**Structured Summary of Coffee Sales Dashboard Project**

**Project Objective:** The goal of this project was to create an interactive dashboard in Excel to analyze coffee sales data. The project utilized Excel's data cleaning, analysis, and visualization tools to provide insights into sales trends across various dimensions, such as time of day, product type, and store location. The dashboard enabled dynamic filtering and detailed analysis of sales patterns to inform business decisions.

**1. Data Cleaning and Preparation:**

* **Power Query Editor:**  
  The raw coffee sales data was cleaned and preprocessed using Excel's Power Query Editor. Key tasks included:
  + Removing duplicates and irrelevant records.
  + Correcting errors and handling missing values.
  + Transforming the data into a format suitable for further analysis, ensuring it was structured and ready for use in Pivot Tables and charts.

**2. Data Analysis and Measures:**

* **Pivot Tables:**  
  Pivot Tables were created to summarize and aggregate the data effectively. These allowed for dynamic insights into sales, including total sales, average sales per person, and sales performance by various dimensions like time and product type.
* **Statistical Measures:**
  + **Average Order per Person:** A custom measure was calculated to determine the average order size per customer. This helped to understand purchasing behavior and the overall sales performance per customer.
* **Use of Slicers:**  
  Slicers were incorporated to maintain interactivity in the dashboard. Users could filter data by product type, date, and store location, allowing for customized views and deeper analysis.

**3. Data Visualization:**

* **Charts and Graphs:**  
  Various chart types were employed to present data visually, making it easier to understand and interpret:
  + **Pie Chart:** Used to display the distribution of sales across different store location.
  + **Column Chart:** Visualized sales trends by time of day, months, and other dimensions.
  + **Horizontal Bar Chart:** Displayed rankings of top-selling products and compared them in a clear and easy-to-understand format.

**4. Key Analytical Insights:**

* **Variation in Sales by Hour:**
  + **Findings:** The highest sales occurred during the morning hours, specifically between **6 AM and 8 AM**, followed by a decrease throughout the rest of the day.
  + **Impact:** This insight helps in identifying peak sales periods and adjusting store operations, staffing, and promotions accordingly.
* **Variation in Sales by Month:**
  + **Findings:** **June** recorded the highest sales, driven by factors such as **seasonal promotions**, **increased foot traffic**, or **special events**.
  + **Impact:** Understanding why June performed well allows for more targeted marketing campaigns and inventory management in future months.
* **Variation in Sales by Day of the Week:**
  + **Findings:** **Mondays** consistently had the highest sales, outperforming other days of the week.
  + **Impact:** This analysis highlights that customers tend to make more purchases at the start of the week, possibly due to weekly promotions or customer habits.
* **Variation in Sales by Product Type:**
  + **Findings:** The **top 5 best-selling products** were:
    - Hot Chocolate
    - Gourmet Brewed Coffee
    - Brewed Chai Tea
    - Brewed Black Tea
    - Barista Espresso
  + **Insight:** Among these, **Barista Espresso** was the highest-selling product.
  + **Impact:** This identifies the most popular products and informs inventory planning and marketing efforts to focus on top-selling items.
* **Footfall Distribution by Store Location:**
  + **Findings:** The dashboard showed the **percentage of footfall** across various store locations.
  + **Impact:** This data is crucial for understanding which locations are performing better, helping with resource allocation, store promotions, and operational strategies.
* **Variation in Sales by Product Category:**
  + **Findings:** The **Coffee** category emerged as the highest-performing product category in terms of total sales.
  + **Impact:** This analysis confirms the importance of coffee-related products, guiding business decisions on stock levels, marketing focus, and product placement.
* **Count of Orders by Product:**
  + **Findings:** The product with the highest number of orders was **Gourmet Beans**.
  + **Impact:** Knowing the most ordered products enables the business to optimize stock levels and ensure that high-demand items are readily available, reducing the risk of stockouts.

**5. Final Dashboard:**

The final dashboard presented a dynamic, interactive interface with the following features:

* Users could filter data using **slicers** for product types, date ranges, and store locations, providing customized views.
* **Charts and Pivot Tables** provided clear, insightful visualizations that made it easy to spot trends, track sales performance, and compare different product categories.
* The dashboard allowed users to interact with the data, drill down into specific time periods, and identify key trends for better decision-making.

**Conclusion:**

This Excel dashboard project provided valuable insights into coffee sales, helping to identify peak sales periods, top-performing products, and high-traffic store locations. By leveraging Power Query for data cleaning, Pivot Tables for analysis, and interactive charts for visualization, the project offered a comprehensive and user-friendly tool for sales analysis. The findings—such as peak sales times, popular products, and high footfall locations—will aid in making informed business decisions to enhance sales strategies, optimize inventory, and improve overall operations.