COFFEE SHOP SALES

Project Overview:
I have recently become a franchise owner at Maven Roasters, a coffee shop chain with three locations in New York City.
To better understand purchase behavior and streamline operations, I collected transactional data from January 2023 to Jun 2023. The goal is to transform the data into a dynamic dashboard that franchise owners can use to identify patterns, trends, and opportunities for the business.

Objectives:
- Profile and prepare the raw data for analysis.
- Explore the data using Excel PivotTables.
- Build a dynamic dashboard to visualize patterns and trends.

Data source:
The data set is a collection of transaction records from a fictitious coffee shop in New York City.

Tools Used:
Microsoft Excel

Objective 1: Explore the coffee shop dataset, conduct basic QA and profiling, and add calculated date and time fields to prepare data for analysis.
- Create a calculated field called Revenue.
- Use the transaction date to create the Month and Weekday.
- Add a new column to extract the Hour from the transaction time.

Objective 2: Slice and dice the coffee shop data with Excel PivotTables, and create views to analyze time series and product-level trends.
- Add a pivot table to show Revenue by Month on a new sheet.
- Add two PivotTables to display the number of transactions by day of the week and by hour of the day on the same sheet.
- Add a PivotTable to the same sheet to display the Number of transactions by product category, sorted in descending order.
- Add a PivotTable to the same sheet to display the number of transactions and revenue by product type, sorted in descending order, and filtered to the top 15.

Objective 3: Visualize the data using Pivot Charts, design an interactive dashboard, and identify key insights and recommendations for the coffee shop.
- Add Pivot Charts to show revenue by month as a line chart, transactions by day of week and hour of day as column charts, and transactions by product category as a bar chart

- Assemble the charts into a rough dashboard layout, and include space for the PivotTable showing Top 15 product types (you can design your own layout, or follow the solution)
- Add a slicer for store location, and connect it to all of the PivotTables on the sheet
- Adjust formatting, alignment, and polish to finalize the dashboard (**TIP**: hide the raw PivotTables and remove the worksheet gridlines)
- Do you notice any interesting patterns or trends? What recommendations might you offer to improve Maven Roasters' operations?

Conclusions:

In the Lower Manhattan store location:
- June 2023 had the highest sales, at $54,446, while February had the lowest, at $25,320.
- Monday has the highest number of transactions, at 7,100, followed by Thursday at 6,900. Tuesday and Sunday have the least at 6,700.
- Between 7:00 and 10:00 AM are the busiest times, with the largest number of transactions, while between 7:00 and 8:00 PM, there are very few transactions.
- Coffee is the top-selling category, followed by Tea. Barista Espresso and Gourmet brewed coffee generated the highest revenues at $31,000 and $23,000

Astoria Location:
- The monthly revenue trends closely mirror those of the Lower Manhattan location.
- The number of transactions is high on Thursday, followed by Monday, with Saturday having the lowest at 6800.
- People are regularly buying at this store. The transactions are evenly distributed throughout the day.
- Coffee is the top-selling category, followed by Tea. Brewed Chai Tea followed Gourmet brewed coffee to generate the highest revenues at $27,400 and $23,800

Hell's Kitchen Location:
- The monthly revenue trends closely mirror those of the Lower Manhattan location and Astoria.
- The number of transactions is high on Friday, followed by Tuesday with 7500, with Saturday having the lowest at 6800.
- Between 8:00 and 10:00 AM is the busiest hour at this store. The transactions are evenly distributed throughout the day.
- Coffee is the top-selling category, followed by Tea. Barista Espresso and Brewed Chai Tea generated the highest revenues at $32,400 and $25,600

Recommendations:

Lower Manhattan

- **Seasonality Strategy:** Since June sales peaked at $54K and February lagged at $25K, introduce **mid-winter promotions** (e.g., hot beverage discounts, loyalty rewards in February) to balance seasonal dips.
- **Day-of-Week Optimization:** Mondays and Thursdays are strongest. Consider **"Monday Kickstart" promotions** (bundled breakfast + coffee) and **Thursday specials** to sustain momentum.
- **Time-of-Day Promotions:** With mornings (7–10 AM) being busiest, strengthen upselling (e.g., add-on pastries). To boost slow evenings (7–8 PM), test **"happy hour coffee/tea"** discounts.
- **Category Focus:** Coffee dominates. Barista Espresso ($31K) and Gourmet Brewed Coffee ($23K) are leaders—ensure **staffing and inventory are optimized** in mornings to meet demand.

Astoria

- **Aligned Trends:** Revenue patterns mirror Lower Manhattan, so seasonal campaigns can be standardized across both stores.
- **Day-of-Week Targeting:** Thursday and Monday see higher sales, while Saturday is lowest. Consider **weekend promotions** (e.g., "Saturday Brunch + Coffee" deals) to lift weak traffic.
- **Steady Daily Demand:** Since transactions are evenly distributed across the day, this store benefits from **consistent staffing** and **less time-specific marketing**.
- **Category Focus:** Coffee still leads, but **Brewed Chai Tea ($27K)** is unusually strong here—highlight chai in **store branding, signage, and seasonal campaigns**.

Hell's Kitchen

- **Revenue Trends:** Similar to other locations—centralize seasonal promotions across all three stores for efficiency.
- **Day-of-Week Optimization:** Strongest sales on Fridays and Tuesdays— experiment with **"Friday Treat" promos** and **Tuesday loyalty bonuses** to sustain high traffic.
- **Time-of-Day Patterns:** Peak between 8–10 AM—align staffing to avoid bottlenecks. Since sales remain steady across the rest of the day, maintain **consistent service speed**.

- **Category Focus:** Coffee leads again, but here **Barista Espresso ($32.4K)** and **Brewed Chai Tea ($25.6K)** are top performers—suggest promoting a **"Coffee & Chai Duo" deal** to capture both audiences.