

# Power BI Assignment 2 – DAX & Data Visualization

## Calculate column:

Created a Calculated Column called Category Type using category and sub-category.

The screenshot shows the Power BI Data View interface. At the top, there are tabs for Structure, Formatting, Properties, Sort, Groups, Relationships, and Calculations. Below these, a search bar contains the formula: 1 Category type = 'Order Details (1)'[Category] & " - " & 'Order Details (1)'[Sub-Category]. The main area displays a table with columns: Order ID, Amount, Profit, Quantity, Category, Sub-Category, Profit margin, Profit status, and Category type. The Category type column contains values like Clothing-Hankerchief. To the right of the table is a Data pane containing a list of fields and their types: CustomerName (Text), Location (Text), Order ID (Text), Order Date (Date/Time), Amount (Number), Category (Text), Category type (Text), Profit (Number), Profit margin (Number), Profit status (Text), Quantity (Number), Sub-Category (Text), and Sales target (Number).

Order ID	Amount	Profit	Quantity	Category	Sub-Category	Profit margin	Profit status	Category type
B-25603	\$12	\$1	2	Clothing	Hankerchief	\$0.0833	Profit	Clothing-Hankerchief
B-25608	\$257	\$23	5	Clothing	Hankerchief	\$0.0895	Profit	Clothing-Hankerchief
B-25615	\$68	\$20	5	Clothing	Hankerchief	\$0.2941	Profit	Clothing-Hankerchief
B-25616	\$42	\$12	5	Clothing	Hankerchief	\$0.2857	Profit	Clothing-Hankerchief
B-25624	\$26	\$12	3	Clothing	Hankerchief	\$0.4615	Profit	Clothing-Hankerchief
B-25625	\$97	\$29	2	Clothing	Hankerchief	\$0.299	Profit	Clothing-Hankerchief
B-25635	\$40	\$16	3	Clothing	Hankerchief	\$0.4	Profit	Clothing-Hankerchief
B-25638	\$154	\$39	3	Clothing	Hankerchief	\$0.2532	Profit	Clothing-Hankerchief
B-25654	\$34	\$12	3	Clothing	Hankerchief	\$0.3529	Profit	Clothing-Hankerchief
B-25656	\$6	\$3	1	Clothing	Hankerchief	\$0.5	Profit	Clothing-Hankerchief
B-25656	\$56	\$18	2	Clothing	Hankerchief	\$0.3214	Profit	Clothing-Hankerchief
B-25670	\$24	\$1	2	Clothing	Hankerchief	\$0.0417	Profit	Clothing-Hankerchief
B-25670	\$14	\$2	1	Clothing	Hankerchief	\$0.1429	Profit	Clothing-Hankerchief
B-25730	\$18	\$8	2	Clothing	Hankerchief	\$0.4444	Profit	Clothing-Hankerchief
B-25751	\$32	\$7	3	Clothing	Hankerchief	\$0.2188	Profit	Clothing-Hankerchief
B-25757	\$106	\$15	7	Clothing	Hankerchief	\$0.1415	Profit	Clothing-Hankerchief
B-25757	\$14	\$5	1	Clothing	Hankerchief	\$0.3571	Profit	Clothing-Hankerchief
B-25757	\$17	\$7	3	Clothing	Hankerchief	\$0.4118	Profit	Clothing-Hankerchief
B-25771	\$148	\$59	3	Clothing	Hankerchief	\$0.3986	Profit	Clothing-Hankerchief
B-25783	\$26	\$2	2	Clothing	Hankerchief	\$0.0769	Profit	Clothing-Hankerchief
B-25784	\$15	\$4	1	Clothing	Hankerchief	\$0.2667	Profit	Clothing-Hankerchief

Formula used:

Category Type = 'Order Details'[Category] & " - " & 'Order Details'[Sub-Category]

## Revenue per Order in Order Details :

Created a calculated column Revenue per order by using Amount \* Quantity.

