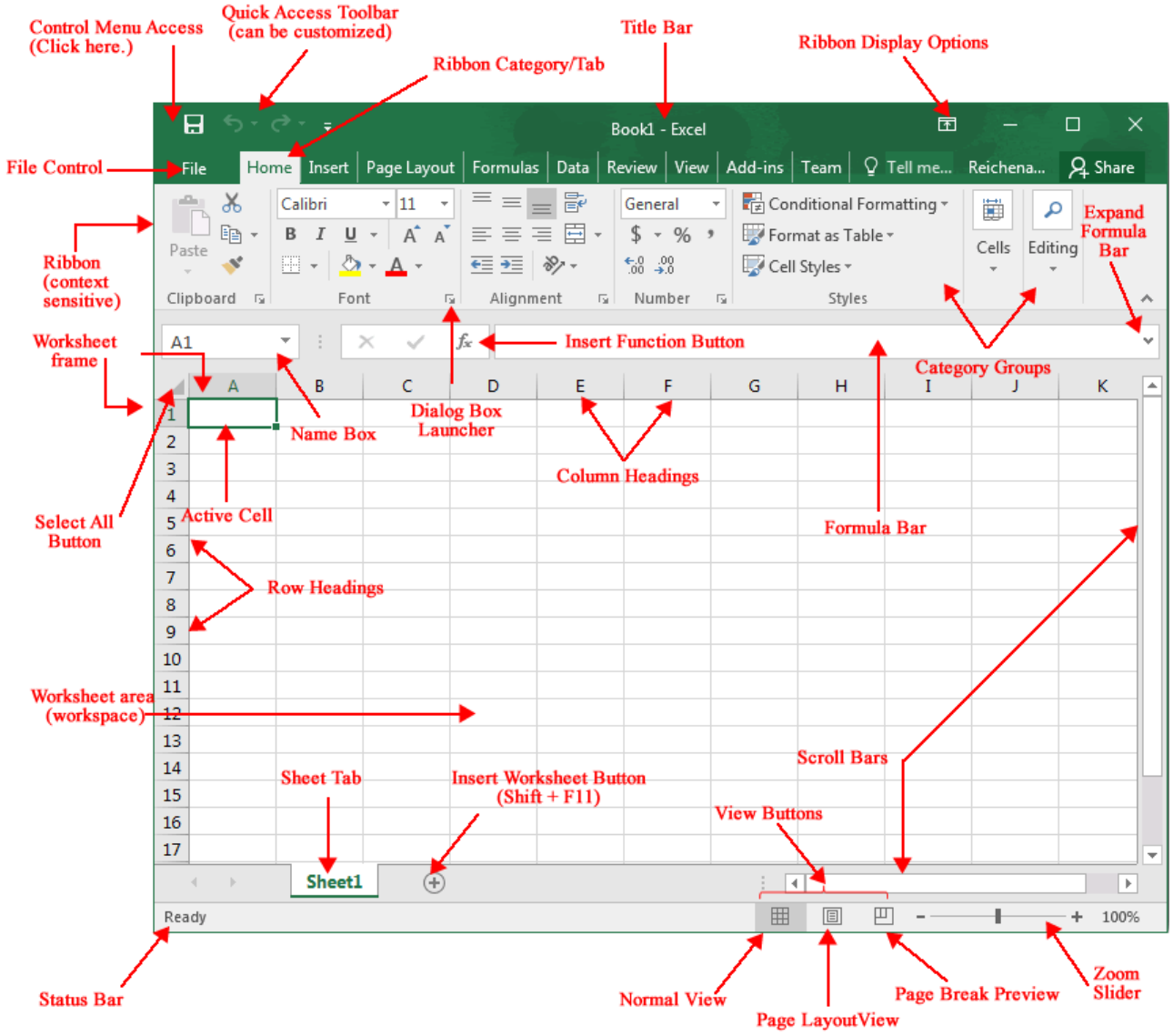
1. Introduction to Microsoft Excel

1.1 Overview

1.1.1 User Interface

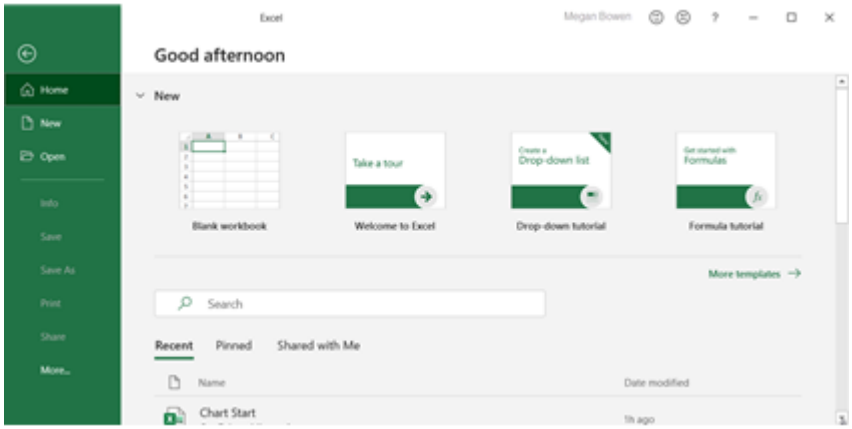
A spreadsheet is an online version of an accountant's worksheet, which can automatically do most of the calculating for you. You can do budgets, analyze data, or generate sorted lists.

When you open Microsoft Excel, you'll see the familiar worksheets you're accustomed to. The old look of Excel menus and buttons has been replaced with this new Ribbon, with tabs you click to get to commands.

