

Q i . Explain in detail the area graphs and line graphs in tableau and how to create them with examples.

Area Graph - An area chart is a line chart where the area between the line and the axis are shaded with a colour. These charts are typically used to represent accumulated totals over time and are the conventional way to display stacked lines.

A stacked area chart 'stacks' trends on top of each other to illustrate how a part-to-whole distribution is changing over time. When combined with a table calculation that computes the percent of total for each dimension member in the visualization, stacked area charts are an effective way to evaluate distributions. Below fig is a illustration of an area graph.

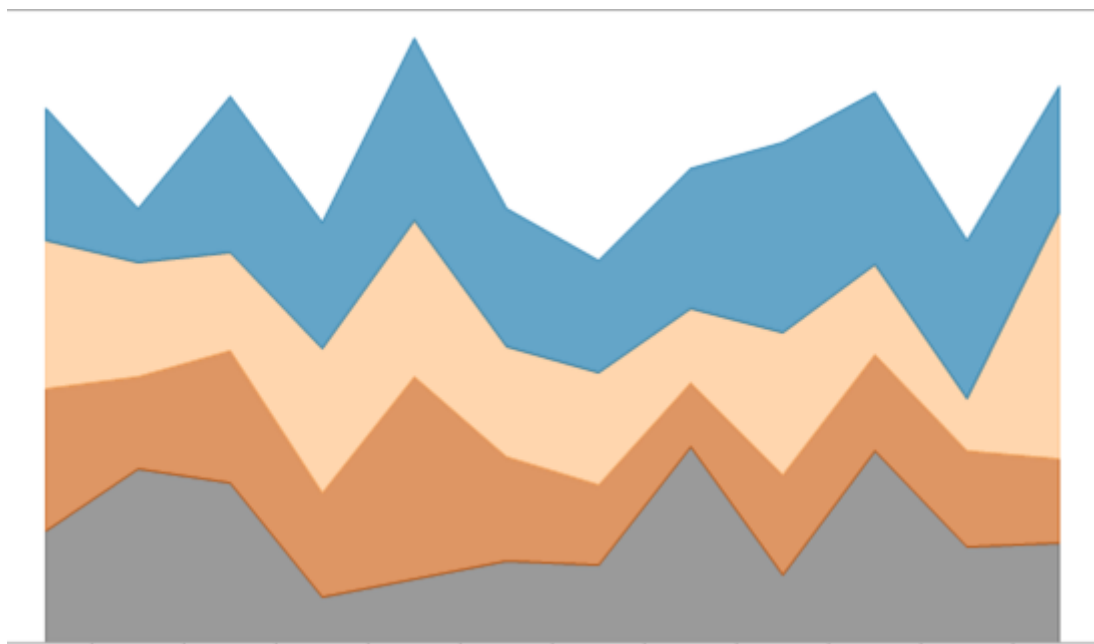


Fig : 1.0

Line Graph–Line charts connect individual data points in a view. They provide a simple way to visualize a sequence of values and are useful when you want to see trends over time, or to forecast future values.

It is drawn using straight line segments between points. By joining all points, we get a resulting line that may be a straight line or a curve.

It has two variables: one is independent while the other is dependent on the first independent variable. See fig 1.1.

