

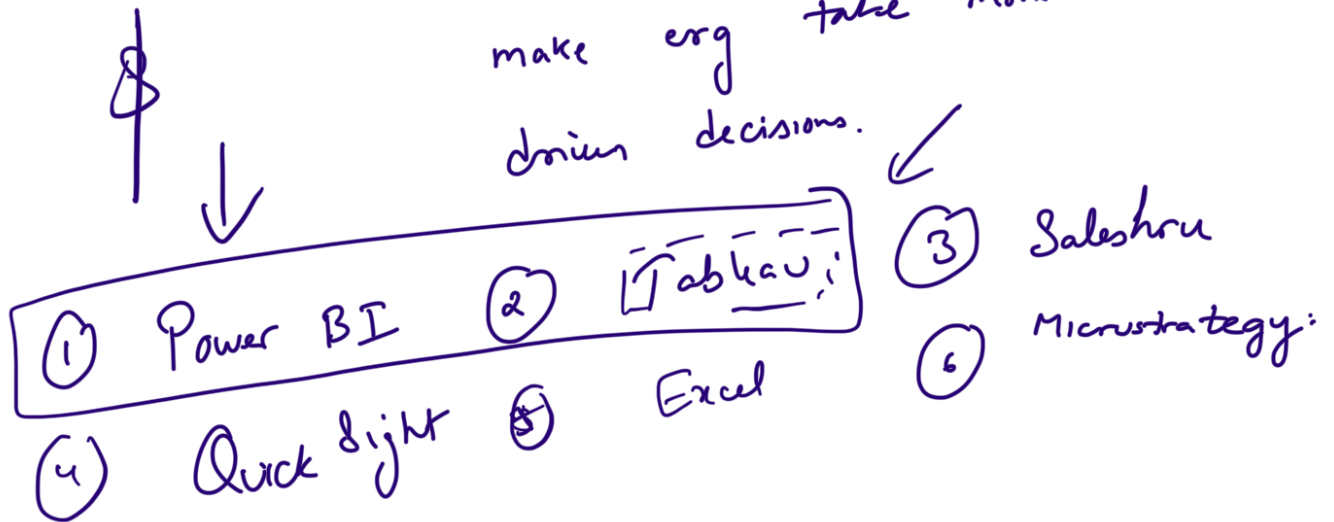
## Tab: Intro to Data Visualization, Basic Charts and Operations |Lecture

- Tableau Basics
  - Why choose Tableau?
  - Tableau Product Suite
  - Download & Install Tableau
  - TWB vs TWBX file format
  - Tableau Public GUI
  - Data Fields
  - Data Types
  - Measures & Dimensions
  - Discrete vs Continuous fields
  - Rows, Columns, Marks shelf
  - Visual Analytics
  - Data Connections in Tableau
    - Live connection
    - Extract connection
  - Aggregation on Dimensions and Measures
  - Basic Charts
    - Line chart
    - Bar chart
    - Pie chart
    - Histogram
  - Cleaning and Formatting data for analysis
    - Data Interpreter
    - Pivoting Data
    - Data Source Filter
  - Introduction to Summer Olympics dataset
-

HOW'S THE  
JOSH?

# Business Intelligence (BI)

⇒ Combines Business Analytics, data mining, data visualization, data story and infra to make org take more data driven decisions.



## Tableau

↳ Prep ✓

↳ Desktop —

↳ Server ✓

↳ online ✓

↳ Reader ✓

↳ Public ✓

## File extension ↓

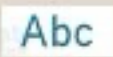






① .tuba : Packaged file which contains data layout, visualization, calculations, workbook.

② .twb (Tableau Workbook):

↳ XML File Contains references to data visualization,

↳ layout, calculations, workbook settings.

# Tableau Data Types

Data Type	Icon
String values (Text)	
Integer values (Numbers)	
Date values (DD/MM/YYYY or MM/DD/YYYY)	
Date & Time values	
Boolean values (True or False; relational)	
Geographic values (Region, Postal code etc.)	
Cluster group or mixed values	

Measures	Dimensions
↳ It is a field that is a dependent variable, i.e. its value is a <u>function</u> of <u>1 or more</u> dimensions.	↳ It is a field that can be considered as Independent Variable.
↳ Any field which is numeric in nature.	↳ Except numbers, everything is <u>qualitative</u>
↳ <u>Quantitative</u>	

Col_name	M	D
① Customer Name	X	✓
② Order Date	X	✓
③ Qty sold	✓	X
④ employee Id	X	✓
⑤ employee count	✓	X

Discrete and Continuous fields

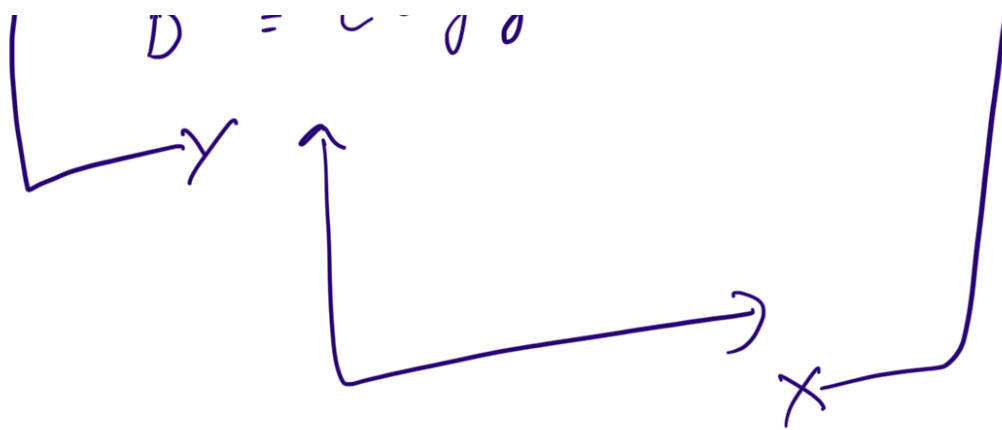
Discrete

Discrete (Blue) (D)	Continuous (Green) (M)
<p>→ Individual, Separate or distinct</p> <p>Ex → C.N ⇒ <u>Amit</u></p> <p>→ Used to grouping, filtering and categorization</p>	<p>→ unbroken, whole or without interruption.</p> <p>Ex → Sales Revenue →</p> <p>100   100.1   100.11... ∞ 101</p> <p>→ used to Calculations, trends and aggregation.</p>

Col-name	Type (D/M)	D/C
① Profit Margin	M	C
② Region	D	D
③ Discount to	M	C
④ Order Date	D	D

Determine the total sales value of each category.





## Visual Analytics

↳ use of sophisticated tools and processes to analyse data set using visual representation of Data.

Live	Extract
<p>→ Connects directly to DB and fetch real time data.</p> <p>→ Always up to date, reflecting real time changes</p>	<p>→ is a Snapshot of data and it is store locally in a .hyper file.</p> <p>→ static, needs to refreshed manually or schedule.</p>

Determine the average sales value of each category.

Determine the average sales value of each category.

An. 2       $M = \text{Sales}$        $Y$   
               $D = \text{Category}$        $X$

Determine total number of products within each category.

An. 3       $M = \text{products} = Y$   
               $D = \text{Category} = X$

**Business problem 3 :** Find the product category that has the highest sales throughout most of the years.

An. 4       $M = \text{Sales}$        $Y$   
               $D = \text{Category, year}$        $X$

Find the year and month that had the highest and lowest sales.

An. 5       $M = \text{Sales}$        $Y$   
               $D = \text{Date}$        $X$