ASSIGNMENT 3

DATA VISUALIZATION

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{ SAMPLE-SUPERSTORE & ABC-CORP DATASET }

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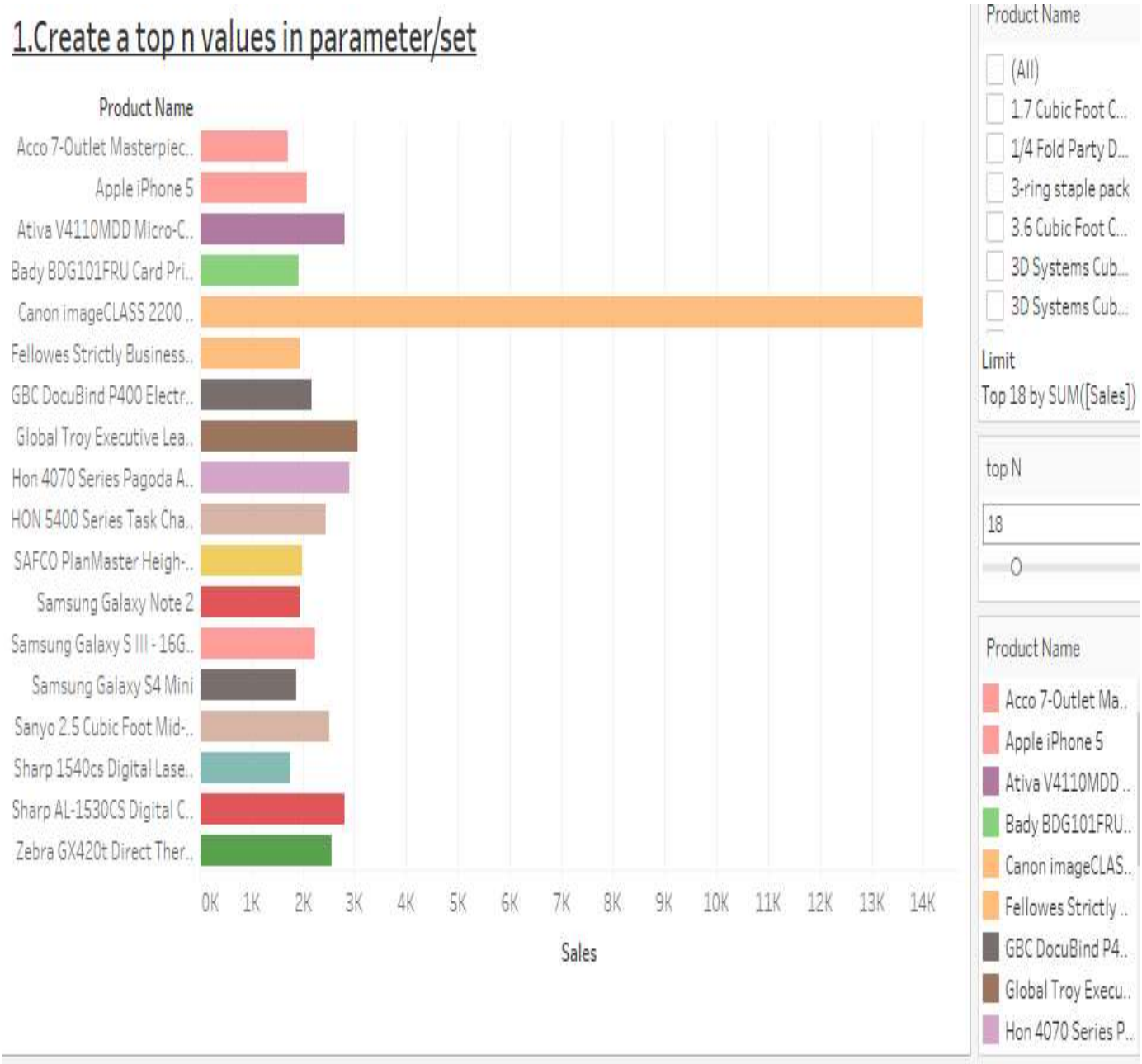
1) Create a top n values in parameter/set?

- **Explanation :~**

- *Bar Chart:-*Bar chart compare the data across categories.
  - It compares the product name and total sales and according
  - to that it plot the bar graph and it shows the which product has maximum sales

