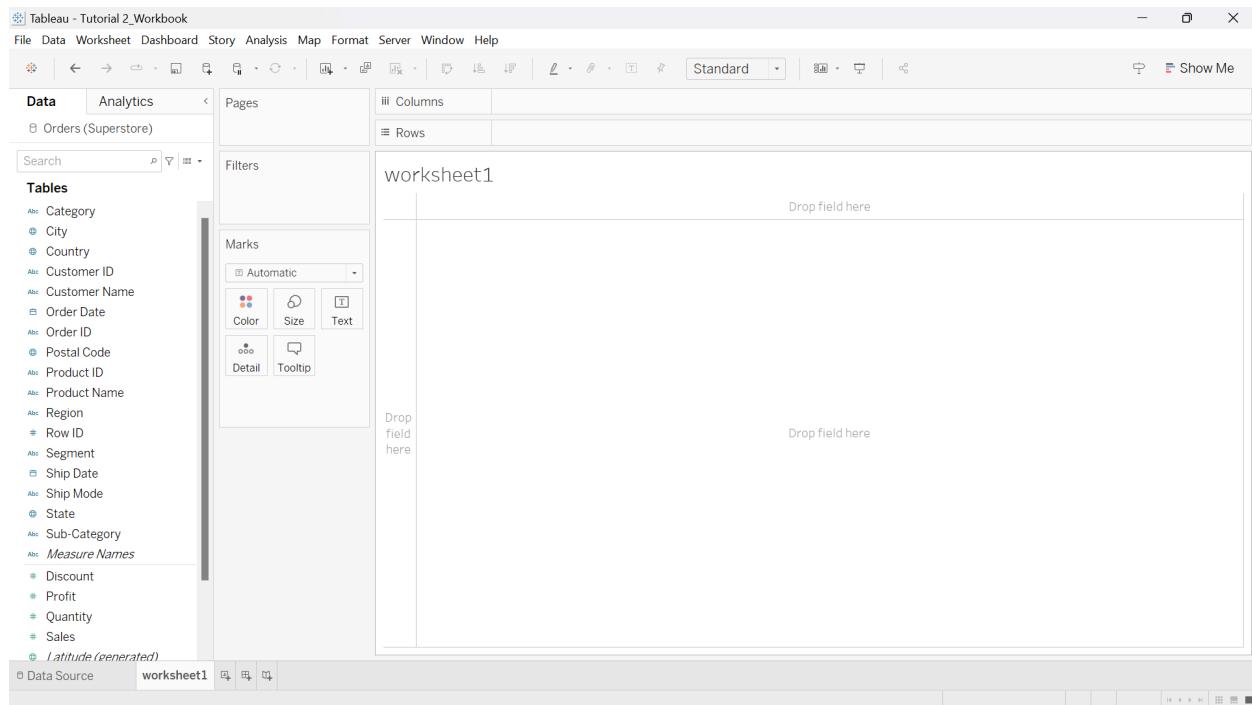
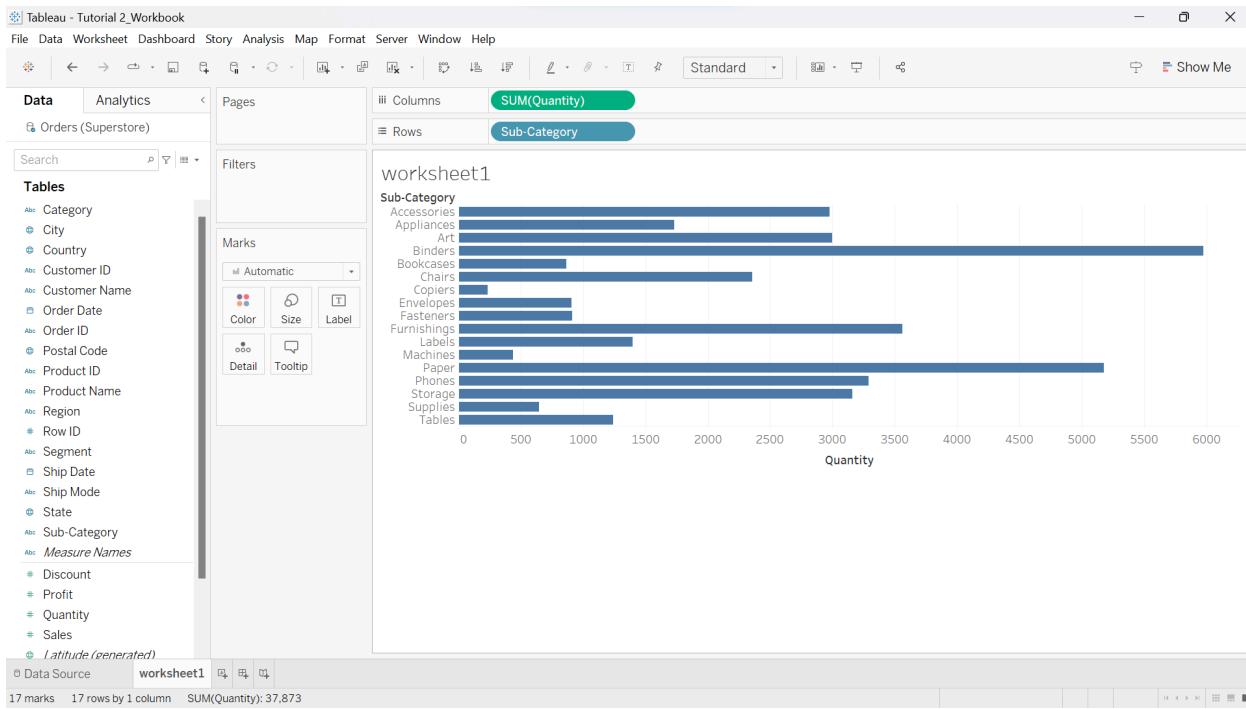


CSCE 5320 Section(s) 003,600 (Spring 2024 1)
Scientific Data Visualization

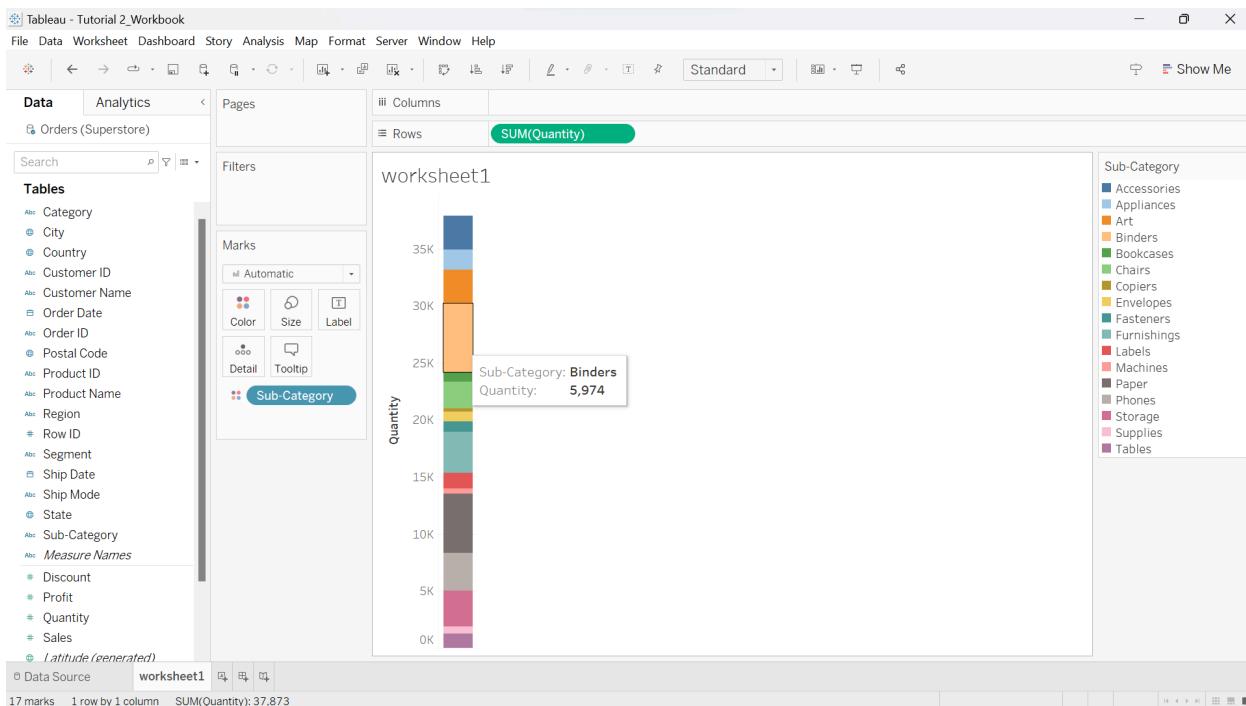
Task 1:
Tutorial 2:



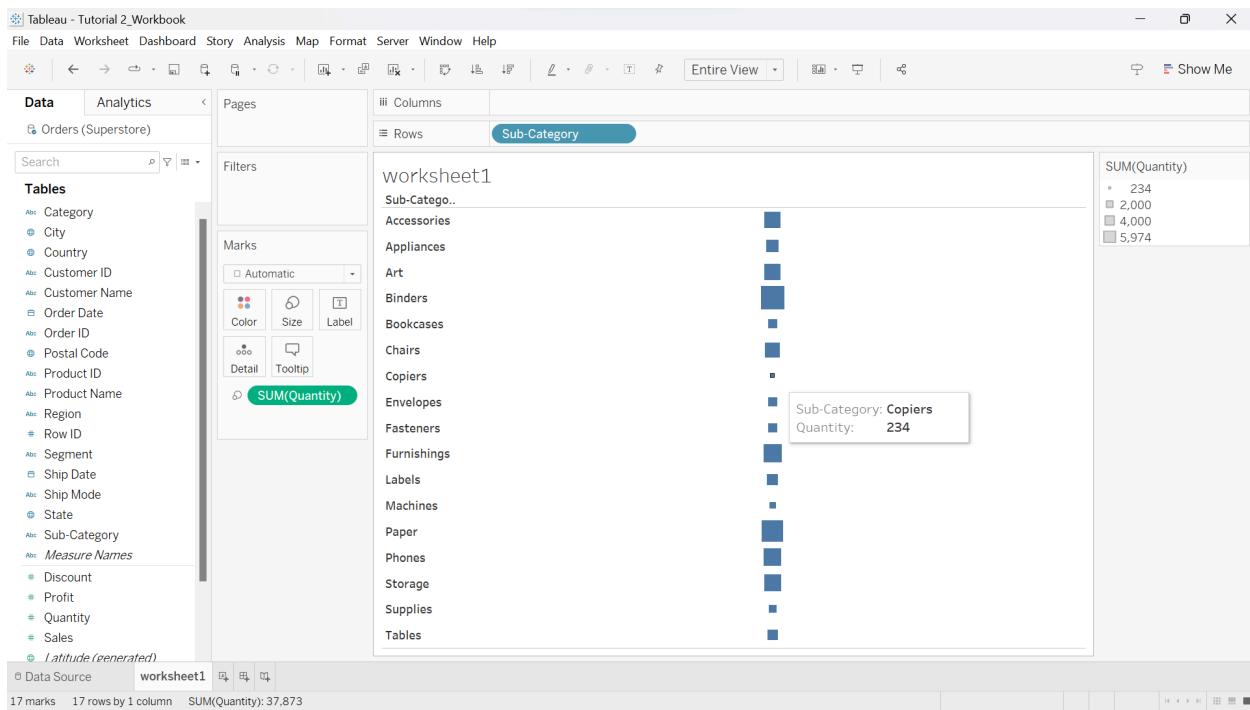
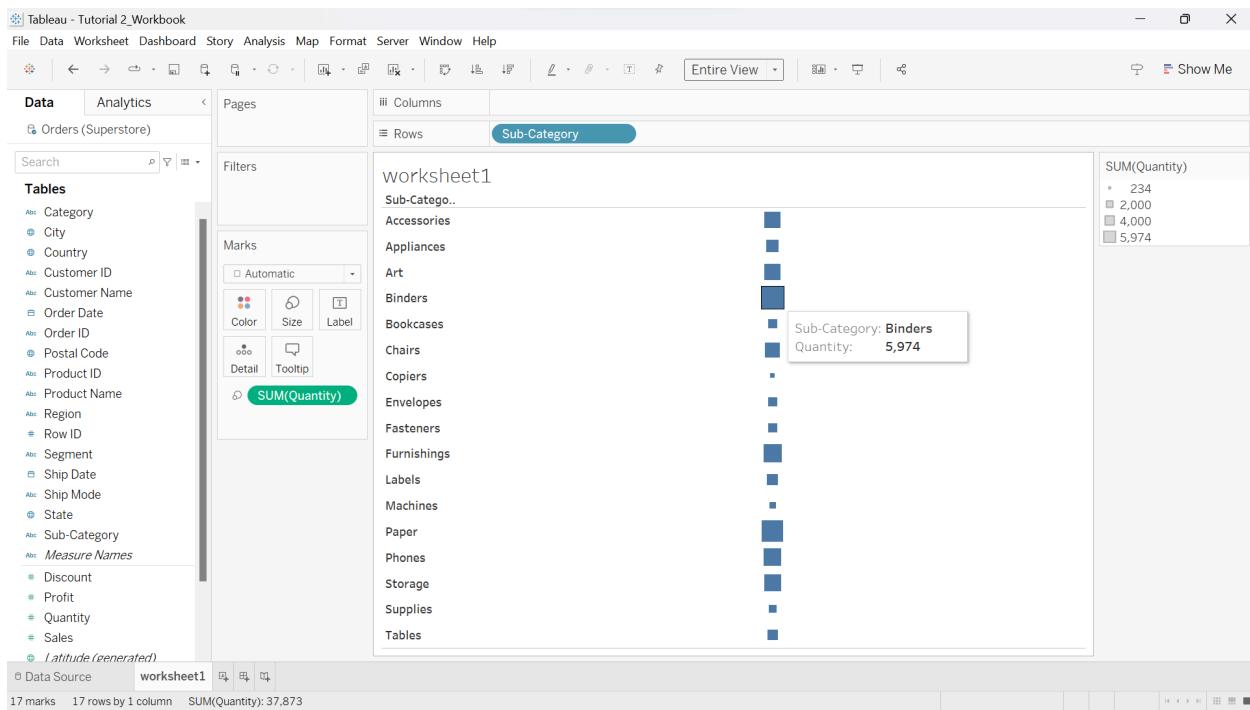
Step 1:
A horizontal bar graph with all the necessary attributes.



