

Data Analytics

Assignment-3:

UNION:

You can union your data to combine two or more tables by appending values (rows) from one table to another. To union your data in Tableau data source, the tables must come from the same connection.

The screenshot displays the Tableau interface with a data source named 'Sample - Superstore'. A dialog box titled 'Orders1 is made of 2 tables.' shows a join configuration for 'Orders1' and 'supermarket_sales - Sheet1.csv'. The join type is set to 'Full Outer', and the fields 'Quantity (Orders1)' and 'Quantity' are selected. Below the dialog, a table view shows the resulting data with columns: Row ID (Orders1), Order ID (Orders1), Order Date (Orders1), Ship Date (Orders1), and Ship Mode (Orders1). The table contains 10 rows of data.

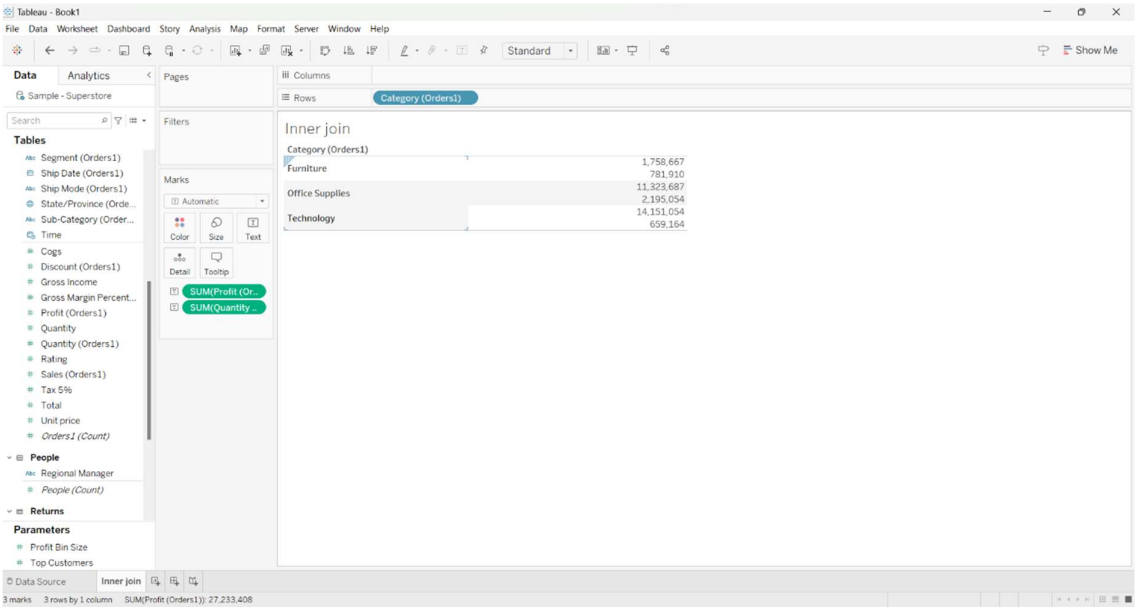
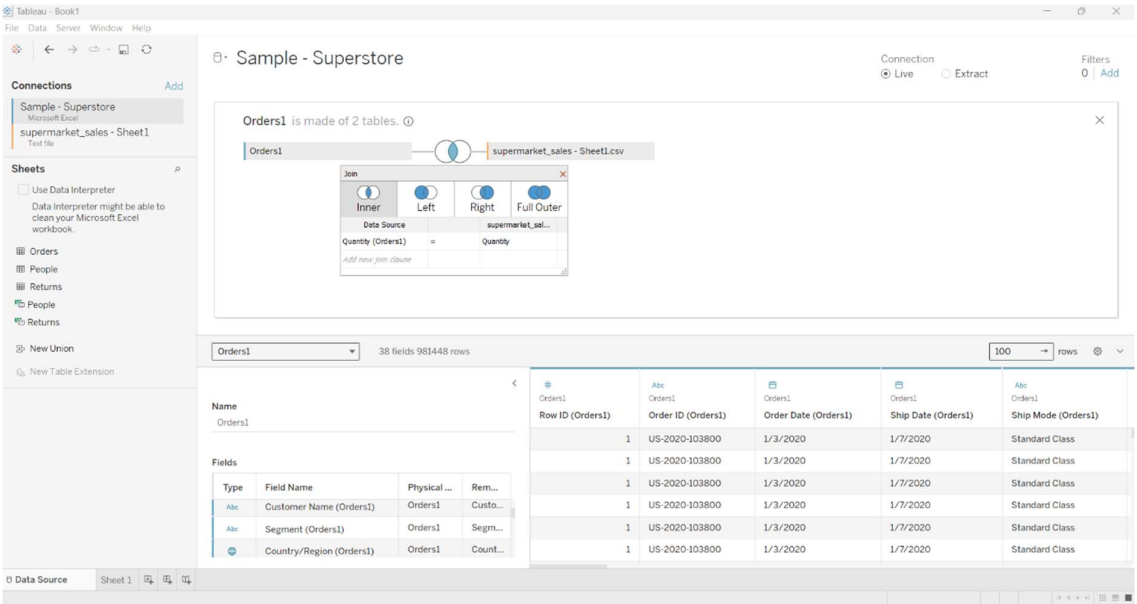
Row ID (Orders1)	Order ID (Orders1)	Order Date (Orders1)	Ship Date (Orders1)	Ship Mode (Orders1)
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class

