

Task-1

FIXED LOD : This function allows users to define a fixed level of detail for a particular calculation, regardless of the level of detail in their view. Fixed LOD functions are useful when users need to perform calculations at a specific level of detail, such as at the customer or product level.

In below visualizations we can see that different data values are considered as the columns and rows, based on this values we can observe that a fixed column with measured values are obtained.

In second visualization we get another fixed value for the same values which are considered in first visualization. Based on fixed values we get appropriate sales values for the customer in both the visualizations.

The screenshot shows a Tableau dashboard titled "Fixed LOD". The top navigation bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. The toolbar has various icons for selection, zoom, and refresh. The interface is in "Standard" mode.

Data View: The main area displays a data table with four columns: Category, Region, Segment, and Sales. The data is grouped by Category (Furniture, Office Supplies) and Region (Central, East, South, West). Within each group, there are three segments: Consumer, Corporate, and Home Office. The Sales values are as follows:

Category	Region	Segment	Sales
Furniture	Central	Consumer	2,297,201
		Corporate	86,229
		Home Office	52,086
	East	Consumer	2,297,201
		Corporate	25,482
		Home Office	114,212
	South	Consumer	2,297,201
		Corporate	64,209
		Home Office	29,870
West	Consumer	2,297,201	
	Corporate	70,800	
	Home Office	16,853	
Office Supplies	Central	Consumer	2,297,201
		Corporate	119,808
		Home Office	83,080
	East	Consumer	2,297,201
		Corporate	49,725
		Home Office	101,255
	South	Consumer	2,297,201
		Corporate	37,786
		Home Office	66,475
West	Consumer	2,297,201	
	Corporate	59,505	
	Home Office	45,930	

Analytics View: The sidebar shows the following configurations:

- Measure Names:** Columns: Category, Region, Segment; Rows: Measure Names (SUM(Fixed 1), SUM(Sales)).
- Marks:** Automatic, Color, Size, Text, Detail, Tooltip.
- Measure Values:** SUM(Fixed 1), SUM(Sales).
- Data Guide:** Fixed 1.
- Viz Details:** Viz description: Enter a description that helps users understand this viz.
- Additional resources:** Add link.
- Accessibility:** Edit alt text.
- Applied Filters:** Orders (Sample - Superstore).
- Data in This Viz:** Category, Measure Names, Region, Segment.

Bottom Navigation: Data Source, Sheet 1, Fixed 1, Fixed 2, Sheet 4, Fixed 3, Sheet 6, Fixed 4, Sheet 8, Exclude 1, Sheet 10, and various sheet icons.

Fixed LOD 2

Category	Region	Segment	Fixed 2	Sales
Furniture	Central	Consumer	742,000	86,229
		Corporate	742,000	52,086
		Home Office	742,000	25,482
	East	Consumer	742,000	114,212
		Corporate	742,000	64,209
		Home Office	742,000	29,870
	South	Consumer	742,000	70,800
		Corporate	742,000	29,645
		Home Office	742,000	16,853
Office Supplies	West	Consumer	742,000	119,808
		Corporate	742,000	83,080
		Home Office	742,000	49,725
	Central	Consumer	719,047	93,111
		Corporate	719,047	41,138
		Home Office	719,047	32,777
South	East	Consumer	719,047	101,255
		Corporate	719,047	66,475
		Home Office	719,047	37,786
	West	Consumer	719,047	59,505
		Corporate	719,047	45,930
		Home Office	719,047	20,217
West	Consumer	719,047	110,081	
	Corporate	719,047	77,134	

Data Guide**Fixed 2****Viz Details****Viz description**

Enter a description that helps users understand this viz

Additional resources

+ Add link

Accessibility

Edit alt text

Applied Filters**Data in This Viz**

Orders (Sample - Superstore)

Abc Category

Abc Measure Names

Abc Region

Abc Segment

EXCLUDE LOD : These functions allow users to exclude specific fields from the calculation while still preserving the level of detail of the view. Exclude LOD functions are useful when users need to perform calculations that exclude specific fields but still need to preserve the level of detail in their view.

In below visualizations we can observe that excluded values to get the detailed view of sales compared to fixed lod we excluded the segments field from the rows.

