Takaisin välilehdelle

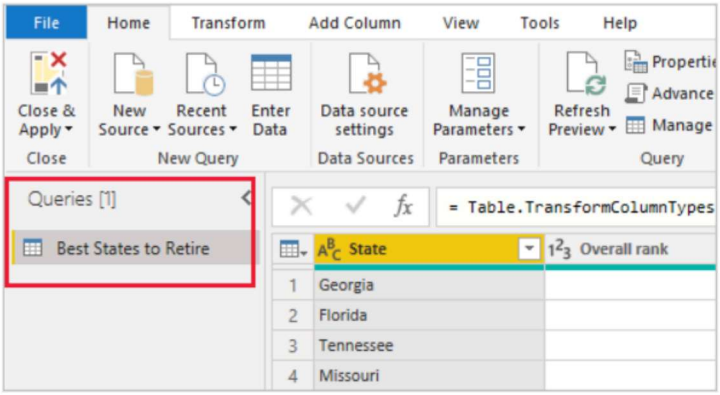
Tee: Käy oppitunti läpi loppuun asti

Transformation basics

Note! There are multiple ways to solve a problem. As you work your way through this course, we have tried to show you the fastest and easiest methods of solving the problems that are presented, but these solutions will certainly not be the only ways to reach your goals.

Every click you do inside the **Power Query Editor** is automatically converted into a formula language called **M**. Virtually all the basic transforms you will need can be accomplished by simply interacting with the **Power Query Editor** user interface, but for more complex business problems there is a good chance you may have to modify the **M** queries that are written for you by the editor.

The left pane, or **Queries** pane, displays the number of active queries and the name of the query. When you select a query from the left pane, its data is displayed in the center pane, where you can shape and transform the data to meet your needs. The following image shows the left pane with a query.



In the center pane, or **Data** pane, data from the selected query is displayed. This pane is where much of the work of the **Query** view is accomplished.

All transforms that are created within the editor are stored in the **Query Settings** pane located on the right side under a section called **Applied Steps**. The **Applied Steps** section has many features, but here are some of the most critical to know for now:

- **Deleting transforms**: If you make a mistake and need to undo a step, you can click the **Delete** button next to a step.
- **Modifying transforms**: This can be done with any step that has a gear icon next to it.
- **Changing the order of transforms**: If you realize that it is better for one step to execute before another one, you can change the order of how the steps are executed.
- **Selecting previous steps**: Clicking on any step prior to the current one will allow you to see how your query results would change one step earlier in the process.

The **Advanced Editor** lets you see the code that Power Query Editor is creating with each step. It also lets you create your own shaping code. To launch the advanced editor, select **View** from the ribbon, then select **Advanced Editor**. A window appears, showing the existing query code.

When your query is where you want it, select **Close & Apply** from Power Query Editor's **File** menu. This action applies the changes and closes the editor.

Use First Row as Headers

Organizing column names or headers is often an important first task when managing your dataset. Providing relevant column names makes many of the downstream processes, such as building reports, much easier. Often, column headers are automatically imported from your data source, but sometimes you may be working with a more unique data source that makes it difficult for **Power BI** to capture the column header information.

If the column headers are not automatically imported, select the transform called **Use First Row as Headers** from the **Home** ribbon. Once complete, you will see the first row of the dataset has been promoted to the column header area. This is a very common transform that you can expect to use often with flat files.

Remove Columns

Often, the data sources you will connect to will include many columns that are not necessary for the solution you are designing. It is important to remove these unnecessary columns from your dataset because these unused columns needlessly take up space inside your data model.

There are several different methods for removing columns in the **Power Query Editor**. One way is to do as descibed below:

- Multi-select (*Ctrl* + click) the column headers of the columns you wish to keep as part of your solution. With these columns selected, right-click on any of the selected columns headers and choose **Remove Other Columns.**

Once this transform is completed, you should be left with only the columns you need.

Another method for removing columns is clicking the **Choose Columns** button on the **Home** ribbon of the **Power Query Editor**. This option provides a list of all the columns, and you can choose the columns you wish to keep or exclude.