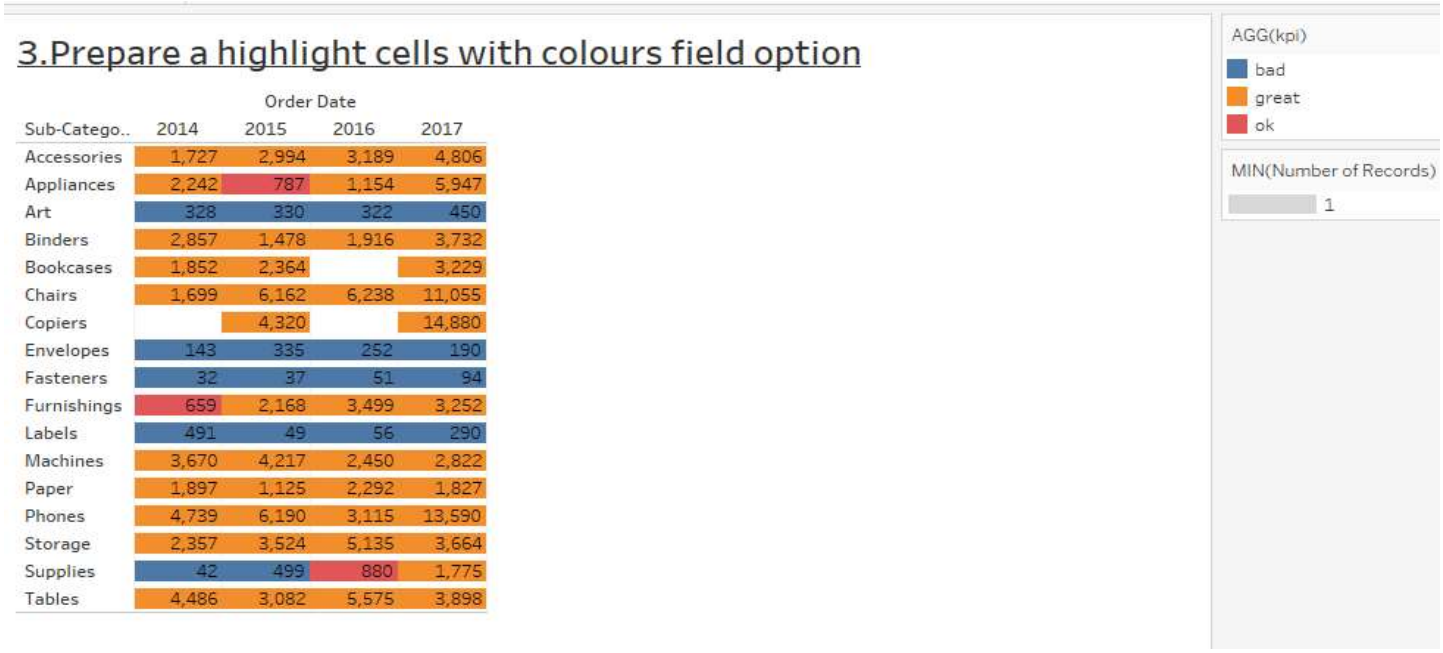


2) Create a bin for days?

- **Explanation :~**
- Bins are useful to create a Range of data
- It use a automatic mark to display day(bin) and which data belong to which day(bin)

3) Prepare a highlight cells with colours field option?

- **Explanation :~**
- *Use Bar Chart:-* show the total(sales) of sub-category in every year and according to that it compare if the total(sales)>1000 then it print "good" and if the total(sales)>500 then it print"ok" otherwise it print "bad" and assign the colors to the cells and highlight that cells

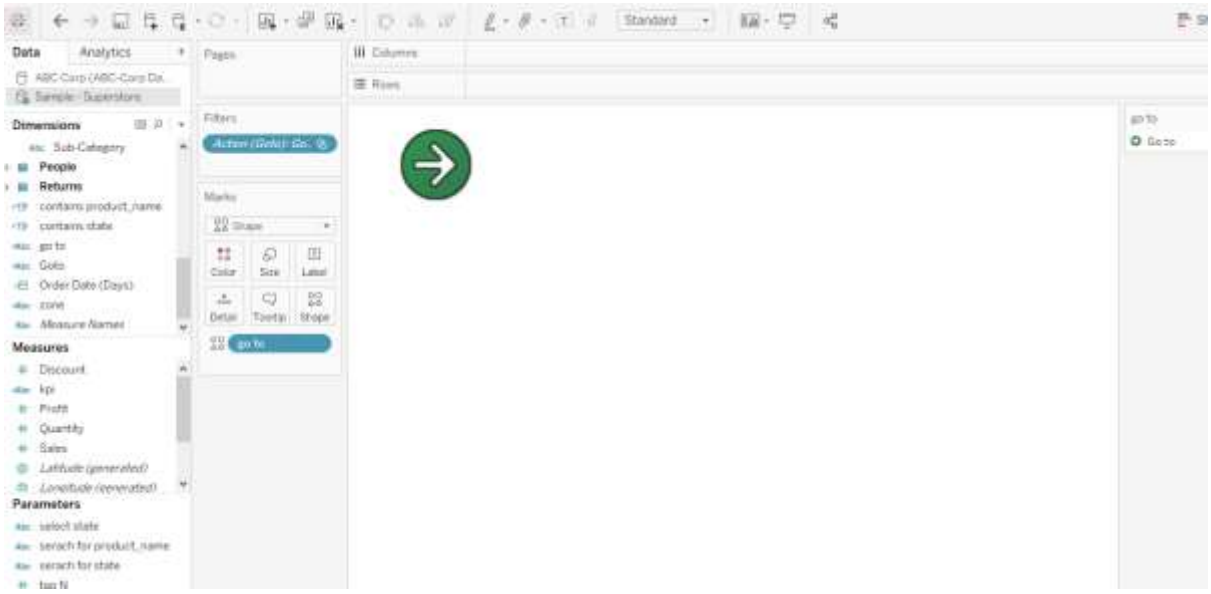


4) Action between the worksheets-dashboard?

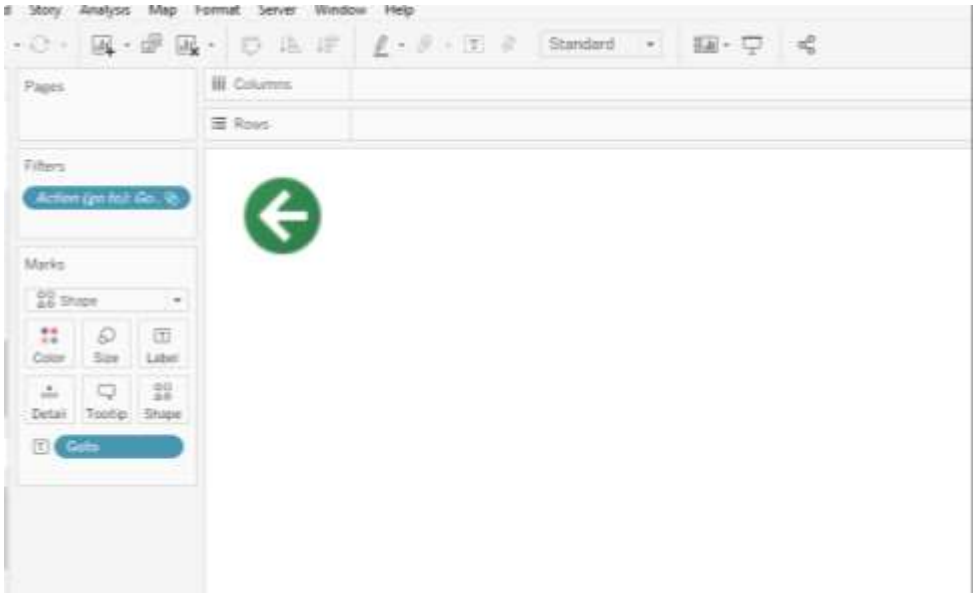
- **Explanation :~**

- Actions allow you to use the data in one view to filter data in another and it allows you to point to external resources, such as a web page, file, or another Tableau worksheet.In this question we create a action between worksheets and dashboard