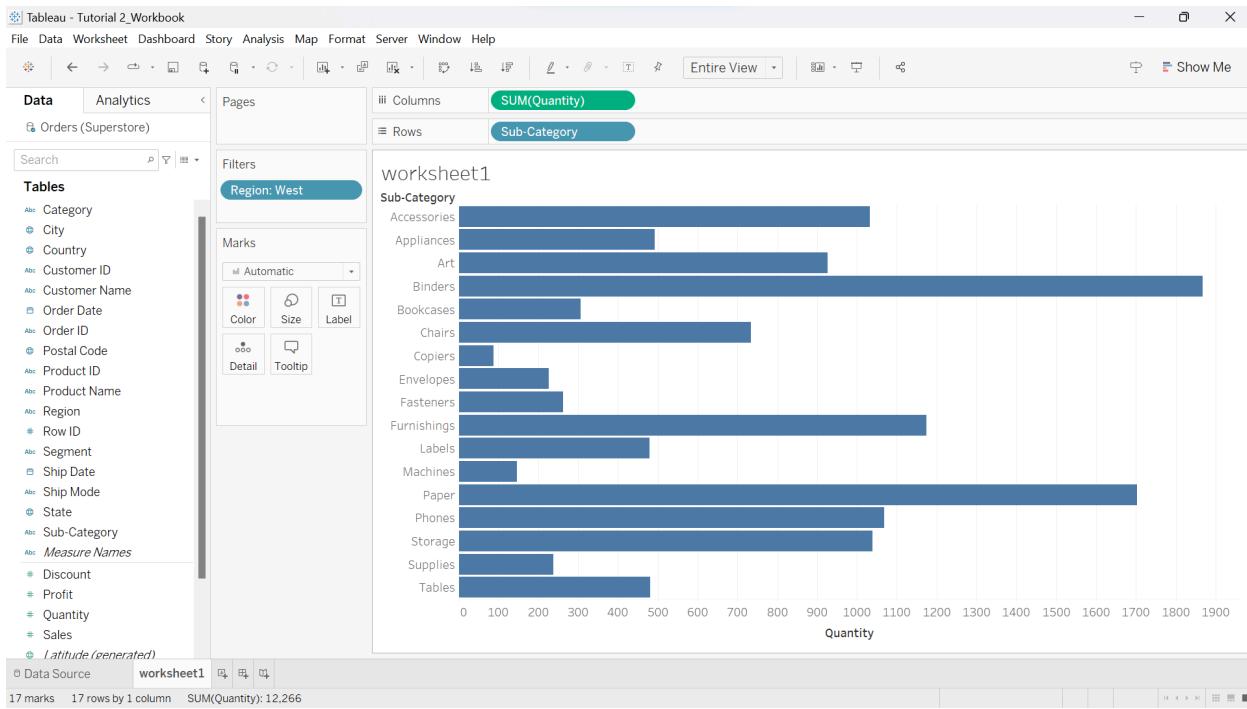
Step 2: Stacked bar chart with binders highlighted.



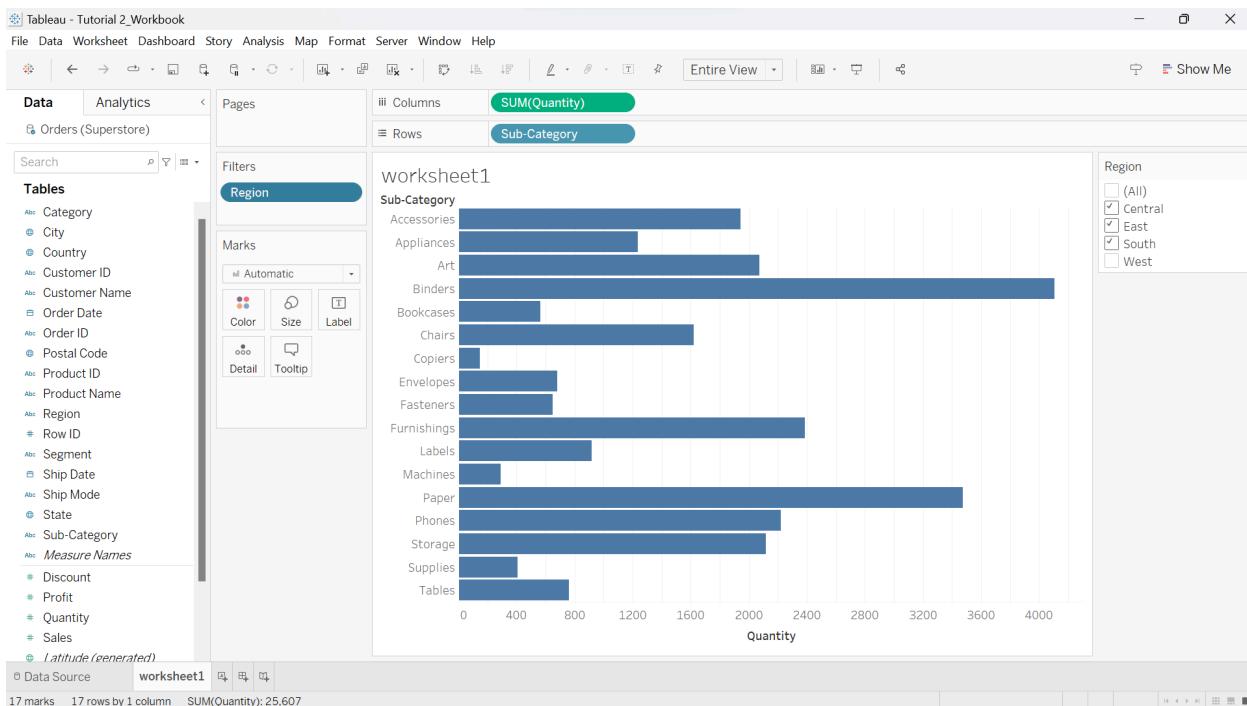
Step 3: A heatmap with subcategory in the rows.

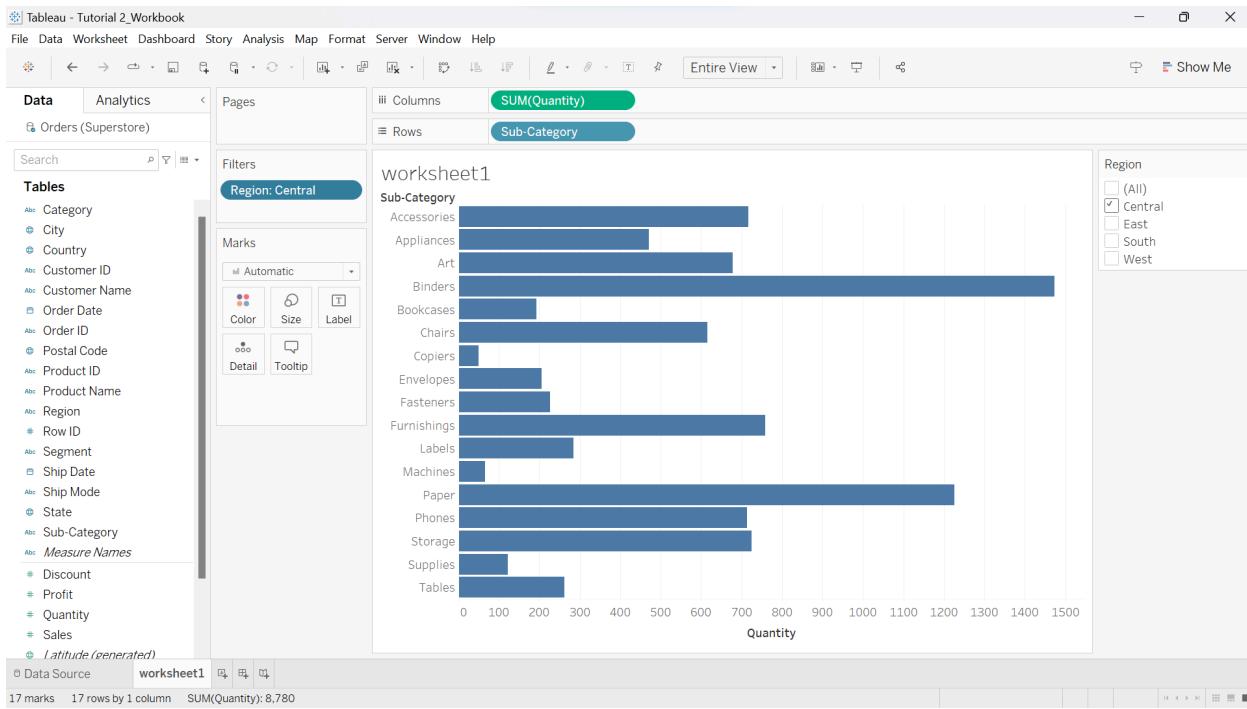


Step 4:



Step 5:

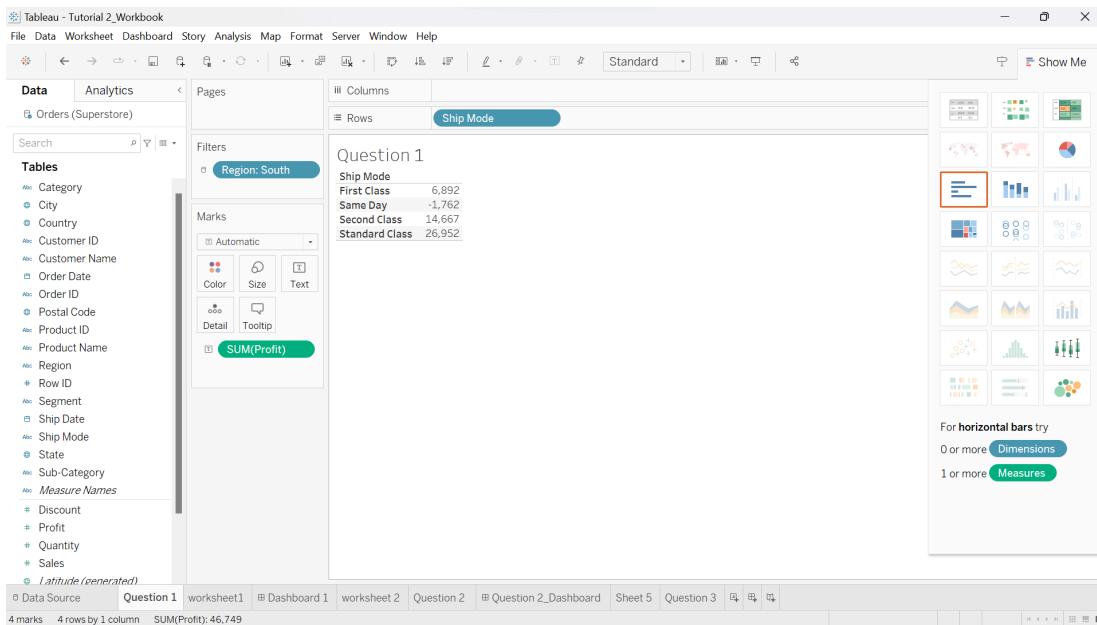




Question 1:

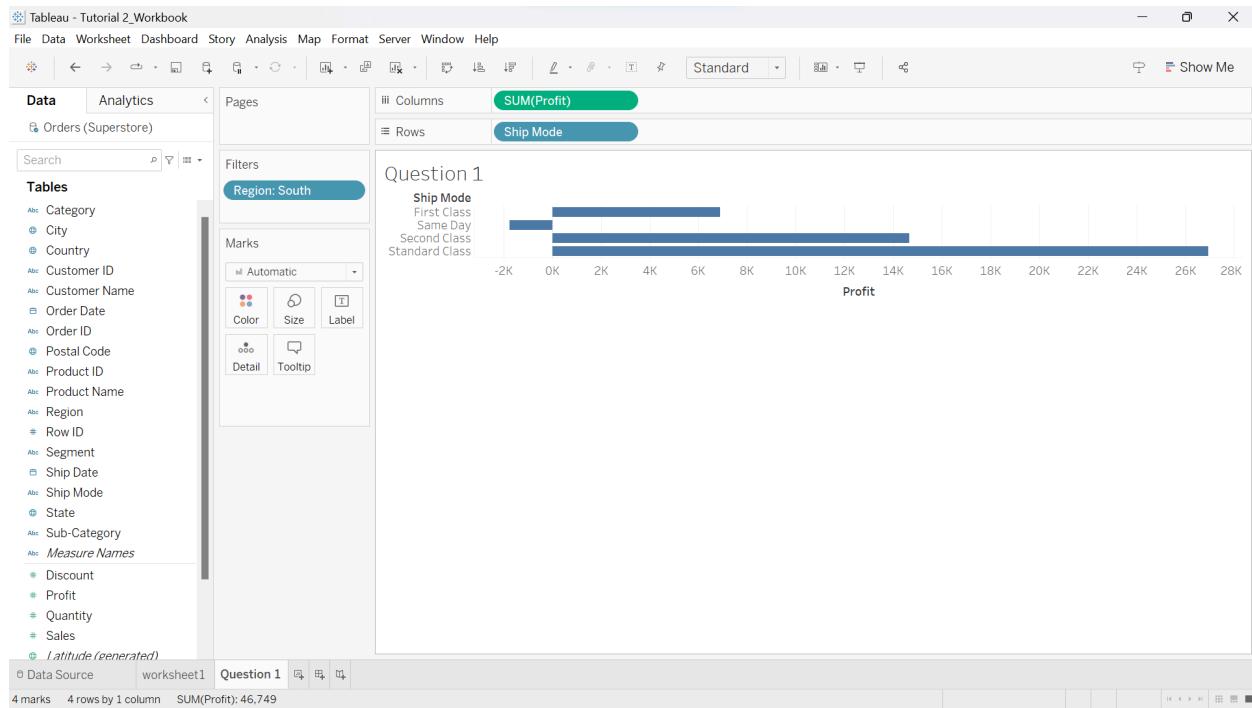
Step 1:

A new sheet is added with Ship Mode in rows and Profit in columns. The visualization tool is filtered with the region in the South.