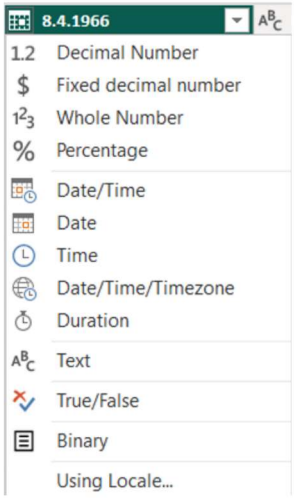
You can also select the columns you wish to remove; right-click on one of the selected columns and click **Remove**. This seems like the more obvious method. However, this option is not as user-friendly in the long run because it does not provide an option to edit the transform in the **Applied Steps** section as the first two methods do.

With any data cleansing tool, data type manipulation is critical and can help save you from many headaches later in the development of your solution. In the next section, you will learn about how to change data types.

Change Type

Defining column **data types** properly early on in your data scrubbing process can help to ensure proper business rules can be applied and data is presented properly in reports. The **Power Query Editor** has various numeric, text, and date-time data types for you to choose from. The data types may be automatically interpreted correctly by the **Power Query Editor,** but you could change this if necessary:

- Locate the data type indicator on the column header to the left of the column name. Click the data type icon, and a menu will open that allows you to choose whichever data type you desire, as shown below.



You may not need to make a change to the data type, but now you know where to go when you are required to.

Another method you can use for changing column data types is to right-click on the column you wish to change, then select **Change Type**, and choose the new data type. You should always be careful when changing data types to ensure your data supports the change.

For instance, if you change a column data type to **Whole Number** while it has letters stored in it, **Power BI** will produce an error.

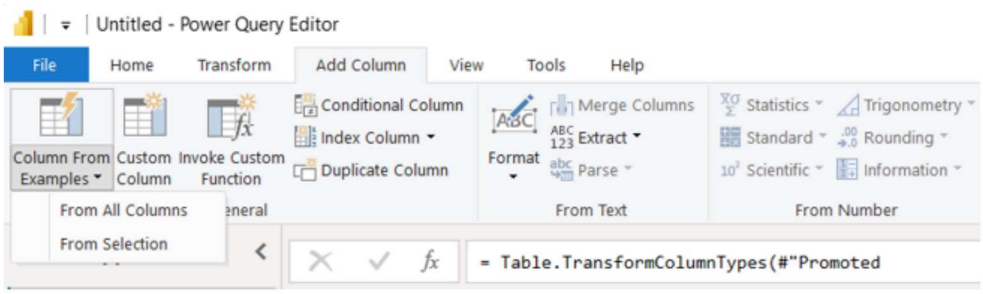
If you want to change multiple column data types at once, you can multi-select the necessary columns, then select the new data type from the **Data Type** property on the **Home** ribbon.

Many of the transforms you will encounter in the future are contextually based on the column data types you are working with. For example, if you have a column that is a date, then you will be provided with special transforms that can only be executed against a date data type, such as extracting the month name from a date column.

Add Column From Examples

One option that can make complex data transformations seem simple is the feature called **Add Column From Examples**. Using Add Column From Examples, you can provide the **Power Query Editor** with a sample of what you would like your data to look like, and it can then automatically determine which transforms are required to accomplish your goal:

1. Find and select the **Add Column** tab in the **Power Query Editor** ribbon.
2. Select the **Column From Examples** button and, if prompted, choose **From All Columns**. This will launch a new **Add Column From Examples** interface:



3. In the first empty cell, type column name and then hit **Enter**.
4. Once you click **OK**, the transform is finalized and automatically added to the overall **M** query that has been built through the user interface. The newly merged column will be added with the rest of your columns and you can optionally rename the column to something more appropriate by double-clicking on the column header.

As you can see, the **Add Column From Examples** feature is great because you don't have to be an expert in which transforms are appropriate because **Power BI** will automatically choose them for you!

Sometimes, you may encounter scenarios where the **Add Column From Examples** feature needs more than one example to properly translate your example into an **M** query function that accomplishes your goal. If this happens, simply provide additional examples of how you would like the data to appear in different rows, and the **Power Query Editor** should adjust to account for outliers.

Click link to watch a video about making Basic transformations.

Advanced data transformation options

◄ Lesson 2 Quiz

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Exercise 3 - Transformation basics ►

Olet kirjautunut nimellä Janne Bragge. (Kirjaudu ulos)
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