
SmartBridge Data Analytics 2023

Assessment – 2

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Course Name - VIT Data Analytics 2023

Institution - Vellore Institute of Technology

Campus - Vellore

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Vellore Institute of Technology

Questions

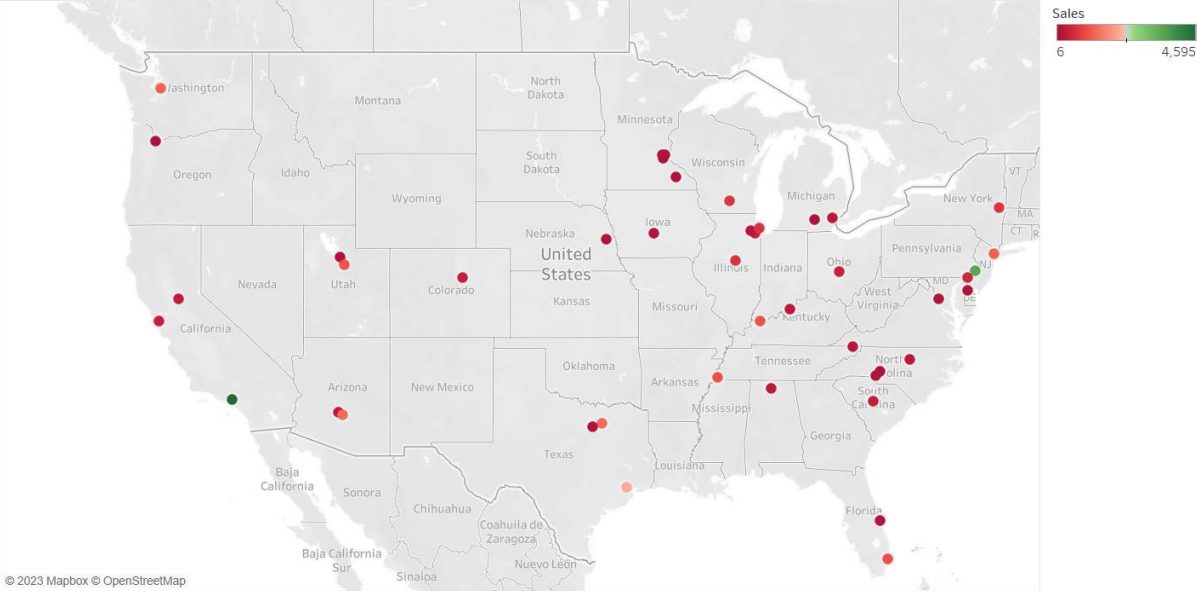
- 1) Create any 7 data visualizations/charts and perform the following
- 2) Apply dimension filter, context and measure filter on any of the three visualizations
- 3) Perform the following data manipulations on your dataset
 - create a Hierarchy
 - create a set
 - create a group

Note : Use 'superstore-sales' dataset

Question 1

1. Map

Map



Map based on Longitude (generated) and Latitude (generated). Colour shows sum of Sales. Details are shown for StateandCity.

2. Text Table

TextTable

Sub-Catego..	State																		
	Alab..	Ariz..	Calif..	Colo..	Dela..	Flori..	Illin..	India..	Iowa	Kent..	Mich..	Min..	Nebr..	New York	North Caro..	Ohio	Oreg..	Penn..	South Caro..
Accessories			105	239	45		436					66		30	74				
Appliances	208		115									78	60						69
Art		1,113	62						76					19	2	3		102	
Binders	17	2	206		31		2	38	27			50		53			6	10	158
Bookcases													262					3,083	532
Chairs			81				213	90		732				319				71	302
Envelopes					115										201	135		3	
Fasteners			4												15		62		
Furnishings			410	102	47			6				53		138				207	97
Labels			15					75				6							
Paper			209				65				19	37		47	16	102			29
Phones		168	2,106		90		147							1,030	28	60			1,469
Storage		244	99		227	118	230				212			209				73	186
Supplies			66																
Tables			1,706			958	618												1,045

Sum of Sales broken down by State vs. Sub-Category.

3. Highlight Table

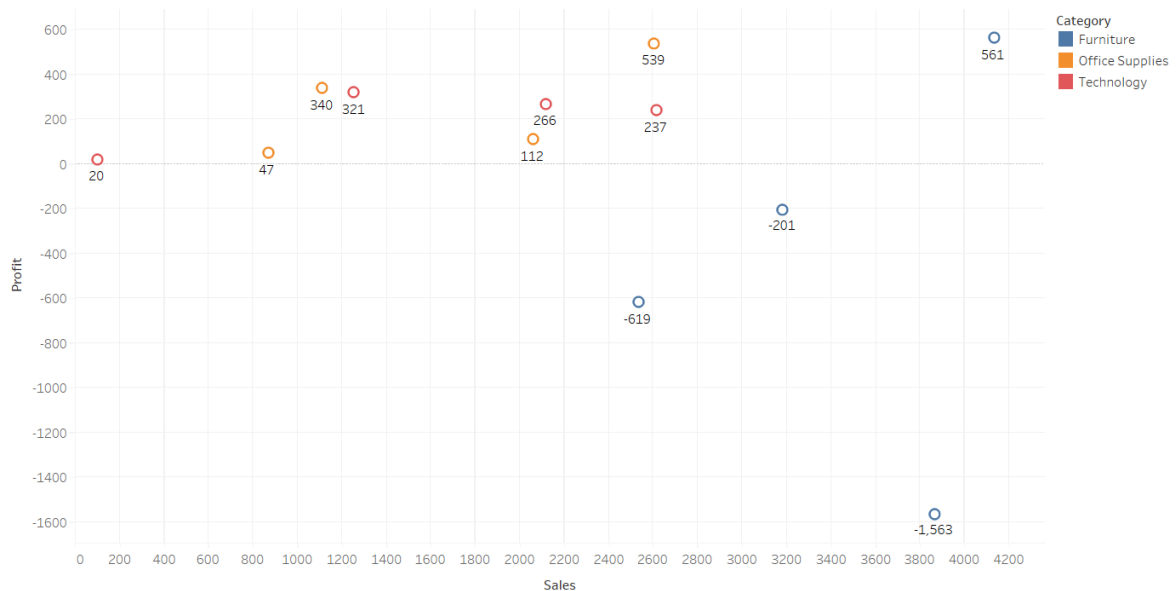
HighLight

Category	Sub-Catego..		Sales
Furniture	Bookcases		-1,670
	Chairs		113
	Furnishings		34
	Tables		-300
Office Supplies	Appliances		5
	Art		173
	Binders		162
	Envelopes		197
	Fasteners		30
	Labels		45
	Paper		258
	Storage		149
	Supplies		18
Technology	Accessories		101
	Phones		743

Sum of Profit broken down by Category and Sub-Category. Colour shows sum of Sales.