The screenshot shows the Power BI Data view interface. At the top, there are several configuration tabs: Name, Format, Summarization, Sort by column, Data groups, Manage relationships, New column, Structure, Formatting, Properties, Sort, Groups, Relationships, and Calculations. The 'Name' tab is active, displaying the formula: `Revenue per order = 'Order Details (1)'[Amount] * 'Order Details (1)[Quantity]`. The 'Format' tab shows the currency format set to '\$'. The 'Properties' tab shows the data type as 'Fixed decimal number'. The main area displays a table of data with columns: Order ID, Amount, Profit, Quantity, Category, Sub-Category, Profit margin, Profit status, Category type, and Revenue per order. The 'Revenue per order' column is highlighted in green. On the right side, there is a 'Data' pane with a search bar and a list of available fields from the data source, including Order ID, Amount, Category, Profit margin, Profit status, Quantity, Sub-Category, and Revenue per order.

Order ID	Amount	Profit	Quantity	Category	Sub-Category	Profit margin	Profit status	Category type	Revenue per order
B-25603	\$12	\$1	2	Clothing	Hankerchief	\$0.0833	Profit	Clothing-Hankerchief	\$24
B-25608	\$257	\$23	5	Clothing	Hankerchief	\$0.0895	Profit	Clothing-Hankerchief	\$1,285
B-25615	\$68	\$20	5	Clothing	Hankerchief	\$0.2941	Profit	Clothing-Hankerchief	\$340
B-25616	\$42	\$12	5	Clothing	Hankerchief	\$0.2857	Profit	Clothing-Hankerchief	\$210
B-25624	\$26	\$12	3	Clothing	Hankerchief	\$0.4615	Profit	Clothing-Hankerchief	\$78
B-25625	\$97	\$29	2	Clothing	Hankerchief	\$0.299	Profit	Clothing-Hankerchief	\$194
B-25635	\$40	\$16	3	Clothing	Hankerchief	\$0.4	Profit	Clothing-Hankerchief	\$120
B-25638	\$154	\$39	3	Clothing	Hankerchief	\$0.2532	Profit	Clothing-Hankerchief	\$462
B-25654	\$34	\$12	3	Clothing	Hankerchief	\$0.3529	Profit	Clothing-Hankerchief	\$102
B-25656	\$6	\$3	1	Clothing	Hankerchief	\$0.5	Profit	Clothing-Hankerchief	\$6
B-25656	\$56	\$18	2	Clothing	Hankerchief	\$0.3214	Profit	Clothing-Hankerchief	\$112
B-25670	\$24	\$1	2	Clothing	Hankerchief	\$0.0417	Profit	Clothing-Hankerchief	\$48
B-25670	\$14	\$2	1	Clothing	Hankerchief	\$0.1429	Profit	Clothing-Hankerchief	\$14
B-25730	\$18	\$8	2	Clothing	Hankerchief	\$0.4444	Profit	Clothing-Hankerchief	\$36
B-25751	\$32	\$7	3	Clothing	Hankerchief	\$0.2188	Profit	Clothing-Hankerchief	\$96
B-25757	\$106	\$15	7	Clothing	Hankerchief	\$0.1415	Profit	Clothing-Hankerchief	\$742
B-25757	\$14	\$5	1	Clothing	Hankerchief	\$0.3571	Profit	Clothing-Hankerchief	\$14
B-25757	\$17	\$7	3	Clothing	Hankerchief	\$0.4118	Profit	Clothing-Hankerchief	\$51
B-25771	\$148	\$59	3	Clothing	Hankerchief	\$0.3986	Profit	Clothing-Hankerchief	\$444
B-25783	\$26	\$2	2	Clothing	Hankerchief	\$0.0769	Profit	Clothing-Hankerchief	\$52
B-25784	\$15	\$4	1	Clothing	Hankerchief	\$0.2667	Profit	Clothing-Hankerchief	\$51

## Formula used:

Revenue per Order = 'Order Details'[Amount] \* 'Order Details'[Quantity]

## Sales category:

Create a Calculated Column called Sales category using average average amount as "Above average" and "Below Average".

The screenshot shows the Power BI Data View interface. At the top, there are several tabs: Structure, Formatting, Properties, Sort, Groups, Relationships, and Calculations. The 'Properties' tab is active, showing the 'Name' as 'Sales Category', 'Data type' as 'Text', and a formula bar with the DAX code: `1 Sales Category = if('Order Details (1)'[Amount] > CALCULATE(AVERAGE('Order Details (1)'[Amount])), "Above Average", "Below average")`. Below the formula bar is a table with columns: Amount, Profit, Quantity, Category, Sub-Category, Profit margin, Profit status, Category type, Revenue per order, and Sales Category. The table contains 20 rows of data. To the right of the table is a 'Data' pane containing a search bar and a list of fields from the 'Order Details (1)' table, including CustomerName, Location, Order Date, Order ID, Amount, Category, Category type, Order ID, Profit, Profit margin, Profit status, Quantity, Revenue per order, and Sales Category.

