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If youve ever felt overwhelmed by the tasks of sorting, formatting, and presenting data in Excel, the TEXT function might just be the life-saver you need. This nifty tool can streamline your workflows by turning complex data into readable formats without breaking a sweat. Imagine being able to convert those pesky date formats into a consistent style or swiftly combining numbers and text to create informative headers all with a single function!Key Takeaways:The Excel TEXT function allows users to convert numbers into text with specified formatting, enabling the display of data in a more readable or required format. This can be particularly useful when dealing with dates, times, and numerical data that need to conform to specific report formats or stylistic guidelines.Examples of format codes within the TEXT function include patterns like dd/mm/yyyy for dates, hh:mm:ss AM/PM for times, and #,##0.00 for numbers, which help define the structure of the resulting text string. Understanding these codes is critical for applying the correct formatting to various data types.The TEXT function is versatile and can also be used to concatenate text strings and values. For instance, combining static text with formatted numbers to create dynamic and informative labels or descriptions directly within a spreadsheet cell, without additional concatenation functions or formulas.Common errors with the Excel TEXT function often relate to invalid format codes or incorrect references. Users must ensure they use supported format codes and validate the references to prevent errors such as #VALUE! from appearing in the cells where they apply the TEXT function. Understanding the Role of TEXT Function in Data FormattingThe TEXT function serves a crucial role in the data formatting realm of Excel, bridging the gap between raw data and user-friendly information. It gives you unparalleled control over how your data appears, allowing you to define text, dates, and numbers in various ways that best suit your needs or the expectations of your audience. Whether you want to display figures in a certain currency, showcase dates in a specific format, or even manipulate how large numbers are presented, the TEXT function steps in to make data not only more legible but structured in a way that enhances comprehension.You can see the following possible formats below:To displayAsUse this format1234.591234.6####.#8.98.900#.0000.6310.60.#1234.5681234.6#.0#5.255 1/4# ???/???1200012000#,###1200012#,1220000012.20.0,,Months112mMonths0112mmMonthsJanDecmmmMonthsJanuaryDecembermmmmMonthsJDmmmmmDays131dDays0131ddDaysSunSatdddDaysSundaySaturdaydddYears0099yyYears19009999yyyyHours023hHours0023hhMinutes059mMinutes0059mmSeconds059sSeconds0059ssTime4:00 AMh AM/PMTime4:36 PMh:mm AM/PMTime4:36:03 PMh:mm:ss A/PTime36:03.8h:mm:ss.00 Demystifying TEXT Function Syntax and UsageBreaking Down the Formula: Syntax EssentialsDiving into the syntax of the TEXT function, its quite straightforward. The formula takes on two arguments: the value you want to format and the format code that defines how this value should appear. The structure looks like =TEXT(value, "format_code"). The value is what youre aiming to reshape, be it a date, number, or another piece of data. The format_code is a powerful component where you specify the desired format using predefined codes for dates, times, numbers, and more. Its about matching the right code to your data to achieve the desired textual representation.STEP 1: For example, we want to get the month of the date. So we type in: =TEXT(A8,mm)STEP 2: We immediately get the results thanks to the TEXT function.Practical Tips for Effective TEXT Function UseWhen using the TEXT function, there are a few practical tips that can make your life easier. To start, always preview your format codes in an empty cell before applying them to ensure they work as expected. Keep a list of frequently used format codes handy for quick reference; this saves time and reduces errors. Also, remember that while the TEXT function is great for displaying data, it converts numbers to text, which means you cant perform calculations on them directlyplan accordingly. And lastly, consider combining TEXT with other functions for complex formatting needs. Master these tips, and youll be on your way to becoming a TEXT function wizard.Advanced Formatting with the TEXT FunctionCustom Date and Time Formats Made EasyGone are the days of fiddling with pesky date and time formats that dont quite fit your preferences or needs. With Excels TEXT function, you can easily tailor the appearance of date and time information in your spreadsheets. From rearranging the day, month, and year components, to defining whether you want a 12-hour or 24-hour clock display, the options are virtually limitless. Interested