We use category and region in rows and measures names in column.

The screenshot shows a Tableau desktop interface with the following details:

- File Data Worksheet Dashboard Story Analysis Map Format Server Window Help**
- Data Analytics** tab selected.
- Search** bar.
- Tables** shelf on the left:
 - Category
 - City
 - Country
 - Customer ID
 - Customer Name
 - Order Date
 - Order ID
 - Postal Code
 - Product ID
 - Product Name
 - Region
 - Row ID
 - Segment
 - Ship Date
 - Ship Mode
 - State
 - Sub-Category
 - Measure Names
 - Discount
 - Exclude 1
- Pages** shelf:
 - Columns: Measure Names
 - Rows: Category, Region
- Exclude LOD** visualization:

Category	Region	Exclude 1	Sales
Furniture	Central	216	163,797
	East	238	208,291
	South	242	117,299
	West	226	252,613
Office Supplies	Central	216	167,026
	East	238	205,516
	South	242	125,651
	West	226	220,853
Technology	Central	216	170,416
	East	238	264,974
	South	242	148,772
	West	226	251,992

Measure Values:

 - ATTR(Exclude 1)
 - SUM(Sales)
- Data Guide** pane:
 - Exclude 1
- Viz Details** pane:
 - Viz description: Enter a description that helps users understand this viz
 - Additional resources: Add link
 - Accessibility: Edit alt text
- Applied Filters** pane:
 - Orders (Sample - Superstore)
- Data in This Viz** pane:
 - Category
 - Measure Names
 - Region
 - Measure Values
- Bottom navigation: Data Source, Sheet 1, Fixed 1, Fixed 2, Sheet 4, Fixed 3, Sheet 6, Fixed 4, Sheet 10, Google Chrome.

Data Guide

Sheet 10

Viz Details

Viz description
Enter a description that helps users understand this viz

Additional resources
+ Add link

Accessibility
Edit alt text

Applied Filters

Data in This Viz

Orders (Sample - Superstore)

Legend

- Abc Measure Names
- Abc Segment
- Abc Sub-Category
- # Measure Values

Exclude LOD 2

Segment	Sub-Catego..	Exclude 2	Profit	
Consumer	Accessories	134,119	20,736	
	Appliances	134,119	6,982	
	Art	134,119	3,454	
	Binders	134,119	17,996	
	Bookcases	134,119	-4,436	
	Chairs	134,119	13,235	
	Copiers	134,119	24,084	
	Envelopes	134,119	3,264	
	Fasteners	134,119	577	
	Furnishings	134,119	7,919	
	Labels	134,119	3,076	
	Machines	134,119	2,141	
	Paper	134,119	15,535	
	Phones	134,119	23,837	
	Storage	134,119	7,104	
	Supplies	134,119	-1,658	
	Tables	134,119	-9,728	
	Corporate	Accessories	91,979	12,707
		Appliances	91,979	7,430
Art		91,979	2,005	
Binders		91,979	6,377	
Bookcases		91,979	638	
Chairs		91,979	8,345	

Sheet 10

Task-2

Visualizing geographic information helps data consumers quickly and easily derive insights and meaning. Tableau is designed to make the most of geographical data, with instant geocoding, tableau automatically turns the location data. Map visualization is used to analyze and display the geographically related data and present in the forms of map.

