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Comma Separated Values (CSV) data format is quite common and you will often find yourself working with this kind of data in Excel. In such cases, you may want to divide these values into different cells at each point where there is a comma. In this article, I am going to show you some simple methods to separate comma-separated values in Excel. Microsoft Excel has recently introduced the TEXTSPLIT function for us to split a text based on a delimiter. Below is a table where each respondent entered their favorite three colors. They entered three colors in column B and separated them with commas. I want to split these results into columns C, D, and E. To separate the comma-separated colors in column B, I can use the below formula in cell C2. Then, I have to copy the same formula to the rows below. =TEXTSPLIT(B2,",") The syntax of the TEXTSPLIT function is =TEXTSPLIT(text,col_delimiter,[row_delimiter],[ignore_empty], [match_mode], [pad_with]). In this case, I am using only the first two arguments to split the text based on commas. As the first argument, I have to select the text. So, I select cell B2 as the first argument. Then, I want to separate the selected text into columns at each comma. So, I enter a comma within quotes for the second argument. If I want to separate the comma-separated values into multiple rows instead of columns, I can skip the second argument and enter the comma within quotes in the third argument. Currently, the TEXTSPLIT function is available only for Microsoft 365 users. If you are not a Microsoft 365 user, you cannot apply this formula. Pro Tip: If I want to separate a text into multiple columns based on multiple delimiters, I can use an array constant {} for the second argument and enter all the delimiters within quotes inside the array constant. Also read: How to Add Comma Between Names in Excel If we don't have the Microsoft 365 Excel version, we can't use the Excel TEXTSPLIT function. Then, we have to combine Excel text functions to dynamically separate comma-separated values in Excel. Below is a table where each respondent entered their favorite three colors. They entered three colors in column B and separated them with commas. Now, I want to split these results into columns C, D, and E. To separate the comma-separated three colors in column B, I have to use three different formulas. I can use the below formula to extract the first color from column B. =LEFT(B2,FIND(",",B2)-1) I am using the Excel LEFT function to extract the first color. To get the number of characters dynamically, I use the FIND function. I use a comma within quotes for the "find_text" argument of the FIND function. The "FIND(",",B2)" part of the formula helps to get the number of characters of the first color, including the first comma. As I want to get only the color (without the comma), I am reducing 1 from the number of characters. I can use the below formula to extract the second color from column B. =MID(B2, FIND(",",B2) + 2, FIND(",",B2,FIND(",",B2)+2) - FIND(",",B2) -2) I am using the Excel MID function to extract the second color. I use the FIND function to get the number of characters and starting position to extract data dynamically. I use a comma within quotes for the "find_text" argument of the FIND function. As I want to get only the color (without the comma and space), I am adjusting the number of characters by 2 (1 comma + 1 space). I can use the below formula to extract the last color from column B. =RIGHT(B2, (LEN(B2)-FIND(",", B2,FIND(",",B2)+1))-1) I am using the Excel RIGHT function to extract the last color. To get the number of characters dynamically, I use the FIND function. I use a comma within quotes for the "find_text" argument of the FIND function. I am using the LEN function to get the total number of characters of each cell in column B. A couple of important things to know when using the above formulas: I have created these formulas to show you How it works when you have 3 comma-separated values in a cell. If you have more or less, than you will have to adjust these formulas Once you have the result, and you do not need the original data, you need to convert your formula result data into static values and only then delete your original data set Also read: Extract Text After Space in Excel If you don't like Excel functions and you want to separate comma-separated values in Excel, I am sure you will definitely love this method. This method is Excel Flash Fill. Below is a table where each respondent entered their favorite three colors. They entered three colors in column B and separated them with commas. Now, I want to split these results into columns C, D, and E. I can use the below steps to separate comma-separated values using the Excel