Running Total

Power BI seems to be a little difficult for MS Excel users because in excel we work cells, so by using cell references we can work easily but when it comes to Power BI we no longer work with cells but with entire columns and rows. This is where beginners in Power BI face huge challenges. One of the requirements of users in Power BI how do we get the running total or cumulative total of values. In this article, we will show you how to write DAX formulas to get running total in Power BI.

Running total is the summation of values of each period before arriving at the overall period totals. For example, look at the below data in excel worksheet.

	A	B
1	**Date**	**Sales**
2	26-Nov-2019	341
3	26-Nov-2019	769
4	26-Nov-2019	777
5	27-Nov-2019	668
6	03-Dec-2019	280
7	10-Dec-2019	461
8	16-Dec-2019	576
9	18-Dec-2019	202
10	18-Dec-2019	238
11	21-Dec-2019	277
12	22-Dec-2019	579
13	27-Dec-2019	625
14	29-Dec-2019	627
15	29-Dec-2019	233
16	30-Dec-2019	232
17	01-Jan-2020	245
18	09-Jan-2020	381
19	09-Jan-2020	600
20	10-Jan-2020	282

This is the daily sales numbers, so the running total is arriving each period number with previous period numbers. For the above data, we can apply the running total like below.

First running total is the total of first two days i.e. 341 + 769 = 1110, next it will add three days numbers 341 + 769 + 777 = 1887. This, in the end, we get to know the pattern of each day.

Download this Excel workbook, and create a Power BI project to load the "Date" and "Sales" columns in to the Data Model.

Step #1: Similar stuff can be arrived in Power BI as well but not as easy as in excel, use the same data as shown above in Power BI as well.

Step #2: For this table, we can arrive running totals in three ways, first, we will arrive through "New Measure", right-click on the table and choose "New Measure".
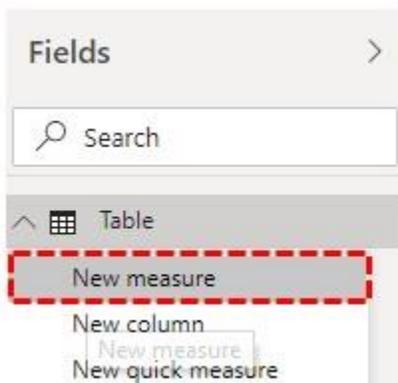
Step #3: Name the measure as **"RT Measure"**. (RT= Running Total).
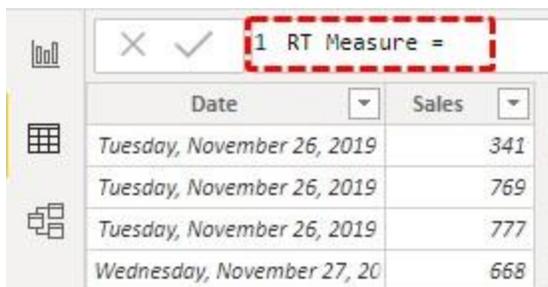
Step #4: Open the CALCULATE function first.

Step #5: The kind of **Expression** that we need to do with the CALCULATE function is "Summation of Sales Value", so open SUM function and choose the "Sales" column.

Step #6: After applying the kind of calculation to be done next we need to apply the filter to decide the criteria to be matched for calculation. Open FILTER function now.

