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Data Visualization – Class 1 TCS Corporate Training

Data is growing day by day and to understand the data we need to see the data in charts, dashboard etc. Tableau and Power BI are the market leaders, and it helps to tell a story to the end user about the data.

Tableau is acquired by Salesforce

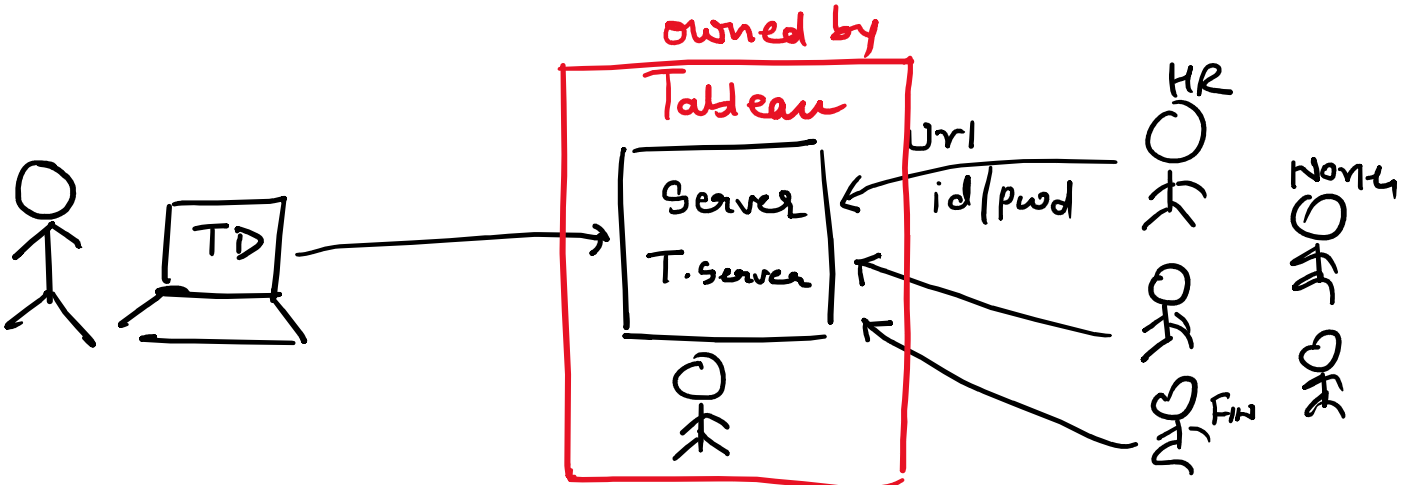
To create the data visualizations

- **Tableau Public – Free Software**
  - We cannot connect to databases i.e. We cannot connect to databases like MySQL, Oracle and so on..
  - We can only connect to file systems excel file, CSV files and so on..
  - When we create some data visuals in Tableau Public we cannot save the visual in the local machine, it will get saved in the public server. We cannot use the client's data.
  - We cannot integrate with R and Python
  - We cannot create extracts
  - https://public-pantheon.tableau.com

- **Tableau Desktop - $70 per user per month**
  - No limitations in this software
  - https://www.tableau.com/academic/students#form

How to collaborate with the larger audiences

- **Tableau Reader** – Only read the data, see the visuals, we can apply the filter as well
  - This solution is good when the company size is small
  - Tableau read is not a scalable solution – Security is a concern, managing the groups will be difficult
- **Tableau Cloud – Tableau Online**
  - Good for mid size companies
  - It is exactly the same as Tableau Server, the only difference is Tableau Server, The machine where Tableau Server is installed and The employee who is taking care of Tableau Server are not owned by you, owned by Tableau



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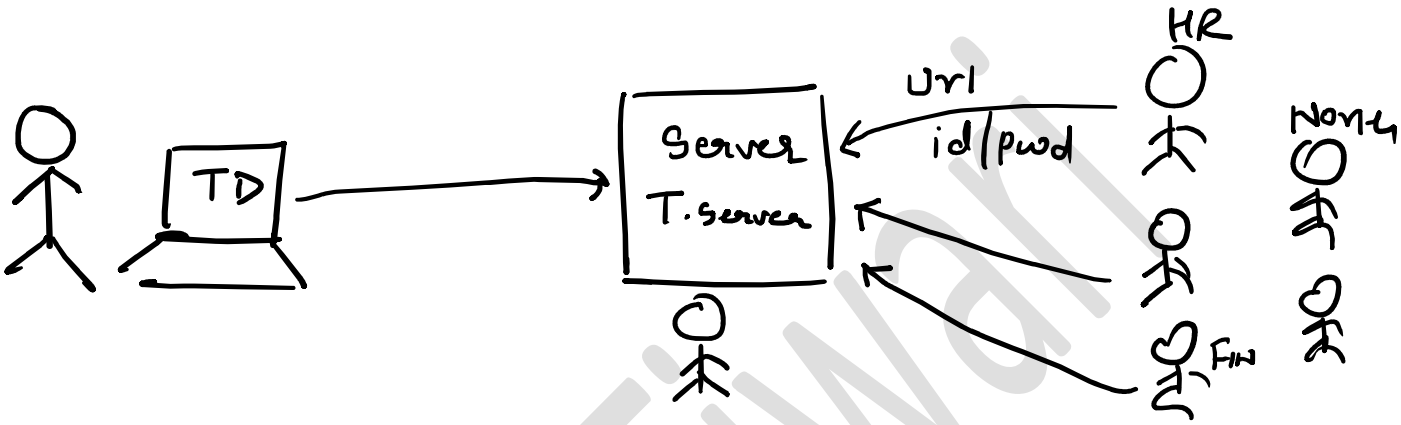
- **Tableau Server – It is a software**
  - It's a cost so good for the big size companies
    - We have to purchase the Tableau Server
    - We have to buy a server as well where we will install Tableau Server
    - One employee who can manage the server where Tableau server is installed
  - The user will get the URL and credentials and he/she can login and see the desired reports