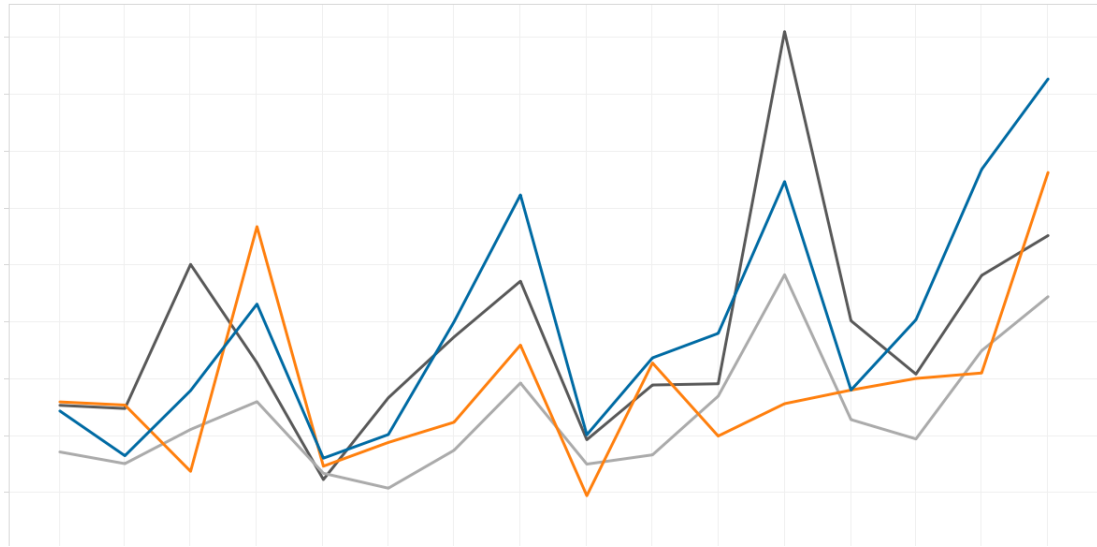


Fig: 1.1

How to create them with examples in Tableau.

for the demo purpose I chose the following dataset-

Area Graph –

Step 1: Open Visualization Pane in Tableau

Open a new sheet in a Tableau workbook. Here, on the left side, We can find a list of the dimensions and measures from the connected data source.

find two options for area charts that is Area charts (Continuous) and Area charts (Discrete).

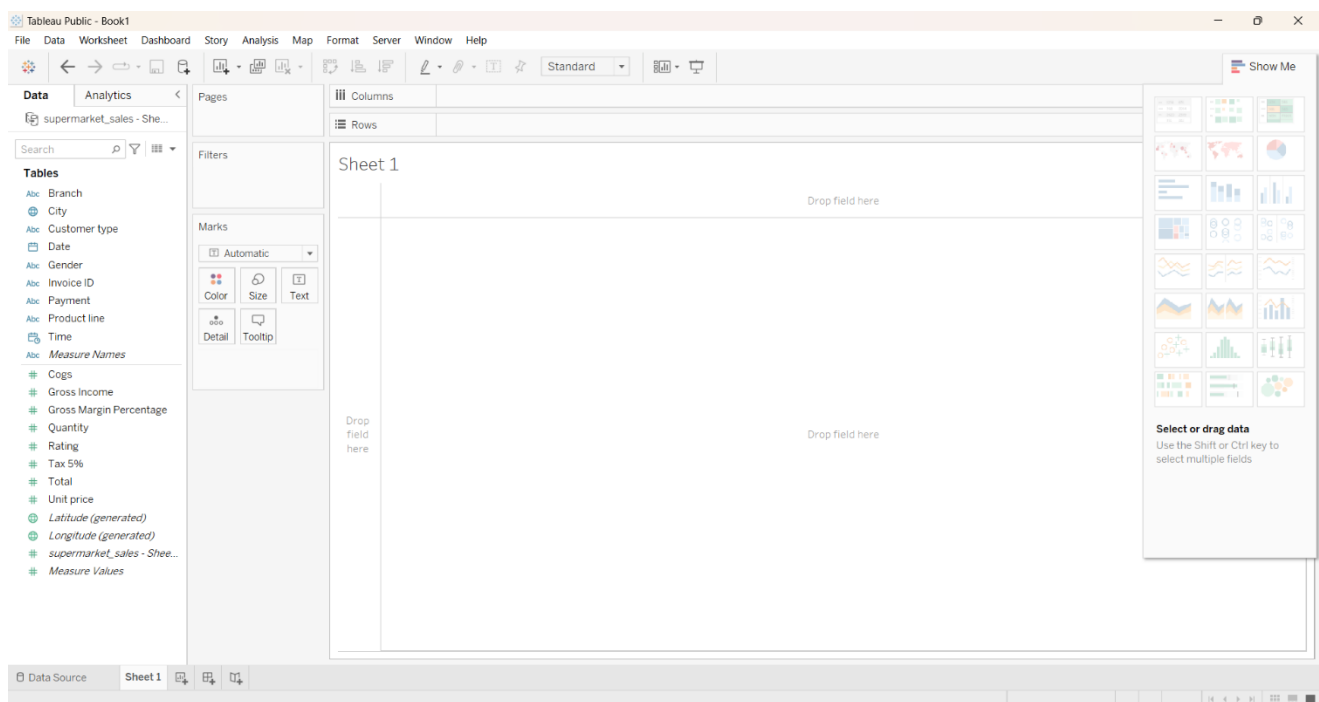


Fig: 2.0

Step 2: Select Area Chart in Visualization Pane

As we know, Tableau recommends using a date field for making an area chart. So, we start by dragging a date dimension to the Columns section. Go to the visualization pane and select Area charts (Continuous) option .

