

Coffee Shop Sales Analysis Documentation

Project Overview

This project involved analysing the sales performance of a coffee shop using transactional data and creating an interactive dashboard using Microsoft Excel's Power Query and Pivot Tables. The analysis aimed to identify trends, optimize sales strategies, and enhance decision-making.

Tools and Technologies Used

- **Microsoft Excel:** Used for data analysis, transformation, and dashboard creation.
 - **Power Query:** For extracting, transforming, and loading (ETL) data.
 - **Pivot Tables:** For summarizing data and generating insights.
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Data Cleaning and Transformation

Steps in Data Preparation:

1. **Data Import:**
 - Transactional data was imported into Power Query for preprocessing.
2. **Column Extraction:**
 - Added a new column Size derived from product_details to categorize items (e.g., Sm = Small, Lg = Large).
3. **Bill Calculation:**
 - Created a new column Total_Bill by multiplying transaction_qty and unit_price.
4. **Time Correction:**
 - Cleared incorrect date values in the transection_time column, retaining only time values.
5. **Temporal Dimensions:**
 - Extracted fields like Month, Weekdays, and Hours for temporal analysis.
6. **Sorting Helper Columns:**
 - Added numeric representations for weekdays and months for proper sequence-based sorting

Analysis Highlights

Transaction Insights:

- **Peak Hours:** High transactions occur between 8 AM and 10 AM.
- **Low Activity:** Post 8 PM sees the lowest sales.

Weekly Trends:

- **High Sales Days:** Thursday and Friday are the most profitable.
- **Low Sales Day:** Sunday has the least sales activity.

Monthly Performance:

- **Best Month:** June recorded the highest sales.
- **Slowest Month:** February had the lowest revenue.

Top Products:

- **Leading Category:** Coffee accounts for the largest sales.
- **Bestseller:** Barista Espresso is the most popular item.

Store Analysis:

- **Top Location:** Astoria generates the highest revenue.
- **Footfall Leader:** Astoria also leads in customer visits.

Key Metrics and Visualizations

1. **Total Sales:** \$6,98,812.33
2. **Total Footfall:** 1,49,116
3. **Average Bill per Person:** ₹4.69
4. **Average Orders per Person:** 1.44

Visual Components:

- **Hourly Sales:** Trends to identify peak times.
 - **Product Categories:** Revenue distribution pie chart.
 - **Top Products:** Revenue by top-selling items.
 - **Store Analysis:** Footfall and sales by location.
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Security and Access

1. **Protected Dashboard:** The Excel file requires a password for access.
2. **Password:** 12345