Flash Fill option. Go to cell C2 and type the first word before the first comma. So, I type Green in cell C2. (I can even copy and paste the words). Go to the cell below that (which is cell C3 in this case) and press "Control + E " to flash fill. As soon as I use the Flash fill shortcut, I will get the first color for all rows in column C. Go to cell D2 and type the word before the second comma. So, I type Red in cell D2. Go to one cell below (which is cell D3 in this case) and press "Control + E " to flash fill. As soon as I use the Flash fill shortcut, I will get the second color for all rows in column D. Go to cell E2 and type the last color of cell B2. So, I type Blue in cell E2. Go to one cell below (which is cell E3 in this case) and press "Control + E " to flash fill. As soon as I use the Flash fill shortcut, I will get the last color for all rows in column E. This method can be used when we have the same number of comma-separated values for all rows. Otherwise, it is difficult for Excel to identify the pattern. So, we may get the wrong results. You can also use Flash Fill by going to the Data tab and then clicking on the Flash Fill icon, which is in the Data Tools group. While Flash Fill has worked perfectly in this case, keep this in mind that it works by identifying patterns based on a manual entry that you do in the adjacent column. In case the data is not consistent or it's a complex data set, Flash Fill may not be able to identify the correct pattern. So it's always a good idea to double-check your results Also read: Convert Text to Rows in Excel Let's say that we want to separate comma-separated values using a non-formula method. However, the number of values in each cell is not the same. In such a situation, we can use the Excel Text-to-Columns feature to do this task. Below is a table where each respondent entered their favorite three colors in column B and separated them with commas. Now, I want to split these results into columns C, D, and E. I can use the below steps to separate comma-separated values using the Text-to-Column feature. Copy all the colors in column B to column C. Go to the "Data" tab while you select the pasted values. Click the "Text-to-Column" icon (which is in the Data Tools group). Select the "Delimited" option in the Convert Text to Columns Wizard – Step 1 of 3. Then, Click the "Next" button. Select the "Comma" option in the Convert Text to Columns Wizard – Step 2 of 3. Then, Click the "Finish" button. Then, Excel will separate the comma-separated colors into multiple columns, as shown below. This method is not a dynamic option in Excel. For example, if you change the original data (data in column B in this case), it will not be updated in the split data. One benefit of this method is that your data doesn't need to be consistent. So you can have three colors in one cell and four in another cell, and it would still split these separated values into different columns. Also read: Combine Two Columns in Excel (with Space/Comma) We can use another method to separate comma-separated values in Excel. This method is Excel Power Query. Using this method, we can easily separate comma-separated values into columns or rows. Below is a table where each respondent entered their favorite three colors. They entered three colors in column B and separated them with commas. Now, I want to split these results into columns C, D, and E. I can use the below steps to separate comma-separated values using the Excel Power Query. Select the comma-separated values, including the heading. So, I am selecting cells B1 to B5. Click the "From Table/Range" icon (Which is in the "Get & Transform Data" Group). Check the "My table has headers" option and click the "OK" button. Then, I can see the "Power Query Editor" window. Go to the "Home" tab of "Power Query Editor" and expand the "Split Column" options in the Transform Group. Click "By Delimiter" from the expanded options list. After I select that, I can see the "Split Column by Delimiter" dialog box. Select "Comma" as the delimiter and select "Each occurrence of the delimiter" to split at. Then, click the "OK" button. Finally, press the "Close & Load" icon of the "Home" tab of the Power Query Editor. Now, I got a new table that has multiple columns for comma-separated values in a new sheet. I can copy these separated colors to my original data table. Additionally, we can use Excel VBA codes also to separate comma-separated values in Excel. In summary, Excel provides quite useful features to separate comma-separated values. We can select the best option as per our choice. Other Excel articles you may also like: The tutorial explains how to split cells in Excel using formulas and the Split Text feature. You will learn how to separate text by comma, space or any