

Customer Behavior and Sales Analysis

Executive Summary

This report analyzes sales and customer behavior for the Mock Business using generated data from 2023. The objective was to identify the most popular products, peak sales periods by month and day, and customer purchasing patterns. These insights aim to support future business optimization. Data was cleaned, formatted, and visualized using Excel pivot tables and charts.

Data Cleaning

The original dataset contained several inconsistencies:

- Mixed capitalization in item names
- Text based quantity values
- Missing or incorrect totals
- Incomplete timestamp formatting

To ensure accuracy:

- All entries were standardized, including both numeric and text values
- The *Timestamp* column was split into Date, Month, and Day fields for differentiated analysis.

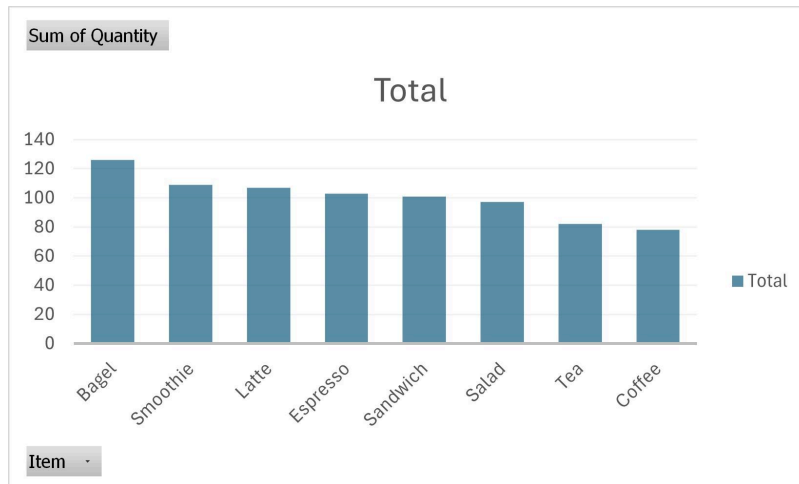
Aesthetic Enhancements were made for readability, including:

- Merged header cells
- Bolded column titles
- Currency and time formatting
- Adjusted row/column widths
- Highlighting key cells for contrast

Key Findings

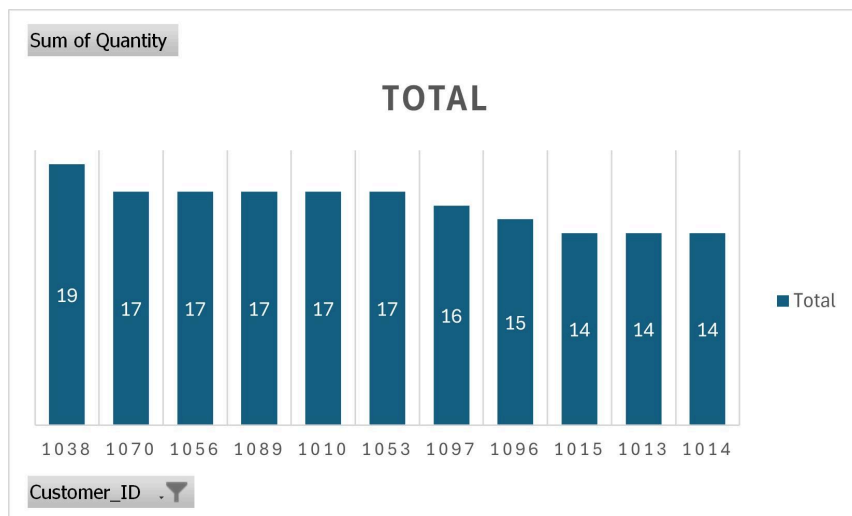
Best and Worst Selling Items

- **Most Sold:** Bagels were the top-selling item with 126 units sold.
- **Least Sold:** Coffee had the fewest sales, totaling 78 units.
- **Suggestion:** Consider promoting coffee, or decreasing price to increase customer demand.