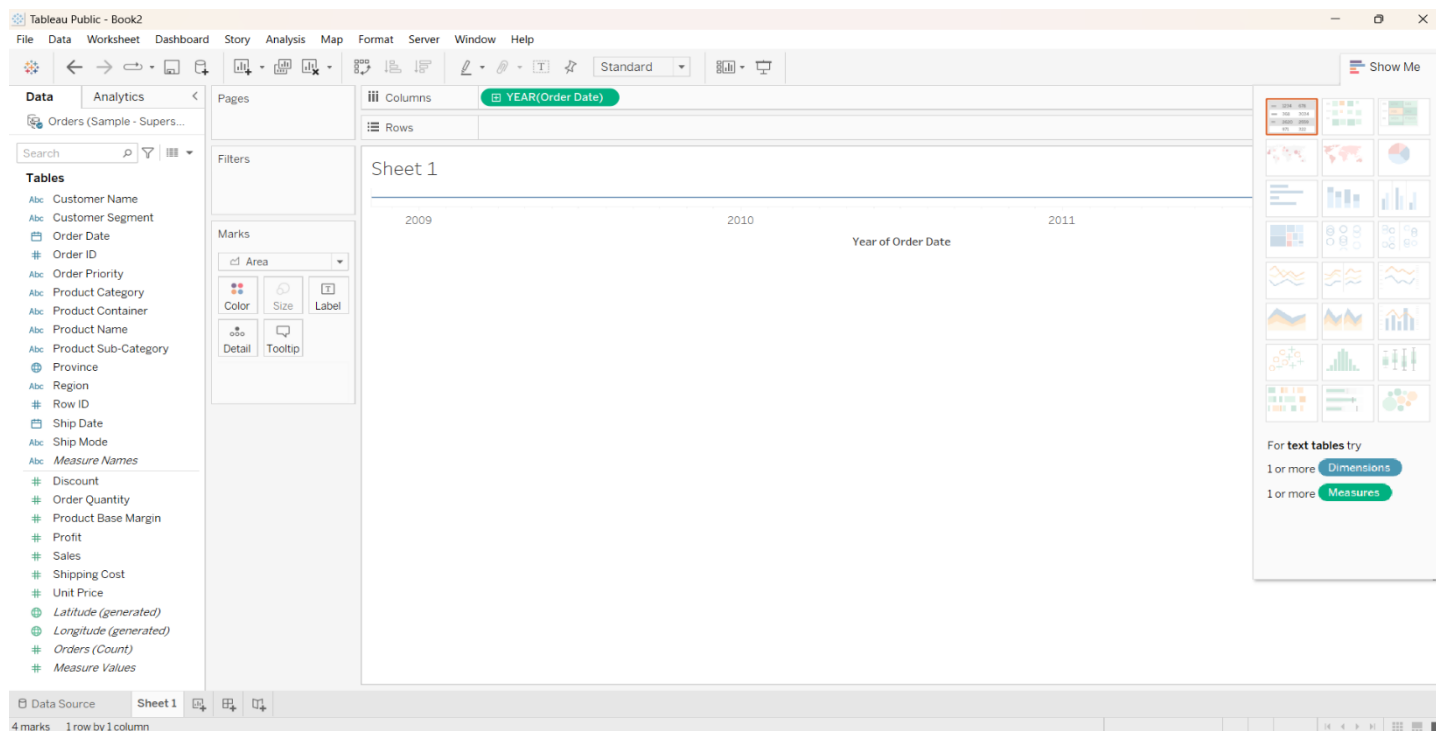


Fig:2.1

Step 3: Add Measure

Next, we'll drag and add one measure (Sales) to the Rows section.

