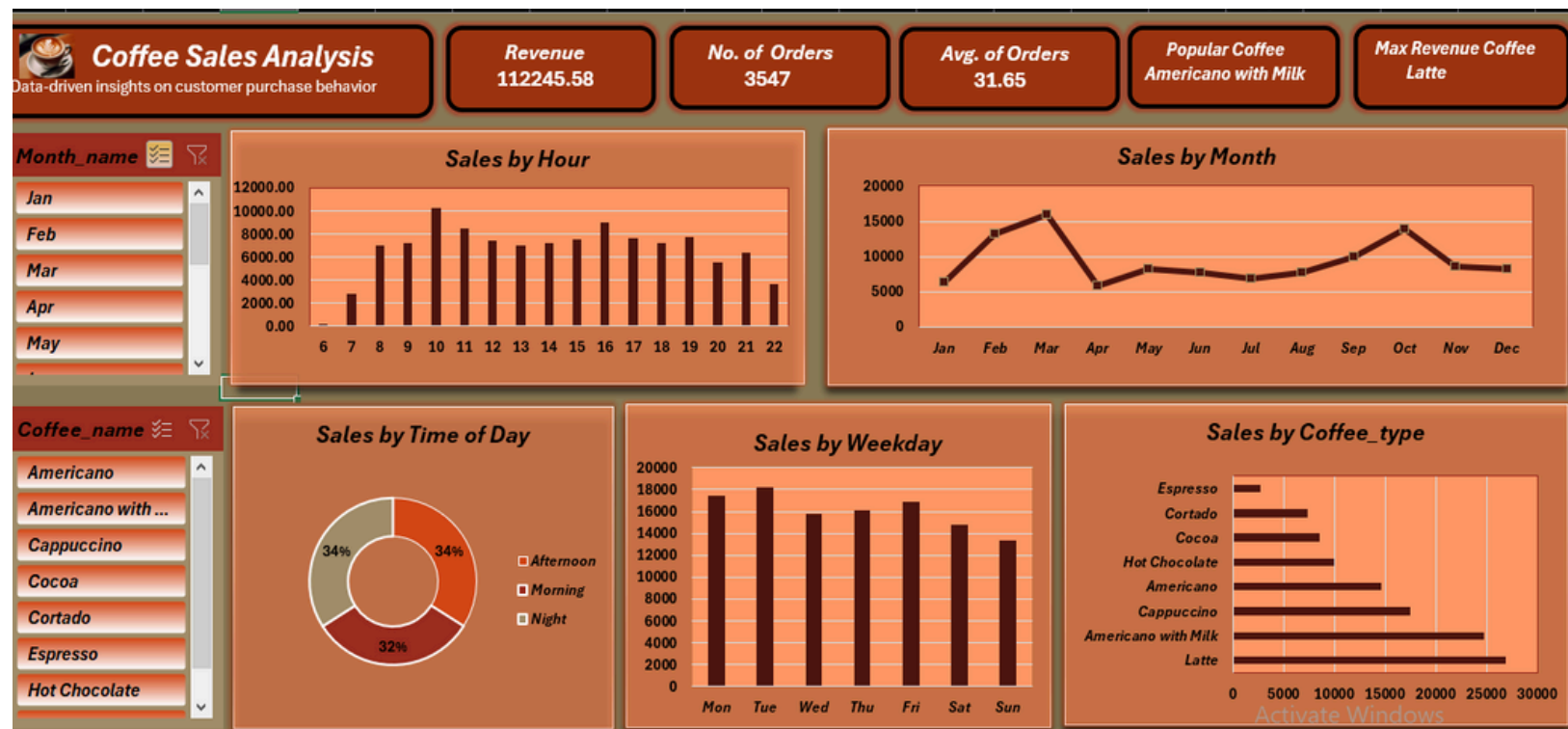- **Line Charts (Sales by months)**

- **Doughnut (Time of day)**

- **Slicers (Month name and Coffee name**

<u>DASHBOARD</u>

INSIGHTS

- Total orders is **3547**, total revenue **$112245.58** and average .of ordes - **$31.45(per order)** in one year of coffee shop

- **Peak Sales Hours: Morning (8 AM–12 PM) and Afternoon (3 PM– 7 PM)** are the busiest periods**.**

- **Top Product: Americano with Milk** is the most popular item.

- **Highest Revenue Product: Latte** generates the maximum revenue.

- **Monthly Trends:** Sales peak in **February-March** and **September-October,** but drop in **January and April.**

- **Day-wise Trends: Monday, Tuesday, and Friday** show slightly higher sales.

RECOMMENDATION

- Launch promotions during morning and afternoon hours to capitalize on peak demand.

- Focus marketing campaigns on Latte and Americano with Milk, as they are top sellers.

- Prepare inventory and staffing for high-demand months (February-March and September-October).

- Offer weekday loyalty programs to sustain sales momentum.

CONCLUSIONS

The Coffee Sales Analysis project demonstrates how Microsoft Excel can be effectively utilized to transform raw sales data into actionable business insights. The analysis showcases proficiency in data cleaning, visualization, and trend analysis, highlighting how data-driven decision-making can help identify sales patterns, optimize operations, and support strategic business growth.

LINKS

- **Dataset link:
  https://www.kaggle.com/datasets/jawad3664/coffee-shop**

- **LinkedIn link: www.linkedin.com/in/upasana-bara-225611247**