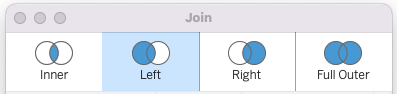
**What are the join types in Tableau?**



In general, Tableau supports the following join types:

* **inner join**: An inner join returns only the rows that have matching values in both tables.
* **left join**: A left 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, it returns NULL values.
* **right join**: A right 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, it returns NULL values.
* **full outer join**: A full outer join returns all the rows from both tables. It includes the matching rows from both tables and the non-matching rows with NULL values for the missing columns.

**What are the different Tableau Products?**

* Tableau Desktop
* Tableau Server
* Tableau Online
* Tableau Public
* Tableau Prep
* Tableau Mobile
* Tableau Reader
* Tableau Prep Builder

**What are the different datatypes in Tableau?**

* String
* Numerical values
* Date and time values
* Boolean values
* Geographic values
* Date values
* Cluster Values

### What data sources can you connect to the Tableau?

Tableau is a powerful BI and data visualization tool that supports a wide range of data sources:

**Databases**: Relational (e.g., MySQL, PostgreSQL), NoSQL (e.g., MongoDB), and cloud-based (e.g., Amazon Redshift, Snowflake).

**Cloud Storage**: Services like Amazon S3, Google Cloud Storage, and Azure Blob Storage.

**Web Connectors**: Connects to web APIs and services (e.g., Google Analytics, Salesforce, JSON).

**Statistical Tools**: Integrates with R and Python for advanced analytics and machine learning.

**Data Servers and OLAP Cubes**: Connects to Microsoft SSAS and SAP HANA.

**Excel and Text Files**: Directly imports data from Excel spreadsheets and text files (CSV, TSV)

### What are the different file extensions used in Tableau and what are their significance?

Tableau uses several file extensions for different purposes:

**.twb (workbook)**: Contains layout and visualization details, referencing the data source without embedding data.

**.twbx (packaged workbook)**: Includes both the workbook and data, enabling independent viewing; larger in size.

**.hyper (data extract file)**: Snapshot of data for faster querying and analysis.

**.tds (tableau data source)**: Stores data source connections and schema information without data, for consistent use across workbooks.

**.tdsx (packaged data source)**: Contains a data source and extracts, ensuring comprehensive sharing.

**.tbm (Tableau bookmark)**: Snapshot of a single visualization for sharing specific insights.

**.twbx (Tableau Server Workbook)**: Used for publishing workbooks to Tableau Server or Tableau Online for web access.

**.tds (Tableau Server Data Source)**: Published data source files on Tableau Server or Online for collaborative analysis.

**What kinds of connections can you build with your dataset in Tableau?**

In Tableau you can create different types of connections with your dataset:

* Live Connection: Real-time link to the data source for instant updates.
* Extract Connection(TDE): Snapshots of data for improved performance and scheduled refreshes.
* Blended Data Connection: Combine data from multiple sources in one visualization.
* Data source Union: Combine related tables or sheets within the same source.
* Cross-Database Join: Join tables from different databases or sources.
* Custom SQL Connection: Write custom SQL queries for data retrieval.
* Web Data Connector: Fetch data from web-based APIs.
* Local File Connection: Connect to local files(eg., Excel, CSV)
* Cloud Data Connection: Link to data in cloud-based services(e.g, AWS, GCS)

### What is the difference between Measures and Dimensions in Tableau?

Dimension:-

* They are categorical or qualitative data fields. They represent categories, labels, or attributes by which you can segment and group your data.
* They are used for grouping and segmenting data, creating hierarchies, and the structure for visualizations.
* Example:- Category, Region, Product name, etc.

Measure:-

* They are numerical or quantitative data fields. They represent quantities, amounts, or values that can be aggregated, or calculated.
* They are used for performing calculations and creating the numerical representation of the data as sum, average, etc.
* Example:- Sales(sum of sales), Profit(sum of profit), Quantity(sum of quantity), etc.

**Dashboard:**

Definition: A collection of views (worksheets) on one page for an interactive and comprehensive data view.

Features: Includes graphs, maps, tables, and other elements; allows dynamic filtering and highlighting; provides instant insights.

**Worksheet:**

Definition: The basic building block for creating data visualizations.

Features: Drag-and-drop fields to create charts (bar, line, scatter, etc.); add filters; customize formatting; supports reference lines, data blending, and computed fields.

**Story:**

Definition: A sequence of sheets to create a logical flow or narrative.

Features: Guides viewers through visualizations step-by-step; allows adding text comments, captions, and descriptions; interactive navigation.

**Workbook:**

Definition: The highest-level container in Tableau, encompassing worksheets, dashboards, and stories.

Features: Stores the entire Tableau project, including data connections and visualizations; used to create, save, and share projects; can organize multiple worksheets, dashboards, and stories; supports establishing data source connections, parameters, and calculated fields.

**What are the different data aggregation functions in Tableau?**

Tableau has many different data aggregation functions used in Tableau:

* **SUM:** calculates the sum of the numeric values within a group or partition.
* **AVG:** Computes the average of the numeric values.
* **MIN:**Determines the minimum value.
* **MAX**: Determines the maximum value.
* **COUNT:** Count the number of records or non-null values.
* **VAR:**Computes the variance of the sample population.
* **VARP:** Computes the variance of the entire population.
* **STEDV:** Compute the standard deviation of the sample population.
* **STEDVP:** Calculate the standard deviation of the entire population.

### How do you concatenate two strings in Tableau?

We can concatenate two strings in Tableau by creating a calculated field using either the ‘CONCAT()’ function or the ‘+’ operator.

