Lesson 01: Demo 03
Green vs. Blue Pills and Components of the Chart

Objective: To demonstrate adding measures and dimensions, selecting mark types, and setting up tooltips in Tableau for effective data visualization.

Tools required: Tableau Desktop

Prerequisites: None

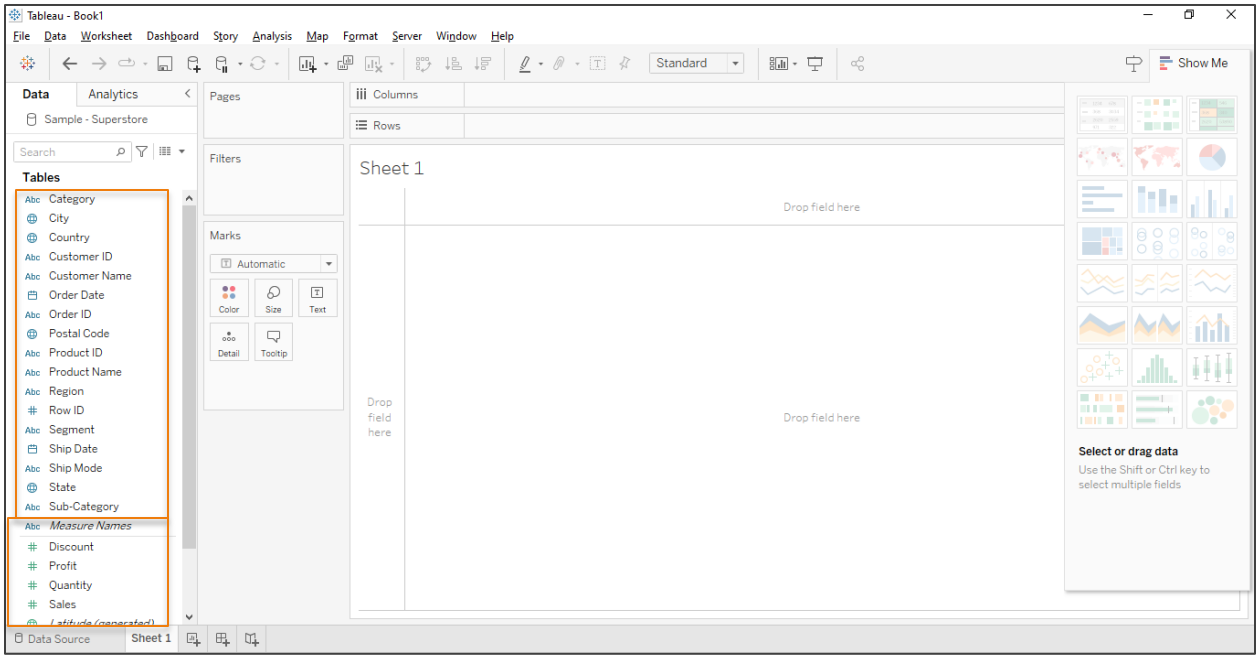
Note: Download the **superstore-excel.xlsx** dataset from the Reference Materials section of the LMS.

Steps to be followed:

1. Import the Excel file and preview the data
2. Add measure to create chart
3. Add dimension to create chart
4. View and change the mark type
5. Create Color marks
6. Add Size marks
7. Organize Labels marks
8. Interpret Detail marks
9. Clarify Tooltip

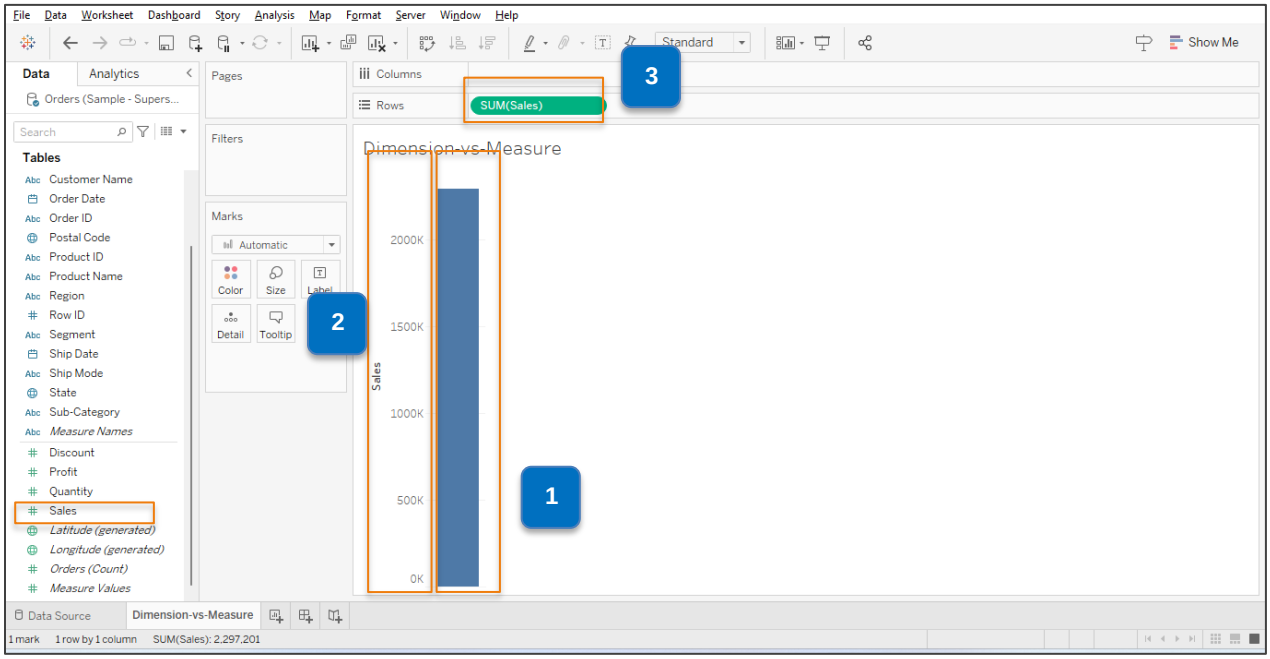
Step 1: Import the Excel file and preview the data

1.1 Import the **superstore-excel.xlsx** data and click on **Sheet 1**. Once you open the workspace, dimensions (blue) and measures (green) are found on the Data pane (extreme left).



Step 2: Add measure to create chart

2.1 Double-click on **Sales** measure



Observation:

This will modify the UI in three ways.