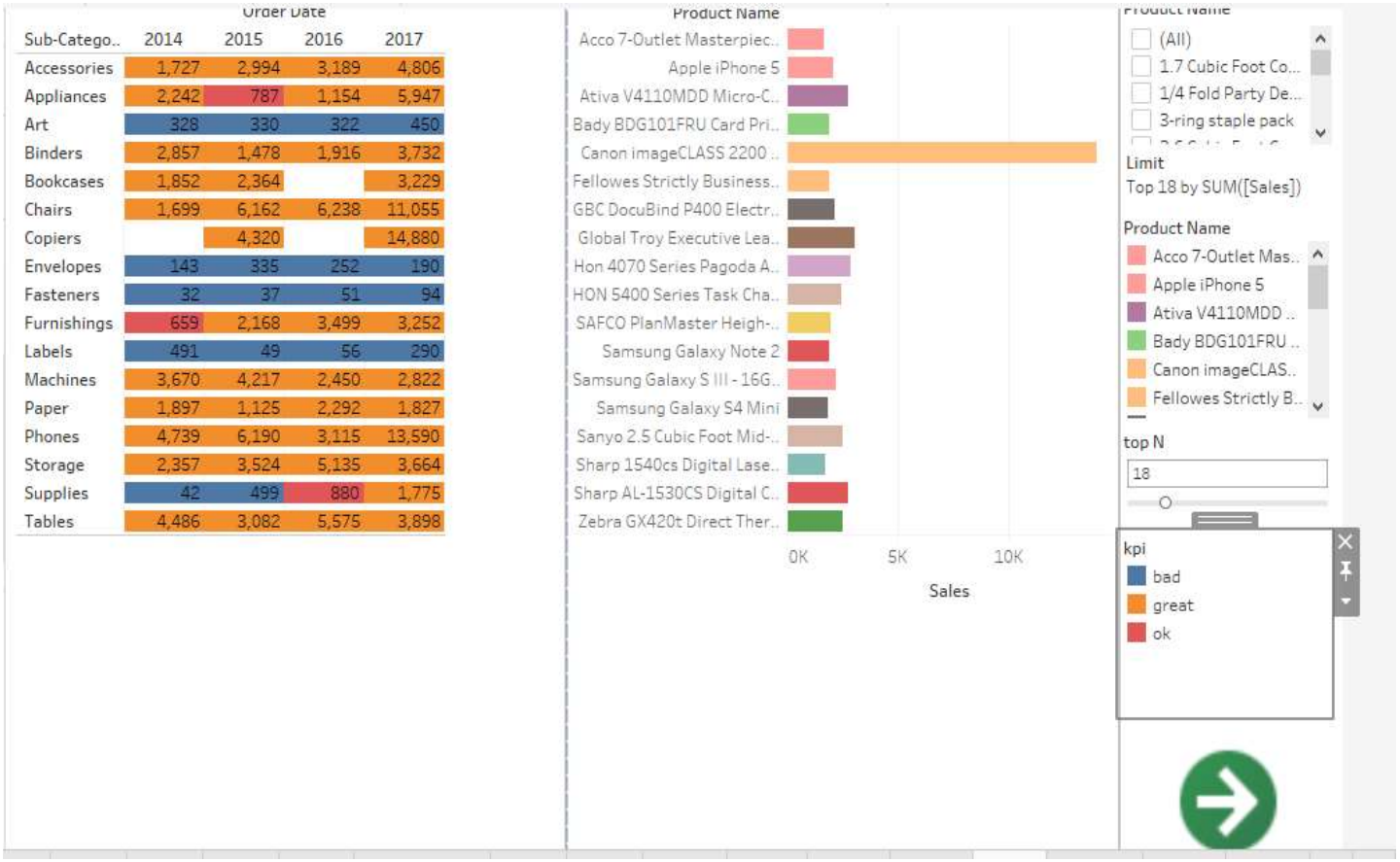
- **Sheet1:-**



- **Sheet 2:-**



➢ Dashboard 1:-

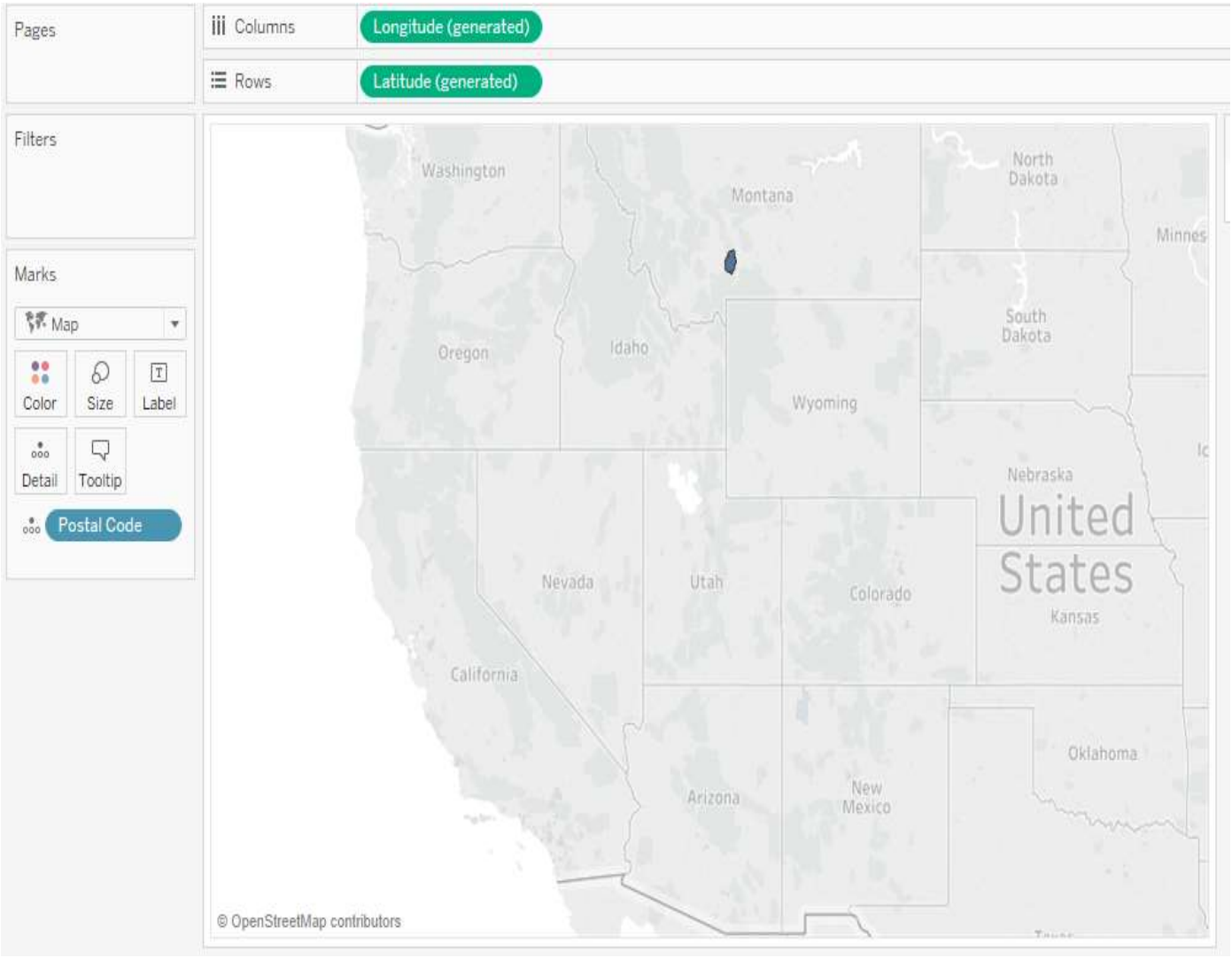


➢ Dashboard 2:-

5) Prepare Geographical regions based on Postal Code, Latitude, Longitude?

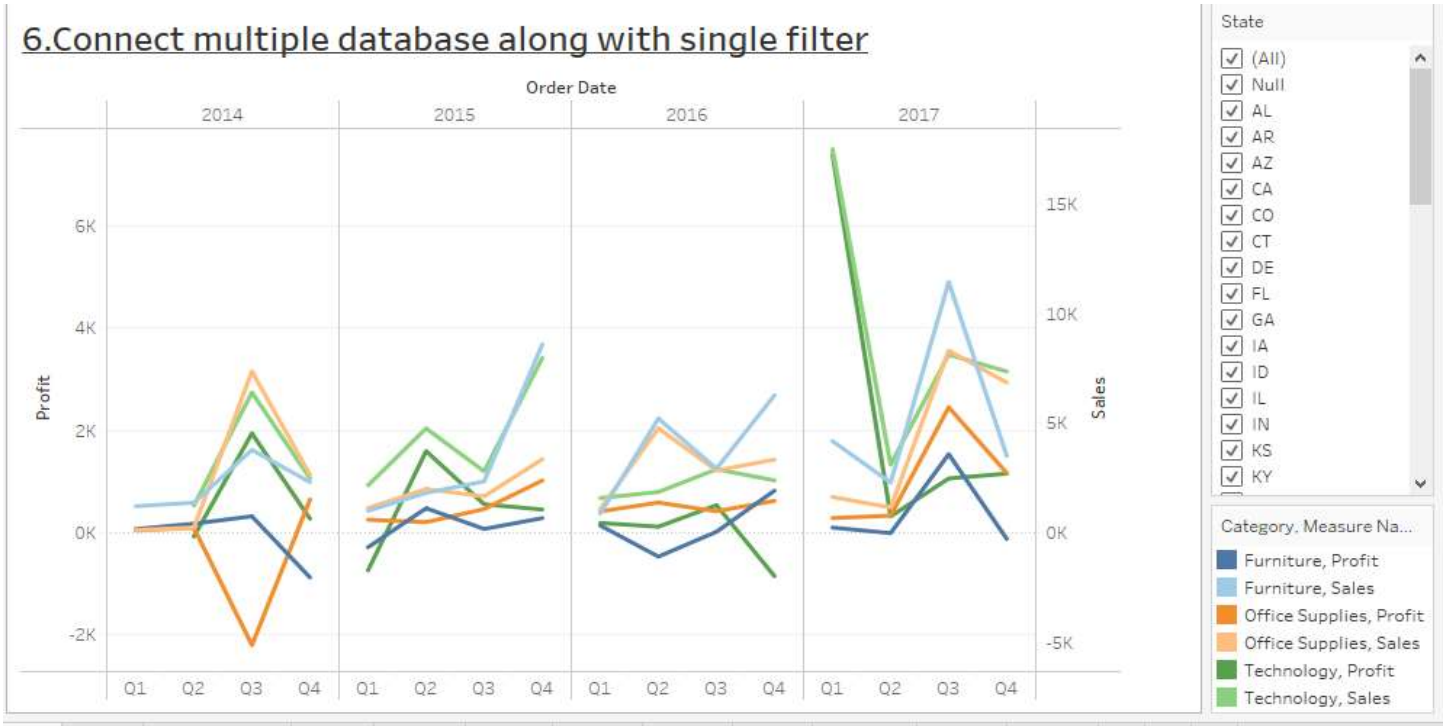
- **Explanation :~**

- A *geographic role* associates each value in a field with a latitude and longitude value. When you assign a geographic role to a field, Tableau assigns latitude and longitude values to each location in your data based on data that is already built in to the Tableau map server.
- *Map:-*Map is use to see the location and postal code of each country

