

EXAMPLE - LIST and UNIQUE Function

This example illustrates the following functions:

- **LIST** - Extracts up to 1000 values from one column into an array in a new column. See *LIST Function*.
- **UNIQUE** - Extracts up to 1000 unique values from one column into an array in a new column. See *UNIQUE Function*.

You have the following set of orders for two months, and you are interested in identifying the set of colors that have been sold for each product for each month and the total quantity of product sold for each month.

Source:

OrderId	Date	Item	Qty	Color
1001	1/15/15	Pants	1	red
1002	1/15/15	Shirt	2	green
1003	1/15/15	Hat	3	blue
1004	1/16/15	Shirt	4	yellow
1005	1/16/15	Hat	5	red
1006	1/20/15	Pants	6	green
1007	1/15/15	Hat	7	blue
1008	4/15/15	Shirt	8	yellow
1009	4/15/15	Shoes	9	brown
1010	4/16/15	Pants	1	red
1011	4/16/15	Hat	2	green
1012	4/16/15	Shirt	3	blue
1013	4/20/15	Shoes	4	black
1014	4/20/15	Hat	5	blue
1015	4/20/15	Pants	6	black

Transformation:

To track by month, you need a column containing the month value extracted from the date:

Transformation Name	Edit column with formula
Parameter: Columns	Date
Parameter: Formula	DATEFORMAT(Date, 'MMM yyyy')

You can use the following transform to check the list of unique values among the colors:

Transformation Name	Pivot columns
Parameter: Row labels	Date
Parameter: Values	unique(Color, 1000)
Parameter: Max number of columns to create	10

Date	unique_Color
Jan 2015	["green","blue","red","yellow"]
Apr 2015	["brown","blue","red","yellow","black","green"]

Delete the above transform.

You can aggregate the data in your dataset, grouped by the reformatted `Date` values, and apply the `LIST` function to the `Color` column. In the same aggregation, you can include a summation function for the `Qty` column:

Transformation Name	Pivot columns
Parameter: Row labels	Date
Parameter: Values	<code>list(Color, 1000),sum(Qty)</code>
Parameter: Max number of columns to create	10

Results:

Date	list_Color	sum_Qty
Jan 2015	["green","blue","blue","red","green","red","yellow"]	28
Apr 2015	["brown","blue","red","yellow","black","blue","black","green"]	38