The bottom part of the screenshot shows the 'Outer join' configuration in Tableau. The 'Columns' shelf contains 'Category (Orders1)' and 'YEAR(Ship Date (Orders1))'. The 'Rows' shelf is empty. The 'Marks' shelf is set to 'Automatic'. The resulting view shows a table with columns: Category (Orders1), Year of Ship Date (Orders1), and SUM(Sales (Orders1)). The table contains 15 rows of data.

Category (Orders1)	Year of Ship Date (Orders1)	SUM(Sales (Orders1))
Furniture	2020	14,778,756
Furniture	2021	468,941
Furniture	2022	16,214,881
Furniture	2023	386,290
Furniture	2024	19,327,904
Office Supplies	2020	637,546
Office Supplies	2021	20,192,199
Office Supplies	2022	218,476
Office Supplies	2023	286,417
Office Supplies	2024	48,461
Technology	2020	14,258,911
Technology	2021	2,189,213
Technology	2022	13,382,609
Technology	2023	2,345,280
Technology	2024	16,965,273
Technology	2020	2,929,260
Technology	2021	24,068,709
Technology	2022	3,825,927
Technology	2023	194,190
Technology	2024	43,408
Technology	2020	16,696,123
Technology	2021	2,070,238
Technology	2022	15,979,882
Technology	2023	3,375,060
Technology	2024	22,178,930
Technology	2020	3,929,716
Technology	2021	25,858,082
Technology	2022	4,777,485
Technology	2023	37,825
Technology	2024	2,680

INTERSECT:

There's no direct INTERSECT operation in Tableau, but you can achieve similar results by creating a calculated field that checks for common elements between two sets.



MINUS:

Tableau will create a new set that includes members from Set A excluding those that are also in Set B.

Tableau - Book1

File Data Server Window Help

Connections Add

Sample - Superstore
Microsoft Excel
supermarket_sales - Sheet1
Text file

Sheets

Use Data Interpreter
Data interpreter might be able to clean your Microsoft Excel workbook.

Orders
People
Returns
People
Returns

New Union
New Table Extension

Sample - Superstore

Connection Live Extract Filters 0 Add

Orders1 is made of 2 tables.

Orders1 supermarket_sales - Sheet1.csv

Join

Inner Left Right Full Outer

Data Source supermarket_sales...

Category (Orders1) = Customer type

Add new join clause

Orders1 38 fields 10194 rows 100 rows

Name Orders1

Fields

Type	Field Name	Physical ...	Rem...
ABC	Customer Name (Orders1)	Orders1	Custo...
ABC	Segment (Orders1)	Orders1	Segm...
ABC	Country/Region (Orders1)	Orders1	Count...

#	Order ID (Orders1)	Order Date (Orders1)	Ship Date (Orders1)	Ship Mode (Orders1)
1	US-2020-103800	1/3/2020	1/7/2020	Standard Class
2	US-2020-112326	1/4/2020	1/8/2020	Standard Class
3	US-2020-112326	1/4/2020	1/8/2020	Standard Class
4	US-2020-112326	1/4/2020	1/8/2020	Standard Class
5	US-2020-141817	1/5/2020	1/12/2020	Standard Class
6	US-2020-167199	1/6/2020	1/10/2020	Standard Class

Data Source Inner join Outer join

Tableau - Book1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard Show Me

Data Analytics Pages Columns Rows

Sample - Superstore

Filters

minus

Category (Orders1) Sub-Category (Orders1)

Furniture

Office Supplies

Technology

Bookcases 115,361

Chairs 335,768

Furnishings 95,598

Tables 208,020

Appliances 108,213

Art 27,659

Binders 207,355

Envelopes 16,528

Fasteners 8,532

Labels 12,695

Paper 79,541

Storage 224,645

Supplies 46,725

Accessories 167,380

Copiers 150,745

Machines 189,925

Phones 331,843

MARKS

SUM(Sales (Orders1))