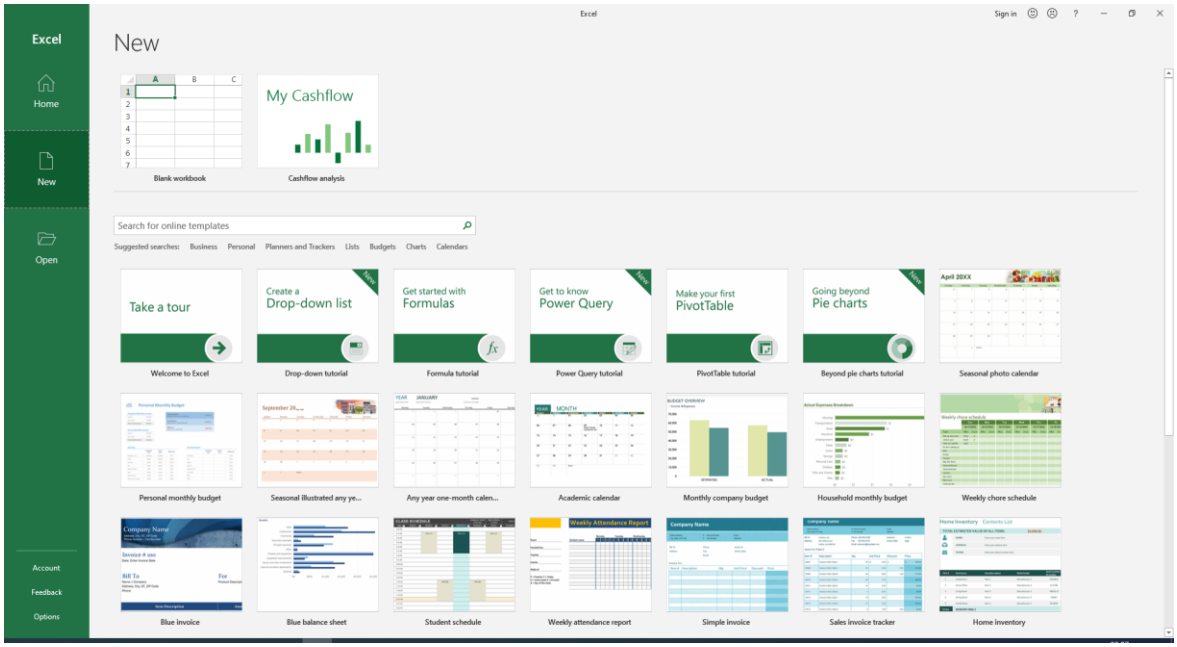


1.1.2 Create new Workbook

In order to open Excel. Select “Blank workbook” or press **[Ctrl]** + **[N]** in the welcome screen.



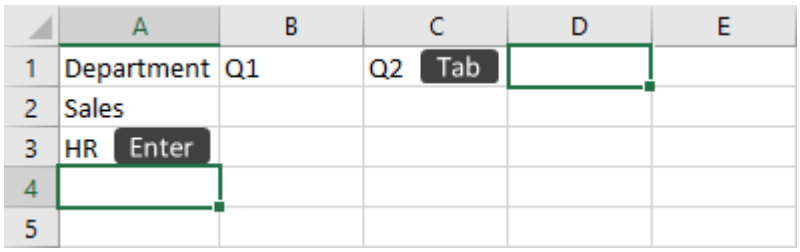
Moreover, you can create a workbook from a template by selecting **File➔ New**. Then double click the template you like.



1.1.3 Enter Data

To manually enter data, select an empty cell (such as A1) and then type text or a number.

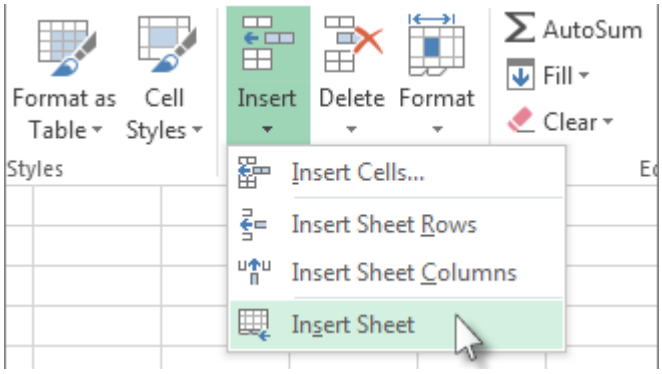
Press **[Enter]** to move down, or press **[Tab]** to move right



1.2 Worksheet Manipulation

1.2.1 Insert Worksheet

In order to inset a new worksheet, select **Home ➔ Insert ➔ Insert Sheet**.



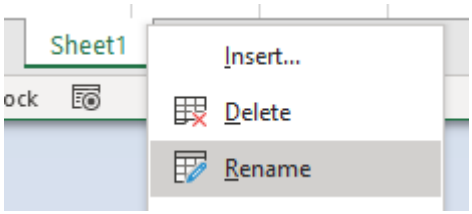
Besides, you can select the plus icon at the bottom of the screen.



1.2.2 Rename Worksheet

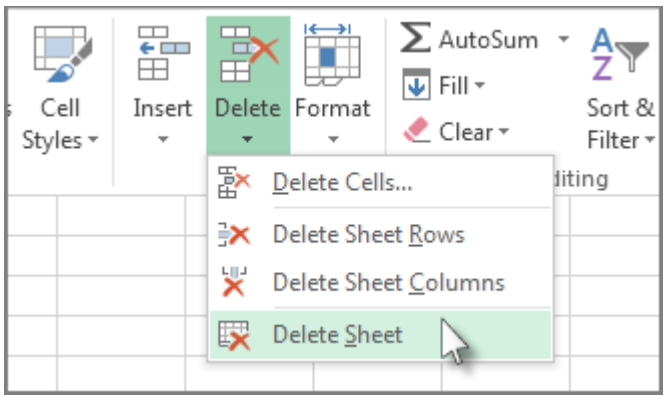
In order to rename a worksheet, right-click on the Sheet tab, click **Rename**, and type a new name.

Besides, you can double-click the sheet name on the Sheet tab to quickly rename it.

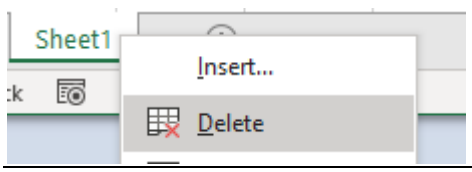


1.2.3 Delete Worksheet

In order to delete an unwanted worksheet, select **Home ➔ Insert ➔ Delete Sheet**.

