

LIST Function

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Extracts the set of values from a column into an array stored in a new column. This function is typically part of an aggregation.

Tip: To generate unique values for the list, apply the `ARRAYUNIQUE` function in the next step after this one. See *ARRAYUNIQUE Function*.

Input column can be of any type.

- By default, the list is limited to 1000 values. To change the maximum number of values, specify a value for the `limit` parameter.
- This function is intended to be used as part of an aggregation to return the distinct set of values by group. See *Pivot Transform*.

For a version of this function computed over a rolling window of rows, see *ROLLINGLIST Function*.

Basic Usage

```
pivot value:LIST(Name, 500) group:Month limit:1
```

Output: Generates a two-column table containing the values for `Month` and an array of all values (up to a count of 500) from the `Name` column for each `Month` value. The `limit` parameter defines the maximum number of output columns.

Syntax and Arguments

```
pivot value:LIST(function_col_ref, [limit_int]) [ group:group_col_ref] [limit:limit_count]
```

Argument	Required?	Data Type	Description
<code>function_col_ref</code>	Y	string	Name of column to which to apply the function
<code>limit_int</code>	N	integer (positive)	Maximum number of values to extract into the list array. From 1 to 1000.

For more information on the `group` and `limit` parameters, see *Pivot Transform*.

For more information on syntax standards, see *Language Documentation Syntax Notes*.

function_col_ref

Name of the column from which to extract the list of values based on the grouping.

- Literal values are not supported as inputs.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	String (column reference)	myValues

limit_int

Non-negative integer that defines the maximum number of values to extract into the list array.

NOTE: If specified, this value must be between 1 and 1000, inclusive.

NOTE: Do not use the limiting argument in a LIST function call on a flat aggregate, in which all values in a column have been inserted into a single cell. In this case, you might be able to use the limit argument if you also specify a group parameter. Misuse of the LIST function can cause the application to crash.

Usage Notes:

Required?	Data Type	Example Value
No	Integer	50

Examples

Tip: For additional examples, see *Common Tasks*.

Example - Colors sold this month

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 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

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 function 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
```