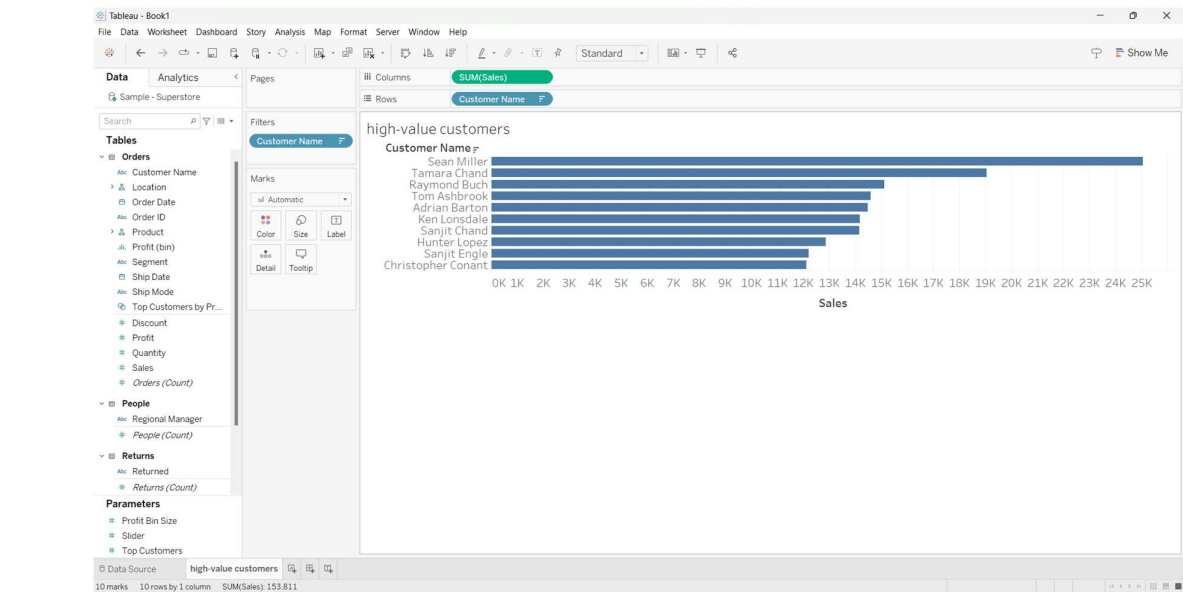
SUM(Profit (Orders1))

17 marks 17 rows by 1 column SUM(Sales (Orders1)): 2,326,534

Two sets based on specific criteria from the dataset.

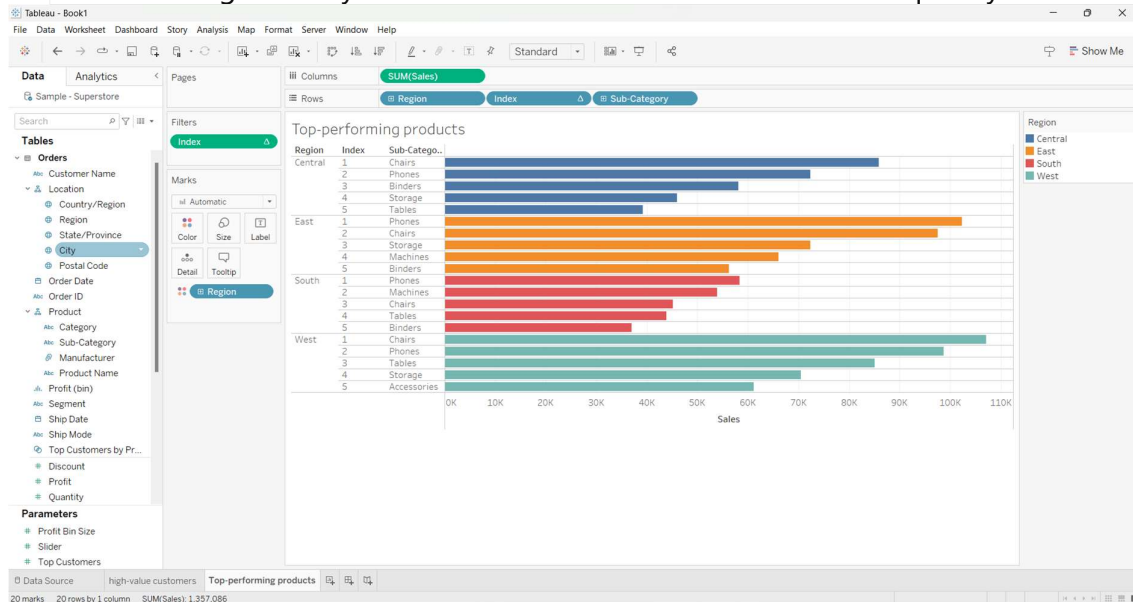
1. High-value customers:

Customers who have made purchases exceeding a certain monetary threshold within a specified period (e.g., last year). Customers who have shown consistent engagement with the business.