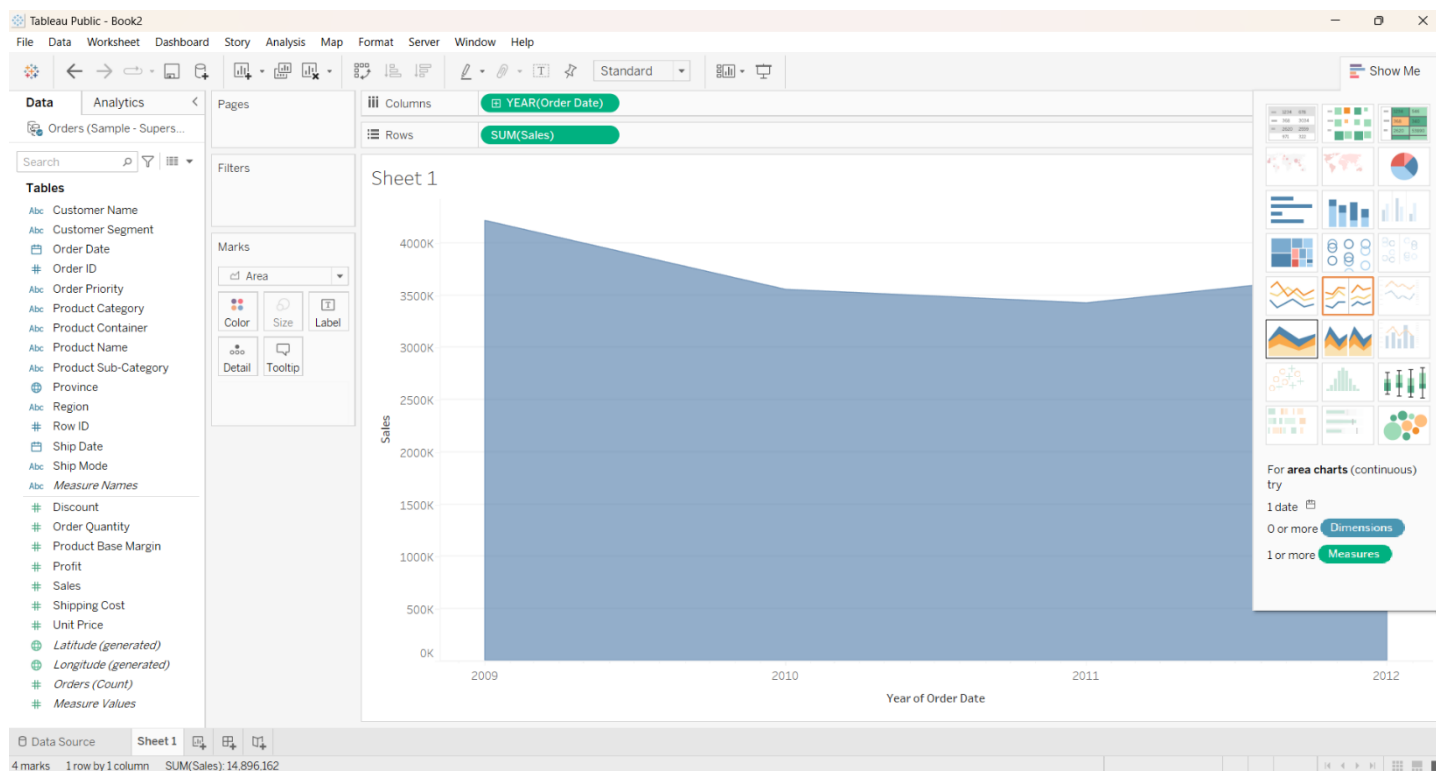


Fig:2.2

Step 4: Add Dimensions to the Colors Box

Now, we'll add one more dimension (Product Category) to the Colors box of the Marks pane. This will add category-wise colors into the chart and represent each category with distinct colors.

