**KINDLY DOWNLOAD THIESE WORKBOOK AS A ZIP THAN YOU ARE ABLE TO SEE IT ONLY XML IS VISIBLE IN GITHUB.**

**Q1**: **Explain in detail the area graphs and line graphs in tableau and how to create them with examples.**

Ans: Area graphs: Area graph is a line graph where the area between the line and the axis are shaded with color. Area charts in Tableau show relationships between different aspects or dimensions in a data set.

Steps to create area graph:

1. Open Tableau Desktop and connect to the Sample - Superstore data source.
2. Navigate to a new worksheet.
3. From the Data pane, drag Order Date to the Columns shelf.
4. On the Columns shelf, right-click YEAR(Order Date) and select Month.
5. From the Data pane, drag Quantity to the Rows shelf.
6. From the Date pane, drag Ship Mode to Color on the Marks card.
7. On the Marks card, click the Mark Type drop-down and select Area.

Line graphs: In the Tableau Line Chart visualization option, a measure and a dimension are shown side by side on two axes of a graph.

Steps to create line graph:

1. Connect to the Sample - Superstore data source.
2. Drag the Order Date dimension to Columns.
3. Drag the Sales measure to Rows.
4. Drag the Profit measure to Rows and drop it to the right of the Sales measure.
5. Tableau creates separate axes along the left margin for Sales and Profit.

Area and line graph is in tableau work book.

**Q2. What are the different steps in grouping fields and combining tables in tableau? Explain with examples.**

Ans. Steps to create grouping fields:

1. In the Data pane, right-click a field and select Create > Group.
2. In the Create Group dialog box, select several members that you want to group, and then click Group.
3. To rename the group, select it in the list and click Rename.

Award name group is made check it on tableau workbook

Steps to combine tables:

1. To create a join, connect to the relevant data source or sources.
2. Drag the first table to the canvas.
3. Select Open from the menu or double-click the first table to open the join canvas (physical layer).
4. Double-click or drag another table to the join canvas.
5. Click the join icon to configure the join.
6. When finished, close the join dialog and join canvas.

Join Book, award and info together check it on tableau.

**Q3. What is the use of color and size options in the marks cart of tableau?**

Ans. One can "encode" the markings on a view using the Color and Size markings Cards. By mapping marks to colors, sizes to offer context to a view, encoding marks deepens an analysis.

Steps to give color:

1. On the Marks card, click Color, and then select a color from the menu.
2. From the Data pane, drag a field to Color on the Marks card.
3. If one drop a continuous field, such as SUM(sales), on Color, each mark in the view is colored based on its sales value.

Steps to set size:

1. On the Marks card, click Size, and then move the slider to the left or right.
2. From the Data pane, drag a field to Size on the Marks card.

Example is in tableau work book.

**Q4. What are the different joins supported by tableau?**

Ans. Tableau, you may utilize four different types of joins: full outer, left, right, and inner.

* Inner Join: A table that contains values that have matches in both tables is produced when you use an inner join to merge tables. When a value is inconsistent between the two tables, it is completely ignored.
* Left Join: A table containing all values from the left table and matching values from the right table is created when two tables are joined using a left join.
* Right Join: A table that contains all values from the right table and matches from the left table is produced when we use a right join to combine tables.
* Full Join: When you use a full outer join to combine tables, the result is a table that contains all values from both tables.

Example is in tableau workbook.

**Q5. Explain the steps to create dashboard in tableau with example.**

Ans. Steps to create Dashboard:

1. Connect to Data Source.
2. Create new worksheets.
3. Open new dashboard.
4. Configure Dashboard Size.
5. Add Relevant Sheets.
6. Add Filters.
7. Add Objects.
8. Change to presentation mode.

Dashboard is in tableau work book.

**Q6. Explain in detail the heat maps and scatter plot and how to create them with example.**

Ans. Heat maps: By adding one or more dimensions to the Columns shelf and one or more dimensions to the Rows shelf, you can construct a highlight table in Tableau. A measure of interest is then placed on the Color shelf after choosing Square as the mark type. By altering the size and style of the table cells to produce a heat map, you may improve this simple highlight table.

Steps to create Heat map taking sample superstore example:

1. Connect to the Sample - Superstore data source.
2. Drag the Segment dimension to Columns.
3. Drag the Region and Sub-Category dimensions to Rows, dropping Sub-Category to the right of Region.
4. Drag the Profit measure to Color on the Marks card.
5. Click Color on the Marks card to display configuration options.
6. One can change color palette if wants to.
7. Drag the Sales measure to Size on the Marks card to control the size of the boxes by the Sales measure.
8. To enlarge the marks, click Size on the Marks card to display a size slider.
9. Now view is complete.

