Tableau Assessment

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

In Tableau, area graphs and line graphs are both used to display trends and patterns in data over time or across categories. The main difference between the two is that an area graph fills the space below the line with color or shading, while a line graph does not.

Creating an Area Graph in Tableau:

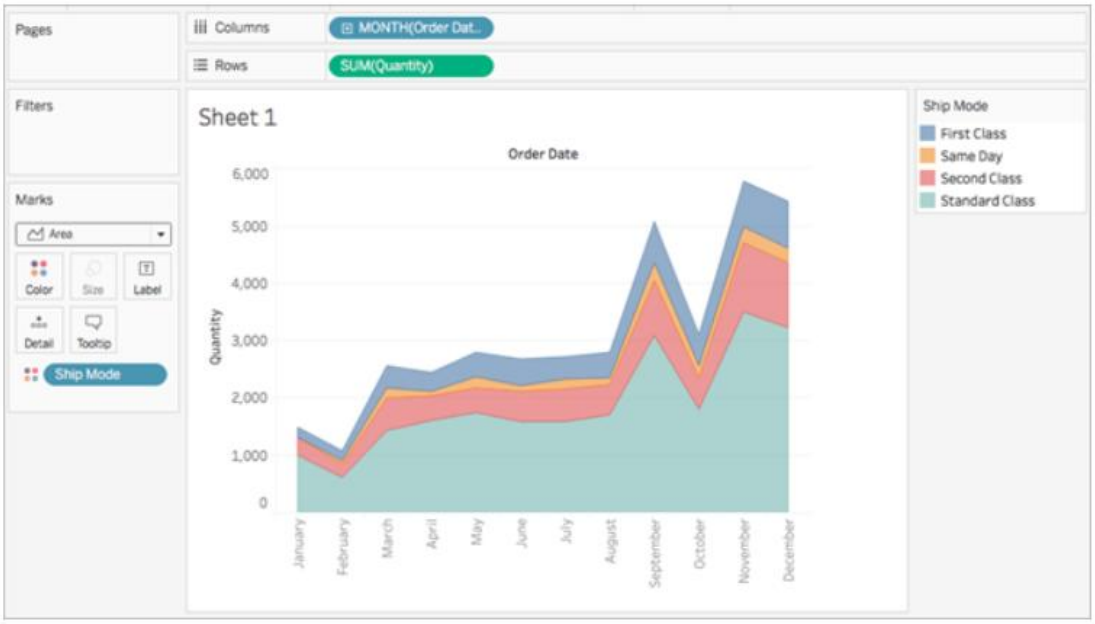
1. Connect to your data source and drag the relevant dimensions and measures onto the rows and columns shelf.
2. Click on the Show Me panel and select the Area mark type.
3. To break the area into different categories, drag a categorical dimension to the Color shelf.
4. If you want to add additional dimensions or measures, drag them to the respective shelves.
5. Customize the appearance of the graph as needed by adjusting the axes, labels, colors, and other settings.
6.

Creating a Line Graph in Tableau:

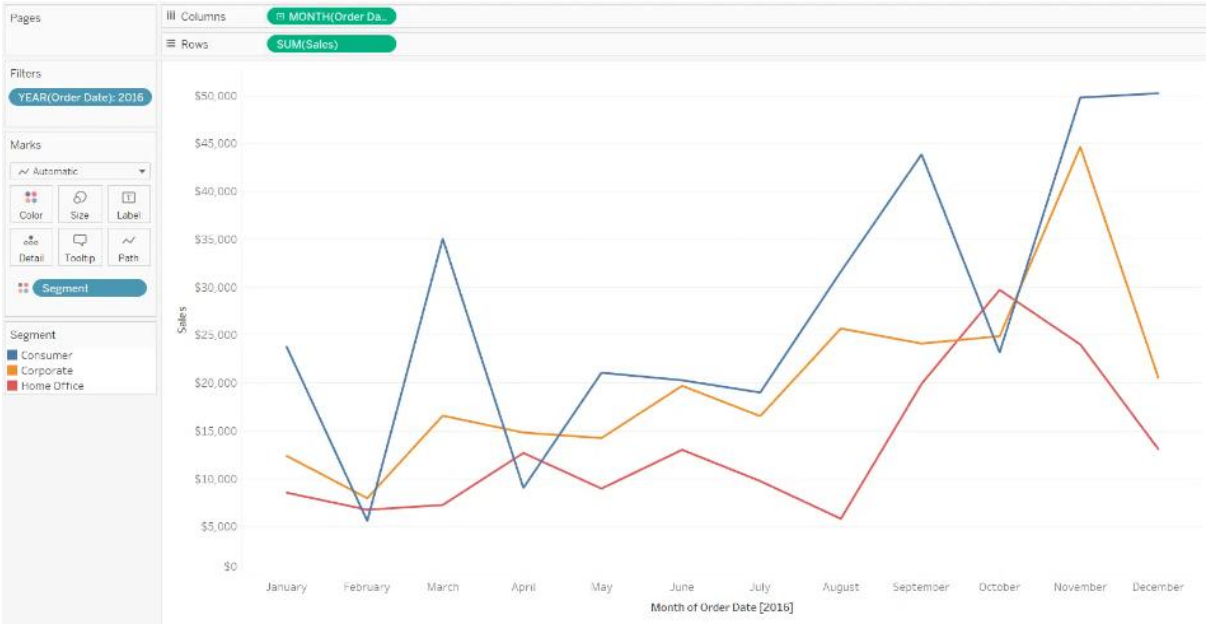
1. Connect to your data source and drag the relevant dimensions and measures onto the rows and columns shelf.
2. Click on the Show Me panel and select the Line mark type.
3. To break the line into different categories, drag a categorical dimension to the Color shelf.
4. If you want to add additional dimensions or measures, drag them to the respective shelves.
5. Customize the appearance of the graph as needed by adjusting the axes, labels, colors, and other settings.