In Task 2 we created different map visualizations using geographical data

They are : 1. Heat Map

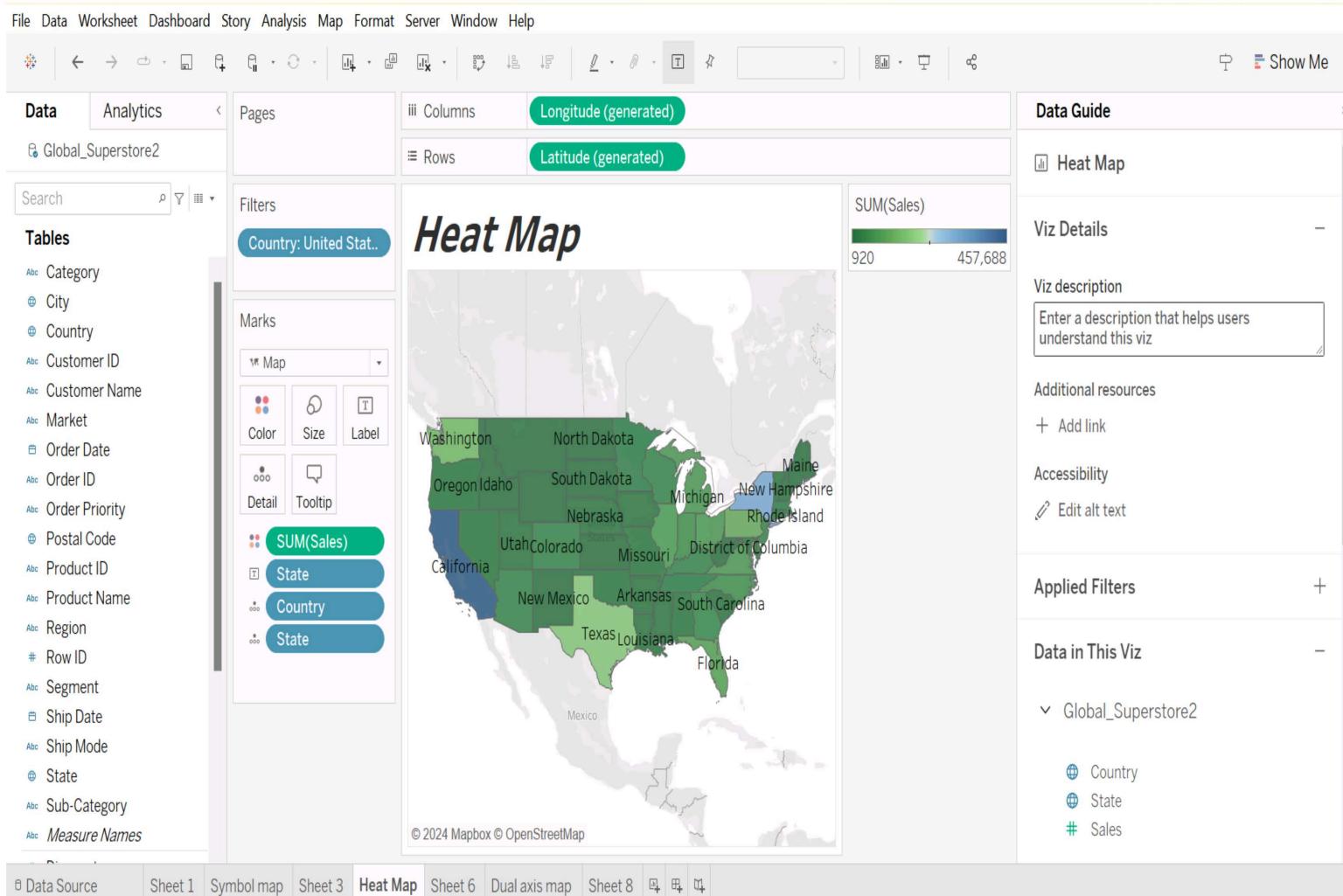
2. Symbol Map

3. Dual Axis map

In this visualizations global super store data is used,

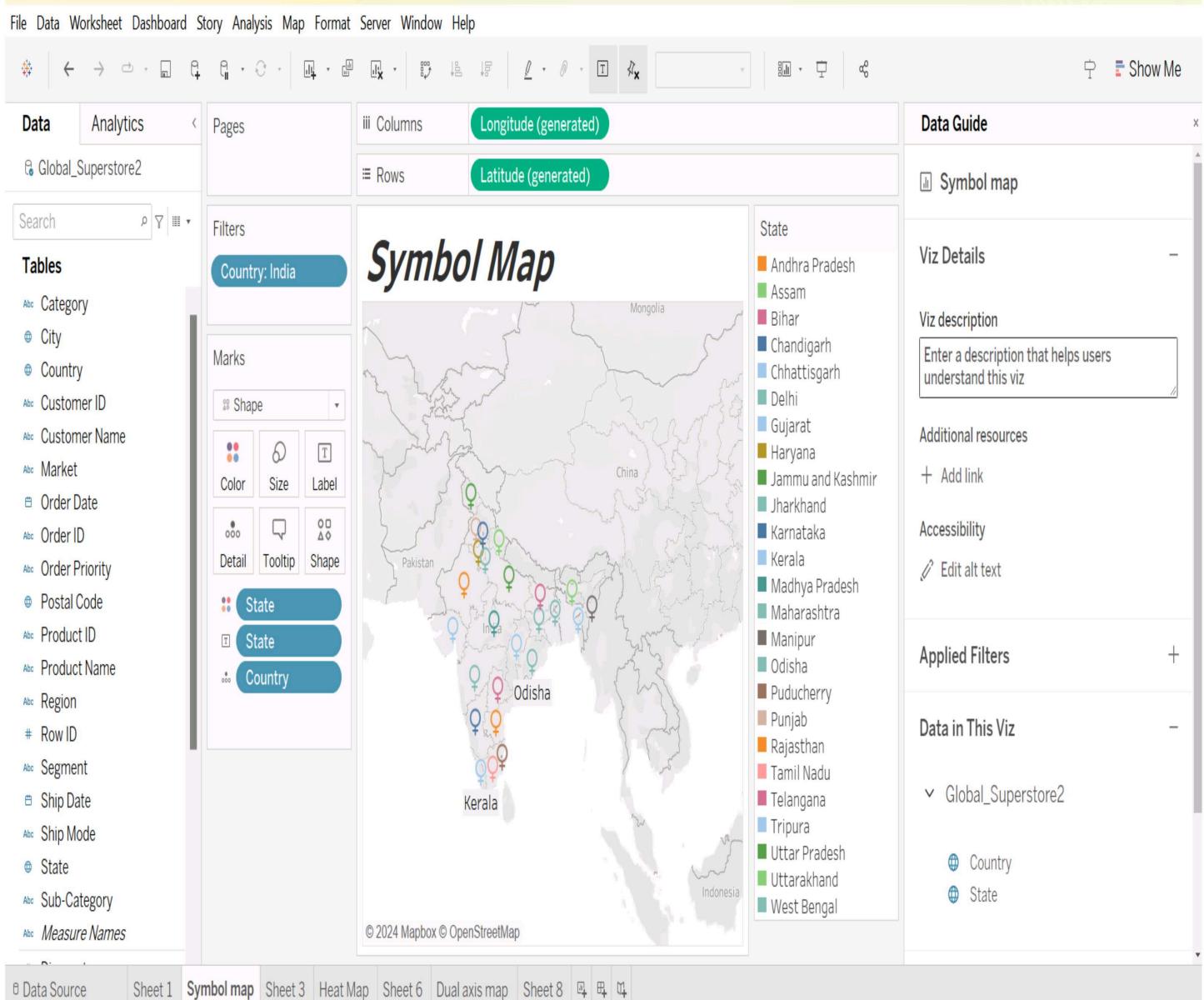
Heat Map : Heatmap visualization is a method of graphically representing numerical data where the value of each data point is indicated using colors.

In this heat map longitude value is taken in column field and latitude value is taken in row field then we get resultant heat map. Here we can observe that the sales values are represented with different shades of colours respected to different areas.



Symbol map: A symbol is an abstraction or pictorial representation of something else. Symbols on a map consist of discrete points, lines, or shaded areas; they have size, form, and color. Map symbols present information collectively, leading to appreciation of form, relative position, distribution, and structure.