in adding textual elements like hrs and mins to time intervals? Its a breeze! Access the custom number formats, find your preferred date or time type, tap in the right code, and voil your data is both informative and aesthetically pleasing.Financial and Numerical Data PresentationFinancial and numerical data can often appear as a sea of digits that are intimidating at first glance. The TEXT function in Excel empowers you to present this data in a way thats much easier on the eyes. Whether its including currency symbols, decimal places, commas for thousand separators, or even displaying negative amounts in red or in parentheses, TEXT handles it with elegance. This not only adds clarity to financial statements and reports but also increases accuracy by preventing misinterpretation of figures. Think of it as tailoring your numerical data to speak the language of your stakeholders, with precision and transparency.The Intersection of TEXT Function with Other FormulasCombining TEXT Function with Logical OperationsBlend logical operations with the TEXT function, and Excel becomes a powerhouse for dynamic data management. Pair TEXT with IF statements to conditionally format data, making cells react to specific criteria with tailored text formats. You could, for instance, flag up dates that are approaching a deadline or highlight revenue changes that surpass a certain threshold. This combination is particularly useful for dashboards and reports where you want key information to stand out or be interpreted in context.Creative Uses of TEXT with Lookup FunctionsWhen you blend the TEXT function with lookup functions like VLOOKUP or INDEX-MATCH, your data analysis and presentation get a creative boost. This pairing lets you retrieve information and simultaneously format it without altering the source data. For example, you can extract a price from one table and display it in a currency format in another report, all in a single formula. The key is to nest the TEXT function within your lookup formula, so as you pull the data, its already dressed up for the occasion.Overcoming Common Hurdles with TEXT FunctionTroubleshooting Typical Issues and ErrorsWhen you hit a snag with the TEXT function, dont frettroubleshooting is part of the journey to mastery. A common hiccup is the #VALUE! error, which usually pops up when the format code is incorrect or the value isnt compatible with the TEXT function. Double-check those format strings, and ensure your value is actually a number or a date. Another frequent issue is the appearance of unexpected results, such as a date formatted as a string of numbers. This often means revisiting the syntax and format codes to iron out any kinks. Remember, when in doubt, Excels trusty Help feature is your go-to resource.Performance Optimization for Large DatasetsDealing with large datasets can significantly impact performance, but with smart optimization strategies, you can maintain efficiency. One key is to limit the use of the TEXT function only to the final stage of your report or output, preventing unnecessary processing in intermediary steps. Also, keep the formatting simple; overcomplicated custom formats can slow down your spreadsheets. Where possible, convert TEXT formula results back to values once the desired format is achieved. This step avoids continuous recalculations and keeps your workbook zippy.Expert Tips and Tricks for TEXT Function MasteryLeveraging Hidden Features of TEXT Function FormulasExcels TEXT function is much like an iceberg whats on the surface is impressive, but theres even more to discover underneath. One hidden gem is its ability to work with conditions and arrays to format only specific entries that meet certain criteria. Another subtle yet powerful feature is the functions harmony with Excels custom formats, enabling the design of truly unique data representations. Additionally, mastering lesser-known format codes can bring a wow factor to your data visualizations that few users will know how to replicate.Maximum Impact: Shortcuts and Efficiency TechniquesTo make the most of the TEXT function, embrace shortcuts and efficiency techniques. Instead of manually typing format codes, use the cell format dialog to explore and test formats, then copy-paste the code into your TEXT function. Create and save custom formats for repeated use across multiple workbooks. Utilize named ranges to streamline your formulas, making them easier to read and manage. The more you fine-tune your workflow with these efficiency boosters, the faster youll become at converting your raw data into visual stories that speak volumes.FAQs on Mastering TEXT Function in ExcelWhen Should You Use the TEXT Function Instead of Standard Formatting?Use the TEXT function when you need the formatted data to remain static or combined with other text in a