### What are the different types of charts available in Tableau?

**Bar Chart**: Compares values between categories or shows data distribution across categories.

**Line Chart**: Displays patterns and changes over time, commonly used for time series data.

**Area Chart**: Similar to line charts, with the area beneath the line colored to highlight contrasts between variables.

**Pie Chart**: Shows proportions of a whole, useful for illustrating data distribution.

**Tree Map**: Uses rectangles to display hierarchical data, useful for visualizing hierarchical structures.

**Bubble Chart**: Compares data points with three properties, highlighting clusters or relationships.

**Scatter Plot**: Shows the relationship between two continuous variables, aiding in discovering correlations or clusters.

**Density Map**: Depicts the distribution and concentration of data points within a 2D space.

**Heat Map**: Displays data on a grid where color denotes value, useful for visualizing large datasets and spotting patterns.

**Symbol Map**: Adds symbols or markers to a map to represent information about specific locations.

**Gantt Chart**: Visualizes tasks, their durations, and dependencies over time, commonly used in project management.

**Bullet Graph**: Monitors progress toward a goal by showing a measure, a target, and performance ranges.

**Box Plot (Box and Whisker)**: Shows data distribution and identifies outliers by displaying the median, quartiles, and possible outliers.

### What is the difference between a discrete and a continuous value in the Tableau?

### What are groups, sets, and parameters in Tableau?

### What is the difference between sets and groups in Tableau?

### What is a calculated field and How do we create it in Tableau?

### What is the difference between the COUNT and COUNTD functions in Tableau?

### How would you distinguish between Reference Band and Bollinger Bands ?

60 Charts :-

**Bar Charts:-**

Column Bar Chart

Row Bar Chart

Side By Side Bar Chart

Over time Bar Chart

Stacked Bar Chart

Full(100%) Stacked Bar Chart

Multiple Small Bar Charts

Bar in Bar Charts

Bar Code Charts

**Line Charts:-**

Basic Line Chart

Customized Line Chart

Multiple Line Chart

Dual Line Chart

Cumulative Line Chart

Multiple Small Line Chart

Highlighted Line Chart

Highlighted Line Chart (2)

Bump Chart

Sparkline Chart

Barbell Chart

**What is Calculated Field and how to use it?**

* Calculated field is a user-defined fields that are created using expressions or formulas to perform calculations on existing fields in the data source.
* Calculated fields allow you to create new data from data that already exists in the data source.
* When creating a calculated field, new field (or column) in the data source will be created, the values or members of which are determined by a calculation that can be controlled.

Calculated field can be used for many reasons.

* Segmenting data
* Converting the data type of a field, such as converting a string to a date.
* Aggregating data
* Filtering results
* Calculating rations.

For example, we have customer name field and we have to convert name from lower case to uppercase then we will use calculated field.

### What is the Difference Between Joining and Blending?

* Data Blending is a method for combining data from multiple sources. such as [Oracle](https://www.simplilearn.com/oracle-interview-questions-and-answers-article), Excel, and [SQL Server.](https://www.simplilearn.com/what-is-microsoft-sql-server-architecture-article)
* Joins are used when combining data from different tables in the same data source.
* The main difference between joining and blending is when aggregation is performed.
* A join combines the data and then aggregates. A blend aggregates and then combines the data.

**How many tables join are possible in tableau?**

The maximum number of tables that can be joined in tableau is 32.

**What are the different filters in tableau?**

There are 6 types of filters in tableau?

Extract filters:- Used When creating extracts.

Data source filters:- Filter directly from data source.

Context filters:- Generally, when working with sets, top N…

Dimension filters:- Include/exclude LOD.

Measure filters:- Used for table calculation, cluster….

User filters:- When working with reference line, trend line.

**Can you explain the use of context filters in tableau?**

* Context filter can be used to improve the performance.
* Context filter cab be used when creating a top n filter.

**What do you mean by parameters in tableau?**

* Parameters are variable that allow user to replace a fixed constant values.
* Parameters can be used in calculations, filters, Test bins, Reference line.
* Parameters are independent from the data source.

The purpose of parameters:

* + add dynamic, flexibility and interactivity.
  + Enable users to customize the views(Self service)
  + Reduce number of views.

**Where can we use parameters in tableau?**

* Reference Line.
* Actions.
* Filters
* Calculated fields.

**What is the difference between parameters and filters?**

* Parameters are independent of the data source whereas filters are dependent.
* By default, parameters can be used with all the worksheets within the same workbook whereas filters cannot. Nevertheless, we can choose to apply the filter to the other worksheet manually.
* Parameters can be used within calculated field whereas filter are applied directly to a dimension or a measure.

**What is the difference between groups and sets in tableau?**

* Groups are used to combine related members in the same field to result in a new dimension. Group are static(for example, grouping the states in a country into regions like east, west, south and north).
* Sets are custom field that define a subset of data based on some conditions. Sets can be static or dynamic (for example, retrieving the top 10 cities based on a given conditions.)

**What is the difference between aggregation and Disaggregation?**

**Aggregation** refers to the process of summarizing data points into a single value. Common aggregation functions include sum, average, count, min, and max. When data is aggregated in Tableau, multiple rows of data are combined into a single value based on the specified aggregation function.

#### **Example:**

If you have sales data for different products across different regions, and you want to see the total sales per region, you would use aggregation to sum the sales values for each region.

**Disaggregation:-**

Disaggregation in Tableau refers to displaying data at its most granular level, where each individual data point is shown separately without summarization. This approach allows for detailed analysis and examination of raw data, making it useful for identifying patterns, outliers, and relationships among individual data points.

### Example:

Instead of showing the total sales per region (aggregated view), disaggregation would display each individual sale transaction, providing a detailed look at the data.