**1. Basics:**

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

ANS:

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| --- | --- |
| **Discrete Data** | **Continuous Data** |
| It is a thing that we can Count. | It is a thing that we can measure |
| Discrete data is countable | continuous measurable. |
| We can not apply any aggregate function | We can apply any aggregate function |
| EX. Days Of week | EX. Market Price Of Product |

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

ANS:

|  |  |
| --- | --- |
| **Dimensions** | **Measures** |
| It contains Discrete Values | It contains Continuous Values |
| We can not apply any aggregate function | We can apply any aggregate function |
| EX. Name Of Mobiles like M1, M2,M3  That we can’t Calculate | EX. Price Of Mobiles like SUM(10k,80k,20k) |
| Criteria : Dimensions Qualitative data Names, dates, or geographical | Criteria: Measures Quantitative Numeric &quantitative values. |

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

ANS: In metadata we can perform Hide operation and it is present in left bottom in the workbook

Metadata is data about data.

Examples: Library catalogue contains information(metadata) about publications(data)

A file system maintains permissions(metadata)about files(data)

If your Tableau Server has the data management Add on enabled, you can access the Metadata API by going to the External Assets section in the servers menu on the left , and clicking the Query metadata.

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

ANS : Tableau aggregates data in your view by default. Now you see a lot of marks-one for each row in your original data source: When you disaggregate measures, you no longer are looking at the average or sum for the values in the rows in the data source.

Instead, the view shows a mark for every row in the data source.

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.

ANS : If you use only Tableau Desktop, you manage all your own connections to data. For example, you might open Tableau, connect to SQL Server, and columns to work with. Or you might connect to an Excel spreadsheet and select the sheet to analyze. You generally don’t think about how You’re going to share the data with others. In fact, a newbie error We’ve all

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

ANS:

|  |  |  |
| --- | --- | --- |
| **File Type** | **File Extension** | **Purpose** |
| **Tableau Workbook** | .twb | It contains information on each sheet and dashboard that is present in a workbook. It has the details of the fields, which are used in each view and the formula applied to the aggregation of the measures. |
| **Tableau Packaged Workbook** | .twbx | This file format contains the details of a workbook as well as the local data that is used in the analysis. Its purpose is to share with other Tableau desktop or Tableau reader users, assuming it does not need data from the server. |
| **Tableau Data Source** | .tds | The details of the connection used to create the tableau report are stored in this file. In the connection details, it stores the source type (excel/relational/sap, etc.) as well as the data types of the columns. |
| **Tableau Packaged Data source** | .tdsx | This file is similar to the .tds file with the addition of data along with the connection details. |
| **Tableau Data Extract** | .tde | This file contains the data used in a .twb file in a highly compressed columnar data format. This helps in storage optimization. It also saves the aggregated calculations that are applied in the analysis. This file should be refreshed to get the updated data from the source. |
| **Tableau Bookmark** | .tbm | These files contain a single worksheet that is shared easily to be pasted into other workbooks. |
| **Tableau Preferences** | .tps | This file stores the color preference used across all the workbooks. It is mainly used for consistent look and feel across the users. |

**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?

ANS : In a worksheet in Tableau, select Analysis> Create Calculated field. In the Calculation Editor that opens, give the calculated field a name. In this example, the calculated field is called Profit Ratio.

1. Global Superstore data set; Region wise year wise sales are ranked. What is the rank of some

country when compared to last year?

1. What percent of total profits do the top 10 customers by Sales represent? - **Sample Superstore**
2. Find the customer with the lowest overall profit. What is his/her profit ratio? - **Sample Superstore**
3. Ranking States based on Sales what is the rank of state which has sales crossed $20000. - **Sample Superstore**
4. What is the percent of orders which took more than 7 days on an average to deliver.
5. 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?

Ans: There are six filters in Tableau

1. Extract Filters: As understood by its name, the extract filters are used to extract data from the various sources, by saving a screengrab of the way it gets added on your life. Such methods can help in lowering the tableau queries to the data source. As soon as you are done extracting data into your dashboards, you can create the extract and execute Hide all unused files to clear the columns unused in the datasheet of your panel.
2. Data Source Filters: Used mainly to restrict sensitive data from the data viewers, the data source filters are similar to the extract filters in minimizing the data feeds for faster processing. The data source filter in tableau helps in the direct application of the filter environment to the source data and quickly uploads data that qualifies the scenario into the tableau workbook. To execute such processes, you need to go to the data source tab and select the add option in the upper right corner.
3. Context filter: A context filter is a discrete filter on its own, creating datasets based on the original datasheet and the present chosen for compiling the data. Since all the types of filters in tableau get applied to all rows in the datasheet, irrespective of any other filters, the context filter would ensure that it is first to get processed.
4. Dimension filter: Now that you’ve chosen the data, you can access the values highlighted or remove them from selected dimension, represented as strikethrough values. You can click All or none to select or deselect based on your operation in case of multiple dimensions.
5. Measure Filters: in this filter, you can apply the various operations like sum, Avg , Median, Standard Deviation, and other aggregate functions. In the next stage, you would be presented with four choices: Range, At least, At most, and Special for your values. Every time you drag the data you want to filter you can do that in a specific setting.
6. Table filters: The last filter to process is the table calculation that gets executed once the data view has been rendered. With this filter, you can quickly look into the data without any filtering of the hidden data.
7. Create a list of Top 10 Products based on Profits whose sale value is more than $5000? - **Global Superstore**
8. Create a Chart with Customer Name and Profit and check for the Sale Value for top 15 Customers? - **Global Superstore**
9. Apply filter to all the worksheet, filter by year 2011, then find the sum(sales) for the highest subcategory. - **Global Superstore**
10. 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?

Ans: 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.

**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?

Ans: The parameters (sometimes called formal parameter) is often used to refer to the variables as found in the function definition, while argument (sometimes called actual parameter) refers to the actual input supplied at function call.

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

Ans: 1. In the Data pane, click the drop-down arrow in the upper right corner and select Create parameter.

2.in the Create parameter dialog box, give the field a Name.

3.Specify the data type for the values it will accept.

4.Specify a current value

5.Specify a value when the workbook opens.

**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.
2. 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**