

1. Basics:

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

Ans – Discrete = 1) The Type of data that has clear spaces between values is Discrete Data.

2) Discrete data is Countable.

3) There are distinct or different values in discrete data.

4) The bar graph is used to graphically represent discrete data.

5) Ungrouped frequency distribution of discrete data is performed against a single value.

6) Points in a graph of the discrete function remain unconnected.

Continuous = 1) Continuous information is information that falls into a continuous series.

2) Continuous data is measurable.

3) Every value within a range is included in continuous data.

4) A Histogram is used to graphically represent continuous data.

5) Grouped distribution of continuous data tabulation frequencies is Performed against a value group.

6) The Points are associated with an unbroken line.

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

Ans – Dimensions (always blue) – 1) It contain qualitative values (such as names, dates or graphical data).

2) You can use dimensions to categorize, segment and reveal the details in your data.

3) Dimensions affect the level of details in the view

Measures (always green) - 1) It contain numeric, quantitative values that you can measure.

2) Measures can be aggregated.

3) When you drag a measure into the view, Tableau applies an aggregation to that measure.

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

Ans –_1) In simple terms, metadata is data or information about data. Metadata helps us understand the structure, nature and context of the data.

2) Metadata facilitates easy search and retrieval of data. Metadata also helps keep a check on the quality and reliability of data.

3) Metadata is the key to unlocking the value of your data.

4) Other Information of Metadata is any Data which conveys knowledge about an item without requiring examination of the item itself.

5) Because Metadata derives its value from saving human time and attention, it must be effective at distinguishing relevant and irrelevant or redundant content.

Metadata present in the Workbook

- After Connecting to the data source, Tableau captures the metadata details of the source like the columns and their types.
- This is used to create the dimensions, measures and calculated fields used in views.
- We can browse the metadata and change some of its properties for some specific requirements.

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

- **Data Aggregation:**
- Data Aggregation is any process whereby data is gathered and expressed in a summary form.
- When data is aggregated, atomic data rows – typically gathered from multiple resources are replaced with totals or summary statistics.
- **Data Disaggregation:**
- Disaggregation your data means that Tableau will display a separate mark for every data value in every row of your data source.
- To disaggregate all measures in the view.
- Clear the analysis > Aggregate Measures option.
- If it is already selected, click aggregate measures once to deselect it.

5. 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 Data :**
- This refers to a data source which contains direct connection to real time data.
- Live connections can be used at a place where the data is real time data which when get updated, so our visualization also gets updated automatically.
- **Example-** real – time transactions.
- Live connections are slower for complex visualizations.

- Live connection are used especially in less complex visualizations with small datasets, filters, calculations etc.
- Live connections get refreshed when there is a change in the original data source.
- Live connections always rely on the database for all queries.
- **Extracted Data:**
 - Extract files are the local copy of the data source that you can use to make the view.
 - Extracts can be used at a place where the view can be created by subset of the data source.
 - **Example-** Keeping the record of the monthly trends of hospital.
 - Extracts are much faster for visualization.
 - Extracts are used especially in more complex visualizations with large datasets, filters, calculations etc.
 - Extracts is a snapshot of data, so they need to be refreshed to receive updates from original data source.
 - However, extracts databases should not always be optimized.
 - The Extracts in tableau are refreshed in two ways:
- **INCREMENTAL REFRESH**
- **FULL REFRESH**
- **INCREMENTAL REFRESH:**
 - A refresh in which only the rows and columns are added which are new since the previous time you extracted the data.
 - Most data sources support an incremental refresh as it takes less time.
 - Although it is faster but once in a period of time the user needs to use full refresh to ensure that the data is most up to date.
- **FULL REFRESH:**
 - It refers to the refreshment of the entire extract.
 - In this refresh, all of the rows are replaced with the data in the original data source.
 - This kind of refresh ensure that the user has an extract copy of the original data.
 - A full refresh can sometimes take a long time and be expensive on the database.

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

➤ **File Extensions in Tableau:**

1. Tableau workbook(.twb) :

- The Tableau Workbook file type is the one that you will use the most when working in tableau.
- This file type has the extension (.twb) and is set as default for the users.
- We know, a workbook in tableau is a file that contains sheets, dashboards, etc.
- All the information regarding the fields, aggregation types, styles, formatting, filters, etc is present in these files.

- The (.twb) files also contains metadata related to the existing data connection.
- A (.twb) files does not contain actual data concerning the workbook.

2. Tableau Packaged Workbook (.twbx):

- The Tableau Packaged workbook file type has both information about the constituents of a workbook and the data extracted from the data source.
- Tableau Packaged workbook files have an extension(.twbx)
- You can use a .twbx file type in place of a .twb(Tableau Workbook) file when you wish to share a workbook with a user who does not have access to the live data connection.

3. Tableau Data Source (.tds):

- The Tableau Data Source files are files that contain all the necessary information regarding a data connection made in tableau.
- When we set up a fresh connection to data source we make a lot of modifications in it as per our requirements such as setting data types, aggregations, custom fields etc.
- The .tds file helps in saving information on data connections with custom fields and table joins.
- Tableau file type only saves the information needed to establish a connection with a data source but not the actual data.
- To create a .tds file, go to the data tab on the toolbar, then choose a data source that you wish to connect to and select add to saved data source option.
- After this, save that file as Tableau data source file.

4. Tableau Packaged data Source (.tdsx):

- A tableau Packaged Data Source file is a file that contains information of a data source connection along with the data extracted from that source.
- The extracted data is saved as .tde file and the information on data source as .tds file
- The extracted data can be from any local file such as a text file, extract files, Excel files, Access files, etc.
- The extension of a tableau packaged data source file has the extensions as .tdsx.
- The tableau packaged data source files are used when we want to share data and other relevant information about a data source with a user who does not have access to the data source and its data.

5. Tableau Data Extract (.tde):

- The tableau data extract files have the extension .tde.
- These tableau files types only contain a local copy of the entire or a subset of a data from its source.
- It is important to note that the .tde files do not contain a file path or information about the data source, workbooks, dashboards etc.
- Tableau data extract files are important and useful as they are highly compressed and optimized to improve tableau's performance

- You can use .tde files for offline work as well , one noted drawback of such tableau files types is that the data in it cannot be refreshed automatically as and when it refreshes as the source.

6. Tableau Bookmark (.tbm):

- Files with extension .tbm are tableau bookmark files.
- These tableau file types are most commonly used to save worksheets and share them with others so they can use it in their workbooks without having to create a new worksheet from scratch.
- To create a .tbm file, go to windows option present on the toolbar.
- From there, select bookmark and then click on create bookmark.
- This will create a .tbm file of the active worksheet.

7. Tableau Map Source (.tms):

- A tableau map source file contains information about maps and its elements for use in tableau.
- The extension of such file is .tms.
- As per the default settings, tableau will fetch map details like background and other layers from a certain map server or provider.
- IN Tableau, you have the option to add map details from a WMS server of your choice or a custom map from Mapbox.
- Once you create a map file (.tms) of your preference.

8. Tableau Preference (.tps):

- A Tableau Preference file contains all the information related to a customized color palette.
- You can create a custom color palette or a theme and save it as (a.tps) file so that you can use it all over the workbook uniformly at once.
- Tableau Preference files have the extension as.tps and exist in XML format.
- These Tableau Preference files are present in My Tableau Repository.