4. Scatterplot

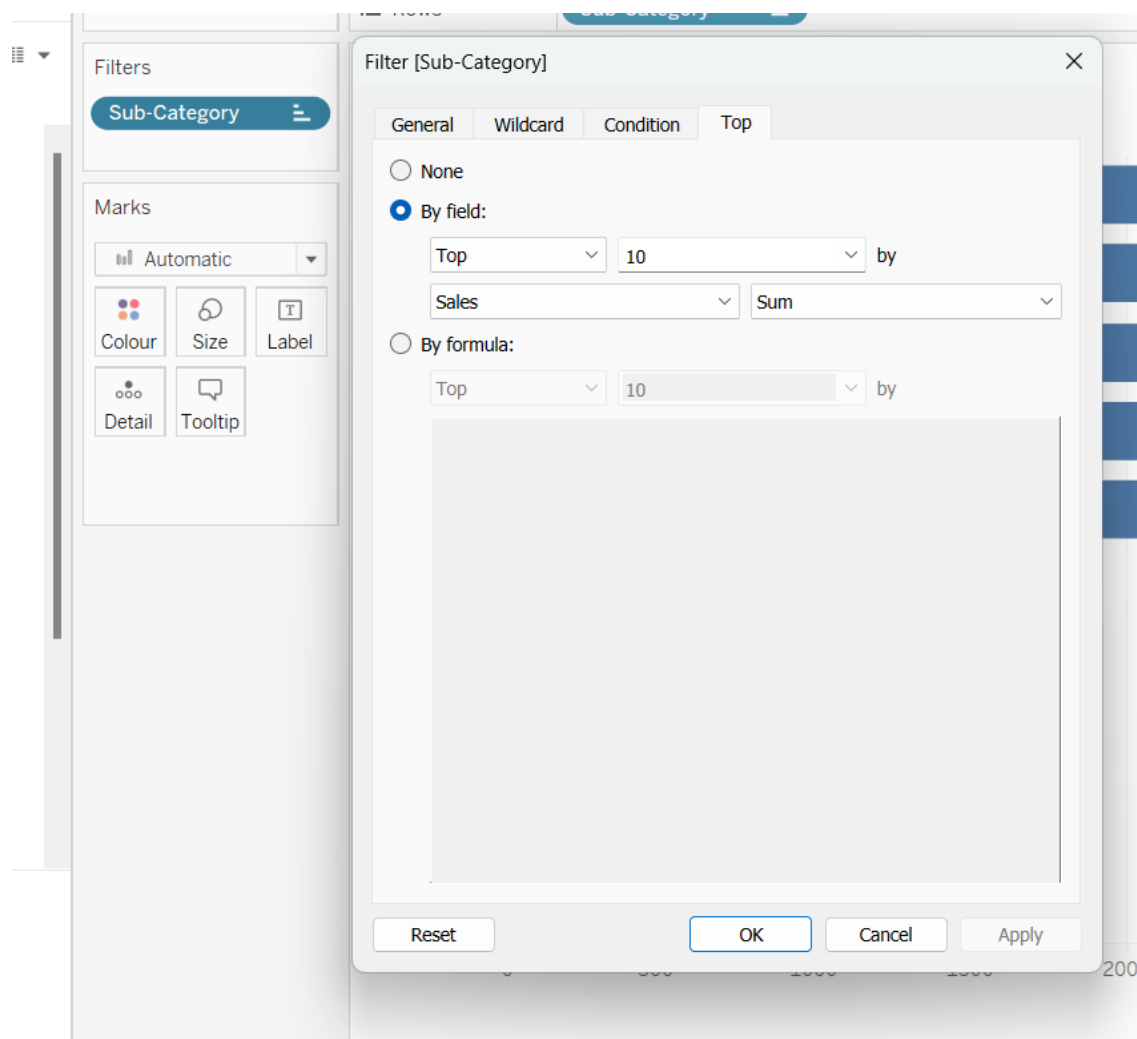
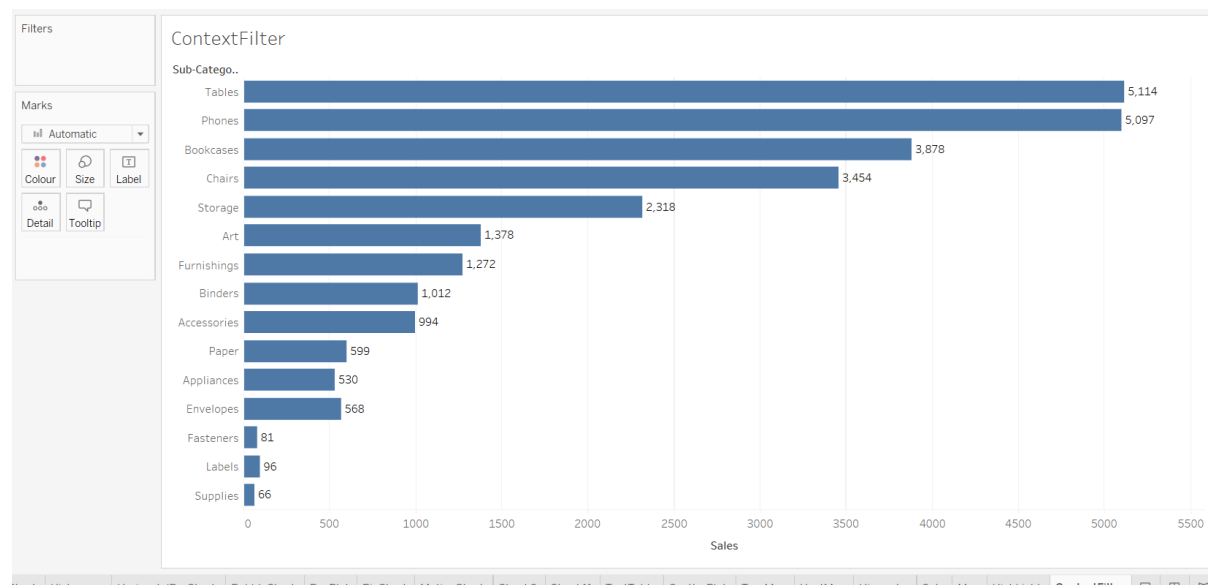
ScatterPlot

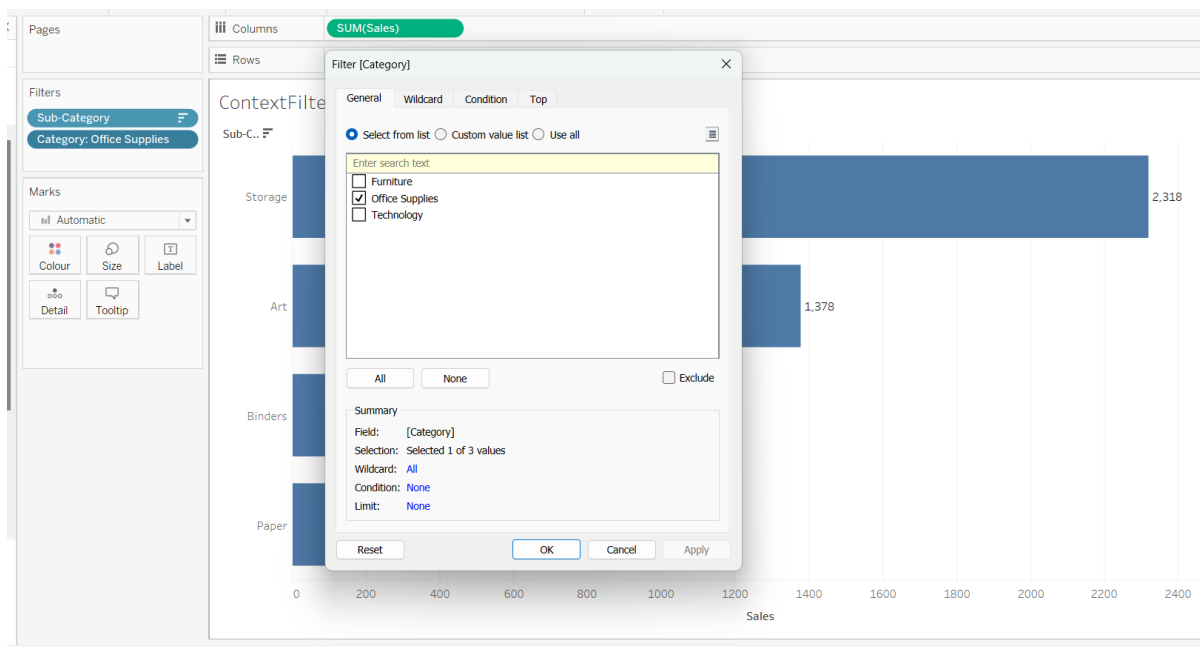
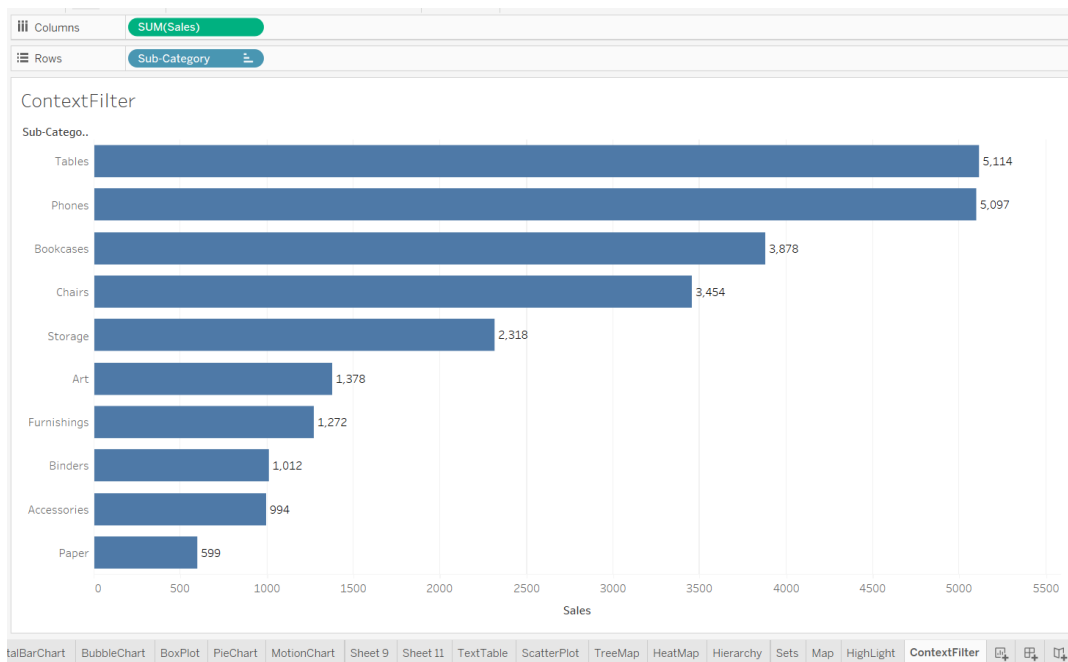


