## **What Is Power Query**

Power Query is a data transformation and connectivity tool developed by Microsoft. It is designed to help connect to, combine, and transform data from various sources, making it easier to analyze and visualize data in applications such as Microsoft Excel and Power BI.

With Power Query, you can:

Connect to a wide range of data sources, including databases, cloud services, files, and web pages.

Transform data by cleaning, reshaping, and enhancing it through a user-friendly interface without the need for complex programming.

Automate data preparation tasks by saving queries, enabling consistent and repeatable workflows.

Power Query is especially valuable for business analysts, data professionals, and anyone who needs to handle large amounts of data efficiently. Its intuitive interface, combined with powerful capabilities, simplifies the process of preparing data for meaningful analysis.

## **Expressions, values, and let expression**

A Power Query M formula language query is composed of formula **expression** steps that create a mashup query. A formula expression can be evaluated (computed), yielding a value. The **let** expression encapsulates a set of values to be computed, assigned names, and then used in a subsequent expression that follows the **in** statement. For example, a let expression could contain a **Source** variable that equals the value of Text.Proper and yields a text value in proper case.

## **Comments**

You can add comments to your code with single-line comments // or multi-line comments that begin with /\* and end with \*/.

## **Evaluation Model**

The evaluation model of the Power Query M formula language is modeled after the evaluation model commonly found in spreadsheets, where the order of calculations can be determined based on dependencies between the formulas in the cells.

## **Operators**

The Power Query M formula language includes a set of operators that can be used in an expression. **Operators** are applied to **operands** to form symbolic expressions. For example, in the expression 1 + 2 the numbers 1 and 2 are operands and the operator is the addition operator (+).

## **Types and type conversion**

Power Query M uses types to classify values to have a more structured data set. This article describes the most commonly-used M types and how to convert one type to another type.

## **Metadata**

**Metadata** is information about a value that is associated with a value. **Metadata** is represented as a record value, called a metadata record. The fields of a **metadata record** can be used to store the metadata for a value. Every value has a metadata record. If the value of the metadata record hasn't been specified, then the metadata record is empty (has no fields). Associating a metadata record with a value doesn't change the value’s behavior in evaluations except for those that explicitly inspect metadata records.

## **Errors**

An *error* in Power Query M formula language is an indication that the process of evaluating an expression could not produce a value. Errors are raised by operators and functions encountering **error** conditions or by using the **error** expression. Errors are handled using the **try** expression. When an error is raised, a value is specified that can be used to indicate why the error occurred.

## **Text Formatting**

In Power Query, text formatting refers to various transformations and operations that can be applied to text data to modify its appearance or structure.

## **Functions**

The Power Query M function reference includes articles for each of the over 700 functions.

**(The descriptions of the functions are found the in the excel file)**

## **Enumerations**

The M language provides a range of enumerations. These simplify the process of selecting options within a function. For example, you have the option to provide the Date.StartOfWeek function with the first day of the week by writing Day.Monday. Yet to be more concise you could enter the short-hand value 1. The Enumeration Overview delves into all enumerations and their short-hand alternatives.

## **Constants**

Constant values are values that do not change. The M language supports several and they provide an easy way to input values that are immutable. More on these in the Constants Overview.

## **Dynamic Values**

A dynamic value is a value that takes into account your personal settings, resulting in potentially different values for each user. The M Language offers a limited selection of dynamic values to cater to varying user environments. Find all in the Dynamic Values Overview.

## **About This Reference**

This Power Query reference contains information on the M language. The Guide is updated regularly to reflect the latest changes in Microsoft products. Each M function is presented with a syntax, supporting articles and often with examples.

While this Power Query Guide is a [BI Gorilla](https://gorilla.bi/) project created and maintained by [Rick de Groot](https://powerquery.how/about/), it also incorporates official Microsoft documentation to provide you with the most accurate and up-to-date information. It also took inspiration from the [dax.guide](https://dax.guide/" \t "_blank) website that does something similar for the DAX language.