In summary, area graphs and line graphs are both effective ways to visualize trends and patterns in data over time or across categories in Tableau. The choice between the two depends on the specific data being analyzed and the insights that need to be communicated.

Area Graph :



Line Graph :



2. What are the different steps in grouping fields and combining tables in tableau ? Explain with examples.

Grouping Fields in Tableau:

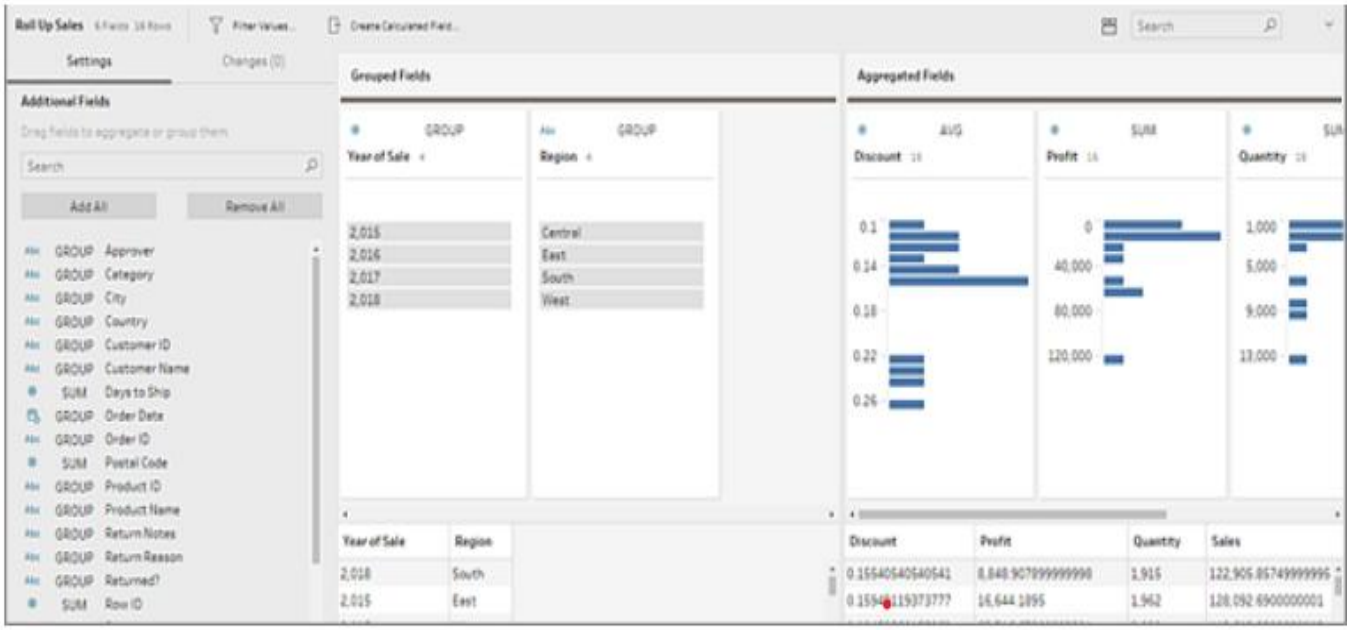
Grouping fields is a useful feature in Tableau that allows users to group data values together based on specific criteria. The following steps can be used to group fields in Tableau:

1. Select the fields you want to group by clicking on them while holding the Ctrl key.
2. Right-click on one of the selected fields and choose "Group" from the context menu.
3. In the "Grouping" dialog box, specify the group name and the criteria for grouping, such as a range of values or a categorical variable.
4. Click "OK" to create the group. The group will appear as a new dimension in the Data pane.
5. Example: Suppose you have a data set that includes the ages of a group of people. You can group these ages into categories such as "child," "teenager," "young adult," and "senior" to better understand the age distribution of the group.

