**Coffee Shop Sales Report**

1. **Objective:** The Coffee Shop Sales Report aims to provide a comprehensive overview of the shop's performance, empowering decision-making and driving strategic improvements. The objective of the analysis is to understand the performance of the coffee shop in terms of sales, footfall, and customer behaviour. The analysis uses various data sources to answer questions about the shop's performance, such as the quantity of orders placed per hour, the sales distribution of different categories of products, the top 5 products sold, and the footfall and sales at different store locations. Additionally, the analysis also considers the impact of weekdays on the number of orders.
2. **Data Preprocessing**

**2.1** **Data Cleaning**: The data cleaning process involved extracting relevant information from existing columns and organizing them into a structured format.

**2.1.1. Extracting Product Size:**

The product size was extracted from the "Product Type" column, separating the sizes "Large", "Regular", and "Small" into a dedicated "Product Size" column. This ensured a clear representation of product size for analysis.

**2.1.2. Extracting Time:**

The time information was extracted from the combined date and time column, creating a separate "Time" column for analysis. This allowed for focused examination of the time component without being tied to the date.

**2.1.3. Extracting Month and Day Names:**

The "Month Name" and "Day Name" were extracted from the date column using Power Query's built-in functions. This ensured that the data was categorized and sorted appropriately for analysis.

**2.1.4. Sorting Month and Day Names:**

The extracted "Month Name" and "Day Name" columns were sorted using Power Query's sorting functionality. The day of the week and month number were determined using Power Query functions, ensuring a sequential order based on the calendar.

1. **Result**
   1. **Total Sales:**

During the analyzed period, the overall total sales reached $698,812.33. Monthly sales figures displayed a notable upward trend, particularly in the latter months. January recorded sales of $81,677.74, followed by $76,145.19 in February. March saw an increase to $98,834.68, with April further rising to $118,941.08. The most significant growth occurred in May and June, where sales peaked at $156,727.76 and $166,485.88, respectively, indicating a positive trajectory in revenue generation.

* 1. **Total Footfall:**

The total footfall during this period amounted to 149,116 visitors. Monthly footfall figures reveal a steady increase, with January recording 17,314 visitors and February slightly lower at 16,359. March experienced a rise to 21,229, followed by April with 25,335 visitors. The trend continued into May and June, where footfall reached 33,527 and 35,352 respectively. This consistent growth in foot traffic suggests increasing customer engagement and interest over the months.

* 1. **Average Bill per Person:**

The overall average bill per person was $4.69, with minor fluctuations across the months. In January, the average bill was slightly higher at $4.72, while February saw a decrease to $4.65. March's average was $4.66, and it stabilized at $4.69 in April. May recorded an average of $4.67, with June seeing a slight increase back to $4.71. These figures indicate a relatively stable spending pattern among customers throughout the period.

* 1. **Average Order per Person:**

The average order per person remained consistent at 1.44 throughout the analyzed months. January and February both recorded an average of 1.44, while March showed a slight decrease to 1.43. However, the average returned to 1.44 in April, May, and June. This stability in average orders suggests that customer purchasing behavior remained relatively unchanged, with consistent ordering patterns observed across the months.

* 1. **Quantity Ordered Based on Hours:**

The peak hours for orders were consistently observed between 8 AM and 10 AM, with a gradual decline in order quantity throughout the day. This pattern was evident overall, with a sharp drop in orders after 8 PM. In January, the highest order quantities occurred between 9 AM and 11 AM, followed by a slight decrease from 12 PM to 2 PM and consistent orders from 2 PM to 6 PM. From February to June, the trend of peak orders in the morning hours continued, highlighting the importance of early-day engagement for maximizing sales.

* 1. **Categories % Distribution Based on Sales:**

Coffee emerged as the most popular category, accounting for 39% of overall total sales, followed by tea, which contributed 28%. The remaining categories, including bakery items, branded products, coffee beans, drinking chocolate, flavors, loose tea, and packaged chocolate, collectively represented a smaller portion of total sales. In January, coffee beans led with 38% of sales, while tea maintained its 28% share. February reflected a similar trend, with coffee contributing 38% and tea 28% of total sales, while other categories accounted for less than 12%. This pattern continued through March, April, May, and June, where coffee consistently contributed 39% and tea 28% of the total sales, underscoring the dominance of these two categories throughout the period.