Step #7: Before we apply FILTER first we need to release any kind of filter applied to the "Date" column, so open ALL function to remove the filter from the "Date" column.
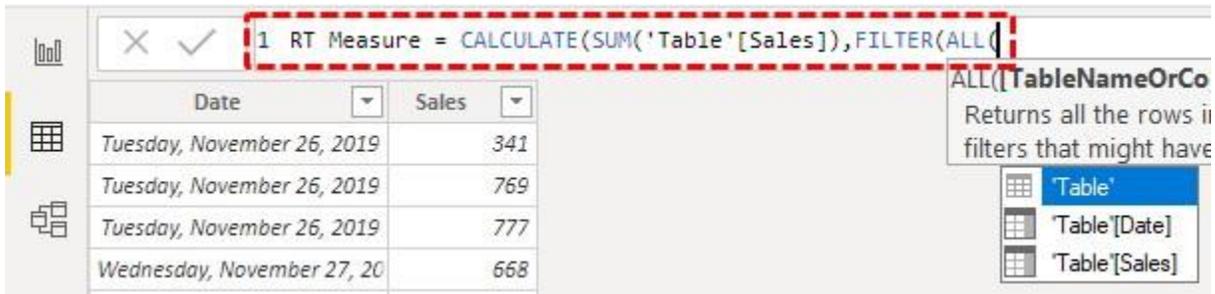
Step #8: In this function choose the **Table or Column Name** for which we need to remove the filter for, so choose the "Date" column.
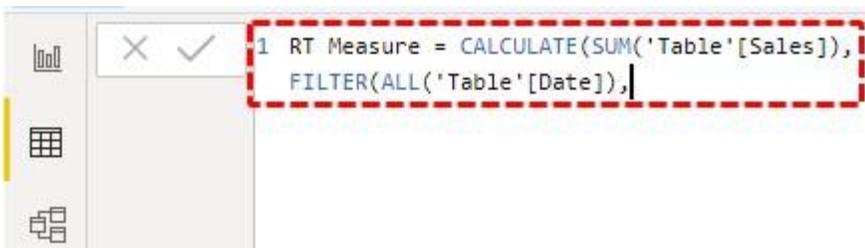
Step #9: Once the filter is removed then we need to apply fresh filter criteria in **Filter Expression,** so for this again choose the date column.
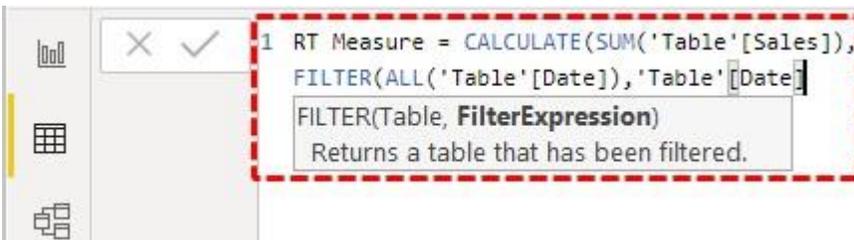
Step #10: Once the "Date" column has been selected we need to apply the kind of filter to be applied, for this, we need to decide the last date in the "Date" column, so enter the logical operator as less than (<) and open MAX function.
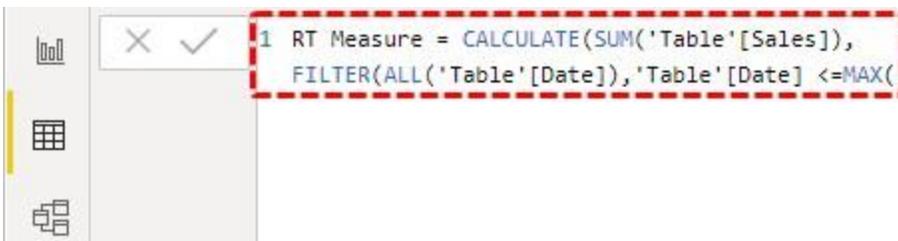
Step #11: MAX function will find the last date in the column of "date" so supply date column.
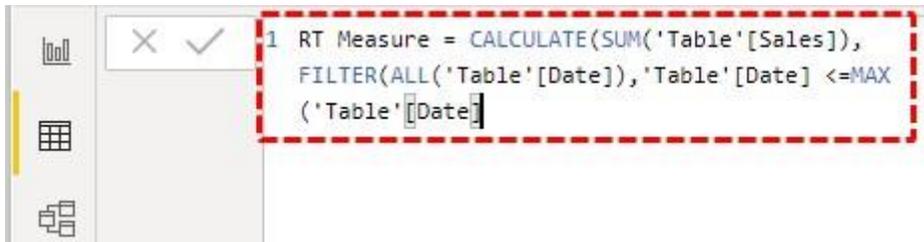
Step #12: Ok, we are done close three brackets and hit enter key to get the result.
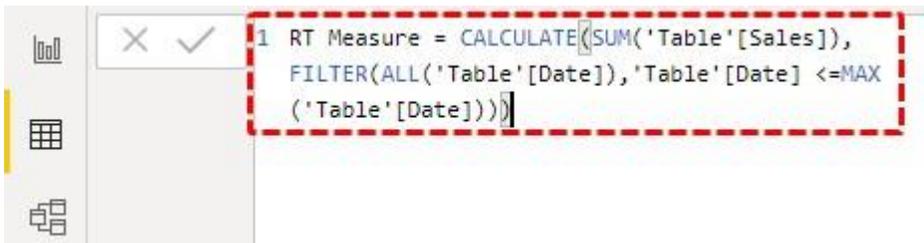
Step #13: Now insert the table visually and add "Date" and "Sales" columns first.
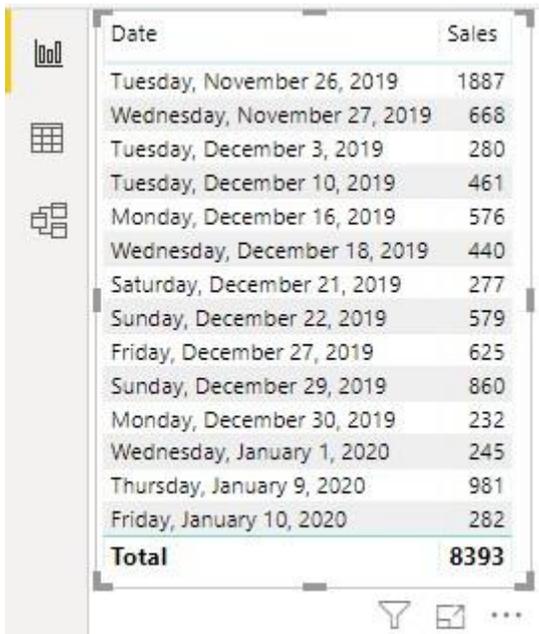
Date	Sales
Tuesday, November 26, 2019	1887
Wednesday, November 27, 2019	668
Tuesday, December 3, 2019	280
Tuesday, December 10, 2019	461
Monday, December 16, 2019	576
Wednesday, December 18, 2019	440
Saturday, December 21, 2019	277
Sunday, December 22, 2019	579
Friday, December 27, 2019	625
Sunday, December 29, 2019	860
Monday, December 30, 2019	232
Wednesday, January 1, 2020	245
Thursday, January 9, 2020	981
Friday, January 10, 2020	282
Total	**8393**

