Methodology

This analysis aims to evaluate the performance and trends of the coffee shop to support data-driven decision-making. The following steps outline the methodology used to collect, process, analyze, and interpret the relevant data:

1. Objectives

- key questions to answer:

    o   What are the most popular products?

    -Coffee and Tea.

    o   What times during the day, we see the highest sales?

    -Mornings.

    o   Are there trends in customer preferences?

    -Yes, customers love their coffee.

    o   What factors contribute to low or high sales periods?

    -For high sales: Most sales were made in the mornings and during cold season i.e May and June.

    -For low sales: few sales were made in the evening and during hot weather i.e January and February.

2. Data Collection

- **Sources:** data saved as CSV on MS Excel, Data time frame is 6 months for sufficient trend analysis. Data Includes product sold, quantity, price, date/time, category, and store location .

3. Data Preparation

I used Miro for my flowcharts and planning.

I used Snowflake to query my data:

- Counted number of units sold.

- counted number of transactions per store location.

- Multiplied unit price by quantity to get revenue.

- Grouped dates into months for monthly analysis.

4. Data Analysis

- I used Excel to:

    - Analyze sales volume and revenue by product category.

    - Identify peak days for staffing optimization.

    - Identify customer purchase frequency.

    - Perform trend analysis to detect seasonal patterns.

5. Data Visualization

- I used Excel to Develop clear visualizations (charts, graphs, dashboards) to highlight insights:

    - Line charts for sales trends over product category.

    - Bar charts for store location comparisons over 6 months.

    - Doughnut chart for time bucket contributions.

6. Interpretation and Insights

- Summarize findings with a focus on actionable recommendations, such as:

    - Bright coffee shop can Adjust inventory based on top-selling items.

    - We can Plan on promotions during off-peak times:

      - We can make buy 2 for 1 in the afternoon/evening. OR

      - We can choose days during January-March were we make specials like buy a coffee and get 25% off from (products that's low on sales) .

    - We can revise staffing schedules to match busy periods.