- **Tableau Prep – It is used for the data preparation**
  - There is a raw data and we need to clean that
  - Tableau Prep is some kind of ETL tool, E - Extract T – Transformation L – Load
  - The same Tableau Desktop Student's license you can use in Tableau Prep also

- **Tableau Mobile – Android and iOS**
  - Reporting on the go
  - You should have access to either Tableau Online or Tableau Server

When we are connecting to the CSV files with Tableau it can be only connected to Tableau as a text file

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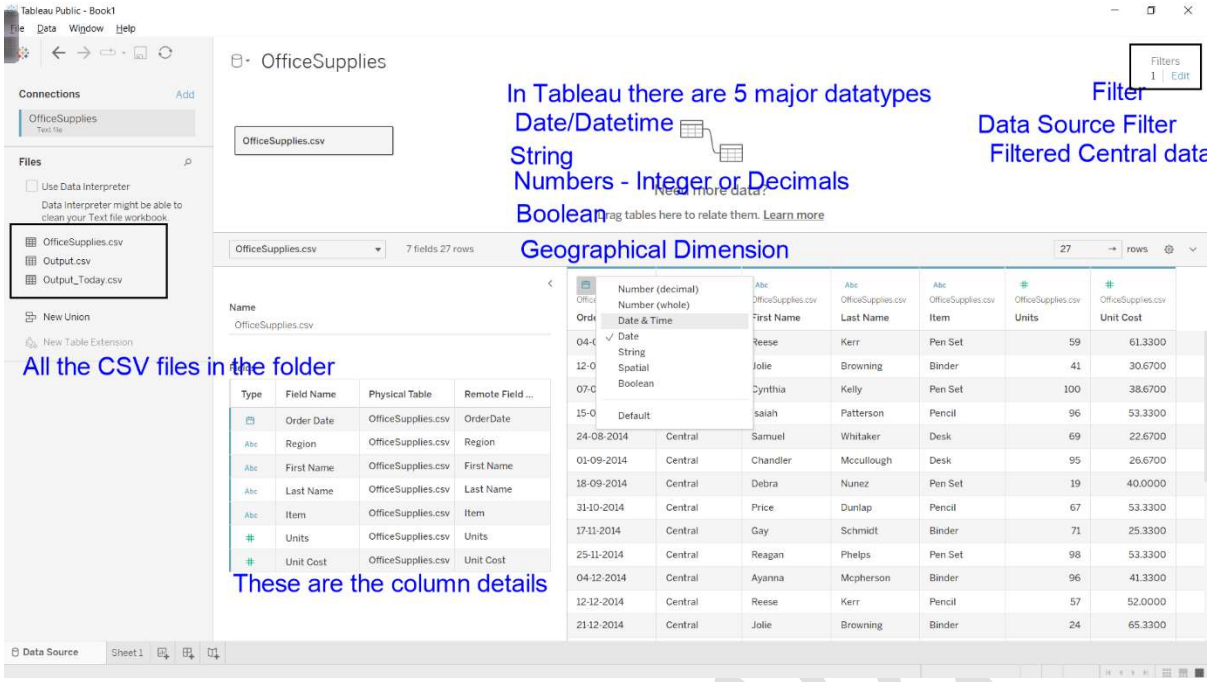