Amount	Profit	Quantity	Category	Sub-Category	Profit margin	Profit status	Category type	Revenue per order	Sales Category
\$12	\$1	2	Clothing	Hankerchief	\$0.0833	Profit	Clothing-Hankerchief	\$24	Below average
\$257	\$23	5	Clothing	Hankerchief	\$0.0895	Profit	Clothing-Hankerchief	\$1,285	Below average
\$68	\$20	5	Clothing	Hankerchief	\$0.2941	Profit	Clothing-Hankerchief	\$340	Below average
\$42	\$12	5	Clothing	Hankerchief	\$0.2857	Profit	Clothing-Hankerchief	\$210	Below average
\$26	\$12	3	Clothing	Hankerchief	\$0.4615	Profit	Clothing-Hankerchief	\$78	Below average
\$97	\$29	2	Clothing	Hankerchief	\$0.299	Profit	Clothing-Hankerchief	\$194	Below average
\$40	\$16	3	Clothing	Hankerchief	\$0.4	Profit	Clothing-Hankerchief	\$120	Below average
\$154	\$39	3	Clothing	Hankerchief	\$0.2532	Profit	Clothing-Hankerchief	\$462	Below average
\$34	\$12	3	Clothing	Hankerchief	\$0.3529	Profit	Clothing-Hankerchief	\$102	Below average
\$6	\$3	1	Clothing	Hankerchief	\$0.5	Profit	Clothing-Hankerchief	\$6	Below average
\$56	\$18	2	Clothing	Hankerchief	\$0.3214	Profit	Clothing-Hankerchief	\$112	Below average
\$24	\$1	2	Clothing	Hankerchief	\$0.0417	Profit	Clothing-Hankerchief	\$48	Below average
\$14	\$2	1	Clothing	Hankerchief	\$0.1429	Profit	Clothing-Hankerchief	\$14	Below average
\$18	\$8	2	Clothing	Hankerchief	\$0.4444	Profit	Clothing-Hankerchief	\$36	Below average
\$32	\$7	3	Clothing	Hankerchief	\$0.2188	Profit	Clothing-Hankerchief	\$96	Below average
\$106	\$15	7	Clothing	Hankerchief	\$0.1415	Profit	Clothing-Hankerchief	\$742	Below average
\$14	\$5	1	Clothing	Hankerchief	\$0.3571	Profit	Clothing-Hankerchief	\$14	Below average
\$17	\$7	3	Clothing	Hankerchief	\$0.4118	Profit	Clothing-Hankerchief	\$51	Below average
\$148	\$59	3	Clothing	Hankerchief	\$0.3986	Profit	Clothing-Hankerchief	\$444	Below average