Combining Tables in Tableau:

Combining tables in Tableau involves bringing together data from different tables or data sources to create a unified view. The following steps can be used to combine tables in Tableau:

1. Connect to the data sources you want to combine.
2. Drag one of the tables onto the canvas to create a new worksheet.
3. Drag the fields you want to use from the second table onto the first worksheet.
4. If the fields in the two tables have different names, you may need to create a join 5. condition by dragging a field from each table onto the join area in the "Data" pane.
5. Customize the view as needed by adding filters, sorting, and formatting options.



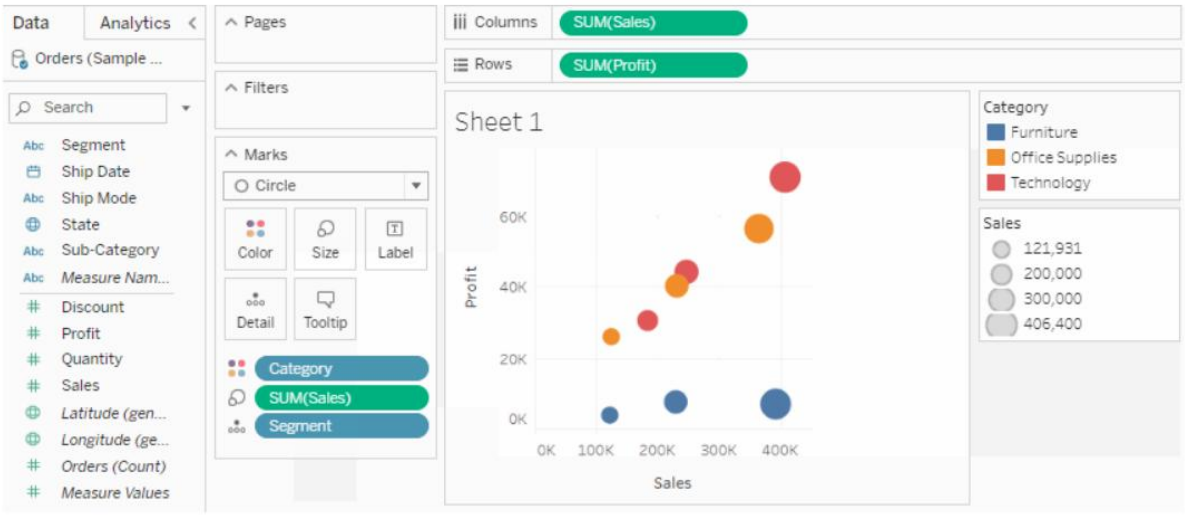
3. What is the use of color and size options in the marks cart of tableau ?

In Tableau, the Marks card is used to control the appearance of marks, which represent the data points on a visualization. The Marks card includes several options for customizing the appearance of the marks, including color and size.

The use of color in the Marks card allows you to visually encode additional information into the visualization beyond the primary data being displayed. Color can be used to distinguish between different categories, highlight specific data points or patterns, and provide context or additional insights into the data. For example, you can color-code different regions on a map to help users quickly identify which areas have higher or lower values for a particular measure.

The use of size in the Marks card allows you to adjust the size of the marks to reflect the relative importance or value of the underlying data. Size can be used to highlight outliers or anomalies in the data, emphasize specific data points, or help users compare the relative magnitudes of different values. For example, you can use size to create a bubble chart that shows the size of each bubble representing the sales volume of a product, with larger bubbles indicating higher sales volumes.

In summary, the color and size options in the Marks card of Tableau are powerful tools for customizing the appearance of visualizations and encoding additional information into the data. By using these options effectively, you can create visualizations that are more engaging, informative, and useful for exploring and analyzing data.



4. What are the different joins supported by tableau?

1. Inner Join: This type of join returns only the matching rows from both tables based on a specified condition.

2. Left Join: This type of join returns all the rows from the left table and the matching rows from the right table. If there is no match in the right table, then the result will have NULL values for those columns.

3. Right Join: This type of join returns all the rows from the right table and the matching rows from the left table. If there is no match in the left table, then the result will have NULL values for those columns.