cell. Standard formatting is good for visual presentation, but when you want to embed a specific format within a formula or concatenate numbers and text together, TEXT ensures the format is carried through. For example, using TEXT is crucial when creating serial numbers or generating reports that get exported, where the format needs to be preserved regardless of the application used to view the data.How to Ensure TEXT Function Results Remain Dynamic and Updatable?To keep TEXT function results dynamic and updatable, link your TEXT formula directly to source cells that contain the raw data. This why, whenever the source data changes, the TEXT function will automatically reformat the new data according to your specified format. Avoid hard-coding values into your TEXT formulas to ensure they update when the source does. Additionally, use dynamic named ranges or table references for scalability; even as your dataset grows, your TEXT-based formulas will adapt accordingly.What is the formula text function?The TEXT function formula in Excel transforms a numeric value into a text string, formatted according to the pattern specified in the formula. The basic syntax is =TEXT(value, "format_text"). The value is the number or date you want to format, and format_text is a string that defines the desired text format. This could include date-time formats, number formats with decimals and commas, currency symbols, and more. By using the TEXT function, you can control how your data is displayed without changing the underlying values. Excel has many functions to offer when it comes to manipulating text strings. Join Strings To join strings, use the & operator. Note: instead of using the & operator, use the CONCATENATE function in Excel. LEFT To extract the leftmost characters from a string, use the LEFT function. RIGHT To extract the rightmost characters from a string, use the RIGHT function. MID To extract a substring, starting in the middle of a string, use the MID function. Note: started at position 5 (p) with length 3. LEN To get the length of a string, use the LEN function. Note: space (position 8) included! FIND To find the position of a substring in a string, use the FIND function. Note: string "am" found at position 3. Visit our page about the FIND function for more examples. SUBSTITUTE To replace existing text with new text in a string, use the SUBSTITUTE function. Home Excel-Built-In-Functions Excel-Text-Functions This page lists all of the built-in Excel Text Functions. The functions have been grouped by category, to help you to find the function you need. Each function link provides a full description of the function, with examples of use and common errors. Note that some of the Excel text functions listed below are new to Excel 2013 or Excel 2016, so are not available in earlier versions of Excel. CLEAN Removes all non-printable characters from a supplied text string TRIM Removes duplicate spaces, and spaces at the start and end of a text string LOWER Converts all characters in a supplied text string to lower case PROPER Converts all characters in a supplied text string to proper case (i.e. letters that do not follow another letter are upper case and all other characters are lower case) UPPER Converts all characters in a supplied text string to upper case BAHTTEXT Converts a number, plus the suffix "Baht" into Thai text DOLLAR Converts a supplied number into text, using a currency format FIXED Rounds a supplied number to a specified number of decimal places, and then converts this into text TEXT Converts a supplied value into text, using a user-specified format VALUE Converts a text string into a numeric value NUMBERVALUE Converts text to a number, in a locale-independent way (New in Excel 2013) CHAR Returns the character that corresponds to a supplied numeric value CODE Returns the numeric code for the first character of a supplied string UNICHAR Returns the Unicode character that is referenced by the given numeric value (New in Excel 2013) UNICODE Returns the number (code point) corresponding to the first character of a supplied text string (New in Excel 2013) CONCAT Joins together two or more text strings (New in Excel 2019 - replaces the Concatenate function) CONCATENATE Joins together two or more text strings (Replaced by Concat function in Excel 2019) LEFT Returns a specified number of characters from the start of a supplied text string MID Returns a specified number of characters from the middle of a supplied text string RIGHT Returns a specified number of characters from the end of a supplied text string REPT Returns a string consisting of a supplied text string, repeated a specified number of times TEXTJOIN Joins together two or more text strings, separated by a delimiter (New in Excel 2019) LEN Returns the length of a supplied text string FIND Returns the position