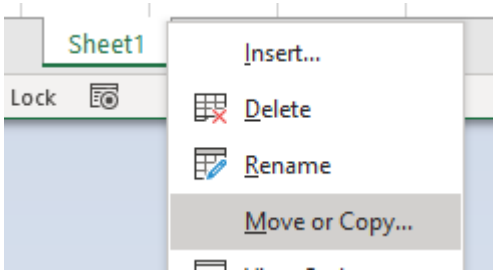


Besides, you can right-click the Sheet tab and select Delete.



1.2.4 Move Worksheet within Workbook

You can use the Move or Copy Sheet command to move or copy entire worksheets, to other locations in the same or a different workbook. You can use the Cut and Copy commands to move or copy a portion of the data to other worksheets or workbooks.

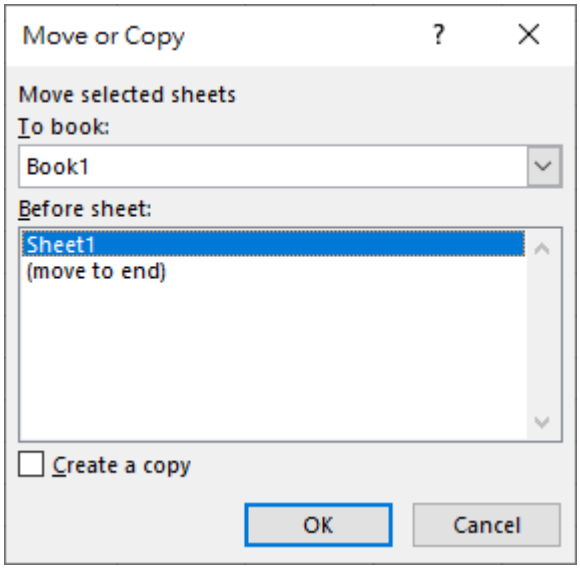


On the other hand, you can select the worksheet tab, and drag it to where you want it.

When you move a sheet to another workbook, check any formulas or charts that refer to data on the sheet because moving the sheet might cause errors or produce unintended results in your data. Similarly, if you move a sheet that is referred to by 3-D references, the calculation might include or leave out data on the sheet.

1.2.5 Copy Worksheet within Workbook

In order to copy a worksheet, right click on the worksheet tab and select **Move or Copy**. Select the "**Create a copy**" checkbox. Then select where you want to place the copy under "Before sheet" dialog. Finally, press **[OK]** to confirm.



On the other hand, you can press **[Ctrl]** and drag the worksheet tab to the tab location you want.

1.3 Select Cell Contents

In Excel, you can select cell contents of one or more cells, rows and columns.

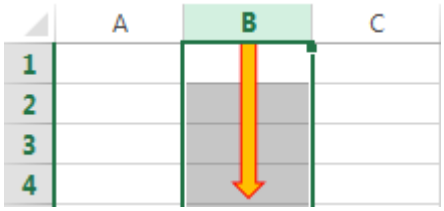
If a worksheet has been protected, you might not be able to select cells or their contents on a worksheet.

1.3.1 Select one or more Cells

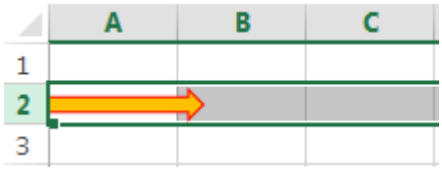
1. Click on a cell to select it. Or use the keyboard to navigate to it and select it.
2. To select a range, select a cell, then with the left mouse button pressed, drag over the other cells. Or use the **[Shift]** and arrow keys to select the range.
3. To select non-adjacent cells and cell ranges, hold **[Ctrl]** and select the cells.

1.3.2 Select one or more Rows and Columns

1. Select the letter at the top to select the entire column. Or click on any cell in the column and then press **[Ctrl] + [Space]**.



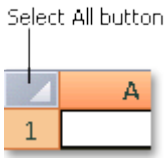
2. Select the row number to select the entire row. Or click on any cell in the row and then press **[Shift] + [Space]**.



3. To select non-adjacent rows or columns, hold **[Ctrl]** and select the row or column numbers.

1.3.3 Select Table, List or Worksheet

1. To select a list or table, select a cell in the list or table and press **[Ctrl] + [A]**.
2. To select the entire worksheet, click the "Select All" button at the top left corner.



1.4 Cell Manipulation

1.4.1 Move Cells

Use Cut, Copy, and Paste to move or copy cell contents. Or copy specific contents or attributes from the cells. For example, copy the resulting value of a formula without copying the formula, or copy only the formula.

When you move or copy a cell, Excel moves or copies the cell, including formulas and their resulting values, cell formats, and comments.

You can move cells in Excel by drag and dropping or using the Cut and Paste commands.

1.4.1.1 Move Cells by Drag and Dropping

1. Select the cells or range of cells that you want to move or copy.
2. Point to the border of the selection.
3. When the pointer becomes a move pointer , drag the cell or range of cells to another location.

1.4.1.2 Move Cells by using Cut and Paste

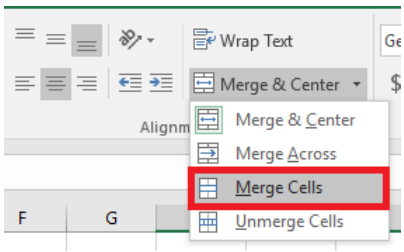
1. Select a cell or a cell range.
2. Select **Home ➔ Cut** or press **[Ctrl] + [X]**.
3. Select a cell where you want to move the data.
4. Select **Home ➔ Paste** or press **[Ctrl] + [V]**.

1.4.2 Merge Cells

1.4.2.1 Merge Cells

You can't split an individual cell, but you can make it appear as if a cell has been split by merging the cells above it. To merge the cell:

1. Select the cells to merge.
2. Select **Merge & Center**.



When you merge multiple cells, the contents of only one cell (the upper-left cell for left-to-right languages, or the upper-right cell for right-to-left languages) appear in the merged cell. The contents of the other cells that you merge are deleted.

