Inbuilt Column Transformations

- ✓ Remove Columns / Remove Other Columns
- ✓ Name / Rename a Column
- ✓ Reorder Columns or Sort Columns
- ✓ Add Column / Custom Column
- ✓ Split Columns
- ✓ Merge Columns
- ✓ Pivot, Unpivot Columns
- ✓ Transpose Columns

Remove Columns / Remove Other Columns

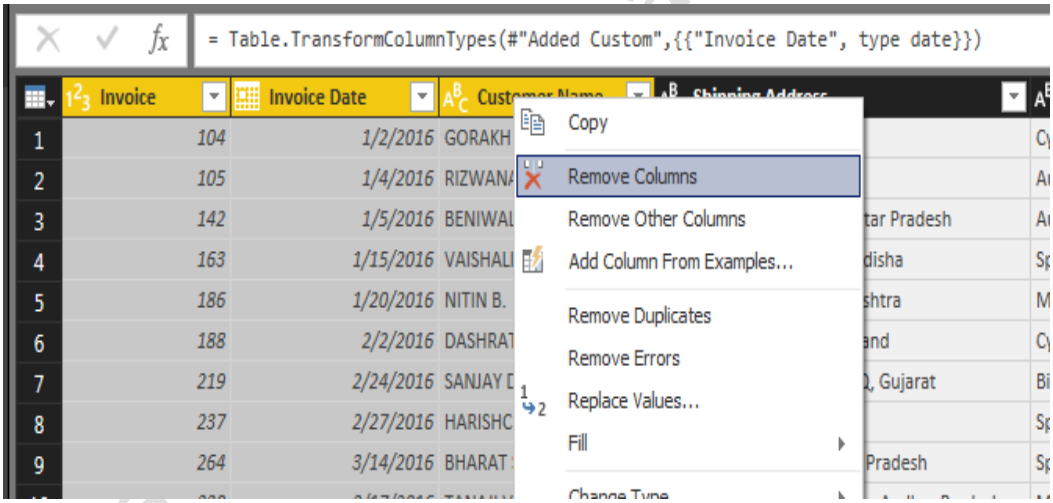
If you want to remove unwanted columns which are not necessary in your data model for the data source in your query, you can use Remove Columns / Remove Other Columns option as shown in the below image.

If you want remove selected columns

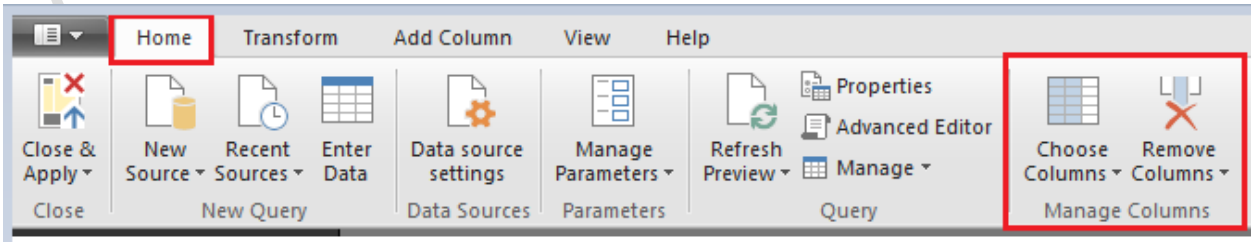
Select the columns you want to remove → Right Click → Remove Columns

If you want to remove all other columns other than selected

Select the columns you want to keep → Right Click → Remove Other Columns



You can also remove columns from **Manage Columns** Section in **Home** Tab in **Query Editor** Ribbon.



