

Using VLOOKUP in Microsoft Excel or Google Spreadsheet

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Ctrl+F is a keyboard shortcut that many of us are familiar with. We usually use it to find words or phrases quickly and efficiently when reading or browsing through an article on a website. We can also use it in word processing programs, spreadsheets, or even PDFs.

Though Ctrl+F allows us to find specific data in *Microsoft Excel* and *Google Spreadsheets*, its usefulness stops there as we could not manipulate the data any further. In this short article, we will look at how to use VLOOKUP to find and display a particular data when using spreadsheets programs such as *Microsoft Excel* or *Google Spreadsheet*.

Let's start by looking at the syntax

Syntax: =VLOOKUP(lookup_value, table_array, col-index-num, range_lookup)

| Syntax | Required | Information | Summary |
|---------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| lookup_value | Yes | This value is located in the leftmost column of your data range (i.e., table_array). Lookup function uses this value as the search term. | This is your search term. |
| table_array | Yes | Also known as a lookup table. You can use absolute reference to 'lock' the table.* | This is your data range. |
| col-index-num | Yes | This is the number of the column that contains the search result. The leftmost column of your table_array is column 1. | This is the column number that contains the search result. |
| range_lookup | No | Accepts either TRUE (1) or FALSE (0) value only. By default, it is set to TRUE. Use FALSE or 0 if you want to look for an exact match to your search term. If you use TRUE or 1, sort the leftmost column in ascending order. | Use: 1. FALSE or 0 for exact match. 2. TRUE or 1 for approximate match. |

*Note: In *Microsoft Excel* or *Google Spreadsheet*, an absolute reference is a reference that we have fixed its location. We create an absolute reference by adding the \$ sign to the row and column reference. For example, to make cell A1 an absolute reference, we will place the \$ sign before A and 1 respectively. So,

- a. A1 (relative reference) -> \$A\$1 (absolute reference) and
- b. A2:C7 (relative reference) →\$A\$2:\$C\$7 (absolute reference)

You can think of the VLOOKUP function as:

=VLOOKUP(what to search for, where to search in, the column number of the search result, return exact/approximate match)

Now, let's look at how to use VLOOKUP

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Suppose we have a table as shown in Figure 1. We can use the VLOOKUP function to find and display the marks of a particular student.

G4 contains the following formula: =VLOOKUP(\$G\$3, \$A\$2:\$C\$7, 2, FALSE)

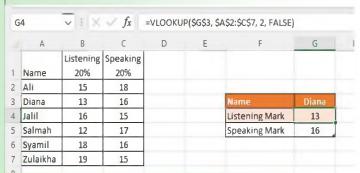


Figure 1

In this formula:

- 1. lookup_value (what to search for)
- → \$G\$3 (i.e., a (fixed) cell with a value, Diana)
- 2. table_array (where to search in)
- → \$A\$2:\$C\$7 (i.e., a fixed range starting from A2 to C7)
- 3. col-index-num (the column number of the search result)
- 2 (i.e., column B is the column in which the search result is located)
- range_lookup (return exact/approximate match)
 - → FALSE (i.e., look for an exact match)

Can you guess the formula in G5?

Yes, the formula in G5 is =VLOOKUP(\$G\$3, \$A\$2:\$C\$7, 3, FALSE).

And if you change the name (Diana) in G3 to any other names listed in A2:A7, you will get the corresponding listening (in G4) and speaking marks (in G5).

Using VLOOKUP to find information from a table located on a different sheet

To do this, add the name of the sheet (enclosed in single quotation marks) followed by an exclamation mark before the **table_array**.

Let's say the table shown in Figure 1 is on a sheet named 'Assessment' and the contents of F3:G5 is on another sheet named 'Search Info' (see Figure 2).

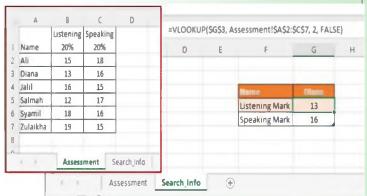


Figure 2

Figure 2 shows two different sheets:

- a. Assessment on which the data is found, and
- b. Search_Info on which the listening and speaking marks of individual student are displayed

Note that the VLOOKUP formula in cell G4 on the Search_Info sheet has been changed from:

the original =VLOOKUP(\$G\$3, \$A\$1:\$C\$7, 2, FALSE)

to =VLOOKUP(\$G\$3, 'Assessment '!\$A\$1:\$C\$7, 2, FALSE)

The name of the sheet enclosed in single quotation marks followed by an exclamation mark have been added to table_array

Caution

When using VLOOKUP, here are some issues you have to remember:

- 1. The **lookup_value** must be the left-most column of your **table_array** (lookup table) i.e., the first column of your data range.
- 2. The content of **lookup_value** must be a cell reference, e.g.: G3. If you want to use a text, you must en-

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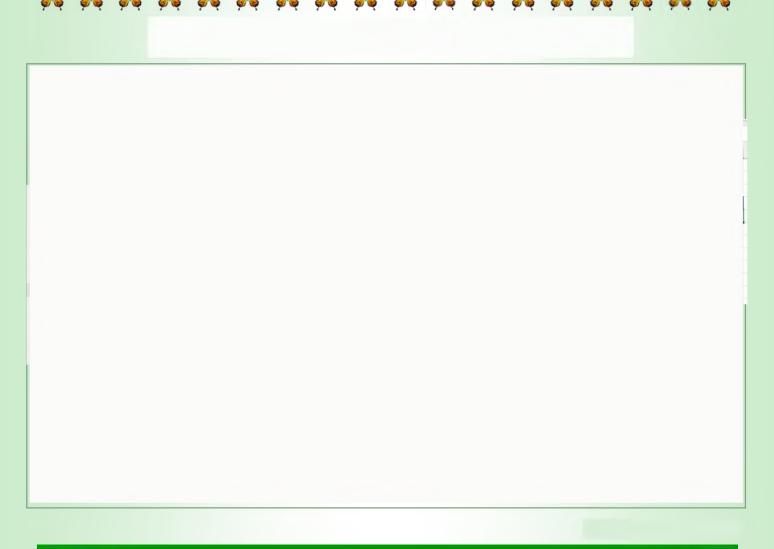
close the text in single quotation marks, e.g.: 'Diana'.

- 3. Are you using absolute reference instead of relative reference?
- 4. Is the table_array (lookup table) on the same sheet or a different one?
- 5. For **col-index-num**, are you pointing to the correct column in the **table_array** (lookup table)?
- 6. For range_lookup, use FALSE for the exact match.

7. If you use TRUE in **range_lookup**, you must ensure that the first column of the **table_array** is sorted in ascending order.

Conclusion

VLOOKUP is a very useful function that we can use to find and display data. Try using it in your *Microsoft Excel* or *Google Spreadsheet.* I am sure you will be an expert of VLOOKUP in no time. Good luck and adios...



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