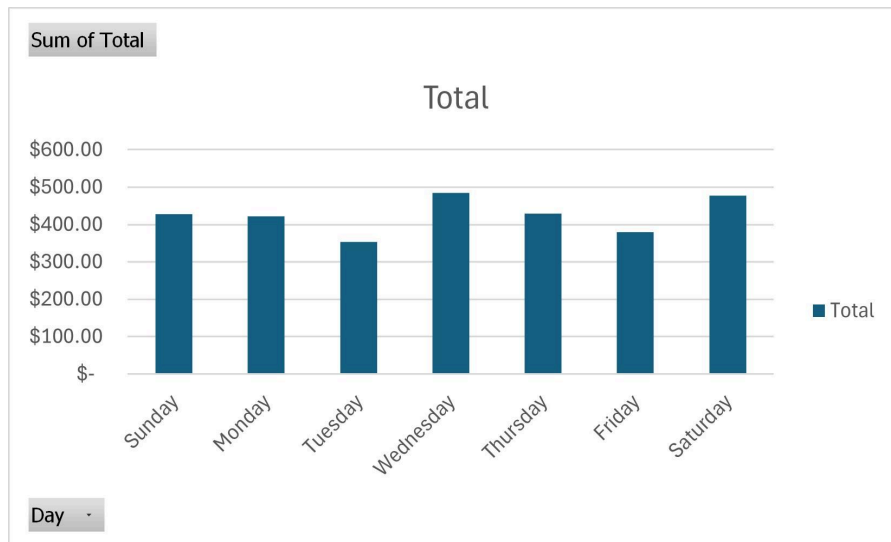
Top customers

- **Top 10 Customers:** Top 10 customers purchased between 14-19 items during the year.
- **Suggestion:** Implementation of a loyalty rewards program could boost customer retention and increase annual purchase volume.



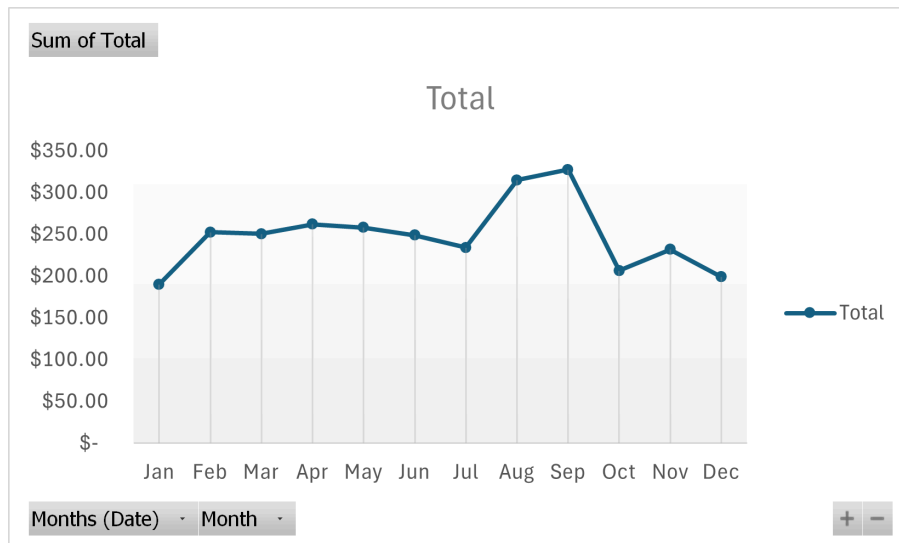
Sales by Day of the week

- **Busiest:** Wednesday
- **Slowest:** Tuesday
- **Suggestion:** Introduce weekday specific promotions, especially on lower traffic days like Tuesday.



Monthly revenue

- **Highest sales month:** September
- **Lowest sales month:** January
- **Suggestion:** Capitalize on the late summer to early fall peak by expanding marketing. During slow periods, offer seasonal promotions to boost customer engagement.



Appendix

- Microsoft Excel
 - Data cleaning and Preparation
 - Pivot Tables: Aggregation and pattern discovery
 - Charts: Column and Line charts for insight visualization
- Sources
 - [GitHub Link | Excel File](#)