











## Tableau Introduction

TERMS	BUSINESS INTELLIGENCE (BI)	Refers to technical infrastructure that collects, stores, and analyzes the data produced by a company's activities to help making better data-driven decisions			
	DATA VISUALIZATIONS	The process of converting raw data into visuals and graphs, such as charts, plots, or maps, to tell a meaningful story using the data			
	TABLEAU	Powerful data visualization and business intelligence tool that allows users to connect, visualize, and share data in a way that provides insights and facilitates decision-making			
WHY TABLEAU	AUTOMATION	SECURITY	BIG DATA	VISUALS	

## Tableau Interface

	HOME PAGE		DATA SOURCE
Landing Page in Tableau Desktop		Connect Data, Build data model and combine tables using physical and logical layers	
	WORKSHEET		DASHBOARD
Single view in workbook dedicated to create data visualizations, filters, legends, and more		A collection of multiple worksheets and objects to provide a comprehensive view of the data	
	STORY		
A collection of multiple worksheets and dashboards that describe a data sotry			

## Tableau Products Suite

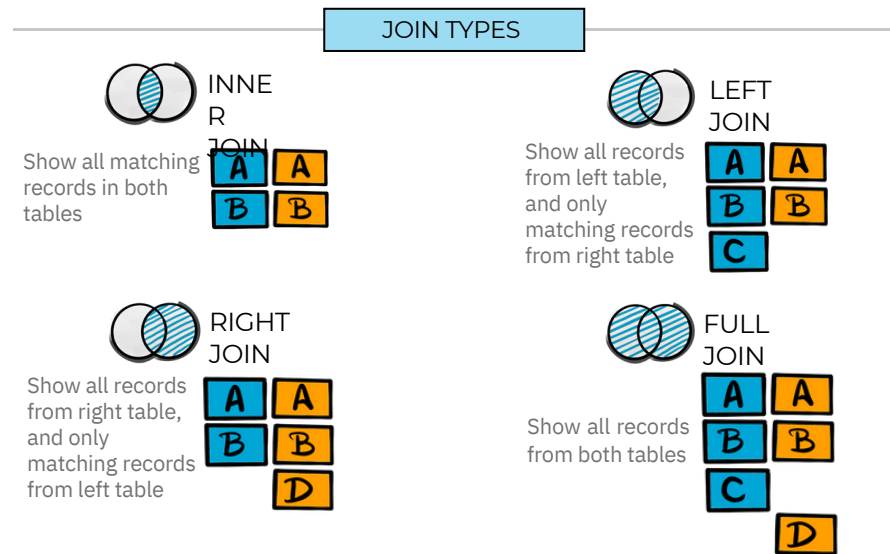
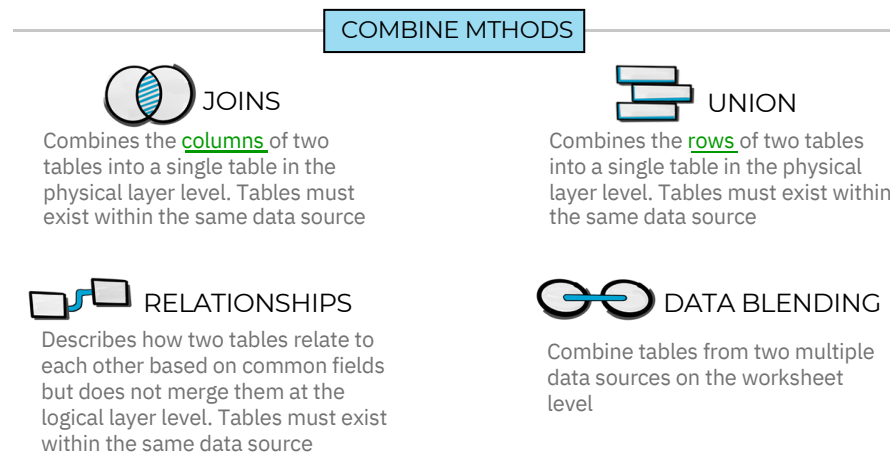
DEVELOPMENT		TABLEAU DESKTOP	Tool used to create and publish data visualizations		TABLEAU DESKTOP PUBLIC	(Free) Tool used to create and publish data visualizations		TABLEAU PREP	Data Engineering tool used to transfer and prepare data to be ready for data visualization
		TABLEAU SERVER	In-House platform to share and host data visualization		TABLEAU CLOUD	Tableau-cloud based platform to share and host data visualization		TABLEAU PUBLIC	(Free) Tableau-cloud based platform to share and host data visualization
VIEWING		TABLEAU MOBILE	Mobile App allows users to view visualization		TABLEAU READER	Software allows users to view visualization			