Name or Rename a Column

When you want give a meaningful name for a column that needs in Report, you can do it by renaming a column. To rename a column

Right click a column → Rename → Enter a meaningful Name

(OR)

Double click the column →that will allow you to edit Name → Enter a meaningful Name

Reorder Columns or Sort Columns in Power BI

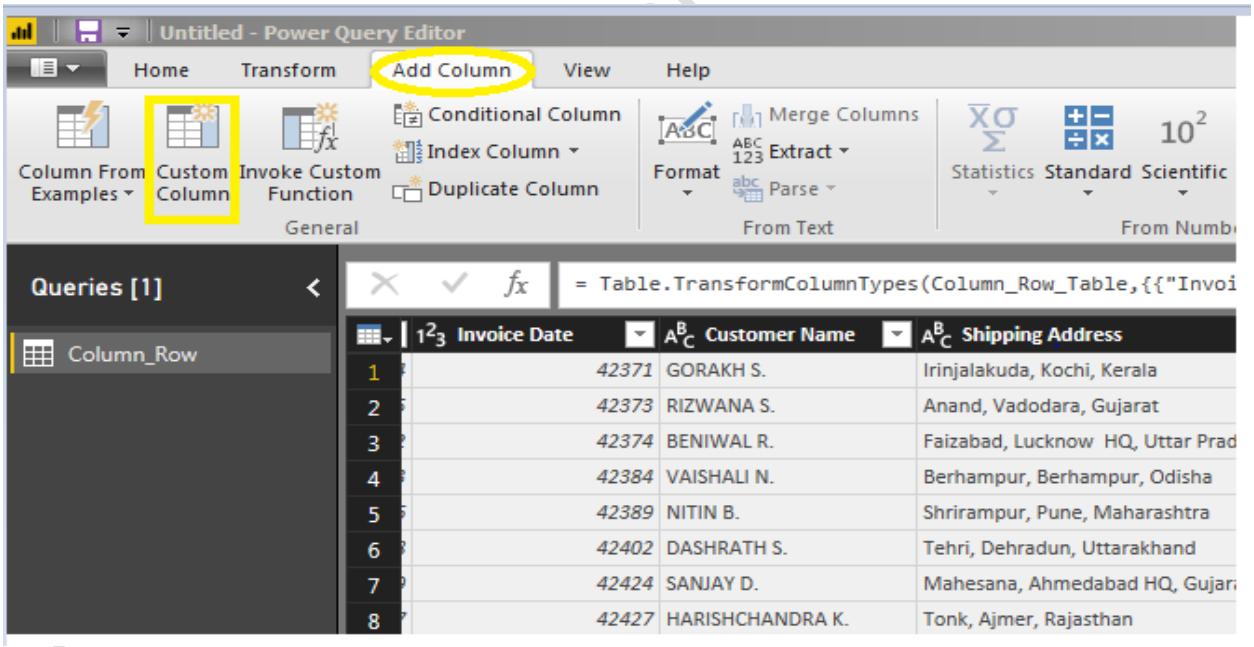
One way is drag the required column and Drop at the position you want to place.

Second way, right-click on the column name that you want to move will open the context menu. Select the **Move** and then select **Right**, **Left**, **To End**, or **To Beginning** options.

