**Store Data Analysis and Visualization Using Excel**

**Objective:** Store wants to create an annual sales report for 2022. So that store owner can understand their customers and grow more sales in 2023.

**Sample Questions:**

1. Compare the sales and orders using single chart
2. Which month got the highest sales and orders?
3. Who purchased more men or women in 2022?
4. What are different order status in 2022?
5. List top 10 states contributing to sales?
6. Relation between age and gender based on number of orders
7. Which channel is contributing to maximum sales?
8. Highest selling category?

**Step 1: Data Cleaning:**

* Use excel filtering to check for null and if the data is of appropriate data types (numerical or text) for each unique values in columns.
  + Found that in Gender column Along with Men and Women Data values their were M and W to denote the same. Filtered M and W values and replaced them with appropriate Men And Women values.
  + Found that in Qty column instead of 1 and 2 the some are represented as One and Two to denote the same. Filtered One and Two values and replaced them with appropriate 1 And 2 values.

**Step 2: Data Processing:**

* Used excel IF function to group people in age group according to their ages. If the customer is above 60 tag as senior, if they are above 25 tag as adult and if they are below 25 and above 18 tag as young adult.
  + =IF(E2 >= 60,"Senior",IF(E2 >=26,"Adult","Young Adult"))

Used this formula to achieve the objective. As minimum value is 18 only need to check if they are above or under 26 years of age for young adult classification. E column is Age. Then pasted the same values only to increase performance.

* Used TEXT function to get month in text from the given data so that the question of month with highest sales can be answered from the Date column.
  + =TEXT(G2,”mmmm”)

This formula was used to get the month in if it was Date(G2) was

04-12-2022 it would give December as value for Month column. For shorter month format Dec give we can use “mmm”. Then pasted the same values only to increase performance.

**Step 3: Data Analysis:**

**Made Pivot Sheet for the Following:**

* **Chart for Orders VS Sales(Question 1 and 2):**
  + Used Data like sum of Amount and count of Order ID along with Month to make chart to see relation of Amount and Orders and make it into a single chart.
  + Used Format Axis for simplifying data into count of millions by using Formula code 0.00,,”M”.
* **Sales: Men VS Women (Question 3):**
  + Used sum of Amount along with the row of Gender (Men, Women) to make Pie Chart which gives share of purchase of both genders.
* **Order Status (Question 4):**
  + Used count of Order ID along with row of Status (Order Status) to make Pie Chart which gives share of order status.
* **Sales: Top 10 States (Question 5):**
  + Used sum of Amount along with row of ship-state to make a bar graph which gives us the share of these top 10 states.
* **Orders: Age Group VS Gender (Question 6):**
  + Used count of Order ID along with row Age Group and column Gender to make a column chart that gives the percentage of grand total of men and women with respect to there age group for count of orders.
* **Order: Channel (Question 7):**
  + Used count of Order ID along with row Channel with the count of Order ID in percentage of grand total. Created a Pie chart for the same.

**Step 4: Making an Interactive Dash board (Question 8):**

* **Made 3 Slicers (Month, Channel and Category) of Excel and connected each of them to 6 PivotTables to create an interactive Dashboard.**

**Step 5: Insights:**

* + - **Highest Orders are in the Month of March.**
    - **64% Orders are from Women.**
    - **Top 3 states in sales are: MAHARASHTRA, KARNATAKA, UTTAR PRADESH contributing 35%**
    - **MOST Sales at 46.7% are from Adult Women.**
    - **Most Sales are from Channel is Amazon, Flipkart and Myntra at 80%.**

**Step 6: Next Steps for incresing sales:**

* **Target Women of Age Group Adult (26-59) living in MAHARASHTRA,KARNATAKA, UTTAR PRADESH by showing ads, offers available on Amazon, Flipkart and Myntra.**