You can learn Tableau completely for Free  
Tableau Public Desktop & Tableau Public

## Tableau Data Model

Every data source that you create in Tableau has a data model. You can think of a data model as a diagram that tells Tableau how it should query data in the connected database tables

PHYSICAL LAYER	LOGICAL LAYER
Layer under the logical layer. Tables can be combined here using JOINS and UNIONS	Default view in data source. Tables can be combined here only using relationships



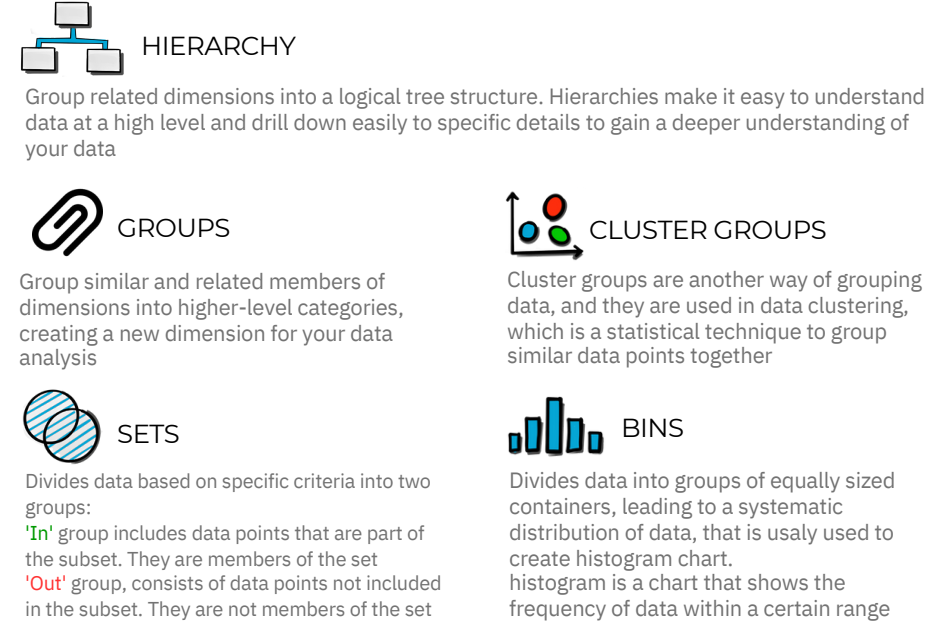
## Tableau Filters

<b>EXTRACT FILTER</b>	<b>DATA SOURCE FILTER</b>
Filters the data between source system and data source. Reducing the data can improve the performance of your views. Extract filter can be used only in data sources with extract connection.	Filters the data between data source and worksheets. Reducing the data can improve the performance of your views. Data source filter can be used in data sources with extract or live connection.
<b>CONTEXT FILTER</b>	<b>DATA SOURCE FILTER</b>
When you create a context filter, Tableau generates a temporary table that includes only the data relevant to the filter. Context filter can be created individually for each worksheets	A dimension filter is used to filter data based on categorical variables or dimensions
<b>MEASURE FILTER</b>	<b>TABLE CALC FILTER</b>
A measure filter is used to filter data based on quantitative measures	You can use table calculations to filter data dynamically based on the result of a computation

