Tableau Link for all the data set assignments, please do check.

[**https:/ put**](https://public.tableau.com/app/profileput) **your dashboard link here**

**1. Basics:**

1. What is the difference between Discrete and Continuous Data?

* Discrete: Data that contains Absolute values (non-decimal)

Continuous: Data that contains decimal values

1. What is the criteria for data to land into dimensions and measures?

* ***Dimensions*** contain qualitative values (such as names, dates, or geographical data). You can use dimensions to categorize, segment, and reveal the details in your data. Dimensions affect the level of detail in the view.

***Measures*** contain numeric, quantitative values that you can measure. Measures can be aggregated. When you drag a measure into the view, Tableau applies an aggregation to that measure (by default).

1. What is Metadata, where is it present in the workbook?

* The Metadata API enables you to see relationships between the content and asset that you're evaluating with other items on your Tableau Online site or Tableau Server. These items include the following: **Upstream and downstream content** - including data sources, workbooks, sheets, fields, metrics, flows, and owners.

1. What happens when you aggregate or disaggregate the Data?

* **Aggregation**: It is calculated the form of a set of values that return a single numeric value. A default aggregation can be set for any measure which is not user-defined.

**Disaggregation**: The disaggregation of data refers to view each data source row during analyzing of data both dependently and independently.

1. You are working on a dataset, the client adds in more data to the dataset. What happens to the Visualization that you had created? Give the explanation for both Live and Extracted data.

* Live and extracts are two ways you can make the data connection to the tableau. Live allows you real-time data while extracts are kind of batch which needs to be refreshed from time to time to get the updated data. So, in the case of live connection whatever changes will be done at the Data source end that will be directly available to the tableau desktop. While in case of extracting any changes made in the data source won't reflect in the report immediately. It will be reflected when the extract will be refreshed.

1. What are the file extensions in Tableau and how each one is different?

* .TWB is for tableau desktop (operated and saved on Local machine) and

.TWBX is for tableau public (can be operated on both local machine and Server. But can be saved only on the server)

**2. Text Table, Highlight Tables, Heat Maps, Tree Map:**

1. Create a text table for the Avg (Sales) for each subcategory using Sample Superstore? List which Sub Category is got Avg (Sale) more than $1000? - **Sample Superstore**
2. Create a Heat Table for the order date and Region against the Sub Category based in Count of Sales with two colours diverging that is distinguished by Sum of Profit - **Sample Superstore**
3. Create a Highlight table for the States for the Order Date Year whose highlighting is done based on Sum of profits - **Sample Superstore**
4. Which customer is having maximum of sales in the year 2012? - **Global Superstore**
5. How much is profit share less in Pennsylvania when compared to New York? - **Sample Superstore**
6. Check for the pane wise percentages of sales with Category, Sub- Category and quarter wise order date, also check for the Row wise grand totals and Column wise grand totals. - **Sample Superstore**

**3. Filled Maps, Symbol Maps:**

1. Use Global Superstore. Check Which Western Country in EMEA region has least profit percentage.
2. Use **“Sample Superstore. Xls”,** which state shares boarders only profit for tables
3. Use **“Sample Superstore. Xls”,** which state has no data for Profits for Office Supplies

**4. Bar Charts, Stacked, Side by Side:**

1. Which Customer name & Year is having all the Product Categories sum of profit less than over-all Average profit? - **Sample Superstore**
2. What is the Maximum of Life Expectancy Female for the region Africa & year 2012? - **World Indicators**
3. What is the share of the top 20 customers based on the sales amount compared to the customers based on profit amounts - **Sample Superstore**

**5. Line Graphs, Dual Line, dual axis:**

1. How can you show two different graphs in one view? - **Global Superstore**
2. Which Region is having Sum of Energy Usage>1000000 and sum of Population 65+>10? - **World Indicators**

**6. Trendlines, Cluster, scatter Plot, boxplot, Word Cloud (Packed Bubbles), Histogram:**

1. Draw a trend line for profit as a linear function of sales only for product technology? - **Sample Superstore**
2. Create a histogram showing the number of Sales using Sales Bins of $1000. Which bins have profit ratios of more than 25%? - **Global Superstore**
3. Using “**Sample Superstore”**, use order sheet create a histogram showing the number of orders using sales bins of $1000.
4. Using **“Global Superstore**”, use the orders sheet, build a scatter plot showing the sum of sales on the x-axis and sum of profits on the y axis for all products (Product name). What is the equation for linear regression for products in Technology?
5. Use **“World Indicators”.**  Take Health Exp% GDP, Health Exp/Capita, Life Expectancy Male, Female. What are the variables that are considered to create the clusters by default?