## Formula used:

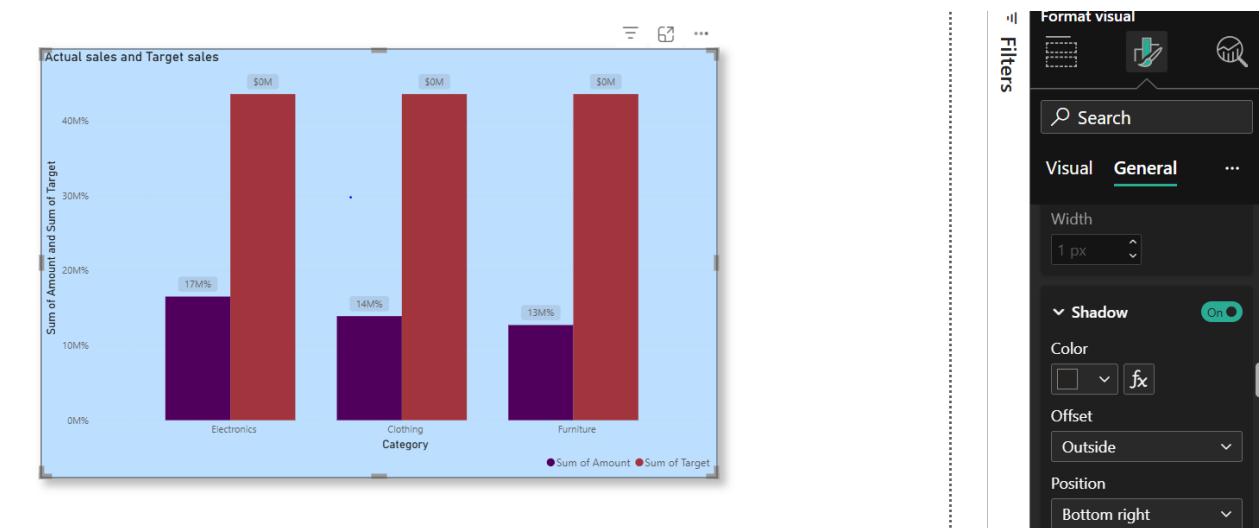
`Sales Category = if ('Order Details (1)'[Amount] > CALCULATE (AVERAGE ('Order Details (1)'[Amount])), "Above Average", "Below average")`

## Calculated Measures:

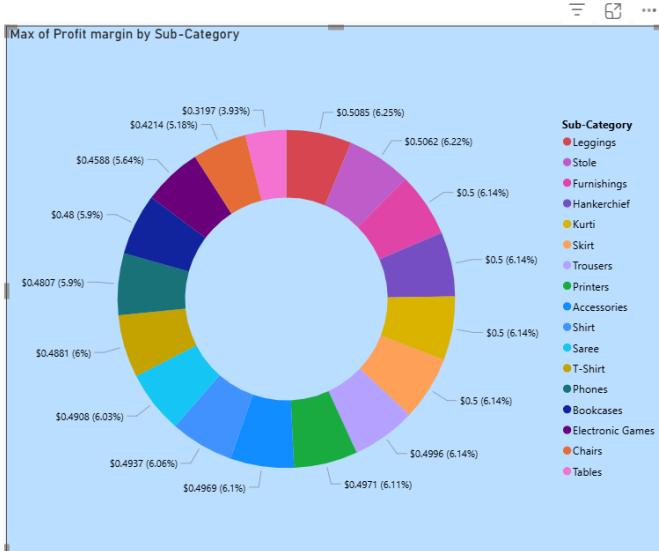
- Order Count = COUNTROWS ('Order Details')
  
- Average Profit (Delhi) =CALCULATE (AVERAGE ('Order Details'[Profit]),  
'Order Details'[City] = "Delhi")
  
- YTD = TOTALYTD (SUM('Order Details (1)'[Amount]),'List of Orders  
(3)'[Order Date]. [Date])