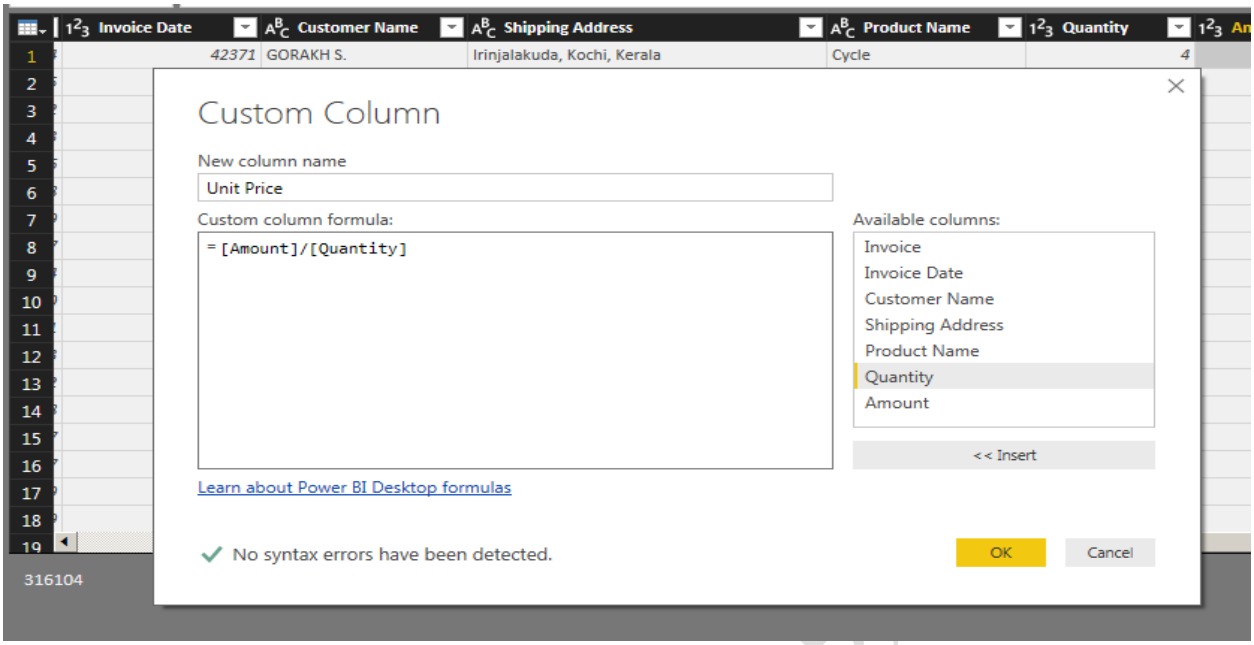
Add Column / Add Custom Column

In Query Editor you can create custom formulas that operate on multiple columns in your table, and then place the results of such formulas into a new (custom) column. Query Editor makes it easy to create custom columns.

In Query Editor, select Custom Column from the Add Column tab on the ribbon.



Once we select custom column a Custom Column window opens as below where we can provide New column name and Custom column formula.

