

# **DATA ANALYTICS WITH TABLEAU**

## **ASSIGNMENT-4**

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## **DATASET :** Sample - Superstore.xls

Task 1:- Create one fixed and one exclude LOD expression.

Task 2: Create any 2 map visualizations using geographical data.

Task 3: Create Top N and/or Dynamic dimension parameters and utilize those in your workbook.

### **Explain LOD Expression, Map Visualizations using geographical data and Top N, Dynamic dimension Parameters**

LOD Expression :-Level of Detail (LOD) expressions are used to run complex queries involving many dimensions at the data source level instead of bringing all the data to Tableau interface.

Different types of LOD functions :- There are three types LOD functions. They are:-

- 1.Fixed
- 2.Include
3. Exclude

## **Map Visualization using geographical data :-**

Tableau is a tool for analyzing geographical data. It can automatically turn location data into interactive maps.

### **ZOOM Levels :-**

16 In Map Visualization, Geographical fields are double click on the field the data pane and tableau will create a map using generated latitude and longitude fields.

### **Top N Parameter:-**

Top N parameter uses a value selected by the user, where N is a value. The value can be static or controlled by a parameter. Top N parameter is also known as Bottom N. Tableau allows users to filter and display a certain percentage of their data.

### **Dynamic Dimension Parameters:-**

Create a Parameter. Create a new Parameter that lists your dimensions. Create a Calculated field that will be used as a dimension in your worksheet. Dimension to display when a particular parameter value is selected. Add the calculated fields to the canvas. 1) Colors 2) Filters 3) Select any ratings or price ranges.

# Tableau Starting

The screenshot displays the Tableau Desktop interface. At the top, the window title is 'Tableau - Book1' with a menu bar containing 'File', 'Data', 'Server', and 'Help'. The interface is divided into several sections:

- Connect (Left Sidebar):** A dark blue sidebar with a search icon at the top. It contains sections for 'Search for Data' (Tableau Server), 'To a File' (Microsoft Excel, Text file, JSON file, Microsoft Access, PDF file, Spatial file, Statistical file, More...), 'To a Server' (Microsoft SQL Server, MySQL, Oracle, Amazon Redshift, More...), and 'Saved Data Sources' (Sample - EU Superstore, Sample - Superstore, World Indicators).
- Open (Top Center):** A light gray area with a large empty box and the text 'Book1' below it. A link 'Open a Workbook' is visible in the top right corner of this section.
- Quick Start (Bottom Center):** A section titled 'Quick Start' featuring three 'Accelerators' (Salesforce Sales Cloud, Customer Insights with..., Budget Controlling) and 'Sample Workbooks' (Explore what Tableau can do).
- Discover (Right Sidebar):** A light gray sidebar with a 'Discover' header. It includes a 'Meet Tableau' section with links like 'Get started', 'Tour the Tableau environment', 'Connect to and prepare data', and 'Learn more...'. Below this is a 'Resources' section with links like 'Get Tableau Prep', 'Tableau Blueprint Assessment', 'Tableau Community Forums', 'Tableau Accelerators', and 'Blog - Read latest post'. At the bottom, there is a promotional banner for 'Tableau 2023.3 available now' with a 'Explore now' link and a small graphic of a city skyline.

## Upload The Dataset in Tableau

Tableau - BookA4

FileDataServerWindowHelp

Connections

Sample - Superstore

Microsoft Excel

Sheets

Orders

People

Returns

New Union

New Table Extension

Sample - Superstore

Orders

Need more data?

Drag tables here to relate them. [Learn more](#)

Orders

22 fields 9994 rows

100 rows

Name

Orders

Fields

Type	Field Name	Physical Table	Remote Fie...
#	Row ID	Orders	Row ID
Abc	Order ID	Orders	Order ID
📅	Order Date	Orders	Order Date

#	Abc	📅	📅	Abc	Abc	Abc
Orders	Orders	Orders	Orders	Orders	Orders	Orders
Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name
1	CA-2016-152156	08-11-2016	11-11-2016	Second Class	CG-12520	Claire Gute
2	CA-2016-152156	08-11-2016	11-11-2016	Second Class	CG-12520	Claire Gute
3	CA-2016-138688	12-06-2016	16-06-2016	Second Class	DV-13045	Darrin Van Huff
4	US-2015-108966	11-10-2015	18-10-2015	Standard Class	SO-20335	Sean O'Donnell
5	US-2015-108966	11-10-2015	18-10-2015	Standard Class	SO-20335	Sean O'Donnell
6	CA-2014-115812	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman

Data Source

Fixed LOD Expression

Exclude LOD Expression

Geographical Data Map Visualiz...