of a supplied character or text string from within a supplied text string (case-sensitive) SEARCH Returns the position of a supplied character or text string from within a supplied text string (non-case-sensitive) EXACT Tests if two supplied text strings are exactly the same and if so, returns TRUE; Otherwise, returns FALSE. (case-sensitive) T Tests whether a supplied value is text and if so, returns the supplied text; If not, returns an empty text string. REPLACE Replaces all or part of a text string with another string (from a user supplied position) SUBSTITUTE Substitutes all occurrences of a search text string, within an original text string, with the supplied replacement text Related Formula Pages: Split a String in Excel Excel String Concatenation Now, take a look at the Contact Names. We can use LEFT to extract the Title used for each person. However, since Mr./Ms. and Mrs. have different string lengths, we have to input num_chars dynamically. If youll notice, the period symbol . is common to all titles. You can use this as the delimiter which indicates the string length needed. Its now just a matter of finding that delimiter in a given text! The FIND function returns the position of a specified text within another text string. 1. The first Title should appear in cell F2. So, type =FIND(. 2. The first input in FIND is find_text. This is the character or delimiter that you are looking for. Since we are looking for the period symbol, type: =FIND(., 3. Next input is within_text and this is the source string. In this case, it is cell A2. So, the above formula becomes: =FIND(., A2 The third input is start_num. This is the starting position where Excel will look within the source string. This input is optional and by default, FIND scans a string from the very beginning at the left. 5. Now, use the above FIND function as the second input in the LEFT function. Your formula becomes: =LEFT(A2,FIND(., A2)) 6. Hit Enter and fill in the other rows. Result: The SEARCH function can also be used similarly. But it is not case-sensitive, unlike the FIND function. Also, you can use any symbol in the FIND function as well see in the next example. Next, you want to extract the First Name. This is not as straightforward as the above examples. To do this, you first have to understand the concepts below. Lets get to it! You know that the First Name is between the first and second spaces which are in positions 4 and 10 respectively. To get the First Name, you can use MID to extract characters starting from position 5 (character immediately after first space) up to position 9 (character preceding the second space). But how exactly do you type the formula? 1. Getting the starting position for the MID function is easy enough. You use FIND just as in the previous example. But instead of the period symbol, use the space character . Also, add 1 to the result. The starting position formula becomes: =FIND(,A2)+1 Try this in cell G2. 2. To get the position of the second space, you need to use the third input of the FIND function which is start_num. You know that the position after the first space can be given by: =FIND(,A2)+1 You can then use the above formula as the starting position of the second FIND function to find the second space like below: =FIND(,A2, FIND(,A2)+1) Try it out in cell G2. 3. Now, you can combine the above formulas to express the string length input in the final MID function in cell G2. Your MID formula is basically: =MID(A2, position AFTER 1st space, position of 2nd space position of 1st space 1) So, the final formula in cell G2 will be: =MID(A2,FIND(,A2)+1,FIND(,A2,FIND(,A2)+1)-FIND(,A2)-1) You deduct 1 at the end to remove the extra space from the result. 4. Fill in the rows below and watch Excel magic happen! Incredible, isnt it? Theres one more interesting example below! Finally, if you want to extract the Last Name, you use the RIGHT function. Going back to the character count, you know that the Last Name is just the characters from the right of the Contact Name up to the second space. This length can be expressed as the length of the entire text minus the position of the second space. You already know how to get the position of the second space from the previous example. So, how do you get the length of the whole text string? You can use the LEN function to get the length of any input string. 