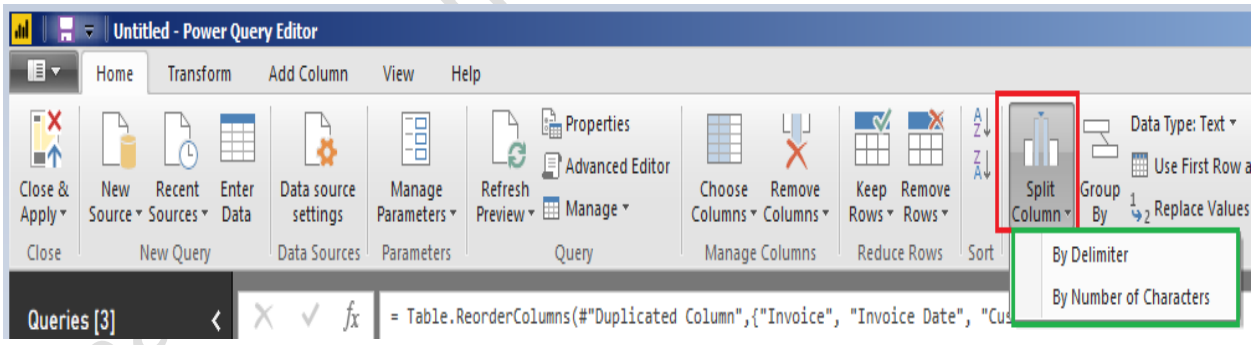


Split Columns

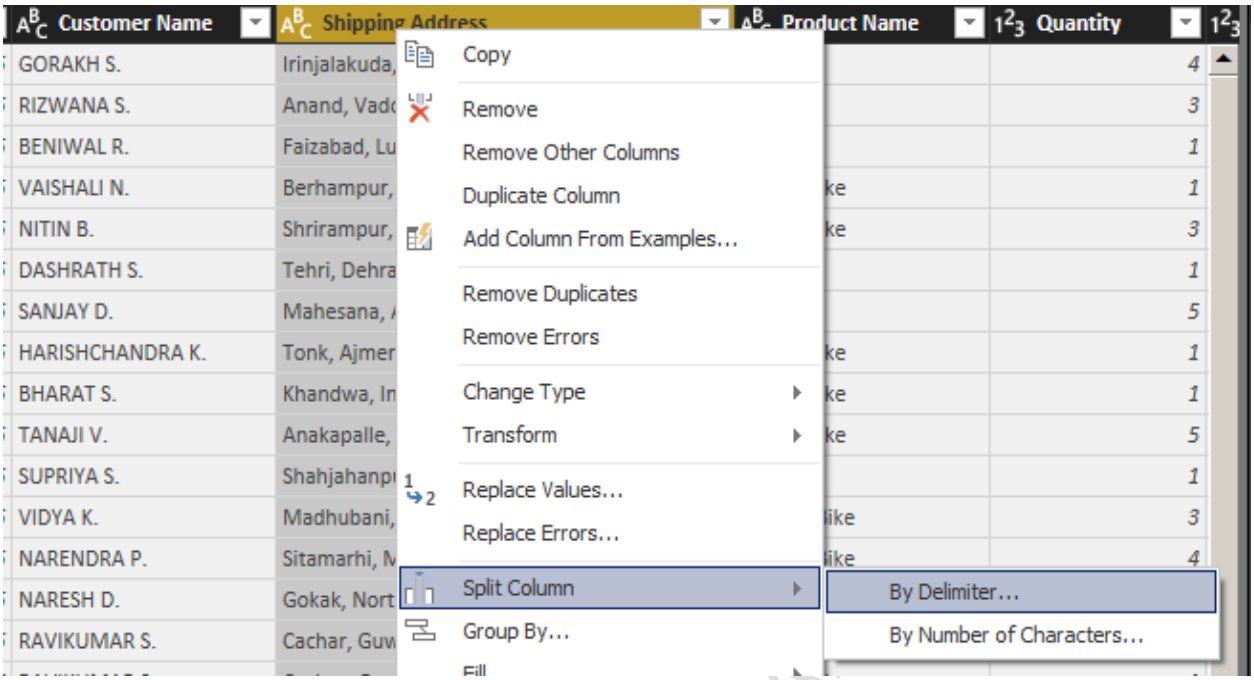
Sometimes you will get merged columns (one column with too much information). In that situation, you can use Power BI Split Columns option to split that column into multiple columns.

We have two options here to split columns as shown in below image.

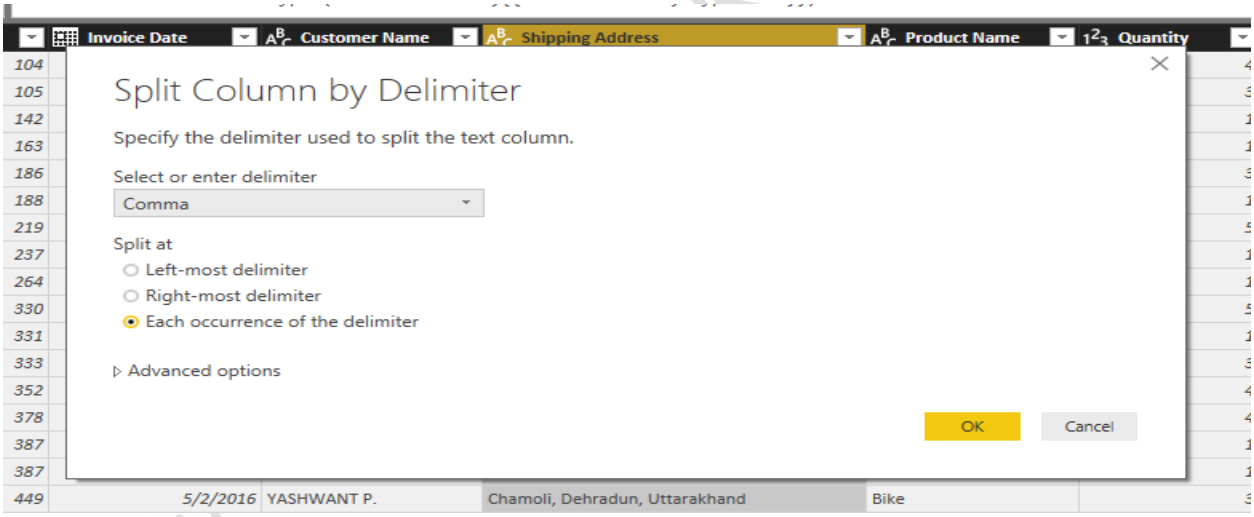
- By Delimiter
- By Number of Characters