Step #14: This is the overall summary, now add a newly created measure to the table to get the "Running Total" column.

Date	Sales	RT Measure
Tuesday, November 26, 2019	1887	1887
Wednesday, November 27, 2019	668	2555
Tuesday, December 3, 2019	280	2835
Tuesday, December 10, 2019	461	3296
Monday, December 16, 2019	576	3872
Wednesday, December 18, 2019	440	4312
Saturday, December 21, 2019	277	4589
Sunday, December 22, 2019	579	5168
Friday, December 27, 2019	625	5793
Sunday, December 29, 2019	860	6653
Monday, December 30, 2019	232	6885
Wednesday, January 1, 2020	245	7130
Thursday, January 9, 2020	981	8111
Friday, January 10, 2020	282	8393
Total	**8393**	**8393**

1887 + 668 = 2555

There you go we have running total measure.

We can also create a running total by using another measurement technique as well, but this measure will give different sorts of results only.

Step #15: Name this measure as "RT Measure 1".

Step #16: Open the CALCULATE function.

Step #17: As we did in the previous method, we need to do a summation of the sales column, so open the SUM function and choose the "Sales" column to sum.

Step #18: This time for **filter** criteria we will use the **DATESYTD** function.

Step #19: Choose the "Date" column for this function.

Step #20: Close two brackets and hit enter key to complete the formula.

Step #21: Ok, now add this new measure to our existing table visual and see the result.

Date	Sales	RT Measure	RT Measure 1
Tuesday, November 26, 2019	1887	1887	1887
Wednesday, November 27, 2019	668	2555	2555
Tuesday, December 3, 2019	280	2835	2835
Tuesday, December 10, 2019	461	3296	3296
Monday, December 16, 2019	576	3872	3872
Wednesday, December 18, 2019	440	4312	4312
Saturday, December 21, 2019	277	4589	4589
Sunday, December 22, 2019	579	5168	5168
Friday, December 27, 2019	625	5793	5793
Sunday, December 29, 2019	860	6653	6653
Monday, December 30, 2019	232	6885	6885
Wednesday, January 1, 2020	245	7130	245
Thursday, January 9, 2020	981	8111	1226
Friday, January 10, 2020	282	8393	1508
Total	**8393**	**8393**	**1508**

We have got two different sets of running totals. The first running total ends at the end of the year on 31st December and the second running total started freshly from the new year date from 01st Jan.

Things to Remember Here

- Always create running total of new measures only to get perfect results.
- If you **DATESYTD** it will give running total from 01st Jan to 31st Dec only, any dates after that will be started as a new running total from next year.