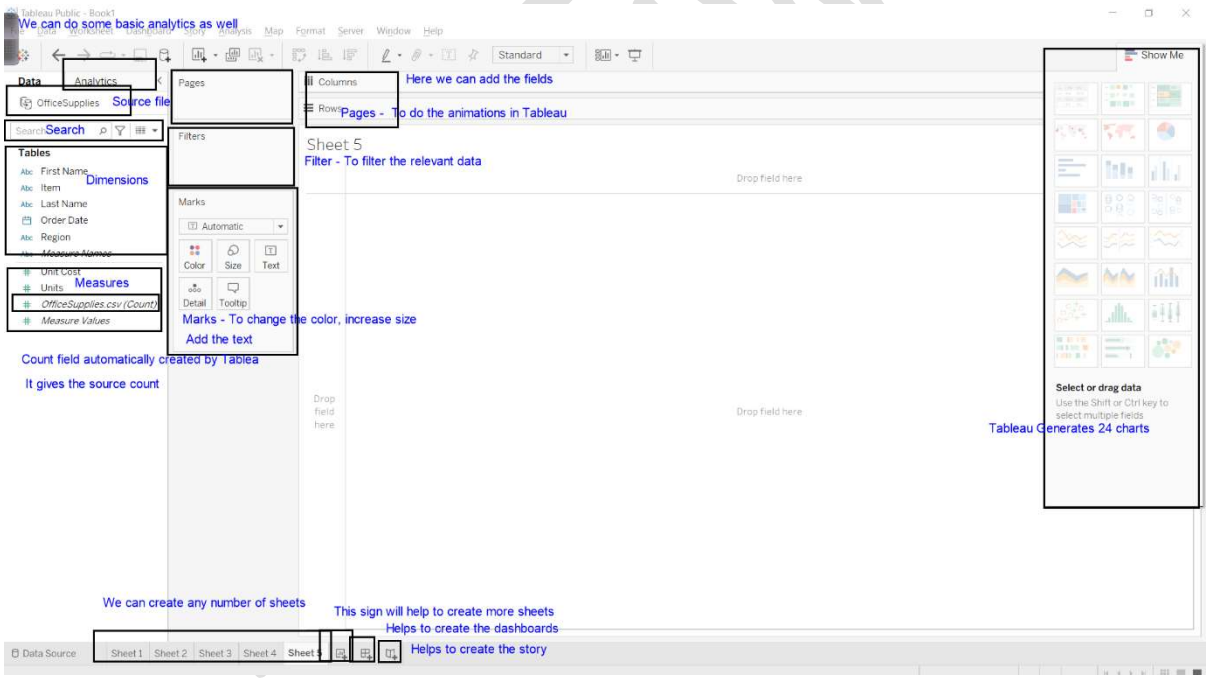

Calculated field – In this we can write the logics

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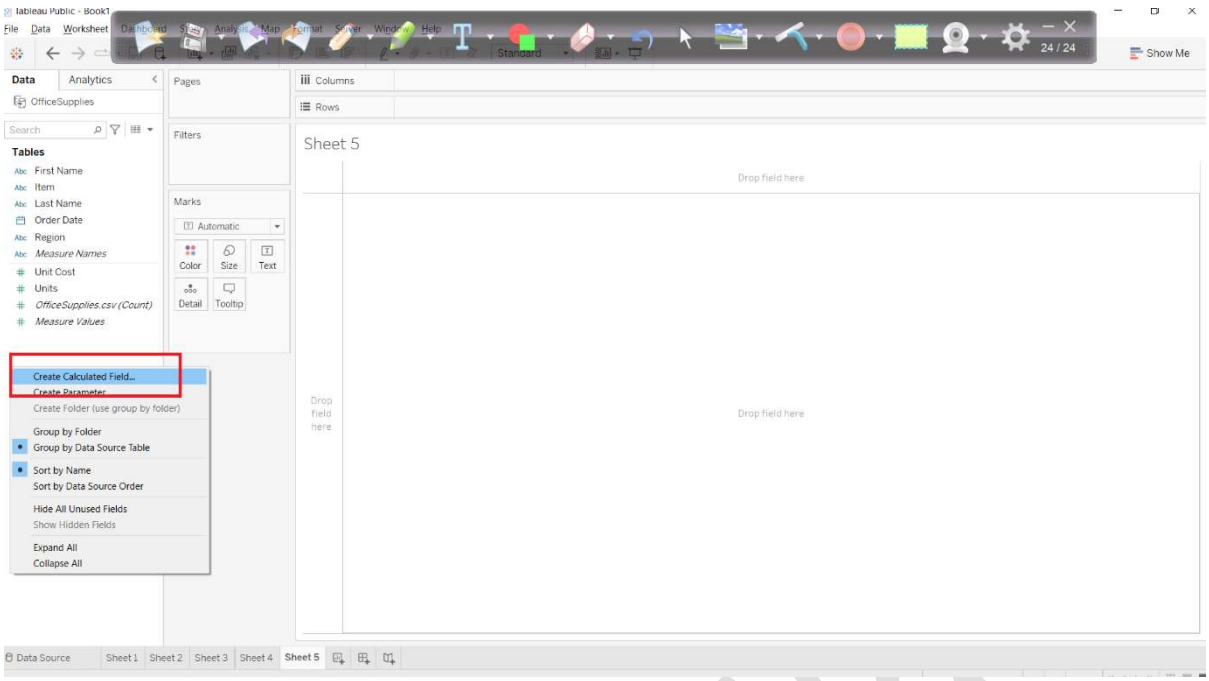
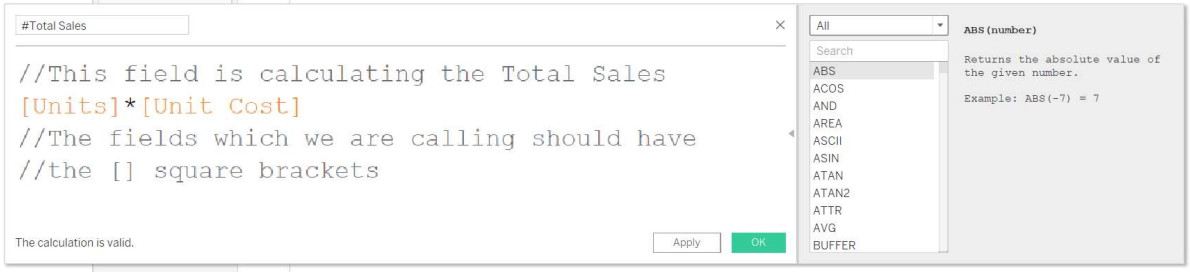
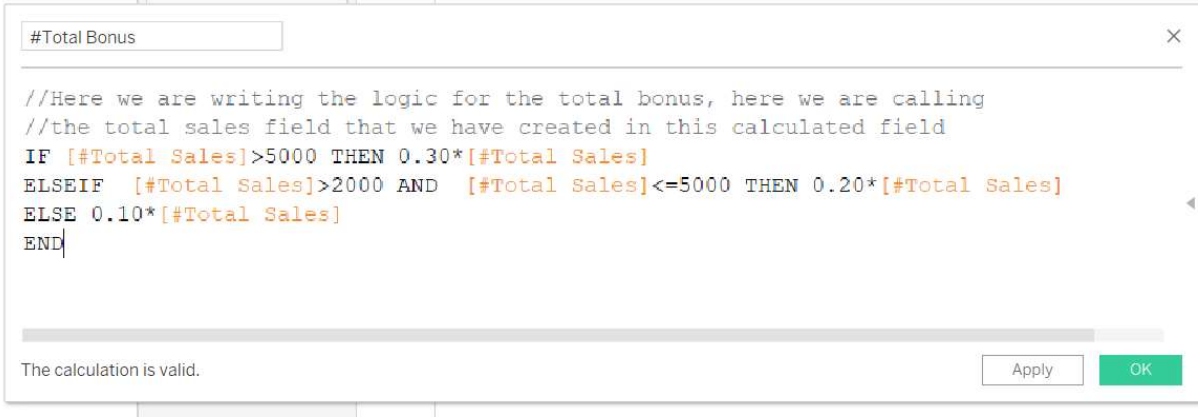