In order to split the columns in a table, right-click on the column that you want to split will open the context menu. Select the Split Columns and then select **"By Delimiter"** option.



Selecting the "By Delimiter" option will open the following window.



Select or enter delimiter

Please select the delimiter that you want to use as the split character from the drop down list. If it is not there in the list, then select Custom option in the drop down and specify that custom character.

Left most delimiter

This option will split the left most string before first delimiter.

Right most delimiter

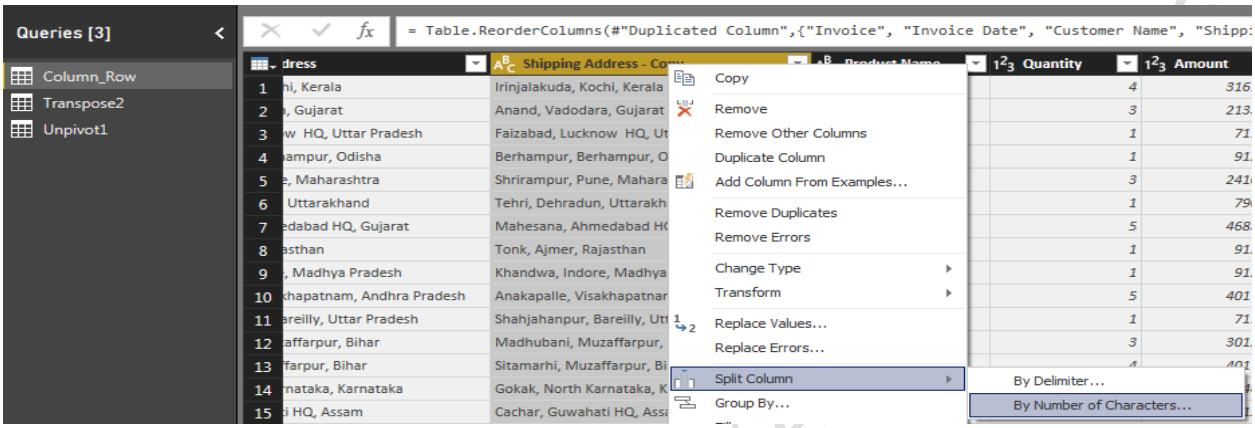
This option will split right most string after the last delimiter.