Geographical data Map Visualiza...

Top N Example 1

Top N Example 2

Dynamic Dimension Parameter 1

Dynamic Dimension Parameter 2

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# Create One Fixed LOD Expression and one exclude LOD expression

## One Fixed LOD

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File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard

Show Me

Data Analytics

Sample - Superstore

Search

Folders

- Category
- City
- Country
- Customer ID
- Customer Name
- Order Date
- Order ID
- Postal Code
- Product Dimension
- Product ID
- Product Name
- Region
- Row ID
- Segment
- Ship Date
- Ship Mode
- State
- Sub-Category
- Measure Names
- Discount
- EXCLUDE product Count
- FIXED product count
- Profit

Parameters

- Parameter 2
- Select a Dimension
- Top N

Pages

Filters

- Customer Name
- Region
- Order ID
- Product Name
- Measure Names

Marks

Automatic

Color Size Text

Detail Tooltip

Measure Values

- SUM(FIXED product ..
- SUM(Quantity)
- SUM(Sales)

Columns

Measure Names

Rows

Customer Name Region Order ID Product Name

Fixed LOD Expression

Customer N..	Region	Order ID	Product Name	FIXED..	Quant..	Sales
Adam	Central	CA-2017-145877	Staple envelope	25.0	5.0	28.4
Shillingsburg	South	US-2017-108063	Newell 309	25.0	3.0	34.7
Alan Shonely	South	CA-2015-150749	Newell 333	13.0	2.0	5.6
Luke Foster	East	CA-2015-109512	Staple envelope	16.0	3.0	29.3
Philip Brown	South	CA-2014-107573	Staple envelope	11.0	3.0	23.5
Zuschuss	West	CA-2014-143336	Cisco SPA 501G IP P..	9.0	3.0	213.5
Donatelli			Newell 341	9.0	2.0	8.6
			Wilson Jones Hangi..	9.0	4.0	22.7
		CA-2017-141481	Kensington 6 Outlet ..	9.0	3.0	61.4

27 marks 9 rows by 3 columns SUM of Measure Values: 581.6

# One Exclude LOD Expression

Tableau - BookA4

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard

Sample - Superstore

Search

**Folders**

- Category
- City
- Country
- Customer ID
- Customer Name
- Order Date
- Order ID
- Postal Code
- Product Dimension
- Product ID
- Product Name
- Region
- Row ID
- Segment
- Ship Date
- Ship Mode
- State
- Sub-Category
- Measure Names
- Discount
- EXCLUDE product Count
- FIXED product count
- Profit

**Parameters**

- Parameter 2
- Select a Dimension
- Top N

**Pages**

**Filters**

- Order ID
- Measure Names
- CNT(Show Custom..
- ATTR(Show Custom..

**Marks**

Automatic

Color Size Text

Detail Tooltip

Measure Values

- ATTR(EXCLUDE pro..
- SUM(FIXED product ..
- SUM(Sales)

**Columns**

Measure Names

**Rows**

Customer Name Region Order ID Product ID CNT(Show Custom..