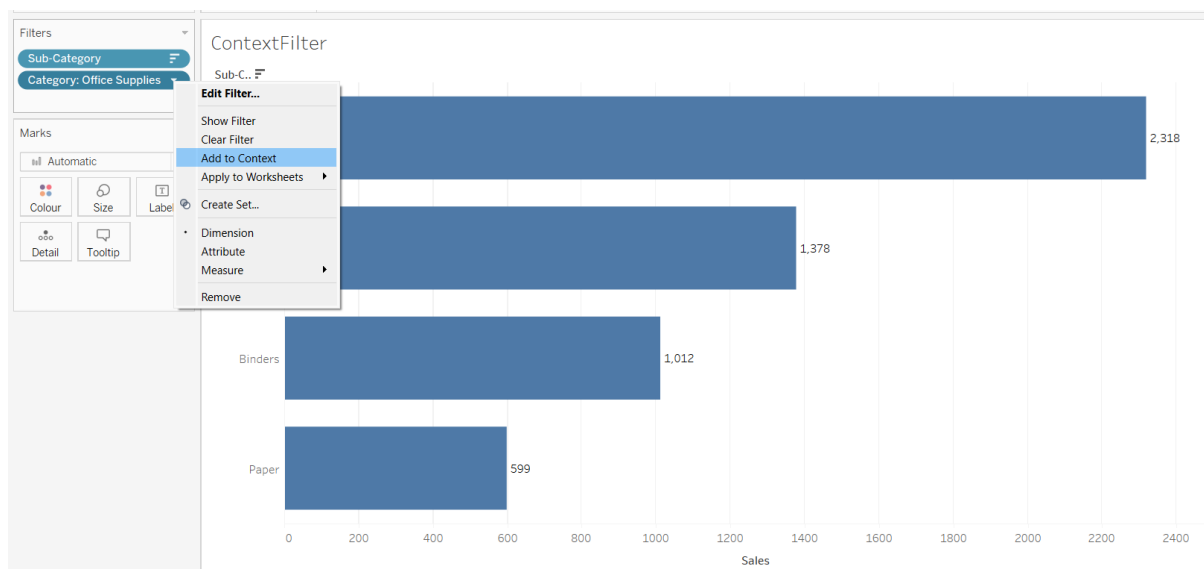
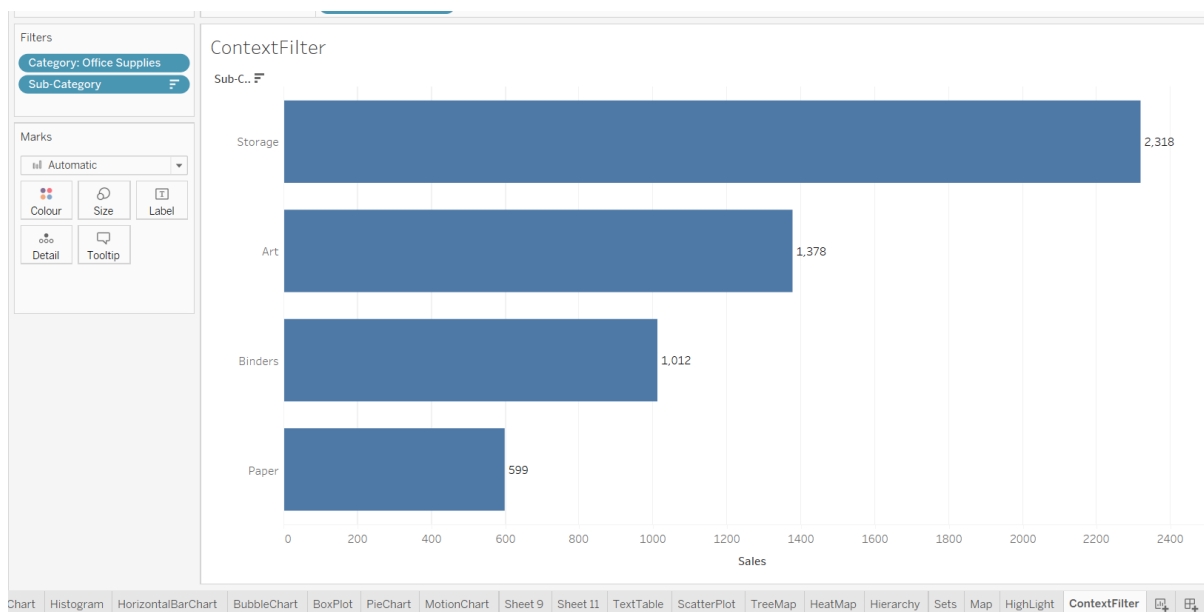
Sum of Sales vs. sum of Profit. Colour shows details about Category. Details are shown for Region.

Question 2

5. Context Filter

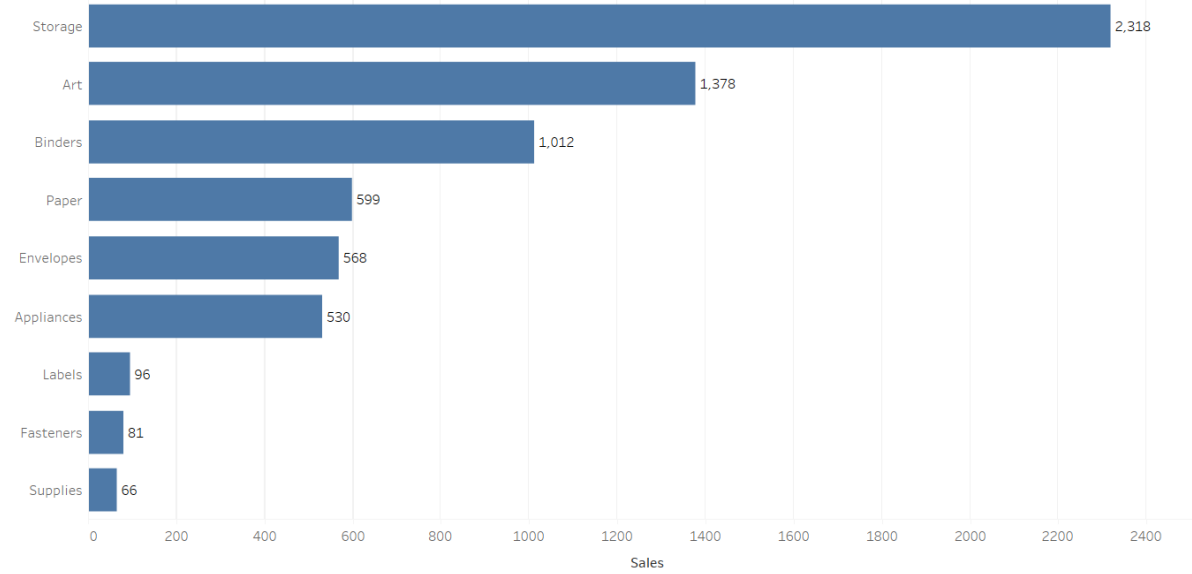






ContextFilter

Sub-C., 7



6. Dimension Filter

Pages	Columns
	Rows
	Customer Name
Filters	Dimension Filter
Marks	Customer Name
Automatic	Alan Dominguez Texas
Colour	Alejandro Grove Utah
Size	Andrew Allen North Carolina
Text	Brendan Sweed Arizona
Detail	Brosina Hoffman California
Tooltip	Christopher Schild Illinois
State	Claire Gute Kentucky
	Clay Ludtke Iowa
	Cynthia Voltz New York
	Darren Powers Indiana
	Darrin Van Huff California
	Dave Kipp Washington
	Dorothy Wardle Ohio
	Duane Noonan California
	Elpida Rittenbach Minnesota
	Emily Burns Utah
	Eric Hoffmann California
	Erin Smith Florida
	Gary Mitchum Texas
	Gary Zandusky Minnesota
	Gene Hale Texas
	Greg Guthrie Tennessee
	Harold Pawlan Texas
	Henry MacAllister New York
	Irene Maddox Washington
	Janet Martin North Carolina

Filters

Customer Name

Marks

Automatic

Colour

Size

Text

Detail

Tooltip

State

Filter [Customer Name]

General

Wildcard

Condition

Top

☒ Select from list

☐ Custom value list

☐ Use all

Enter search text

☒ Alan Dominguez
☐ Alejandro Grove
☒ Andrew Allen
☐ Brendan Sweed
☒ Brosina Hoffman
☐ Christopher Schild
☐ Claire Gute
☒ Clay Ludtke
☐ Cynthia Voltz
☐ Darren Powers
☒ Darrin Van Huff

All

None

☐ Exclude

Summary

Field: [Customer Name]