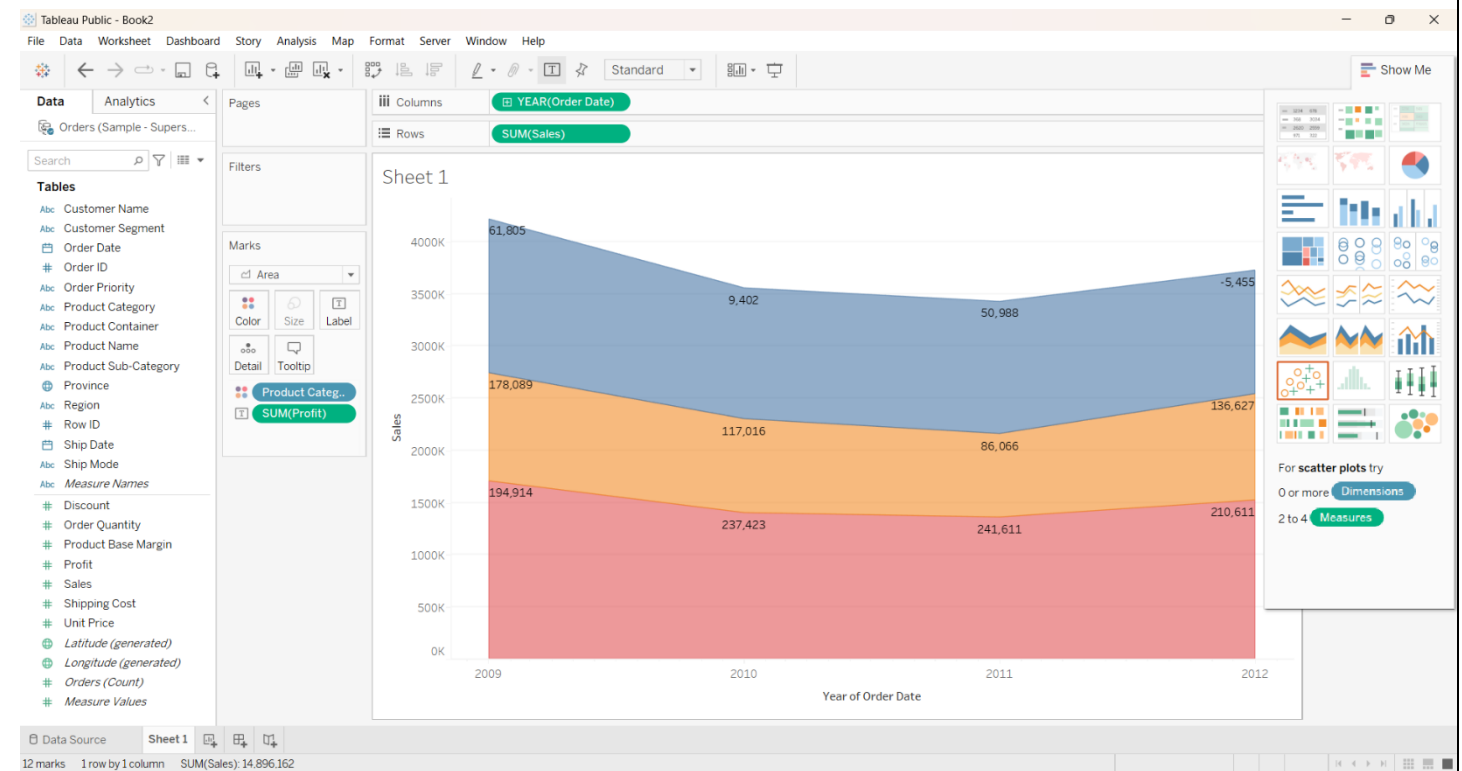


Fig:2.3

also added the profit to the label box of the Marks pane.

With the following process a basic area chart where the chart is divided into three color zones of three categories which are furniture , office supply and technology.

Line Graph-

Step 1: Open Visualization Pane in Tableau

Open a new sheet in a Tableau workbook. Here, on the left side, We can find a list of the dimensions and measures from the connected data source.