1. In cell H2, type the formula below: =LEN(A2) 2. Now, you can combine this with the formula for the second space to get the length of the Last Name: =LEN(A2) FIND(,A2, FIND(,A2)+1) 3. Finally, complete the RIGHT function by using the formula above as the number of characters to be extracted: =RIGHT(A2,LEN(A2) FIND(,A2, FIND(,A2)+1)) 4. Hit Enter and fill in the rows below. Result: Congratulations! You have completed the practice workbook! Heres an overview of a few applications of the TEXT function in Excel. Introduction to the TEXT Function Converts a value to text in a specific format. =TEXT(value, format_text) ArgumentRequired/OptionalExplanationvalueRequiredValue in a numeric form that has to be formatted.format_textRequiredSpecified number format. The value in a specified format. How to Use the TEXT Function in Excel: 10 Suitable ExamplesExample 1 Using the TEXT Function to Modify the Date FormatIn the following dataset, a fixed date has been shown in different formats in column B.We can present the date in a textual format with the following formula:Display the dates in other formats by modifying the date codes like in the picture below. Method 2 TEXT Function to Connect Numerical Data to a StatementWell combine the string, You Have to Pay and the total sum of the food prices along with 4% VAT=.In the output cell C9, the related formula with the TEXT function should be: ="You Have to Pay "&TEXT(SUM(C5:C7)+SUM(C5:C7)*D5,"$ ###,###.00") Method 3 Joining a Date with a Statement by Combining the TEXT and DATE FunctionsWell display todays date in the following format: Today is followed by the date in textual format.For our dataset, the formula in the output cell B9 will be: ="Today is "&TEXT(TODAY(),"d mmmm, yyy") Read More: How to Use TEXT Function to Format Codes in Excel Method 4 Adding Leading Zeros with the TEXT Function in ExcelLets put the numbers from column B in five digits.The required formula in Cell C5 will be:Hit Enter and AutoFill the formula in needed. Method 5 Formatting a Telephone Number with the TEXT FunctionWhile defining the format codes for telephone numbers, we have to replace the number characters with Hash (#) symbols.The required formula for the first telephone number will be: =TEXT(B5,"(###)-###-####") Press Enter and youll get the output with the defined format for a telephone number.Use AutoFill if needed. Method 6 Use the TEXT Function to Format TimestampsThe first formula to format a timestamp in a 12-hour clock system is:You can copy the formula and use it in your own Excel sheet with proper modifications for a timestamp.Read More: How to Add Dashes to SSN in Excel Method 7 Converting a Decimal to a Percentage with TEXT FunctionThe first output in the following table is the result of:You can remove the decimals for the percentage by typing 0 % only in the second argument. If you want to see the output with only one decimal place, use0.0 % instead. Method 8 Converting a Decimal to a Fraction with the TEXT FunctionUse the following formula for the decimal value in Cell B5: This returns a mixed fraction (such as 1 1/2 for 1.5). Method 9 Converting a Number to the Scientific Notation with the TEXT FunctionThe required formula with the TEXT function is: Method 10 Converting a Number to Geographic Coordinates with the TEXT FunctionUse the following formula in the output Cell C5: =TEXT(B5,"##0 #0' #0'"") You can input the degree symbol in the second argument of the function by holding the Alt key and typing 0176 on the numeric keyboard. Things to Keep in Mind If you use a hash (#) in the format_text argument, itll ignore all insignificant zeros. If you use zero (0) in the format_text argument, itl show all insignificant zeros. Input quotation marks ( ) around the specified format code. Since the TEXT function converts a number to a text format, the output might be difficult to use later for calculations. Keep the original values elsewhere for further calculations if needed. If you dont want to use the TEXT function, you can also click on the Number command from the Number group of commands, and then type the format codes by selecting the Custom format option. The TEXT function is really useful when you have to join a statement with a text in a specified format. Download the Practice Workbook Use of TEXT Function.xlsx Less-than and greater than signs=Equal sign/Forward slash!Exclamation point&Ampersand~TildeSpace characterThe following spreadsheet shows how you can use a Text formula in Excel to apply different formatting types to the same value.ABC1Original ValueFormatted ValueFormula25.55.50=TEXT(A2, "0.00")3550%=TEXT(A2,"#%")4$5.50=TEXT(A2, "$#,##0.00")5+ $5.50=TEXT(A2, "+ $#,##0.00;- $#,##0.00;$0.00")6- $5.50=TEXT(A2, "- $#,##0.00;- $#,##0.00;$0.00")75 1/2=TEXT(A2,"# ?/?")85.50E+00=TEXT(A2,"0.00E+00")9~6 !