Total Sales



Total Bonus



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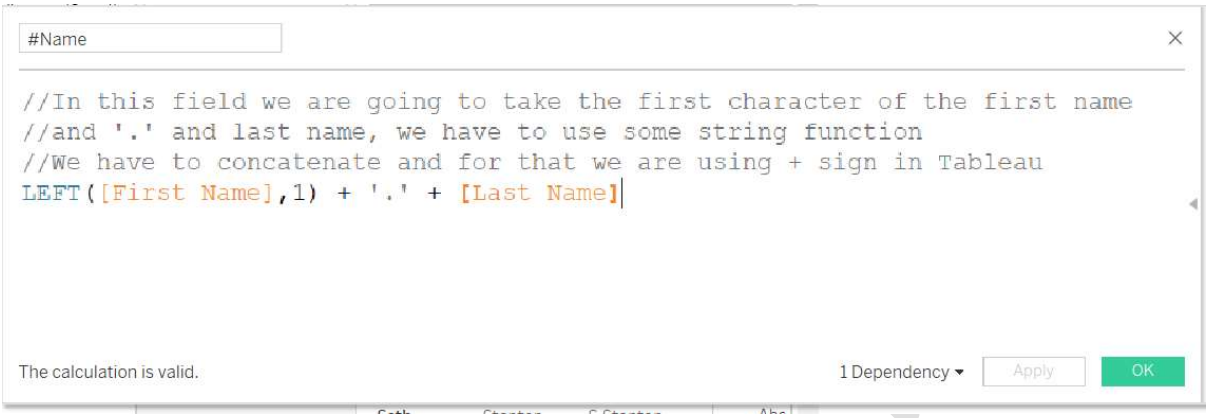

Tableau is automatically categorized the dimension and measure.