**7. Calculate Fields, Quick table calculations, LOD:**

1. How do you create a profit ratio using the Calculated fields?

* Profit ratio can calculate by the formula [sum(profit)/sum(sales)], to open calculated fields, select ANALYSIS >go to Calculated fields.

1. Global Superstore data set; Region wise year wise sales are ranked. What is the rank of some country when compared to last year?
2. What percent of total profits do the top 10 customers by Sales represent? - **Sample Superstore**
3. Find the customer with the lowest overall profit. What is his/her profit ratio? - **Sample Superstore**
4. Ranking States based on Sales what is the rank of state which has sales crossed $20000. - **Sample Superstore**
5. What is the percent of orders which took more than 7 days on an average to deliver.
6. Use **“World Indicators”.** Without using table calculations what is the proper syntax to build a calculated field which will display overall total GDP on this view?

**8. Filters:**

1. What are the different types of filters and give their working order?

* Extract filter, data source filter, context filter, dimension filter, measure filters, table filters.

1. Create a list of Top 10 Products based on Profits whose sale value is more than $5000? - **Global Superstore**
2. Create a Chart with Customer Name and Profit and check for the Sale Value for top 15 Customers? - **Global Superstore**
3. Apply filter to all the worksheet, filter by year 2011, then find the sum(sales) for the highest subcategory.- **Global Superstore**
4. What is the name of 375th top most customer by sum of profits - **Sample Superstore**

**9. Dashboards & story:**

1. What are the different device type preview that Dashboards can use?

* Dashboards can include layouts for different types of devices that span a wide range of screen sizes. When you publish these layouts to Tableau Server or Tableau Online, people viewing your dashboard experience a design optimized for their phone, tablet, or desktop. As the author, you only have to create a single dashboard and deliver a single URL.

1. Create a dashboard using World Indicators showing the all the Actions that can be performed in Tableau.

[Assignment | Tableau Public](https://public.tableau.com/app/profile/radhika.choubey/viz/Assignment_16615171495270/Ques_9_2?publish=yes)

**10. Time Series:**

1. Use Order date and drill down the information for Quarter and Month level separately and show the line Chart in a Continuous Form- **Global Superstore**

**11. Sets, Parameters, Groups:**

1. Parameters can be used in?

* The parameters in Tableau are the workbook variables like a number, date, or calculated field that allows users to replace a constant value in a calculation, filter, or reference line.

1. What are the different ways to create a Parameter?

* To create a parameter, click on the drop-down arrow present on the top right corner of the Data pane.

• Select Create Parameter option from the drop-down men. A Create Parameter window will open. From this window, you can give a name to the parameter, select its data type, set current value, allowable values, etc. ...

• You can also select a display format for the parameter that you are creating. The formats available are Number, Currency, Scientific, Percentage, Automatic, Custom, etc.

• From the next option of Allowable values, you will find three options; All, List and Range. ...

In this way, the newly created parameter “ Top 10 brands ” starts showing in the Parameters section given at the bottom left.

**12. Forecast:**

1. You are provided with the dataset for the past 10yrs. How can you forecast the data for next 4 years, Quarter wise.

* In the Forecast Options dialog box, you can choose the model type Tableau users for forecasting. The Automatic setting is typically optimal for most views. If you choose Custom, then you can specify the trend and season characteristics independently, choosing either None, Additive, or Multiplicative:

Forecasting requires at least a Year date part. Specifically, it can use any of the following sets of date parts for forecasting:

1. Year

2. Year + quarter

3. Year + month

4. Year + quarter + month

5. Year + week

6. Custom: Month/Year, Month/Day/Year.

1. Use **“Sample Superstore”.** What is the Sales Forecast Estimate for the month of September 2018?

**13. Pie Chart:**

1. Create a Pie Chart using regions and sum of sales, sort the pie in ascending order, increase the size in the view and label them with Count of Quantity and Sum of Profits- **Sample superstore**