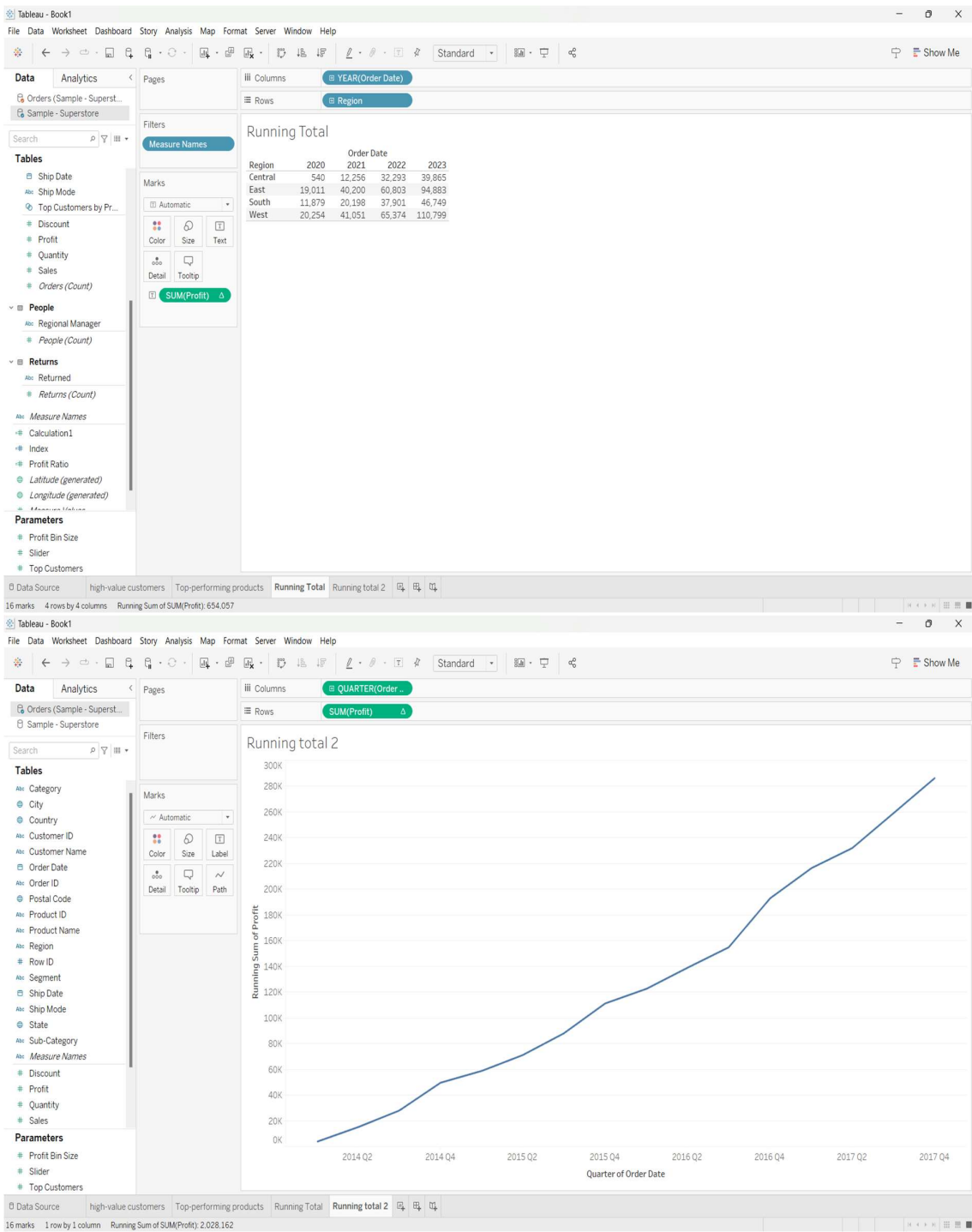
2. Top-performing products:

Customers who have made purchases frequently within a specified period. Customers who may not necessarily spend a lot per transaction but contribute significantly to the business's revenue due to their frequency.

