TABLEAU

A Business Intelligence tool

Tableau

Tableau is a visual analytical tool to present the large complex data into the readable & understandable format.

These days it is widely used by most of the business sectors as it provide great quality with ease.

Tableau can connect to 50+ data sources and gives us 24 types of charts.

Why Tableau?

- Speed
- User Friendly
- Eye-catching and Interactive Dashboards
- Direct Connection
- Easy Publishing and Sharing
- Growing Market

Tableau Products

- Tableau Desktop - to create the visualizations
- Tableau Public – a free version to create interactive visualizations.
- Tableau Online - cloud platform to share the visualizations.
- Tableau Server – to share the visualizations with the people in the organization
- Tableau Reader – to view visualizations created in Tableau can not edit.
- Tableau Prep – Used for cleaning the data

Installing Tableau

(14 Days Free Trial)

- Go to Tableau.com
- Click on Try Now
- Enter your Email id
- Click on Download free trail
- Double click the downloaded file to install it.
- Fill the registration form and get started.
- https://public.tableau.com/en-us/s/download

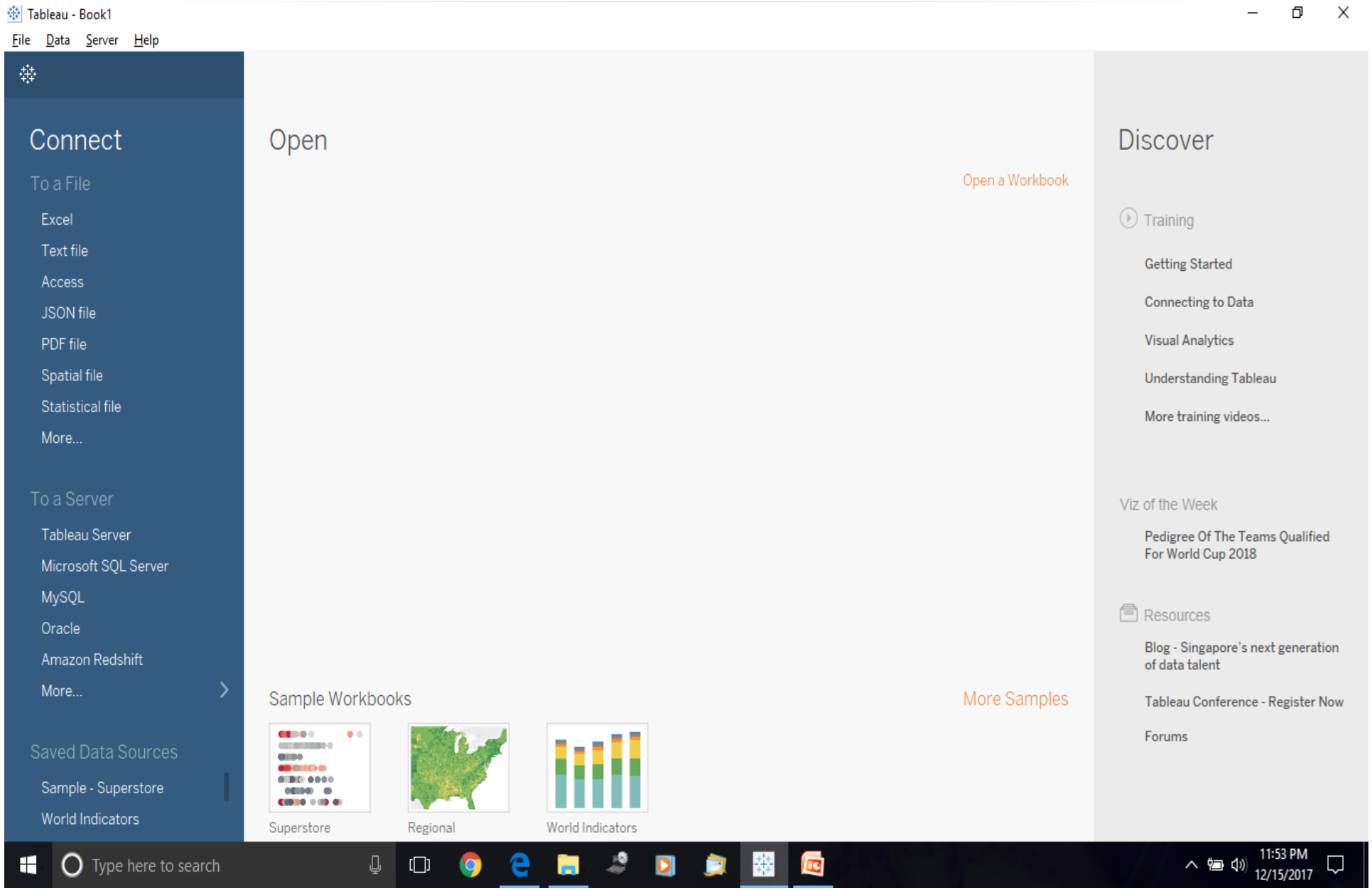
Tableau - Book1
File Data Server Help
Connect
To a File
Excel
Text file
Access
JSON file
PDF file
Spatial file
Statistical file
More...
To a Server
Tableau Server
Microsoft SQL Server
MySQL
Oracle
Amazon Redshift
More...
Saved Data Sources
Sample - Superstore
World Indicators
Open
Open a Workbook
Sample Workbooks
More Samples
Superstore
Regional
World Indicators
Discover
Training
Getting Started
Connecting to Data
Visual Analytics
Understanding Tableau
More training videos...
Viz of the Week
Pedigree Of The Teams Qualified For World Cup 2018
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Tableau

There are three basic steps involved in creating any Tableau report.

- **Connect to a data source** − It involves locating the data and using an appropriate type of connection to read the data.

- **Choose dimensions and measures** − This involves selecting the required columns from the source data for analysis.

- **Apply visualization technique** − This involves applying required visualization methods, such as a specific chart or graph type to the data being analyzed.

Tableau

The Sample Data: Tableau trial version comes with a sample data base ‘Sample – Superstore.xls’. We can access this database at the below location:

\Documents\ Documents\My Tableau Repository\Datasources\10.4\en_US-US\ Sample – Superstore.xls

Tableau & Excel a Comparison

In excel we summarise the data using pivot table. The similar functionality is provided in tableau in more comfortable manner.

For Example let try to retrieve the category wise product sales from Sample – Superstore database.

- Using Excel

- Using Tableau

Live and Extract Connection

Tableau provides two types of connections:

1. Live Connection

2. Extract
(A saved subset of a data source)

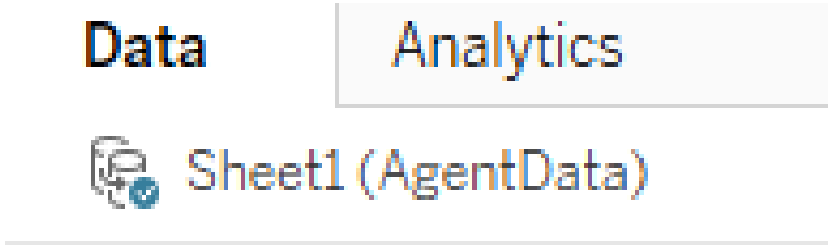


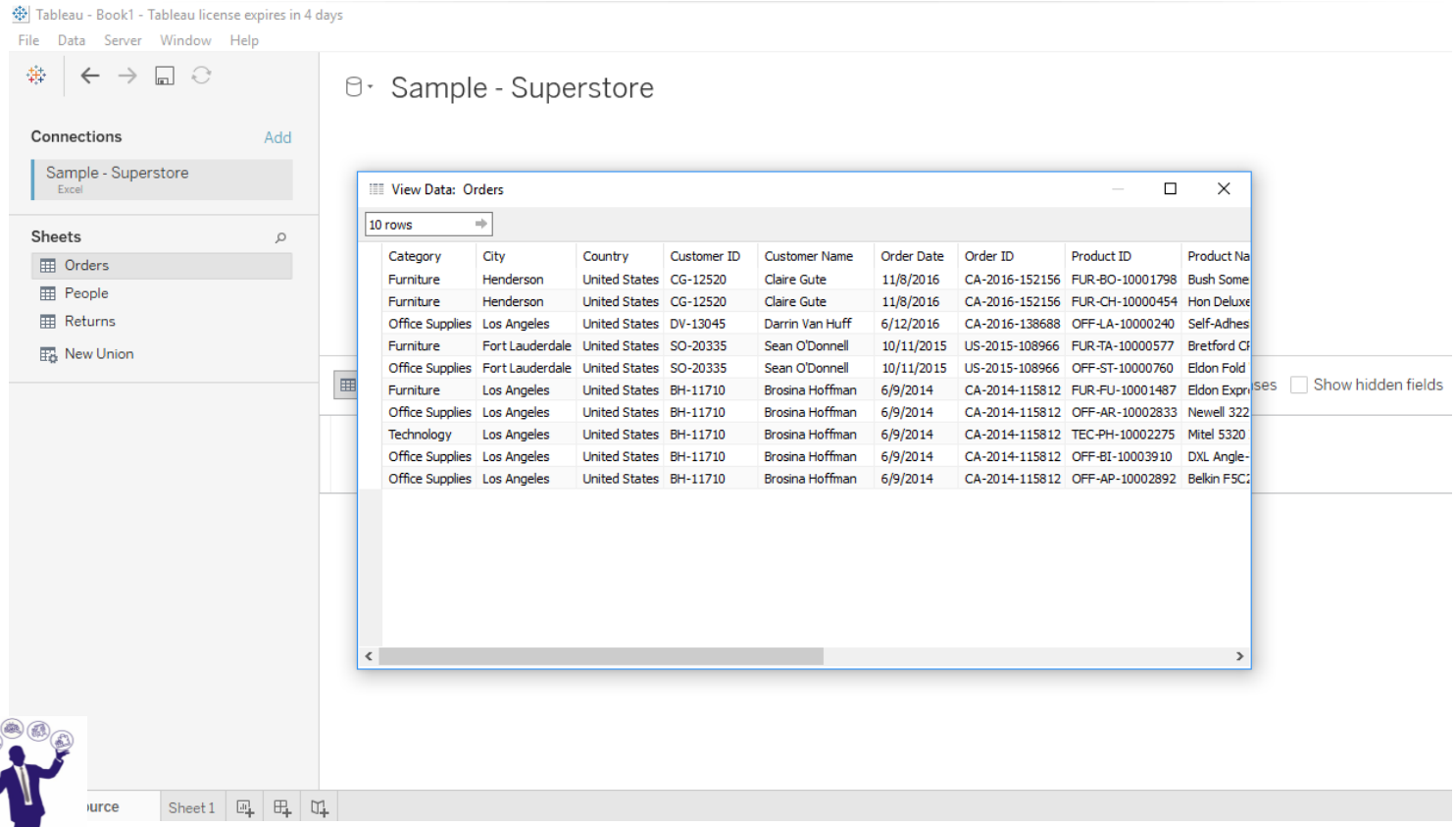
Tableau Data Types

There are 6 data types in Tableau:

1. Number (#)
2. String / Text (ABC)
3. Date ( )
4. Geographic ( )
5. Boolean (True / False)
6. DATE & TIME

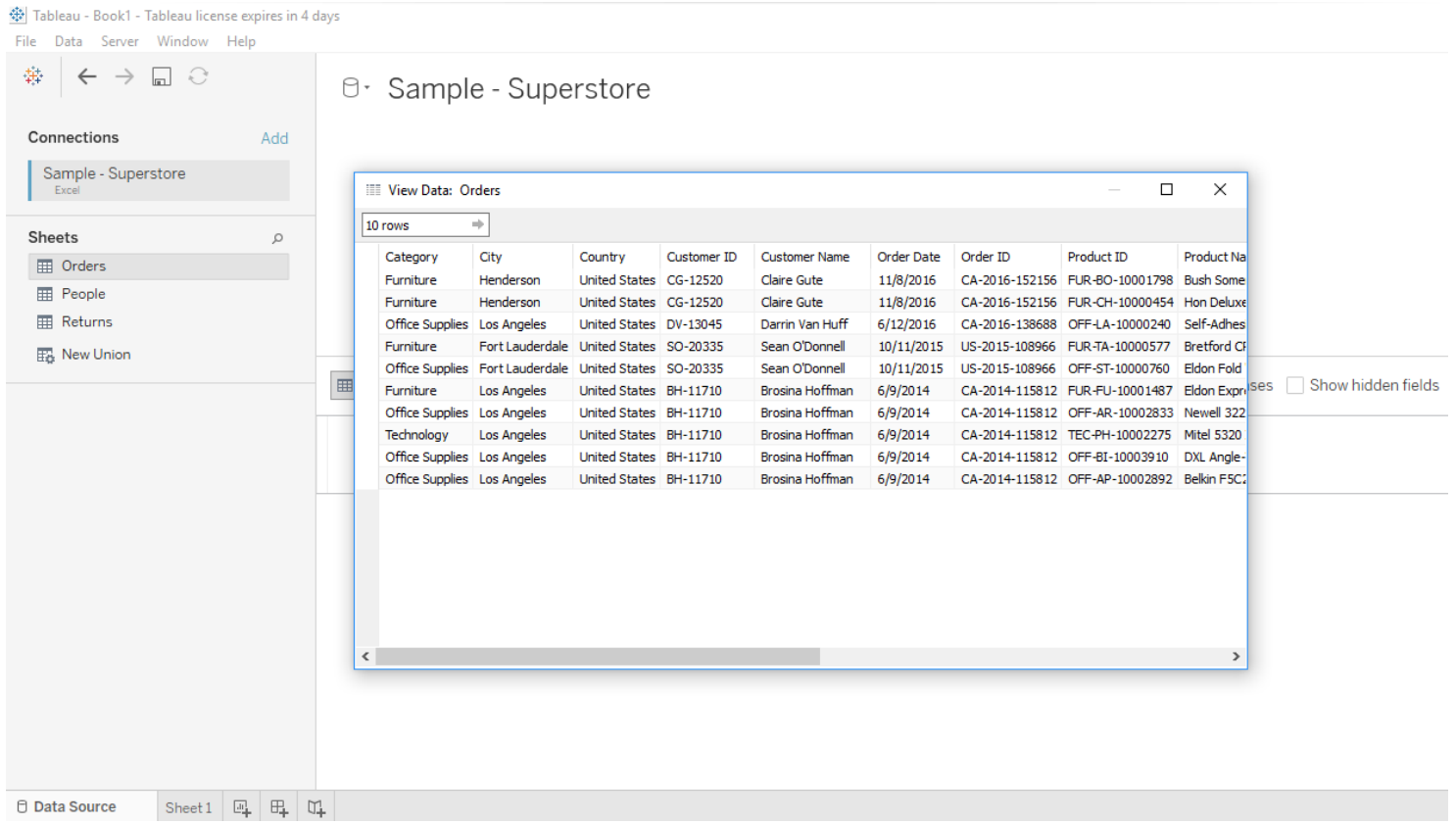
View Data

To view the data source data we need to click on view data button. Alternatively we can drag and drop the sheet in Sheet Area



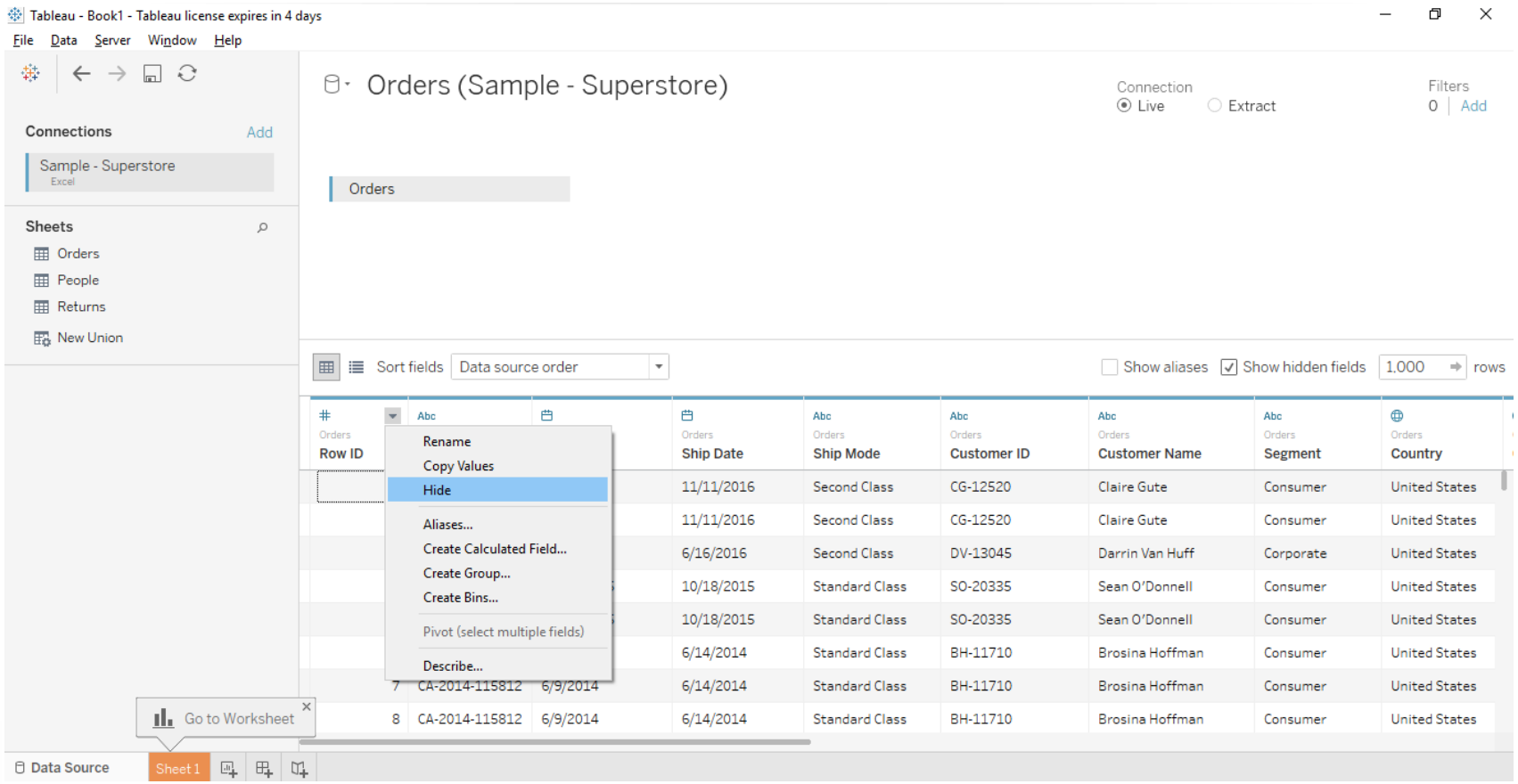
View Data

To view the specific number of records we can specify the number in row count box.



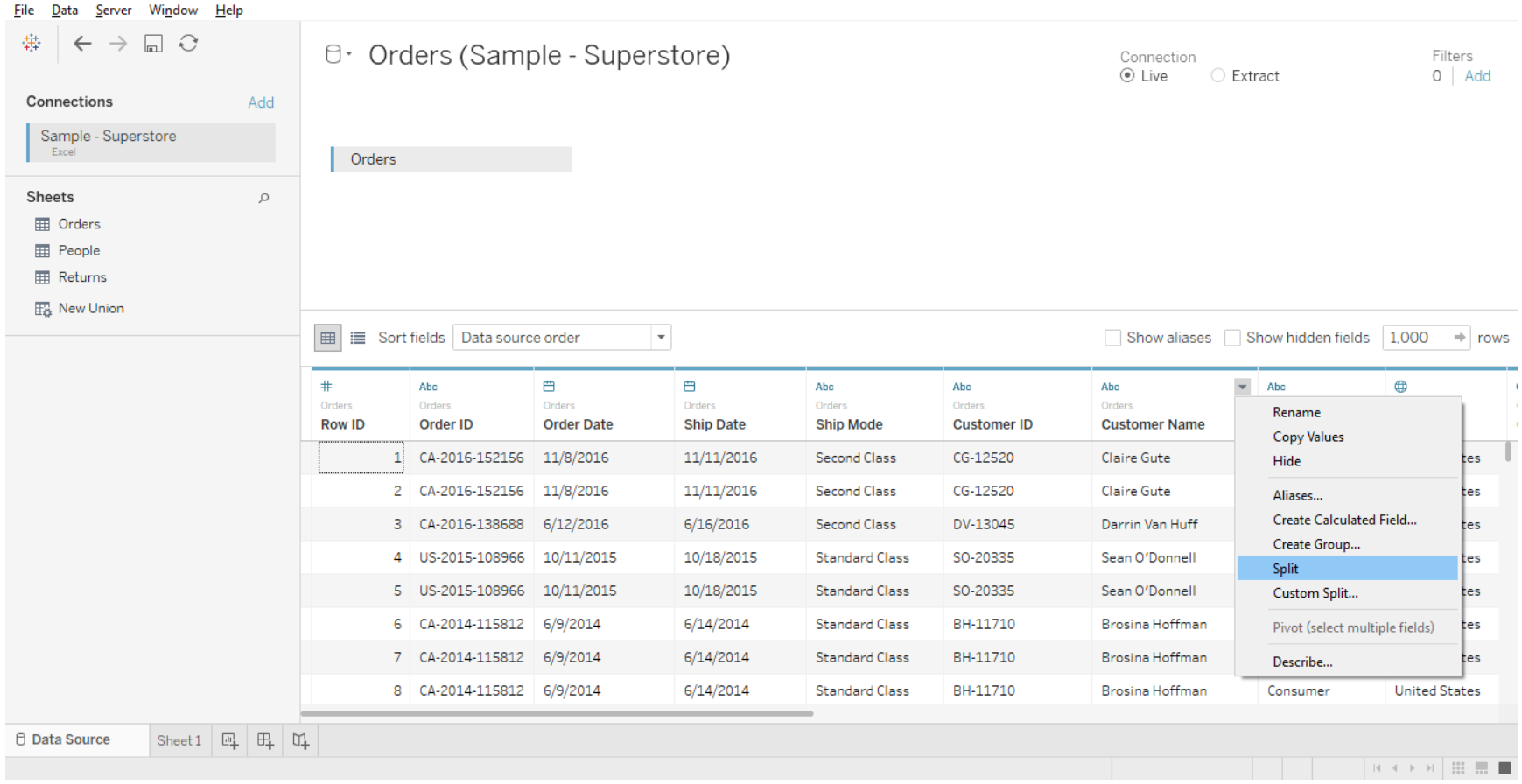
View Data

To hide a particular column we need to click on the column and select hide.



Column Formatting

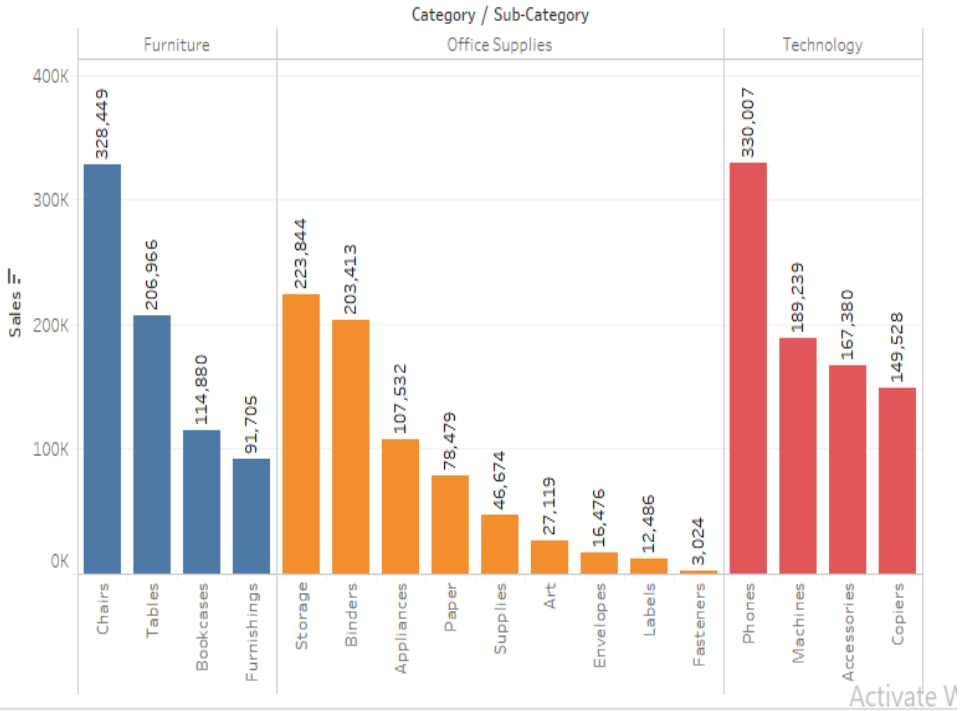
Rename – Double Click on the column and edit the name.
Copy – Select the column / Row copy and paste it in Excel



ASSIGNMENT

A-1 create a Graph display category & subcategory wise sales

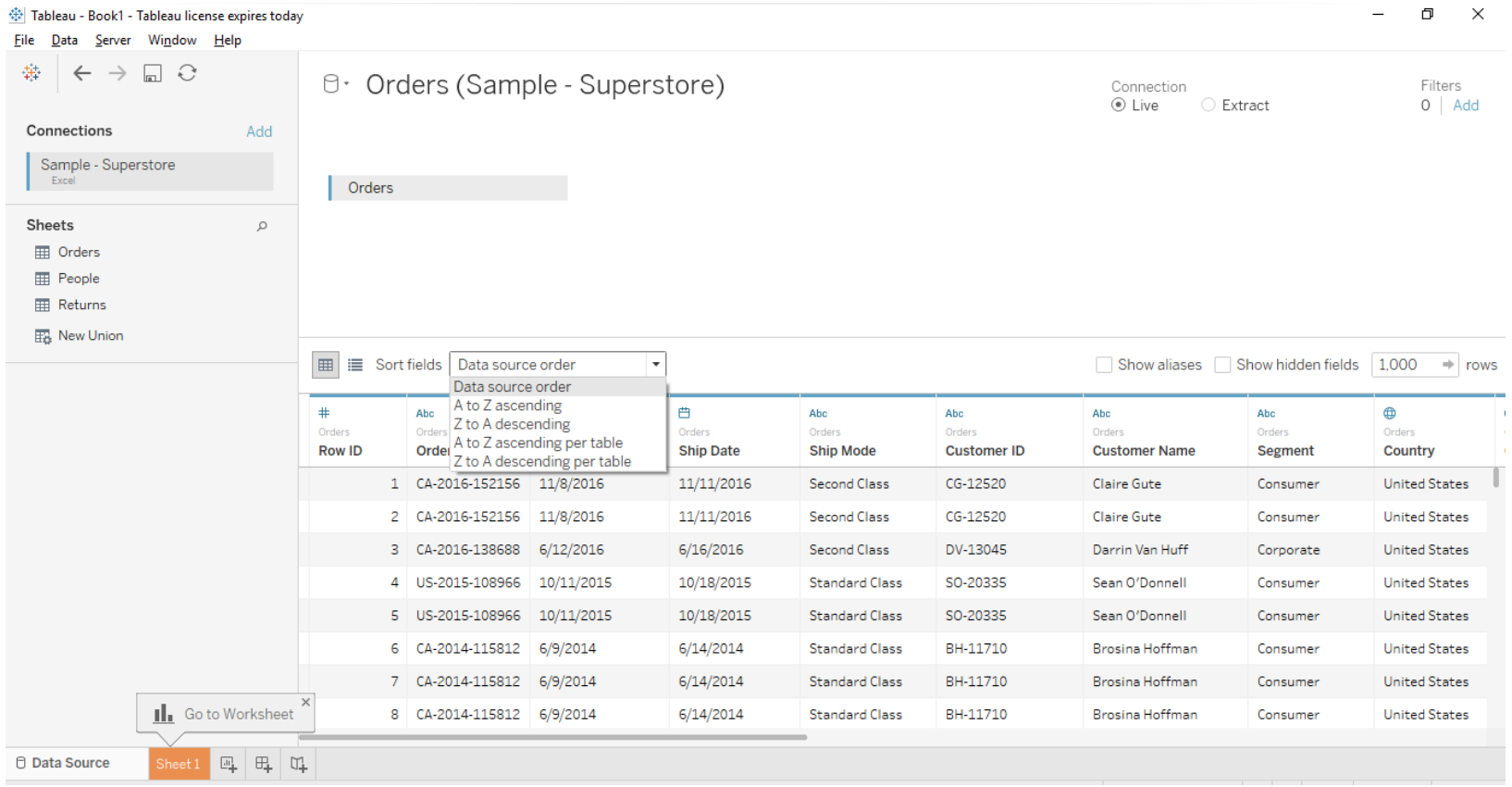
A-2 Category, Region & Sub-Category wise Profit



		Region			
Category	Sub-Catego..	Central	East	South	West
Furniture	Bookcases	-1,998	-1,168	1,339	-1,647
	Chairs	6,593	9,358	6,612	4,028
	Furnishings	-3,906	5,881	3,443	7,641
	Tables	-3,560	-11,025	-4,623	1,483
Office Supplies	Appliances	-2,639	8,391	4,124	8,261
	Art	1,195	1,900	1,059	2,374
	Binders	-1,044	11,268	3,901	16,097
	Envelopes	1,778	1,812	1,465	1,909
	Fasteners	237	264	174	275
	Labels	1,073	1,129	1,041	2,303
	Paper	6,972	9,015	5,947	12,119
	Storage	1,970	8,389	2,274	8,645
	Supplies	-662	-1,155	2	626
Technology	Accessories	7,252	11,196	7,005	16,485
	Copiers	15,609	17,023	3,659	19,327
	Machines	-1,486	6,929	-1,439	-619
	Phones	12,323	12,315	10,767	9,111

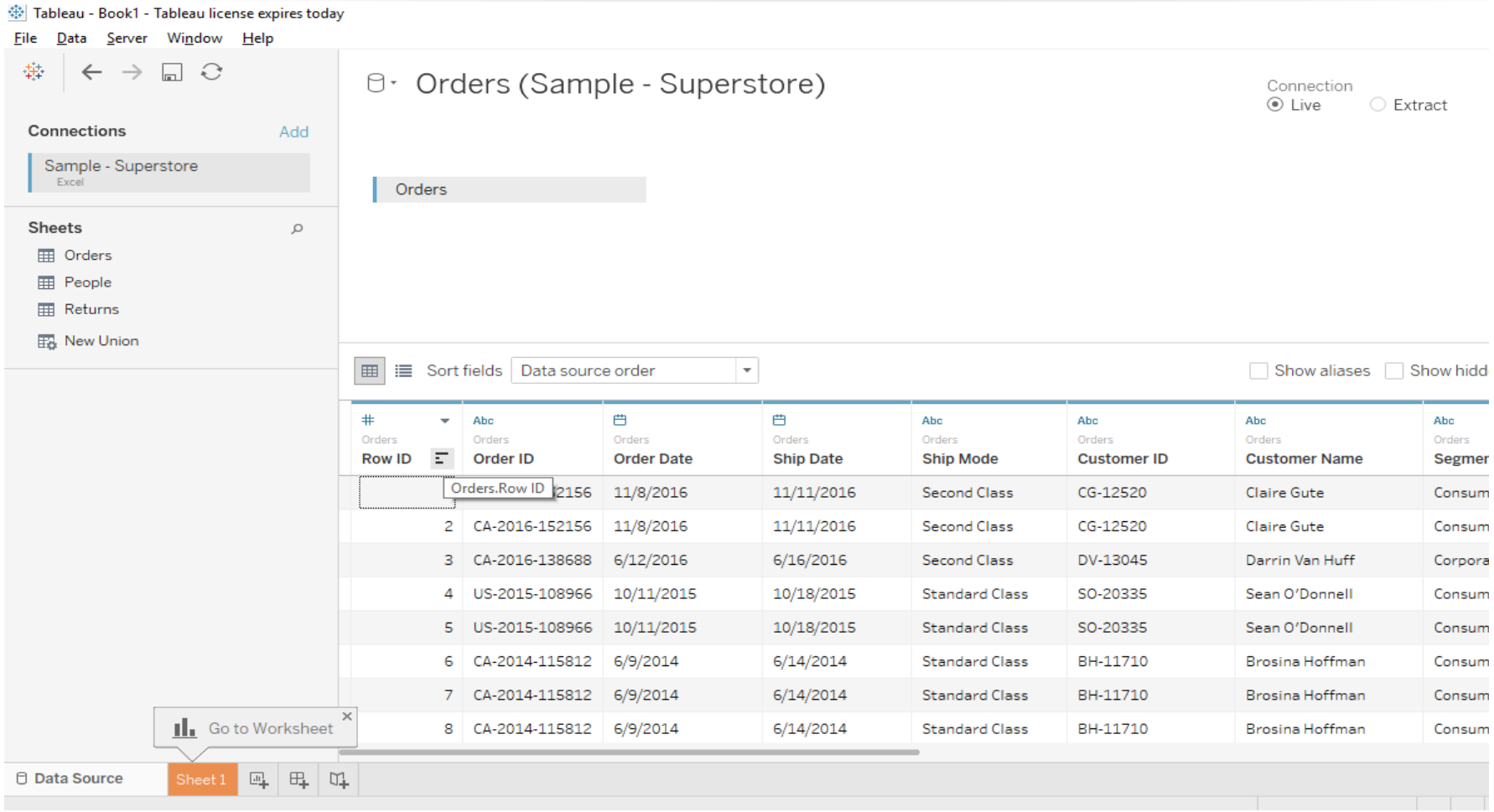
Sorting Columns

By default the order of the fields we get in Tableau is same as it is in the data source. These fields can be sorted using the sort filed option.



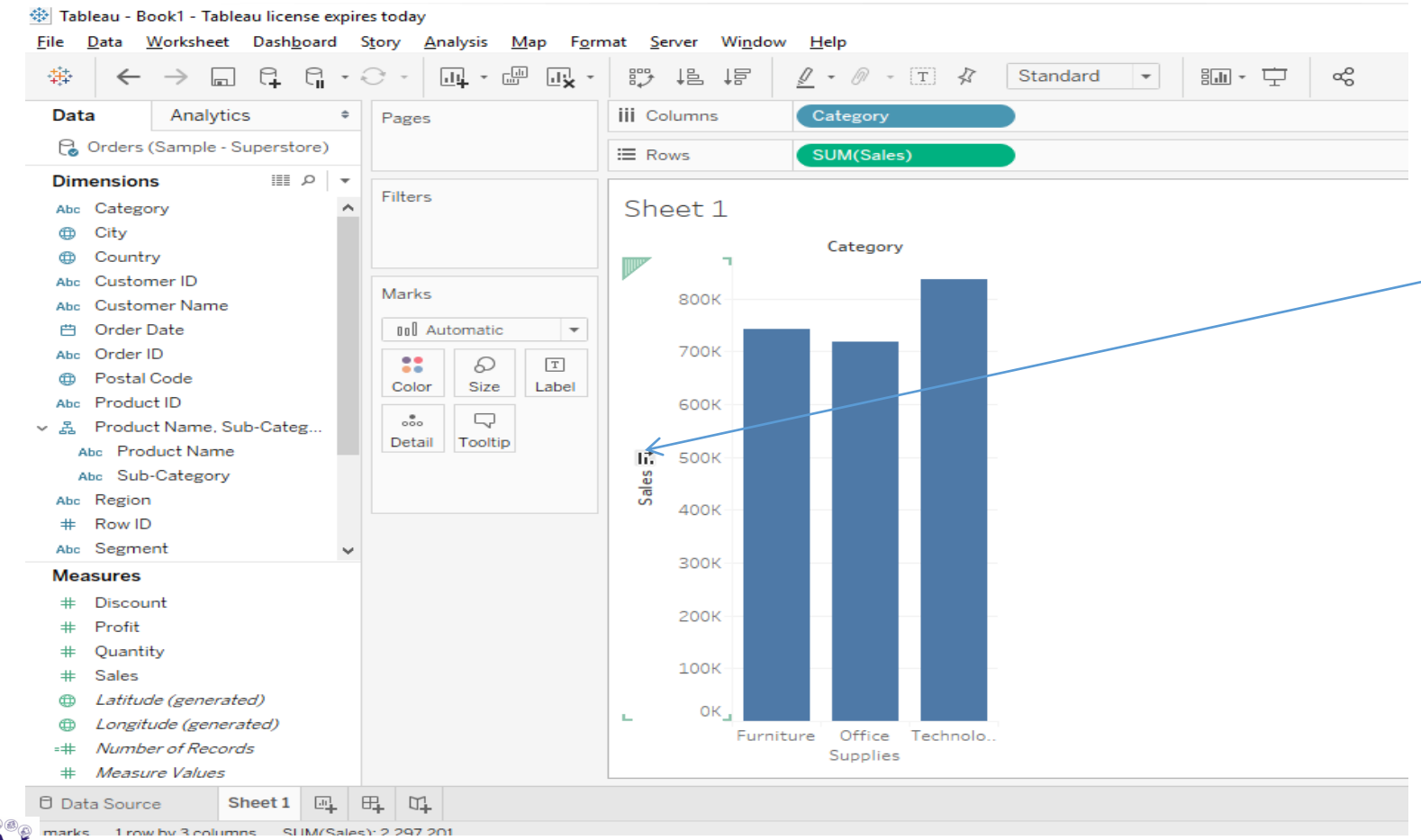
Sorting Rows/Data

To arrange the data in ascending or descending order we need to click on small icon with the field name



Sorting Rows/Data

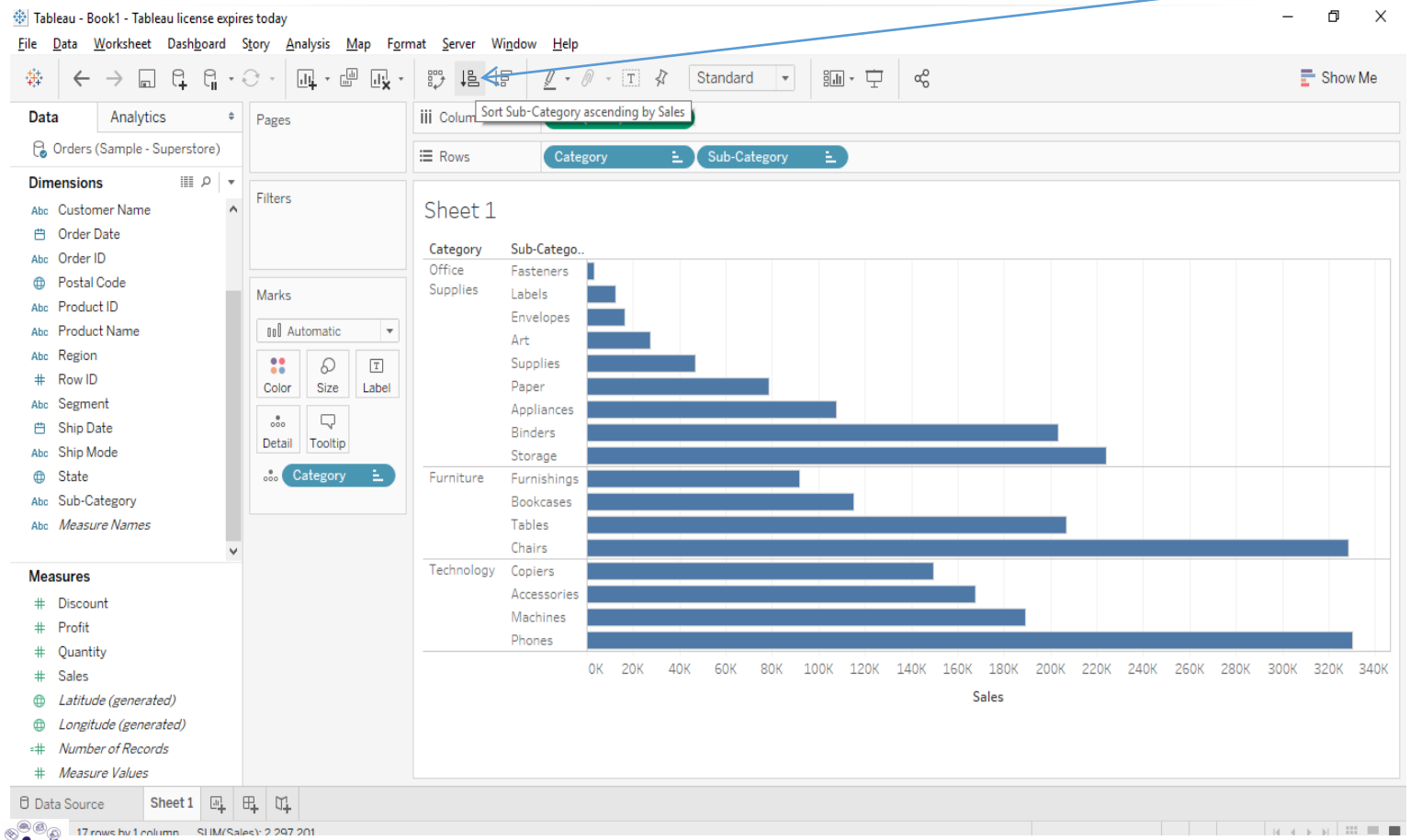
Quick Sort : The quick sort button enables us to sort the graph in ascending or descending order.



Sorting Rows/Data

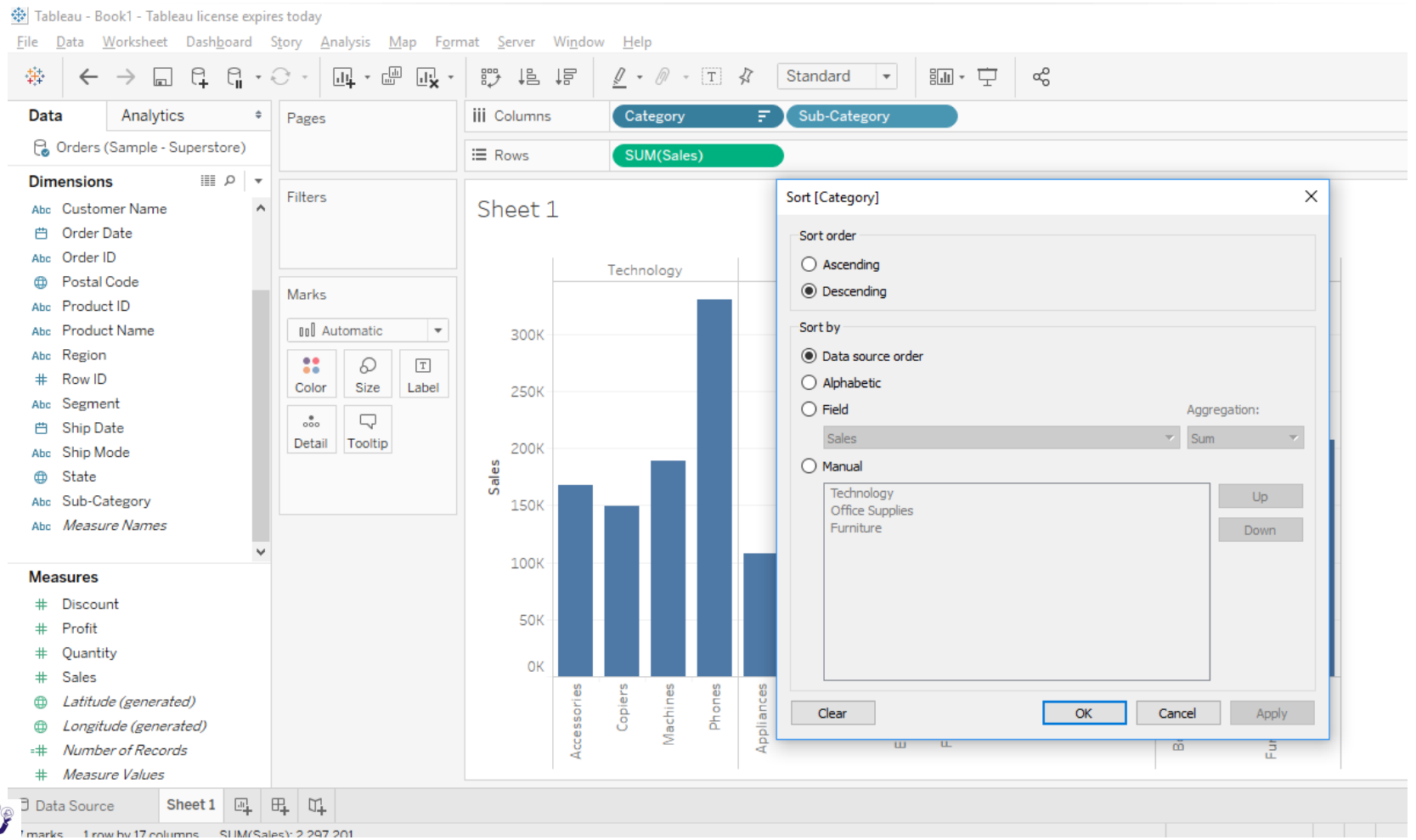
Toolbar Sort : To sort through toolbar we need to select the respective pill and click on the sort button.

Sort Buttons



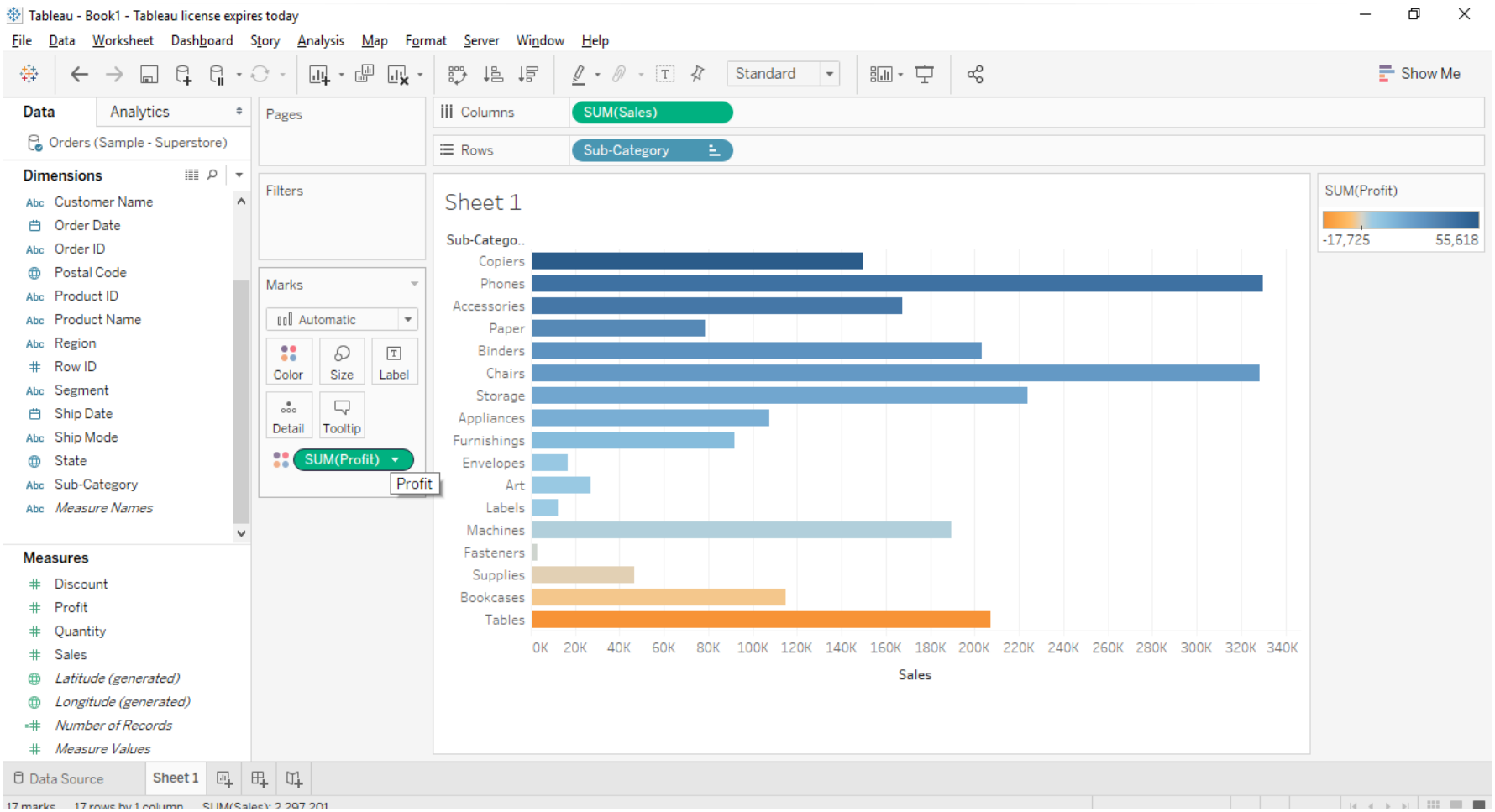
Sorting Rows/Data

Sorting By Pills : This gives us few advance options.



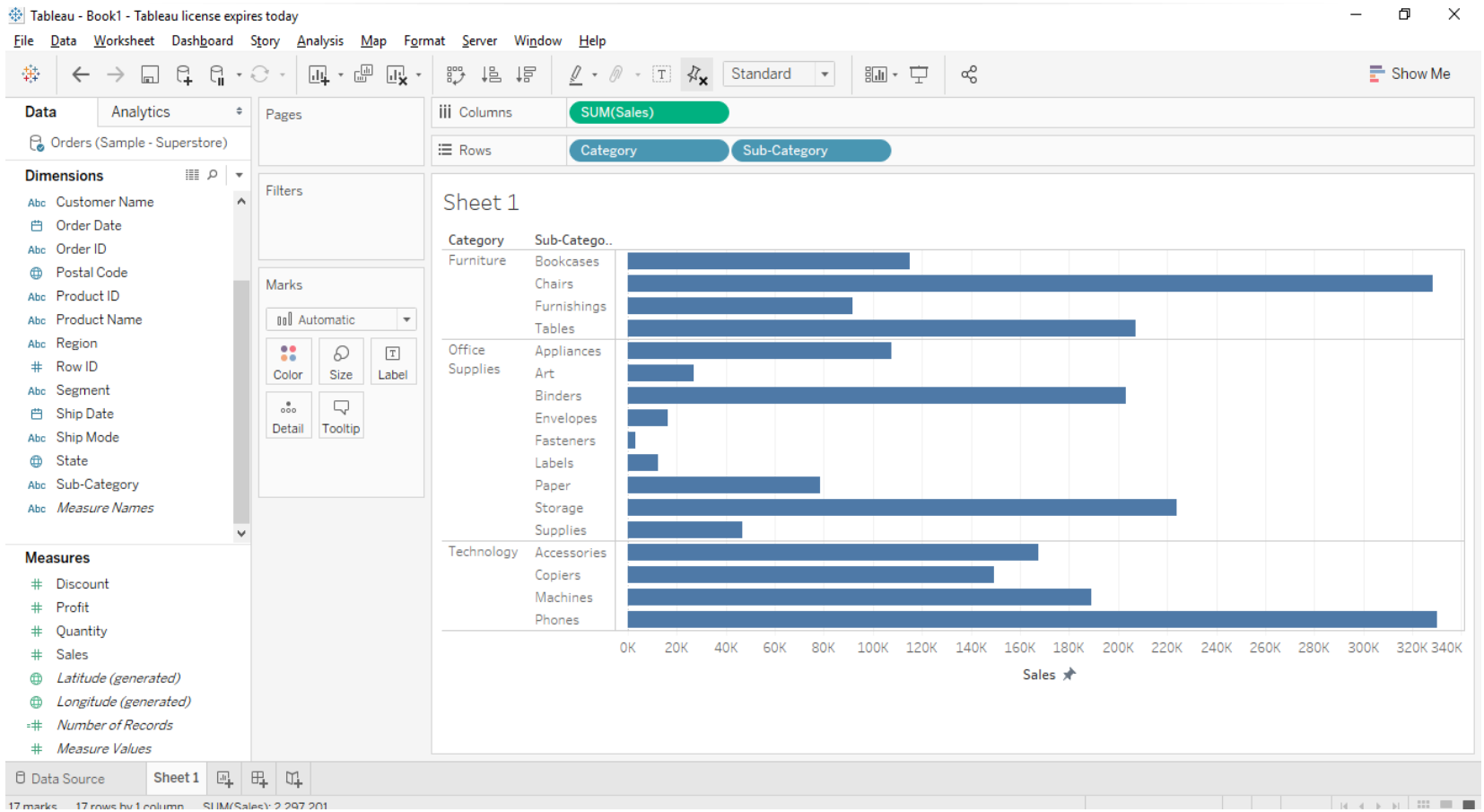
Sorting Rows/Data

Sorting By Marks Card



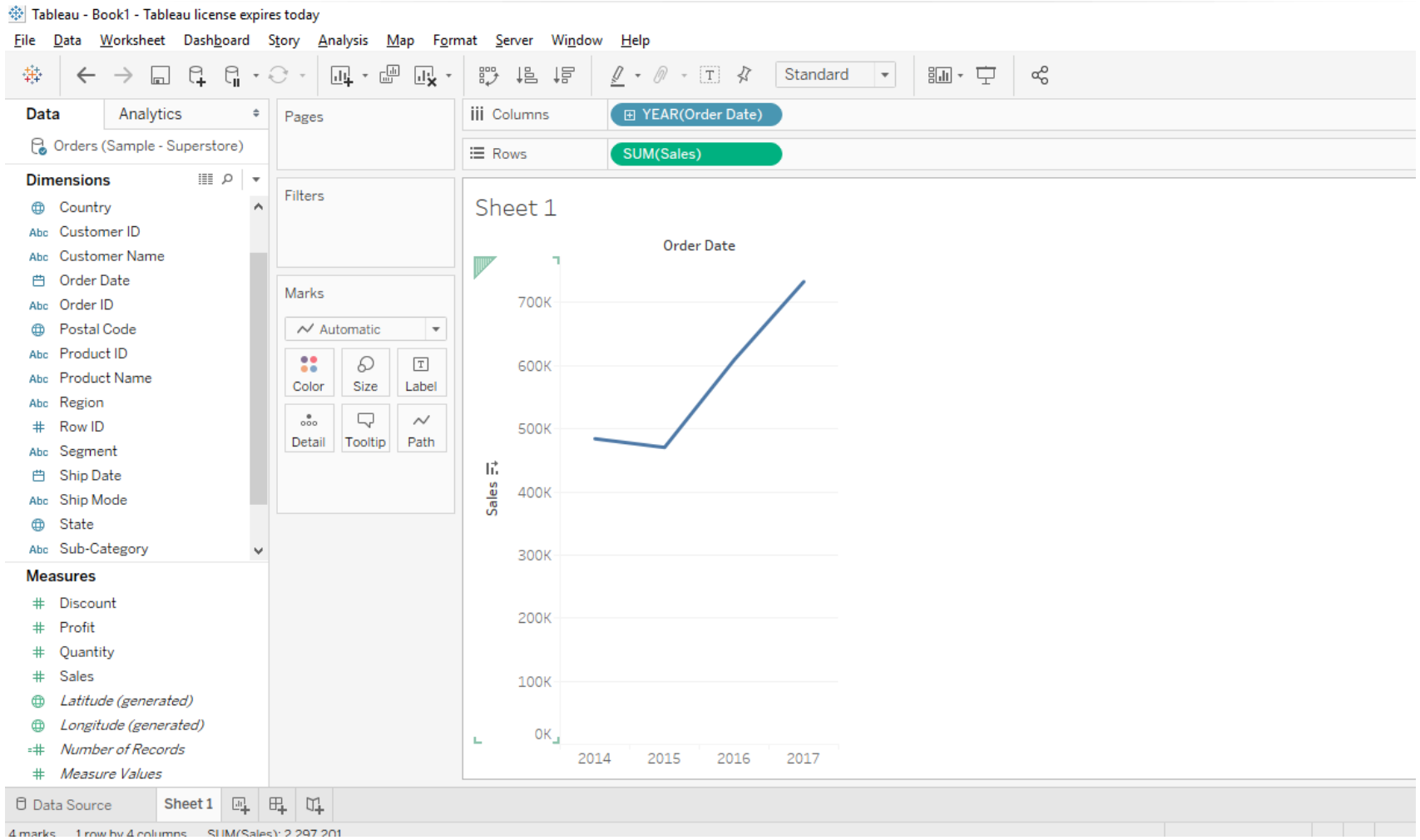
Creating Hirearchies

We can create the hierarchy of fields by dropping one filed into another.



Auto Hirearchies

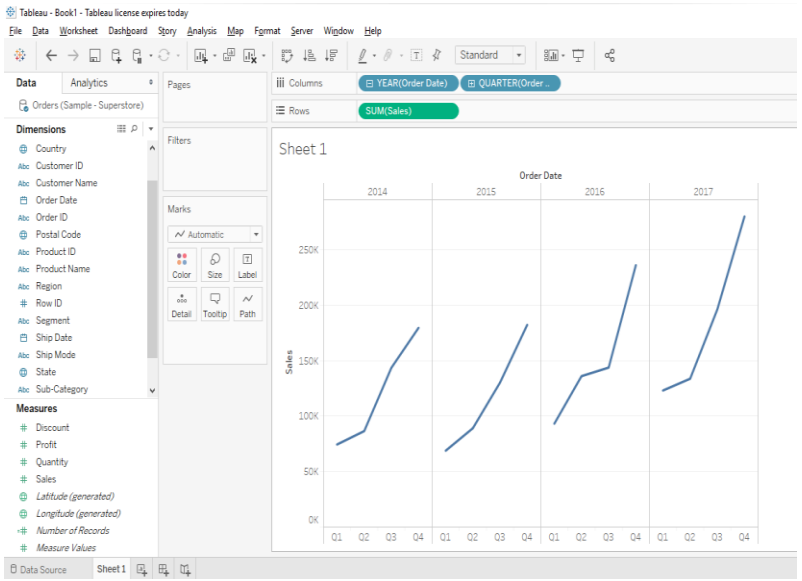
Tableau create the auto hierarchy for date fields



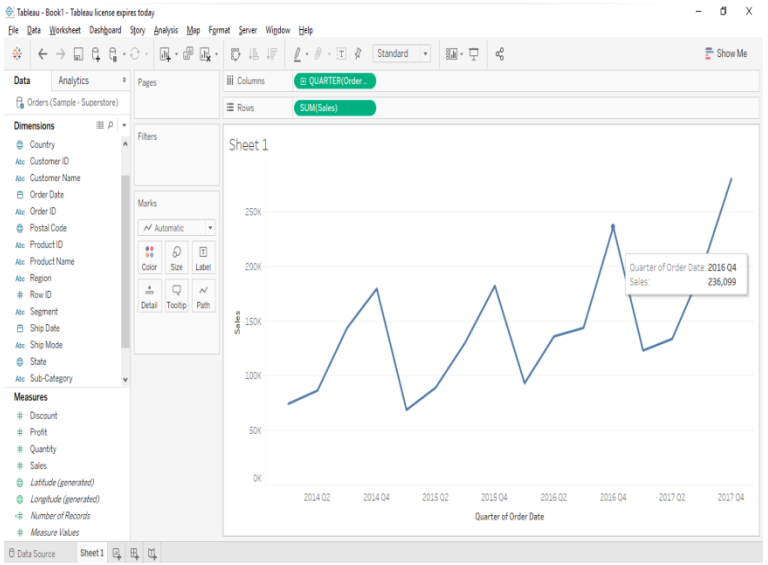
Auto Hirearchies

Auto hierarchy can be displayed using

1. Discrete
2. Continuous Graphs



Discrete Graph

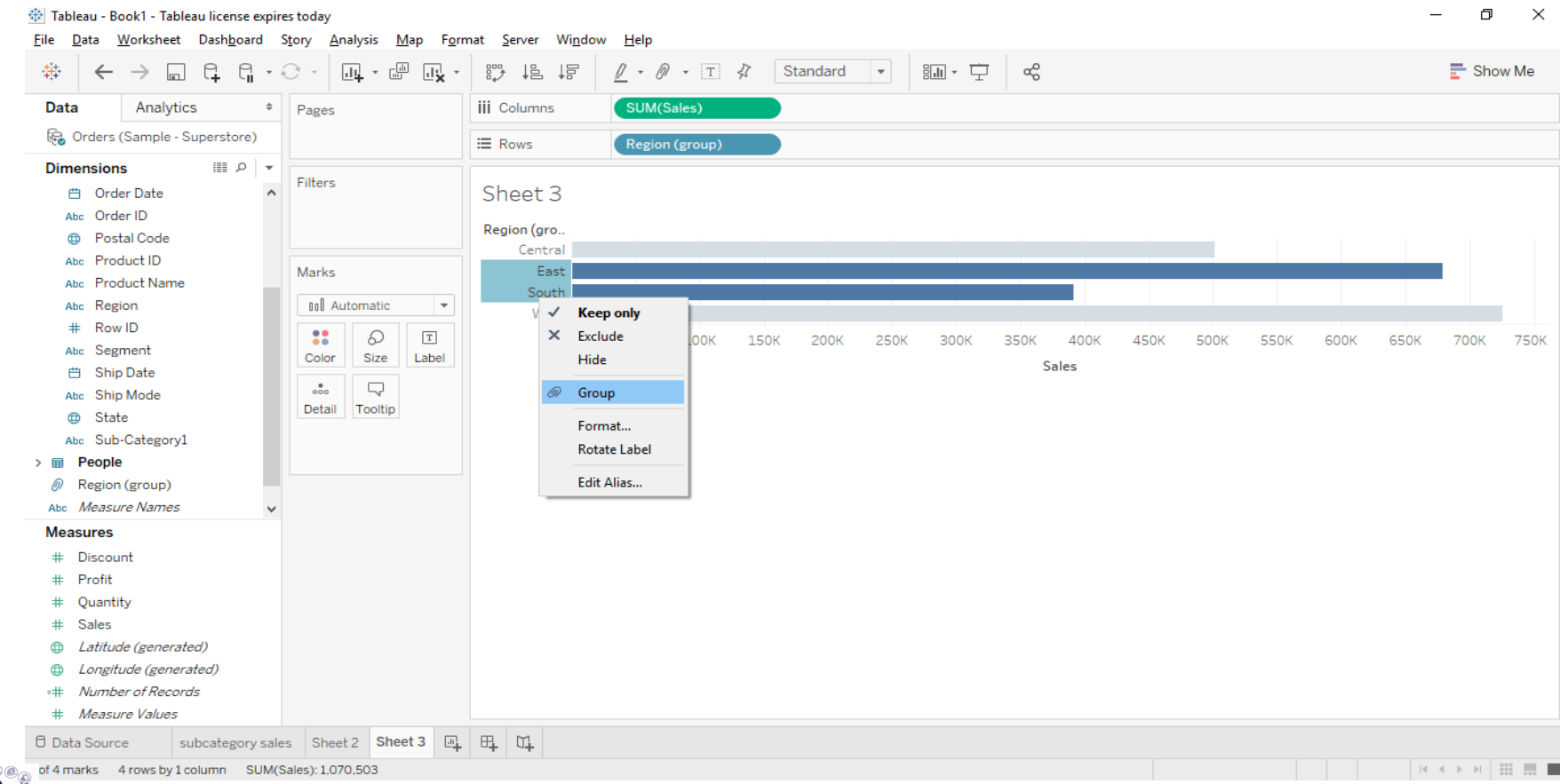


Continuous Graph

To remove the hierarchy Right chick on the hierarchy and select Remove hierarchy

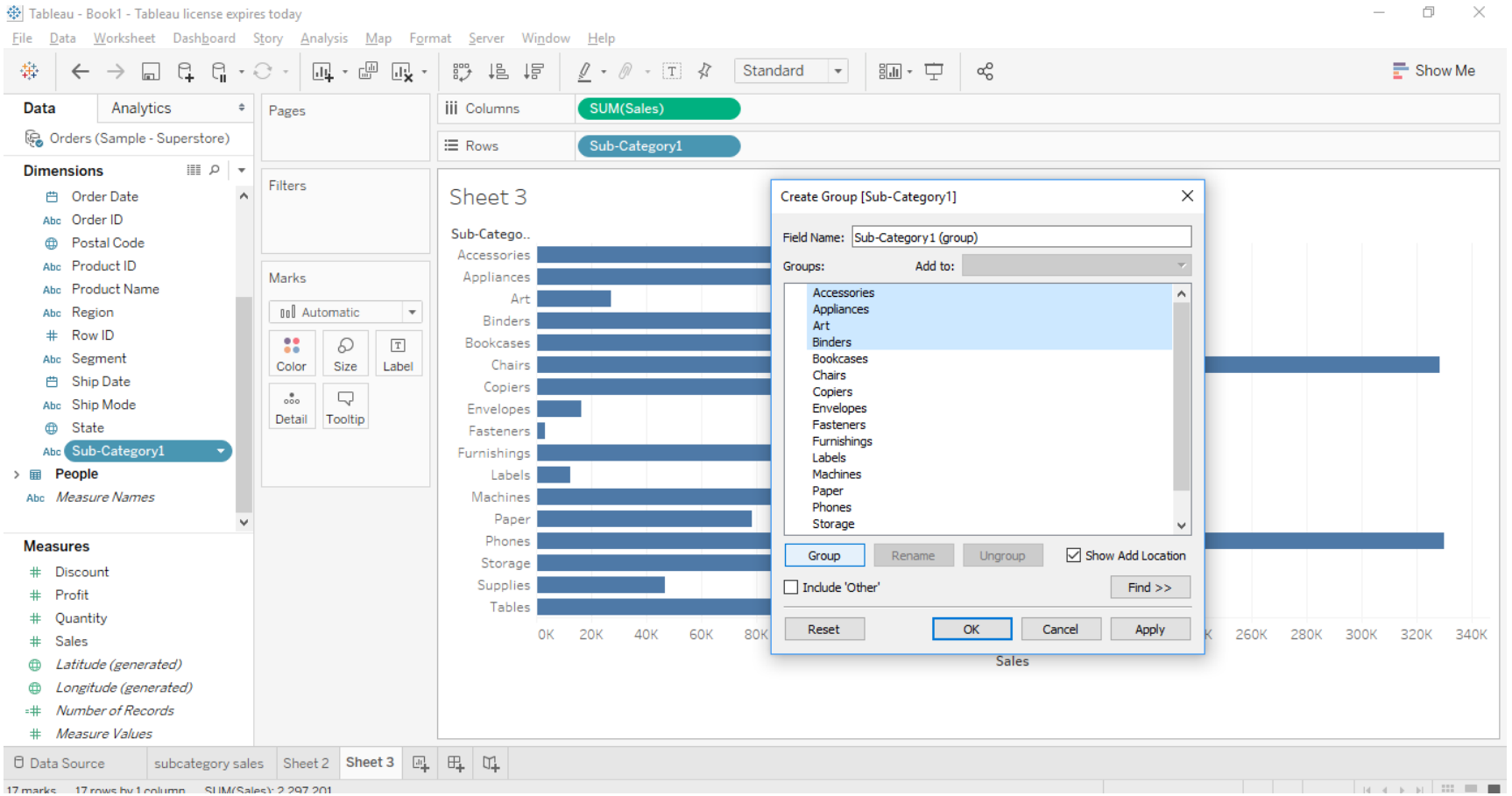
Grouping

Tableau also allows us to compare the one particular segment with rest of the segments by grouping the other segments as one.



Grouping Through Data Pane

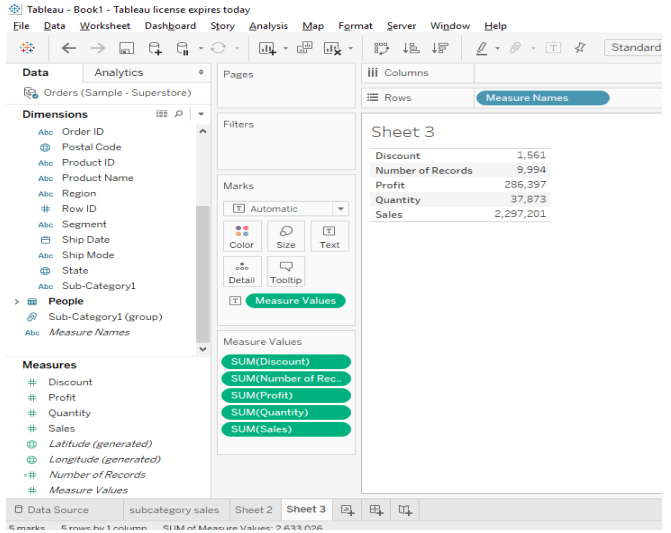
In the data pane right click on the dimension on which we need to create a group and select create group.



Auto Generated Fields

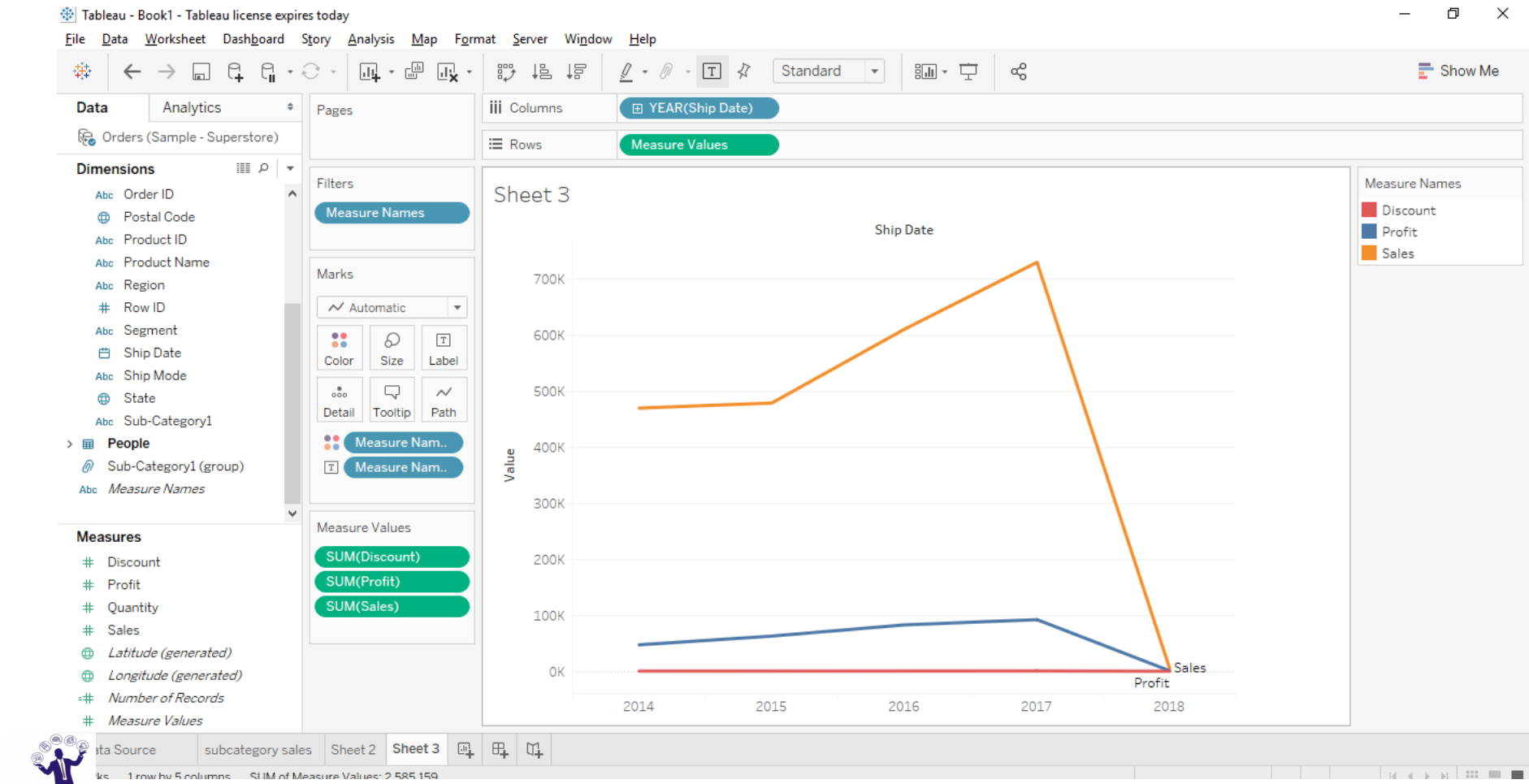
When connecting to the data source Tableau generates five fields:

1. *Number of Records – Total no of records in data source.*
2. *Longitude – In maps*
3. *Latitude – In Maps*
4. *Measure Value*
5. *Measure Name* – Summary of all numbers



Utilizing Measure Name

Measure name can be utilized to display multiple measure value on the single graph.



Discrete & Continuous Values

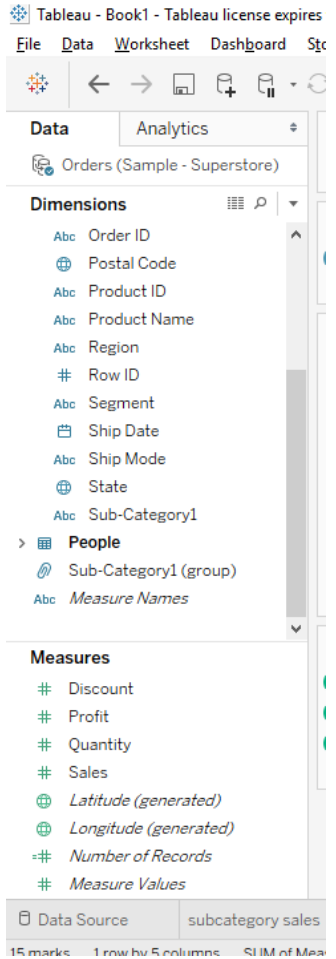
Discrete are the fields from the data source with have different values and Continuous are the fields which are aggregated.

Discrete- Highlighted in Blue
Continuous - Highlighted in Green

Discrete filed gives separate colors
Continuous filed gives gradient color.

Filtering on the Discrete filed gives the exact values to filter.
Filtering on the Continuous filed gives the range to filter.

Discrete filed in maps gives colored dots (symbol graph)
Continuous filed in maps gives filled maps (gradient color).



A-1 Display year wise Sales, Discount, Profit & Quantity using Measures Names

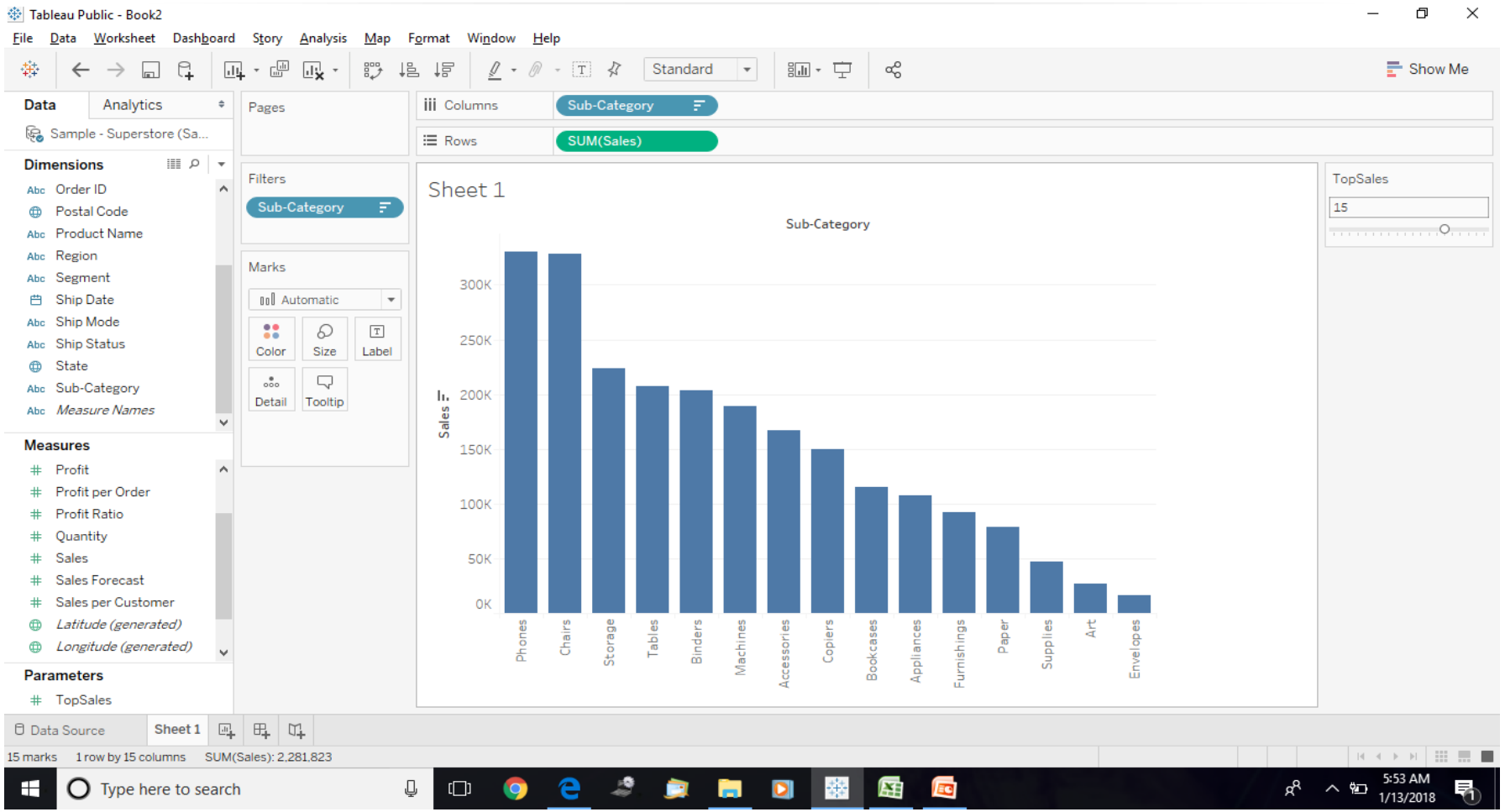
A-2 Display Sales using Hierarchy for Region, Segment, Category, Subcategory

A-3 Create a horizontal Bar chart to represent subcategory sales, all stationary related subcategories like paper, label etc should be grouped as Stationary.

A-4 Represent Subcategory wise profit in graphical manner, arranged in the descending order of profit.

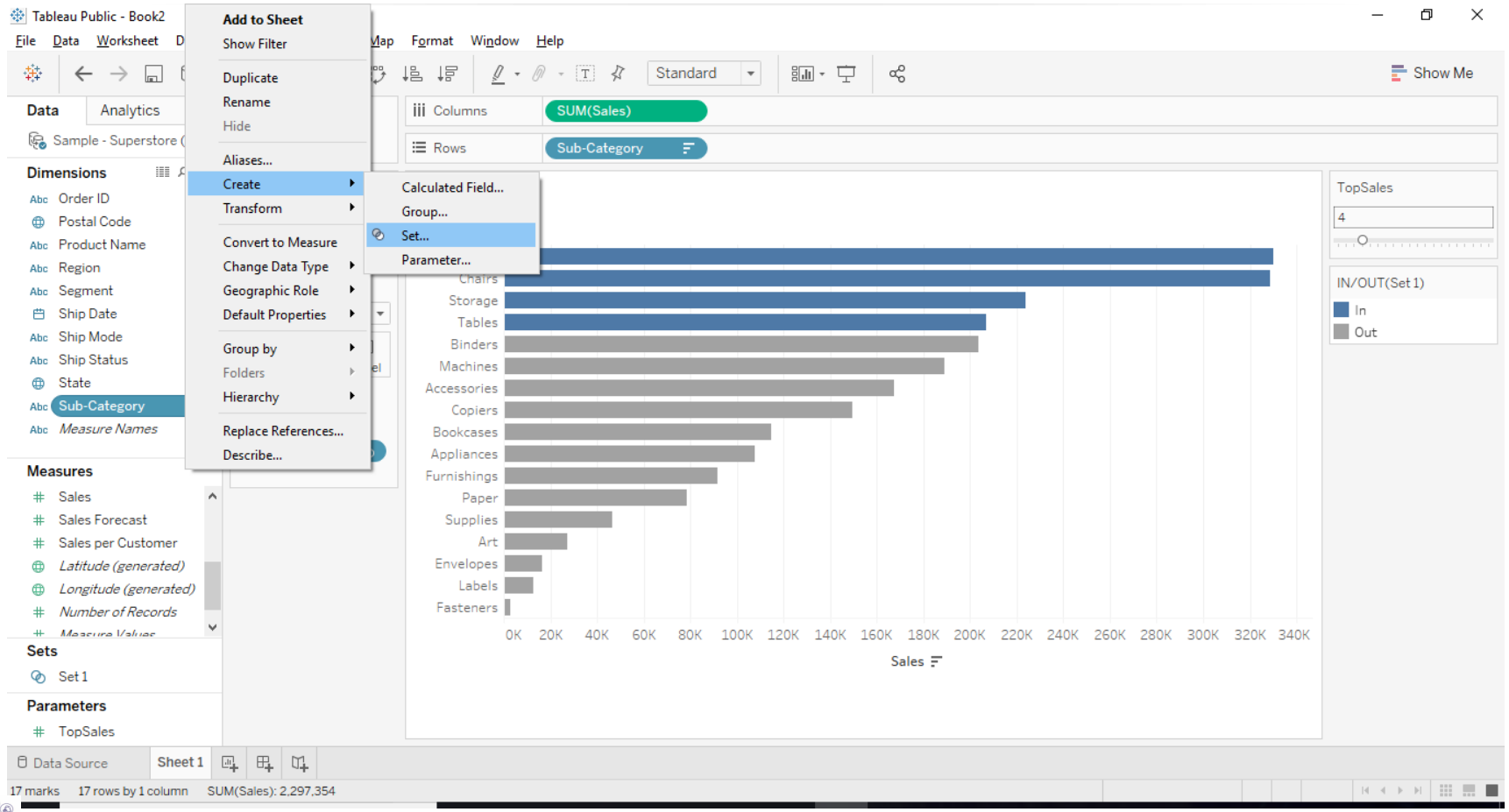
Adding Parameters

Parameters are the dynamic values that can replace the constant values in calculations or filters We can make our chart dynamic by adding parameter to it. This will allow the user to manipulate the chart at runtime.



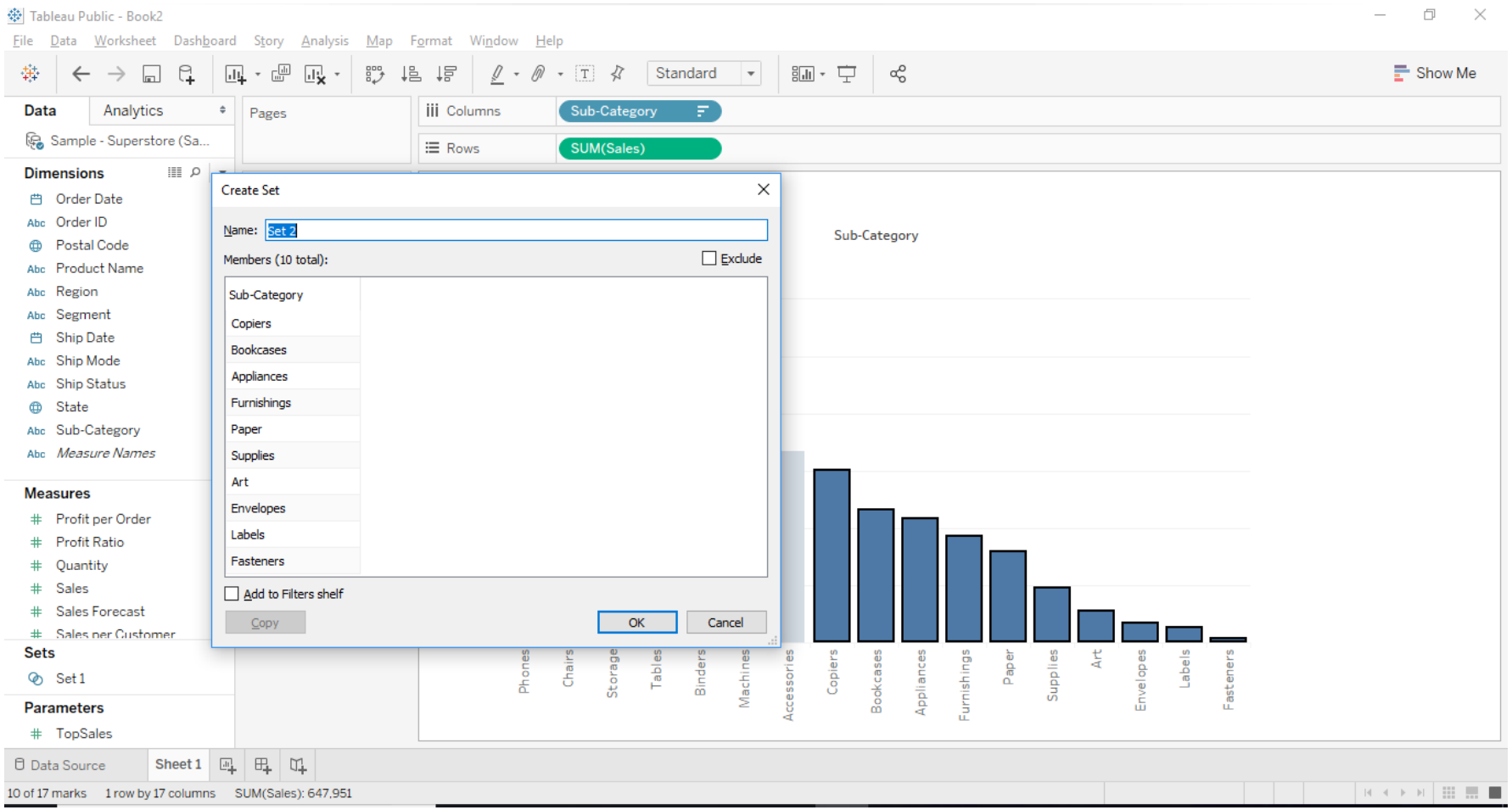
Creating Sets

Set can be used to highlight the specific number of values in the chart.



Creating Sets

The short cut method.

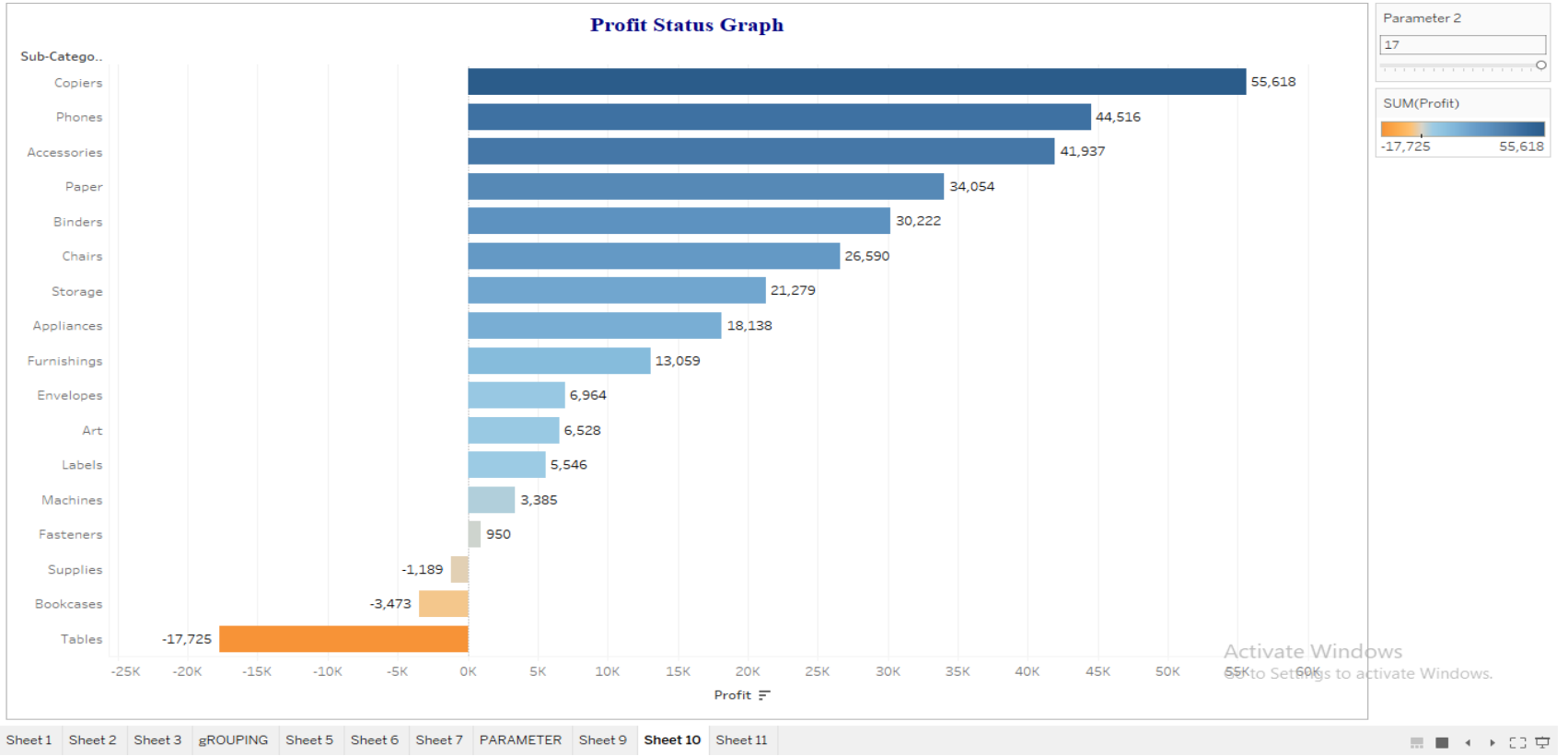


ASSIGNMENT

A-1 Interactive Graph to highlight top 5 Profit generating categories –(Use Parameter)

A-2 Interactive category & subcategory wise sales - (using sets)

A-3 YEAR wise segment wise sales



Using Combines

Combine allow us to do the collective analysis on fields.

Eg: Comparing Region wise, Category & Sub Category wise Sales.