Selection: Selected 10 of 64 values

Wildcard: All

Condition: None

Limit: None

Reset

OK

Cancel

Apply

Pages

Filters

Customer Name

Marks

Automatic

Colour

Size

Text

Detail

Tooltip

State

Columns

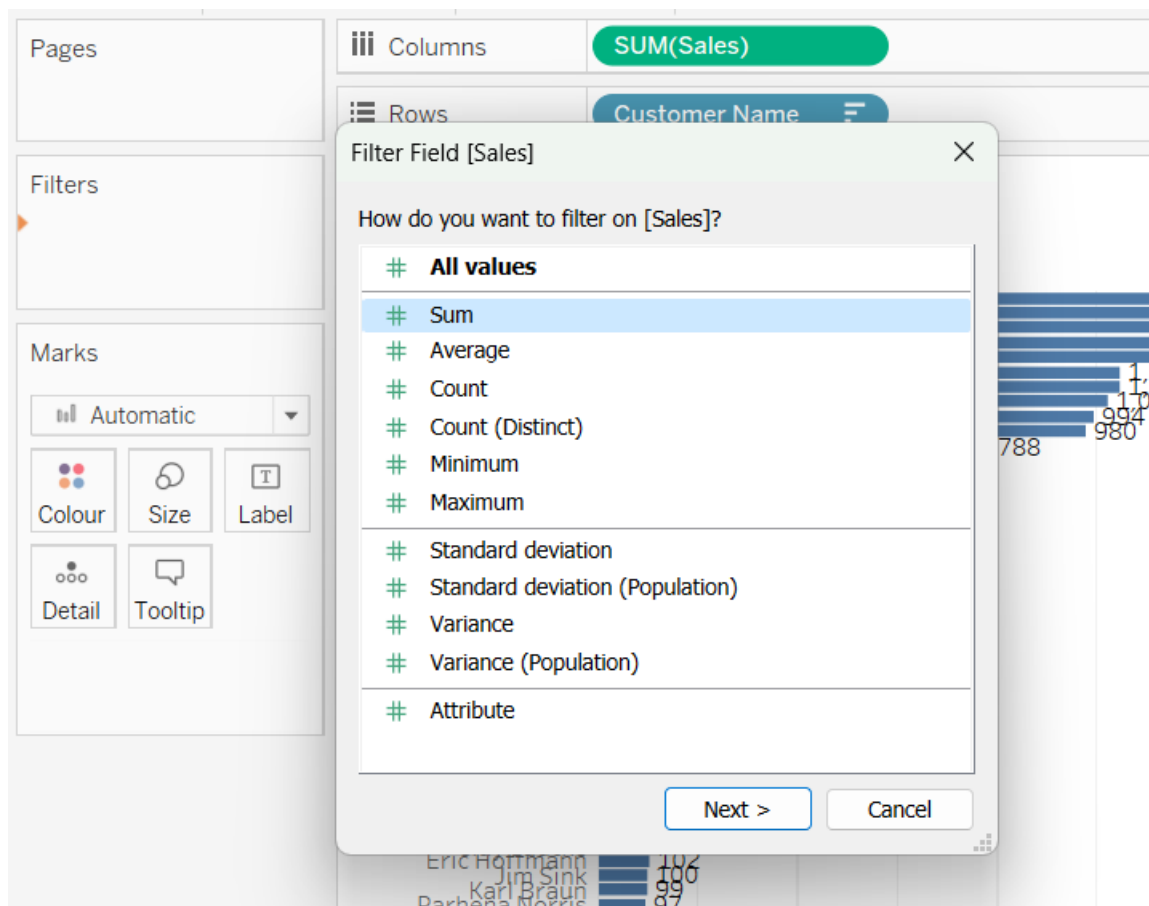
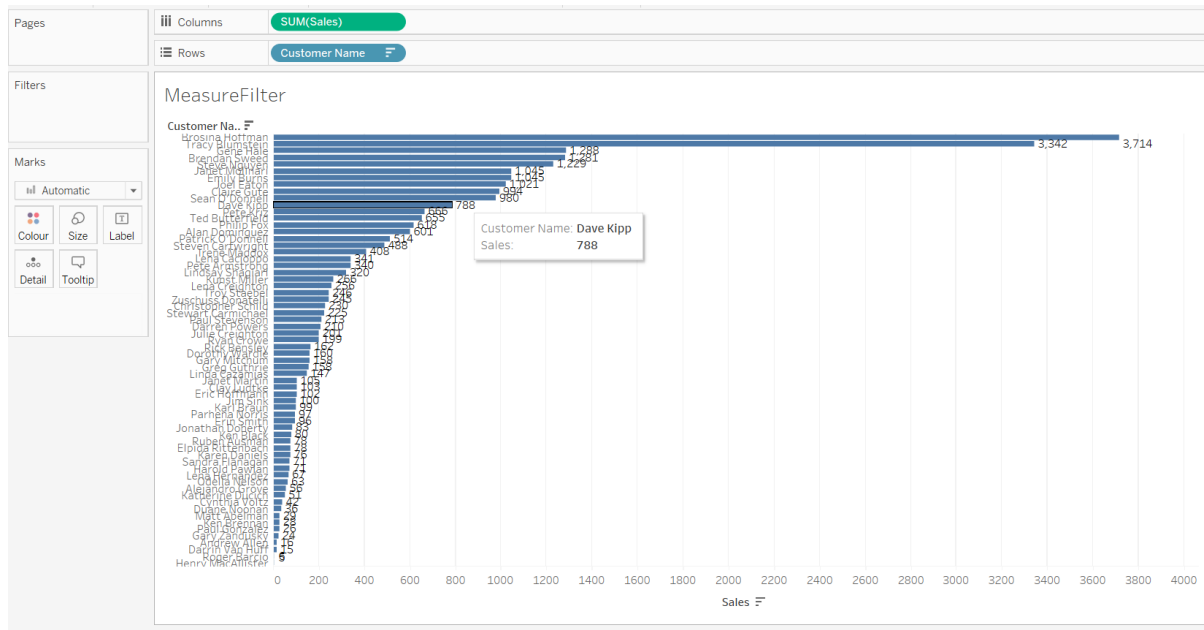
Rows

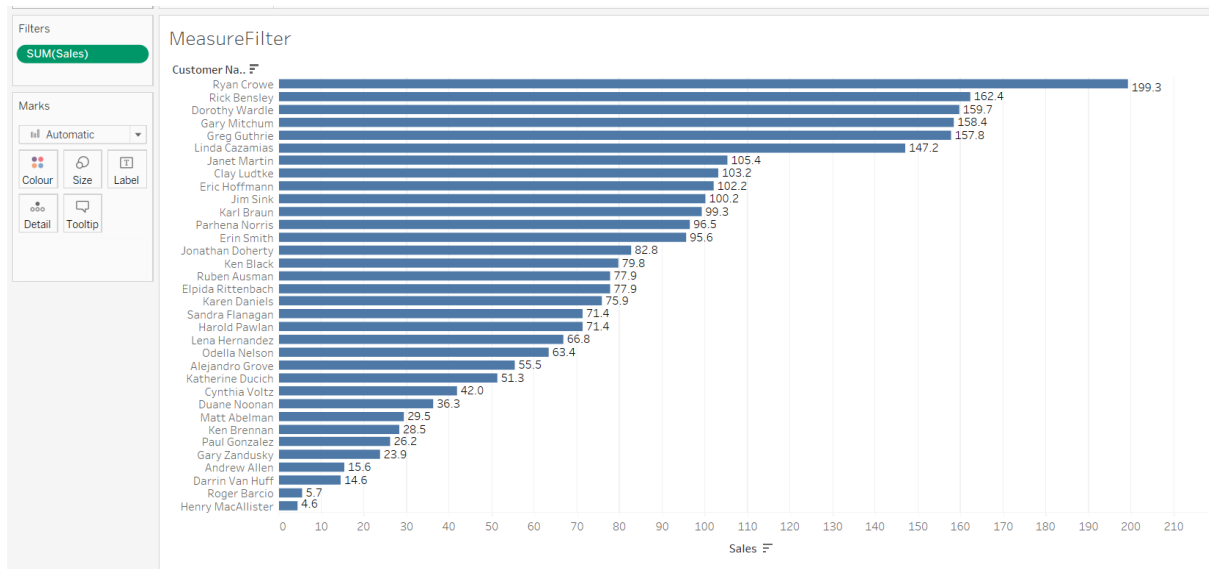
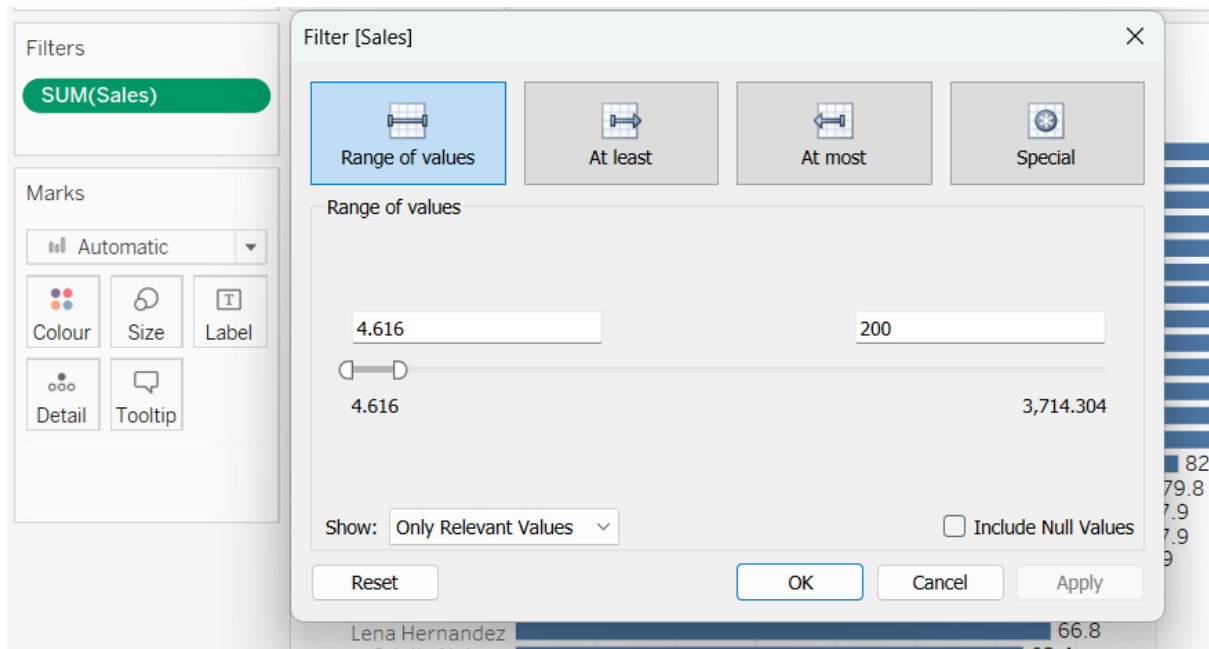
Customer Name