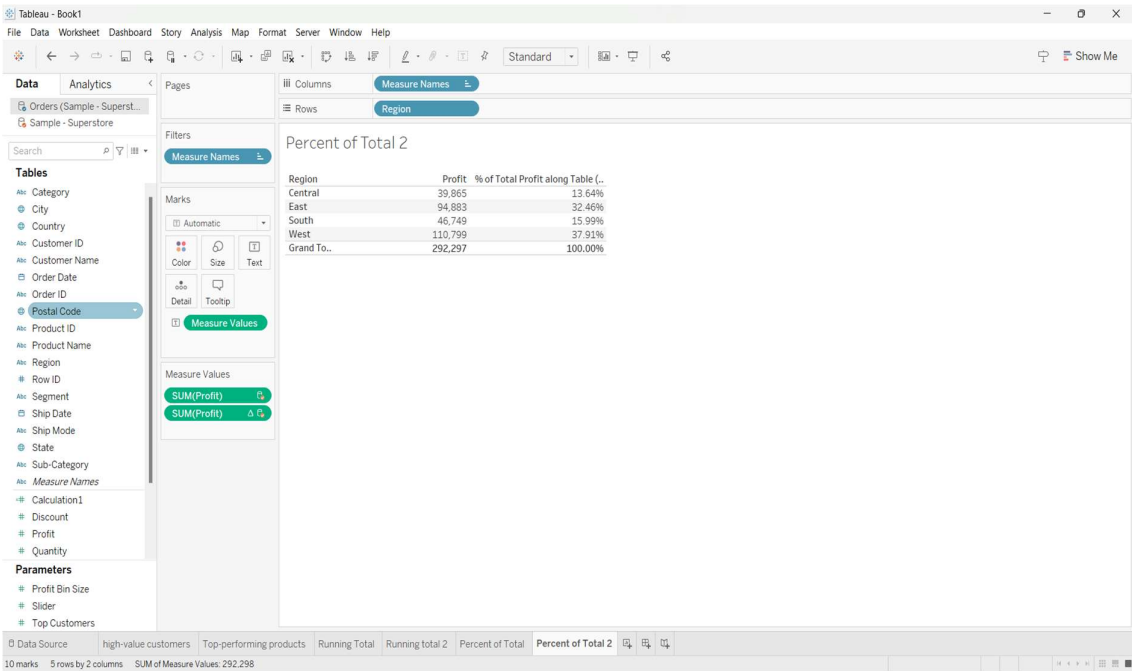
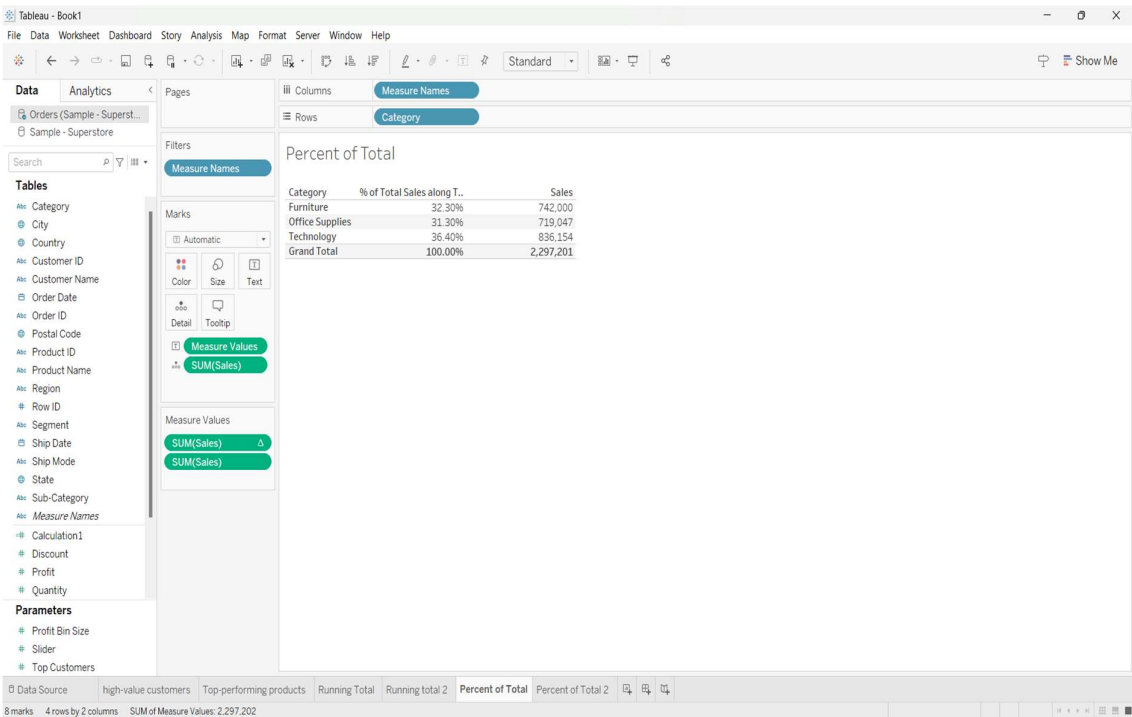