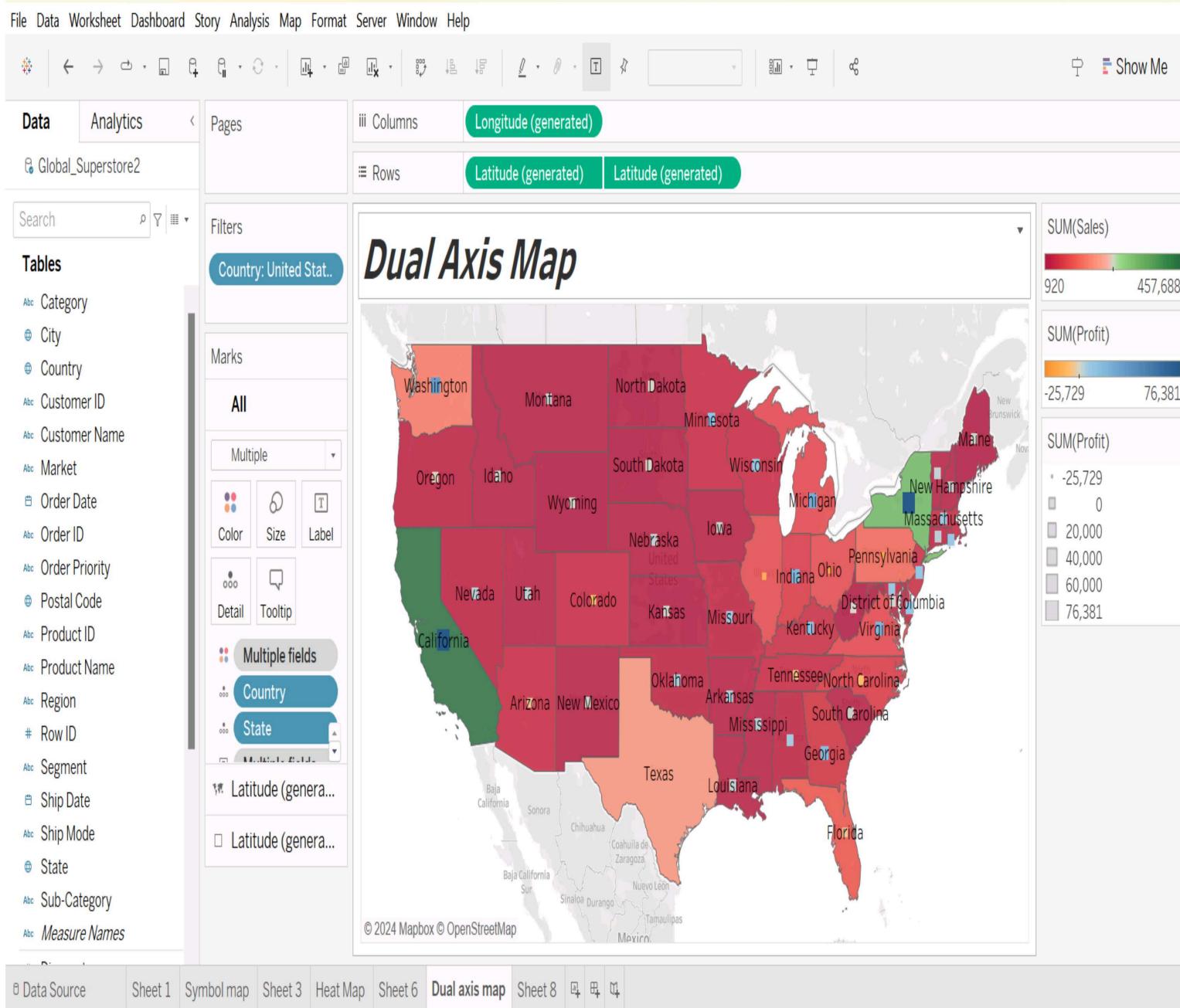
In below symbol map we use longitude values in column field and latitude values in row field, state in colour for clear visualization and country in detail then we get the resultant symbol map.



Dual Axis : Dual axis map is a map with two sets of geographical data overlaid on top of one another.

To create dual axis map we use longitude in column and latitude in row as well as multiple fields in colors, state field and country in detail then we get the resultant dual axis map.