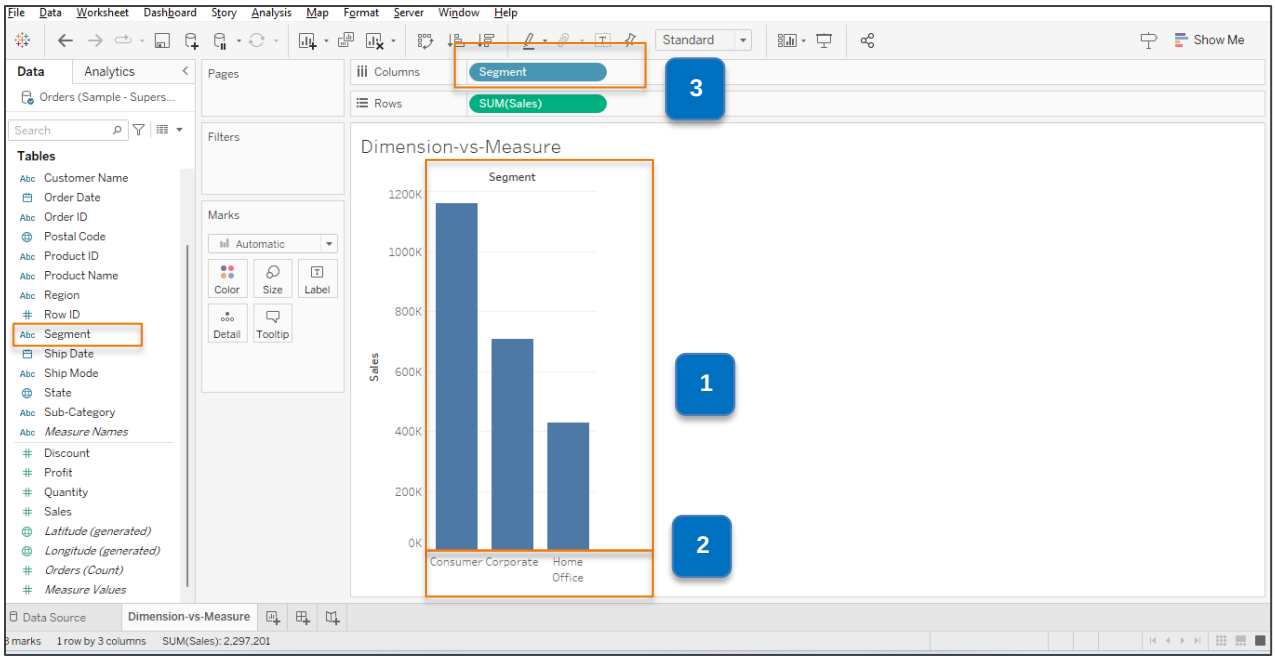
1. Create a single bar for sales
2. Generate an axis for sales with the name **Sales**
3. Move the **Sales** field to **Rows** shelf and add an aggregation **SUM**

Sales is now displayed as SUM(Sales) in green color.

> **Note:** This is the most basic bar chart you have created with only one Measure. Alternatively, you can also drag the Sales measure straight into Rows field.

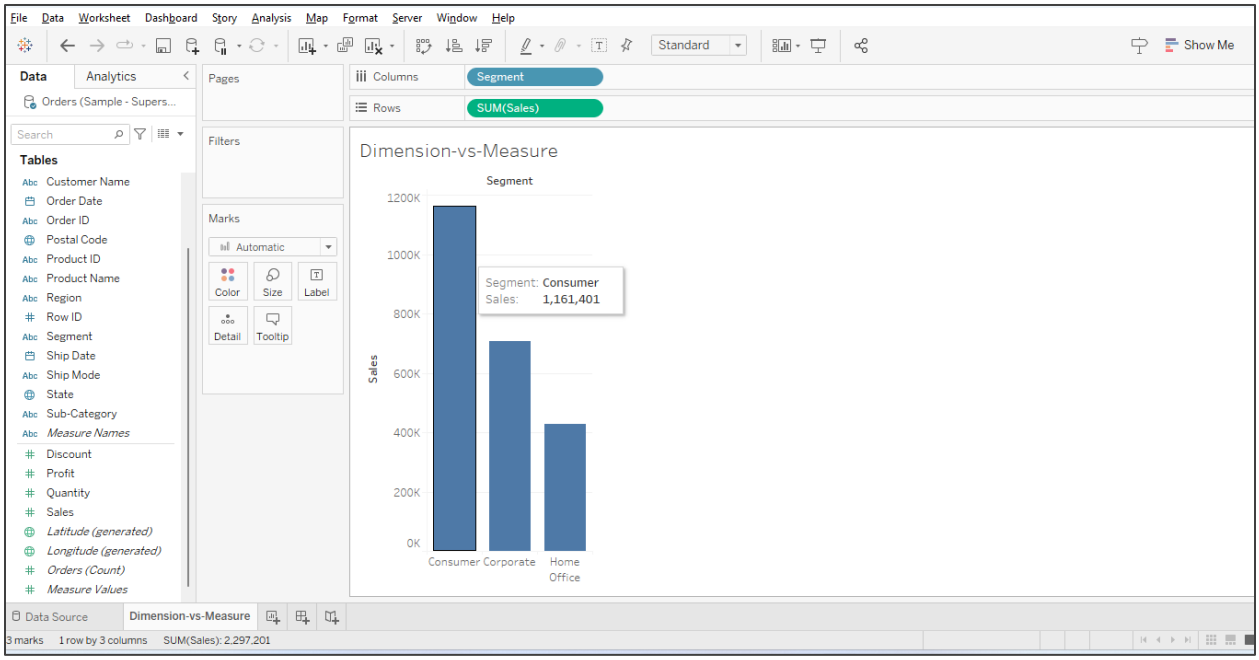
Step 3: Add dimension to create chart

3.1 Double-click on **Segment** in continuation to the above chart. Tableau will add a **Segment** dimension to the columns automatically.



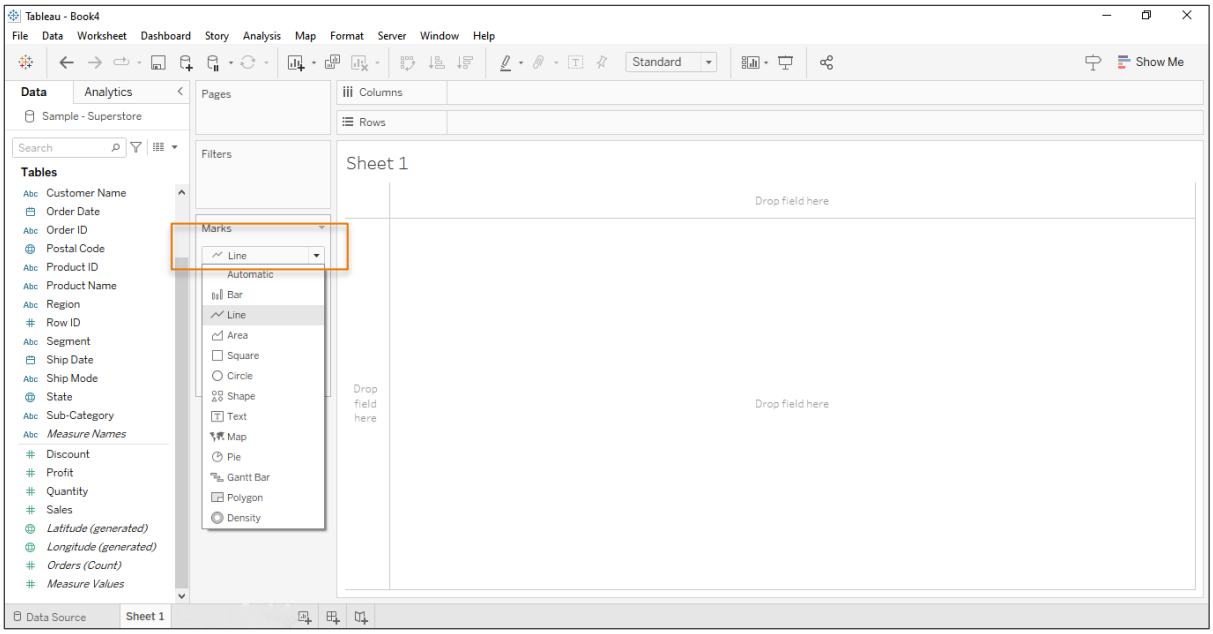
Observation:

1. Sliced the entire SUM(Sales) by segment sales. Now the chart shows the bar chart at segment level.
2. Generated headers with the names of the segments
3. Moved the segment field into the **Columns** shelf in blue color

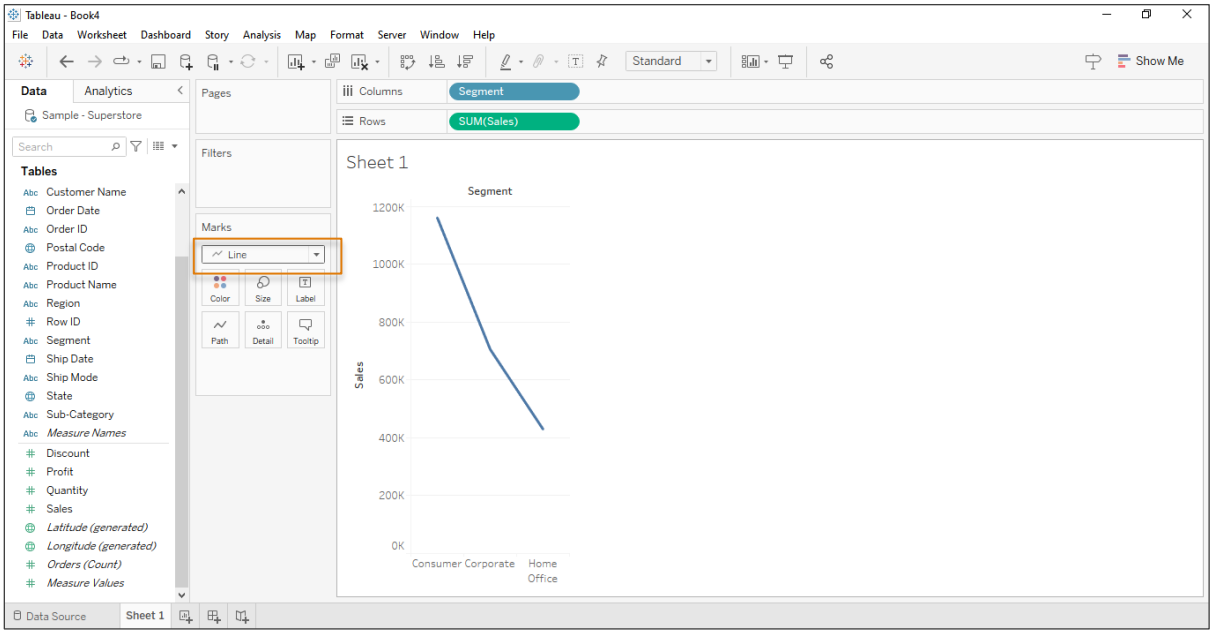


Step 4: View and change the mark type

4.1 Click on the dropdown to view the mark type and change the mark type from **Automatic** to **Line**



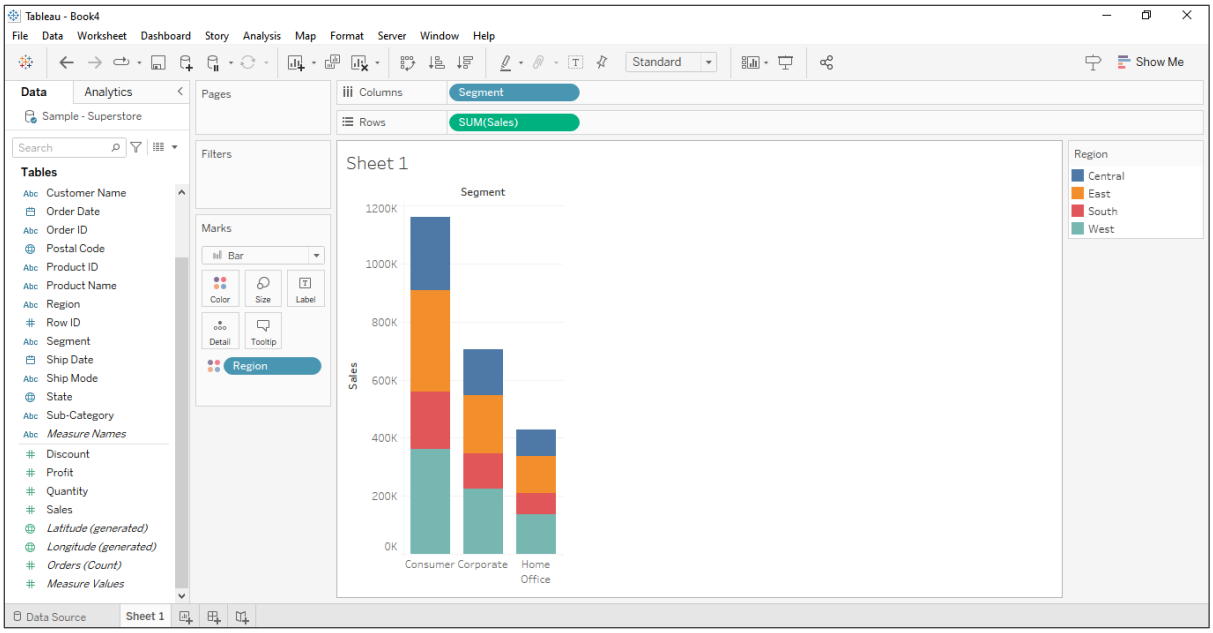
4.2 Select different mark types to see how the chart changes and then bring it back to bar as it is the most suitable (also suggested by Tableau as Automatic)



Note: Tableau automatically suggest the best mark type as the Automatic mark type