* 1. **Footfall and Sales over Various Store Locations:**

Regarding footfall and sales across different store locations, Hell's Kitchen reported the highest footfall with 50,735 visitors, followed closely by Astoria with 50,599 and Lower Manhattan with 47,782. In terms of sales, Hell's Kitchen also topped the chart with $236,511.17, followed by Astoria at $232,243.91 and Lower Manhattan at $230,057.25. In January, Astoria recorded the highest footfall at 5,913, while Hell's Kitchen achieved the highest sales of $27,820.65. February saw Hell's Kitchen again leading in footfall and sales, while Lower Manhattan recorded the lowest figures. In March, April, May, and June, Hell's Kitchen consistently maintained the highest footfall and sales, with Lower Manhattan trailing in both metrics across all months, indicating a strong performance at Hell's Kitchen and Astoria, while Lower Manhattan struggled comparatively.

* 1. **Top 5 Products Based on Sales:**

In the overall sales scenario, Barista Espresso stands out as the top-selling product, followed by Brewed Chai Tea, Hot Chocolate, Gourmet Brewed Coffee, and Brewed Black Tea. In January, Barista Espresso achieved the highest sales of $10,461.20, while Brewed Chai Tea came in second at $8,761.45. Hot Chocolate ranked third with sales of $8,833, followed by Gourmet Brewed Coffee at $8,072.10, and Brewed Black Tea at $5,535.50. This trend continued in February, where Barista Espresso again topped sales at $10,027.15, while Brewed Black Tea recorded the lowest sales at $5,369.50. The dominance of Barista Espresso persisted throughout March, April, May, and June, consistently ranking as the highest-selling product, while Brewed Black Tea and Brewed Herbal Tea varied as the lowest-selling products during different months.

* 1. **% Size Distribution Based on Orders:**

In terms of size distribution based on orders, Regular size emerged as the most popular, accounting for 31% of total orders. Both Not Defined size and Small size followed closely, each representing 30% of total orders, while Large size was the least popular, comprising 9%. In January, Regular size orders accounted for 30%, with Small and Large sizes each also at 30%, while Not Defined orders made up 9%. This distribution remained consistent in February, March, April, May, and June, where Regular size continued to dominate at 31%, and the other sizes maintained their respective proportions, indicating a stable preference among customers for Regular-sized orders.

* 1. **Orders on Weekdays:**

Analyzing orders by weekdays, Friday emerged as the day with the highest number of orders, followed by Monday, Tuesday, Wednesday, and Thursday, with Sunday recording the least orders overall. In January, Tuesday saw the highest number of orders, while Wednesday had the lowest. February's data indicated that Sunday had the most orders, with Tuesday receiving the least. March reversed this trend, with Friday leading in orders and Tuesday again having the fewest. In April, Sunday experienced the highest orders, while Friday had the least. May saw Wednesday topping the order count, whereas Sunday remained at the bottom. Finally, June concluded with Friday as the peak day for orders, while Wednesday recorded the least, highlighting fluctuating ordering patterns throughout the week.

1. **Conclusion**

The analysis of sales, footfall, and customer behavior over the examined period reveals a positive trajectory in revenue generation, with total sales reaching $698,812.33 and a steady increase in foot traffic, culminating in 149,116 visitors. Barista Espresso consistently emerged as the top-selling product, while coffee and tea dominated overall sales categories. Additionally, the data indicated stable customer spending patterns and preferences for regular-sized orders, alongside notable fluctuations in weekday ordering trends.

However, the dashboard lacks detailed customer demographic information, which would be invaluable for tailoring marketing strategies to specific age groups and preferences. Furthermore, without data on the impact of promotions or discounts, it is challenging to assess the effectiveness of marketing campaigns and their influence on sales. To enhance overall performance, it is recommended to implement a customer feedback system to gather insights on preferences and satisfaction levels. Additionally, introducing seasonal products could capitalize on peak sales periods, while analyzing the impact of promotions on sales will refine marketing strategies. Exploring partnerships with local businesses may also increase footfall and enhance brand visibility. Lastly, regularly updating the dashboard to include more granular data will facilitate better decision-making, ultimately driving growth and customer engagement.