other delimiter, and how to split strings into text and numbers. Splitting text from one cell into several cells is the task all Excel users are dealing with once in a while. In one of our earlier articles, we discussed how to split cells in Excel using the Text to Column feature and Flash Fill. Today, we are going to take an in-depth look at how you can split strings using formulas and the Split Text tool. To split string in Excel, you generally use the LEFT, RIGHT or MID function in combination with either FIND or SEARCH. At first sight, some of the formulas might look complex, but the logic is in fact quite simple, and the following examples will give you some clues. When splitting cells in Excel, the key is to locate the position of the delimiter within the text string. Depending on your task, this can be done by using either case-insensitive SEARCH or case-sensitive FIND. Once you have the delimiter's position, use the RIGHT, LEFT or MID function to extract the corresponding part of the text string. For better understanding, let's consider the following example. Supposing you have a list of SKUs of the Item-Color-Size pattern, and you want to split the column into 3 separate columns: To extract the item name (all characters before the 1st hyphen), insert the following formula in B2, and then copy it down the column: =LEFT(A2, SEARCH("-",A2,1)-1) In this formula, SEARCH determines the position of the 1st hyphen ("-") in the string, and the LEFT function extracts all the characters left to it (you subtract 1 from the hyphen's position because you don't want to extract the hyphen itself). To extract the color (all characters between the 1st and 2nd hyphens), enter the following formula in C2, and then copy it down to other cells: =MID(A2, SEARCH("-",A2) + 1, SEARCH("-",A2,SEARCH("-",A2)+1) - SEARCH("-",A2) - 1) In this formula, we are using the Excel MID function to extract text from A2. The starting position and the number of characters to be extracted are calculated with the help of 4 different SEARCH functions: Start number is the position of the first hyphen +1: SEARCH("-",A2) + 1 Number of characters to extract: the difference between the position of the 2nd hyphen and the 1st hyphen, minus 1: SEARCH("-", A2, SEARCH("-",A2)+1) - SEARCH("-",A2) -1 To extract the size (all characters after the 3rd hyphen), enter the following formula in D2: =RIGHT(A2,LEN(A2) - SEARCH("-", A2, SEARCH("-", A2) + 1)) In this formula, the LEN function returns the total length of the string, from which you subtract the position of the 2nd hyphen. The difference is the number of characters after the 2nd hyphen, and the RIGHT function extracts them. In a similar fashion, you can split column by any other character. All you have to do is to replace "-" with the required delimiter, for example space (" "), comma (","), slash ("/"), colon (";"), semicolon (";"), and so on. Tip. In the above formulas, +1 and -1 correspond to the number of characters in the delimiter. In this example, it's a hyphen (1 character). If your delimiter consists of 2 characters, e.g. a comma and a space, then supply only the comma (",") to the SEARCH function, and use +2 and -2 instead of +1 and -1. To split text by space, use formulas similar to the ones demonstrated in the previous example. The only difference is that you will need the CHAR function to supply the line break character since you cannot type it directly in the formula. Supposing, the cells you want to split look similar to this: Take the formulas from the previous example and replace a hyphen ("-") with CHAR(10) where 10 is the ASCII code for Line feed. To extract the item name: =LEFT(A2, SEARCH(CHAR(10),A2,1)-1) To extract the color: =MID(A2, SEARCH(CHAR(10),A2) + 1, SEARCH(CHAR(10),A2,SEARCH(CHAR(10),A2)+1) - SEARCH(CHAR(10),A2) - 1) To extract the size: =RIGHT(A2,LEN(A2) - SEARCH(CHAR(10), A2, SEARCH(CHAR(10), A2) + 1)) And this is how the result looks like: To begin with, there is no universal solution that would work for all alphanumeric strings. Which formula to use depends on the particular string pattern. Below you will find the formulas for the two common scenarios. Supposing, you have a column of strings with text and numbers combined, where a number always follows text. You want to break the original strings so that the text and numbers appear in separate cells, like this: The result may be achieved in two different ways. The easiest way to split text string where number comes after text is this: To extract numbers, you search the string for every possible number from 0 to 9, get the numbers total, and return that many characters from the end of the string. With the original string in A2, the formula goes as follows: =RIGHT(A2,SUM(LEN(A2) - LEN(SUBSTITUTE(A2, {"0","1","2","3","4","5","6","7","8","9"},"")))) To