Step 5: Create Color marks

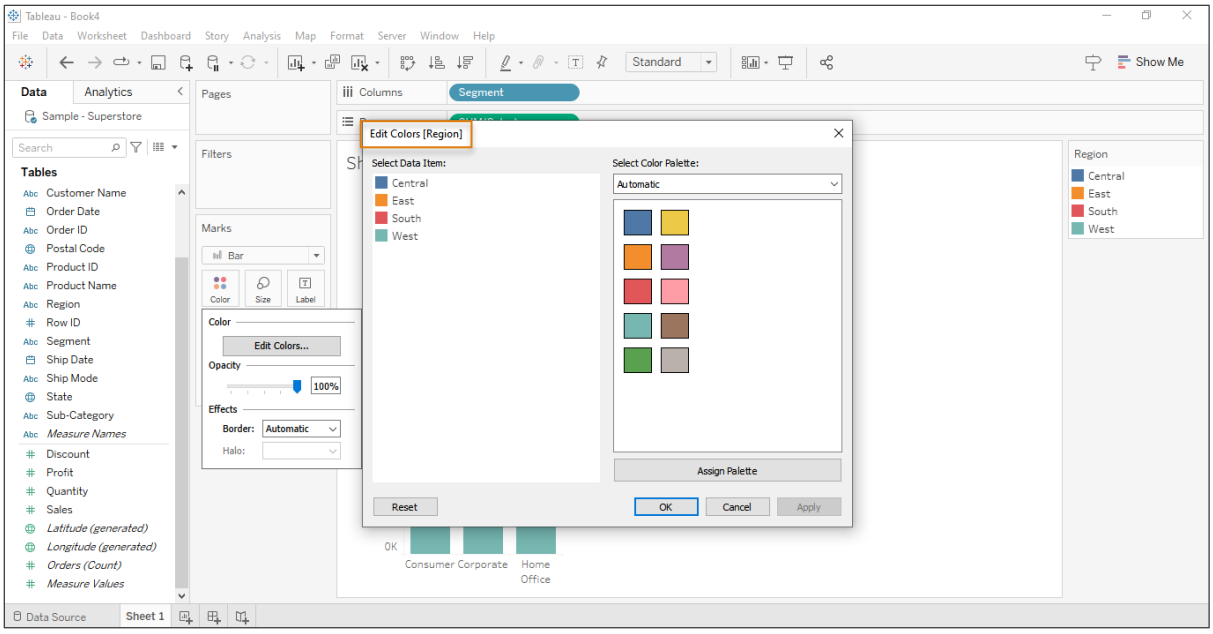
5.1 Drag and drop **Region** dimension on to **Color** marks. This creates a stack bar chart which now shows the region-wise segment sales.



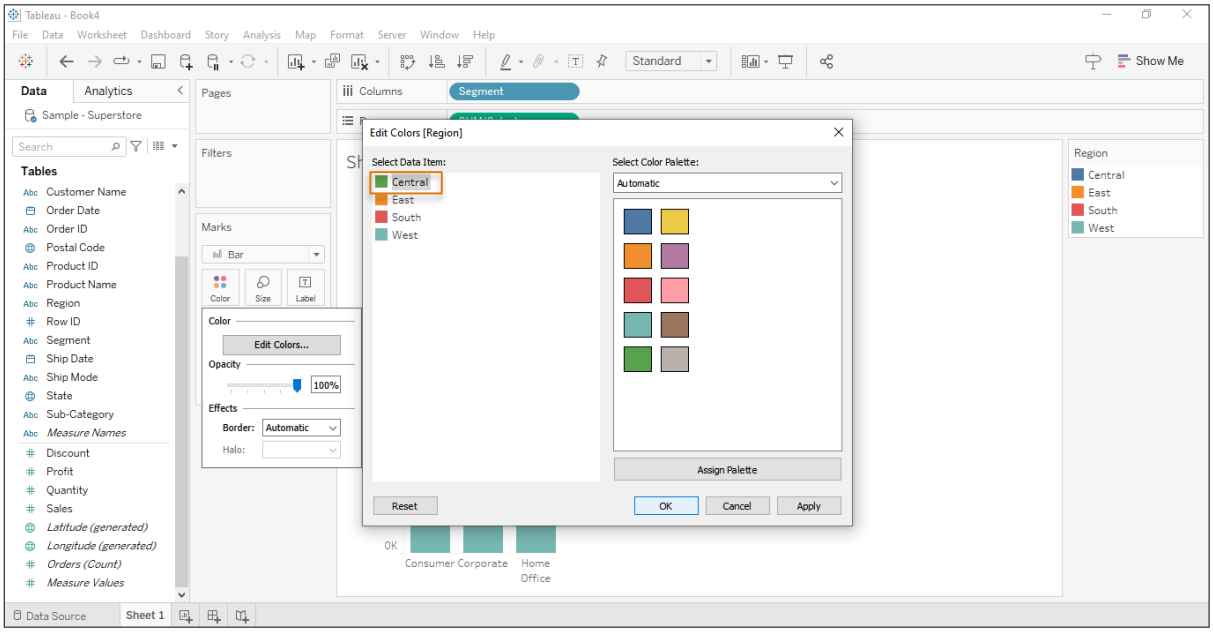
Note:

- Observe that the **Region** dimension sits in the **Marks** card with a color icon indicating the Region has been put on color marks.
- Adding dimension to **Color** marks generate a color legend on the right top corner. You can drag and bring it under the Marks card as well.
- The number of marks also changes based on the visual element. Here the number of marks is 3 (Segments) X 4 (Regions) = 12.
- Details of each mark are visible in the **Tooltip** which can be seen by hovering the cursor on each mark.