Chart as per the business requirements

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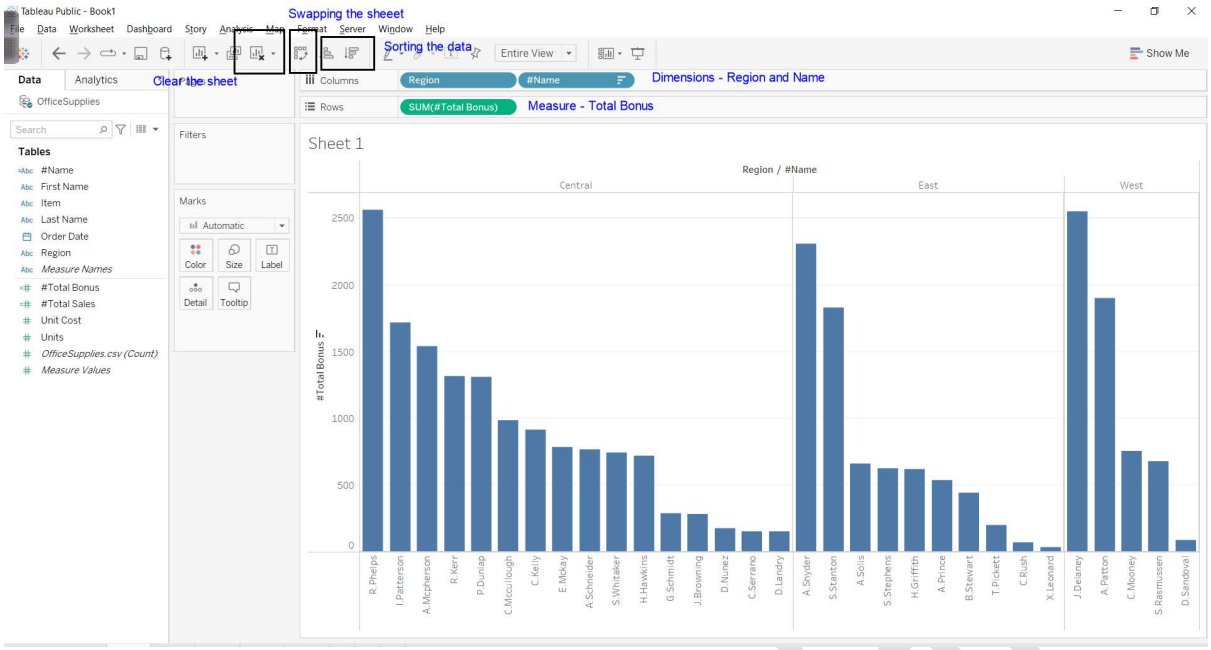
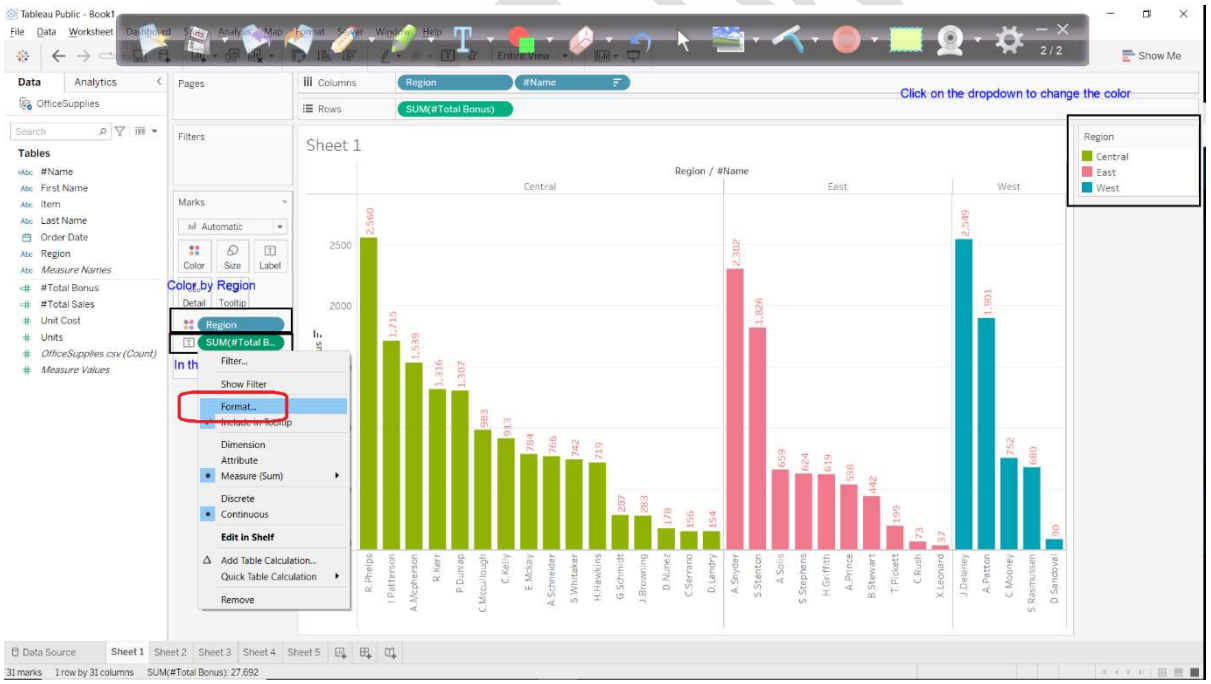


