

The dataset you've provided contains the following key columns for analysis:

1. **Order:** Sequential number of the order.
2. **File_Type:** Indicates if the data is historical.
3. **SKU_number:** Unique product identifier.
4. **SoldFlag:** Binary indicator showing whether the product was sold (1 for sold, 0 for not sold).
5. **SoldCount:** Number of units sold.
6. **MarketingType:** Type of marketing applied to the product.
7. **ReleaseNumber:** The number of times the product has been released.
8. **New_Release_Flag:** Indicates if the product is a new release (1 for new).
9. **StrengthFactor:** A measure of the product's strength in the market.
10. **PriceReg:** The regular price of the product.
11. **ReleaseYear:** The year the product was released.
12. **ItemCount:** Number of items related to the product.
13. **LowUserPrice:** The lowest price paid by a customer.
14. **LowNetPrice:** The lowest net price after discounts.

Based on this, here are the **questions and instructions** for your analysis:

1. Sort and Filter

- **Instructions:**
 - Sort the data by PriceReg in descending order.
 - Apply a custom sort to order products first by ReleaseYear and then by SoldCount.
 - Use a filter to show only the top 10 products based on StrengthFactor.
 - Filter data to show only products where SoldFlag is 1 (sold products).
- **Questions:**
 - What are the top 10 products based on StrengthFactor?
 - How does sorting by PriceReg reveal trends in pricing and sales?

2. Pivot Table

- **Instructions:**

- Create a Pivot Table with MarketingType as rows and SoldCount as values to analyze the sales by marketing category.
- Add ReleaseYear to the columns to see the breakdown by year.
- Create a calculated field that shows the average price (PriceReg) for each marketing type.
- Change the field settings to show Sum of SoldCount instead of the default count.
- **Questions:**
 - How do different MarketingType strategies affect the SoldCount?
 - What trends can you observe when analyzing sales across different ReleaseYear?

3. Charts from Pivot Table

- **Instructions:**
 - Create a column chart from the Pivot Table showing sales (SoldCount) by MarketingType.
 - Sort and filter the chart to display only the top 5 ReleaseYears based on SoldCount.
 - Change the chart colors for better visualization.
 - Insert slicers for ReleaseYear and MarketingType to filter data interactively.
- **Questions:**
 - How do sales vary by marketing strategy and release year?
 - Does the chart reveal any marketing strategies that outperform others over time?

4. SUMIF, AVERAGEIF, COUNTIF

- **Instructions:**
 - Use SUMIF to calculate the total SoldCount for products released after 2010.
 - Apply AVERAGEIF to find the average PriceReg for products that have a SoldFlag of 1.

- Use COUNTIF to count how many products have a StrengthFactor greater than 500,000.
- **Questions:**
 - What is the total sales volume for products released after 2010?
 - What is the average price of products that were sold (SoldFlag = 1)?

5. Treemap Chart

- **Instructions:**
 - Create a Treemap chart based on the MarketingType and SoldCount.
 - Use color coding to represent different ranges of SoldCount.
- **Questions:**
 - What does the Treemap reveal about the distribution of sales across marketing types?

6. Conditional Formatting

- **Instructions:**
 - Apply conditional formatting to highlight products with LowNetPrice below 20.
 - Use a color scale to visually represent the StrengthFactor column, with the strongest factors highlighted in green and the weakest in red.
- **Questions:**
 - How many products have a LowNetPrice below 20, and do they share any other characteristics?

7. Vlookup, Hlookup, Xlookup

- **Instructions:**
 - Use VLOOKUP to find the PriceReg of a specific SKU_number.
 - Apply HLOOKUP to retrieve the SoldCount based on ReleaseYear for a given row.
 - Use the INDEX and MATCH functions to find the LowUserPrice of a product using SKU_number.
- **Questions:**
 - What is the regular price of SKU 1737127?

- How do the INDEX and MATCH functions work together to efficiently find the LowUserPrice of a product using SKU_number?

8. Macros (VBA optional)

- **Instructions:**

- Record a macro that filters the dataset to show only products with SoldFlag of 1.
- If you're familiar with VBA, automate sorting the dataset by StrengthFactor in descending order. (not performed in this project)

- **Questions:**

- How can macros speed up repetitive tasks like filtering and sorting?