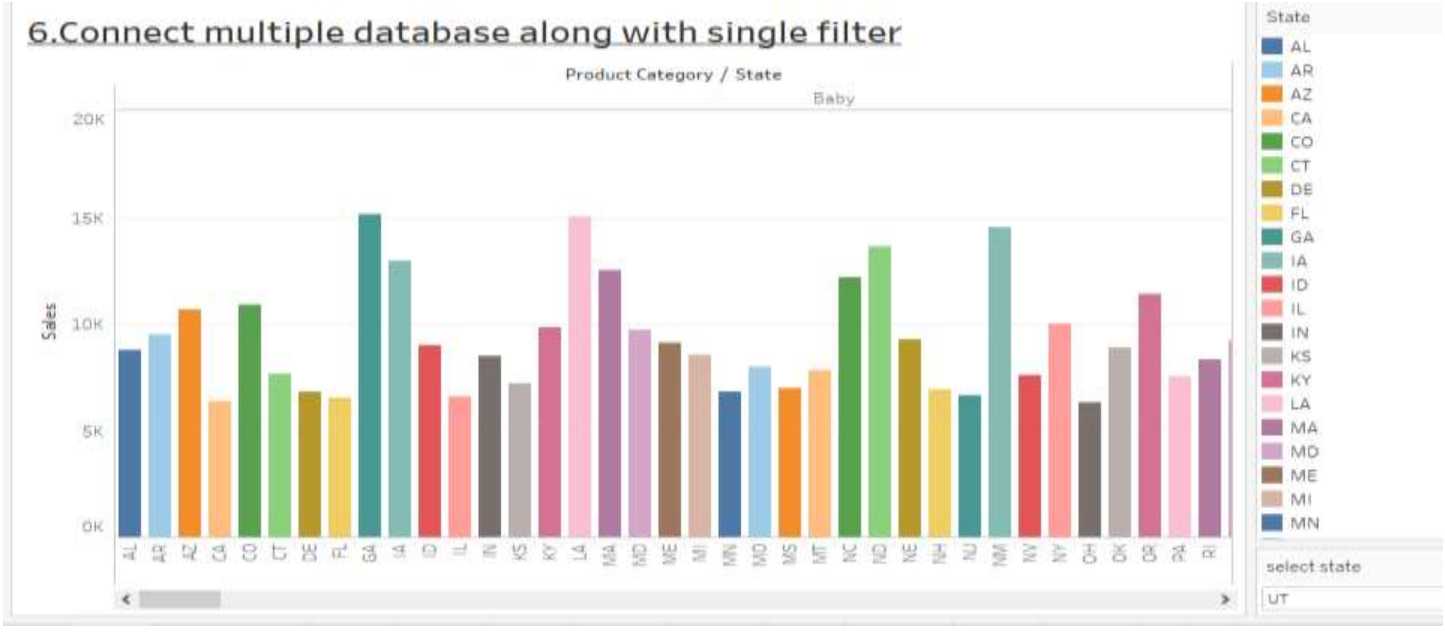


6) Connect multiple database along with single filter?

- **Explanation :~**
- *Line Chart:-*Line Chart are used to display quantitative value over a continuous interval
  - Or time span. It shows trends and relationship among order date, profit and sales
- **Sheet 1:-**



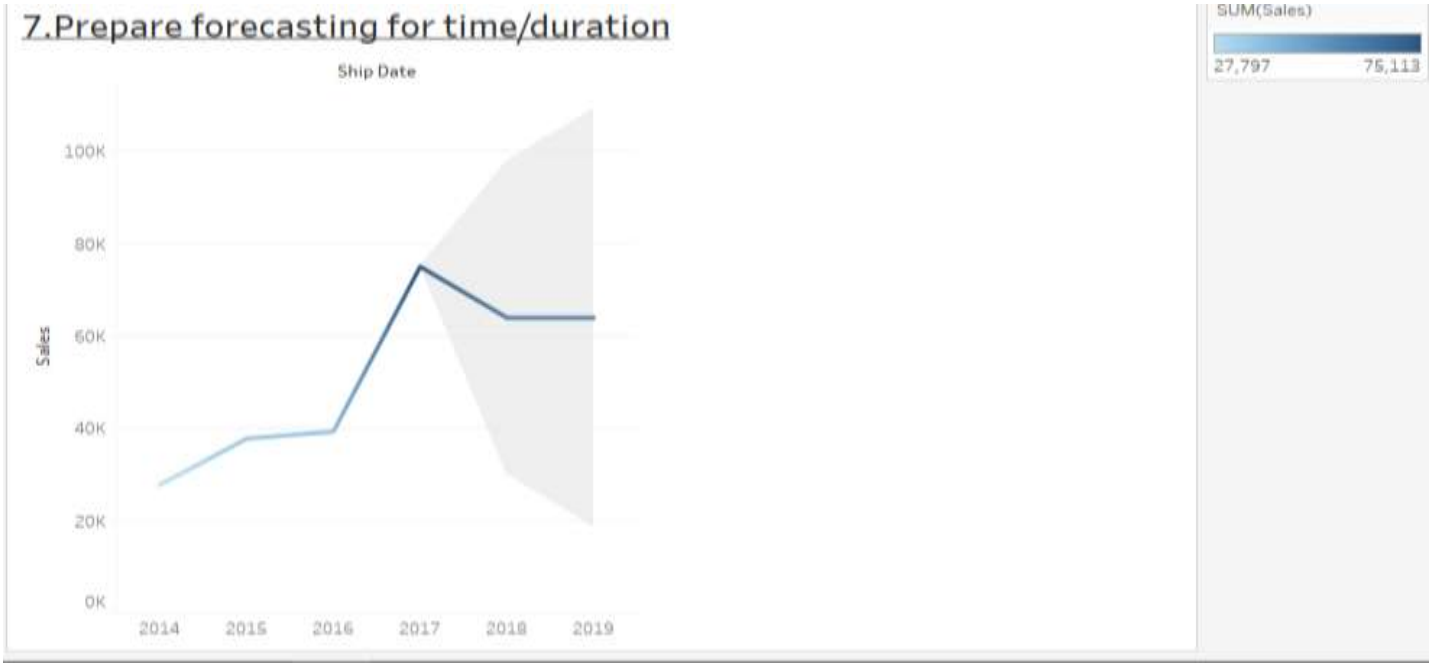
- **Sheet 2:-**
- *Bar Graph:-*Bar graph shows the comparison between different categories



- *Dashboard :-* Dashboard is use to display of many worksheet and related information in a single place. To compare and monitor a variety of data simultaneously. The different data views are displayed all at once

7) Prepare forecasting for time/duration?