Formatting



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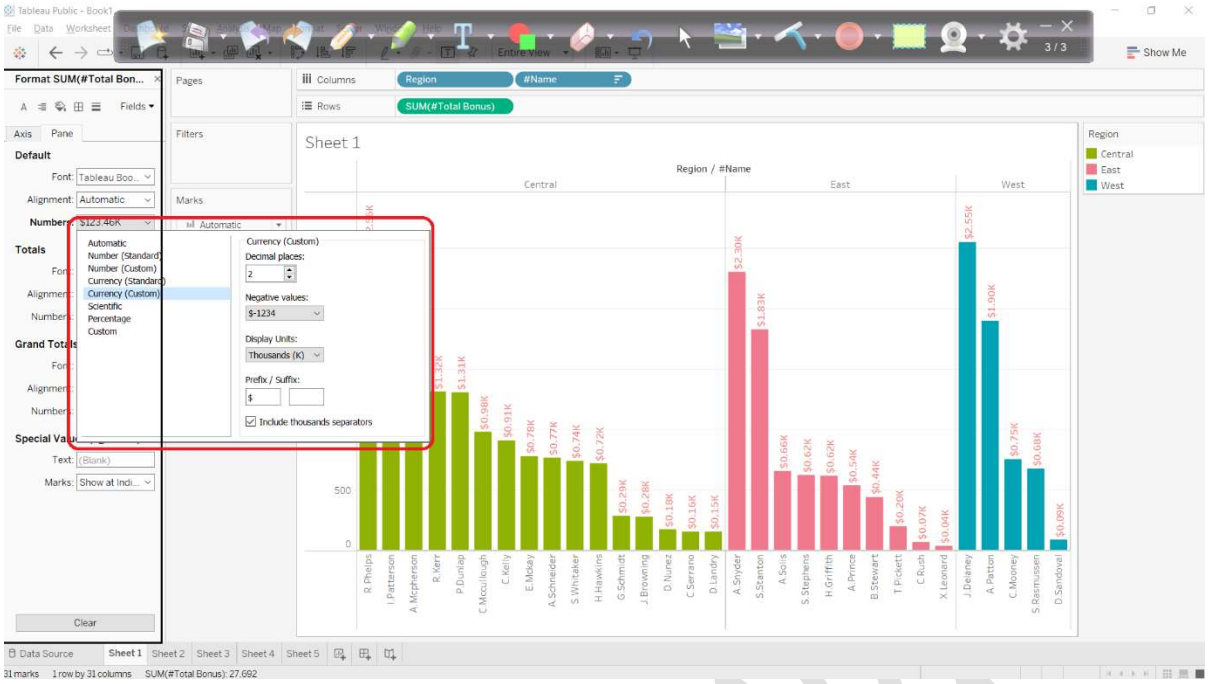