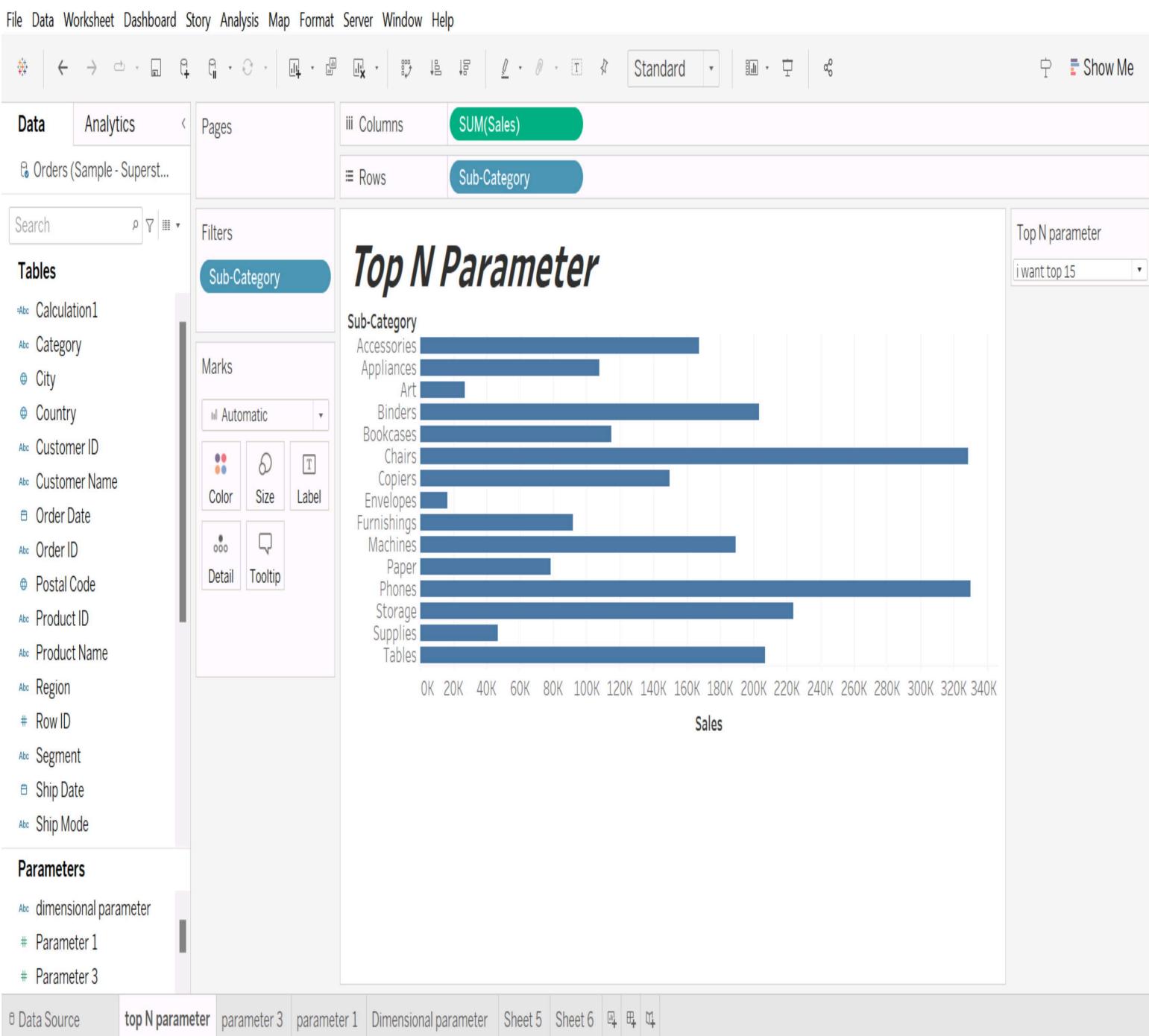
With this dual axis layered map, users can easily tell which state generated more sales while at the same time tell the leading cities within those high performing states



Task-3

Top N parameter : A Top N parameter returns data according to a number you assign it, hence the N in the name.

