Coffee Shop Data Analysis Methodology

1. **Objectives**

- Identify best-selling products
- What time of day the store performs best
- Sales trends across products and time intervals
- Highlight underperforming categories and opportunities for menu adjustment
- Evaluate performance across different store locations
- Recommendations for improving sales performance

2. **Data Collection & Understanding**

- The data was collected from the coffee shop's system.
- Key fields include: transaction_id , store_location , transaction_date , product_category , transaction_qty , unit_price , and day_part (morning/ afternoon/evening).
- The data was reviewed for completeness, consistency, and data types.

3. **Data Cleaning and Preparation**

- Ensured all dates were in proper datetime format.
- Created new fields such as total_revenue by multiplying unit_price .
- Extracted month and day-of-week fields for trend analysis

4. **Analytical Approach**

- **Descriptive Analytics-** Aggregated sales by: - Store - Product category, Time of day (morning/afternoon/evening) and month. Calculated key metrics: - Total revenue, quantity sold
- **Diagnostic Analytics-** Identified which stores have higher foot traffic or spend per transaction. Analyzed which product categories perform best during specific day parts. - Compared the revenue contribution across stores.
- **Visualization and Trend Analysis** - Built pivot tables and charts to show: - Monthly sales trends, Sales by product category and time of day and store performance comparisons
- **Customer Behavior Insights** – Evaluated the impact of time-of-day on product sales, Identified potential for upselling and bundling strategies.

5. **Tools Used**
    - Microsoft Excel (pivot tables, charts, and basic formulas)
    - Snowflake - SQL (for aggregation and metric calculation)
    - Canva- For presentation
    - Miro- For planning