## DATA VISUALIZATION:

### Sales Target Achievement by Category:



## Max Profit Margin by Sub-Category:



Visualizations

Format visual

Filters

Search

General

Title

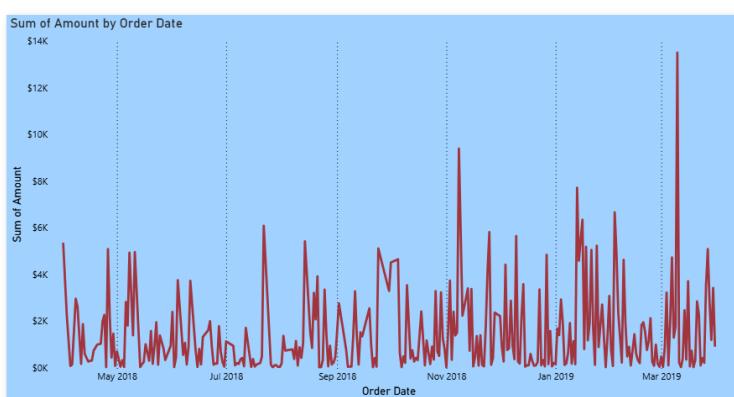
Effects

Background

Color

Transparency

## Monthly Sales Trend:



Build visual

Filters

Values

Add data fields here

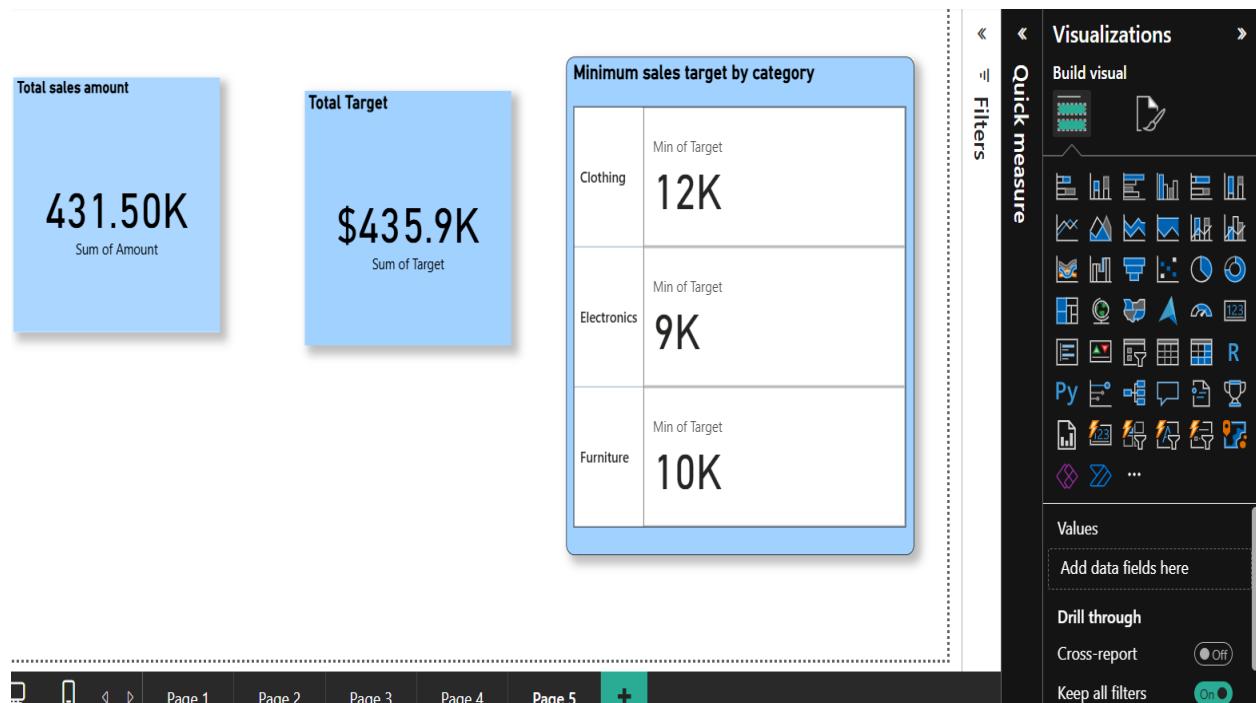
Drill through

Cross-report

## Comparison of Profit and Quantity by Sub-Category:



## Comparison of Total Sales Amount and Target:



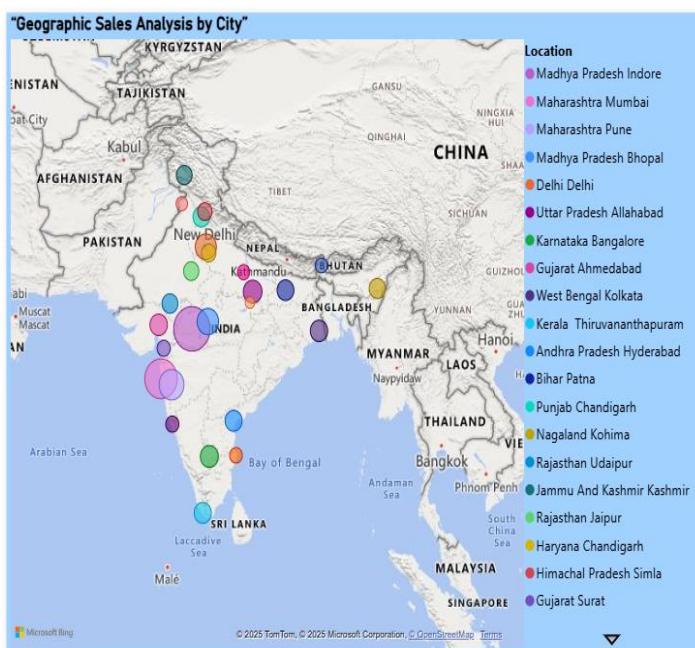
## Sales Performance Matrix:

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Year	2018		2019		Total	
	Category	Sum of Amount	Sum of Target	Sum of Amount	Sum of Target	Sum of Amount
Clothing	\$94,601	\$435,900	\$44,453	\$435,900	\$139,054	\$435,900
Electronics	\$105,098	\$435,900	\$60,169	\$435,900	\$165,267	\$435,900
Furniture	\$73,003	\$435,900	\$54,178	\$435,900	\$127,181	\$435,900
Total	\$272,702	\$435,900	\$158,800	\$435,900	\$431,502	\$435,900



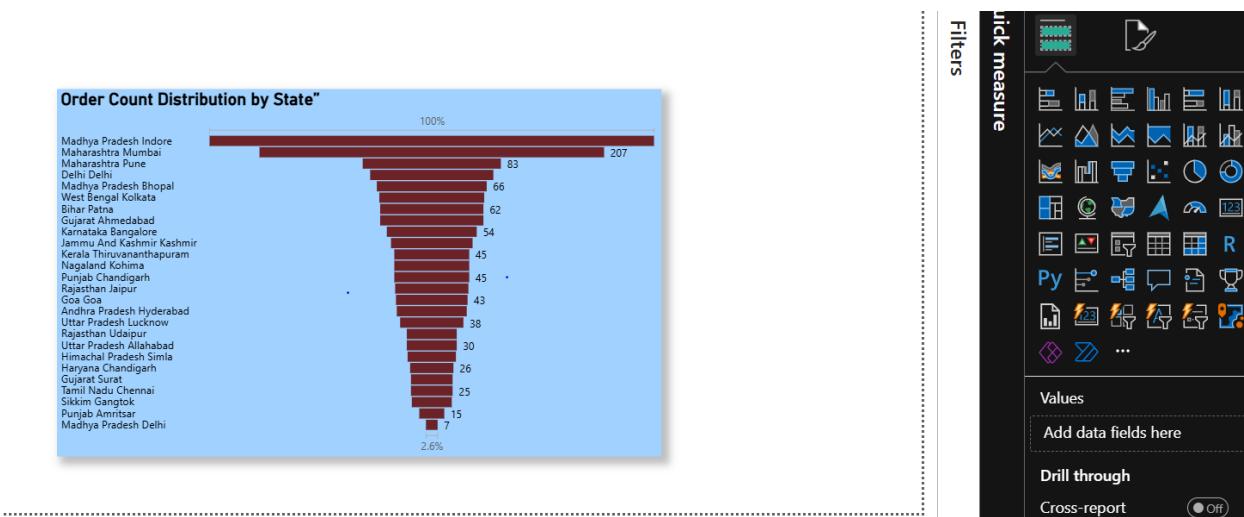
## Geographic Sales Analysis:



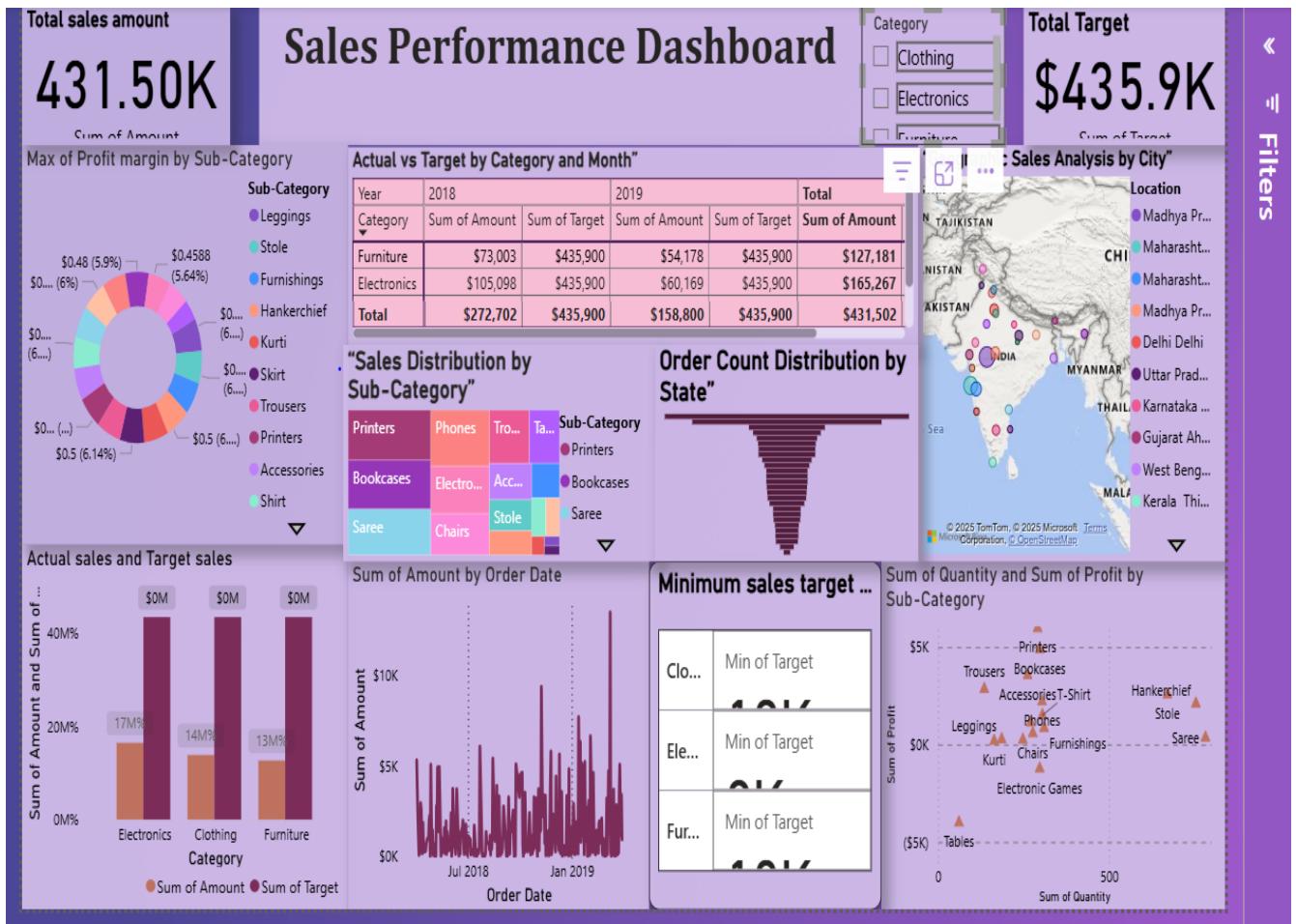
## Sales Distribution by Sub-Category:



## Order Count Analysis by State:

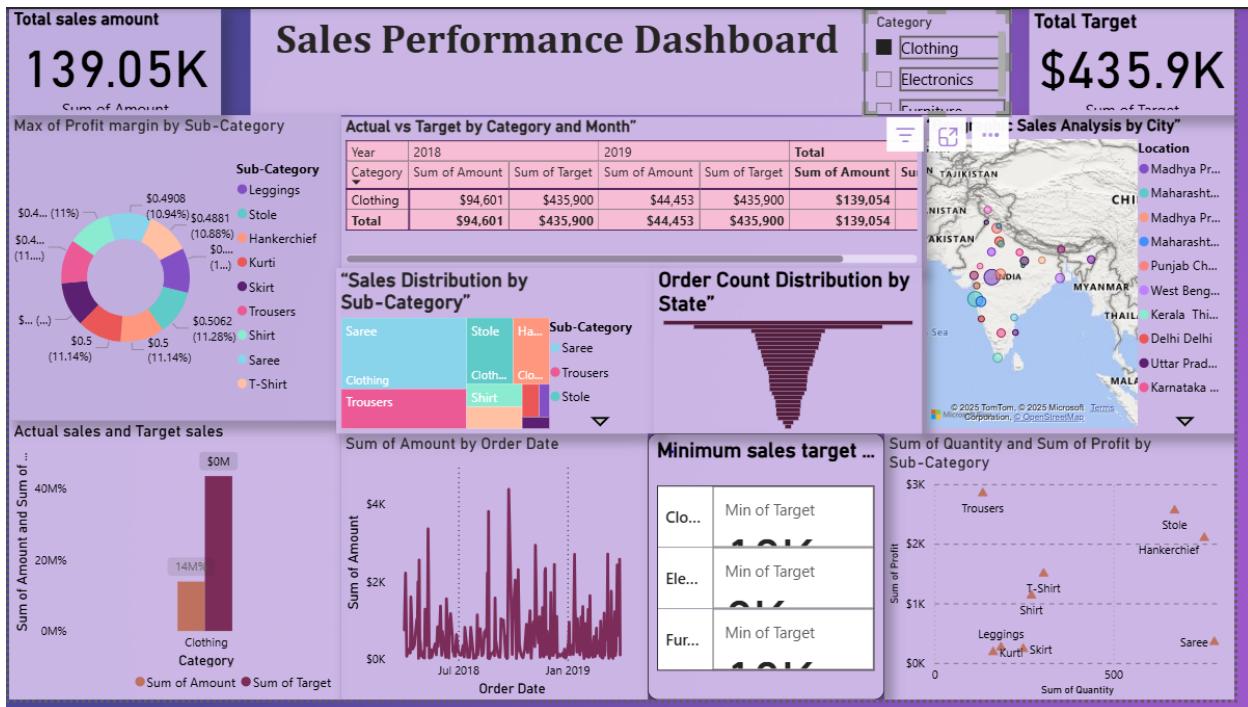


# Data visualization

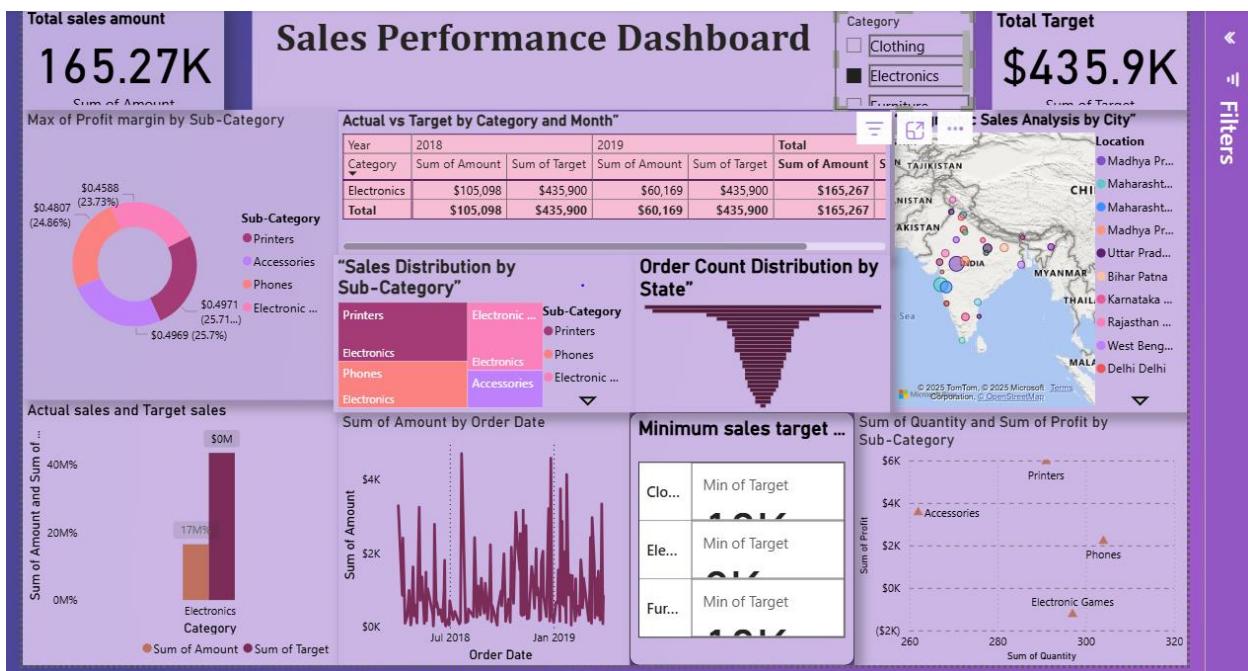


## After using slicers

### Clothing



### Electronics:



## Furniture:

