Filters in Tableau

Filtering is an important part of analyses. It helps to minimise the size of data to improve efficiency, clean up the underlying data, remove irrelevant dimension members, and set up dimension and measure ranges for our analysis.
So now, let's discuss various types of filters available in Tableau in the order of their execution.

Extract Filter:

About-

Extract Filters in Tableau extract a small subset of data from the source. Tableau creates a local copy of the dataset in this filter and stores it in the Tableau repository. A direct connection of data source is referred to as a live connection.

In the case of Tableau Public, it allows only Extracted data.

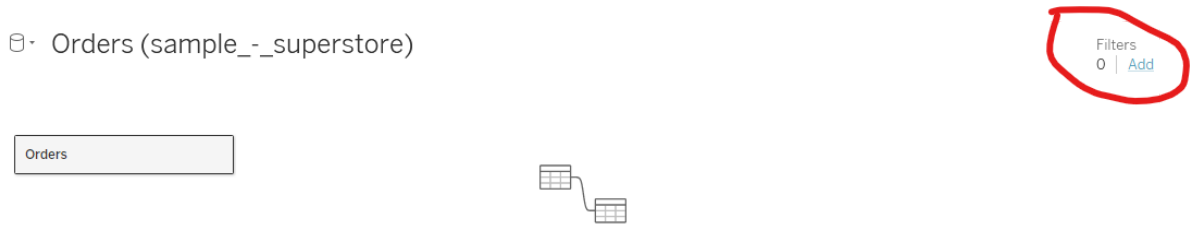
Data Source Filter:

A Data Source filter is used to filter the data at the data source level. It limits the number of records in the dataset. It is not linked with the extract filter.

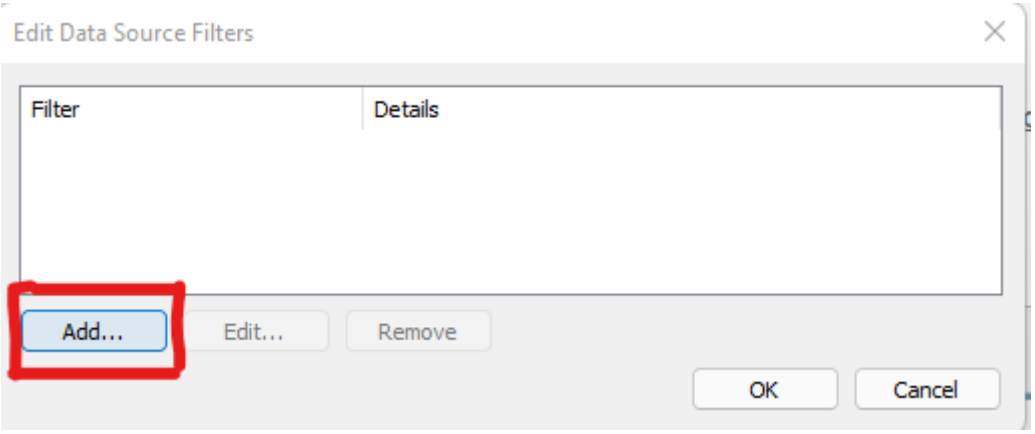
Implementation-

Now let's see the steps to select a data source filter.

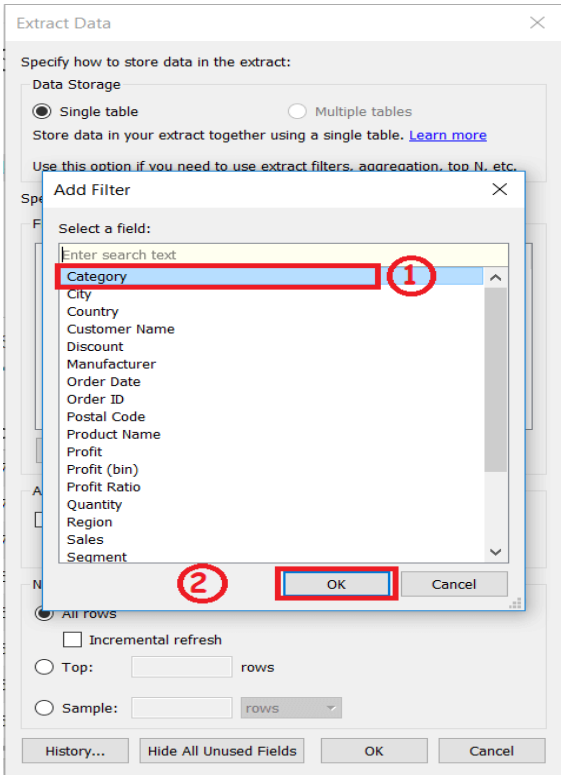
1. First, we need to click on the “Add” button in the top right corner of the Data Source tab.



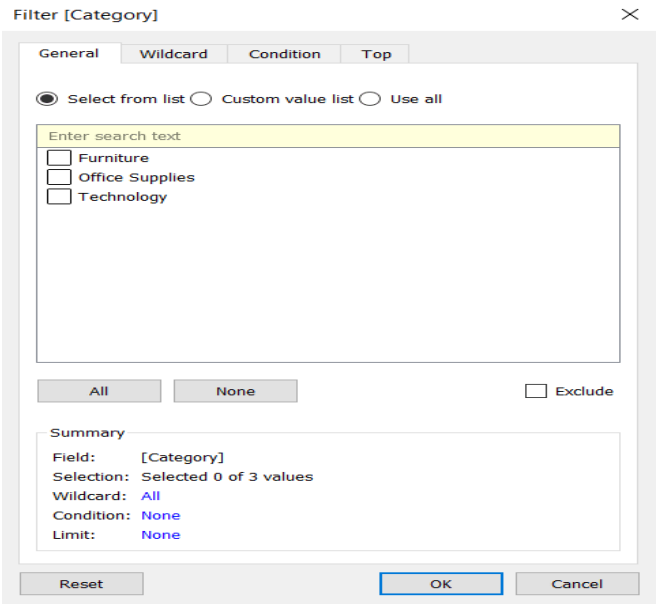
2. After clicking on Add, the Edit data source filter will appear. Click on the Add option available here.



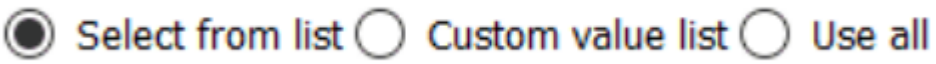
1. By clicking on “Add”, a new “Add Filter” window is opened to select an **Extract filter** condition. So for this example, we will select the “Category” field present in our dataset as our “Extract Filter”.



2. After clicking on “Ok”, we get a “Filter” window showing the extracted data using the Extract Tableau Filter.



3. You can also customise the list or use all values in the list by selecting from the given below options:



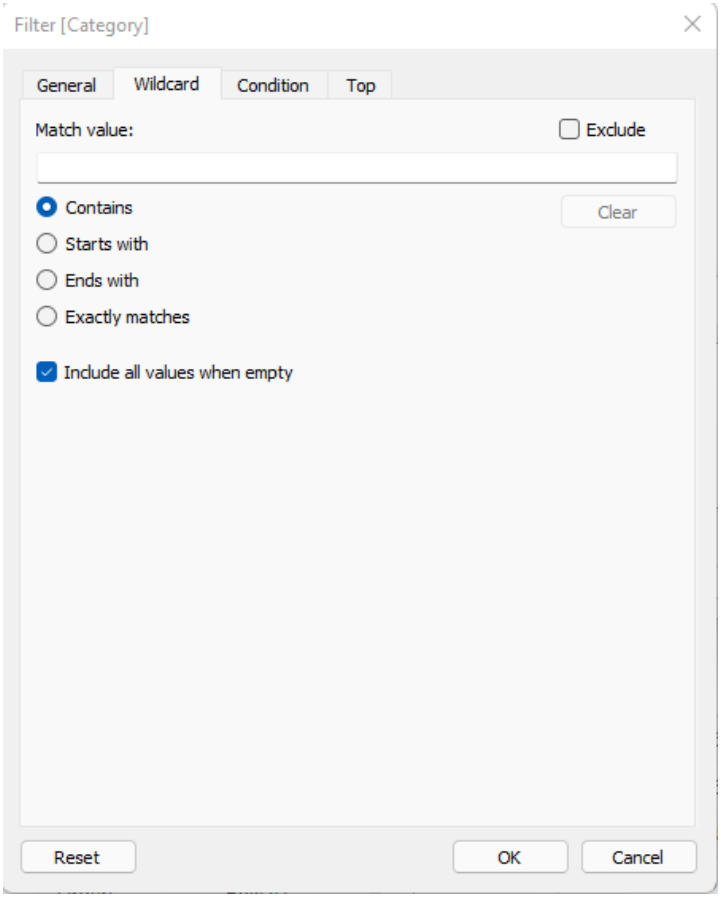
- In addition to this, there are various options other than the **General** category. Now let's discuss these options in detail:

Wildcard:

The wildcard option is used to filter based on the Wildcard match. Users can type the character and filter the field based on the match. The different types of matches are given below:

Contains	Select the members if the member name contains typed characters.
Starts with	Select the members if the member name starts with typed characters.
Ends with	Select the members if the member name ends with typed characters.
Exactly matches	Select the members if the member name exactly matches with typed characters.

Below is a screenshot attached of the Wildcard Filter window:



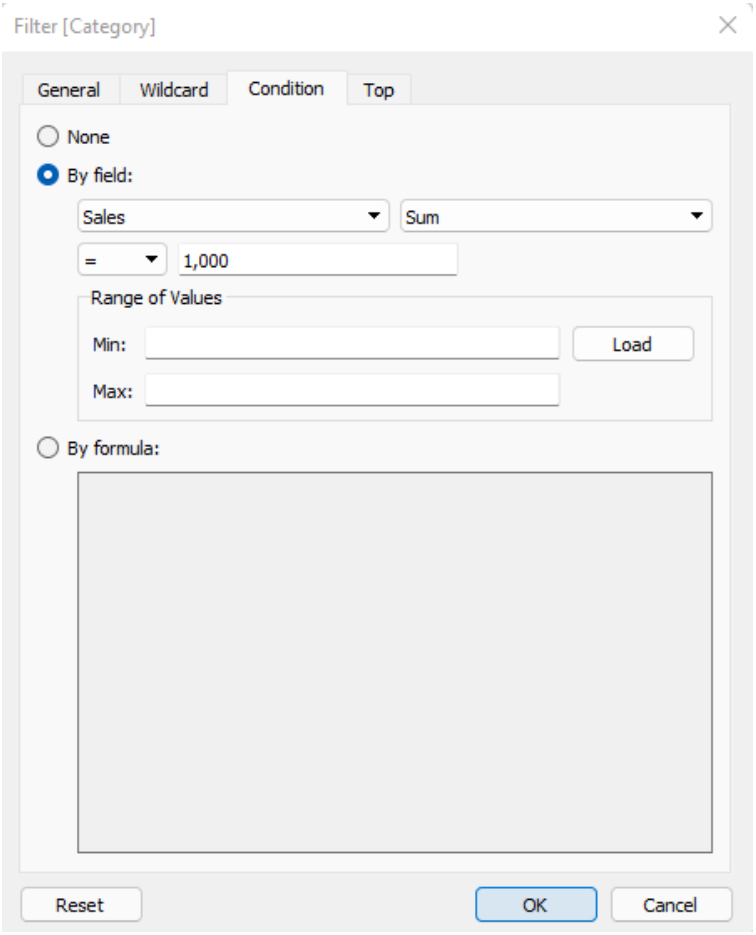
Condition:

The condition option is used to filter out the dataset using several conditions. First, we will discuss the By Field option.

A. By Field:

Suppose we want to see the data where the sum of sales is greater than 1000.

1. In the Condition tab in the Filter window, select “By Field”.
2. Next, select the name of the field to be filtered from the drop-down list, which is Sales in our case.
3. Next, select the aggregation type from the drop-down list, Sum in our case.
4. Next, you select the operator, which in our case will be ‘>’.
5. At last, you need to enter the Filtering value, which in our case is 1000 and then click OK.



You can also filter the result By field option in a particular range. It shows the minimum and maximum value of the selected field by clicking on “Load”.

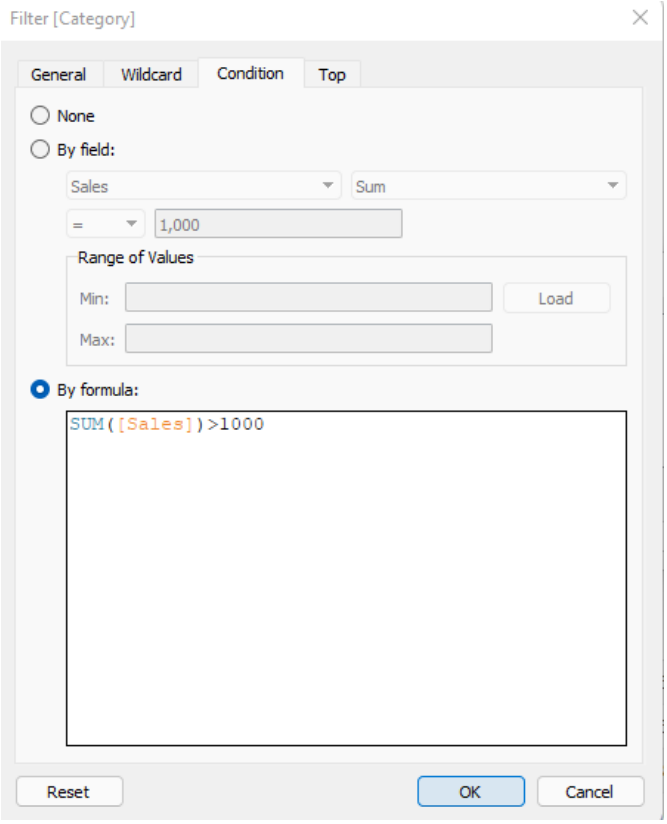
Next, we will discuss filter by condition using Formula.

B. By Formula:

You can write a formula to filter the dataset.

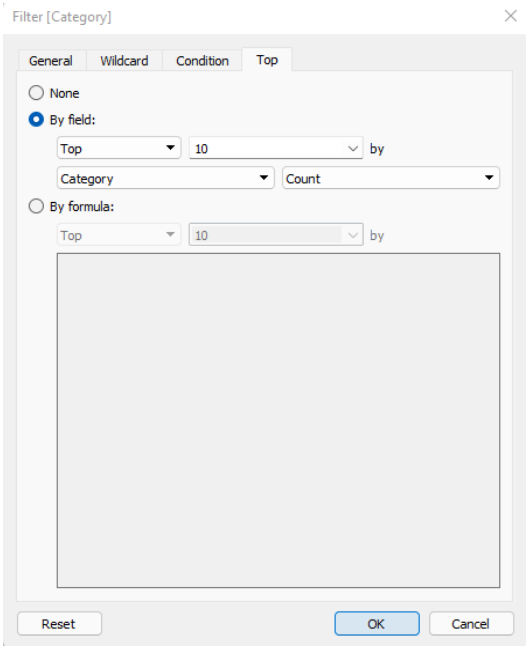
We again want to filter the data having the sum of sales greater than 1000

1. Click on the By Formula button.
2. Next, write the filter condition formula in the box, which in our case will be SUM(Sales)>1000.
3. Click on OK after writing the formula.



Top:

- Top and Bottom is another method to filter data in tableau, which will select the top or bottom ‘n’ number of records.
- Further, we have two methods to filter here, By Field and By Formula, same as in Conditions. Please refer to the steps mentioned above in the Conditions part for further application.



Context Filter:

About-

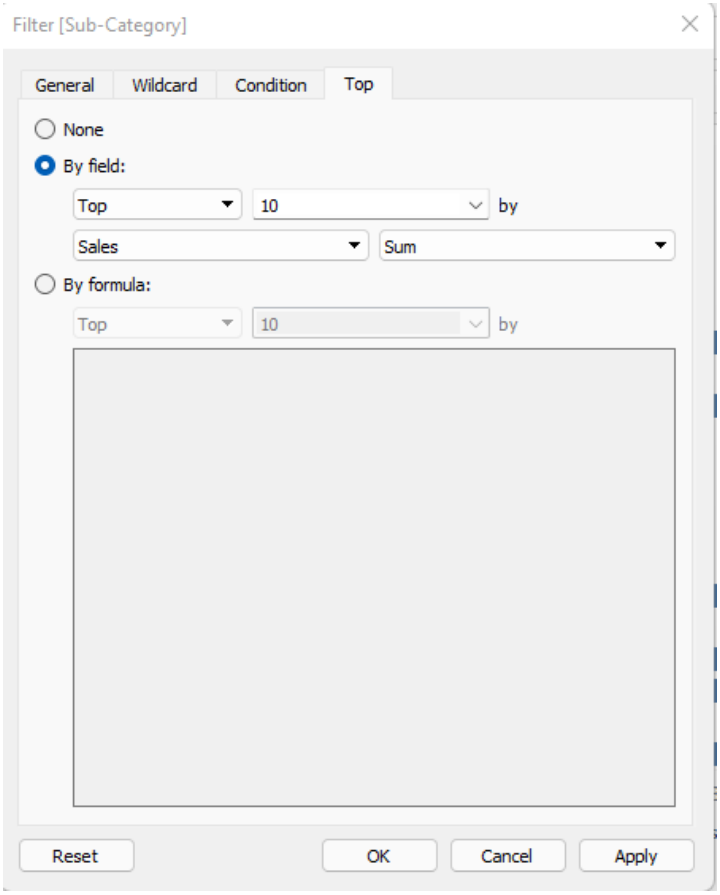
A Context Filter is an independent filter in Tableau that can create a new dataset from the original dataset and compute the selections made in the dataset. One or more categorical filters that separate the dataset into the major part can be used as a context filter. A context filter is applied to the worksheet before any other filters.

Implementation-

Now let's understand the working of context filters. Suppose you want to find out the top 10 subcategories of products in the Furniture category. So, we will take furniture as a Context filter in this case.

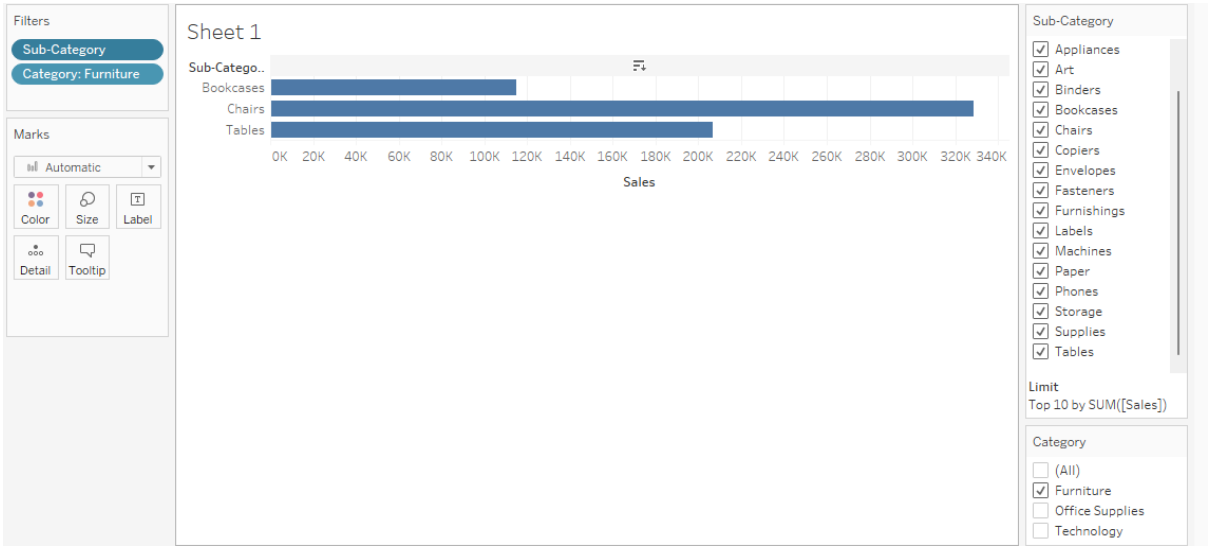
1. So we will start by placing Sub Categories in rows and Sales in Columns. We get the following output:

2. Now to get the top 10 subcategories, drag the subcategories to the filters. And click on the top tab.



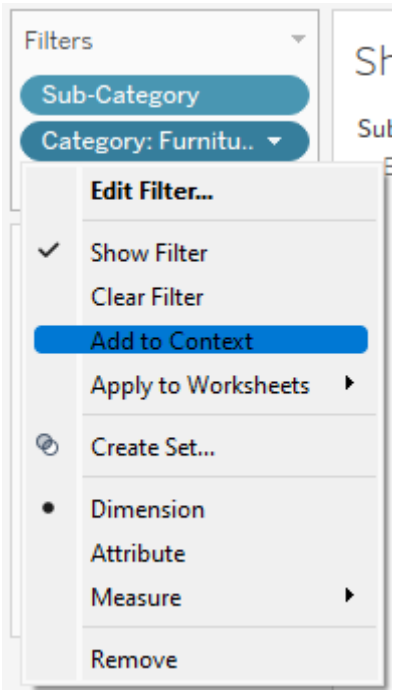
3. After applying the filter, we will get the output as:

4. Again we need only the Furniture category; now drag the category to the Filters tab. And the following will be the output.



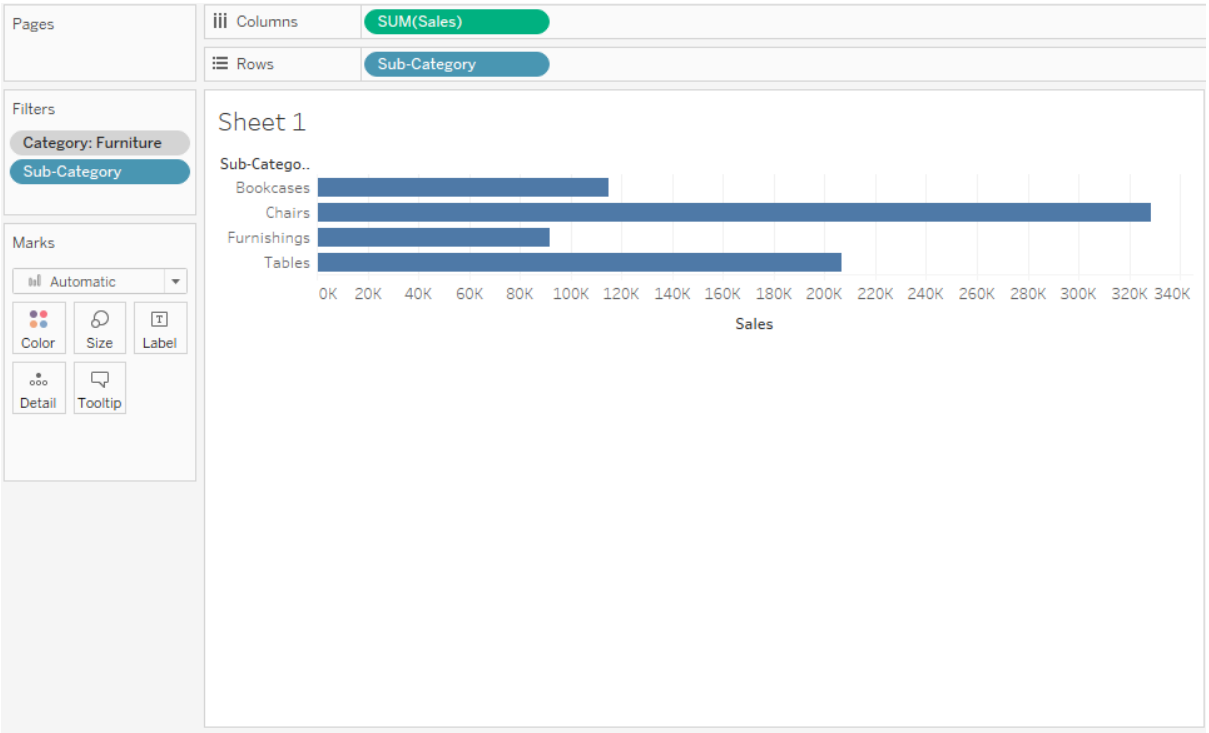
Now, if you carefully observe that we filtered out sub-categories entries corresponding to the Furniture category.

So here **Context filter** comes into play. We want to limit our dataset to Furniture Category to get the Top 10 entries from it. So to apply the Context filter, right-click on the category and select “Add to Context”.



This approach will change the colour of **Category: Furniture to Grey,** which indicates Context Filter.

And we will get the following output:



Dimension Filter:

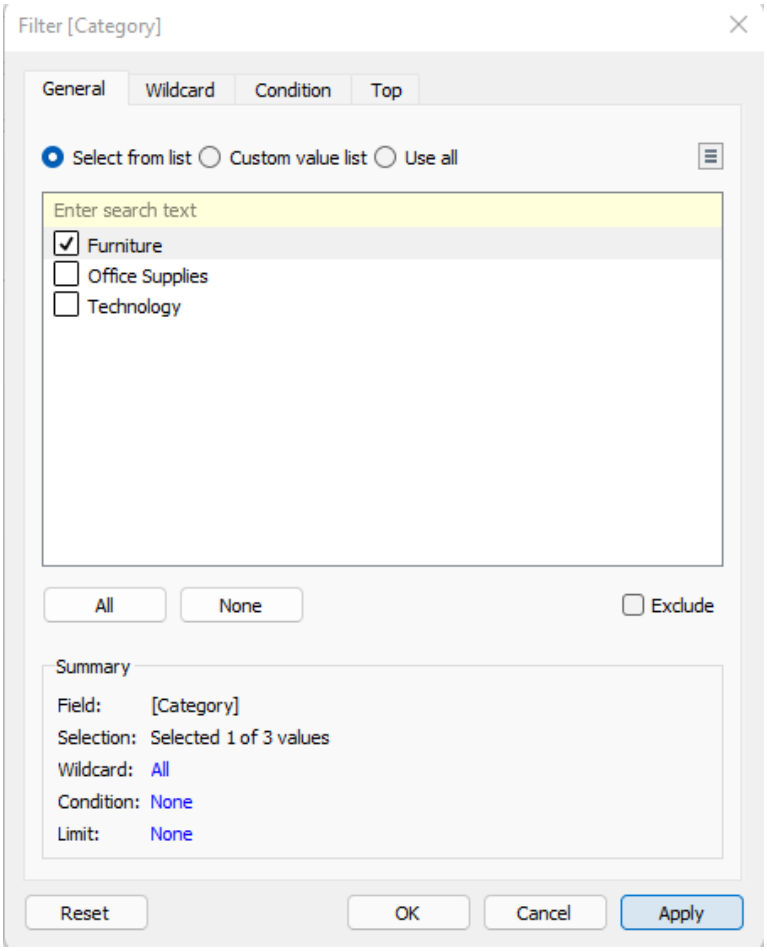
About-

A Dimension Filter is used to filter our dataset based on the dimensional values present in our dataset. It is a non-aggregated filter that allows you to add a dimension, group, set, and bins.

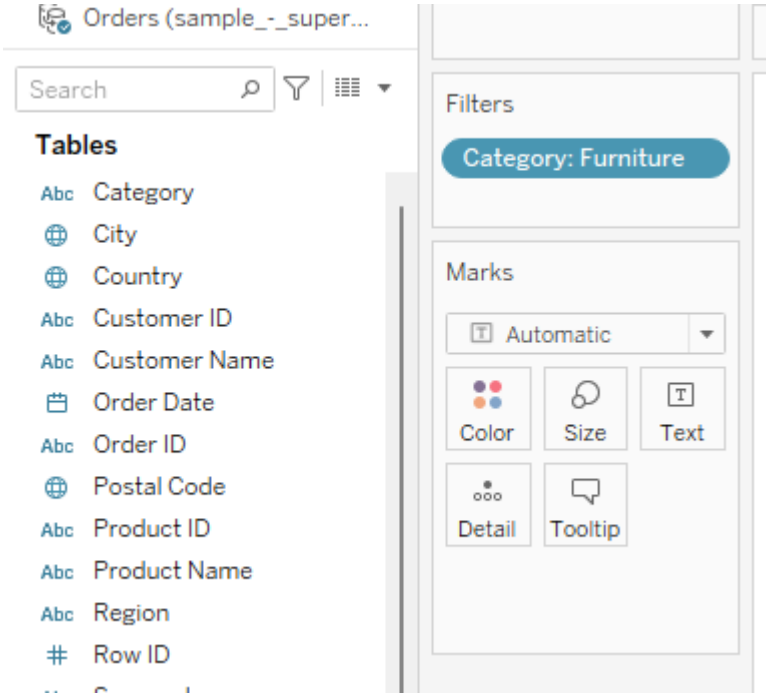
Implementation-

Let's understand the Dimension filter by taking an example to include only data from the Furniture category. So for that, we choose a dimension from the dimension list, in our case, which is "Category". Drop this into the filter section.

It will open a filter window, and we need to select a category from the list, which in our case will be Furniture.



After performing the above steps, our dataset will filter to show records from the category "Furniture" only.



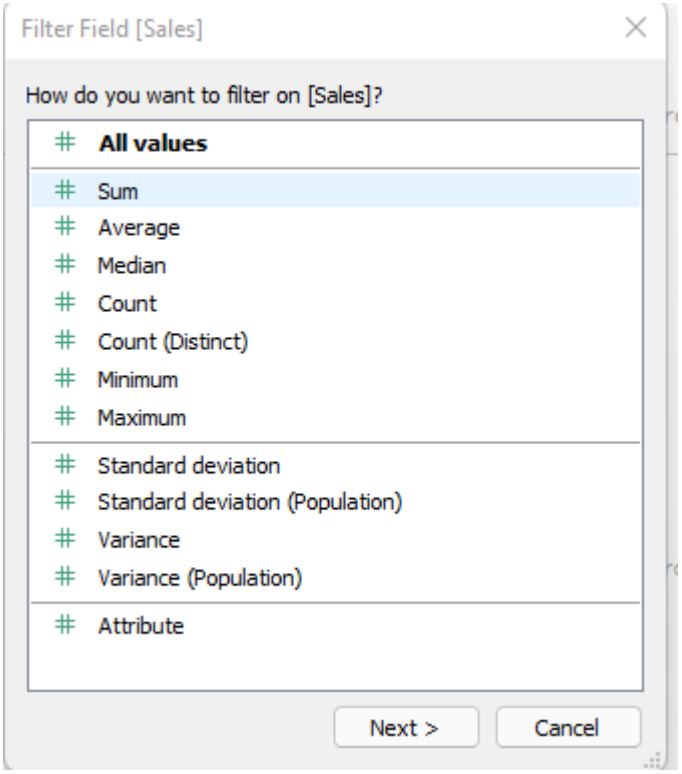
Measure Filter:

About-

A Measure filter is used when we want to filter our dataset based on a Measure Value present in our dataset. We can modify the data based on aggregated measure values in Measure Filters.

Implementation-

Now let's see how measure filters work in tableau. So for that, first, you need to select a measured value from the measure tab and drag it to Filter.
For example, let’s drag Sales to filter, and we get the following Filter window as the output:

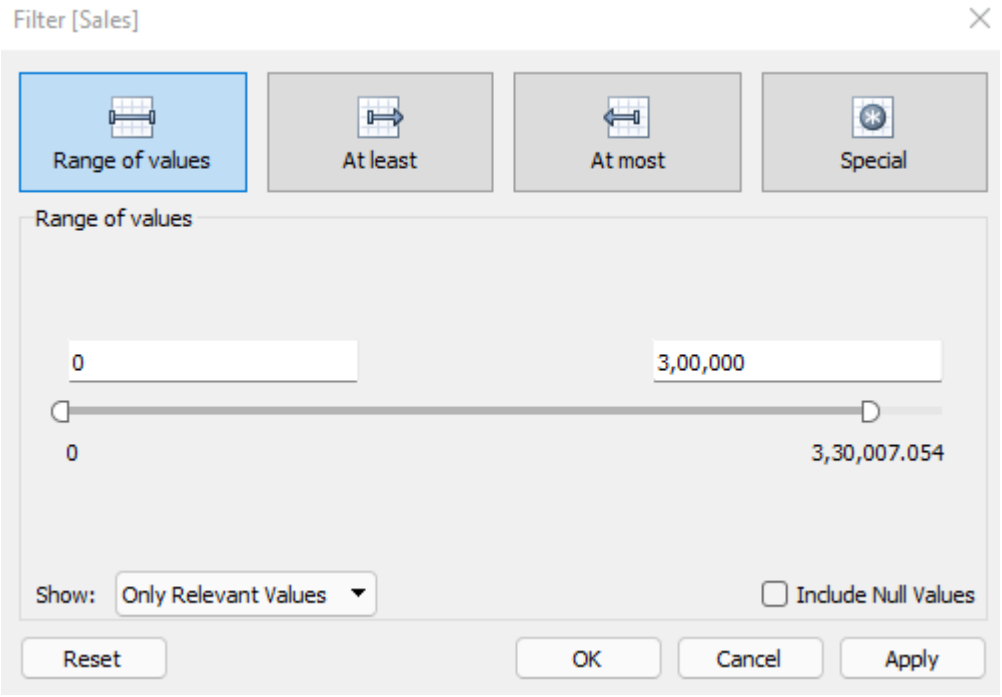


We need to select an Aggregation from the list, so we select Sum and click on the Next button.

It will open a new window where we get various options as follows.

Range of values	Minimum and maximum range of measure value can be given and filtered.
At least	A minimum value of a measure is given to filter the data.
At most	A maximum value of a measure is given to filter the data.
Special	An option to select null or non-null values and filter the data.

So we select Range of Values, and we need to fill the upper and lower limits for the range of values.



Click Apply and then on OK; the dataset will be filtered based on the Sum of Sales between 0 and 300000.

Now to verify, we can drag Sub Category in rows and Sales in Column and get the following output which shows all of the sales in the range 0 to 300000:

Sub-Catego..	
Accessories	167,380
Appliances	107,532
Art	27,119
Binders	203,413
Bookcases	114,880
Copiers	149,528
Envelopes	16,476
Fasteners	3,024
Furnishings	91,705
Labels	12,486
Machines	189,239
Paper	78,479
Storage	223,844
Supplies	46,674
Tables	206,966