EXAMPLE - LIST and LISTUNIQUE 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*.
- `LISTUNIQUE` - Extracts up to 1000 unique values from one columninto an array in a new column. See *LISTUNIQUE 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

Transform:

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

```
set col:Date value:DATEFORMAT(Date, 'MMM yyyy')
```

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

```
pivot value: LISTUNIQUE(Color, 1000) group: Date limit:10
```

Date	listunique_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` functio n to the `Color` column. In the same aggregation, you can include a summation function for the `Qty` column:

```
pivot value: LIST(Color, 1000) SUM(Qty) group: Date limit: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

If needed, you can unpack the list array data using the following:

```
unnest col:list_Color
```