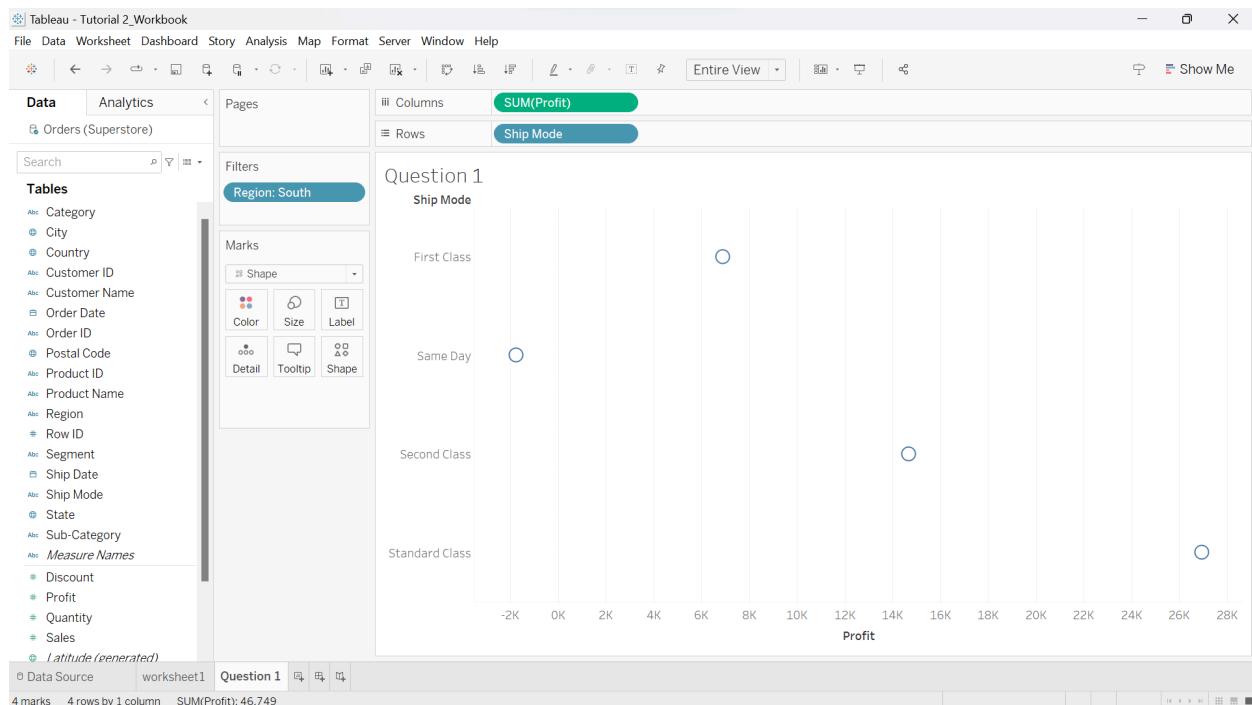


Step 2:

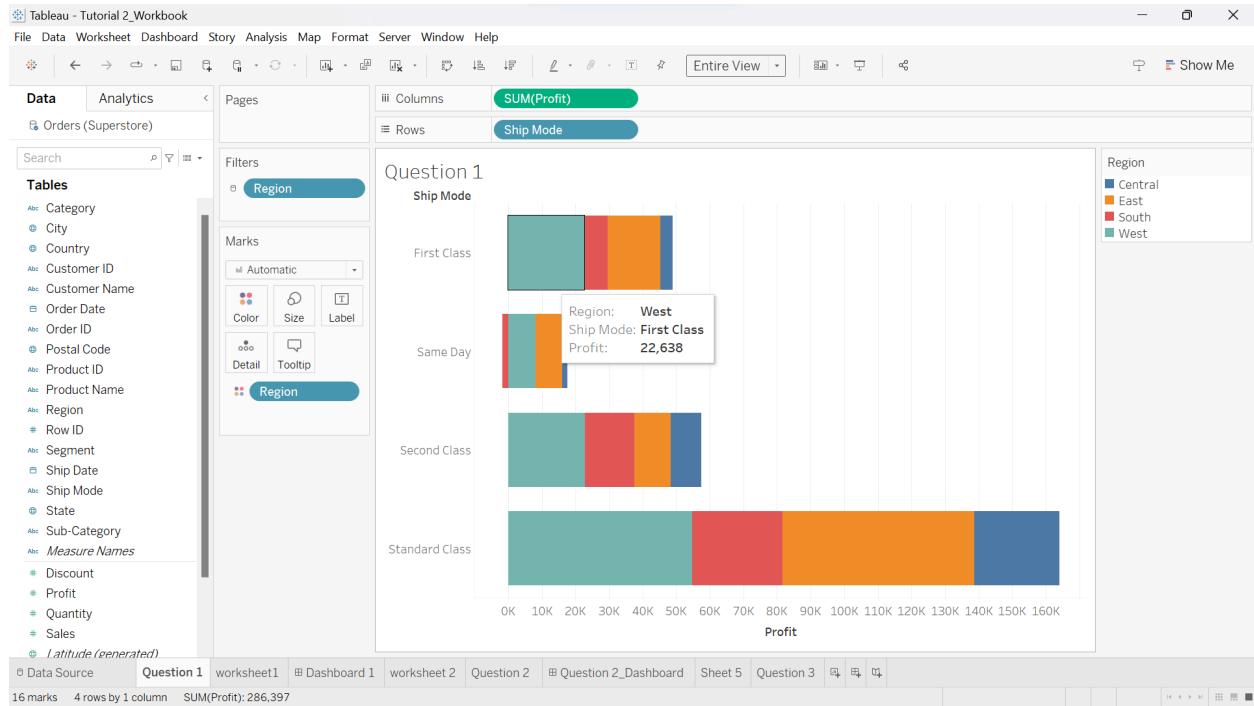
Horizontal Bar chart



Circle View



Step 3: West region has the maximum profit of 22,638 in First Class ship mode.



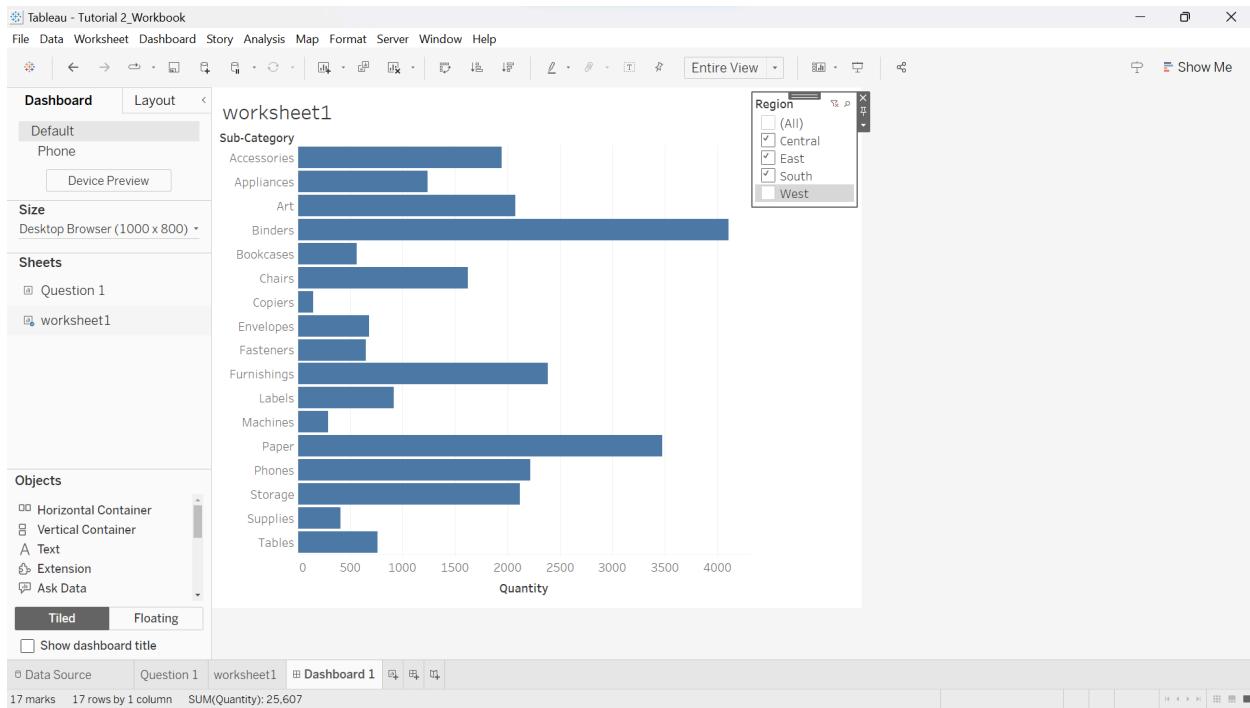
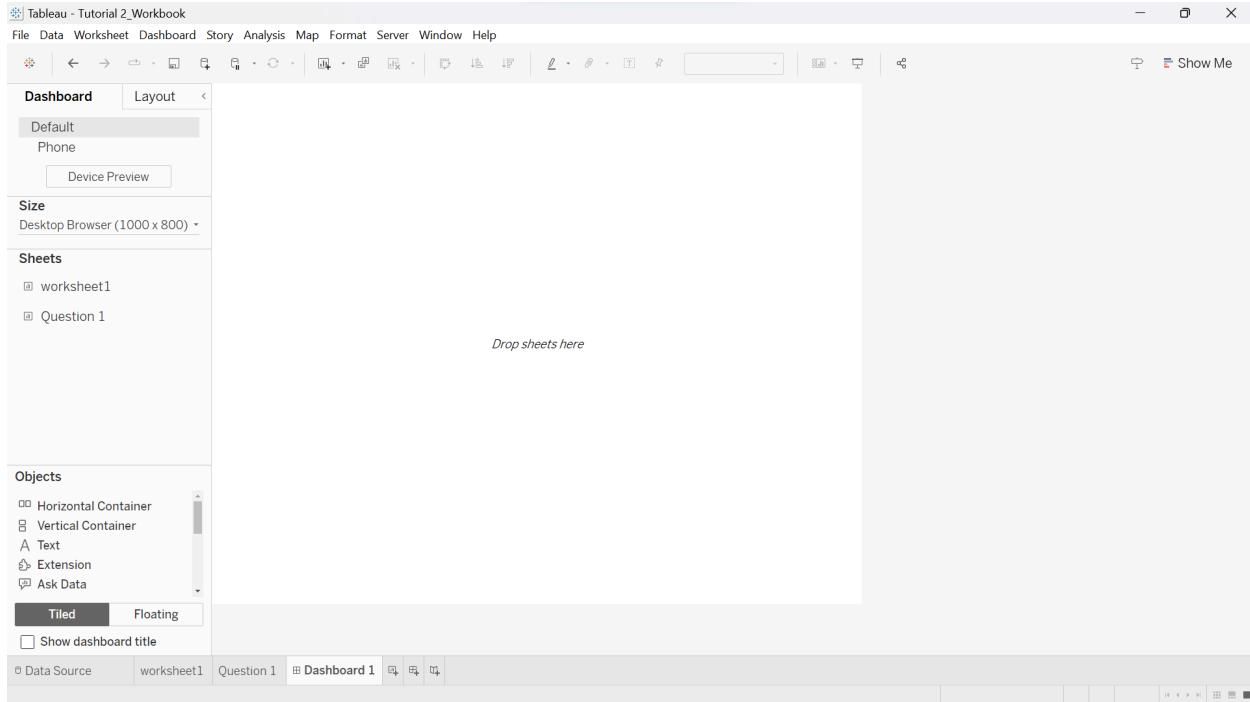
Step 4: Same-day ship mode has the least profits from the above visualization tool. In the other regions, same-day shipping also has the lowest profits.

Step 5: Standard class ship mode gives the highest profit in all regions. The next shipmode which is profitable is Second class.

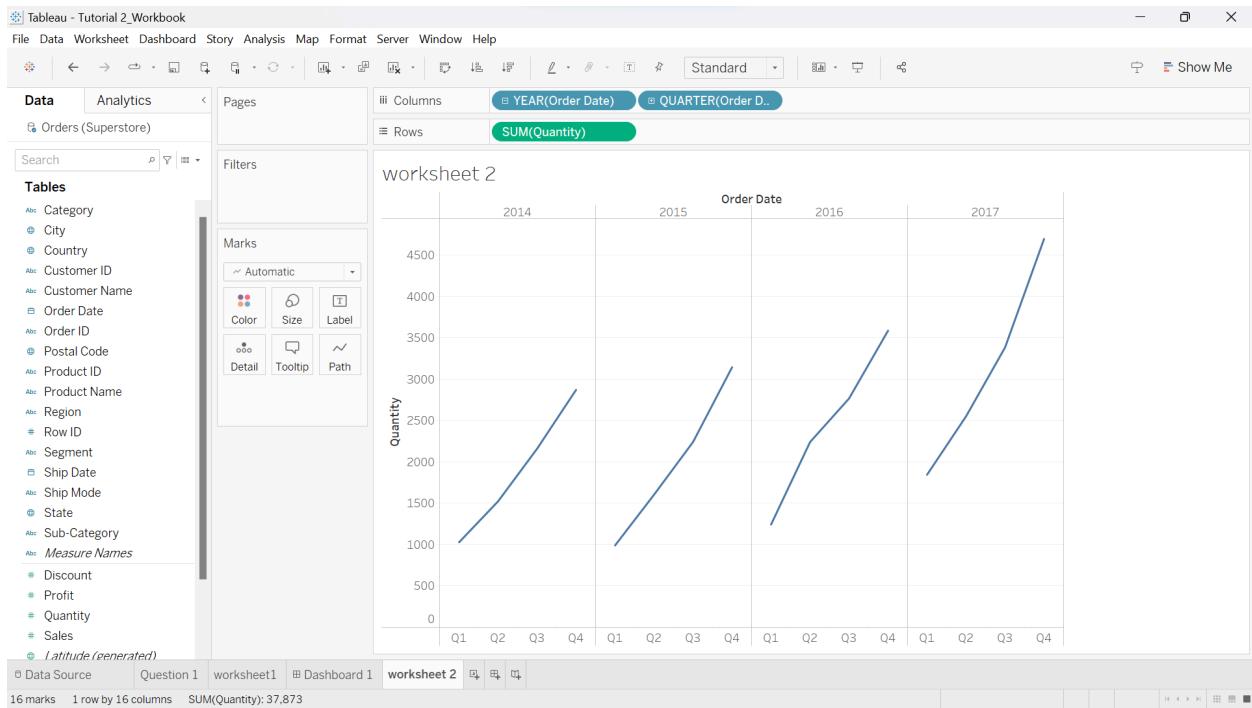
The visualizations presented above allow us to determine and analyze the shipping mode that generates the highest profits or losses for the company. It is possible to filter this information by region. This task helped me understand how to use filters to meet our needs properly.