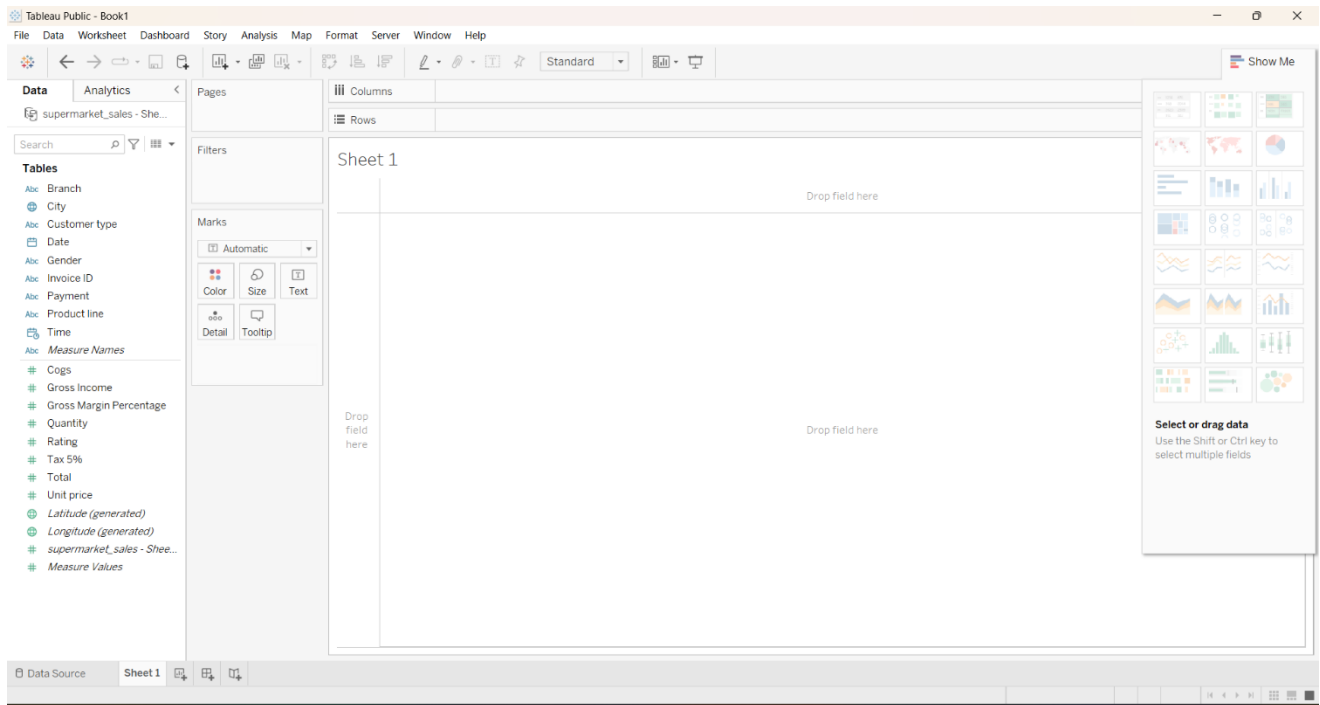


Fig:3.0

Step 2: Select Area Chart in Visualization Pane As we know, Tableau recommends using a date field for making an area chart. So, we start by dragging a date dimension to the Columns section. Go to the visualization pane and select line charts (Continuous) option .