1.4.2.2 Unmerge Cells

1. Select the Merge & Center down arrow.
2. Select **Unmerge Cells**.

You cannot split an unmerged cell. After merging cells, you can split a merged cell into separate cells again. If you don't remember where you have merged cells, you can use the **Find** command to quickly locate merged cells.

1.5 Column and Row Manipulation

1.5.1 Hide or Show Rows and Columns

Hide or unhide columns in your spreadsheet to show just the data that you need to see or print.

1.5.1.1 Hide Columns

1. Select one or more columns, and then press **[Ctrl]** to select additional columns that aren't adjacent.
2. Right-click the selected columns, and then select **Hide**. The double line between two columns is an indicator that you've hidden a column.

1.5.1.2 Unhide Columns

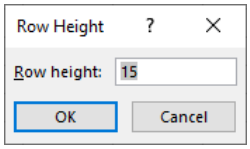
1. Select the adjacent columns for the hidden columns.
2. Right-click the selected columns, and then select **Unhide**. Or double-click the double line between the two columns where hidden columns exist.

1.5.2 Resize

You can manually adjust the column width or row height or automatically resize columns and rows to fit the data. The boundary is the line between cells, columns, and rows. If a column is too narrow to display the data, you will see ### in the cell.

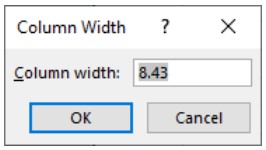
1.5.2.1 Resize Rows

1. Select a row or a range of rows.
2. On the Home tab, in the Cells group, select **Format ➔ Row Width**.
3. Type the row width and select **[Ok]**.



1.5.2.2 Resize Columns

1. Select a column or a range of columns.
2. On the Home tab, in the Cells group, select **Format ➔ Column Width**.
3. Type the column width and select **[Ok]**.

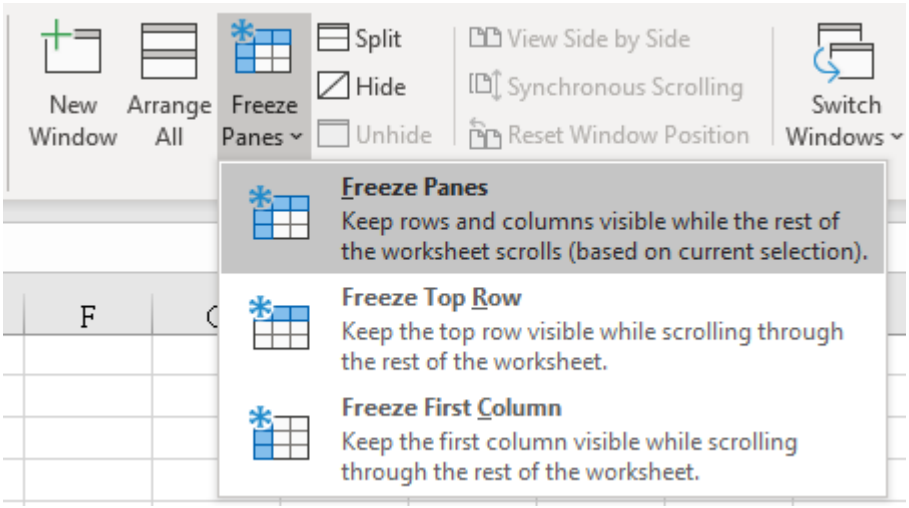


1.5.2.3 Automatically Resize all Columns and Rows

1. In order to automatically resize all columns and rows to fit the data. Select the **[Select All]** button at the top of the worksheet, to select all columns and rows.
2. Double-click a boundary, all columns or rows resize to fit the data.

1.6 Freeze Panes to Lock Rows and Columns

To keep an area of a worksheet visible while you scroll to another area of the worksheet, go to the View tab, where you can Freeze Panes to lock specific rows and columns in place, or you can Split panes to create separate windows of the same worksheet.



1.6.1 Freeze the First Row

Select **View➔ Freeze Panes ➔ Freeze Top Row**. The faint line that appears between row 1 and 2 shows that the first row is frozen.

1.6.2 Freeze the First Column

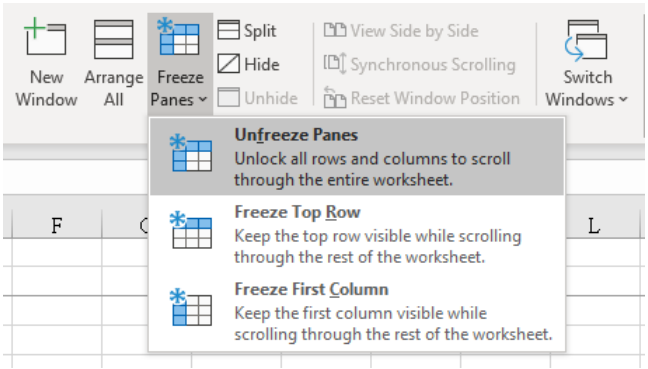
Select **View➔ Freeze Panes ➔ Freeze First Column**. The faint line that appears between column A and B shows that the first column is frozen.

1.6.3 Freeze Columns and Rows

Select the cell below the rows and to the right of the columns you want to keep visible when you scroll, then select **View ➔ Freeze Panes ➔ Freeze Panes**.