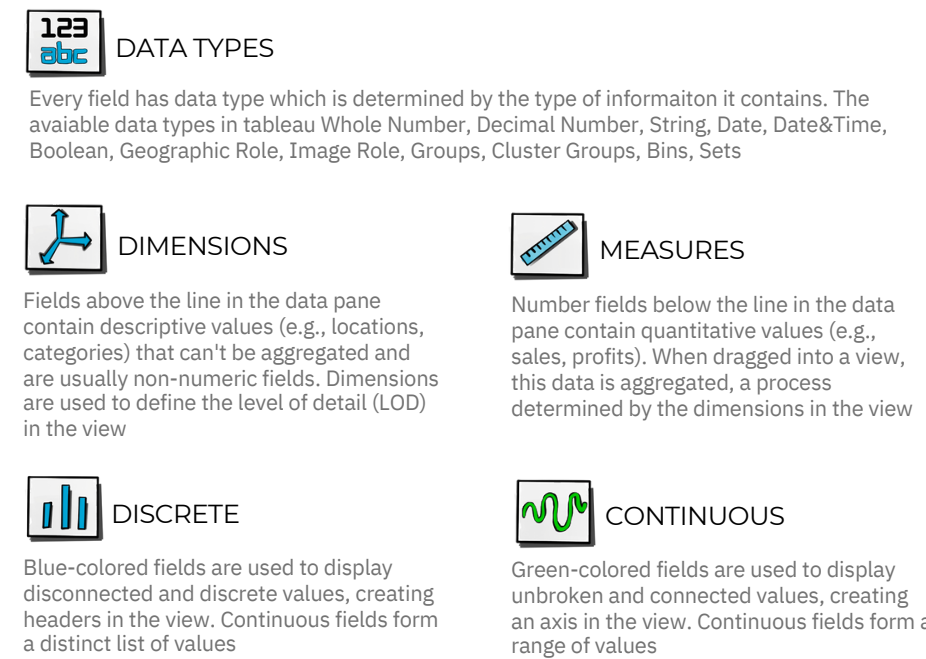


- #1 Tip Use extract, data source and context filters to optimize performance
- #2 Tip Avoid using "Only relevant values" in quick filters
- #3 Tip Avoid using dimensions with 'High' cardinality as quick filters
- #4 Tip Use 'Wildcard Match' option in quick filters for dimensions with 'High' cardinality
- #5 Tip Use 'Apply Button' for quick filters
- #6 Tip Avoid using 'Exclude' in filters
- #7 Tip Minimize the number of quick filters
- #8 Tip Sort and Position the quick filters in logical order
- #9 Tip Don't use 'All' value for filters with 'low' cardinality
- #10 Tip Choose the right filter modes for quick filters: *Range* for dates, *List* for low cardinality, *Drop down* for medium cardinality, and *Wildcard Match* for high cardinality

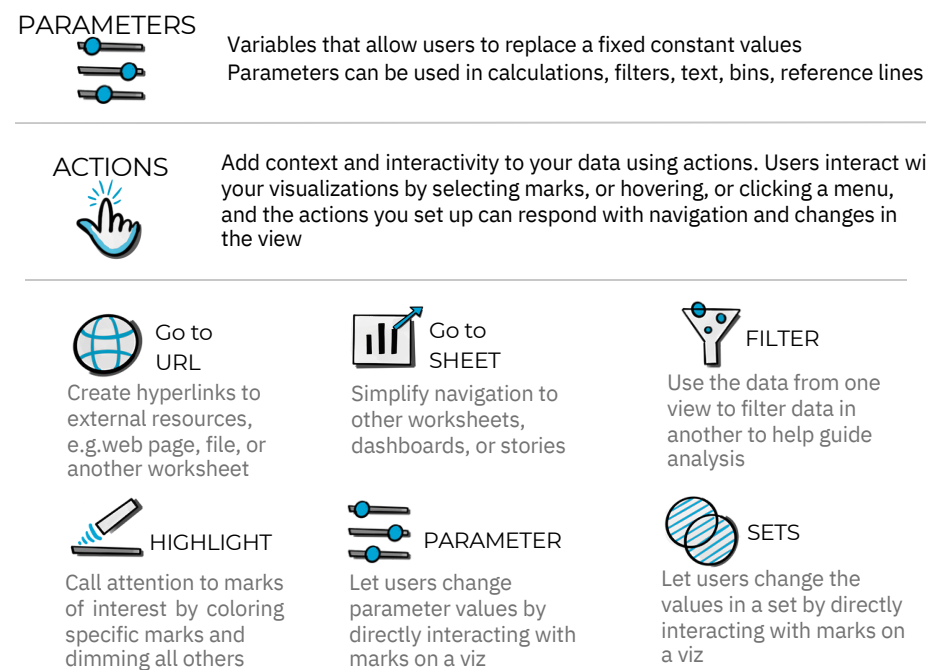
## Organizing Data



## Tableau Metadata



## Tableau Interactivity



## Tableau Project Steps

### ANALYSE REQUIREMENTS

- Collect Requirements
- Choose the Right Charts
- Draw Mockups
- Choose Colors

### BUILD DATA SOURCE

- Connect Data
- Create Data Model
- Rename Fields/Tables
- Check Data Types
- Understand Data

### BUILD CHARTS

- Create Calculated Fields & Test
- Build Chart
- Format
  - Remove Lines & Grids
  - Clean up Axis & Headers
- Coloring Tool

### BUILD DASHBOARD

- Draw Mockups for Containers
- Build Container Structure
- Put all Charts together
- Format
  - Distributed Content "Evenly"
- Format Colors, Sizes..etc
- Fit "Entire View"
- Add Legends
- Add Spaces (Inner/Outer Padding)
- Add filters & Dynamic
- Add Icons