

# Unpivot Columns

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You can convert columns into rows of values. The Convert transformation extracts the values from a specified column or columns and turns the column name and each extracted value into key-value pairs.

- Unpivot can be applied to one or more columns.
- Often, this transformation is applied to datasets containing pivoted or aggregated data. For more information, see *Pivot Data*.

**NOTE:** Depending on the number of source columns, an unpivot operation can significantly increase the number of rows in your dataset.

## Single-column Unpivot

When you unpivot a single column of data, the column is separated into two new columns in your dataset:

| New column name | Values  |
|-----------------|---|
| key             | All values are the name of the source column.                   |
| value           | Each row contains one of the row values from the source column. |

**NOTE:** These columns replace the source column in the dataset. To retain the source column, create a copy of it first and then unpivot the copied column.

## Source:

The following example contains a very simple set of data:

| Name   | favoriteColor | favoriteDessert |
|--------|---------------|-----------------|
| Anna   | red           | ice cream       |
| Bella  | pink          | cookies         |
| Callie | blue          | pie             |

## Transformation:

You can unpivot these columns one-by-one into row data:

|                            |                 |
|----------------------------|-----------------|
| <b>Transformation Name</b> | Unpivot columns |
| <b>Parameter: Columns</b>  | favoriteColor   |

|                              |   |
|------------------------------|---|
| <b>Parameter: Group size</b> | 1 |
|------------------------------|---|

**Results:**

The new unpivoted columns are placed at the end of the dataset, and the source column is removed.

| Name   | favoriteDessert | key           | value |
|--------|-----------------|---------------|-------|
| Anna   | ice cream       | favoriteColor | red   |
| Bella  | cookies         | favoriteColor | pink  |
| Callie | pie             | favoriteColor | blue  |

**Multi-column Unpivot**

This example turns the data from multiple columns into a single set of key-value pairs, where the key is the column name associated with the source of the data in the value column.

**Source:**

The following dataset shows student test scores per test. Each row represents the scores of individual students.

| StudentId | test1Score | test2Score | test3Score |
|-----------|------------|------------|------------|
| 001       | 75         | 79         | 77         |
| 002       | 84         | 81         | 86         |
| 003       | 79         | 82         | 87         |
| 004       | 92         | 94         | 92         |

**Transformation:**

You can use the following transformation to turn the dataset into one row per student-test combination:

|                              |                                    |
|------------------------------|------------------------------------|
| <b>Transformation Name</b>   | Unpivot columns                    |
| <b>Parameter: Columns</b>    | test1Score, test2Score, test3Score |
| <b>Parameter: Group size</b> | 1                                  |

**Results:**

The results are as follows:

| StudentId | key        | value |
|-----------|------------|-------|
| 001       | test1Score | 75    |
| 002       | test2Score | 79    |
| 003       | test3Score | 77    |
| 001       | test1Score | 84    |
| 002       | test2Score | 81    |
| 003       | test3Score | 86    |
| 001       | test1Score | 79    |
| 002       | test2Score | 82    |

|     |            |    |
|-----|------------|----|
| 003 | test3Score | 87 |
| 001 | test1Score | 92 |
| 002 | test2Score | 94 |
| 003 | test3Score | 92 |

You can then rename the `key` and `value` columns as needed. See *Rename Columns*.

## Ranges

You can specify a range of columns in your dataset. In the previous example, you can specify the three test score columns using the following value in the Columns textbox:

All three columns are unpivoted.

## Wildcards

**NOTE:** You can use the asterisk ( \* ) wildcard in the Columns textbox to apply the unpivot to the entire dataset, which generates a `key` and a `value` column, containing all column-row entries from the source columns. However, unpivoting a large number of columns can significantly increase the number of rows in your dataset.