

Learning Guide: How to Concatenate Columns in Power BI Using DAX

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Introduction to String Concatenation in Power BI

In data analysis and reporting, the frequent need to merge distinct fields into a single, cohesive column is essential. Within the environment of [Power BI](#), this operation--known as [concatenation](#)--is critical for creating user-friendly labels, full names, or complete identifiers from separate data elements. To perform this transformation, we rely heavily on [Data Analysis Expressions \(DAX\)](#), Power BI's powerful functional language. This guide provides a detailed breakdown of how to efficiently concatenate two columns using simple yet robust DAX formulas, covering methods both with and without explicit separators.

The ability to combine strings directly within the data model ensures that calculated columns are dynamically updated and correctly formatted for visualization purposes. We will explore two primary methods utilizing the core DAX functions, illustrating how they handle different requirements, particularly regarding the inclusion of separators like spaces or dashes, which are vital for readability and practical application.

You can use the following fundamental formulas in [DAX](#) to successfully merge two columns together:

Understanding Core DAX Concatenation Methods

The DAX language offers several ways to achieve column merging. The most straightforward approach involves the dedicated `CONCATENATE` function, while more flexible string combining often utilizes the ampersand operator (`&`). Understanding the nuances of these two approaches is key to effective data preparation in [Power BI](#).

Formula 1: Concatenate Two Columns with No Separator

New Column = CONCATENATE('my_data', 'my_data')

This particular formula leverages the standard [CONCATENATE](#) function, which is designed to join the strings found in Column 1 and Column 2 seamlessly, resulting in a single string output with absolutely no space or other character inserted between them.

Formula 2: Concatenate Two Columns Using the Ampersand Operator

New Column = CONCATENATE('my_data' & " ", 'my_data')

While Formula 2 still uses `CONCATENATE`, the true power here comes from incorporating the [& symbol](#) (ampersand operator) within the first argument. This powerful operator allows you to easily combine the contents of Column 1 with a specific literal value (in this case, a space represented by

`) before the result is joined with Column 2. This method grants far greater control over the output formatting.

Setting the Stage: The Sample Data

To demonstrate these two distinct concatenation techniques effectively, we will utilize a simple table named **my_data** within the [Power BI](#) environment. This table contains basic records, featuring separate columns for first names and last names, which is a common scenario requiring string merging for reporting purposes.

The following visualization represents the structure and content of our sample data table that we will be manipulating using [DAX](#) calculated columns:

The screenshot shows the Power BI interface with the 'Table tools' ribbon active. The 'Name' field is set to 'my_data'. The ribbon includes options for 'Mark as date table', 'Manage relationships', and 'Calculations' (New measure, Quick measure, New column, New table). Below the ribbon, a data table is displayed with the following data:

First	Last	Sales
Andy	Smith	23
Bob	Johnson	14
Chad	Miller	19
Doug	Hughes	30
Eric	Reed	12
Frank	Hastings	18
Greg	Mack	15
Henry	Anderson	14
Isaac	Billings	10
John	Cranston	33
Kendall	Vells	28
Luke	Weaver	25

Our objective is to generate a new column that displays the full name by merging the contents of the **First** and **Last** columns. We will first show the result without any separator and subsequently show the more standard approach using a space.

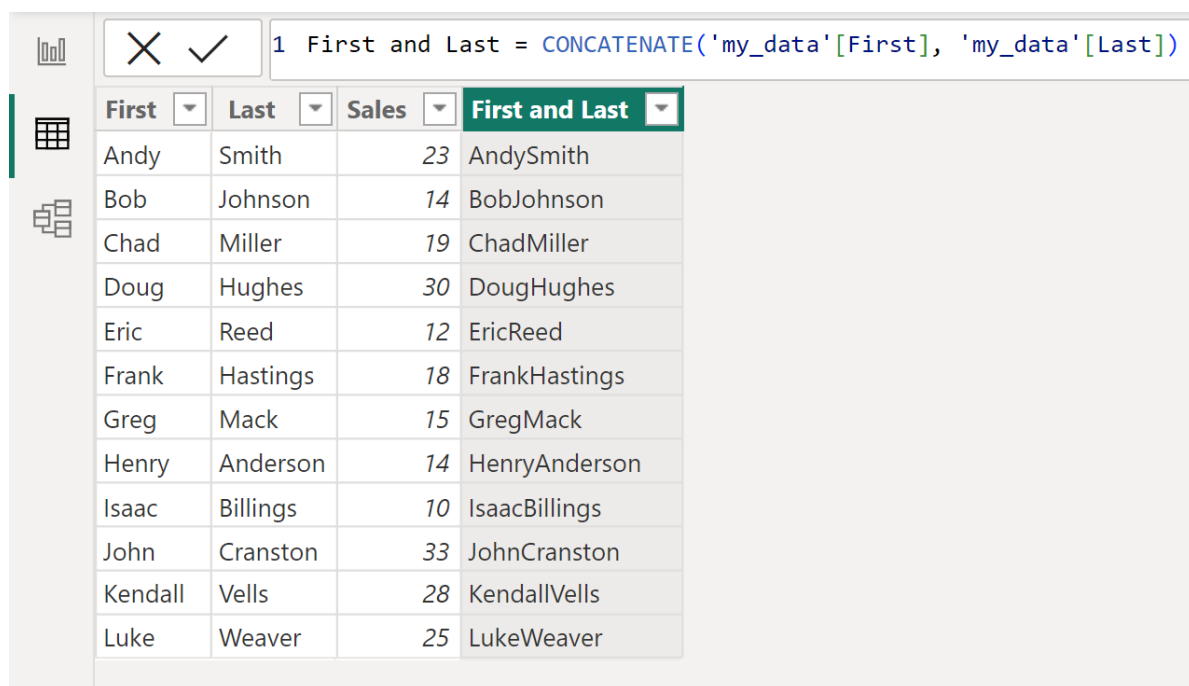
Example 1: Concatenate Two Columns with No Separator

