**Objective 1: Prepare the Data for Analysis**

**Objective Description:**  
Your first objective is to explore the coffee shop dataset, conduct some basic data QA and profiling, and add calculated date and time fields to prepare the data for analysis.

**Task:**

1. **Familiarize Yourself with the Data:**
   * Determine the number of transactions recorded and the time covered.
   * Identify the products and product categories sold.
2. **Add Calculated Columns:**
   * Add a new column to calculate Revenue (price \* quantity).
   * Add new columns to calculate Month and Day of Week based on the transaction date. (Bonus: Display them as text, e.g., "Jan", "Feb", "Sun", "Mon", instead of numerical values).
   * Add a new column to extract Hour from the transaction time.

**Objective 2: Explore the Data with Pivot Tables**

**Objective Description:**  
Your second objective is to slice and dice the coffee shop data with Excel PivotTables and create views to analyze time series and product-level trends.

**Task:**

1. **Insert PivotTable for Revenue by Month:**
   * Insert a PivotTable on a new tab to show revenue by month.
2. **Add Two PivotTables for Transactions:**
   * Add two more PivotTables (on the same sheet) to show the number of transactions by day of the week and by hour of the day.
3. **Add PivotTable for Transactions by Product Category:**
   * Add a PivotTable (on the same sheet) to show the number of transactions by product category, sorted descending by transactions.
4. **Add PivotTable for Transactions and Revenue by Product Type:**
   * Add a PivotTable (on the same sheet) to show the number of transactions and revenue by product type, sorted descending and filtered to the Top 15 (by transactions).

**Objective 3: Build a Dynamic Dashboard**

**Objective Description:**  
Your final objective is to visualize the data with Pivot Charts, design an interactive dashboard, and identify insights and recommendations for the coffee shop.

**Task:**

1. **Add Pivot Charts:**
   * Add Pivot Charts to show revenue by month as a line chart, transactions by day of the week and hour of the day as column charts, and transactions by product category as a bar chart.
2. **Dashboard Layout:**
   * Assemble the charts into a rough dashboard layout.
   * Include space for the PivotTable showing Top 15 product types (you can design your layout or follow the solution provided).
3. **Slicer for Store Location:**
   * Add a slicer for store location and connect it to all the PivotTables on the sheet.
4. **Adjust Formatting and Alignment:**
   * Adjust formatting, alignment, and polish to finalize the dashboard.
   * Hide the raw PivotTables and remove the worksheet gridlines for a cleaner look.

**Insights and Recommendations:**

* **Patterns or Trends:** Analyze the dashboard for any interesting patterns or trends, such as peak revenue months, busiest days or hours, top-selling product categories, etc.
* **Recommendations:** Based on the insights gathered, offer recommendations to improve Maven Roasters’ operations. For example, optimize inventory based on popular products, adjust staffing levels during peak hours, or consider expanding promotions during high-revenue months.