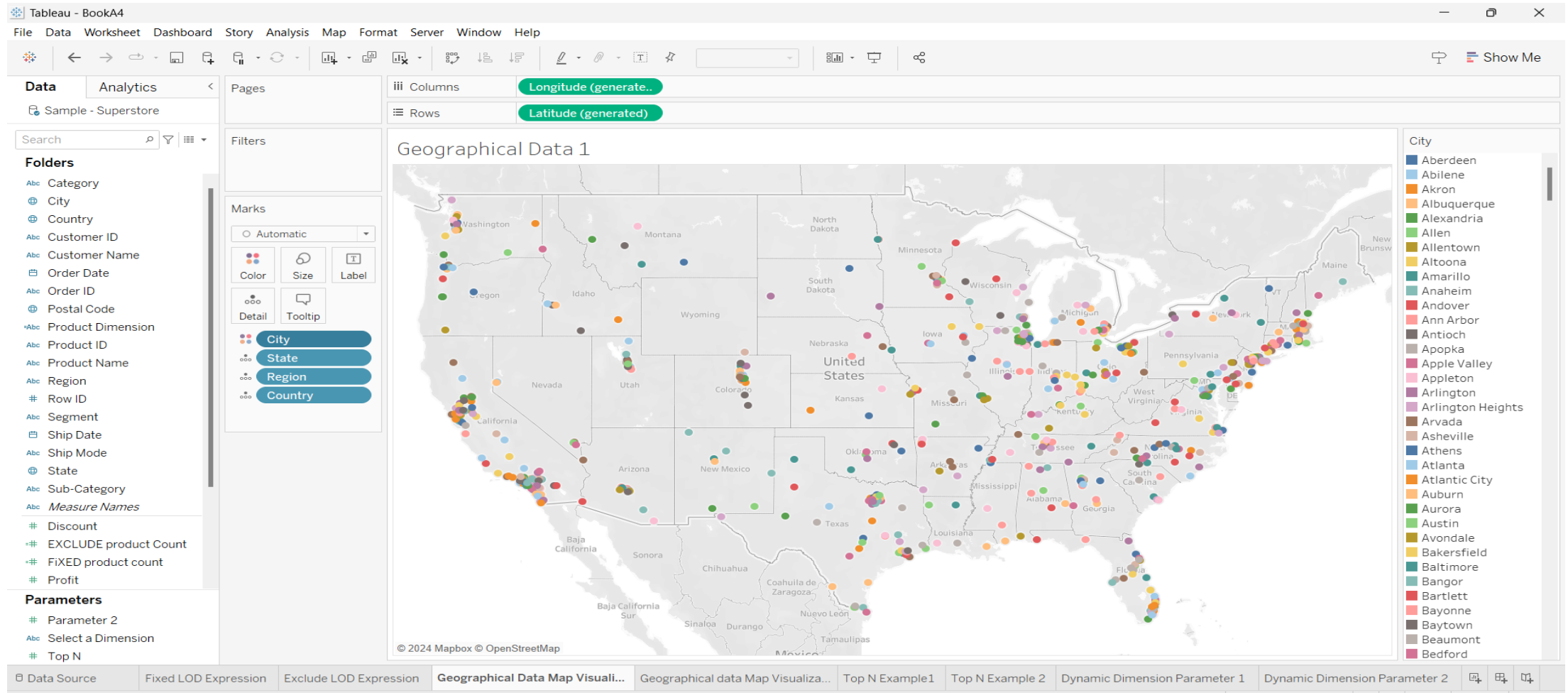
### Exclude LOD Expression

Customer Name	Region	Order ID	Product ID	Show Cu..	EXCL..	FIXED..	Sales
Eugene Hildebrand	West	CA-2014-100867	TEC-PH-10004922	1	1	18	322
Jas O'Carroll	West	US-2016-115819	OFF-AR-10000823	1	6	11	5
			OFF-AR-10004456	1	6	11	73
			OFF-BI-10000050	1	6	11	6
			OFF-BI-10000591	1	6	11	9
			OFF-PA-10002377	1	6	11	23
Jim Mitchum	West	CA-2014-100363	TEC-PH-10004700	1	6	11	40
			OFF-FA-10000611	1	2	12	2
			OFF-PA-10004733	1	2	12	19
John Lee	South	US-2017-167920	OFF-AP-10000159	1	7	34	215
			OFF-BI-10003274	1	7	34	16
			OFF-BI-10004236	1	7	34	29
			OFF-LA-10004409	1	7	34	6
			OFF-ST-10004963	1	7	34	15
			TEC-AC-10001013	1	7	34	146
			TEC-CO-10001046	1	7	34	1,400
			OFF-BI-10004308	1	1	7	67
Pete Armstrong	West	US-2016-117387	FUR-BO-10001519	1	6	24	87
Rob Lucas	East	US-2017-169551	OFF-PA-10004100	1	6	24	16
			OFF-ST-10004835	1	6	24	13
			TEC-AC-10002018	1	6	24	17
			TEC-AC-10003033	1	6	24	528
Tamara Willingham	West	CA-2015-137113	TEC-PH-10001363	1	6	24	684
			FUR-CH-10001215	1	5	12	2,004
			FUR-TA-10001705	1	5	12	1,913
			OFF-PA-10002222	1	5	12	114
			OFF-PA-10004255	1	5	12	32
			OFF-ST-10002554	1	5	12	147