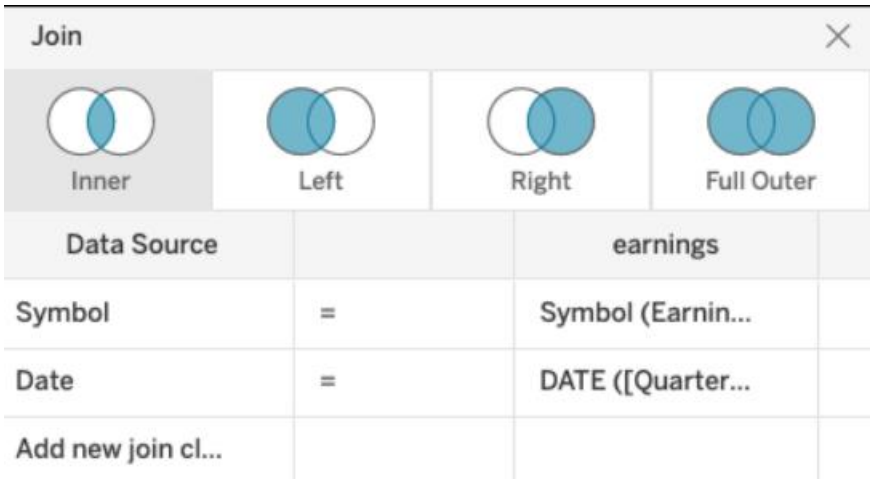
4. Full Outer Join: This type of join returns all the rows from both tables, with NULL values in columns where there is no match in the other table.

5. Cross Join: This type of join returns all possible combinations of rows from both tables.

6. Self-Join: This type of join is used when a table needs to be joined with itself based on a specified condition.

To perform a join in Tableau, you need to drag and drop the tables you want to join onto the canvas, and then drag and drop the fields you want to join onto the join area in the Data pane. You can then select the type of join you want to perform and specify the join condition. Once the join is created, you can use the resulting combined data set to create visualizations and analyze the data.

Types of Join in Tableau :



5.Explain the steps to create dashboard in tableau with example (With the help of an example create one in tableau)

Step 1: Connect to Data
Connect to the data source that you want to use for the dashboard.

Step 2: Create Worksheets
Create worksheets by dragging and dropping fields onto the Rows and Columns shelves. Customize the worksheets as needed by adding filters, sorting, and formatting options.

Step 3: Add Worksheets to the Dashboard
To add a worksheet to the dashboard, drag it from the Sheets tab to the dashboard canvas.

Step 4: Customize the Dashboard Layout
Customize the dashboard layout by adding text boxes, images, and other objects. You can also adjust the size and position of each object.

Step 5: Add Interactivity
Add interactivity to the dashboard by creating actions that allow users to filter or highlight data based on their selections.

Step 6: Publish the Dashboard
Publish the dashboard to Tableau Server or Tableau Online so that others can access and interact with it.

Simple Dashboard :

6. Explain in detail the heat maps and scatter plot and how to create them with example (With the help of an example create one in tableau)

Heat maps and scatter plots are two popular types of visualizations in Tableau. Let's take a look at each in more detail, along with an example of how to create them in Tableau.

Heat Maps:

Heat maps are used to visualize data that has a high density of values in a particular area. They use color to represent the density of data points and can be useful for identifying patterns and trends in large datasets.

To create a heat map in Tableau, follow these steps:

1. Connect to the data source and drag the desired fields to the Rows and Columns shelves.
2. Drag the measure you want to visualize to the Marks card, and choose the "Square" mark type.
3. Drag a second copy of the measure to the Color shelf, and choose a color gradient that represents the density of the data.
4. Adjust the size and opacity of the squares to make the visualization more readable.