Each Occurrence of the delimiter

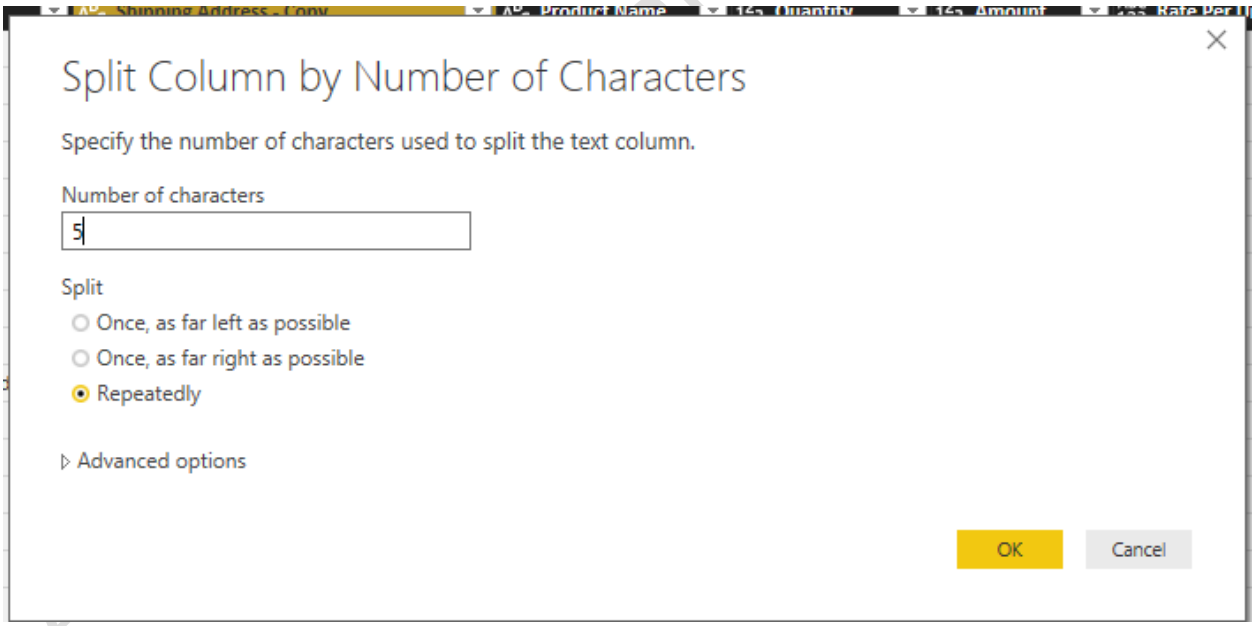
Text will split at each occurrence of a delimiter.

Split Columns by Number of Characters

Right-click on the column that you want to split will open the context menu. Please select the Split Columns and then select “By Number of Characters” option.



Selecting the “By Number of Characters” option will open the Split Column by Number of Characters window.



Number of Characters

Please specify the number of characters used to split the column. Let us give as 5.

Once, as far left as possible

This option will split the given string into two strings first string with first 5 Characters and second string with remaining characters.

Once, as far right as possible

This option will split the given string into two strings first string with all the characters except last 5 Characters and second string will be last 5 characters.

Repeatedly

Text will split for every 5 characters.

Merge Columns

With Power Query, you can merge two or more columns in your query. You can merge columns to replace them with a merged column, or create a new merged column alongside the columns that are merged.

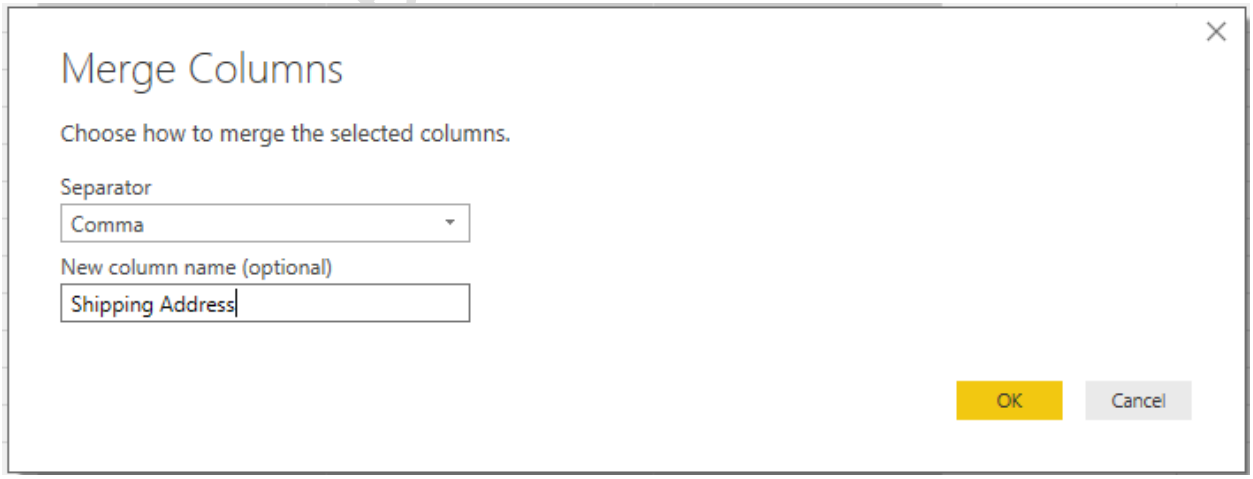
Merge columns to replace existing columns

Select two or more columns that you need to merge. Press the CTRL key, and then click on the column headers to select each of the columns that you'll include in the merge.