Quick Table Calculations

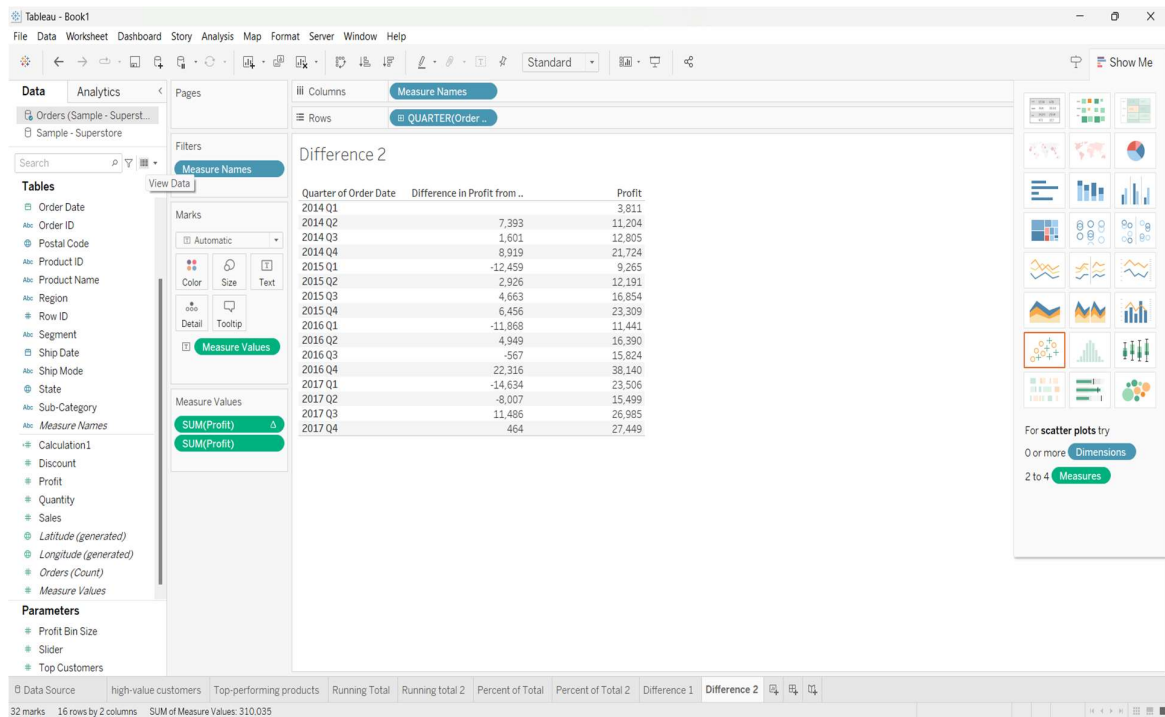
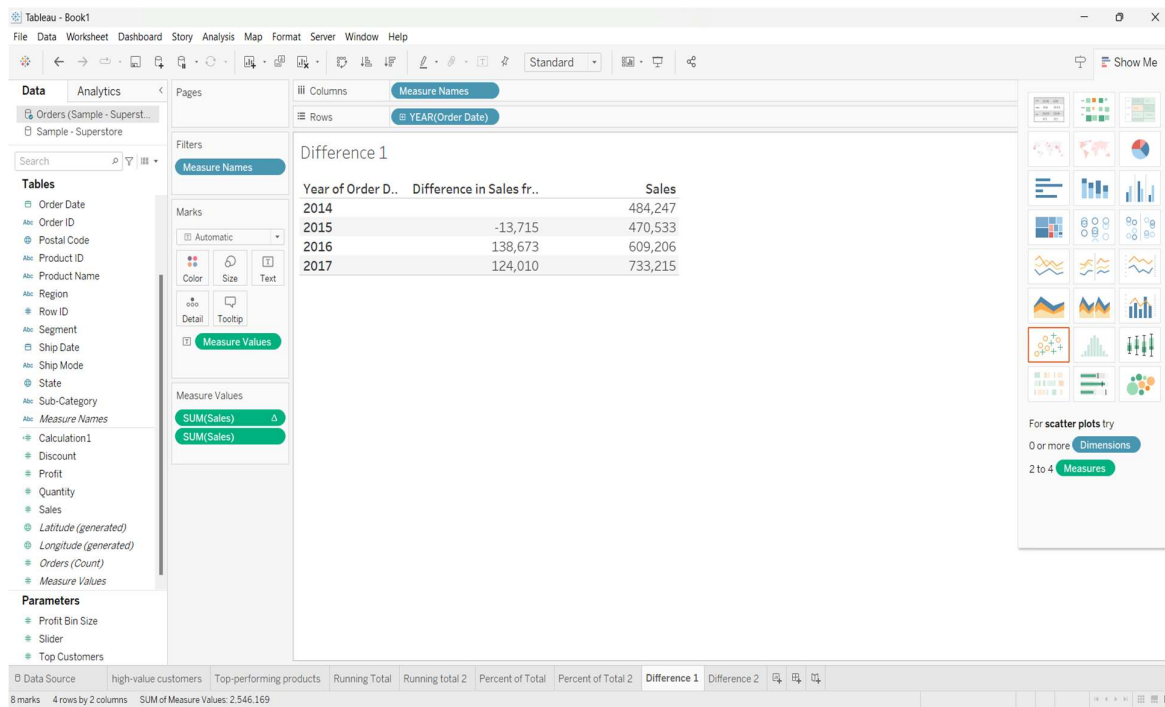
1. Running Total: Computes the cumulative sum of measure over dimension.