The most direct method of joining two string columns is to use the `CONCATENATE` function on its own. This approach is ideal when you require a continuous string without any intervening characters, such as combining unique IDs or sequential codes. We will apply this to merge the **First** and **Last** columns directly.

To initiate this process in [Power BI](#) Desktop, navigate to the [Table tools](#) menu tab. From there, select the **New column** icon. This action opens the formula bar, allowing you to input the necessary [DAX](#) expression. Type the following formula precisely into the bar:

First and Last = CONCATENATE('my_data', 'my_data')

Upon executing this formula, [Power BI](#) instantly generates a new column named **First and Last**. As shown below, the resulting column displays the strings from the **First** and **Last** columns joined together with no separator:



First	Last	Sales	First and Last
Andy	Smith	23	AndySmith
Bob	Johnson	14	BobJohnson
Chad	Miller	19	ChadMiller
Doug	Hughes	30	DougHughes
Eric	Reed	12	EricReed
Frank	Hastings	18	FrankHastings
Greg	Mack	15	GregMack
Henry	Anderson	14	HenryAnderson
Isaac	Billings	10	IsaacBillings
John	Cranston	33	JohnCranston
Kendall	Vells	28	KendallVells
Luke	Weaver	25	LukeWeaver

Example 2: Concatenate Two Columns with a Separator

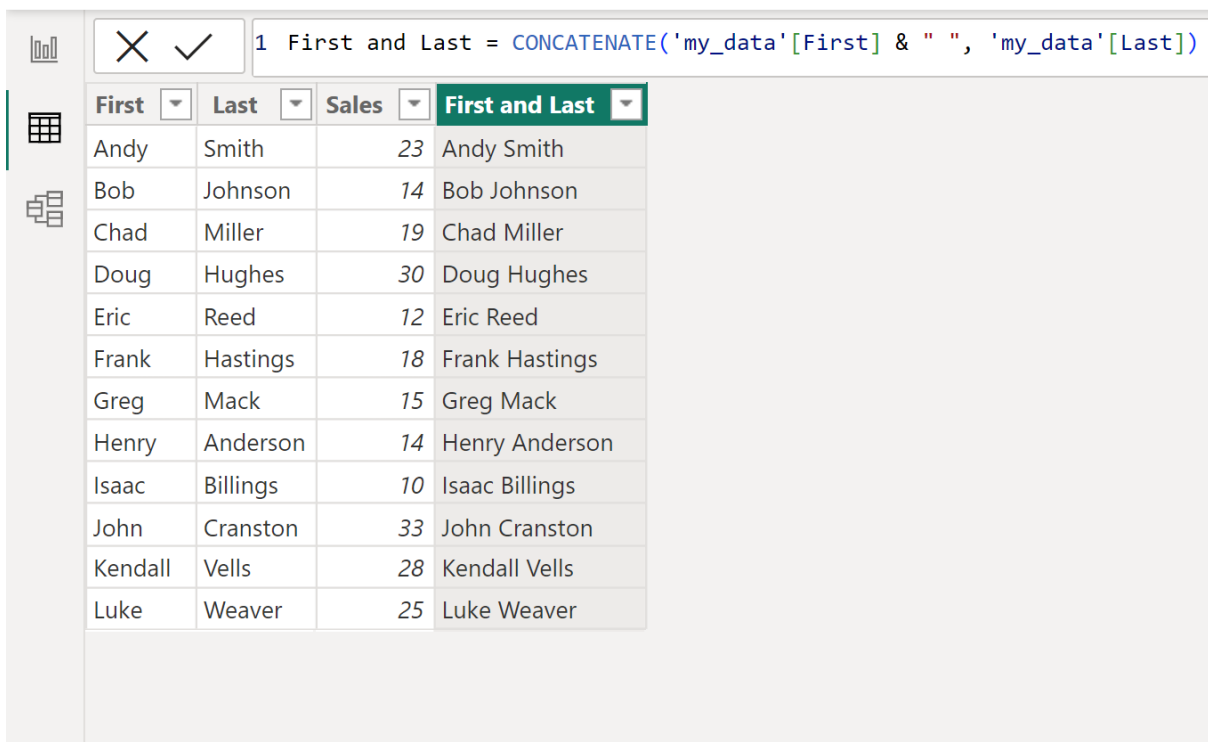
For standard data presentations, especially when dealing with names or addresses, the inclusion of a separator (like a space) is crucial for clarity. Achieving this requires incorporating the [& operator](#) into the [CONCATENATE](#) expression. This method allows us to explicitly insert a literal string--the separator--between the two data fields.