NOTE: The order in which you select the columns sets the order of the values in the merged column.

Right-click the columns and click Merge Columns.

In the Merge Columns popup window, specify the separator that is in use between each of the column values. You can select from predefined separator values, or specify a custom separator value. Give a meaningful Name in **"New column name"** section.



Click OK to create a merge column that replaces the columns selected for the merge operation.

Merge Columns to create a new column

Perform all the above steps in **Add Column** Tab in **Query Ribbon** to create a new column for all the merged columns.

PIVOT and UNPIVOT with Power BI

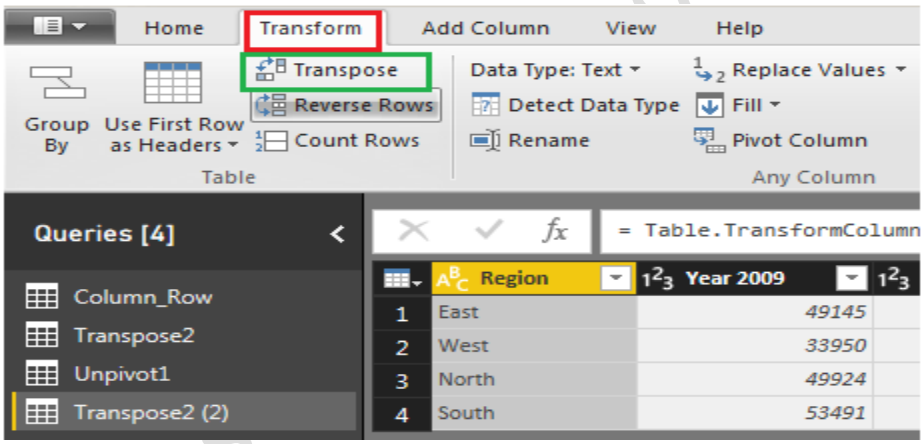
Turning columns to rows, or rows to columns is easy with Power Query and Power BI.

UNPIVOT → Converting Columns to Rows

PIVOT → Converting Rows to Columns

Transpose

This is used to reverse the rows and column of a table. Once you select the column and click on transpose option the rows becomes columns and column becomes rows. For using it click on Transpose option of Transform tab as below.



Region values are in Rows and Year Values are in columns in the below Query and we will use this for Transpose.

	Region	Year 2009	Year 2010	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016
1	East	49145	15805	63544	14588	27252	20240	28094	38449
2	West	33950	43735	66850	23125	10444	41878	41825	27325
3	North	49924	76718	96314	99194	94416	31575	75907	20659
4	South	53491	20462	99796	57194	29032	34539	62883	32993

Once after Transpose the result will looks like below. Year values in rows and Region values in columns.

	Year	East	West	North	South
1	Year 2009	49145	33950	49924	53491
2	Year 2010	15805	43735	76718	20462
3	Year 2011	63544	66850	96314	99796
4	Year 2012	14588	23125	99194	57194
5	Year 2013	27252	10444	94416	29032
6	Year 2014	20240	41878	31575	34539
7	Year 2015	28094	41825	75907	62883
8	Year 2016	38449	27325	20659	32993