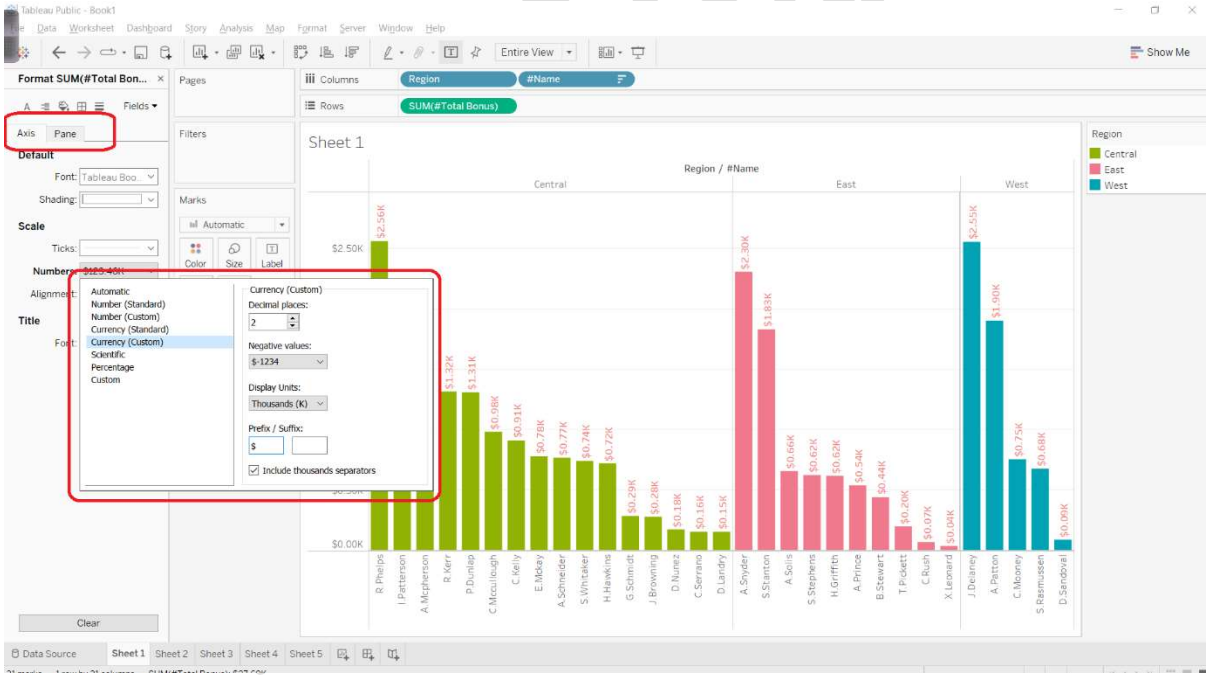

How to save the file in Public

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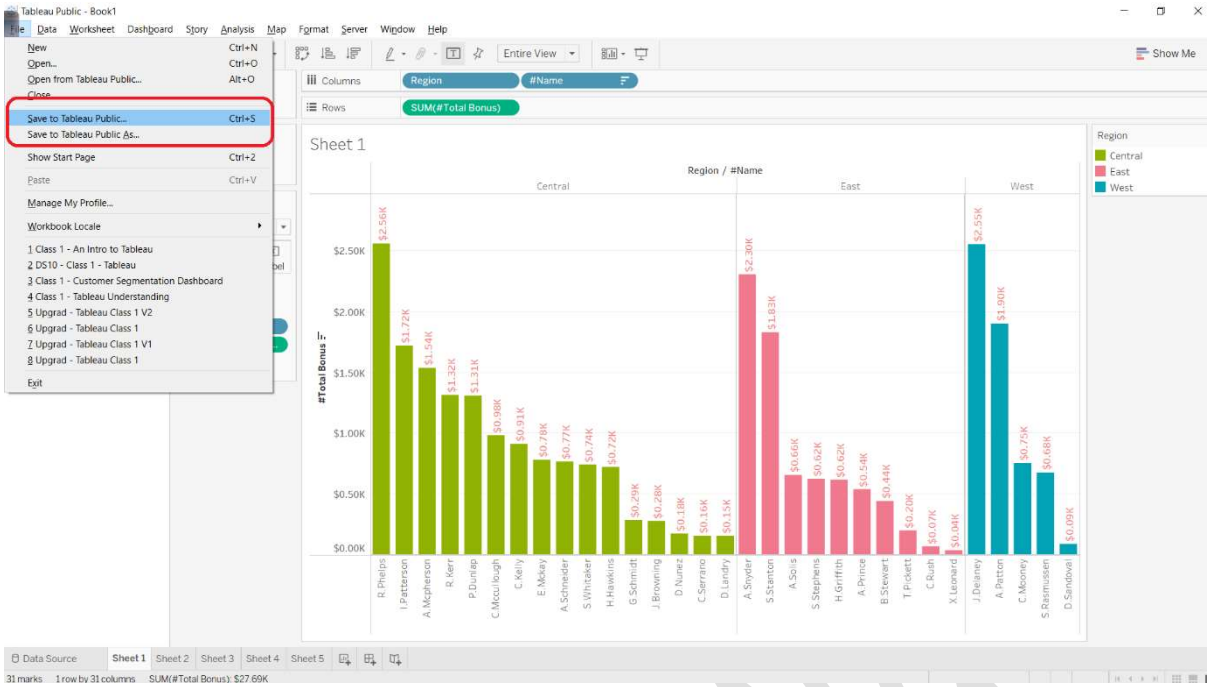