Dimension Filter

Customer Name	
Alan Dominguez	Texas
Andrew Allen	North Carolina
Brosina Hoffman	California
Clay Ludtke	Iowa
Darrin Van Huff	California
Duane Noonan	California
Eric Hoffmann	California
Gary Zandusky	Minnesota
Henry MacAllister	New York
Joel Eaton	Tennessee Texas

7. Measure Filter



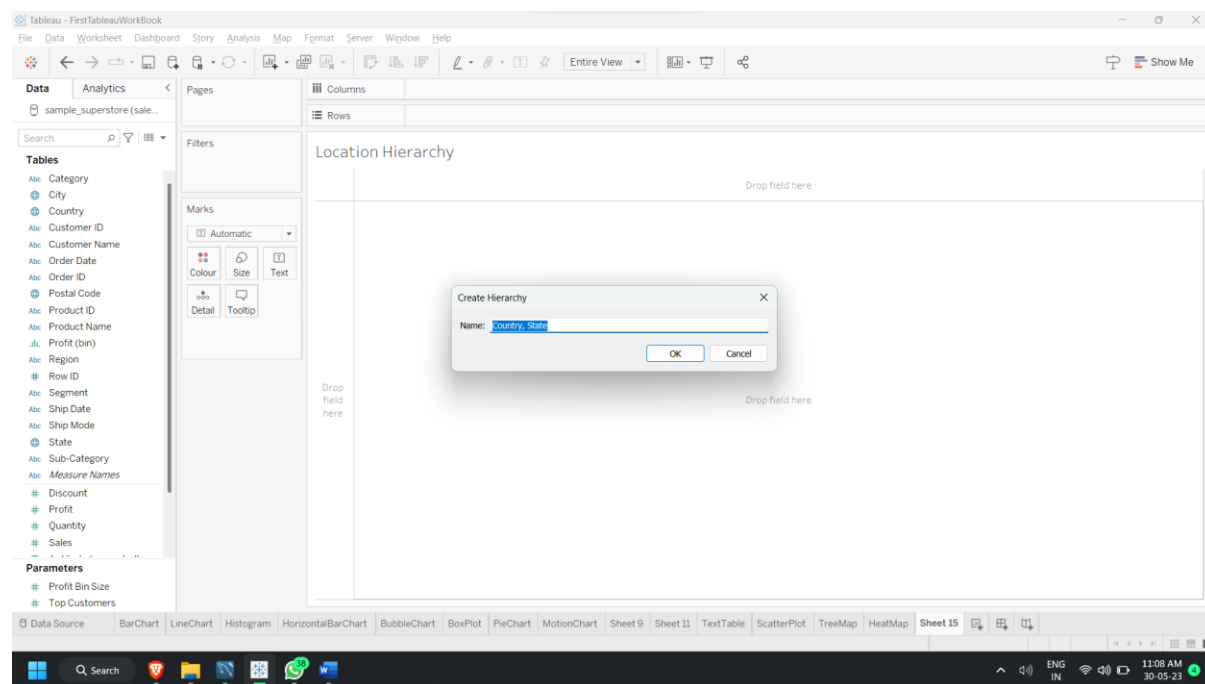


Question 3

1. Hierarchy

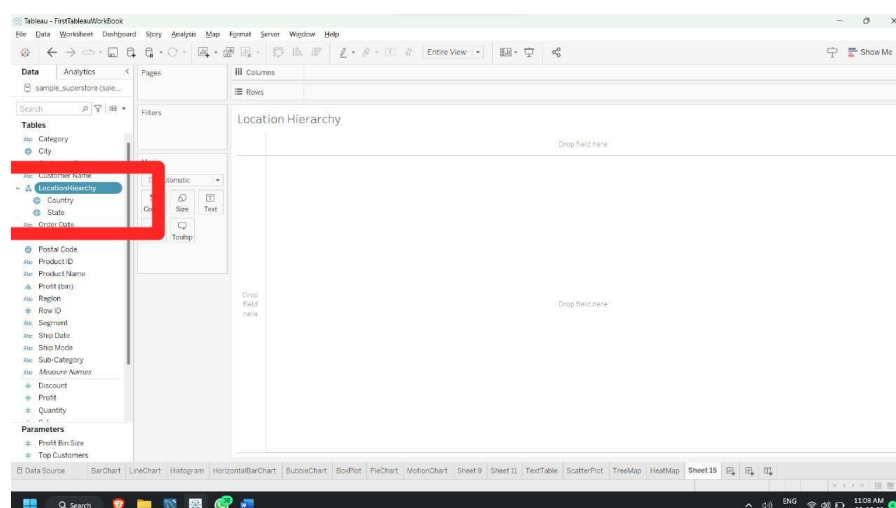
Lets create a Location Hierarchy in Tableau, inorder to create a hierarchy, we just need to drag and drop similar kinds of data together In the data pane in Tableau.

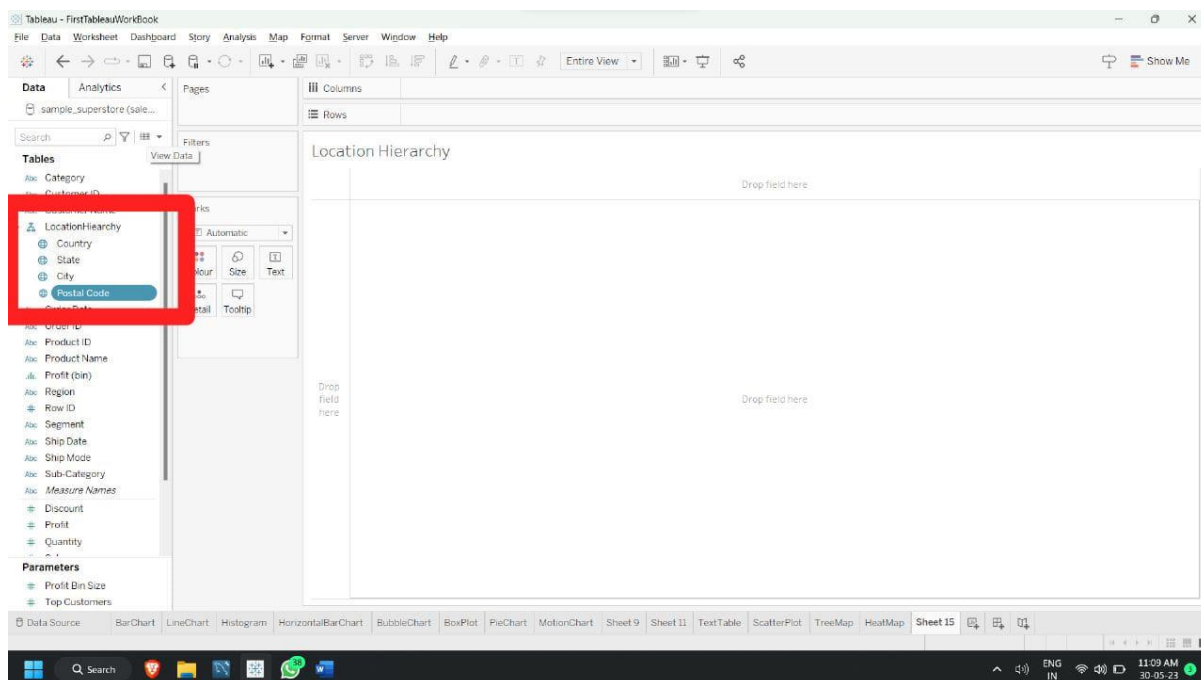
Location Hierarchy: Country>State>City>Postal Code