Tutorial-2

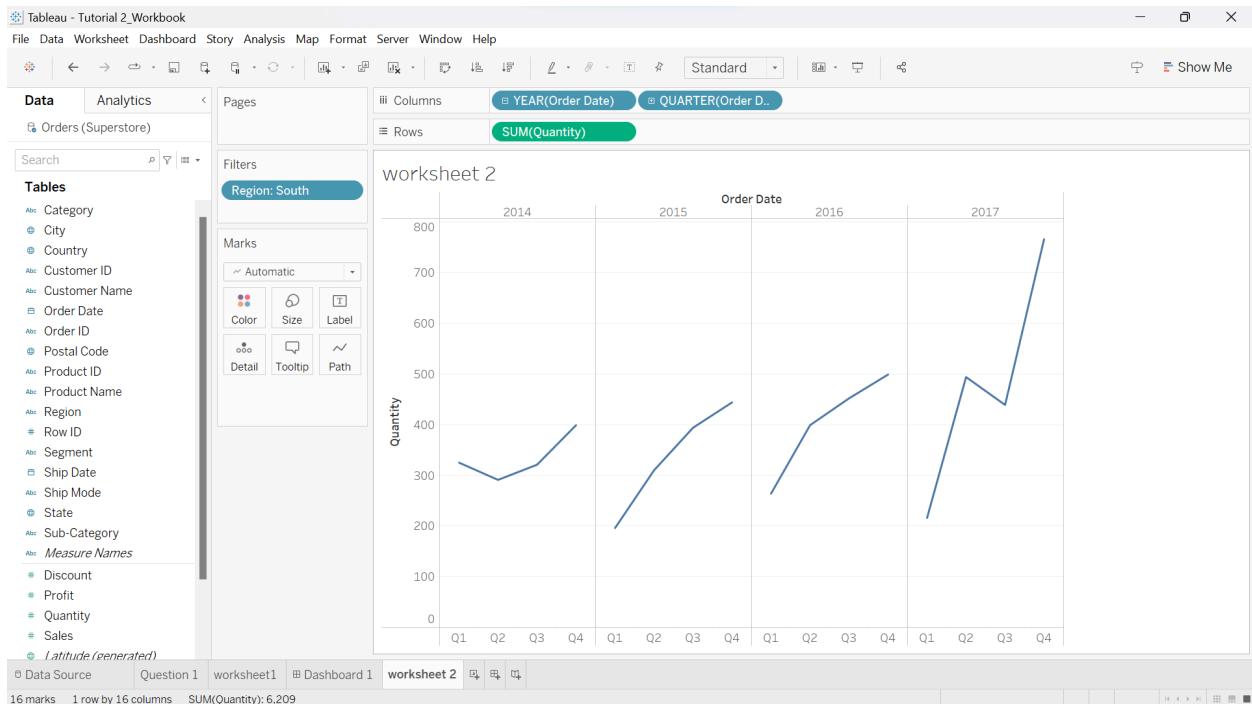
Step 1



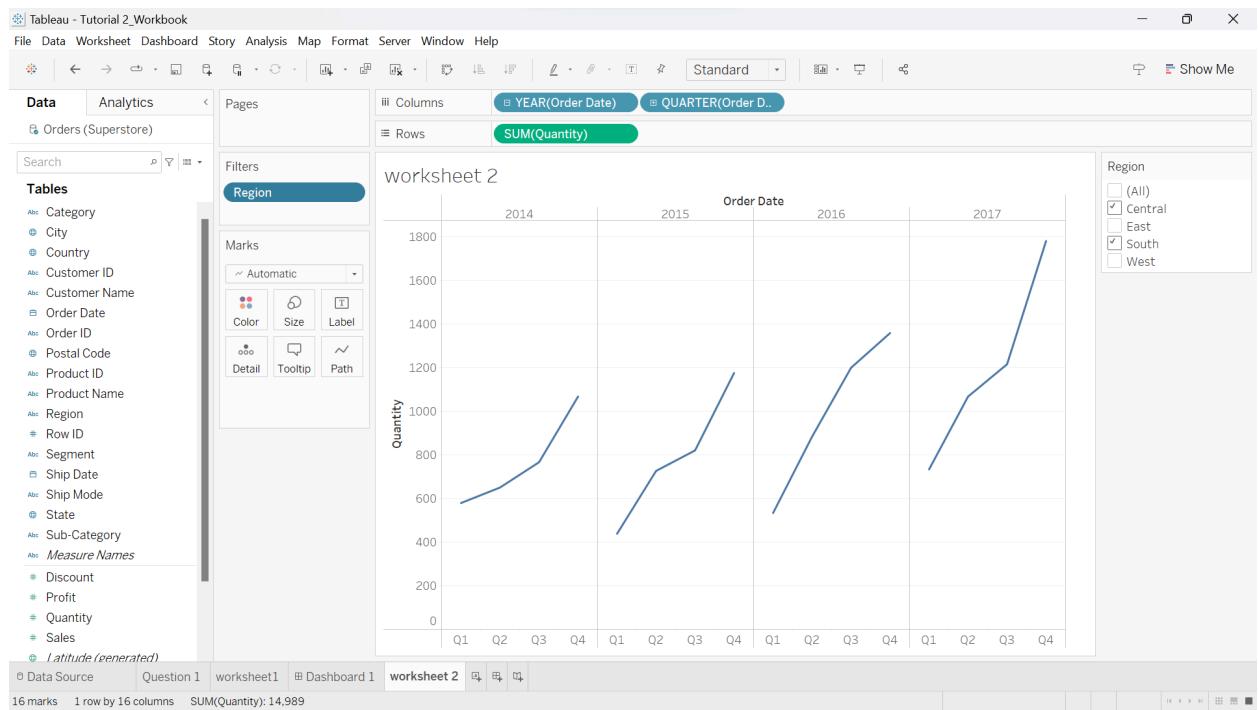
Step 2:



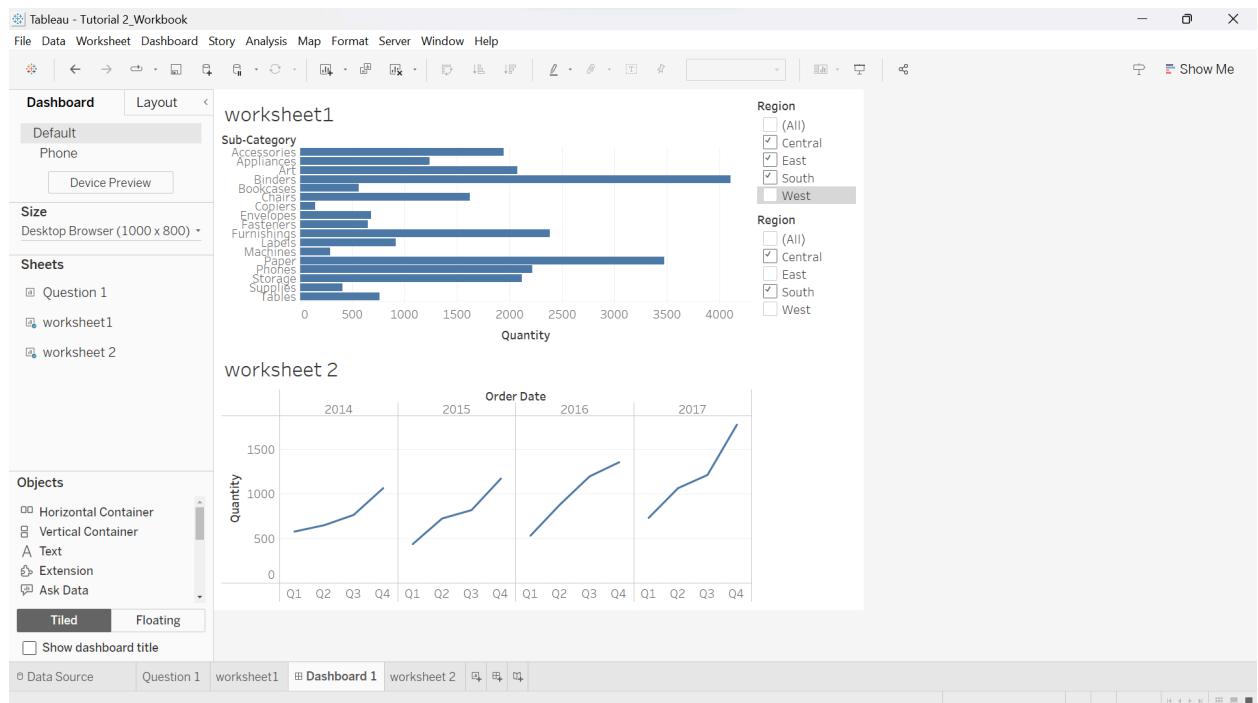
Step 3:

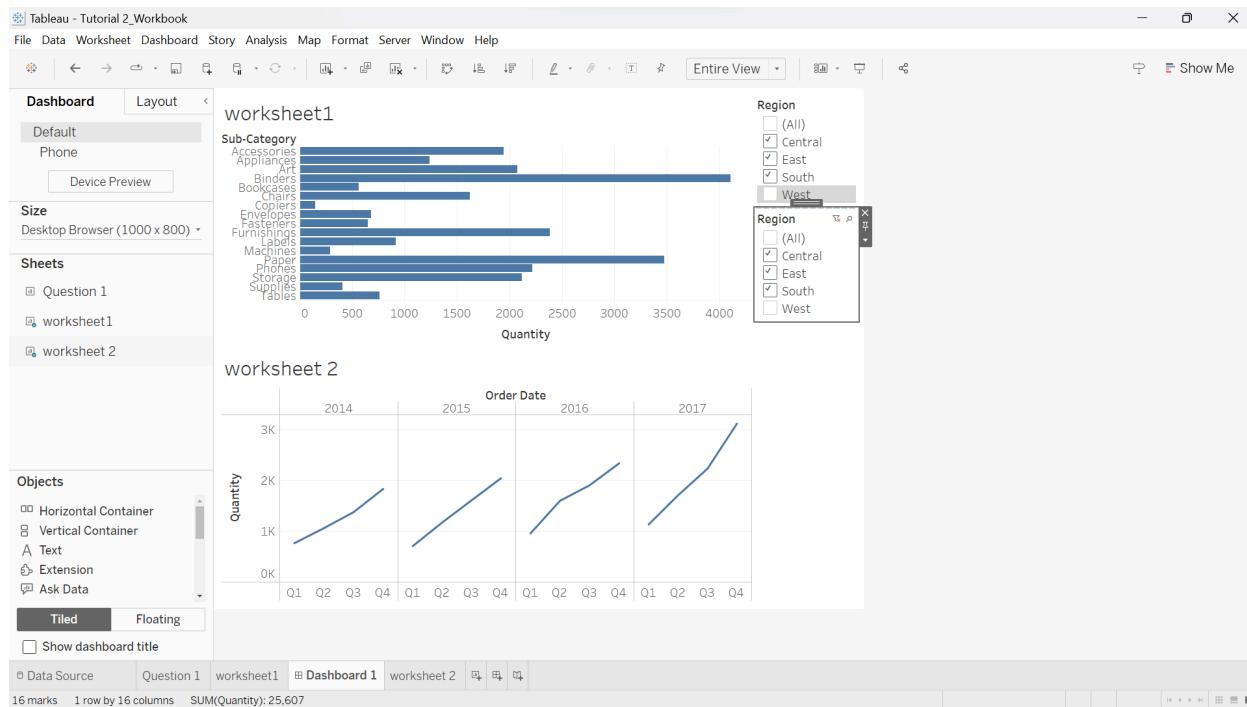
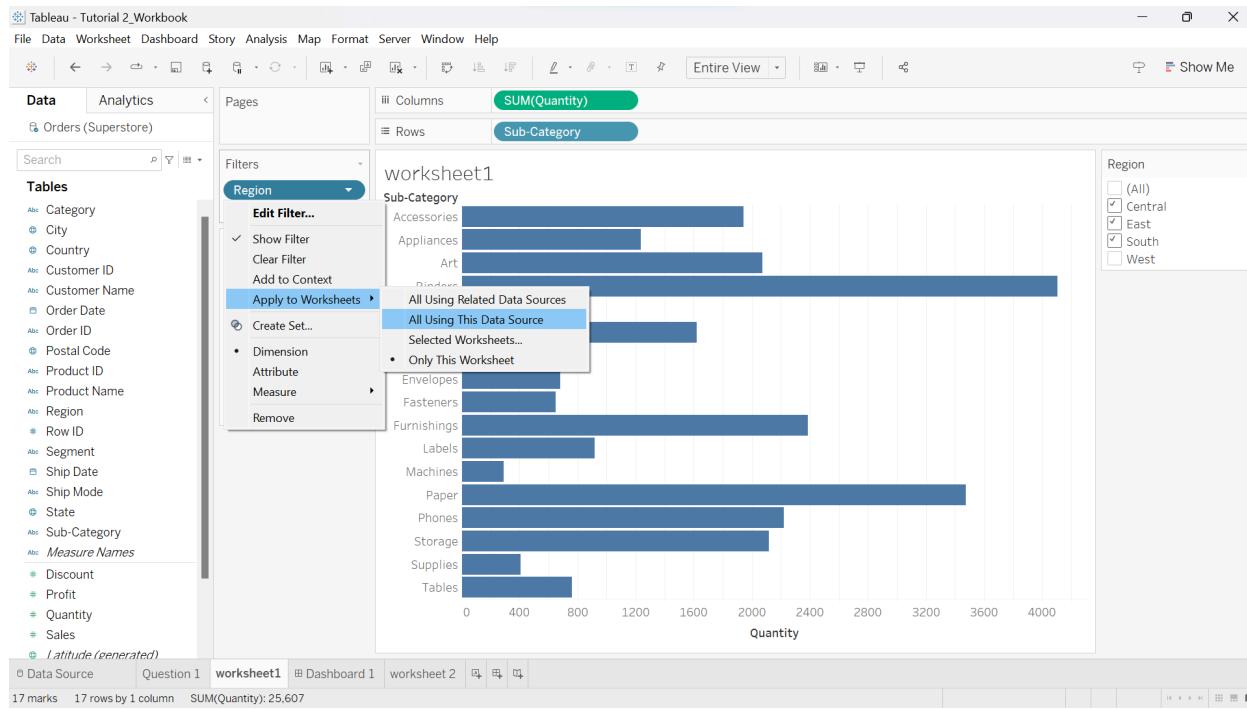


Step 4:

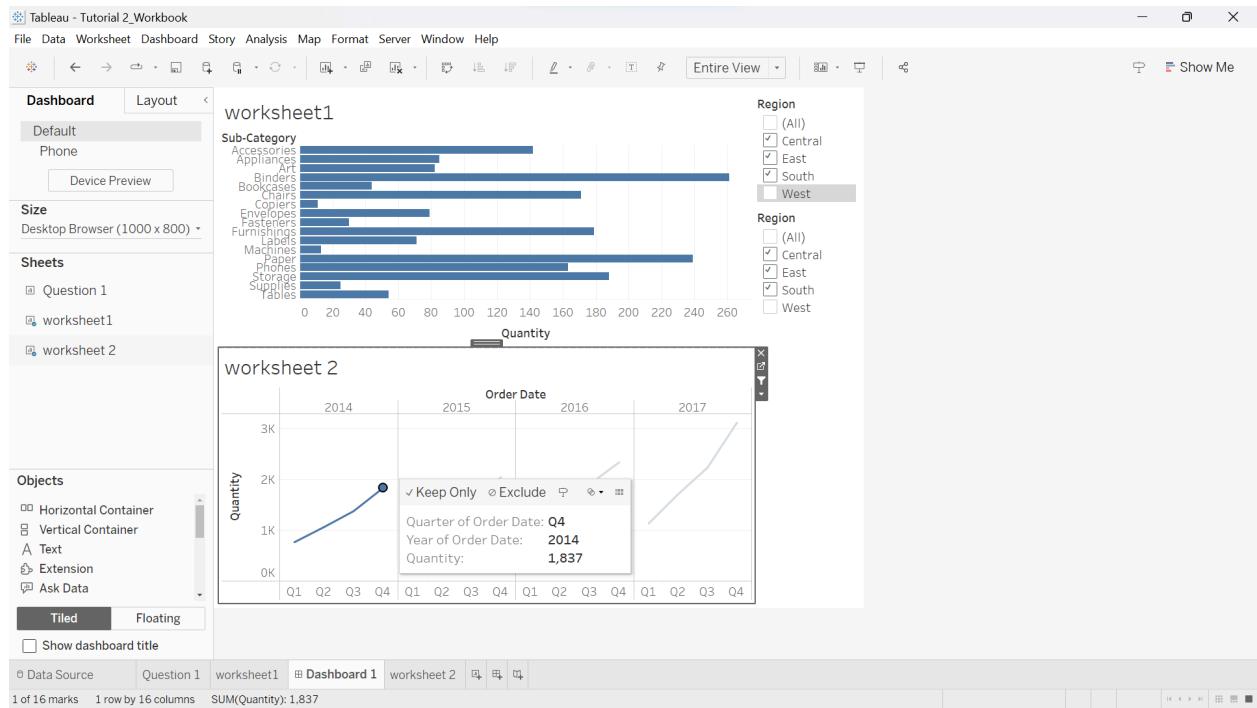


Step 5:



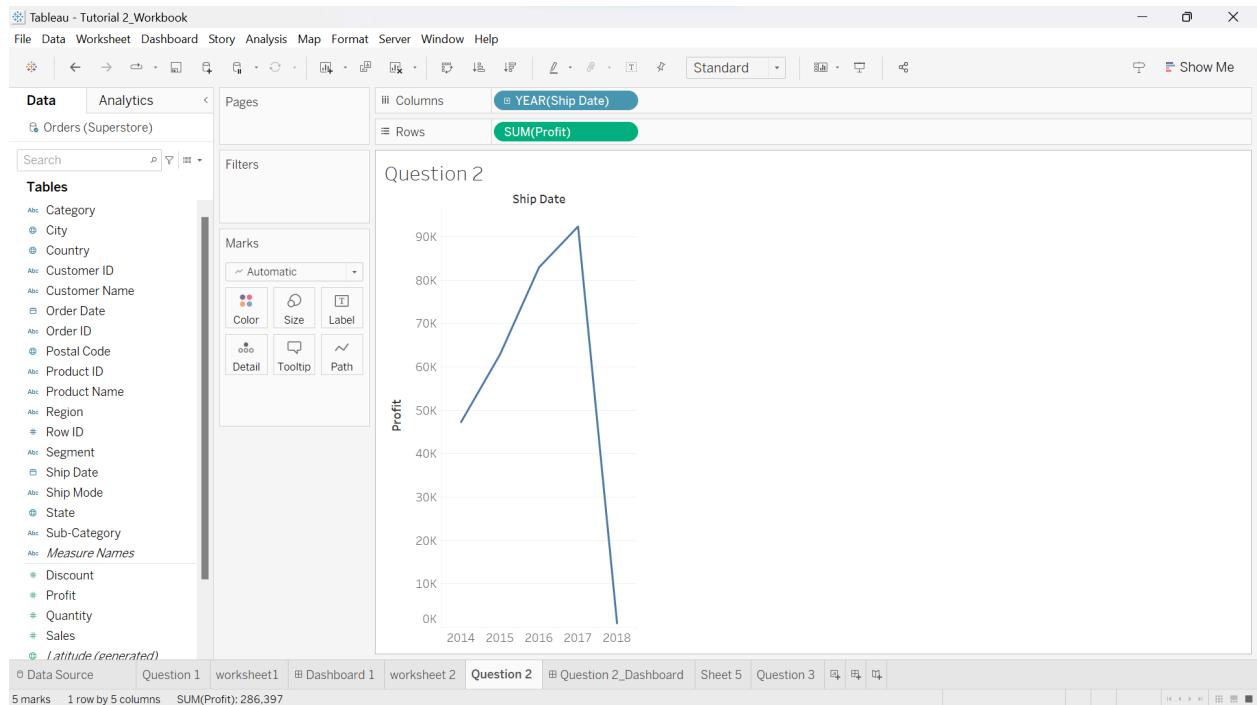


Step 6:

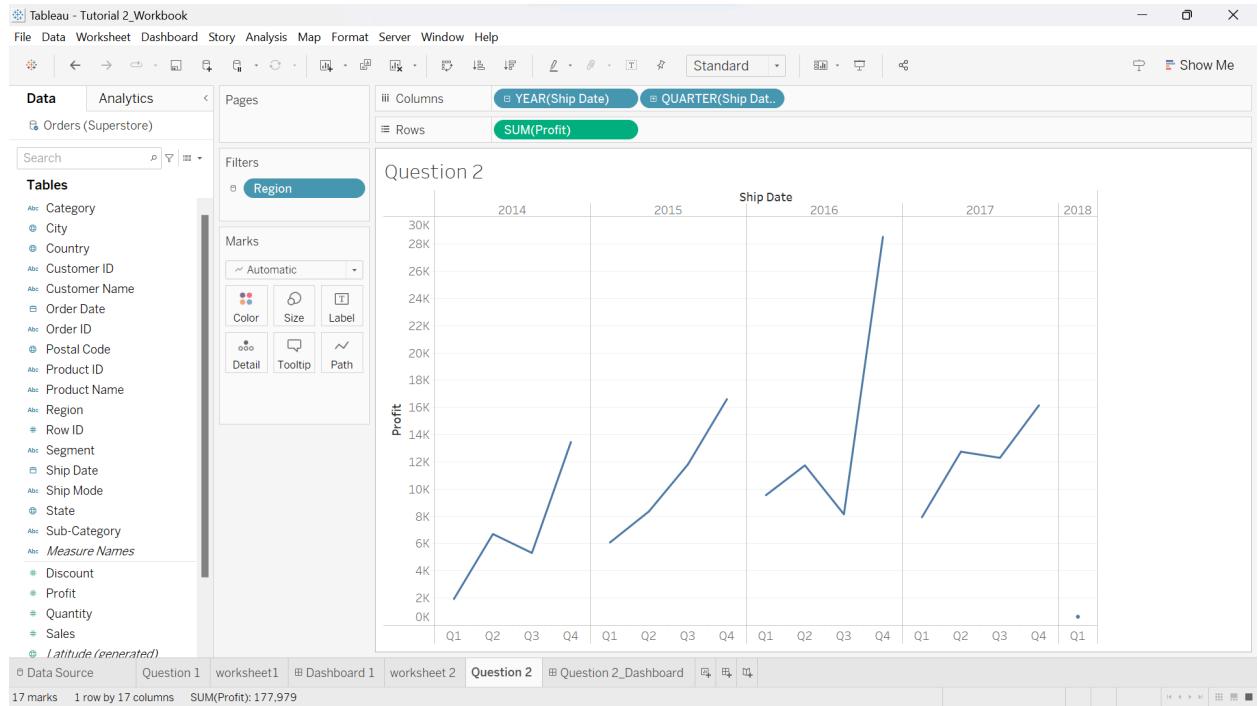


Question 2:

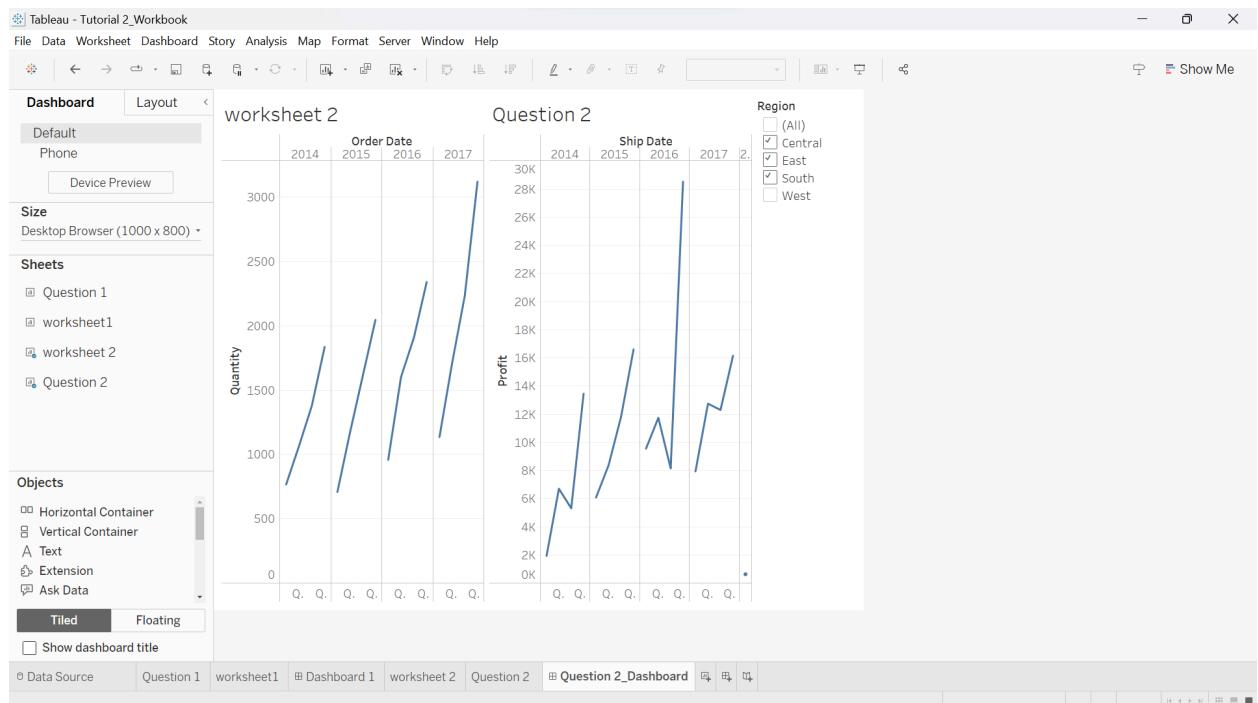
Step 1:



Step 2:

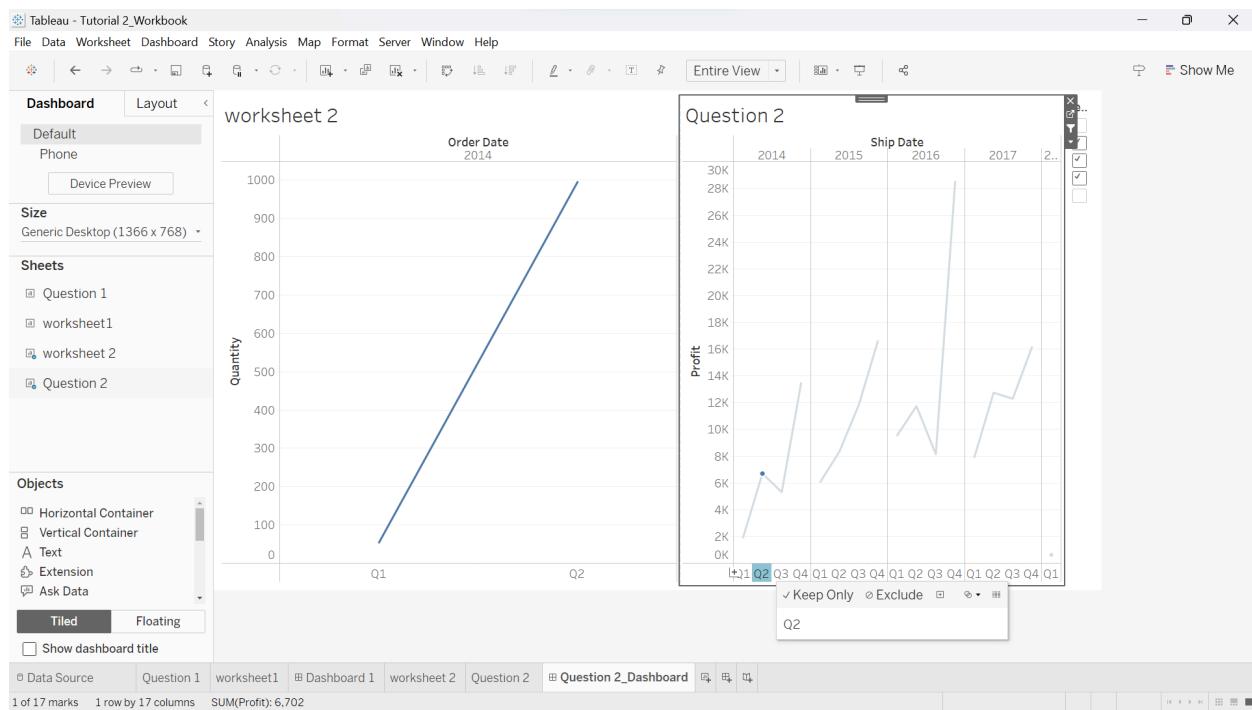


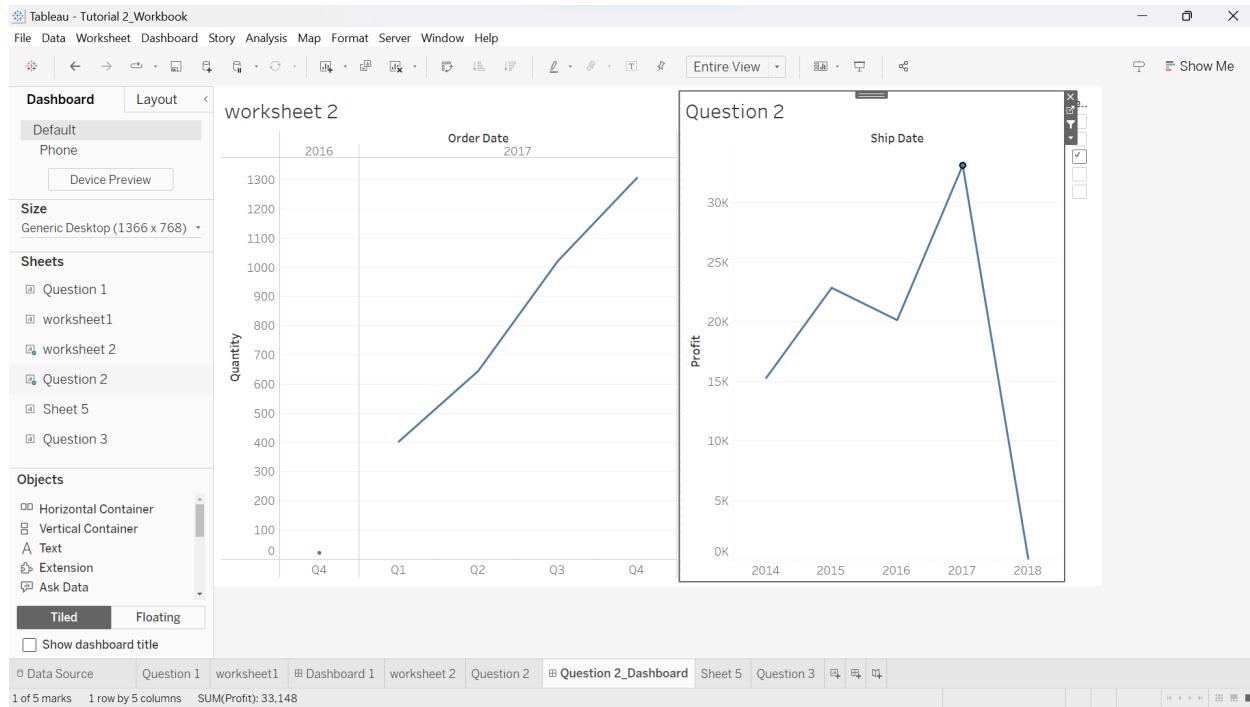
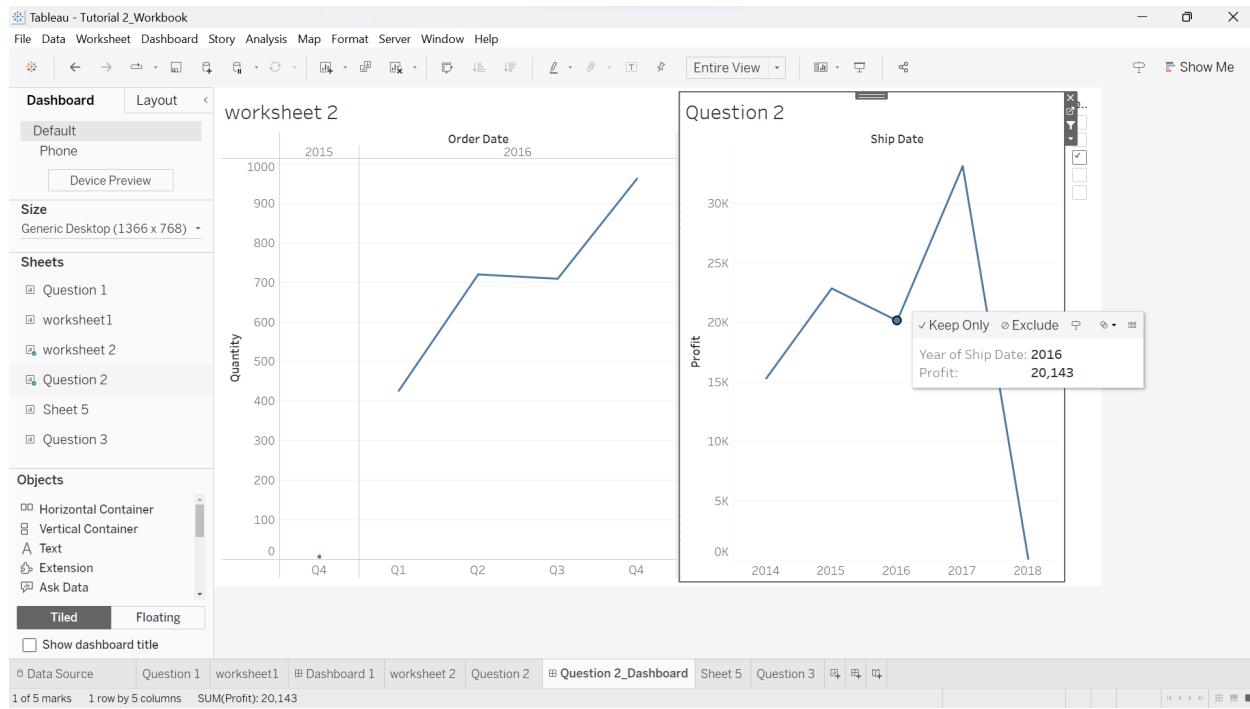
Step 3:



Step 4:

I have used the worksheet prepared for Question 1 and the Question 2 worksheet to show the interactivity between the two graphs. Worksheet 2 displays each quarter's order date and quantity, whereas Question 2 displays the ship date and profit. Whenever the cursor is clicked on a spike, the order date and quantity are changed accordingly in Worksheet 2.



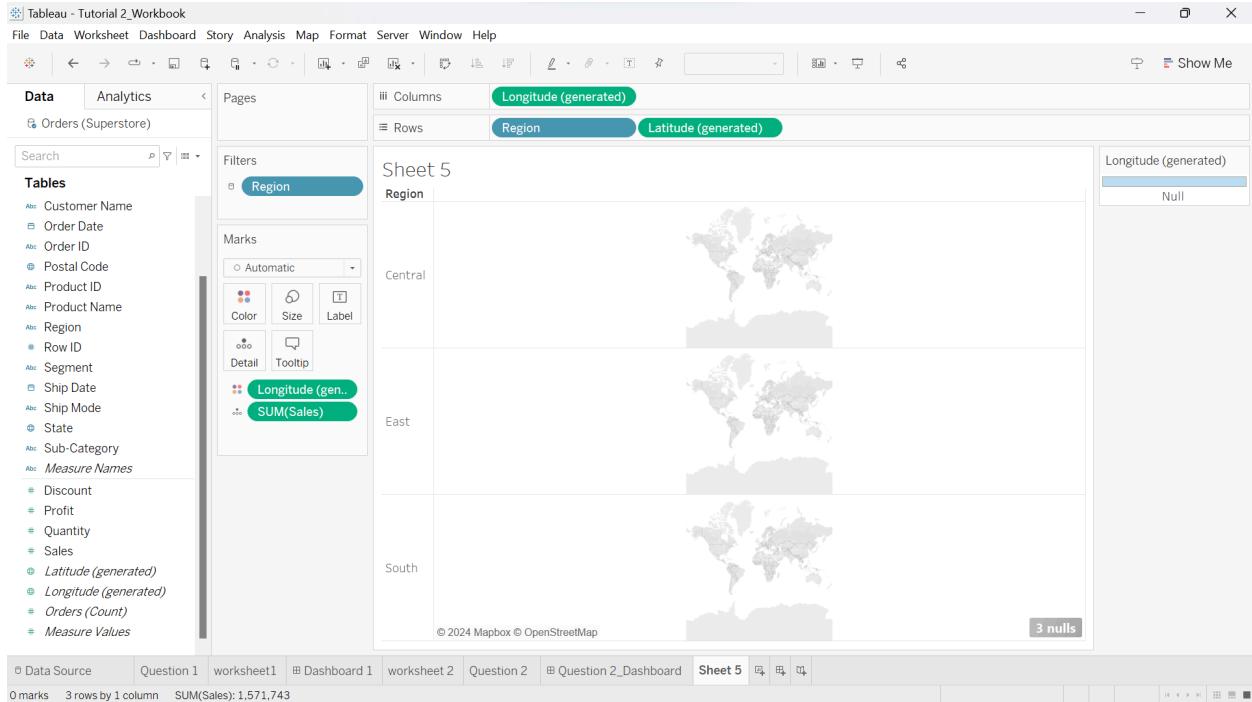


Step 5:

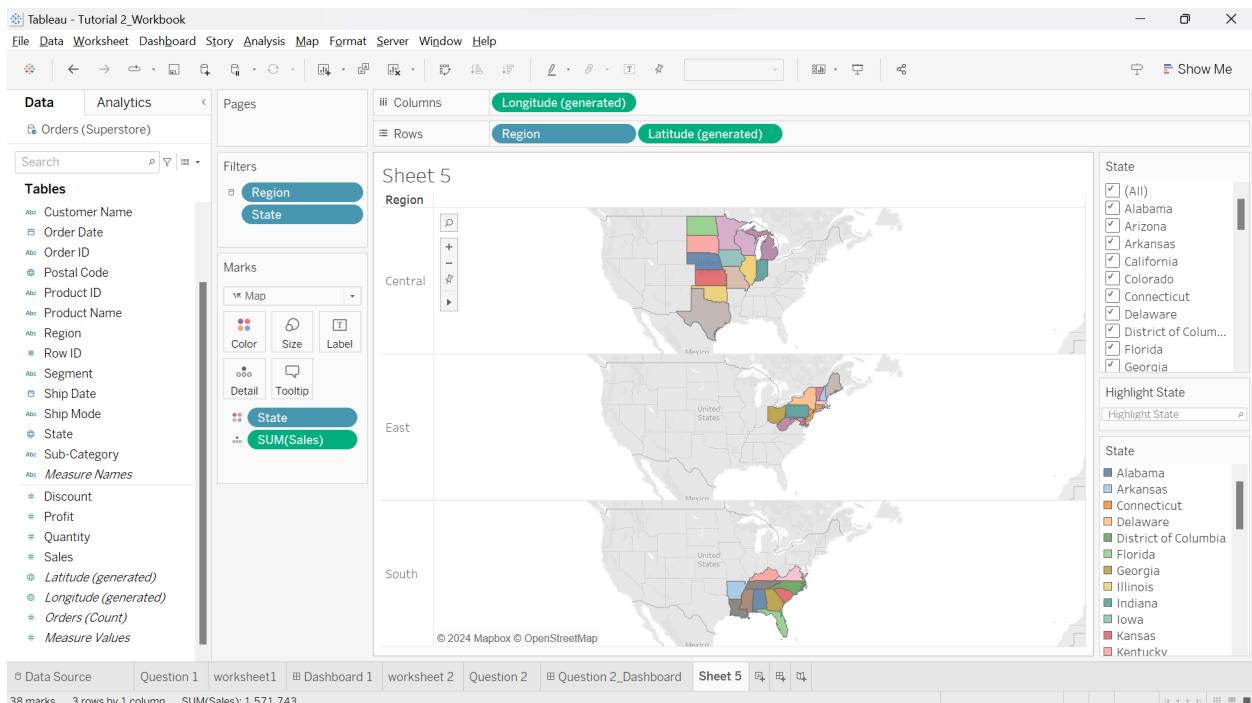
From this task, I understood how to relate two graphs and make analyses with different attributes in a dataset. I also learned how to use the line graphs to the fullest and use tableau features for better analysis.

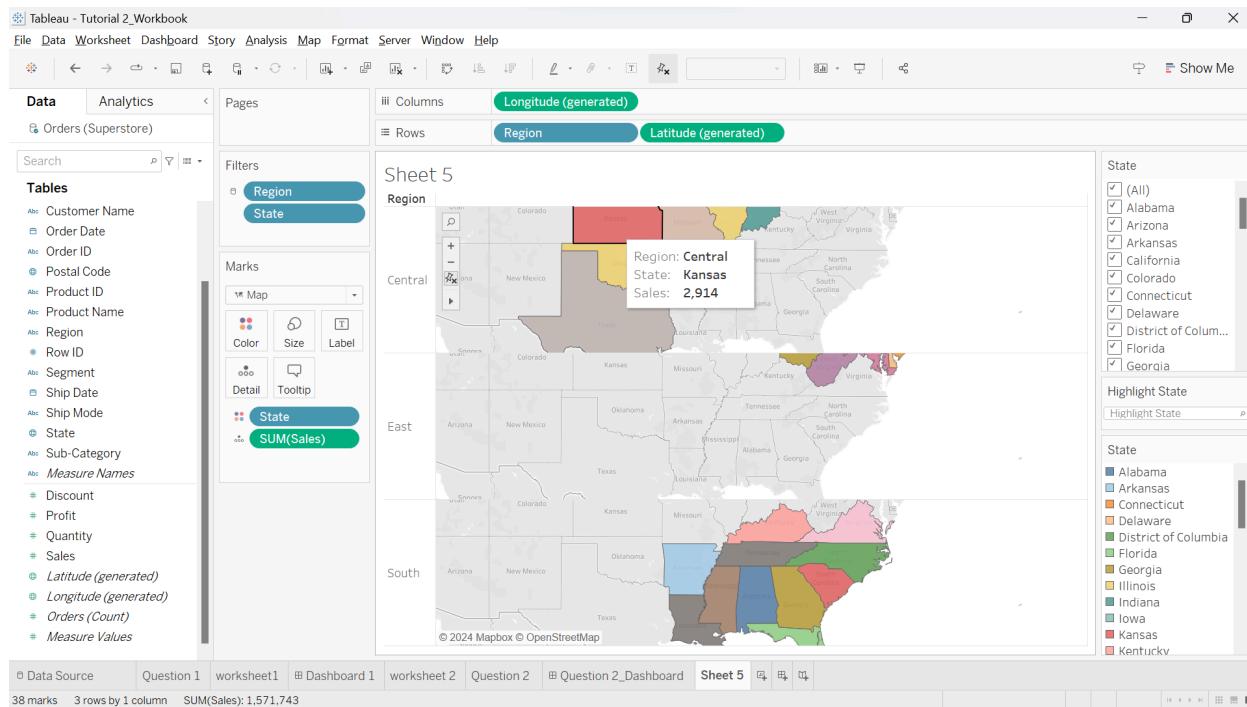
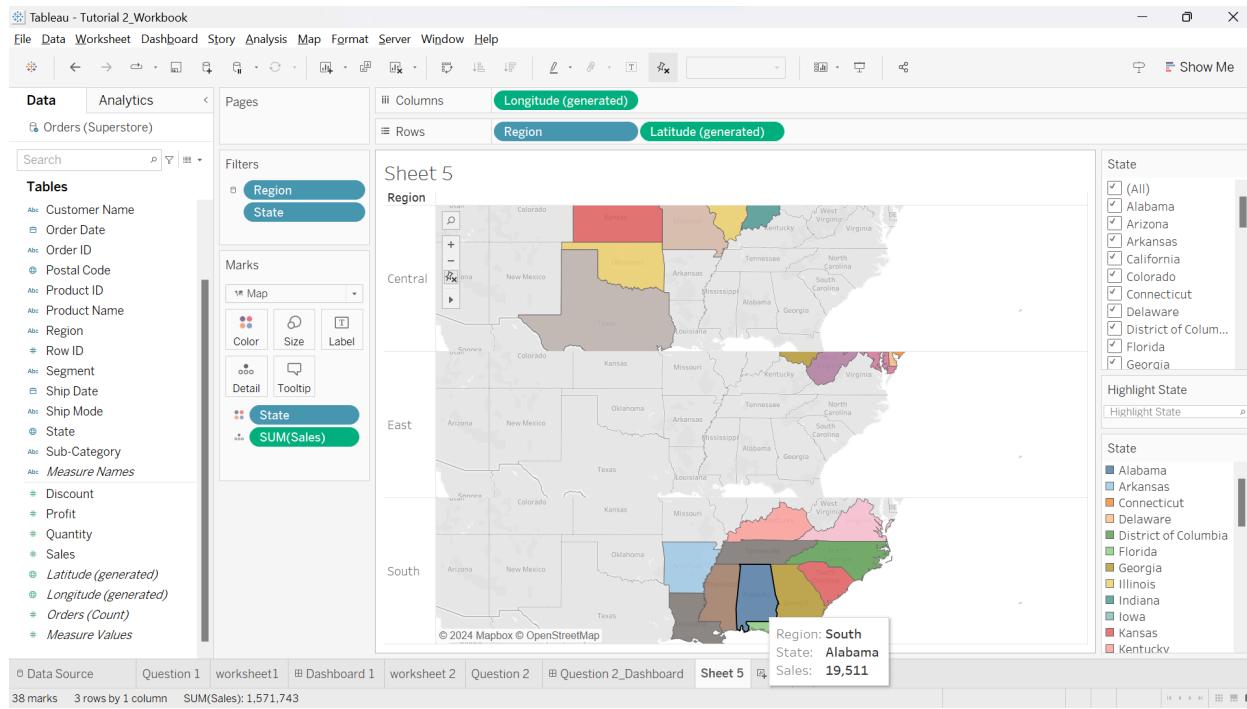
Tutorial 3:

Step 1:



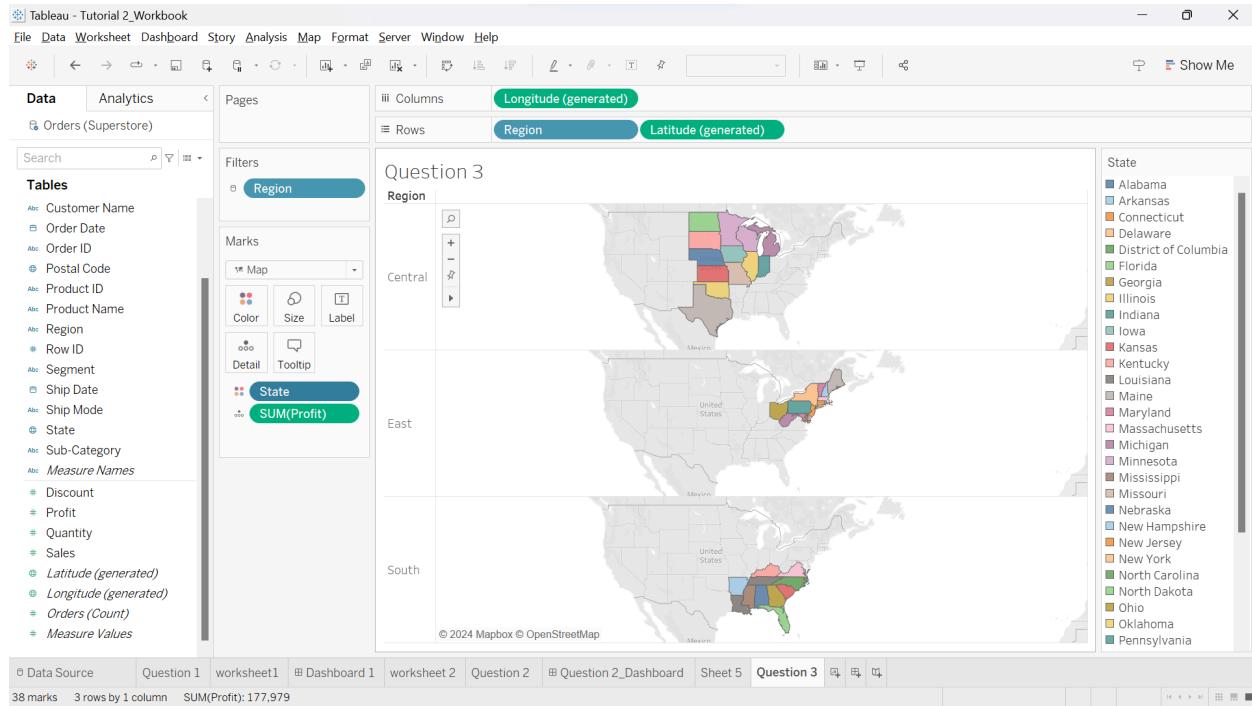
Step 2:



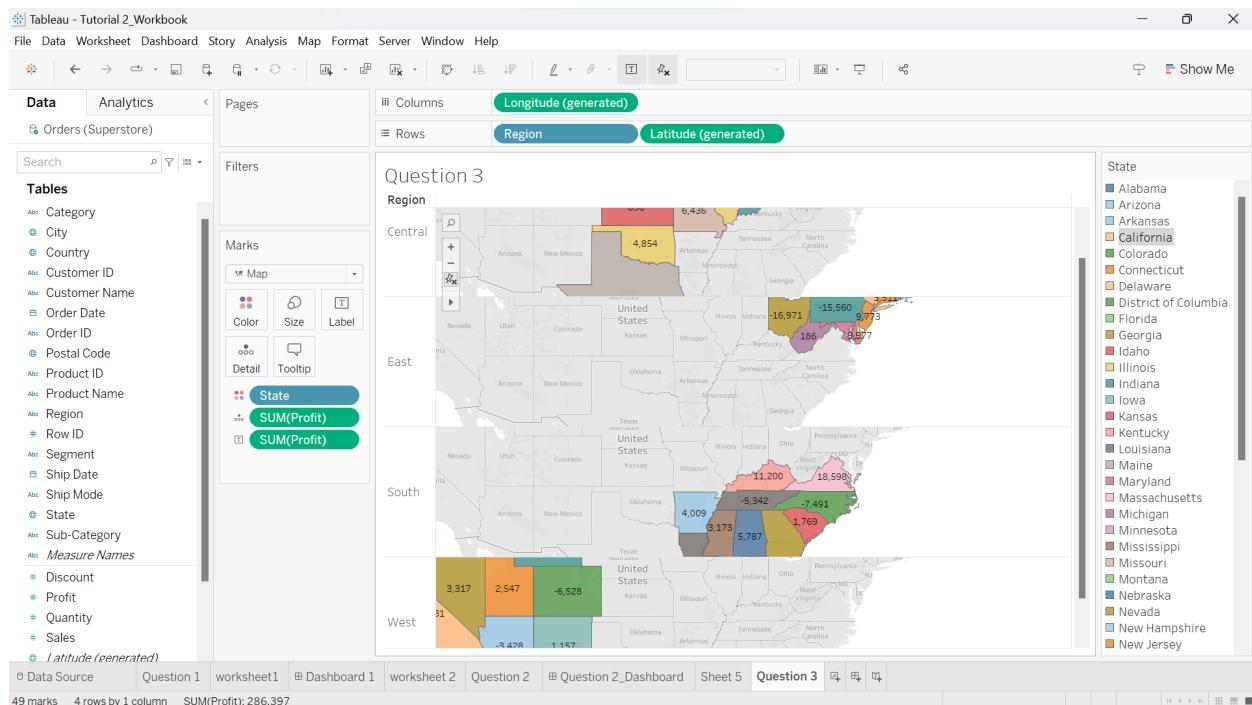


Question 3:

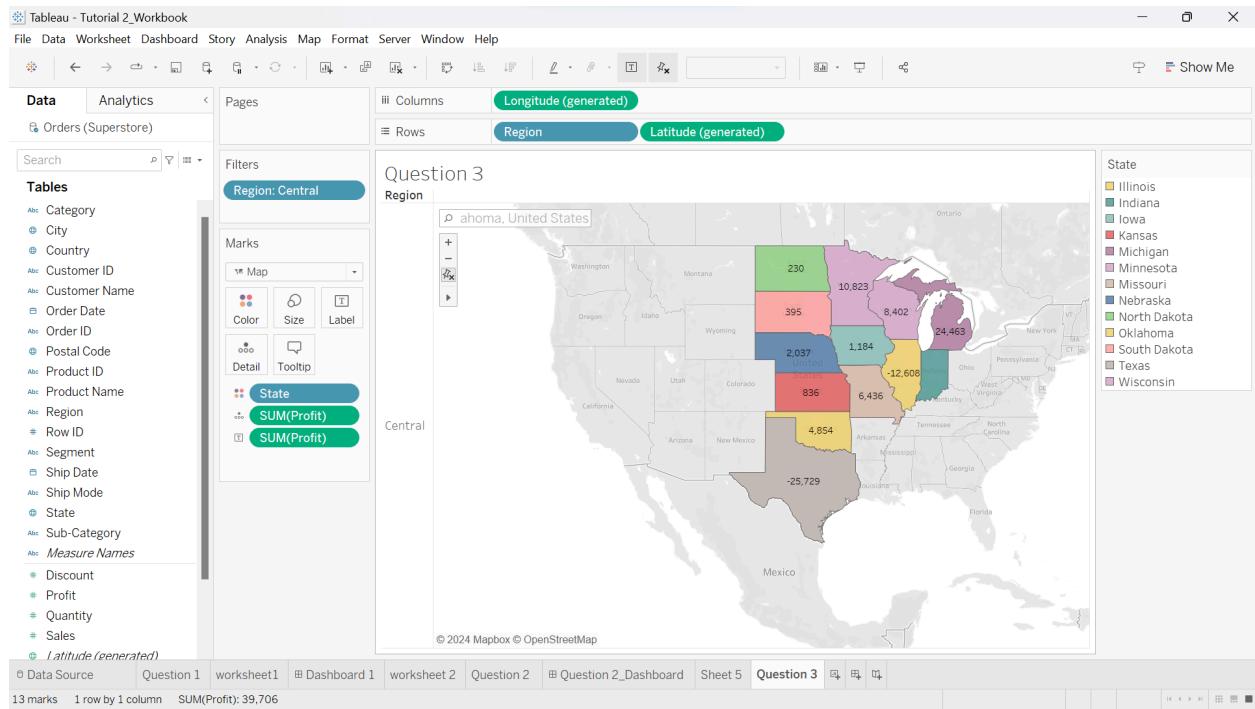
Step 1: The longitude attribute is added to the column. Region and latitude are placed in the row.

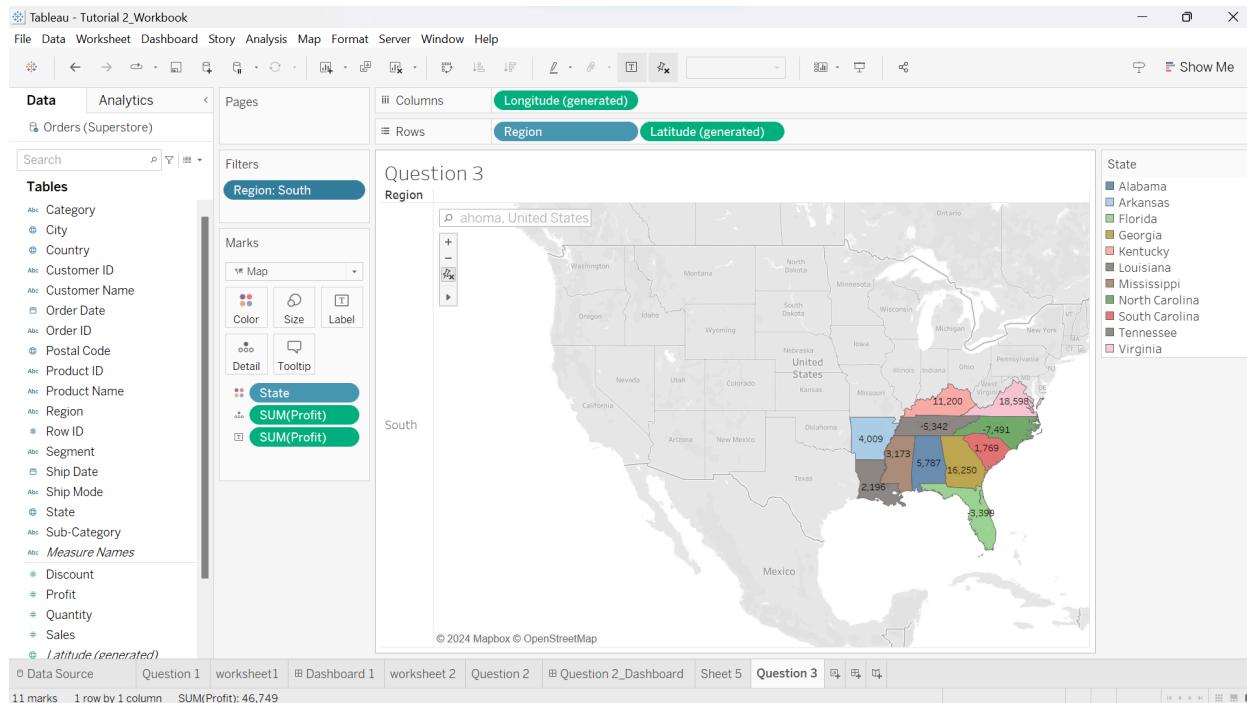


The profit for each state is displayed in the visualisation.