In built Row Transformations

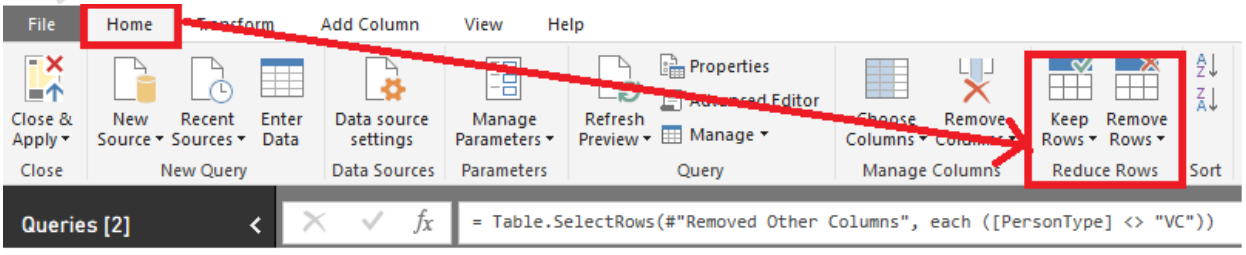
- ✓ Header Row or Use First Row as Headers
- ✓ Keep Top Rows
- ✓ Keep Bottom Rows
- ✓ Keep Range of Rows
- ✓ Keep Duplicates
- ✓ Keep Errors
- ✓ Remove Top Rows
- ✓ Remove Bottom Rows
- ✓ Remove Alternative Rows
- ✓ Remove Duplicates
- ✓ Remove Blank Rows
- ✓ Remove Errors
- ✓ Group Rows

Use First Row as Header

When power bi is not able to identify headers automatically, you can manually do that using **"Use First Row as Header"**.

Reduce Rows

In case you want to filter the data you are importing, you have two options: either by keeping the specific rows or removing rows. Both options can be found by clicking **Home** → **Reduce Rows**.



Under **Keep Rows**, you have the following options

Keep Top Rows → where you specify the number of top rows to keep.
Keep Bottom Rows → for which you pick the number of bottom rows to keep.
Keep Range of Rows → which skips a specified number of top rows and then keeps the chosen number of rows.

In addition to the first three options, which work on whole tables, you have **Keep Duplicates** and **Keep Errors**, both of which can work on either the whole table or the selected columns only. For example, if you select the whole table and choose Keep Duplicates, you will only see the rows that are complete duplicates of each other. However, if you choose only one column and click Keep Duplicates, you will get the rows where the values in the selected column are duplicates, regardless of other columns' values.

Under **Remove Rows**, you have six options

Remove Top Rows → Removes a specified number of top rows. Works on the whole table only.
Remove Bottom Rows → Removes a specified number of bottom rows. Works on the whole table only.
Remove Alternate Rows → Removes rows following a user-supplied pattern: it starts with a specified row, then alternates between removing the selected number of rows and keeping the chosen number of rows. Works on the whole table only.
Remove Duplicates → Removes rows that are duplicates of other rows. Works on either the whole table or the selected columns only.
Remove Blank Rows → Removes rows that completely consist of either empty strings or nulls; if you need to remove blank values from one column, you can click on the arrow to the right of a column's name and click Remove Empty. Remove Blank Rows Works on the whole table only.
Remove Errors → Removes rows that contain errors. Works on either the whole table or the selected columns only.

In case of Remove Duplicates and Remove Errors, there is a difference between applying these options to all selected columns or the whole table. In the first case, if you have new columns added to your query, the functions will not work on the new columns, because selecting all columns keeps their names in the code. To remove duplicates or errors from the whole table, select the table icon above row numbers and choose either Remove Duplicates or Remove Errors.

Group rows / Group By

In Query Editor, you can group the values in multiple rows into a single value. This can be useful when summarizing the number of products offered, the total sales, or the count of students or total salary paid for each department.

Let's summarize our EMP table by Deptno and Job wise TotSal, MinSal, MaxSal, CountOfEmp.

To do that, you can select Deptno and Job first, then click **Home → Transform →** Group By (**Or) Transform → Table → Group By**. The **Group By** window then opens; you'll see a radio button to switch between Basic and Advanced settings. Specify one or more columns to group by and how to aggregate data. To group by more than one column, switch to Advanced settings, or you could have pre-selected multiple columns before clicking **Group By**.