extract text, you calculate how many text characters the string contains by subtracting the number of extracted digits (C2) from the total length of the original string in A2. After that, you use the LEFT function to return that many characters from the beginning of the string. =LEFT(A2,LEN(A2)-LEN(C2)) Where A2 is the original string, and C2 is the extracted number, as shown in the screenshot: An alternative solution would be using the following formula to determine the position of the first digit in the string: =MIN(SEARCH({0,1,2,3,4,5,6,7,8,9},A2&"0123456789")) Once the position of the first digit is found, you can split text and numbers by using very simple LEFT and RIGHT formulas. To extract text: =LEFT(A2, B2-1) To extract number: =RIGHT(A2, LEN(A2)-B2+1) Where A2 is the original string, and B2 is the position of the first number. To get rid of the helper column holding the position of the first digit, you can embed the MIN formula into the LEFT and RIGHT functions: Formula to extract text: =LEFT(A2,MIN(SEARCH({0,1,2,3,4,5,6,7,8,9},A2&"0123456789"))-1) Formula to extract numbers: =RIGHT(A2,LEN(A2)-MIN(SEARCH({0,1,2,3,4,5,6,7,8,9},A2&"0123456789"))+1) If you are splitting cells where text appears after number, you can extract numbers with the following formula: =LEFT(A2, SUM(LEN(A2) - LEN(SUBSTITUTE(A2, {"0","1","2","3","4","5","6","7","8","9"}, "")))) The formula is similar to the one discussed in the previous example, except that you use the LEFT function instead of RIGHT to get the number from the left side of the string. Once you have the numbers, extract text by subtracting the number of digits from the total length of the original string: =RIGHT(A2,LEN(A2)-LEN(B2)) Where A2 is the original string and B2 is the extracted number, as shown in the screenshot below: Tip. To get number from any position in a text string, use either this formula or the Extract tool. Or you can create a custom function to split numbers and text into separate columns. This is how you can split strings in Excel using different combinations of different functions. As you see, the formulas are far from obvious, so you may want to download the sample Excel Split Cells workbook to examine them closer. If figuring out the arcane twists of Excel formulas is not your favorite occupation, you may like the visual method to split cells in Excel, which is demonstrated in the next part of this tutorial. An alternative way to split a column in Excel is using the Split Text feature included with our Ultimate Suite for Excel, which provides the following options: Split cell by character Split cell by string Split cell by mask (pattern) To make things clearer, let's have a closer look at each option, one at a time. Choose this option whenever you want to split the cell contents at each occurrence of the specified character. For this example, let's the take the strings of the Item-Color-Size pattern that we used in the first part of this tutorial. As you may remember, we separated them into 3 different columns using 3 different formulas. And here's how you can achieve the same result in 2 quick steps: Assuming you have Ultimate Suite installed, select the cells to split, and click the Split Text icon on the Ablebits Data tab. The Split Text pane will open on the right side of your Excel window, and you do the following: Expand the Split by character group, and select one of the predefined delimiters or type any other character in the Custom box. Choose whether to split cells to columns or rows. Review the result under the Preview section, and click the Split button. Tip. If there might be several successive delimiters in a cell (for example, more than one space character), select the Treat consecutive delimiters as one box. Done! The task that required 3 formulas and 5 different functions now only takes a couple of seconds and a button click. This option lets you split strings using any combination of characters as a delimiter. Technically, you split a string into parts by using one or several different substrings as the boundaries of each part. For example, to split a sentence by the conjunctions "and" and "or", expand the Split by strings group, and enter the delimiter strings, one per line: As the result, the source phrase is separated at each occurrence of each delimiter: Tip. The characters "or" as well as "and" can often be part of words like "orange" or "Andalusia", so be sure to type a space before and after and and or to prevent splitting words. And here another, real-life example. Supposing you've imported a column of dates from an external source, which look as follows: 5.1.2016 12:20 5.2.2016 14:50 This format is not conventional for Excel, and therefore none of the Date functions would recognize any of the date or time