=TEXT(A2,"~# !")When using the Excel TEXT function with dates and times, you can use any of the following format codes.Format codeDescriptionExamplesdDay of month, orday of weekd - one or two-digit number without a leading zero (1 to 31)dd - two-digit number with a leading zero (01 to 31)ddd - three-letter abbreviation (Mon to Sun)dddd - full name of day of week (Monday to Sunday)mMonth (when used as part of a date)m - one or two-digit number without a leading zero (1 to 12)mm - two-digit number with a leading zero (01 to 12)mmm - abbreviated month (Jan to Dec)mmmm - full name of month (January to December)yYearyy - two-digit number (e.g. 06 meaning 2006 or 16 meaning 2016)yyyy - four digit number (e.g. 2006, 2016)hHourh - one or two-digit number without a leading zero (1 to 24)hh - two-digit number with a leading zero (01 to 24)mMinute (when used as part of time)m - one or two-digit number without a leading zero (1 to 60)mm - two-digit number with a leading zero (01 to 60)sSeconds - one or two-digit number without a leading zero (1 to 60)ss - two-digit number with a leading zero (01 to 60)AM/PMTime represented as a 12-hour clock, followed by "AM" or "PM"The following spreadsheet shows a few Excel Text formulas for dates:ABC1Original DateFormatted DateFormula212/09/2016Dec 09 2016=TEXT(A2, "mmm dd yyyy")3Friday 09 December, 2016=TEXT(A2, "dddd dd mmmm, yyyy")49-Dec-16=TEXT(A2, "d-mmm-yy")5Friday=TEXT(A2,"dddd") So far, you might have an impression that the use of the Excel TEXT function is quite limited (because a value's display can easily be changed using the Format Cells dialog available via a cell's context menu or Ctrl+1 shortcut). The situation changes as soon as you start using TEXT in combination with other Excel functions. The below examples will give you a few inspirational ideas. When creating summary sheets or reports, you may often want not only calculate totals, percentages and the like, but also explain to your users what this or that number means. To do this, use the CONCATENATE function to join text and numbers, and the TEXT function to display the number (or date) like you want it. Supposing you calculate the total amount based on the unit price in cell A2, quantity in B2, and discount percentage in C2 using this calculation: =A2*B2*(1-C2). For your users to know exactly what the output number means, you wish to display it together with some explanatory text like "Your price is". Additionally, you want to show the currency symbol, thousands separator and two decimal places.To have it done, supply the above calculation in the 1st argument of the TEXT function, include the corresponding format code in the 2nd argument, and concatenate the Text formula with a string using either the ampersand operator or CONCATENATE function:="Your price is "&TEXT(A2*B2*(1-C2), "$###,###.00")or= CONCATENATE("Your price is ",TEXT(A2*B2*(1-C2), "$###,###.00"))The following screenshot demonstrates the result: When you return the current date using TODAY() or NOW() function, you may also want to display it in combination with some text so that no one has any doubt what day this date refers to.However, if you try to concatenate a text and date in the usual way:=CONCATENATE("Today is ", TODAY())Excel will return a very odd result, something like "Today is 42198".The point is that in the internal Excel system, dates are stored as numbers, and that number appears in a concatenated text string. To fix this, use the TEXT function to display the date the way you want.For example, embedding the TODAY function in the Text formula with the format code "dddd d mmm, yyyy" will return a string similar to this: "Today is Monday 12 Dec, 2016".The complete formula goes as follows:=CONCATENATE("Today is ", TEXT(TODAY(), "dddd d mmm, yyyy"))or="Today is " & TEXT(TODAY(), "dddd d mmm, yyyy")A few more formula examples can be found here: Concatenate numbers and dates in various formats. As you know, Microsoft Excel automatically removes leading zeros typed before a number in a cell, which works fine in most situations. But what if you want to keep the preceding zeros?The Excel TEXT function can be an easy solution to pad numbers with leading zeros in a column, even if the original values are not the same length. Simply use the format code containing only zero placeholders like "0000000", where the number of zeros corresponds to the number of digits you want to display.For example, to display 7-digit numbers with leading zeros, use this formula (where A2 is the original number):=TEXT(A2,"0000000")As you can see in the screenshot below, our Excel Text formula adds as many leading zeros as necessary to make a 7-character long string (please remember, the result of the TEXT function in Excel is always a text string, even if it looks like a number). Turning a column of numeric values into telephone numbers may sound like a tricky task, but only until you remember that the Excel TEXT function allows using dashes and parentheses in format codes.So, to display a number in A2 in a traditional US local 7-digit phone format like 123-456, use this formula:=TEXT(A2, "###-####")If some of the original values may contain a domestic prefix (i.e. there can be both 7-digit or 10-digit numbers), include the following conditional format code to display 10-digit numbers in the (123) 456-789 format:=TEXT(A2,"[