- **Explanation :~**
- *Line chart:-* to visualize a sequence of values and to see trends over years, or to forecast future values



9) Apply depending filters (countries cascading filter)

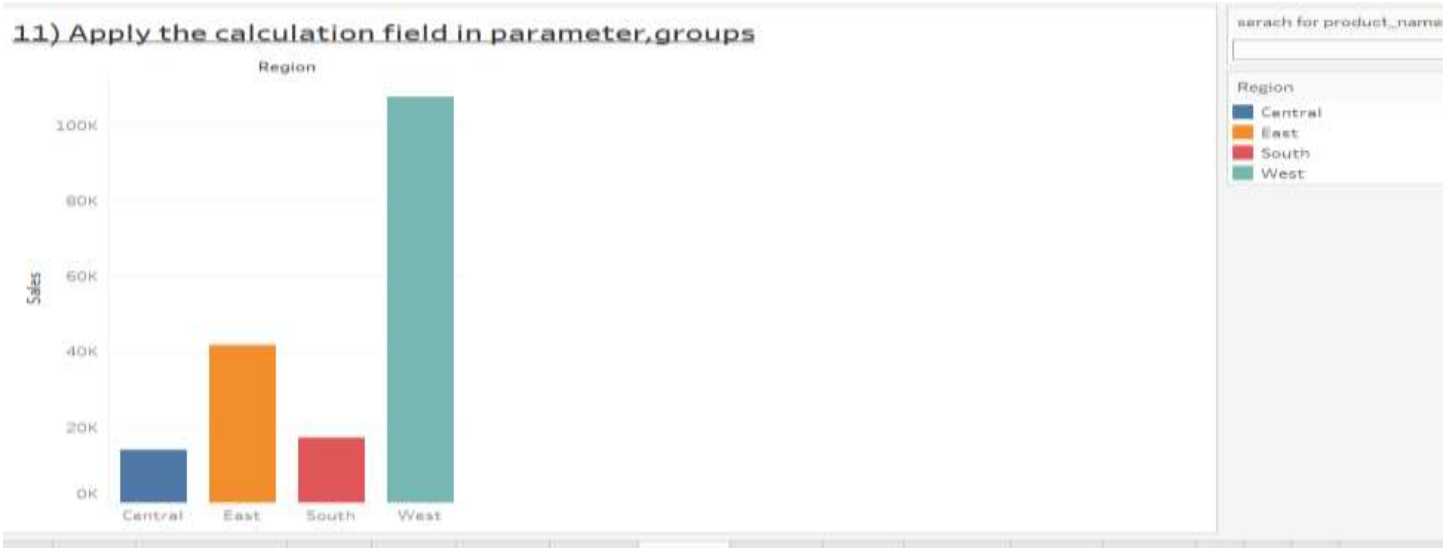
- **Explanation :~**
- *Cascading Filter:-* Cascading (or hierarchical) filters are ones where the selection on the first filter causes the second to be limited to only those values that are now relevant.

10) Apply dynamic filters (each of their own filter)?

- **Explanation :~**
- *Bar chart:-*It shows the comparison between category over total sales and to understand which category has maximum and minimum sales
- *Dynamic Filter:-* Dynamic set and filter means once the values in the data source change, the set or filter will automatically reflect the change of the values

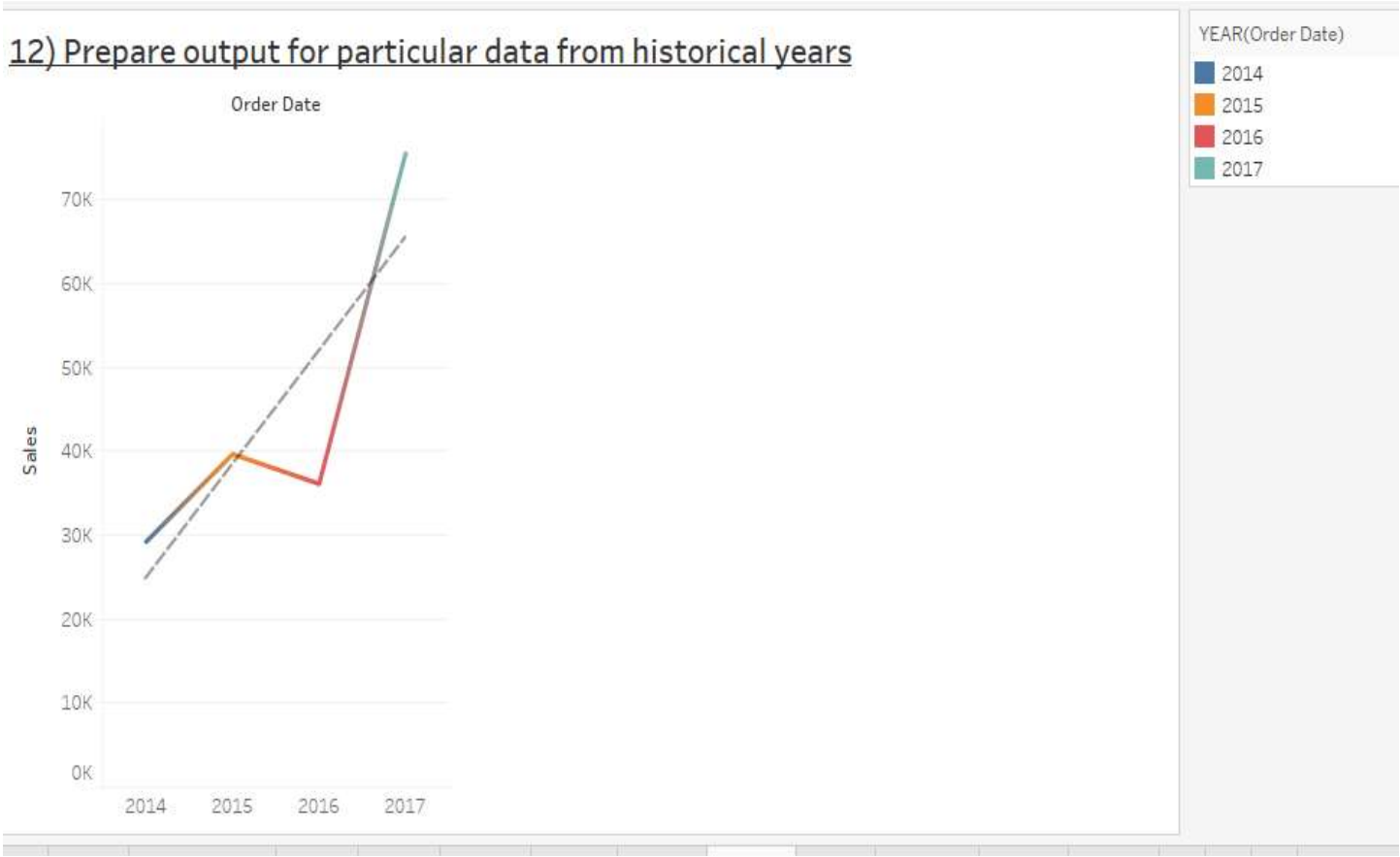
11) Apply the calculation field in parameter, groups?

