GroupBy

Group by is a type of query which is also used in power bi, there is an editor in power bi which is known as query editor window which has various queries for accessing data and such query is Group by which is used to group rows based on a given certain value.

Group By Function in Power BI

Power BI GROUPBY Dax Function will group together data by collecting the information from two different tables. This works almost similar to the summarized function in Power BI but groupby doesn't allow us to do any kind of implicit calculations by using calculate function instead it allows us to use the new DAX function "CURRENTGROUP()" inside the aggregation functions in the additional column it adds.

Below is the SYNTAX of the Power BI GROUP BY Dax function.

GROUPBY (

GROUPBY(**Table**, [GroupBy_ColumnName1], ..., [Name1], [Expression1], ...)
Creates a summary the input table grouped by the specified columns.

- **<Table>:** First we need to specify the table name from where we are grouping the data.
- **[<GroupBy_columnName1>]:** What is the relationship first column from any of the two tables?
- **[<GroupBy_columnName2>]:** What is the relationship second column from any of the two tables?
- **<Name>:** This will be what is the name for the new column we are going to create.
- **<Expression>:** By using which DAX function we need to aggregate the values.

I know it is not that easy to understand by reading the syntax explanations but in the example sections, you will learn clearly.

Power BI Group By

```
1 Group by Category & Buyer = GROUPBY(Sales,Sales[Category],Buyers[Buyer]
  ,"Sales value",SUMX(CURRENTGROUP(),SUM(Sales[Sale Value])),"Cost
  Value",SUMX(CURRENTGROUP(),SUM(Sales[Cost Value])))
```

Sales_Category	Buyers_Buyer	Sales value	Cost Value
	Sara Ferrell	304554085948.823	175245517263
	Maggie Mayer	415086116006.353	238847496928.5
Shoes	Howard Wright	446452534551.631	256896259024.5
Hosiery			
Groceries			
Juniors			
Womens	Amy Buchanan	695135187466.67	399992418804
Kids	Elizabeth Gentry	580970649379.079	334300233234
Mens	Bruce Curran	612798338785.317	352614418302
Home	Richard Carr	414278891999.673	238383006727.5

Syntax

GROUPBY(
GROUPBY(**Table**, [GroupBy_ColumnName1], ..., [Name1], [Expression1], ...)
Creates a summary the input table grouped by the specified columns.

How to Use GroupBy Dax Function in Power BI?

To use the Power BI groupby function we need at least two tables and below are the two tables I am going to use it for this DAX function demonstration.

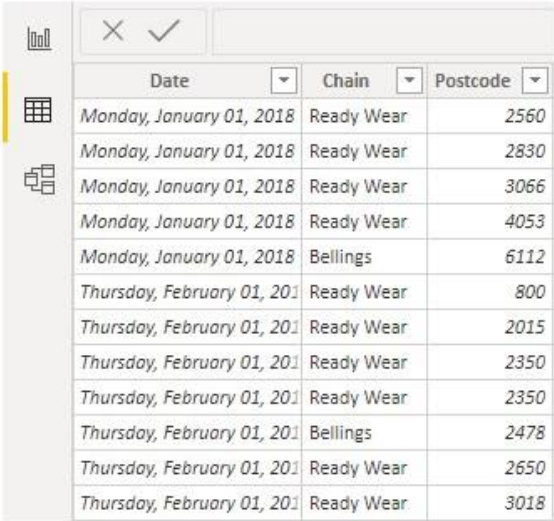|	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	Chain	Postcode	Category	Total Units	Sale Price	Sale Value	Cost Price	Cost Value		Category	Buyer
2	1/1/2018	Ready Wear	2650	Home	175	2.78	486.5	6.35	1111.3		Womens	Amy Buchanan
3	1/1/2018	Ready Wear	3550	Groceries	908	0.61	553.88	0.93	844.44		Mens	Bruce Curran
4	1/1/2018	Ready Wear	4053	Home	1	500	500	750	750		Kids	Elizabeth Gentry
5	1/1/2018	Ready Wear	3076	Groceries	714	1.14	813.96	1.46	1042.4		Juniors	Chester George
6	1/1/2018	Ready Wear	2031	Groceries	65	0.48	31.2	3.9	253.5		Shoes	Howard Wright
7	1/1/2018	Ready Wear	3066	Home	87	3.66	318.42	6.19	538.53		Intimate	Sara Ferrell
8	1/1/2018	Ready Wear	2067	Home	92	5.21	479.32	7.34	675.28		Hosiery	Ella Hickman
9	1/1/2018	Ready Wear	2800	Home	21	4.49	94.29	13.55	284.55		Accessories	Maggie Mayer
10	1/1/2018	Ready Wear	2560	Home	127	4.19	532.13	5.59	709.93		Home	Richard Carr
11	1/1/2018	Ready Wear	3076	Home	77	4.73	364.21	6.99	538.23		Groceries	Chris Monroe
12	1/1/2018	Ready Wear	800	Womens	2	10	20	18.53	37.06			
13	1/1/2018	Ready Wear	2031	Groceries	898	1.2	1077.6	1.39	1248.2			
14	1/1/2018	Ready Wear	4068	Home	170	4.15	705.5	5.13	872.1			
15	1/1/2018	Ready Wear	800	Womens	50	1.9	95	1.92	96			
16	1/1/2018	Ready Wear	4068	Womens	166	2.51	416.66	3.43	569.38			
17	1/1/2018	Ready Wear	2350	Home	213	2.37	504.81	3.07	653.91			
18	1/1/2018	Ready Wear	3353	Home	116	4.62	535.92	5.8	672.8			

Table 2

Table 1

Between the first table (Sales Table) and the second table (Buyers Table), common column is "Category". In the "Buyers" table we have what is the category for each buyer, so using these two tables we will group the data.