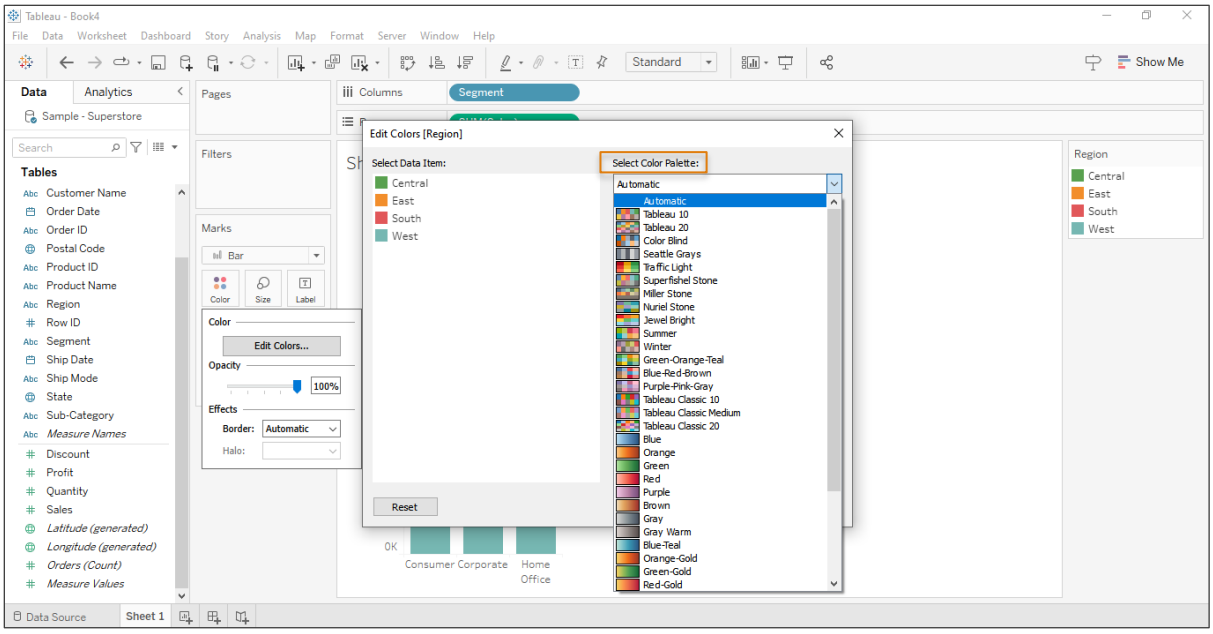
5.2 Click on **Color** marks. A small window opens below the color marks (as marked below) and click on **Edit Colors [Region]**. You can change any specific color of the region or all the colors.



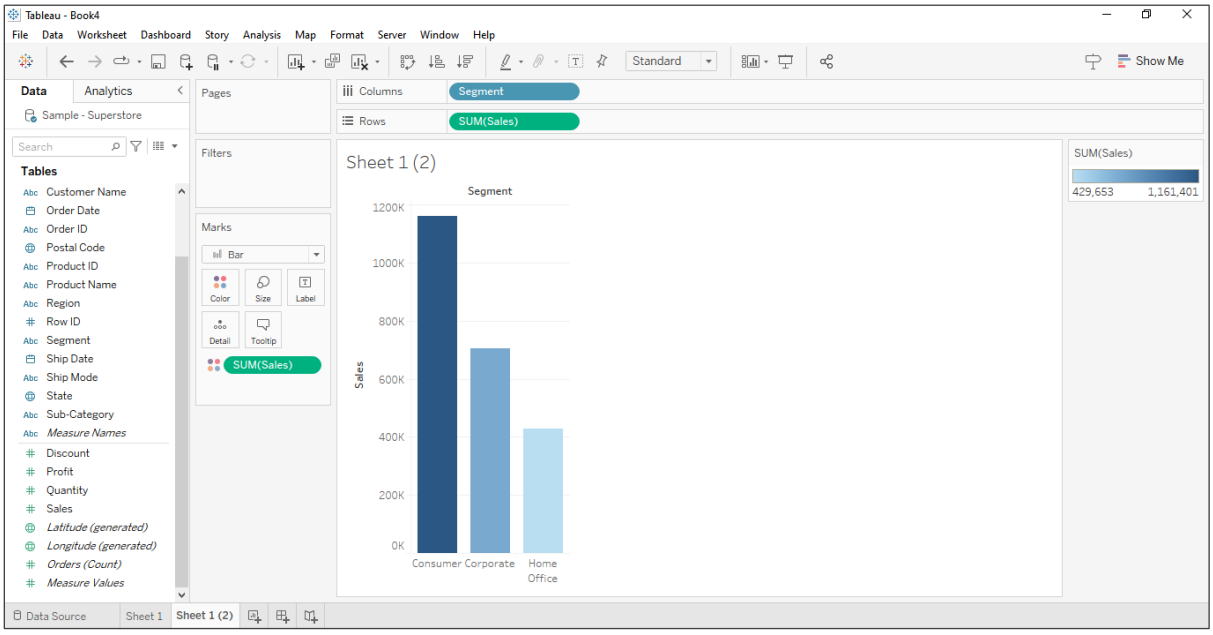
5.3 Click on **Central Region** in the **Select Data Item**. It will be highlighted in grey. Now click on the green color (as shown below). Click **Apply** and **Ok**. Your chart will now look like below with **Central** section of the bars turned into green.



5.4 Click on the **Select color Palette** dropdown to access the color palette



5.5 Duplicate the sheet by right clicking and selecting duplicate. Remove the **Region** dimension from Color marks and drag **Sales** dimension to the Color marks.

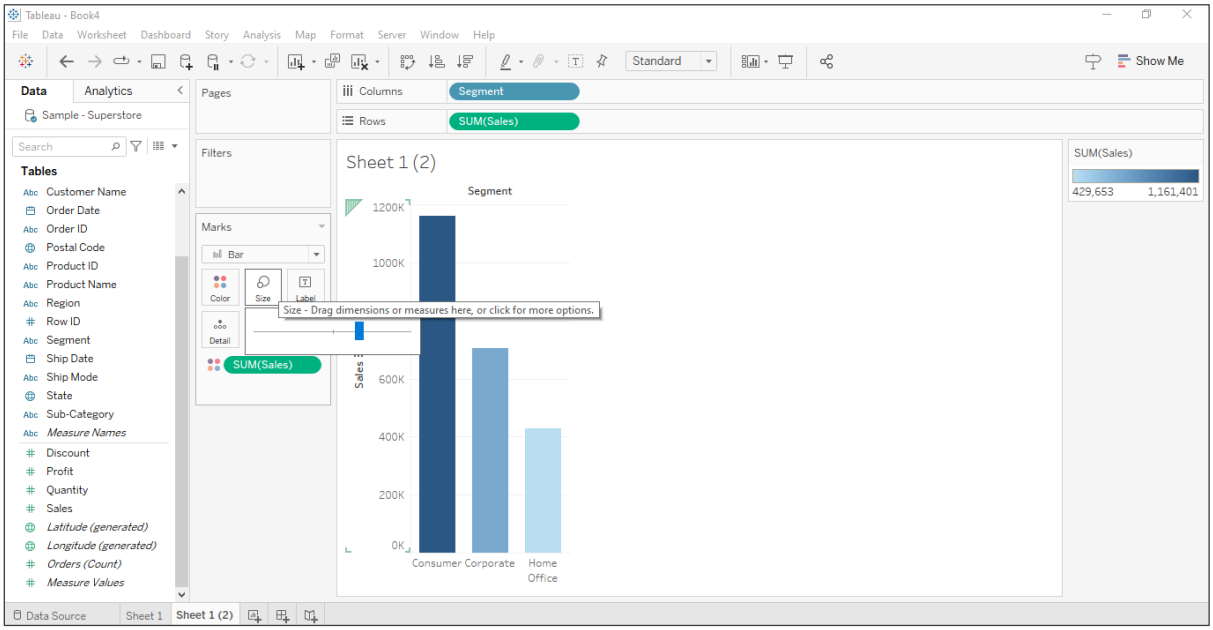


Note:

- Observe that **Sales Measure [SUM(Sales)]** sits in the **Marks** card with color icon indicating region has been put on color marks.
- Adding measure to color marks generates a legend with color gradient on the right top corner. You can drag and bring it under the Marks card also.
- The darker shade is for higher volumes of sales for segment and lighter share for lower volumes of sales values.
- Details of each marks are visible in the **Tooltip** which can be seen by hovering the cursor on each mark.