84 marks 28 rows by 3 columns SUM of Measure Values: 8.659

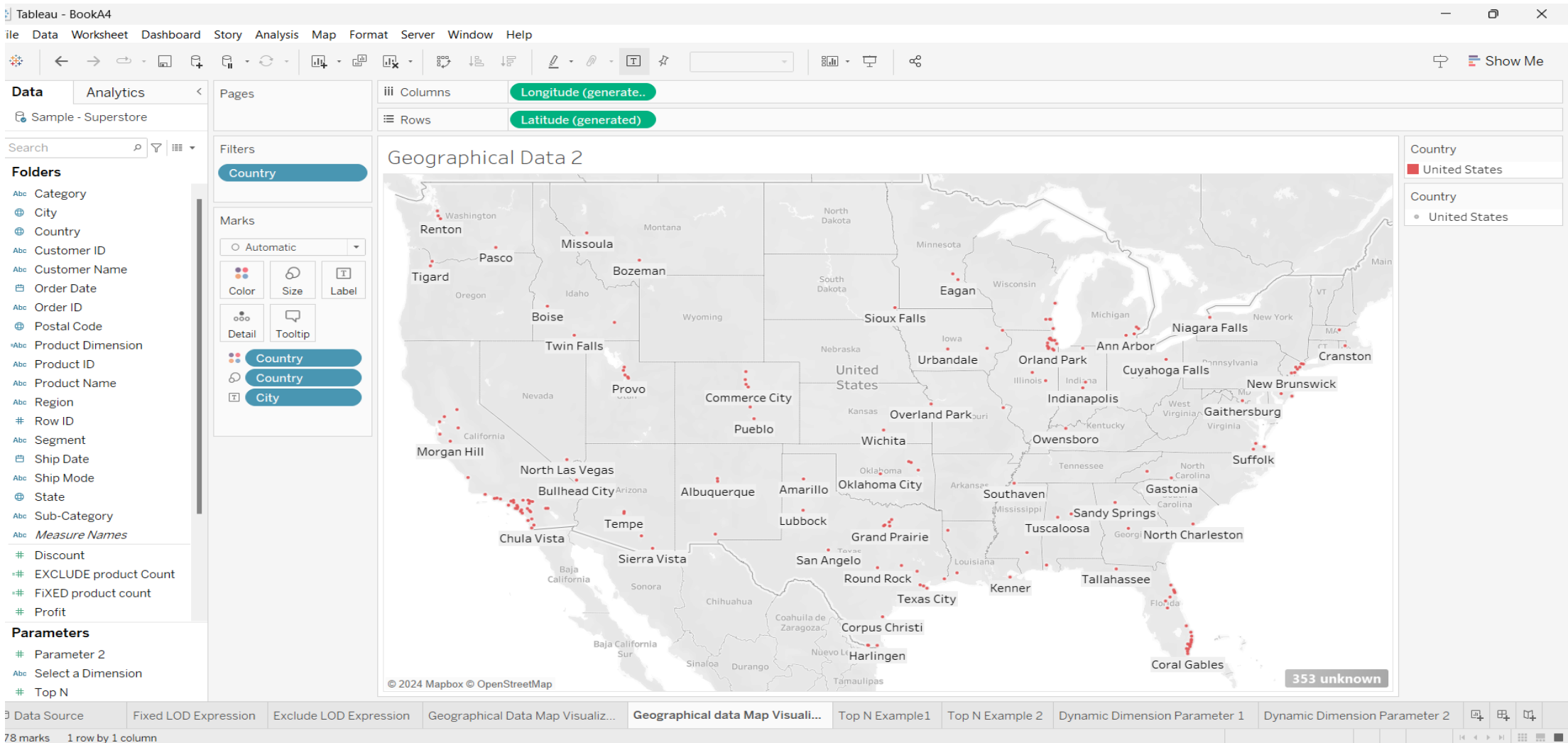
# Create any 2 map visualizations using geographical data

## Map visualization 1



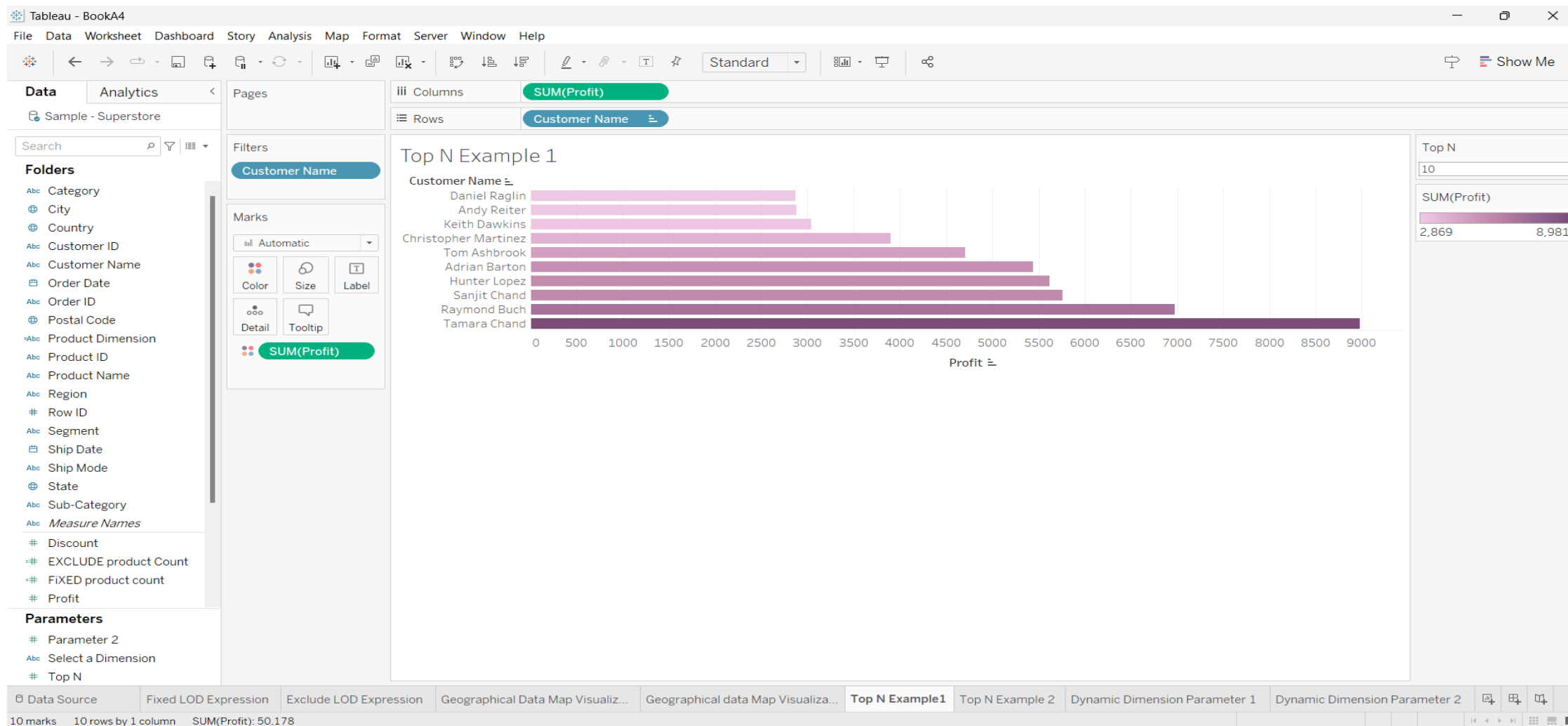


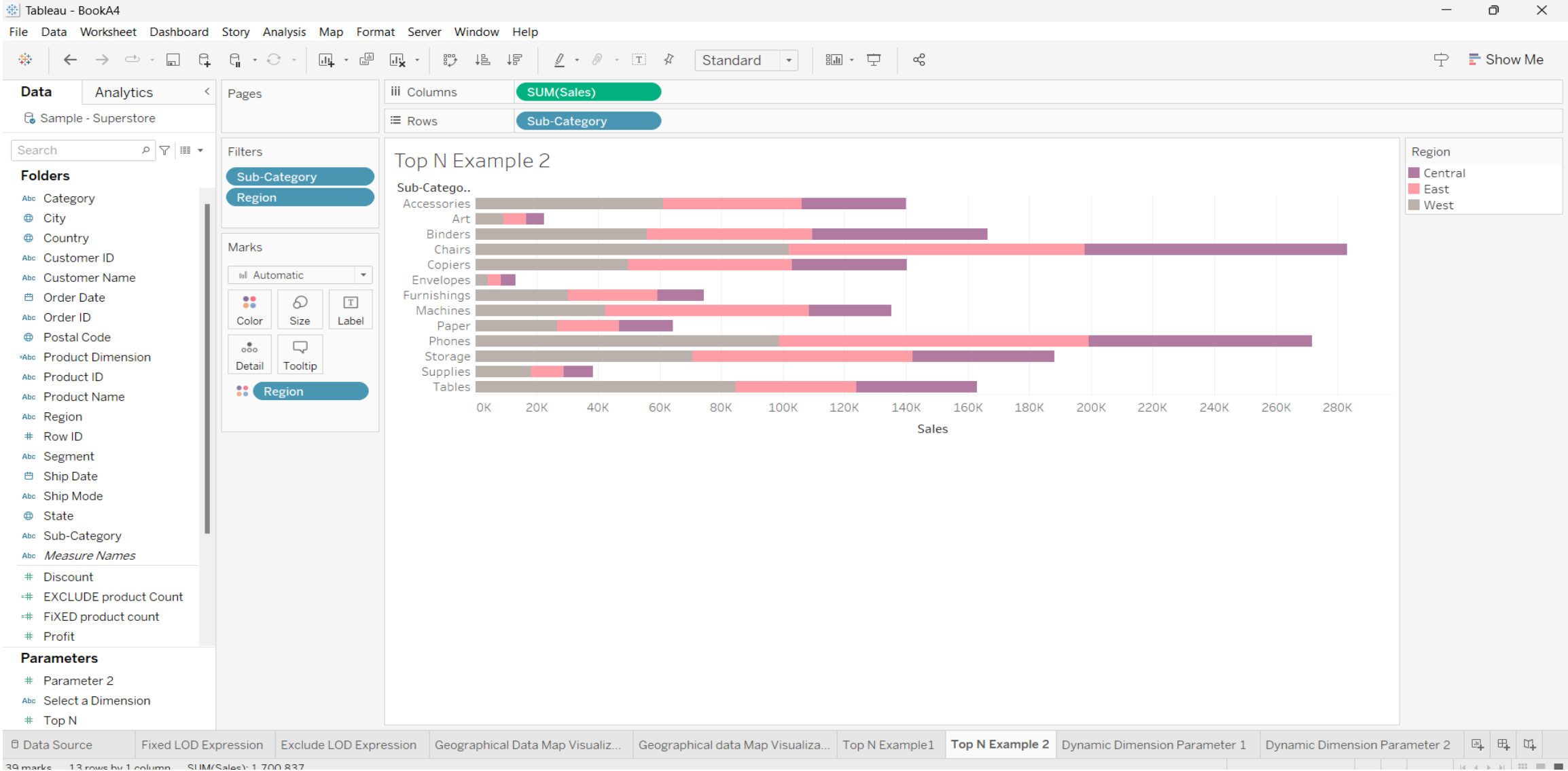
# Map visualization 2



# Create Top N and/or Dynamic dimension parameters and utilize those in your workbook

## Top N Parameters





# Dynamic Dimension Parameter 1