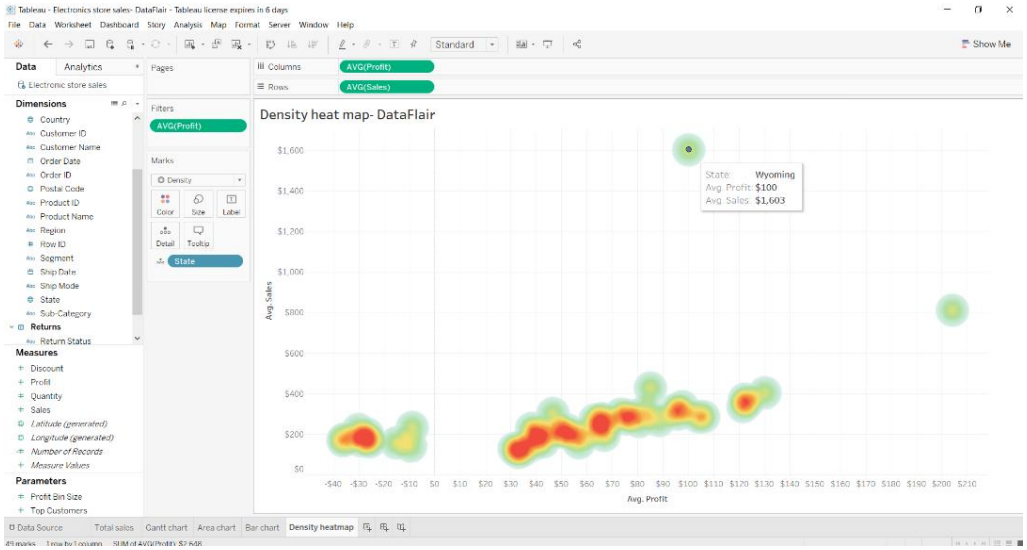
Scatter Plots:

Scatter plots are used to visualize the relationship between two numerical variables. They use dots or markers to represent each data point and can be useful for identifying trends, patterns, and correlations in the data.

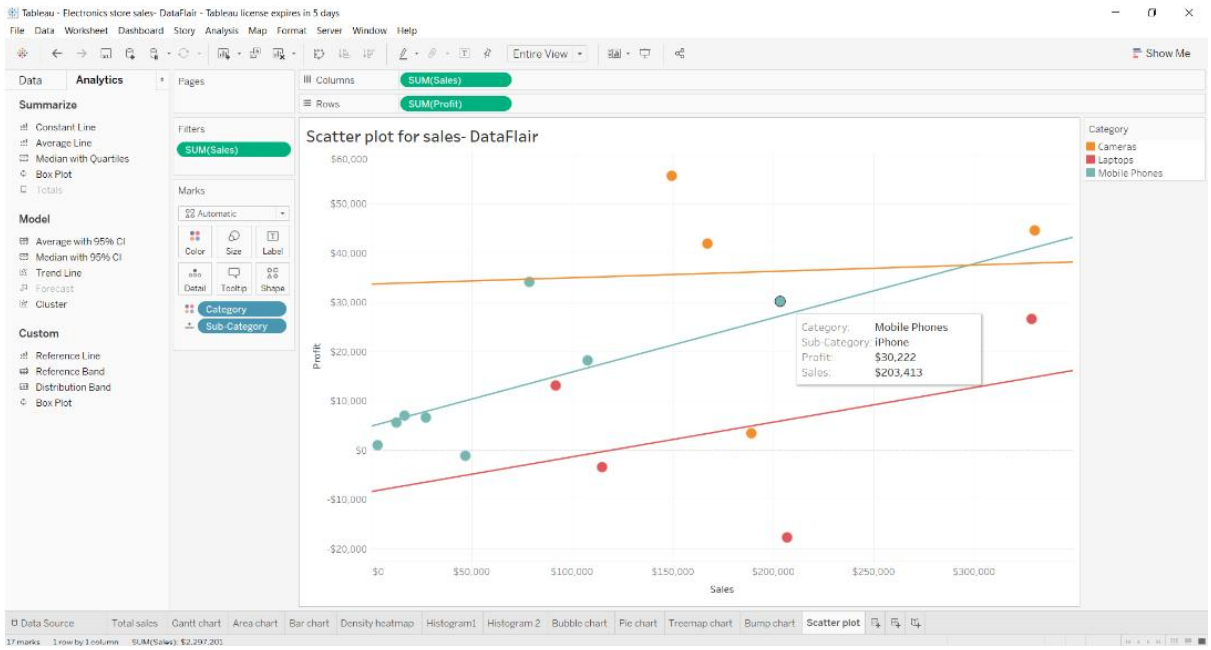
To create a scatter plot in Tableau, follow these steps:

1. Connect to the data source and drag the desired fields to the Rows and Columns shelves.
2. Drag the measure you want to visualize to the Rows shelf and the second measure to the Columns shelf.
3. Drag a dimension to the Detail shelf to group the data points.
4. Customize the appearance of the markers by changing their shape, size, color, and other attributes.