Step 6: Add Size marks

6.1 Click on **Size** marks and adjust the size of the bars by moving the blue adjuster to left or right. Moving the tick to the left will reduce the thickness of the bars and moving to the right will increase the thickness of the bars.

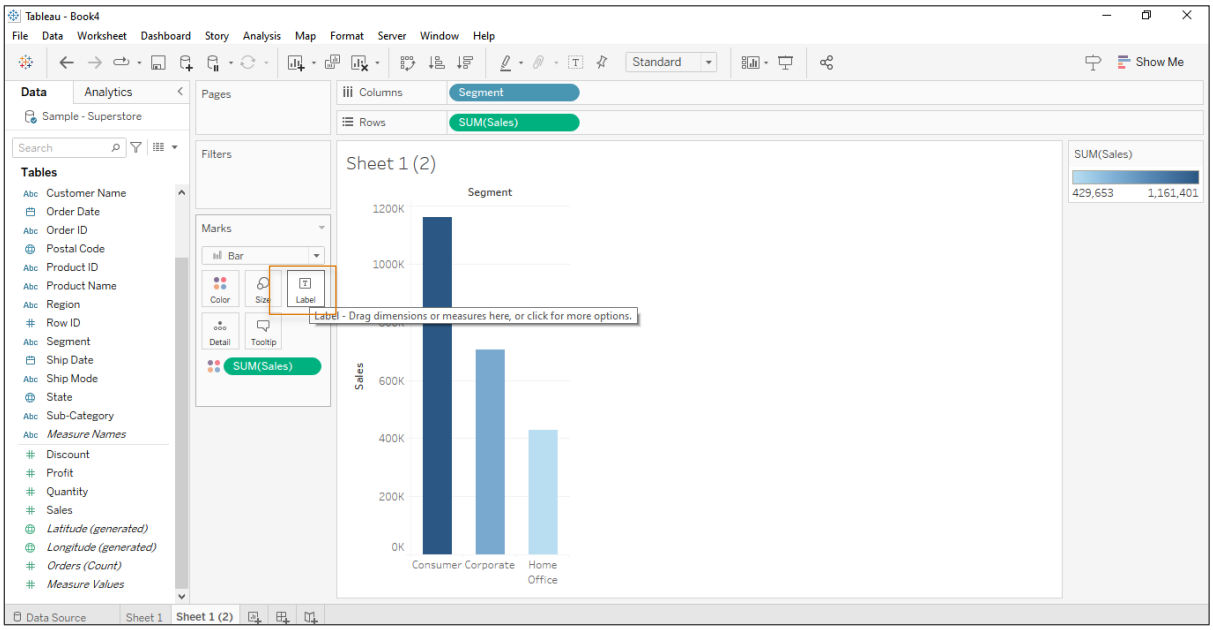


Step 7: Organize Labels marks

You can add labels in 3 different ways to the visualization:

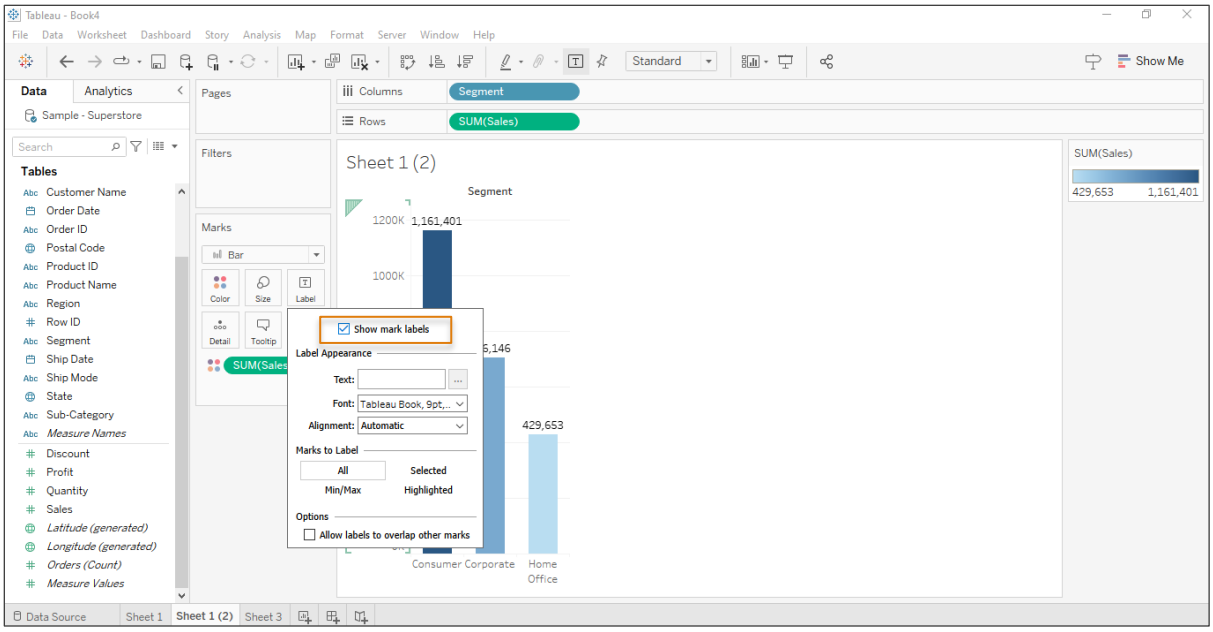
7.1 Short cut in the menu

- Click on **Show Mark Labels** in the menu (T icon). Labels will appear on the **Marks** as shown below
- Click again on the **Show Mark Labels** in the menu (T icon) to remove the labels