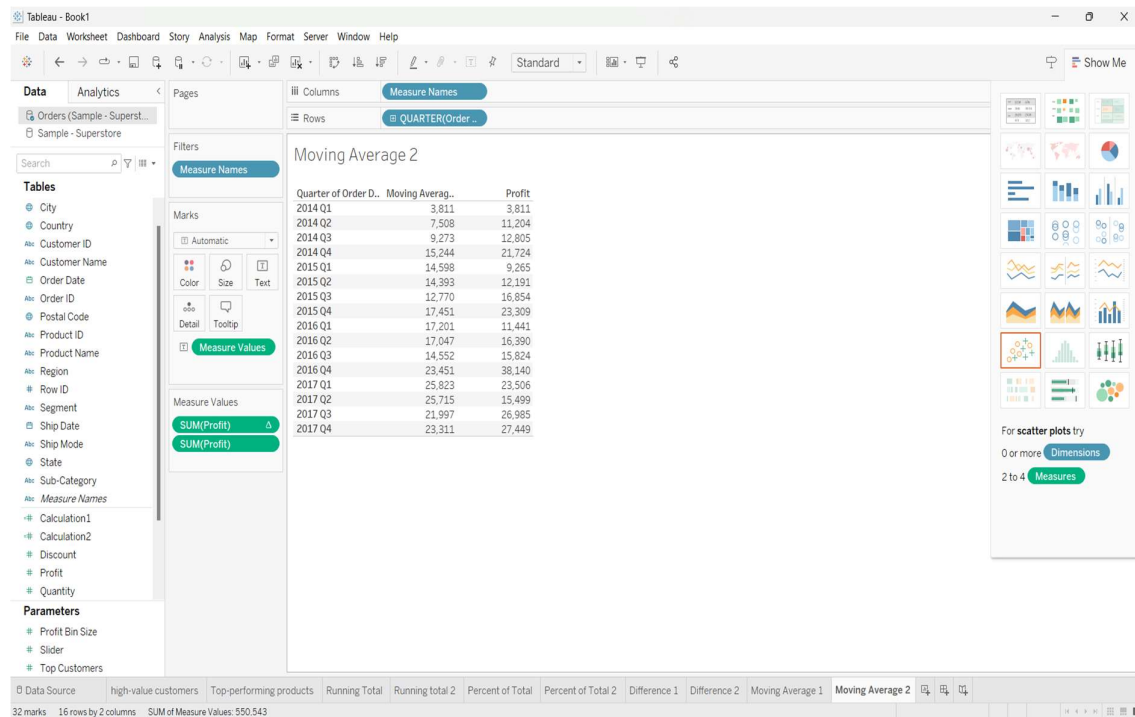
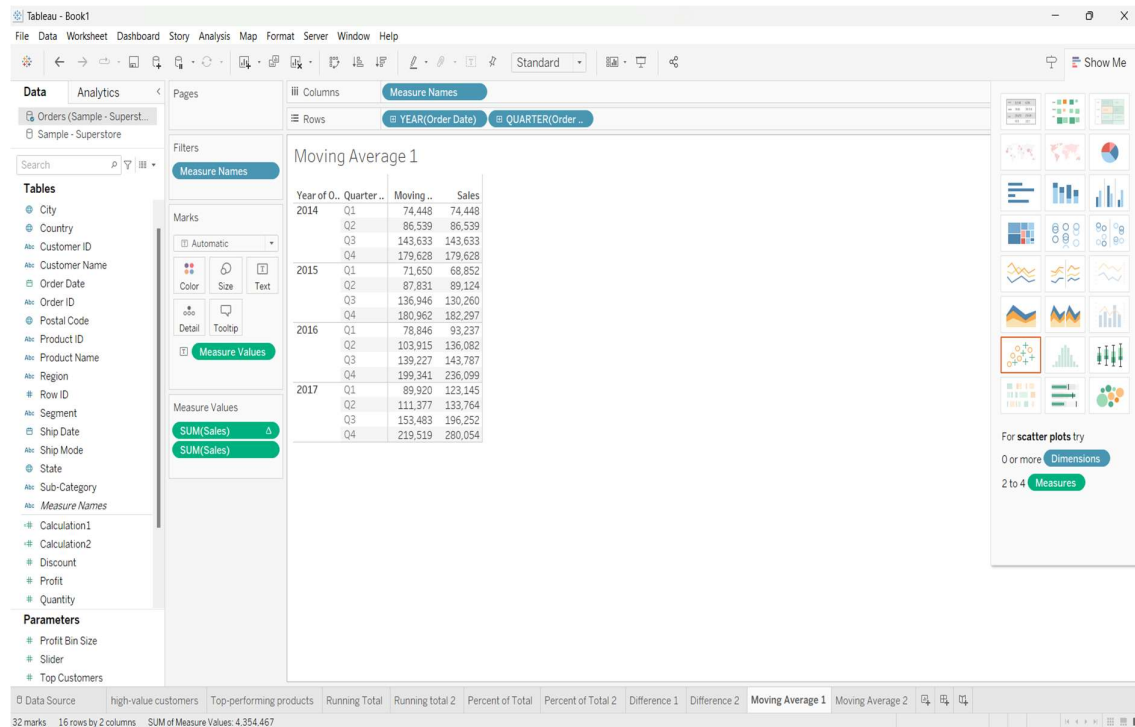
2.Percent of Total: Calculates percentage contribution of each datapoint to the total.