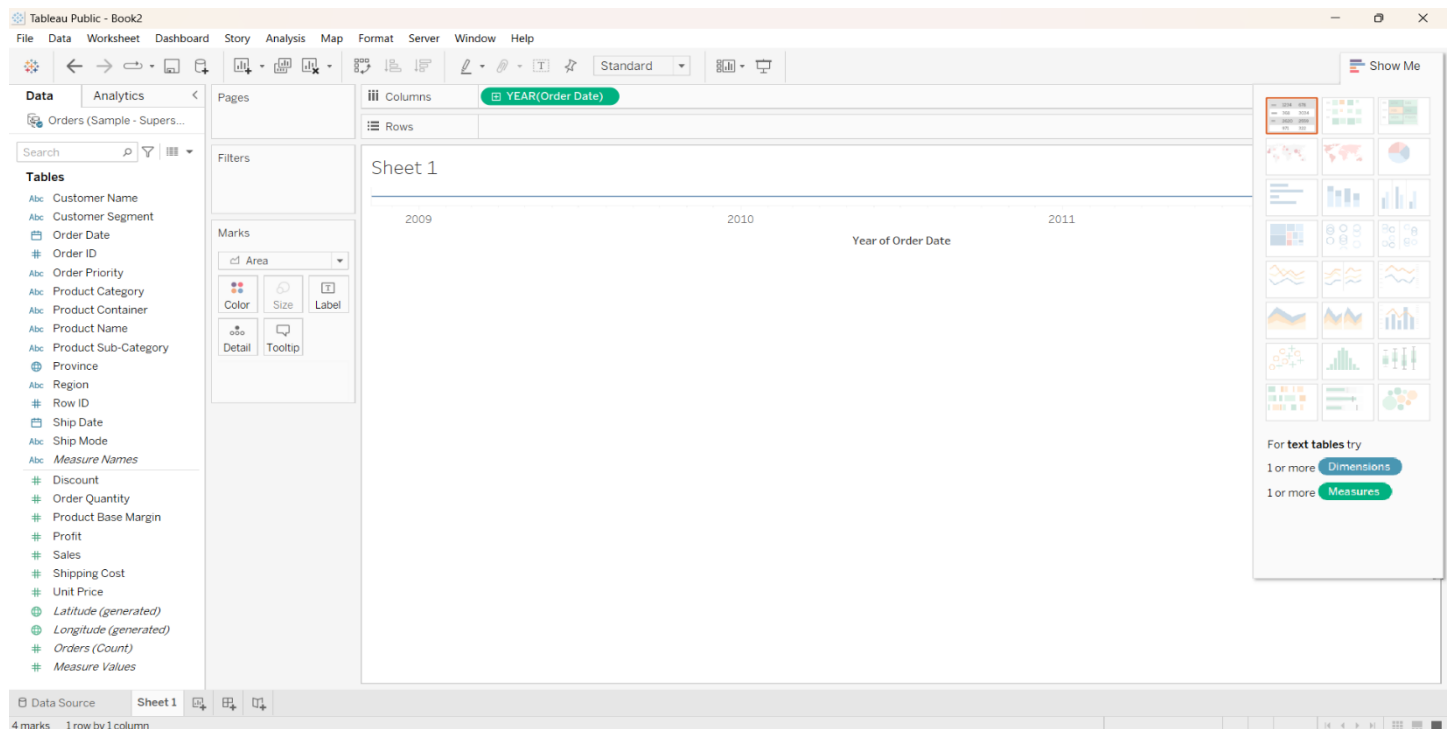


Fig:3.1

Step 3: Add Measure

Next, we'll drag and add one measure (Profit) to the Rows section.

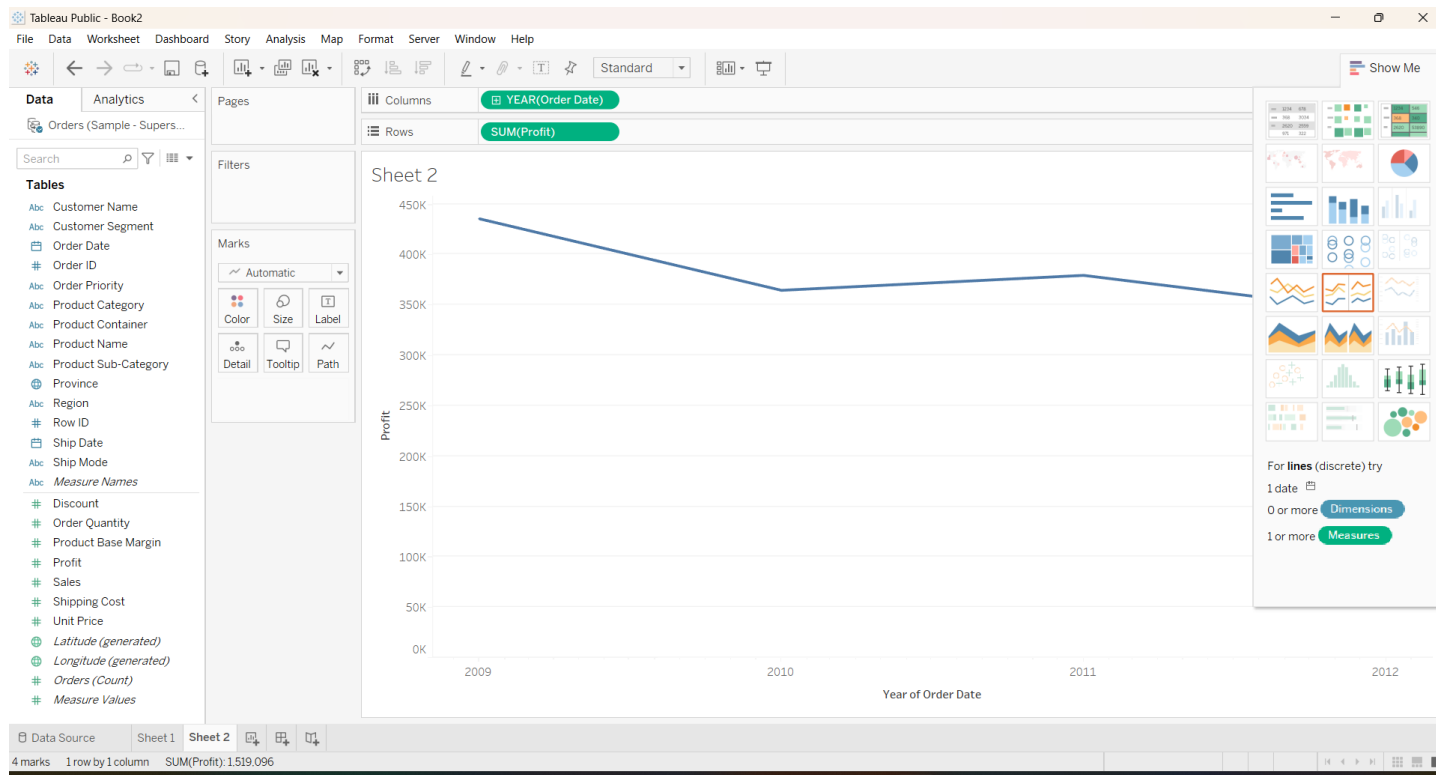


Fig:3.2

Step 4: Add Dimensions to the Colors Box

Now, we'll add one more dimension (Product Category) to the Colors box of the Marks pane. This will add category-wise colors into the chart and represent each category with distinct colors.