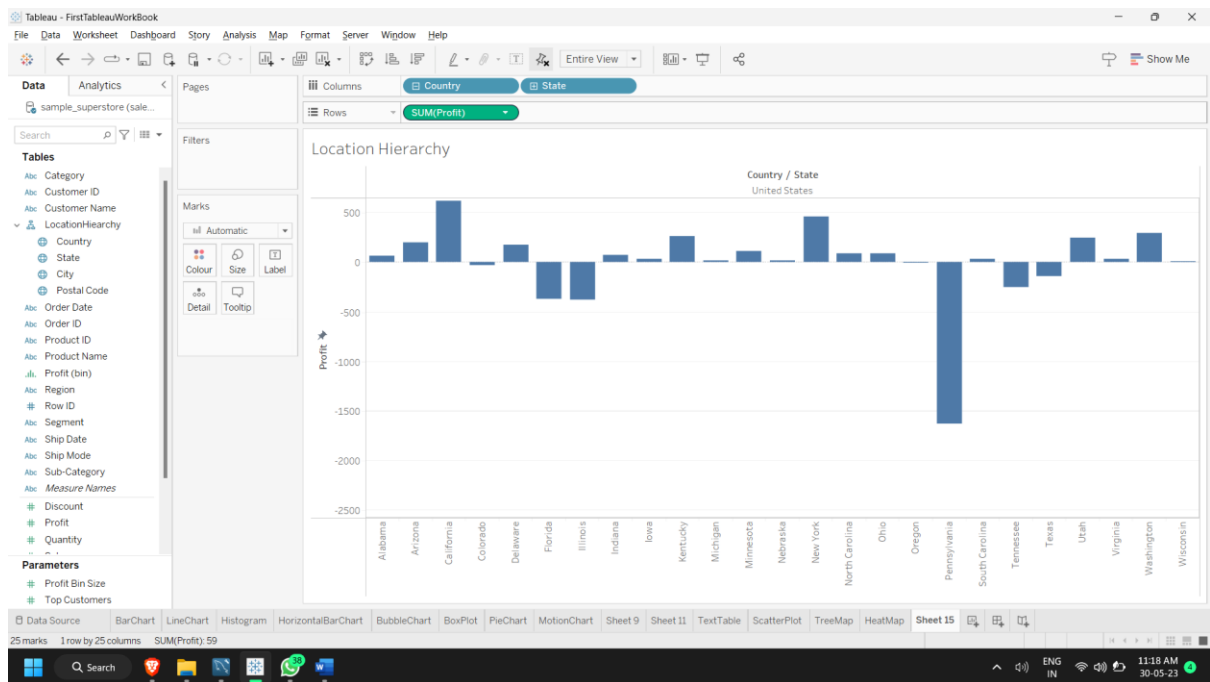
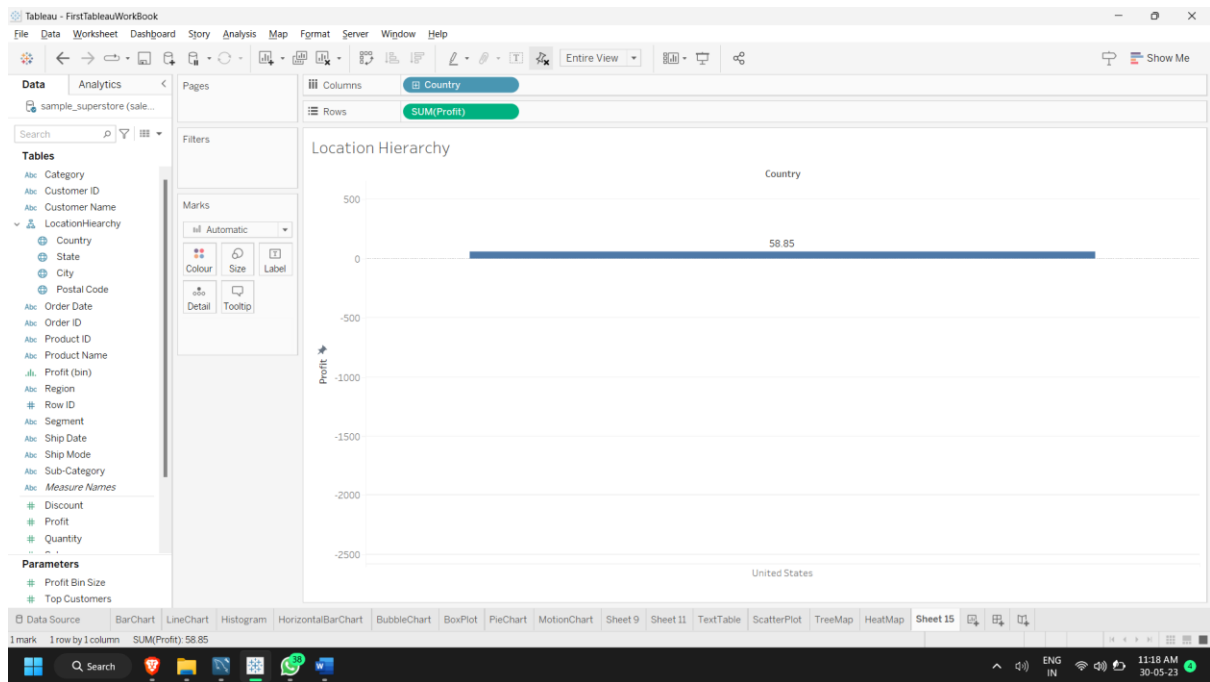
All we have to do is to drag the required fields together, then a pop-window will appear asking to enter the name of the hierarchy.

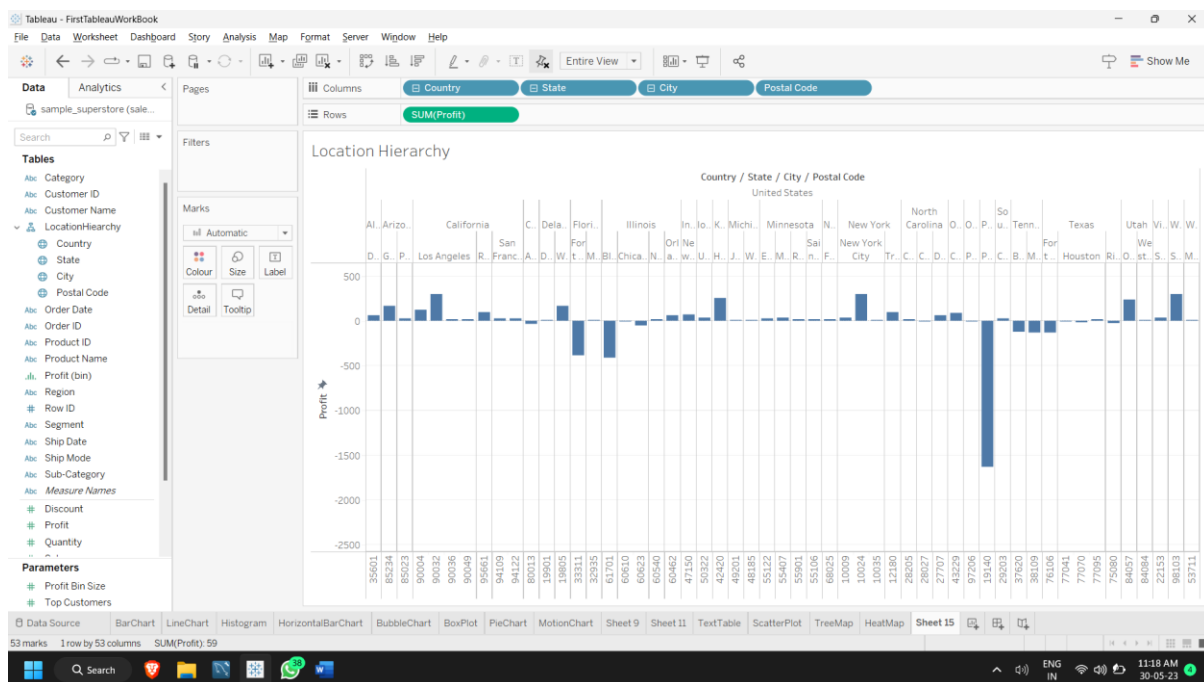
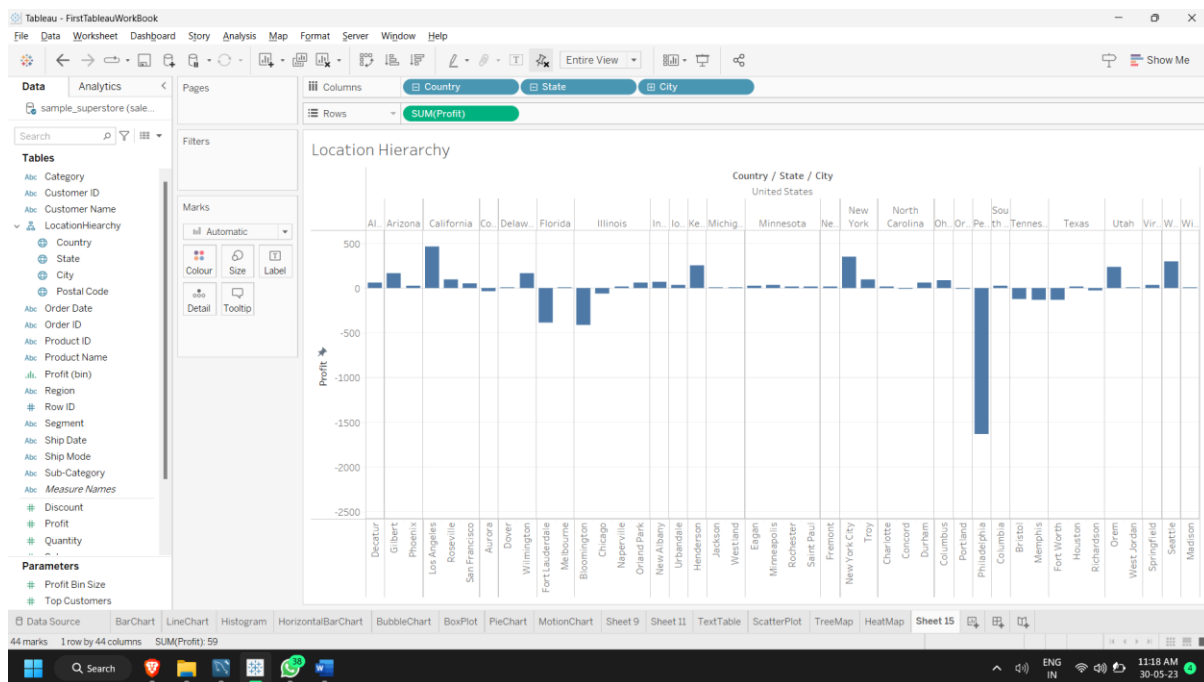
We can have more than 2 fields in a hierarchy and the order of the hierarchy can changed my dragging and dropping.