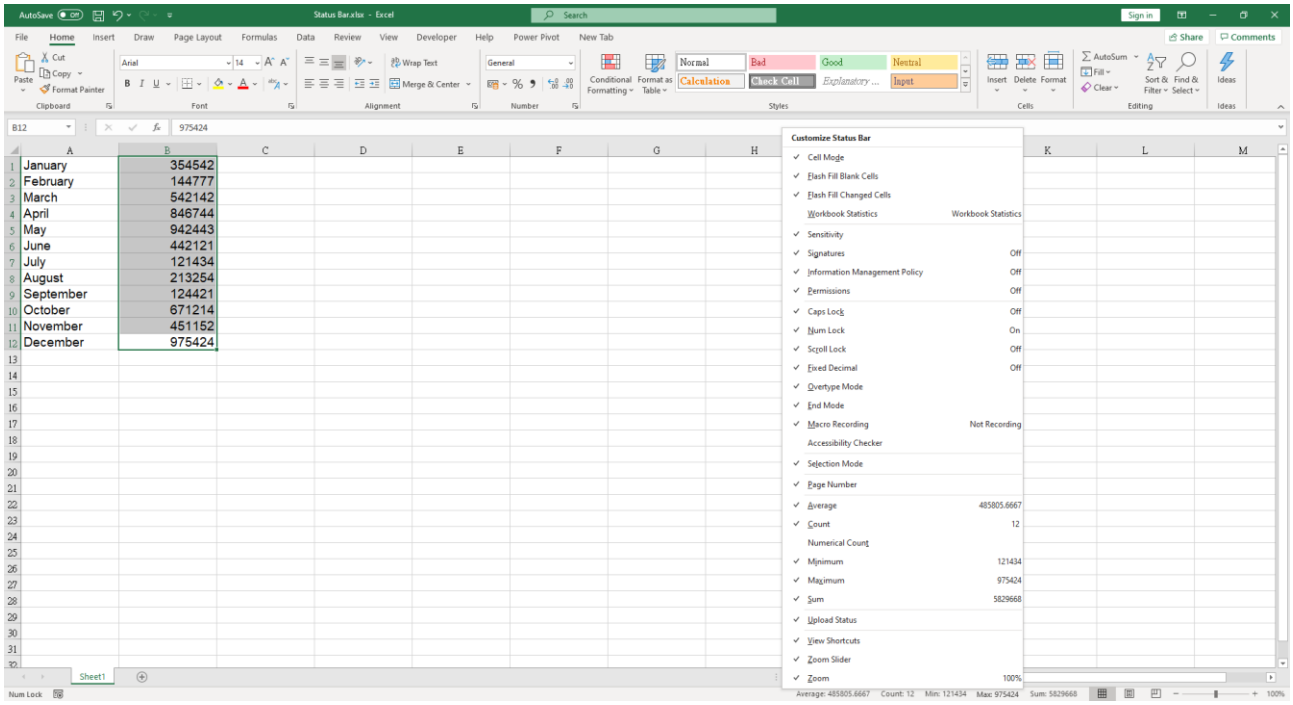
1.6.4 Unfreeze rows or columns

In order to unfreeze row or column, select **View ➔ Freeze Panes ➔ Unfreeze Panes**.



1.7 Status Bar

The status bar displays information about what's happening in your workspace. For example, most of the time, Excel displays the word Ready at the left end of the status bar.



2. Worksheet Editing Techniques

2.1 Copying, Cutting, and Pasting

2.1.1 Basic Copy Technique

2.1.1.1 Copy Cell

1. Select the cells that you want to copy, then select **Home ➔ Copy**, or press **[Ctrl] + [C]**.
2. Select the upper-left cell of the paste area. To move or copy a selection to a different worksheet or workbook, click another worksheet tab or switch to another workbook, and then select the upper-left cell of the paste area. Then select **Home ➔ Paste**, or press **[Ctrl] + [V]**.

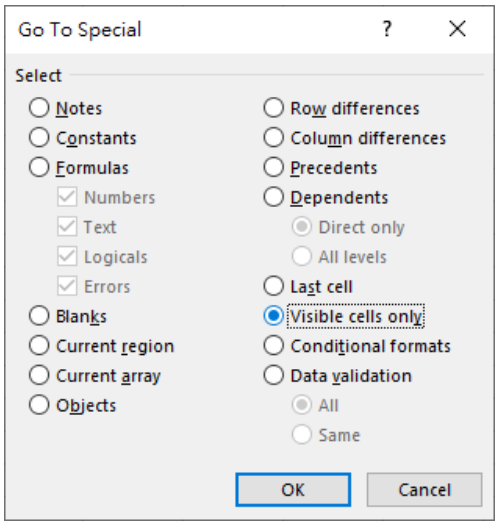
2.1.1.2 Insert Moved or Copied Cells between Existing Cells

1. Select the cells that you want to copy, then select **Home ➔ Copy**, or press **[Ctrl] + [C]**.
2. Right-click the upper-left cell of the paste area, and then click **Insert Cut Cells** or **Insert Copied Cells**.
3. In the Insert Paste dialog box, click the direction in which you want to shift the surrounding cells. If you insert whole rows or columns, the surrounding rows and columns are shifted down and to the left.

2.1.1.3 Copy Visible Cells Only

If some cells, rows, or columns on the worksheet are not displayed, you have the option of copying all cells or only the visible cells. For example, you can choose to copy only the displayed summary data on an outlined worksheet.

1. Select the cells that you want to copy, select **Home ➔ Find & Select ➔ Go To Special**. Under Select, click "Visible cells only", and then click **[OK]**.