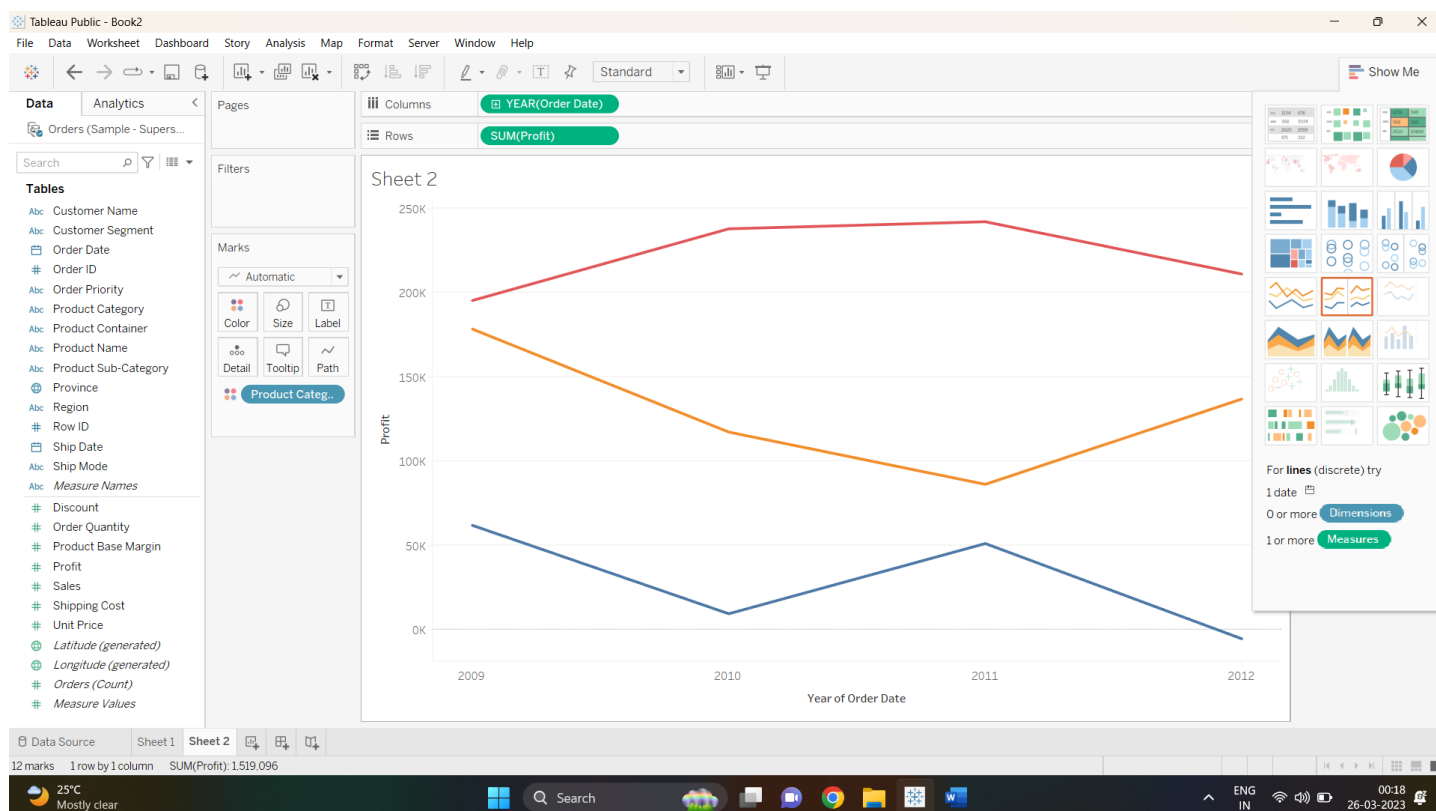


Fig:3.3