A Hierarchy basically groups fields together, for example: a city will have a number of postal codes, and states will have a number of cities and finally a country will have number of states.



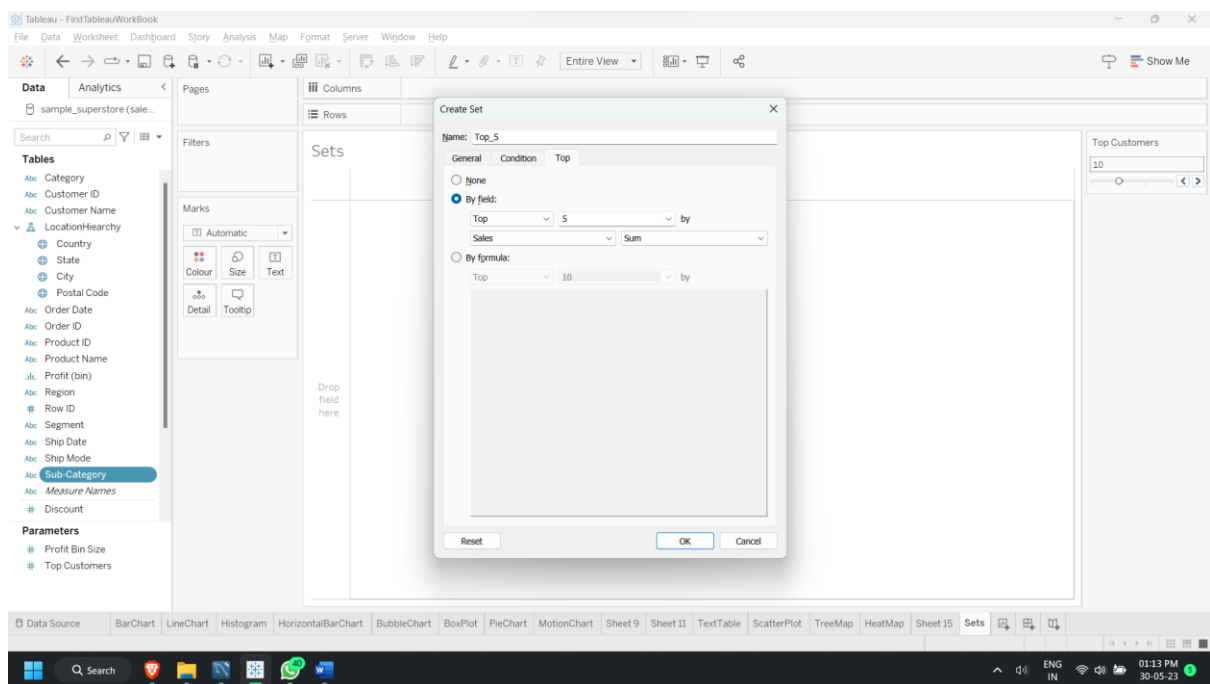
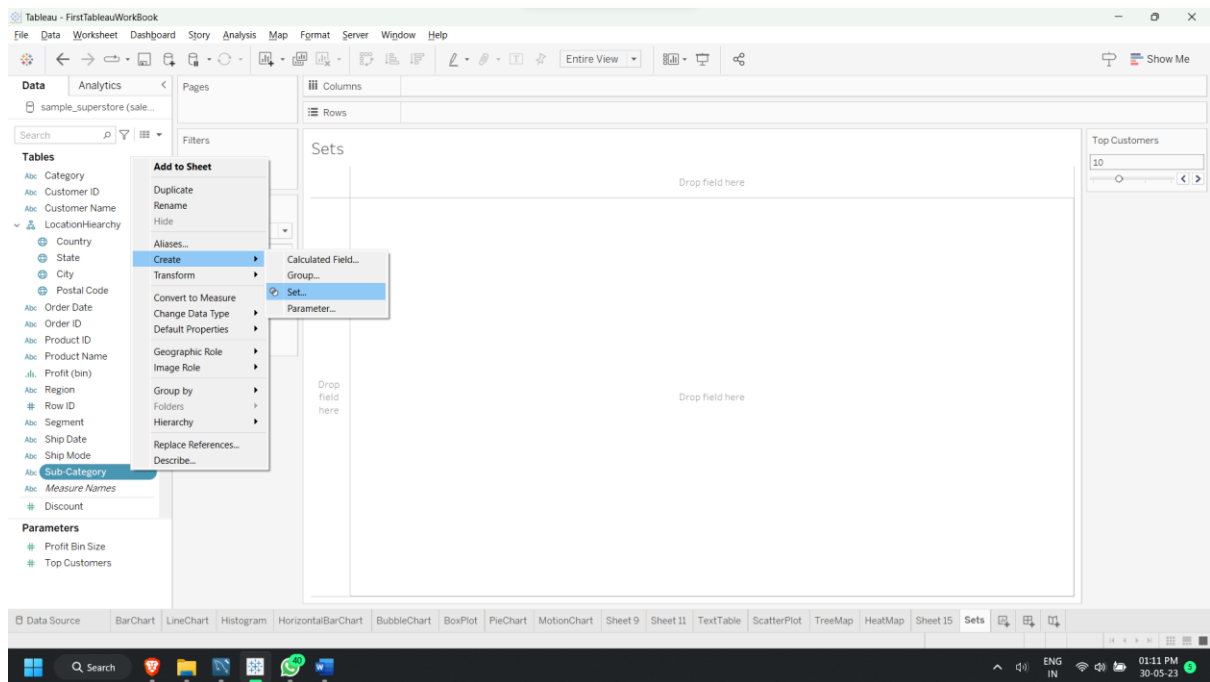


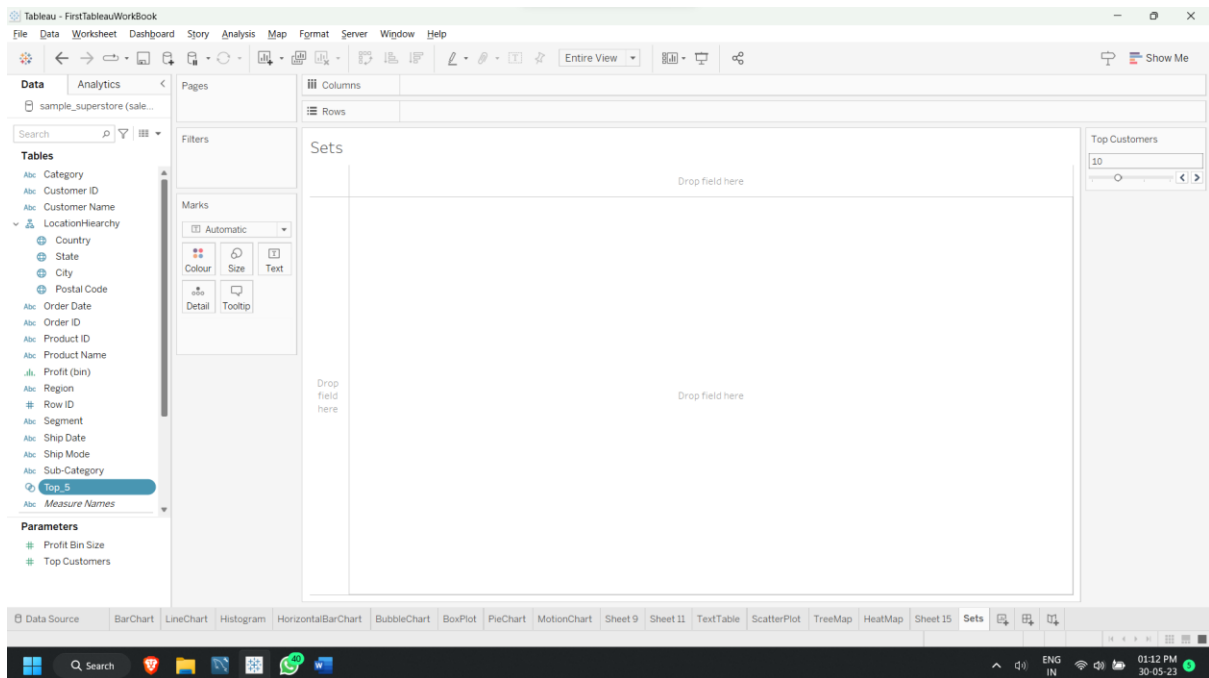
With Hierarchies we will be able visualize any data with the order of the fields in a hierarchy,

Plotting the Sales(profit) made against the Location Hierarchy, we will create a simple bar chart, but we can control the depth of the location using location hierarchy, by using this hierarchy we will be able to create 4 different bar charts.