Following the same procedural steps as before, click the [Table tools](#) tab, and then select the **New**

column icon. In the formula bar, input the enhanced concatenation formula designed to include a space:

First and Last = CONCATENATE('my_data' & " ", 'my_data')

In this expression, the `& " "` segment is evaluated first, combining the first name with a space, and then the entire result is concatenated with the last name. The visual result immediately demonstrates the improved structure and readability achieved by adding the space separator:



The screenshot shows the Power BI interface. At the top, the formula bar contains the DAX formula: `1 First and Last = CONCATENATE('my_data'[First] & " ", 'my_data'[Last])`. Below the formula bar, a table visualization is displayed with four columns: **First**, **Last**, **Sales**, and **First and Last**. The table contains 12 rows of data, where the 'First and Last' column shows the first and last names concatenated with a space.

First	Last	Sales	First and Last
Andy	Smith	23	Andy Smith
Bob	Johnson	14	Bob Johnson
Chad	Miller	19	Chad Miller
Doug	Hughes	30	Doug Hughes
Eric	Reed	12	Eric Reed
Frank	Hastings	18	Frank Hastings
Greg	Mack	15	Greg Mack
Henry	Anderson	14	Henry Anderson
Isaac	Billings	10	Isaac Billings
John	Cranston	33	John Cranston
Kendall	Vells	28	Kendall Vells
Luke	Weaver	25	Luke Weaver

Leveraging Separator Flexibility

It is important to note the versatility offered by the [& operator](#). While we chose to use a standard space as a separator in the previous example, you are not restricted to this choice. Any character or string literal can be used as the intermediary by simply defining it within the quotation marks following the **&** symbol. This flexibility is highly useful when constructing unique identifiers, dates, or structured codes.

Note that we chose to use a space as a separator, but you could use any separator you'd like by specifying it after the **&** symbol.

For example, you could use the following syntax to use a dash as a separator:

First and Last = CONCATENATE('my_data' & "-", 'my_data')

This will concatenate the values from the First and Last columns together with a dash in between them, demonstrating the power of string manipulation within [DAX](#):



The screenshot shows the Power BI interface. At the top, the DAX formula bar contains the formula: `1 First and Last = CONCATENATE('my_data'[First] & "-", 'my_data'[Last])`. Below the formula bar, a table is displayed with four columns: First, Last, Sales, and First and Last. The 'First and Last' column shows the result of the DAX formula, which concatenates the first and last names with a dash in between.

First	Last	Sales	First and Last
Andy	Smith	23	Andy-Smith
Bob	Johnson	14	Bob-Johnson
Chad	Miller	19	Chad-Miller
Doug	Hughes	30	Doug-Hughes
Eric	Reed	12	Eric-Reed
Frank	Hastings	18	Frank-Hastings
Greg	Mack	15	Greg-Mack
Henry	Anderson	14	Henry-Anderson
Isaac	Billings	10	Isaac-Billings
John	Cranston	33	John-Cranston
Kendall	Vells	28	Kendall-Vells
Luke	Weaver	25	Luke-Weaver

Additional Resources for Data Transformation

Mastering column [concatenation](#) is a foundational skill in data transformation using Power BI. These techniques enable analysts to prepare data tables optimally for comprehensive reporting and dashboard creation.

The following tutorials explain how to perform other common tasks in Power BI, further expanding your capabilities in data modeling and calculated field creation:

Exploring Time Intelligence Functions in DAX

Implementing Conditional Formatting in Visualizations

Filtering Data Efficiently using Power Query