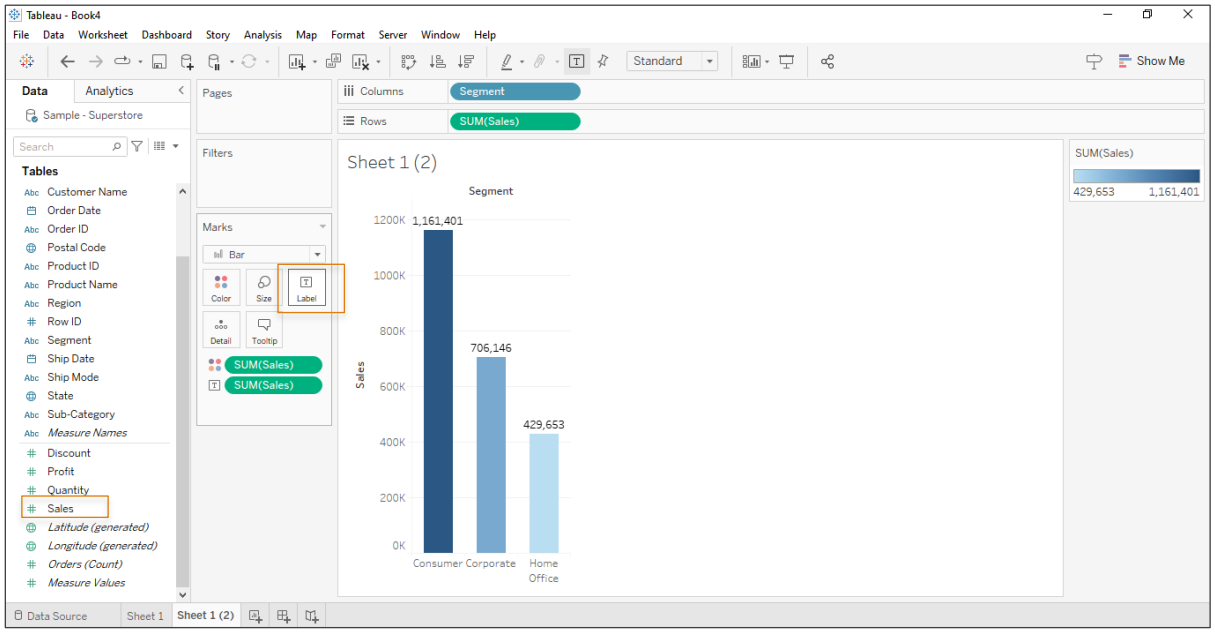
7.2 Check **Show Mark Labels** from Label marks

- Click on the **Label** marks (a window will open). Check the **Show Mark Labels** checkbox on the top of the window.
- Labels will appear on the **Marks**



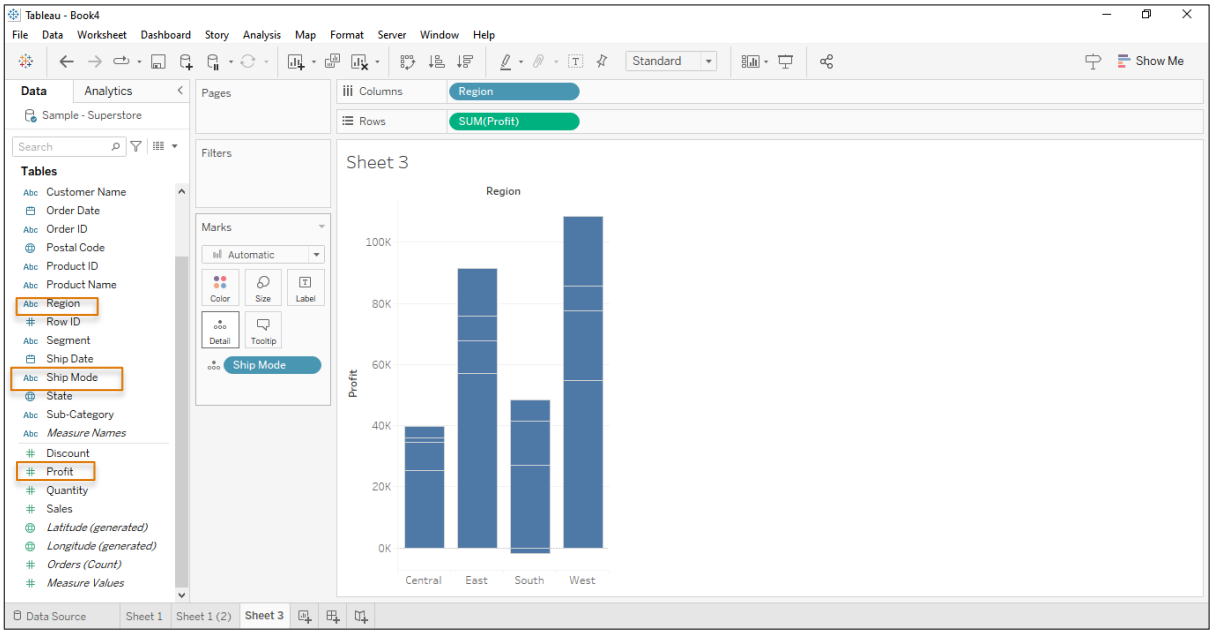
7.3 Drag the field on to the Label marks

- Drag **Sales** measure on to the **Label** marks



Step 8: Interpret Detail marks

8.1 On a new sheet, drag **Profit** measure to **Rows** and **Region** dimension to **Columns** and drag **Ship Mode** dimension on to **Detail** marks

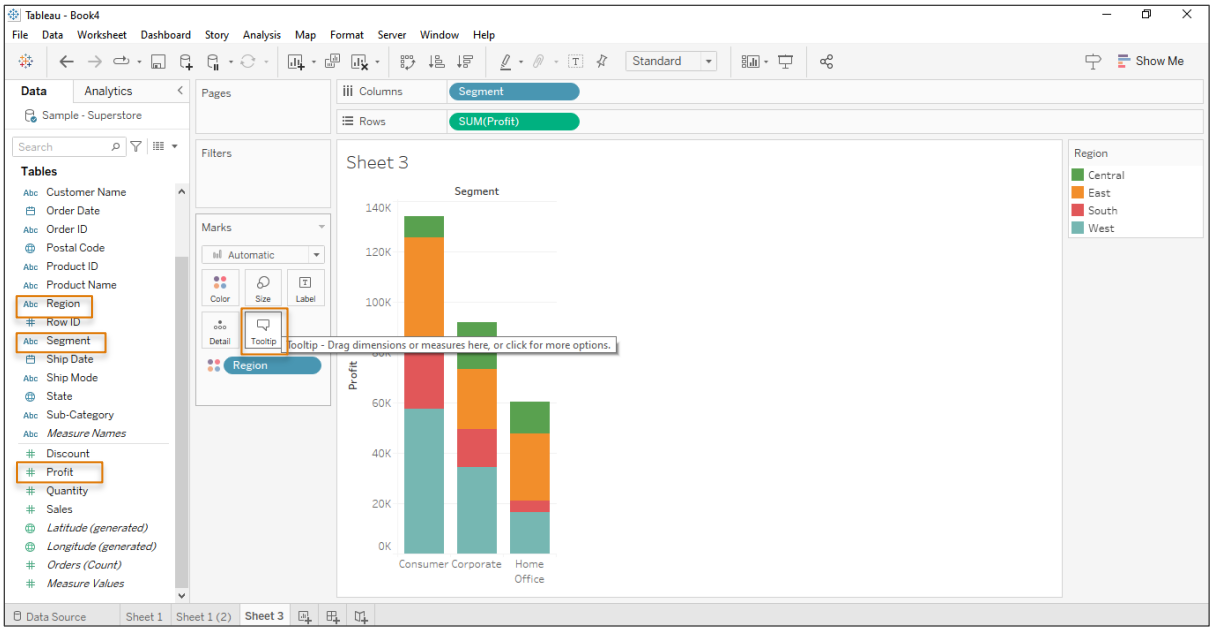


Note:

- Adding a dimension to measure will add a level of detail to the visualization. In other words, it will only split the existing marks with the dimension you have added (**Ship Mode** in this case)
- Adding dimensions to **Detail** marks does not add color to the split.
- It increases the marks of the visualization. (4 Regions X 4 Ship Mode = 16 Marks)

Step 9: Clarify Tooltip

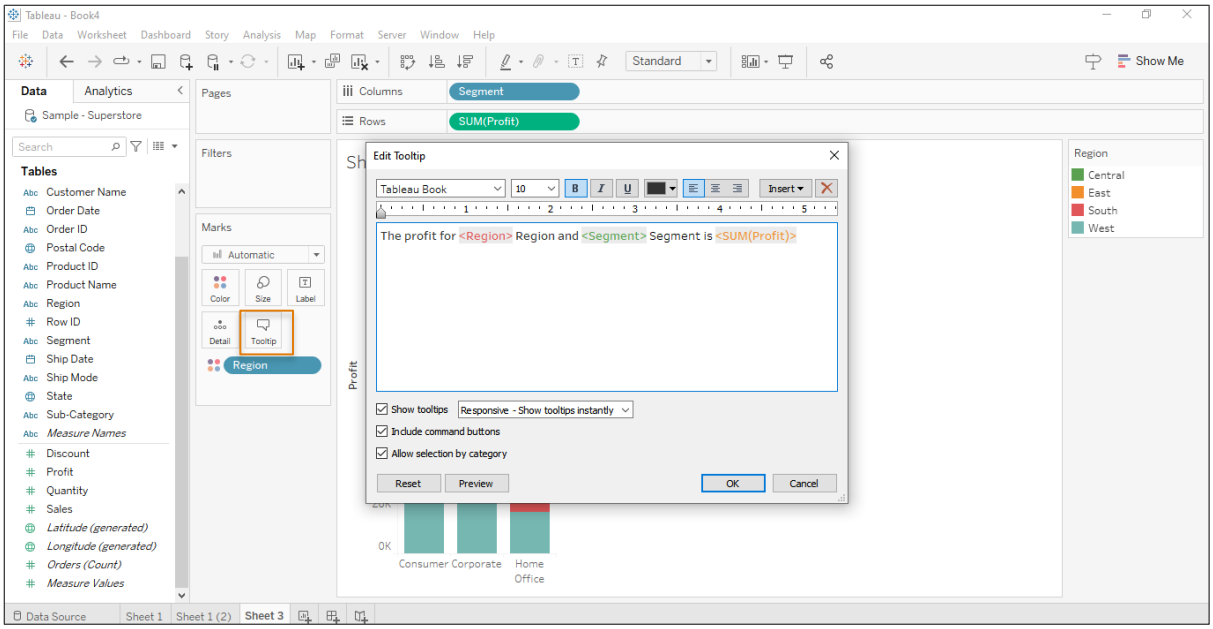
9.1 Drag **Profit** to **Rows** and **Segment** to **Columns** and **Region** to **Color** marks. Click on **Tooltip** in the Marks card



Note:

- It shows the structure of how the information will appear in the tooltip when you hover the cursor on the marks.
- You can change how the information on the tooltip is visible by editing the structure of the tooltip.

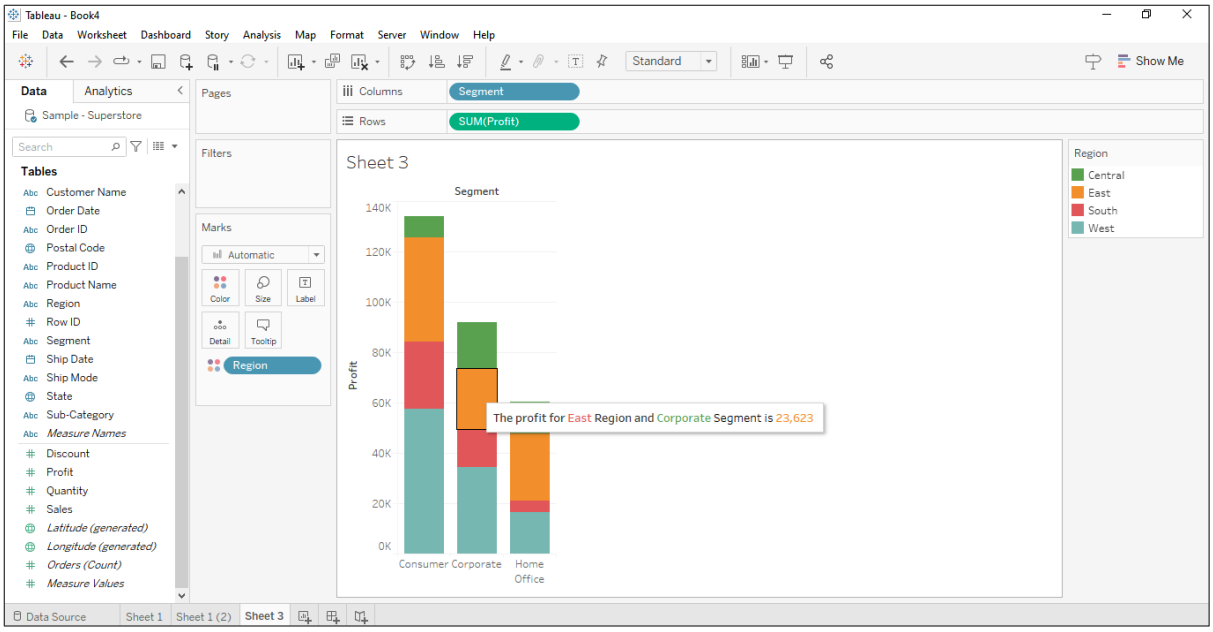
9.2 Click on **Tooltip** in the **Marks** card and replace the current structure with the below structure. The Profit for **<Region>** Region and **** Segment is **<SUM(Profit)>.**



Note:

- The variables appearing in the angled brackets (in the **Edit Tooltip** window) example <Region>, and <SUM(Profit)>, are the variable part of the tooltip. They show the details of the variables used in the marks and change as you hover cursor from one mark to another.
- The left side of the information mentioned (in the edit tooltip window) as – 'Region:', 'Segment:' and 'Profit:' are static information on the tooltip and they do not change as you hover cursor from one Mark to the other.

9.3 Change the format of the text by selecting text using the formatting option in the edit tooltip window



With these steps, you can effectively utilize Tableau's features to enhance data visualization, ensuring clarity and insightful analysis.