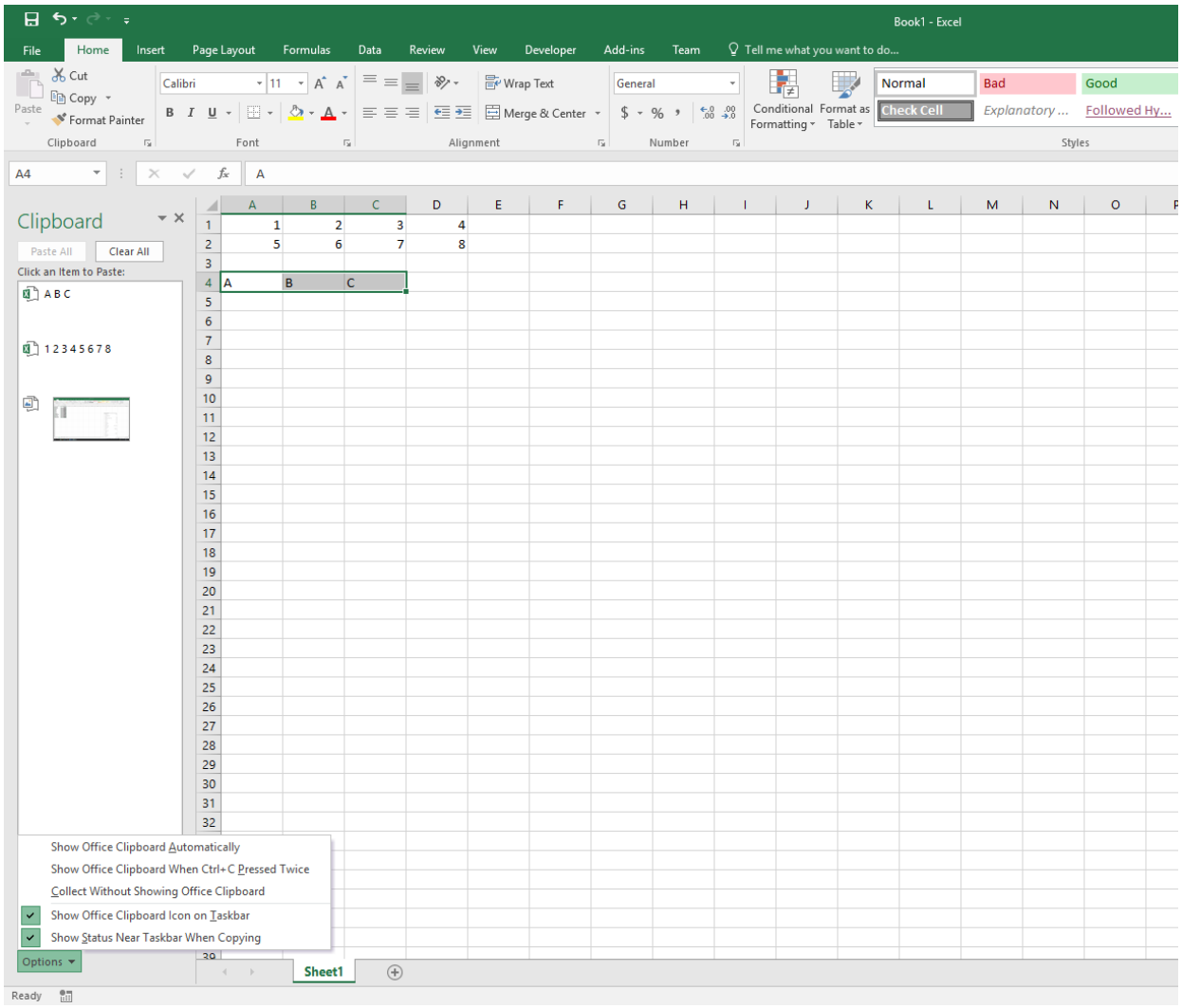
2. Select **Home ➔ Copy**, or press **[Ctrl] + [C]**.
3. Select the upper-left cell of the paste area. Then select **Home ➔ Paste**, or press **[Ctrl] + [V]**.

2.1.2 Collecting Multiple Items on the Clipboard

Using the collect and copy feature, you can Copy (or Cut) up to 24 separate items and then paste them where you want them (one at a time or all at once). You do this by using the **Office Clipboard Task Pane**.

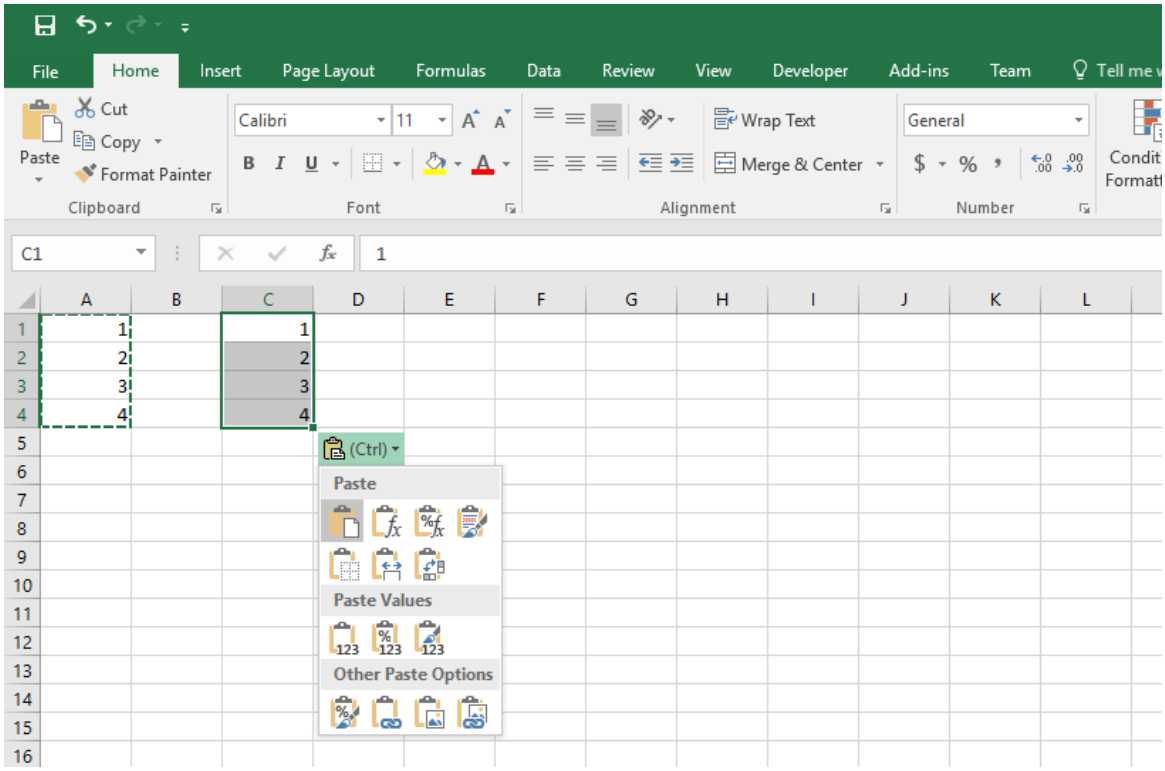
You can change the normal collect and copy behavior so that Excel collects items every time you copy or cut, regardless of whether the **Clipboard Task Pane** is present. To do so, click the **Options** button at the bottom of the **Clipboard Task Pane** and choose **Collect Without Showing Office Clipboard**.