Heat Map :



Scatter Plot :

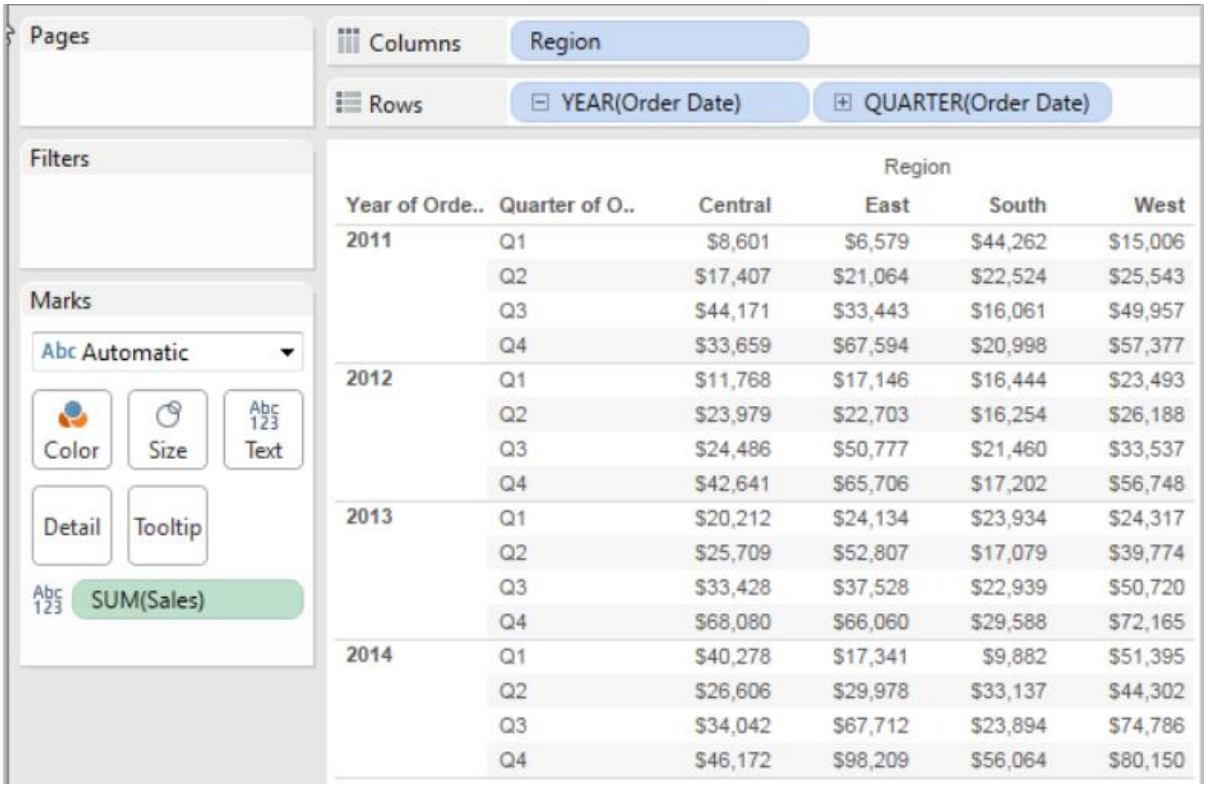


7. How to create table calculations in tableau with examples . (With the help of an example create one in tableau)

Table calculations in Tableau are used to perform calculations on a specific field or a set of fields in a table. These calculations are based on the data that is currently displayed in the view, and can be used to create running totals, moving averages, and other types of calculations.

To create a table calculation in Tableau, follow these steps:

1. Select the field or fields that you want to perform the calculation on.
2. Right-click on the field and choose "Add Table Calculation" from the context menu.
3. Choose the type of calculation that you want to perform, such as "Running Total" or "Percent Difference".
4. Configure the calculation by choosing the appropriate options, such as the starting point for the calculation or the window size for a moving average.
5. Customize the appearance of the calculation by adjusting the formatting, labels, and other settings as needed.