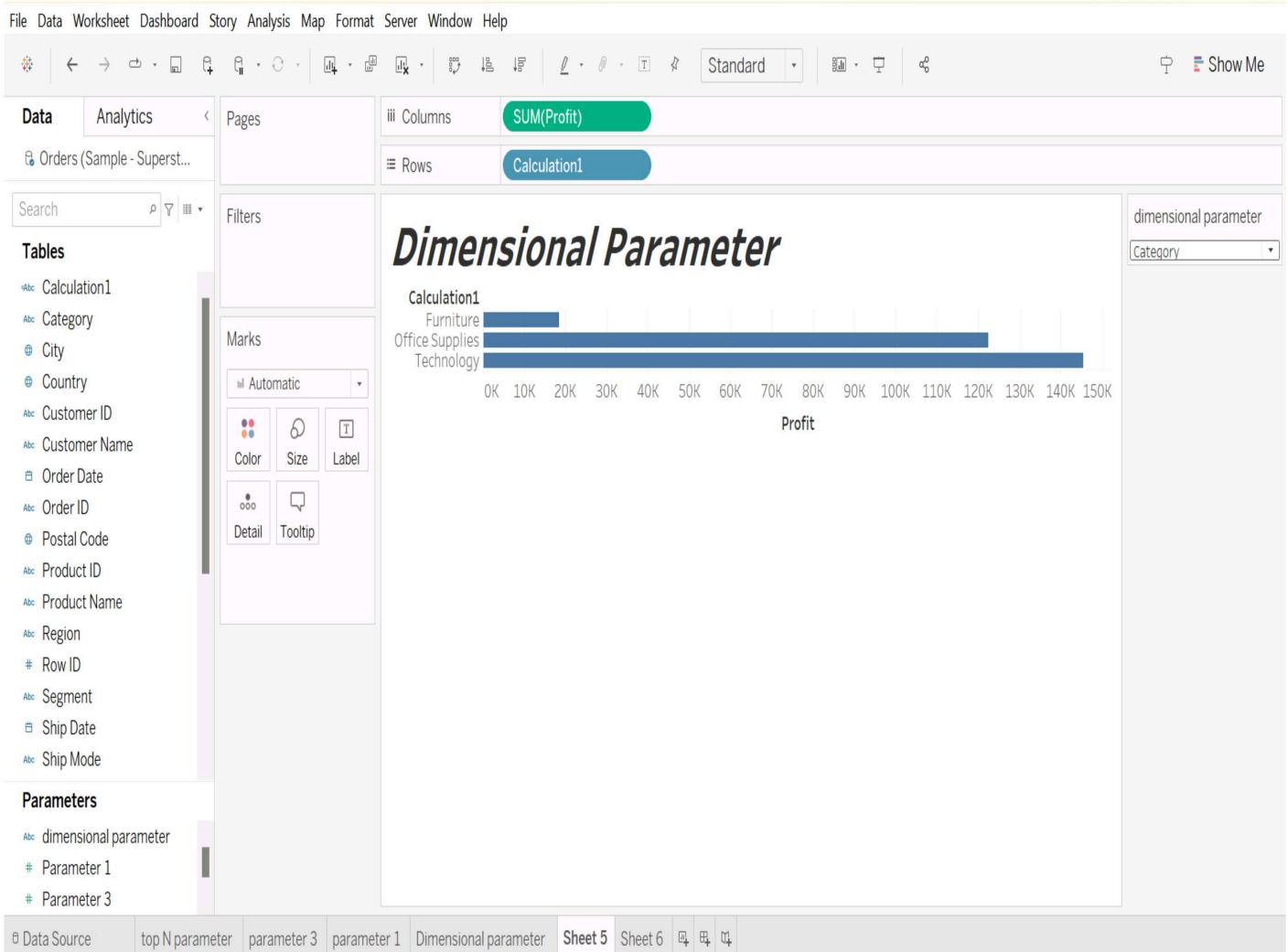
In below visualization we can observe that the Top N parameter display the top 25 sub category values according to their sales. We used sum of sales in colum field and sub category im rows field the we got the resultant visualization showing top 15 sub category values.



Dimensional Parameter: Dimensions contains qualitative values (such as names, dates or geographical data). We can use dimensions to categorize, segment, and reveal the details in your data. Dimensions affect the level of detail in the view.

- Dimensions are categorical data fields that represent qualitative attributes.
- They provide context and structure to data, allowing users to segment, group, and categorize information for analysis.
- They are typically used on the rows and columns of a visualization, defining the axes of charts and graphs.

In below visualization we use sum of profit in column field and calculation in row field gives the resultant visualization shows the profit of categorical values by performed calculation



Dynamic Dimensional Parameter : Dynamic dimensional parameter is very similar to dynamic dimensional parameter, but the values in dimension are changed dynamically according to the user guidance.

- After creating a dimensional parameter we use it in the visualizations then we get the resultant visualization by performing the calculations below.
- The values in visualizations changes according to the dynamic changes in dimensional parameter.