While grouping the data we need to identify what are the columns we need in the new group table, in this case, I need "Category, Buyer, Sale Value, and Cost Value".
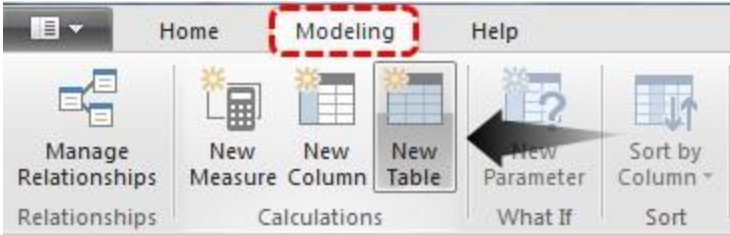
Copy and paste the data directly to Power BI or you can copy the data to excel file and then import to Power BI as Excel file reference. So, you can download the excel workbook from the course site use for this example.

I have directly uploaded the data to Power BI.

- Since we are grouping the data we need to store it as a new table, so in Power BI go to "Modelling" and click on "New Table".

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  This will create a new table and in the formula bar, we can see it has highlighted the same.

- First, give a name to this new table as "Group by Category & Buyer".

- After the table name put equal sing and open Power BI GROUPBY DAX function.

- The first argument of power bi GROUPBY DAX function is **Table** i.e. out of available two tables from which table we need to group the data, in this example we need to group the data from "Sales" table, so supply the table name as "Sales".
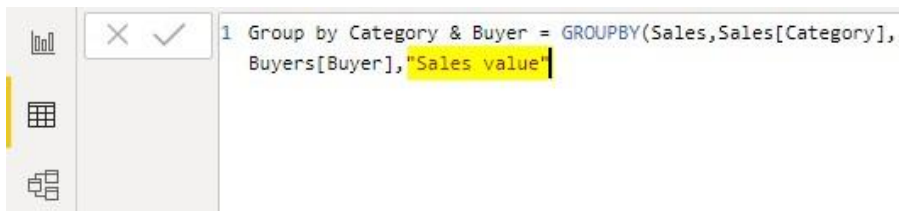
-
  The next argument is **GroupBy_ColumnName1** i.e. based on which column we need to group the data. So from "Sales Table" we need to group by "Category-wise" so select the "Category" column from "Sales Table".
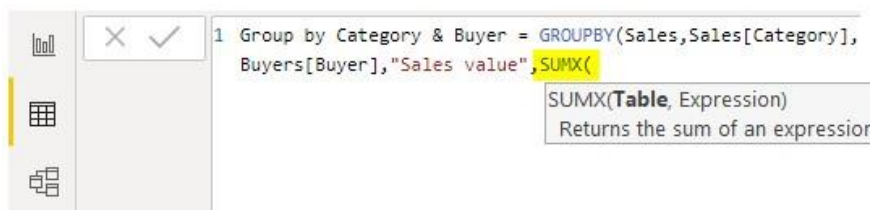

- Next from the "Buyers" table, we need to mention the column name to be grouped. So from the "Buyers" table, we need to group by "Buyerswise".

- Ok, specifying column names is over, next we need to give a name to the aggregate column since we are aggregating the "Sale Value" column we will give the same name only.

- Next for this new "Sales Value" column, we need applying DAX function to return the aggregate value. Open SUMX function in the **Expression 1** argument.

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  For this expression, we need to supply special **CURRENTGROUP()** function.

Note: CURRENTGROUP() function can be used inside the Power BI GroupBy function only. This function access to the sub-table representing the current group in GROUPBY function.

- In the next argument of SUMX function open SUM function.

- Since we are adding the "Sales Value" column from the "Sales" table enter the column name. After this close two brackets for SUMX & SUM functions and enter a comma.

- **Name 2** is the argument of GROUPBY function i.e. what the name of the second aggregate column is, enter the name as "Cost Value" in doublequotes.

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  For this also open SUMX function, inside this open CURRENTGROUP function and for Expression open SUM function and choose the "Cost Value" column from the "Sales" table.

- Now close three brackets for Power BI SUMX, SUM, and GROUPBY functions and hit enter key to close the DAX formula. Then you can see three tables here. Select the newly created table for grouping, in this, we can see DAX expression in the formula section.

As you can see above we can see the aggregated grouped table.

Note: I have done so much of formatting to this table, you can download the Power BI RANKX Template from below link and apply each formatting technique as applied.

Things to Remember

- CURRENTGROUP is the new function that can be used inside the GROUPBY function only.
- CURRENTGROUP takes the reference of the grouping table.

- We cannot use the CALCULATE function in the Power BI GROUPBY DAX function.