elements. To split day, month, year, hours and minutes into separate cells, enter the following characters in the Split by strings box: Dot (.) to separate day, month, and year Colon (:) to separate hours and minutes Space to separate date and time Hit the Split button, and you will immediately get the result: Separating a cell by mask means splitting a string based on a pattern. This option comes in very handy when you need to split a list of homogeneous strings into some elements, or substrings. The complication is that the source text cannot be split at each occurrence of a given delimiter, only at some specific occurrence(s). The following example will make things easier to understand. Supposing you have a list of strings extracted from some log file: What you want is to have date and time, if any, error code and exception details in 3 separate columns. You cannot utilize a space as the delimiter because there are spaces between date and time, which should appear in one column, and there are spaces within the exception text, which should also appear in one column. The solution is splitting a string by the following mask: *ERROR:*Exception:* Where the asterisk (*) represents any number of characters. The colons (:) are included in the delimiters because we don't want them to appear in the resulting cells. And now, expand the Split by mask section on the Split Text pane, type the mask in the Enter delimiters box, and click Split: The result will look similar to this: Note. Splitting string by mask is case-sensitive. So, be sure to type the characters in the mask exactly as they appear in the source strings. A big advantage of this method is flexibility. For example, if all of the original strings have date and time values, and you want them to appear in different columns, use this mask: * *ERROR:*Exception:* Translated into plain English, the mask instructs the add-in to divide the original strings into 4 parts: All characters before the 1st space found within the string (date) Characters between the 1st space and the word ERROR: (time) Text between ERROR: and Exception: (error code) Everything that comes after Exception: (exception text) I hope you liked this quick and straightforward way to split strings in Excel. If you are curious to give it a try, an evaluation version is available for download below. I thank you for reading and hope to see you on our blog next week! Excel Split Cells formulas (.xlsx file) Ultimate Suite 14-day fully-functional version (.exe file) Suppose we have a dataset of some salesman and their respective annual sales (in USD). Let's insert some commas to make the Sales numbers much more user-friendly. Method 1 – Using Format Cells Option STEPS: Select the cells in which to insert commas. Right-click on the selection and select Format Cells from the context menu. The Format Cells dialog box will open. From the Number tab, select Number from Category. Tick Use 1000 Separator. Click OK. There is a comma after every 3 digits. Alternatively, to achieve the same result, select Accounting from Category then select None from Symbol. Or, select Custom from Category, then #,##0 from the Type box. Read More: How to Put Comma After 2 Digits in Excel Method 2 – Using Accounting Number Format STEPS: Select your data. Go to the Home tab. Select Number Format. Click Accounting. Numbers will be formatted to Accounting separated by commas. Method 3 – Using Comma Style STEPS: Select the data Go to the Home tab. Click Comma Style. The numbers are separated by commas. Read More: How to Change Comma Style in Excel Method 4 – Using Shortcut Keys STEPS: Select the data and press the ALT key. The ribbon will show a shortcut key for every option. Press H (for the Home tab). The numbers all have commas. Method 5 – Using the FIXED Function In addition to formatting techniques, there are several functions we can use to add commas to numbers. The first we'll demonstrate is the FIXED function. STEPS: Create a new column in our dataset as in the image below. In cell D5, enter the following formula: Here, C5= the actual number 0= decimal places (we don't want any decimal places) Press ENTER to return the result. Use the Fill Handle to drag the formula down to the rest of the cells. Method 6 – Using the TEXT Function Another function that can add commas to numbers is the TEXT function. STEPS: In cell D5, enter the following formula: Press ENTER. Use the Fill Handle to drag the formula down to the other cells in the range. Method 7 – Using the DOLLAR Function For currency in dollar units, we can insert a comma with the DOLLAR function. STEPS: In cell D5, enter the following formula: Press ENTER and use the Fill Handle tool to drag the formula down. Download Practice Workbook Putting Comma in Numbers.xlsx Related Articles