- **Explanation :~**
- *Bar chart:-*It shows comparison between region and sales and shows which region has maximum and minimum sales



12) Prepare output for particular data from historical years?

- **Explanation :~**
- *Trend lines:-* To identify the correlation between two variables by observing the trend in both of them simultaneously
- *Line chart:-*To visualize the the total sales that changes over years



13) What is mean by Page Shelf in Tableau and use of same?

ANS :~

- The Pages shelf lets you break a view into a series of pages so you can better analyze how a specific field affects the rest of the data in a view. When you place a dimension on the Pages shelf you are adding a new row for each member in the dimension. When you place a measure on the Pages shelf, Tableau automatically converts the measure into a discrete measure.

- The Pages shelf creates a set of pages, with a different view on each page. Each view is based on a member of the field you placed on the Pages shelf. You can easily flip through the views and compare them on a common axis, using the controls that get added to the view when you move a field to the Pages shelf

14) What is use of Actions and how it works in tableau?

ANS :~

- Actions often have unique behaviour when the source or destination is a dashboard. This is because a dashboard can contain multiple views—so a single filter or highlight action can have broad impact. A dashboard is also unique in that it can contain web page objects. Web page objects are associated with URL actions, which you can use to embed a web page in a dashboard.
- Tableau allows you to add context and interactivity to your data using actions. There are three kinds of actions in Tableau: Filter, Highlight, and URL actions (Tableau Desktop only).
- Filter actions allow you to use the data in one view to filter data in another as you create guided analytical stories
- Highlight actions help you call attention to specific results, and
- URL actions allow you to point to external resources, such as a web page, file, or another Tableau worksheet.

15) What are the different charts present in show me option in tableau?

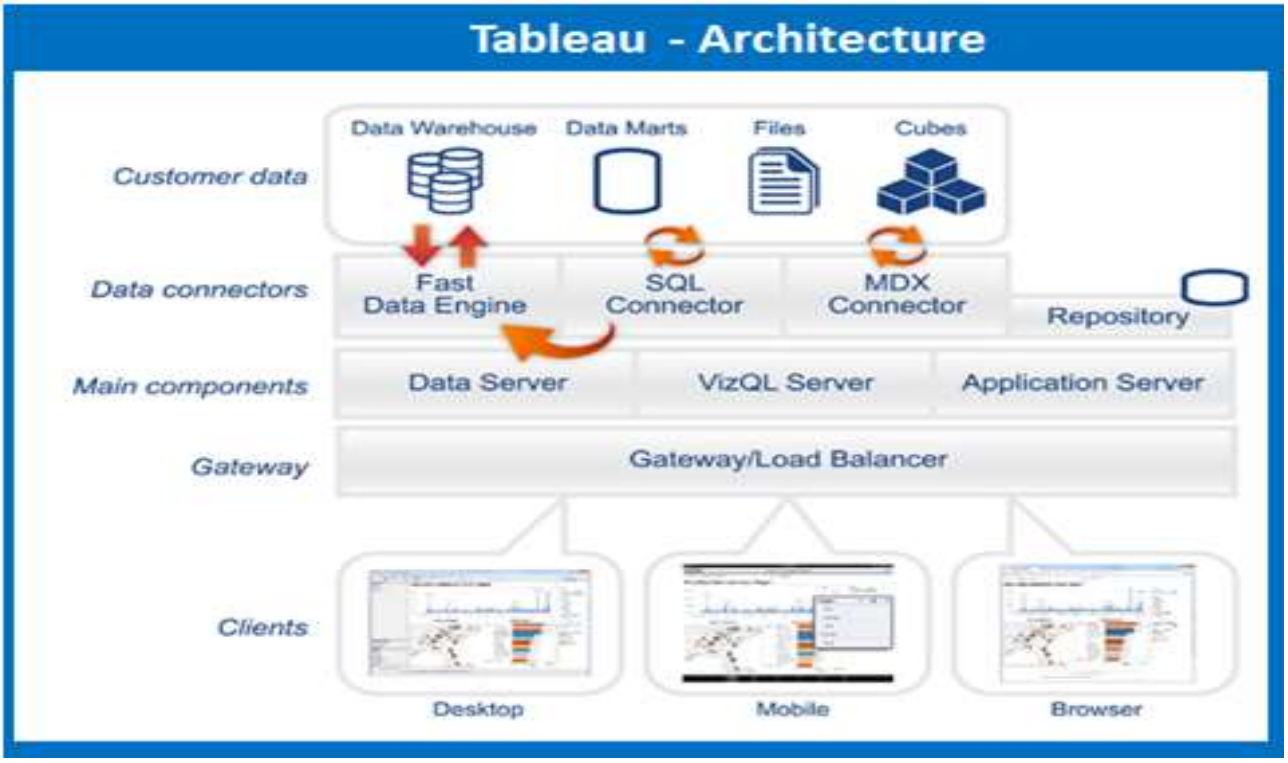
ANS :~

- Text Table(Crosstab)
- Histogram
- Tree Map
- Line Chart
- Dual-Line-Chart
- Area Charts
- Scatter Plot
- Gantt Chart
- Bullet Graph
- Packed Bubbles

16) State the Architecture of Tableau

ANS :~

- Tableau has highly scalable and it has n-tier client-server based architecture that serves the mobile clients, web clients, and desktop installed software.
- Tableau desktop is authorizing and publishing tool used to create and share the views on tableau server.



- Data Layer: The basic characteristic of tableau that supports your choice of data architecture. Tableau does not require any restrictions for the database like data to be stored in any single system.
- Data Connectors: Tableau provides two modes for interacting with data: Live connection or In-memory. Users can switch between a live and in-memory connection as they choose.
- Live connection: Tableau's data connectors leverage your existing data by sending dynamic SQL or MDX statements directly to the source database rather than importing all the data. Tableau is the front-end analytics client to many of the largest databases in the world.
- In-memory: Tableau offers a fast analytic performance due to in-memory data engine. You connect to any data, with one click; data engine will extract the data and bring it in memory in the tableau. Data engine can access the disk store as well as RAM and cache memory; it is not limited by the amount of memory on a system.