Scatter Plot: By putting at least one measure on the Columns shelf and at least one measure on the Rows shelf, a scatter plot is produced. measurements are always to the right of whatever dimensions you have also added to these shelves if these shelves contain both dimensions and measurements since Tableau sets the measures as the innermost fields. In this context, the table structure is referred to by the term "innermost."

Steps to create Scatter plot:

1. Open the Sample - Superstore data source.
2. Drag the Profit measure to Columns.
3. Drag the Sales measure to Rows.
4. Drag the Category dimension to Color on the Marks card.
5. Drag the Region dimension to Detail on the Marks card.
6. To add trend lines, from the Analytics pane, drag the Trend Line model to the view, and then drop it on the model type.
7. Hover the cursor over the trend lines to see statistical information about the model.

Check workbook for example.

**Q7. How to create table calculations in tableau with examples?**

Ans. Table has a feature called Quick Table Calculation, which is used to create such calculations.

1. Select the measure on which the table calculation has to be applied and drag it to column shelf.
2. Right-click the measure and choose the option Quick Table Calculation.
3. Choose one of the following options to be applied on the measure.

* Running Total
* Difference
* Percent Difference
* Percent of Total
* Rank
* Percentile
* Moving Average
* Year to Date (YTD) Total
* Compound Growth Rate
* Year over Year Growth
* Year to Date (YTD) Growth

Example: calculating the running total of the profits earned, check Q7 workbook.

1. On the Marks card, right-click SUM(Profit) and select Quick Table Calculation > Moving Average.
2. You can only perform quick table calculations on measures in the view.

**Q8. Explain in detail the distribution bands in tableau and how to create them with example?**

Ans. The reference distribution is one that divides using the reference line as a guide. A reference line acts as a distribution barrier between certain of the visualization's sections, helping to disperse the visualization in those areas.

Reference bands shade an area behind the marks in the view between two constant or computed values on the axis.

Steps to add reference distribution:

1. Drag Distribution Band from the Analytics pane into the view. Tableau shows the possible destinations. The range of choices varies depending on the type of item and the current view.
2. Select a scope for the distribution. The terms Table, Pane, and Cell define the scope for the item.
3. Select the computation that will be used to create the distribution:

* Percentages.
* Percentiles.
* Quartiles.
* Standard Deviation.

1. Specify how you want to label the distribution bands.
2. Specify whether to Show recalculated band for highlighted or selected data points.

**Q9. Explain the steps to create bar chart and pie diagram in tableau with example.**

Ans. Steps to create Bar chart with example as follows:

1. Connect to the Sample - Superstore data source.
2. Drag the Order Date dimension to Columns and drag the Sales measure to Rows.
3. On the Marks card, select Bar from the drop-down list.
4. Drag the Ship Mode dimension to Color on the Marks card.
5. Drag the Region dimension to Rows, and drop it to the left of Sales to produce multiple axes for sales by region.
6. To view data in the West region only, you can filter out the other regions. To do this, drag the Region dimension again, this time from the Data pane to the Filters shelf.
7. In the Filter Region dialog box, clear the Central, East, and South check boxes, and then click OK.

Steps to create pie diagram with example as follows:

1. Connect to the Sample - Superstore data source.
2. Drag the Sales measure to Columns and drag the Sub-Category dimension to Rows.
3. Click Show Me on the toolbar, then select the pie chart type. Pie charts require at least one or more dimensions and one or two measures.
4. Add labels by dragging the Sub-Category dimension from the Data pane to Label on the Marks card.

**Q10. How to add story points on the dashboard.**

Ans. Steps to created story point on the dashboards:

1. Click the New Story tab.
2. In the lower-left corner of the screen, choose a size for your story. Choose from one of the predefined sizes, or set a custom size, in pixels.
3. By default, your story gets its title from the sheet name. To edit it, right-click the sheet tab, and choose Rename Sheet.
4. To start building your story, double-click a sheet on the left to add it to a story point.
5. Click Add a caption to summarize the story point.
6. To further highlight the main idea of this story point, you can change a filter or sort on a field in the view. Then save your changes by clicking Update on the story toolbar above the navigator box.
7. Add another story point by doing one of the following:

* Click Blank to use a fresh sheet for the next story point.
* Start customizing a story point and click Save as New on the toolbar above the navigator box.
* Click Duplicate to use the current story point as the basis for a new one.