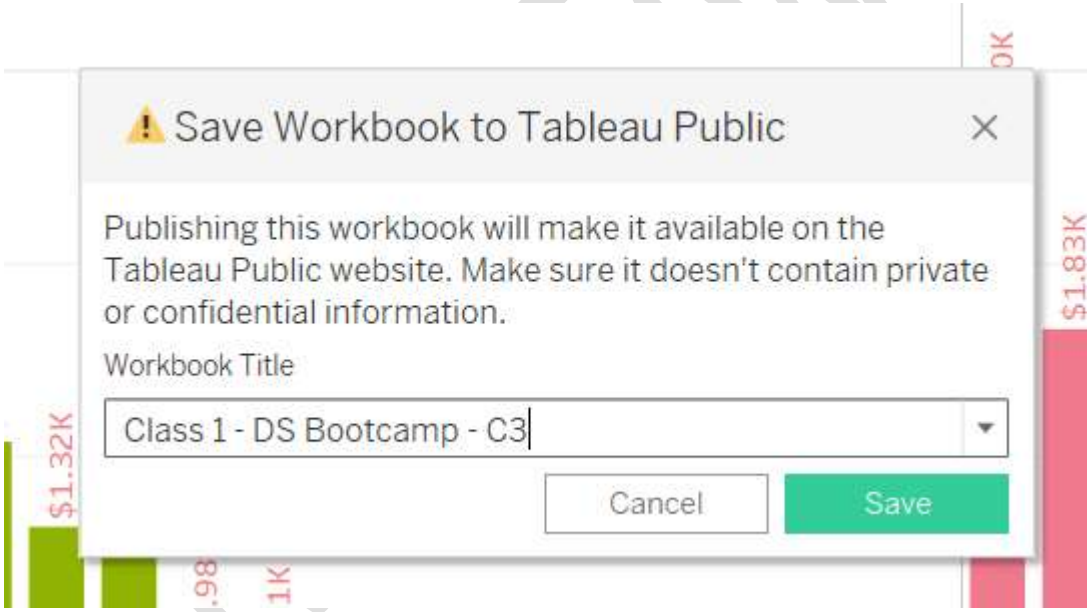

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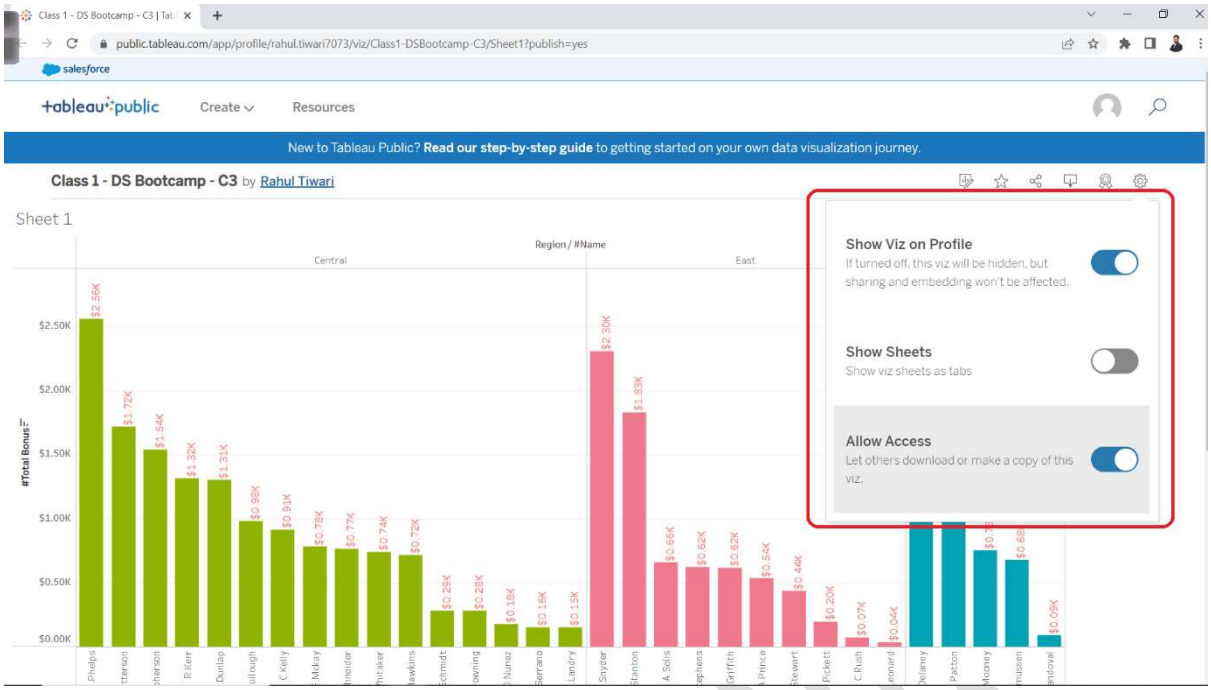
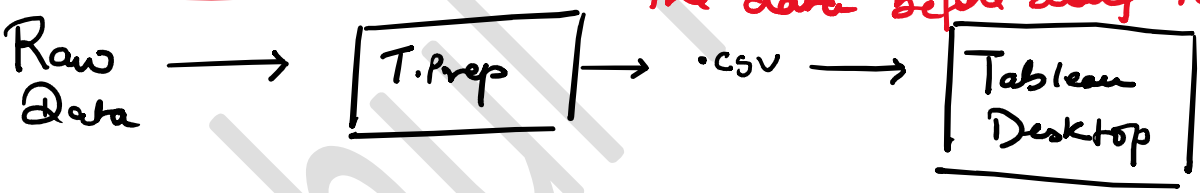


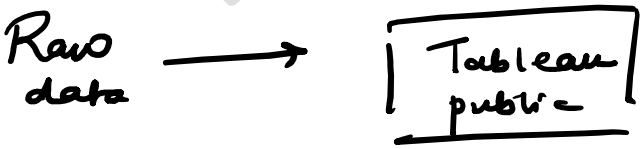
Scenario 1 – Tableau Prep and Tableau Desktop

we always looking to clean the data before doing reporting



Scenario 2 – Tableau Desktop

Scenario 3 – Tableau Public



CNO Financials – Insurance company

Tableau Desktop Report – 40 mins to open and when trying to change the filter it was 20 mins to refresh

Total number of records – 13M – The source was the text file

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We created some extracts it did not work

Admin Policy Number | Ncup Policy number | Xref Policy number – Policy Number (By concatenating we were getting the unique policy number

Tableau Desktop – Meant reporting purpose

Text File -→ Alteryx → TDE (Tableau Data Extract) -> Tableau Desktop 5 secs

Data Types

Categorical Data | Qualitative Data | Dimensions

1) **Nominal – Gender/ State/ Category – There is no order**
2) **Ordinal – Rank where we have some order in the data**
3) **Boolean – True False | Yes No**

Numerical Data | Quantitative Data | Measures | Facts

1) **Discrete – Number without decimals for example 5 Pens**
2) **Continuous - Number with decimals for example 5.5 Liters of milk**
3) **Employee ID – Sum(Employee id) aggregation will not make any sense. It will be a numerical column but cannot be a measure**

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