3. Difference: Computes the difference between consecutive data points.

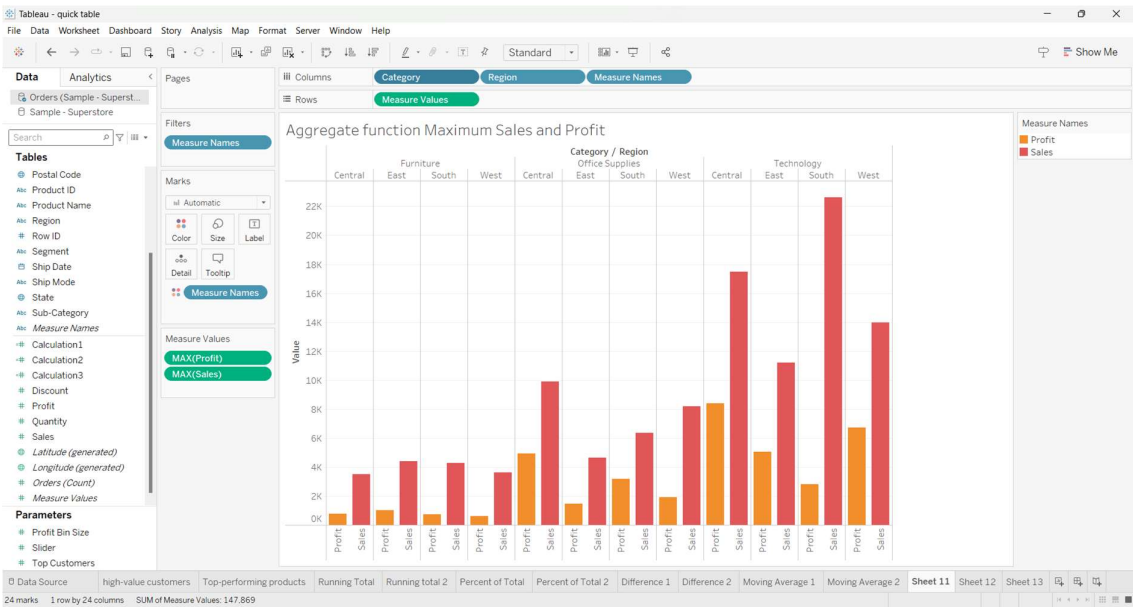


4. Moving Average: Computes the average of measure over the moving window of Datapoint.



Calculation field using any aggregate function.

1. Aggregate function Maximum Sales and Profit.



2. Aggregate function Average Sales.