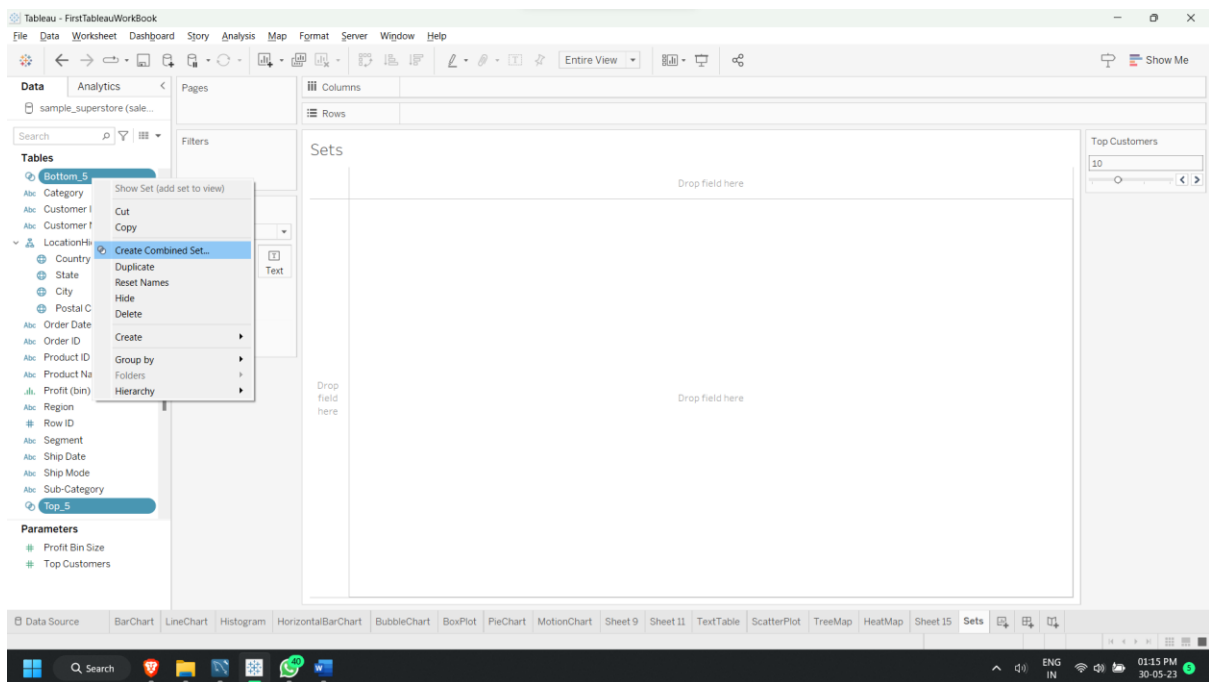
Using more than one field in chart is called drilling up and reducing the number of fields used in the chart is drilling down.

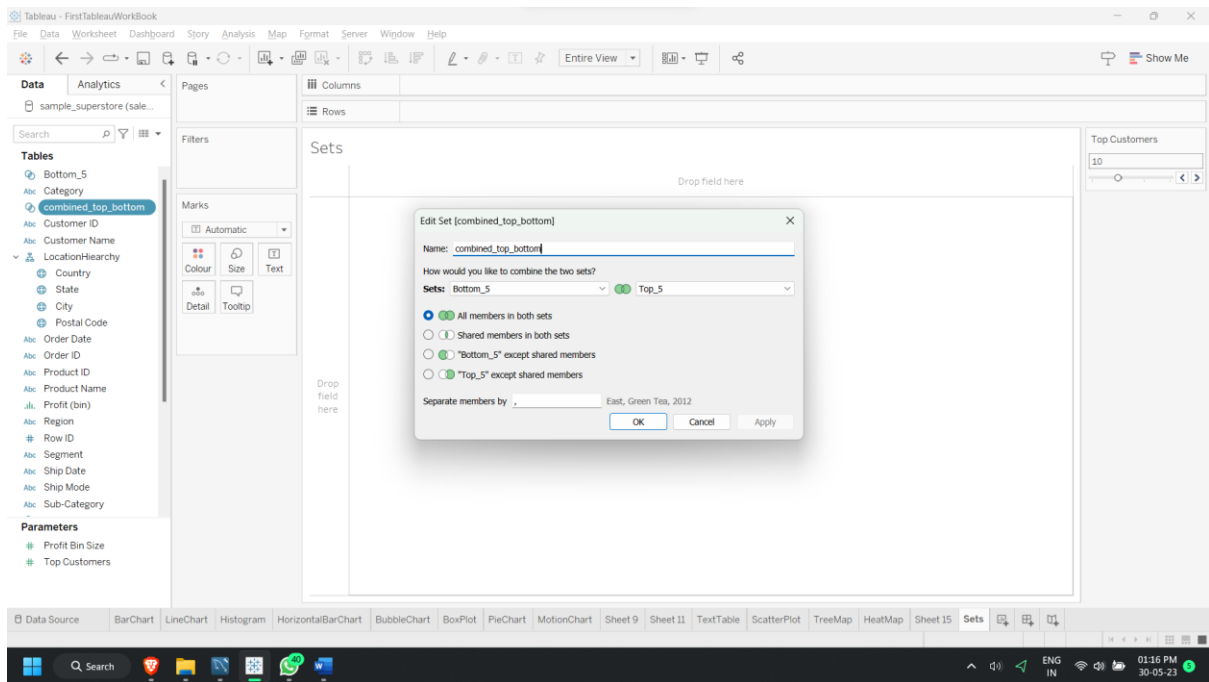
2. Set



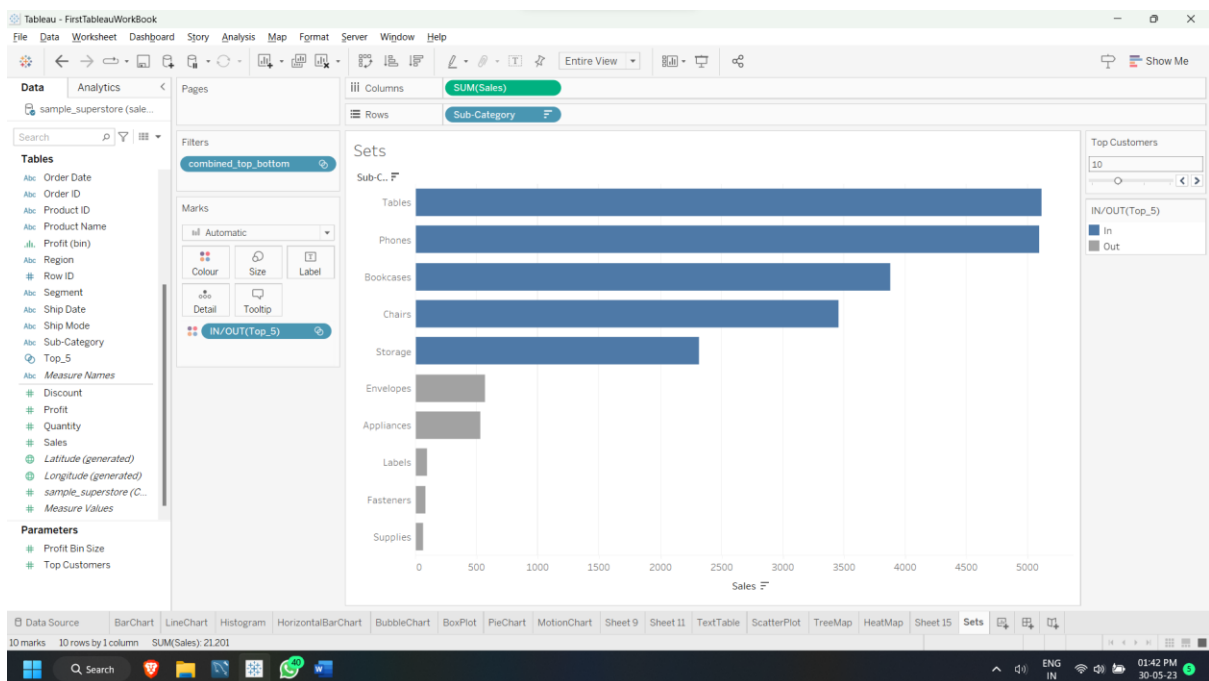


We are basically creating a set of sub categories that are the top 5 in terms of sales, similarly we will be creating for the bottom 5.





Then we combine the two sets of top 5 & bottom 5 to create the combined top and bottom.



In this horizontal bar chart, we are plotting sub categories against the sales, we have filtered the subcategories to only include the sub categories that are either in the top 5 or bottom 5 from the whole.

Furthermore we took the top 5 set and added that to the colour marks, finally,

The 10 horizontal bars include the subcategories that are either in the top 5 or bottom 5 in terms of sales, the coloured horizontal bars are the top 5 and rest are bottom 5.

3. Group