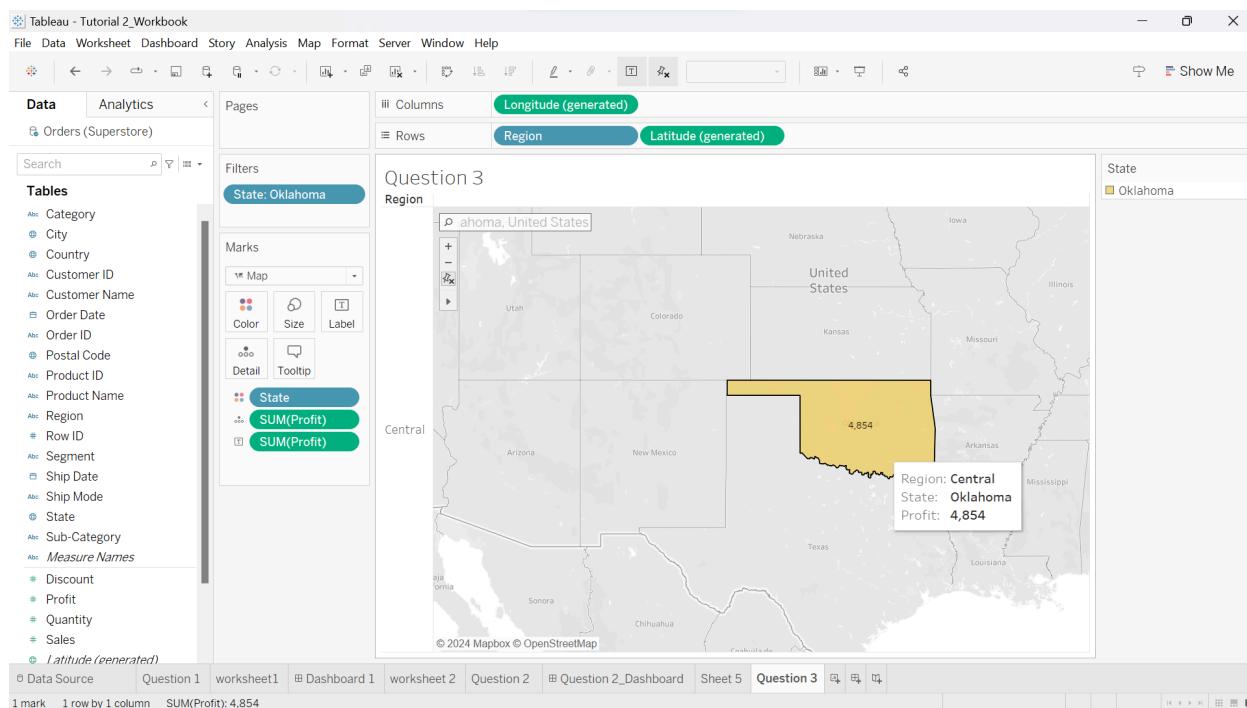


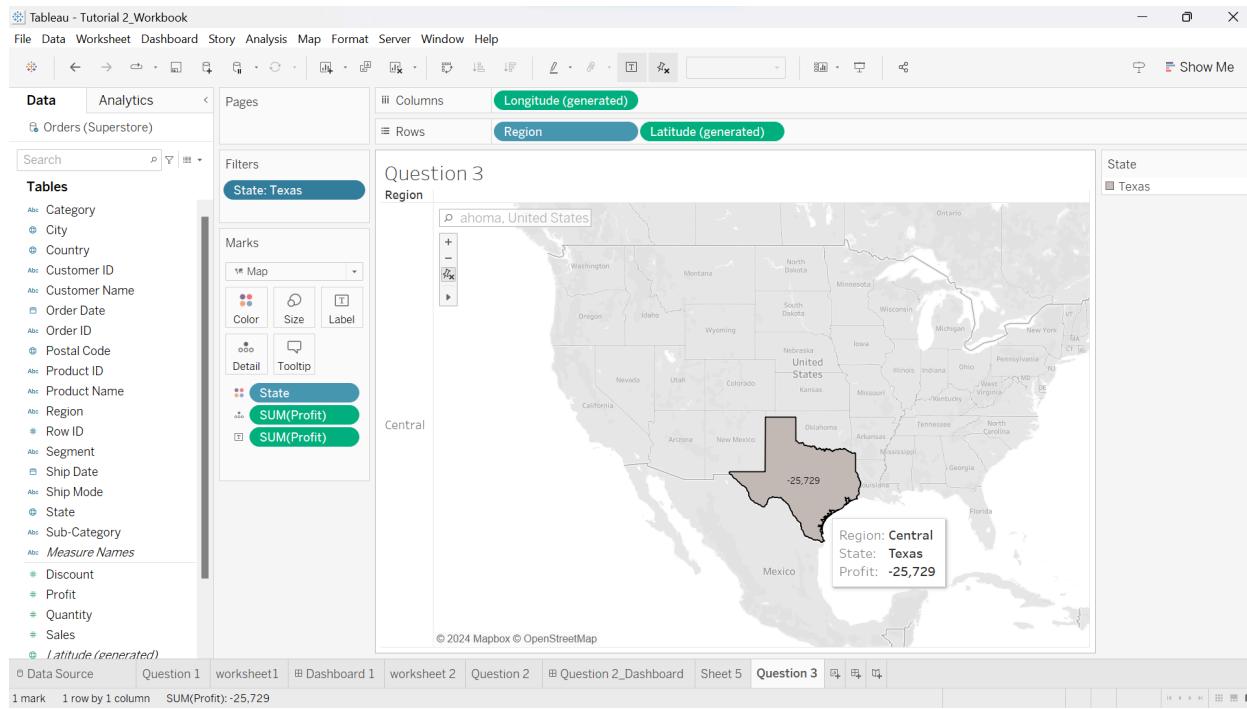
Step 2: Using the filter option, Profits in the Central and Southern parts of the United States are displayed.



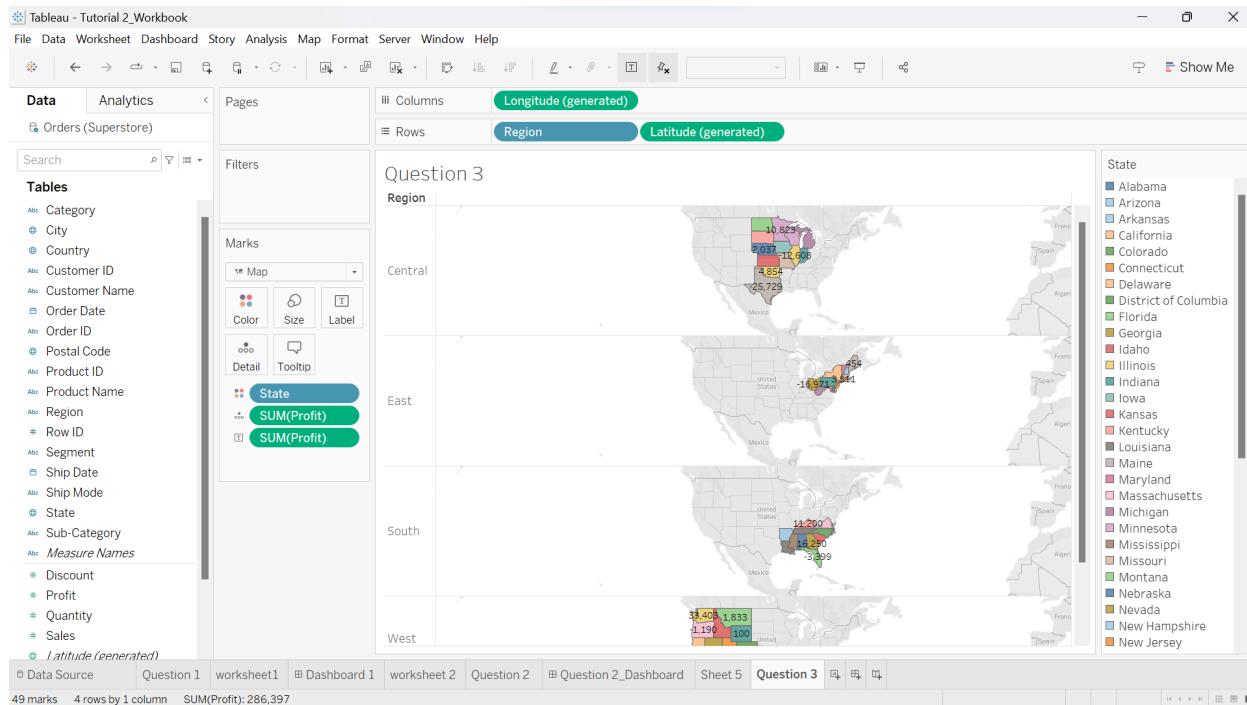


Step 3: Using the filter option, Profits in the Oklahoma and Texas parts of the United States are displayed.

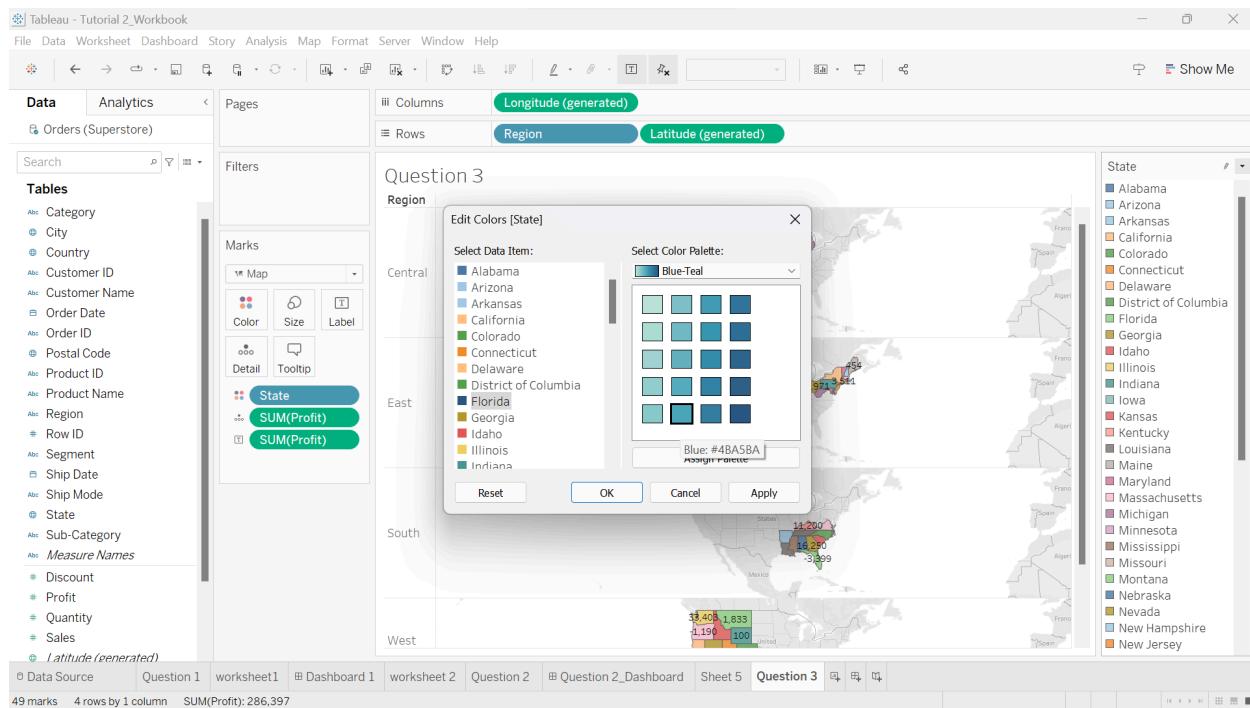
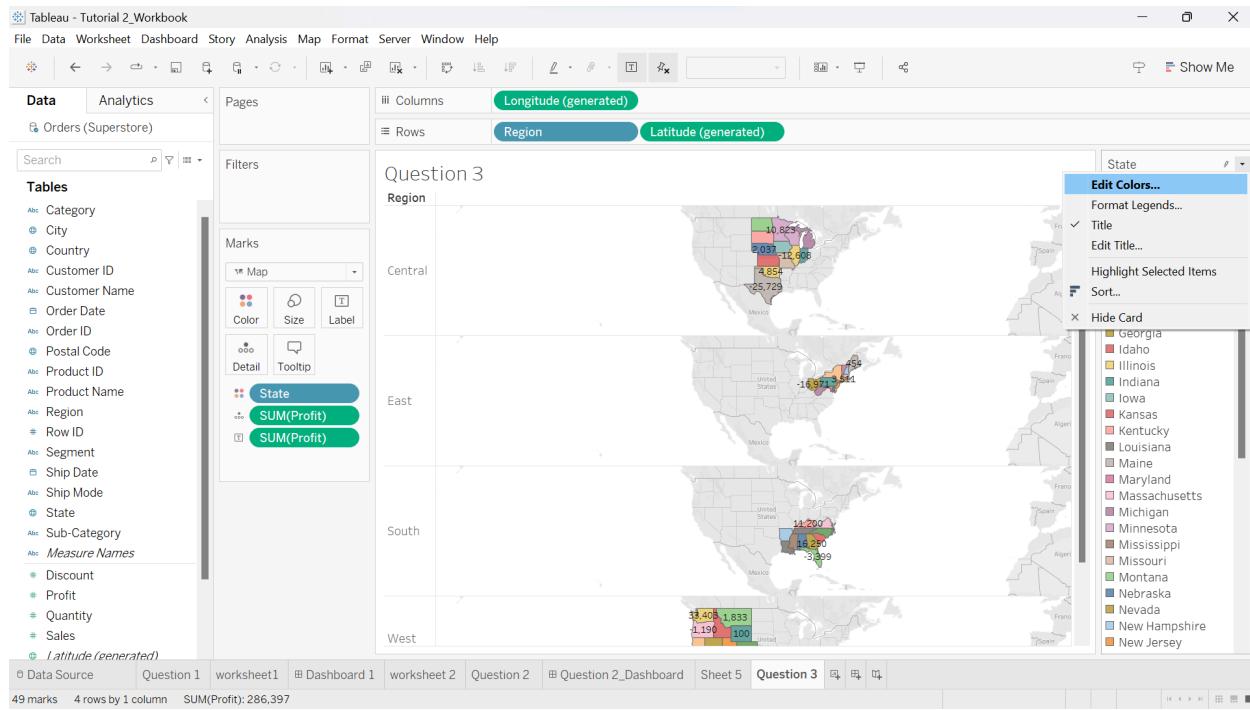


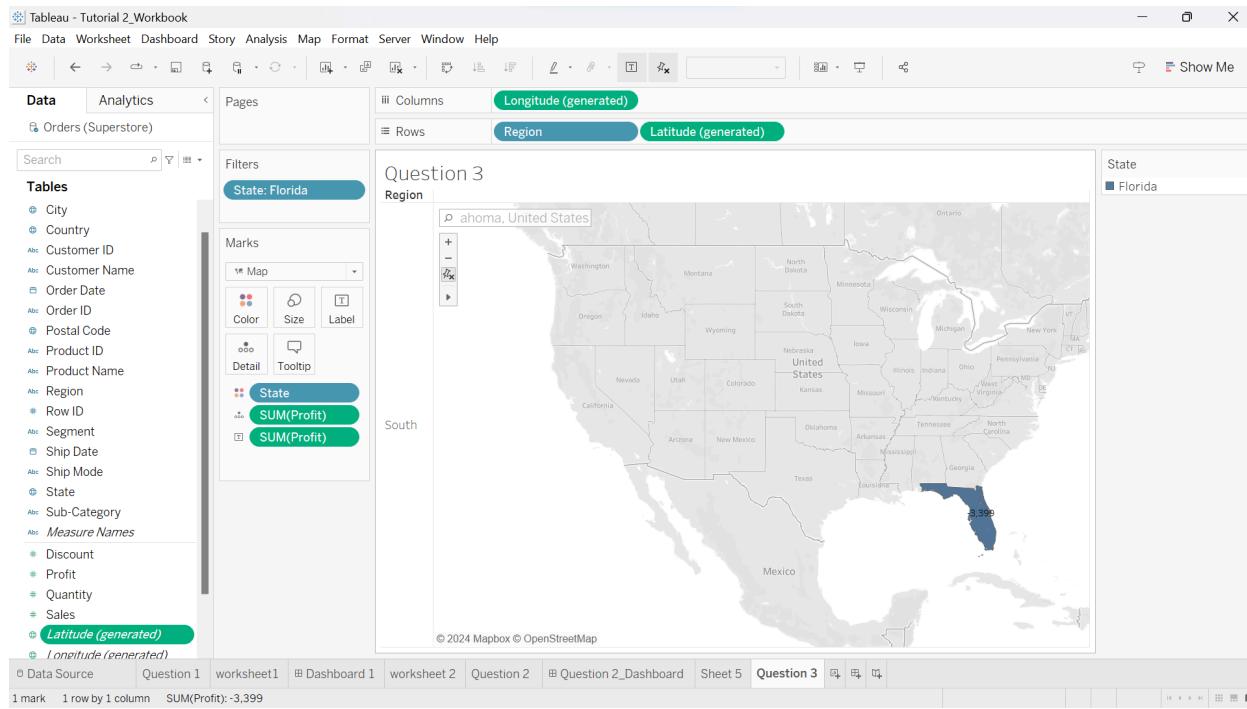


Step 4: If we do not use the filter option, the graph becomes clumsy with all the data in it and it becomes difficult to understand the data.



Step 5: We can change the color of a particular state using the Edit colors option. I have changed the color of Florida state to blue.





Summary:

I have learned a lot from this tutorial. Firstly, I now understand how to use the filter option properly and how important it is to make informed decisions in real-life tasks. Additionally, I have gained knowledge on how to add relativity between two or more worksheets in a dashboard. The connection between graphs can be quite helpful in identifying different trends or patterns in data. I have also learned how to use the "use as filter" option to identify specific data from graphs. Lastly, I have learned about maps, filters in maps, different colors, and analysis.