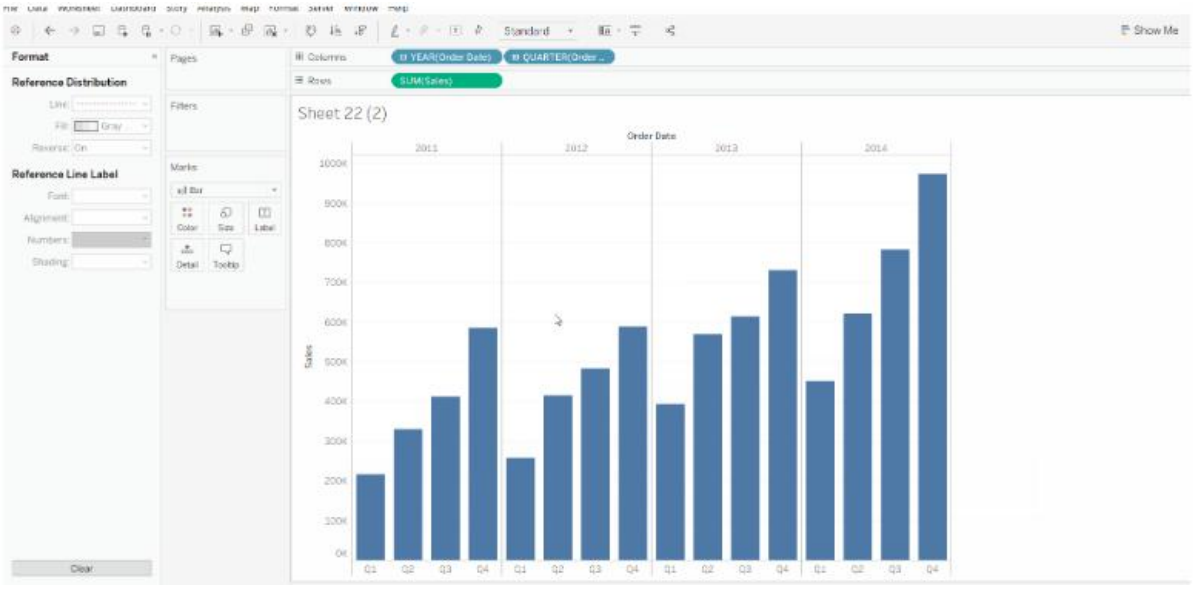
		Region			
Year of Orde..	Quarter of O..	Central	East	South	West
2011	Q1	$8,601	$6,579	$44,262	$15,006
	Q2	$17,407	$21,064	$22,524	$25,543
	Q3	$44,171	$33,443	$16,061	$49,957
	Q4	$33,659	$67,594	$20,998	$57,377
2012	Q1	$11,768	$17,146	$16,444	$23,493
	Q2	$23,979	$22,703	$16,254	$26,188
	Q3	$24,486	$50,777	$21,460	$33,537
	Q4	$42,641	$65,706	$17,202	$56,748
2013	Q1	$20,212	$24,134	$23,934	$24,317
	Q2	$25,709	$52,807	$17,079	$39,774
	Q3	$33,428	$37,528	$22,939	$50,720
	Q4	$68,080	$66,060	$29,588	$72,165
2014	Q1	$40,278	$17,341	$9,882	$51,395
	Q2	$26,606	$29,978	$33,137	$44,302
	Q3	$34,042	$67,712	$23,894	$74,786
	Q4	$46,172	$98,209	$56,064	$80,150

8. Explain in detail the distribution bands in tableau and how to create them with example (With the help of an example create one in tableau)

Distribution bands in Tableau are used to visualize the distribution of data in a histogram-like format. They show the range of values that fall within certain intervals, or "bands," of the data.

To create a distribution band in Tableau, follow these steps:

1. Drag the field that you want to visualize onto the Rows or Columns shelf.
2. Change the view type to "Histogram."
3. Click on the "Bins" button in the Marks card and set the bin size to the desired value. This determines the width of each distribution band.
4. In the Marks card, select the "Area" mark type to create the distribution bands.
5. Click on the "Color" button in the Marks card and choose a color palette for the bands.
6. Adjust the chart title, axis labels, and other formatting options as needed.



9. Explain the steps to create bar chart and pie diagram in tableau with example (With the help of an example create one in tableau)

Bar Chart:

To create a bar chart in Tableau, follow these steps:

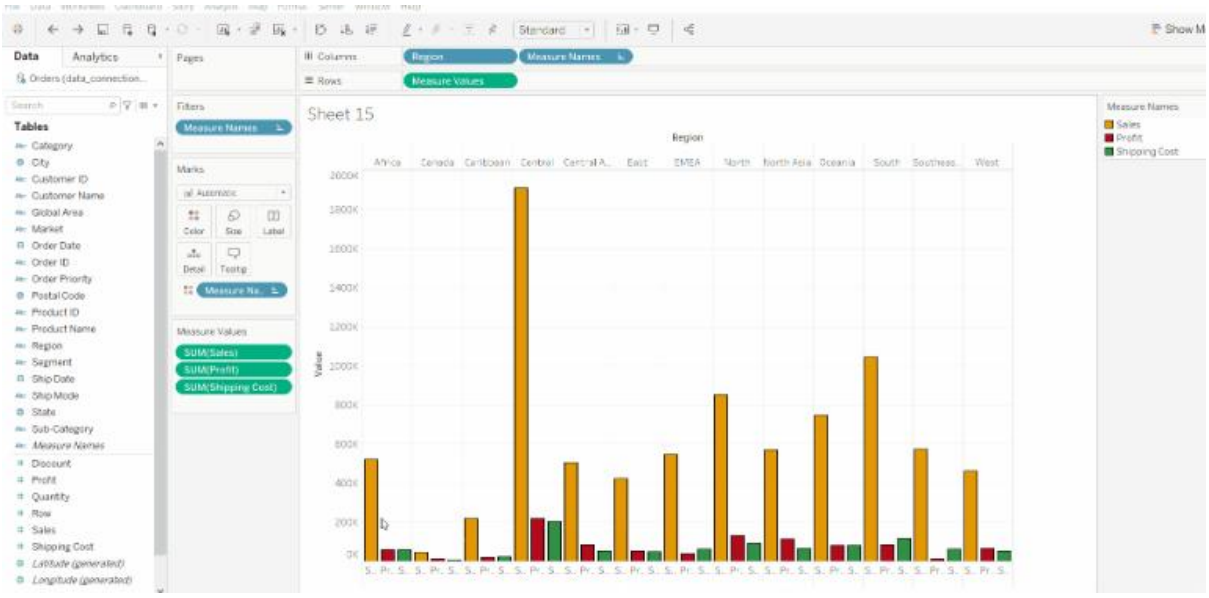
1. Drag the dimension or measure that you want to visualize onto the Rows or Columns shelf.
2. Change the view type to "Bar chart."
3. Customize the appearance of the chart by adjusting the colors, labels, and other settings as needed.

Pie Chart:

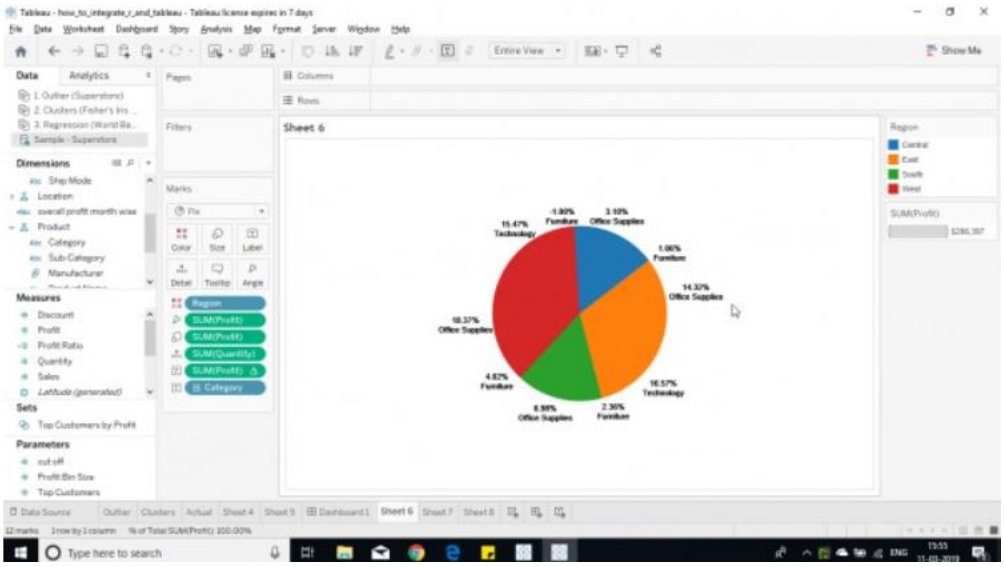
To create a pie chart in Tableau, follow these steps:

1. Drag the dimension or measure that you want to visualize onto the Rows or Columns shelf.
2. Change the view type to "Pie chart."
3. Customize the appearance of the chart by adjusting the colors, labels, and other settings as needed.

Bar Chart :



Pie Chart :


Sheet 6
Region
Central
East
South
West
Data
Analytics
Dimensions
Measures
Sets
Parameters
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Pages
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10. How to add story points on the dashboard (With the help of an example create one in tableau)

Story points in Tableau allow you to create a narrative around your data and create a sequence of visualizations that help tell a story. To add story points to a dashboard in Tableau, follow these steps:

1. Create a dashboard by dragging and dropping the desired sheets onto the dashboard canvas.
2. Click on the "New Story" button in the top left corner of the dashboard.
3. In the "Story" pane that appears, click on the "New Blank Point" button.
4. Drag and drop a sheet or a visualization onto the point canvas.
5. Customize the point by adding a title, caption, or any other relevant details.
6. Repeat steps 3-5 to add additional points to the story.
7. Rearrange the points by dragging them in the desired order in the story pane.
8. Preview the story by clicking on the "Preview" button in the top right corner of the dashboard.