Although collect and copy is useful for editing tasks, it can also be a great tool for gathering information. Copy items such as names or addresses from various locations in the order you want them to appear. Then click the **Paste All** button on the **Clipboard Task Pane** to paste all the items you have collected, in the order collected, into a single column.



2.1.3 Using the Paste Options Smart Tag

This smart tag appears whenever and wherever you paste, offering action options applicable after pasting – a sort of "Smart Paste Special". The best part is that you can try each action in turn. Keep selecting Paste options until you like what you see, and then press **[Enter]**.



Keep Source Formatting: Retains formatting. This is the default action. If the other options don't work for you, you can always come back to this one before you press Enter

Match Destination Formatting: Copies formatted data into a differently formatted table without having to redo the formatting

Values and Number Formatting: Pastes values without losing number formats

Keep Source Column Widths: Retains column widths. This option is like choosing Keep Source Formatting with the added action of "pasting" the column width

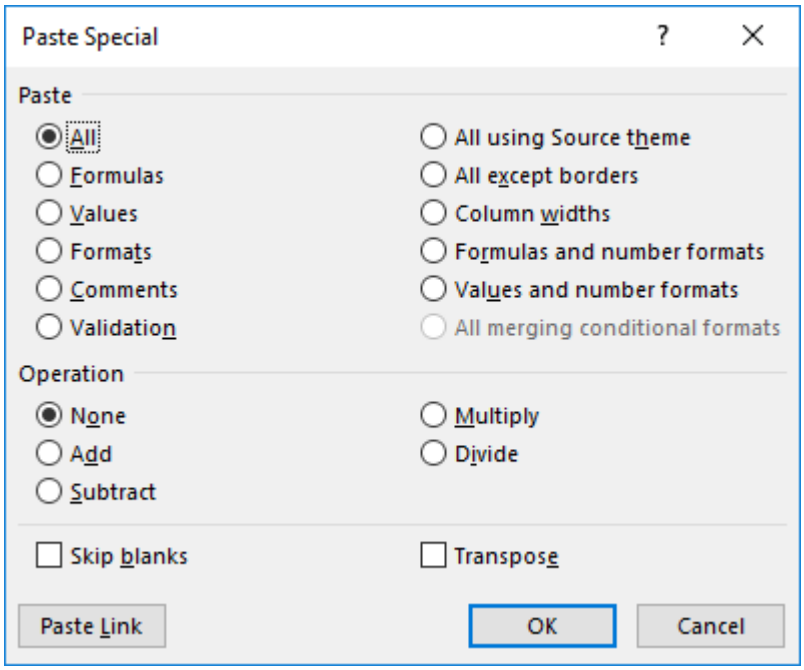
Formatting Only: Leaves the contents of the cells alone and transfers the formatting. This works in the same way as the Format Painter button on the Standard toolbar.

Link Cells: Instead of pasting the contents of the cut or copied cells, pastes a reference to the source cells, ignoring the source formatting

2.1.4 Paste Special

2.1.4.1 Pasting Selectively Using Paste Special

Paste Special is quite possibly the most useful power-editing feature of all. There are many ways to use this feature, but probably the most popular is copying the value in a cell without copying the formatting or the underlying formula.



All: Predictably, pastes all aspects of the selected cell, which is the same as simply using the Paste command

Formulas: Transfers only the formulas from the cells in the copy range to the cells in the paste range, adjusting relative references

Values: Pastes static text, numeric values, or only the displayed values resulting from formulas.

Formats: Transfers only the formats in the copy range to the paste range

Comments: Transfers only comments attached to selected cells.

Validation: Pastes only the Data Validation settings that you have applied to the selected cells.

All except borders: Transfers data without disturbing the border formats you spent so much time applying

Column widths: Transfers only column widths, which is handy when trying to make a sheet look consistent for presentation

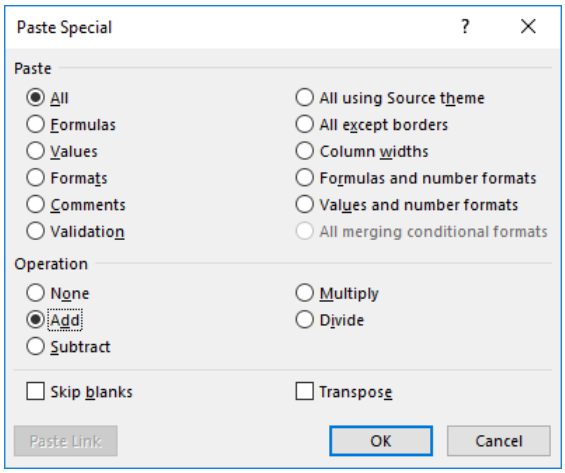
Formulas and number formats: Transfers only formulas and number formats, which is handy when copying formulas to previously formatted areas. Usually, you'll want the same number formats applied to formulas you copy, wherever they happen to go

Values and number formats: Transfers resulting values and number formats

2.1.4.2 Pasting Using Math Operators

You use the options in the **Operation** section of the **Paste Special** dialog box to mathematically combine the contents of the copy area with the contents of the paste area. When you select any option other than **None**, Excel uses the specified operator to combine the copy and paste ranges.

*For example, we want to get a total of the Northern and Eastern regions. First we copied the Northern Region figures to column G, and then we copied the Eastern Region numbers in column D and chose **Paste Special**. We clicked the **Values** and **Add** options in the **Paste Special** dialog box, and after clicking **[OK]**.*

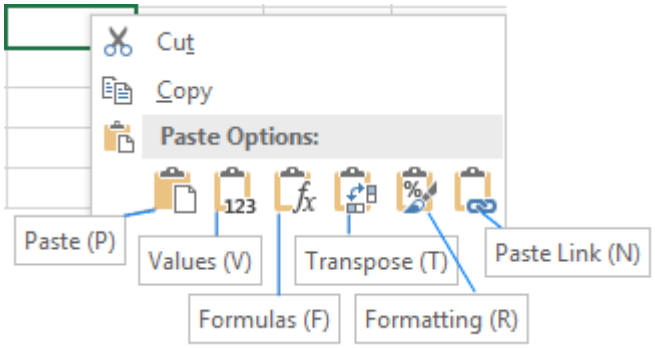


The other options in the **Operation** section of the **Paste Special** dialog box combine the contents of the copy and paste ranges using the appropriate operators. Just remember that the **Subtract** option subtracts the copy range from the paste range, and the **Divide** option divides the contents of the paste range by the contents of the copy range. Also, note that nothing happens if the copy range contains text entries and you use **Paste Special** with an **Operation** option.