17) How to perform incremental load in tableau, explain with example?

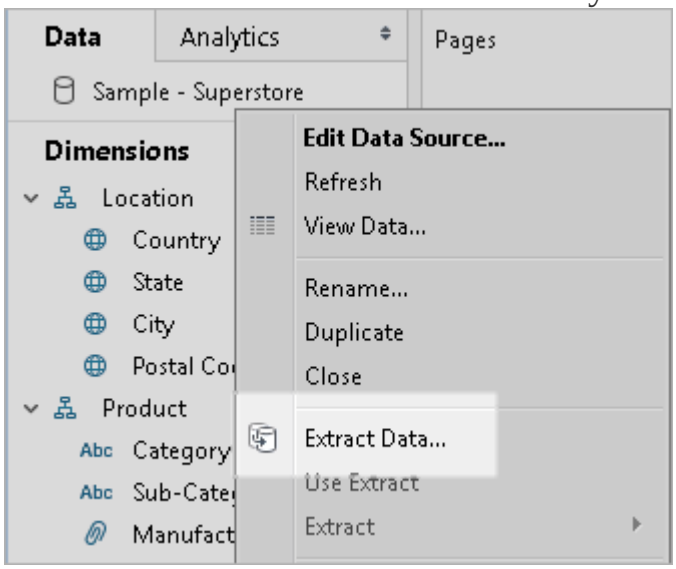
ANS :~

- When you import all or some of your data into Tableau's data engine, you create a data extract. After you create the initial extract, you can set up an incremental refresh so that importing new data doesn't require you to rebuild the entire extract. An incremental refresh

can be defined by the values in a specified column. For example, if you've created an extract that has date values, you can define the incremental refresh to only add new rows if there are additions in the date column.

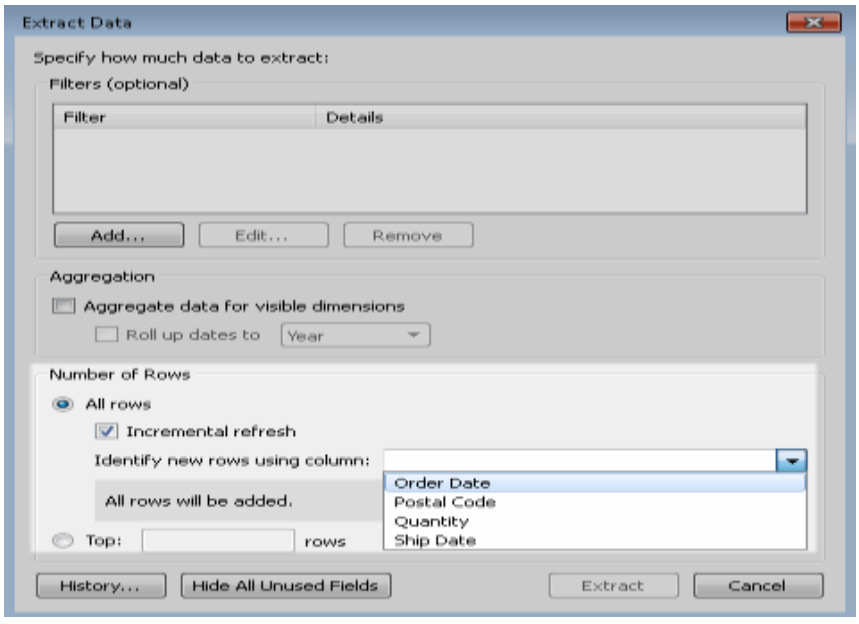
➢ Create an Extract :~

➢ Right-click the data source (or control-click on a Mac) and choose Extract Data to create the initial extract. You must do a full extract before you can set up an incremental refresh.

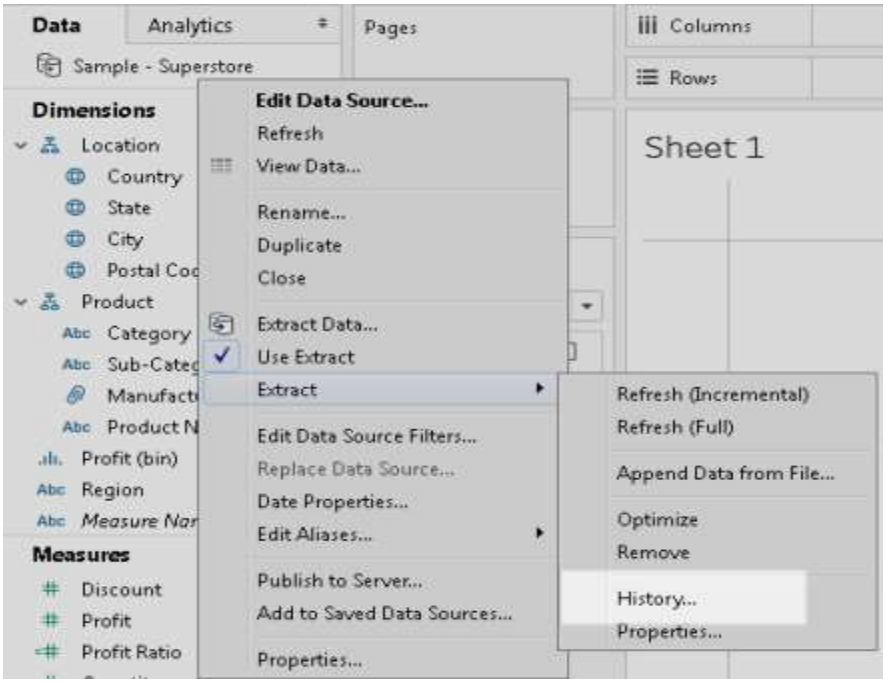


➢ Configure the Incremental Refresh :~

➢ After the data is imported, open the extract dialog box again and choose Incremental refresh. Select the column you want to use to identify new records from the drop-down. When finished, click Extract.



- **View Extract History :~**
- You can see a list of the updates that have been made since the initial extract by right-clicking the extract data source and choosing Extract > History.



- **Add Data from a File :~**
- If you regularly receive updates in a CSV or Excel file, you can add data to the extract directly from the local file by right-clicking the extract data source and choosing Extract > Append Data from File.