2.1.4.3 Pasting Links

The **[Paste Link]** button in the **Paste Special** dialog box is a handy way to create references to cells or ranges. When you click the **[Paste Link]** button, Excel enters an absolute reference to the copied cell in the new location. *For example, if you copy cell A3, and then select cell B5, choose **Paste Special**, and click the **[Paste Link]** button, the formula =A3 is entered into cell B5.*

If you copy a range of cells, the Paste Link button enters a similar formula for each cell in the copied range to the same sized range in the new location.

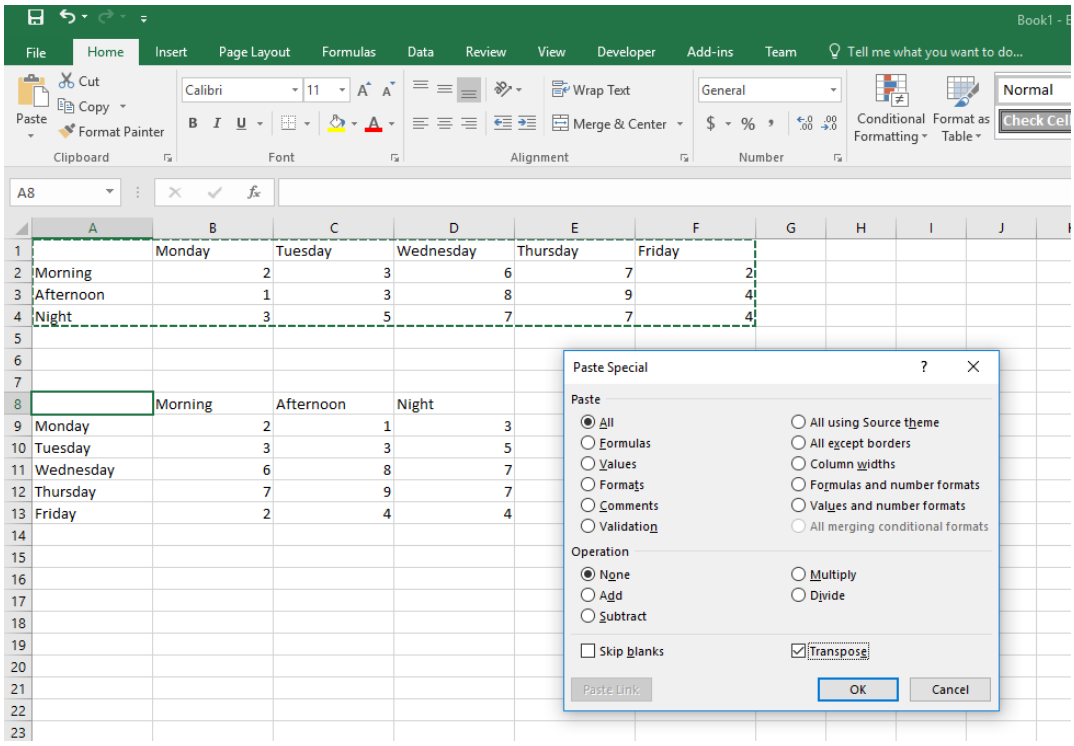


2.1.4.4 Skipping Blank Cells

The **Paste Special** dialog box contains a **Skip Blanks** option that you use when you want Excel to ignore any blank cells in the copy range. Generally, if your copy range contains blank cells, Excel pastes those blank cells over the corresponding cells in the paste area. As a result, empty cells in the copy range overwrite the contents, formats, and comments in corresponding cells of the paste area. When you select **Skip Blanks**, the corresponding cells in the paste area are unaffected.

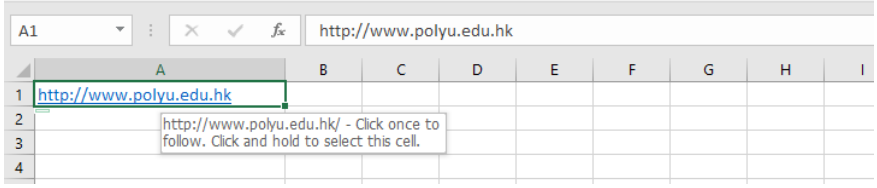
2.1.4.5 Transposing Entries

Transpose helps you to reorient the contents of the copied range when you paste (entries in rows appear in columns, and entries in columns appear in rows). *For example, we needed to use the column headings in Row 3 of the top sheet to create identical row headings in column A of the bottom sheet. Accomplishing this was as simple as copying cells B3:G3 in the top sheet, clicking cell A4 in the bottom sheet, and using* ***Paste Special*** *with* ***Transpose*** *selected.*



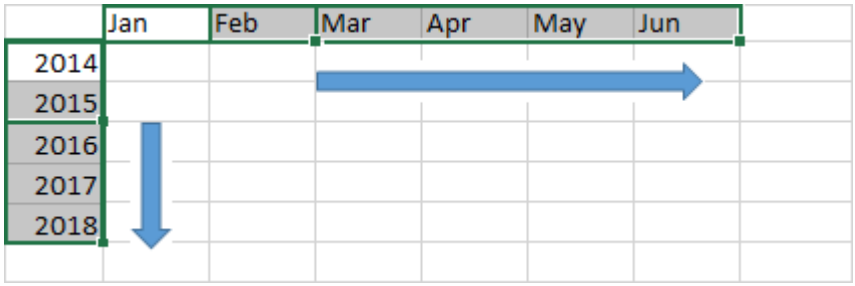
2.1.5 Pasting Hyperlinks

The **Paste as Hyperlink** paste a hyperlink to the copied data in the location you specify. When you create a hyperlink, it's as if Excel draws an invisible box that acts like a button when you click it, and places it over the selected cell.



2.2 Creating Data Series

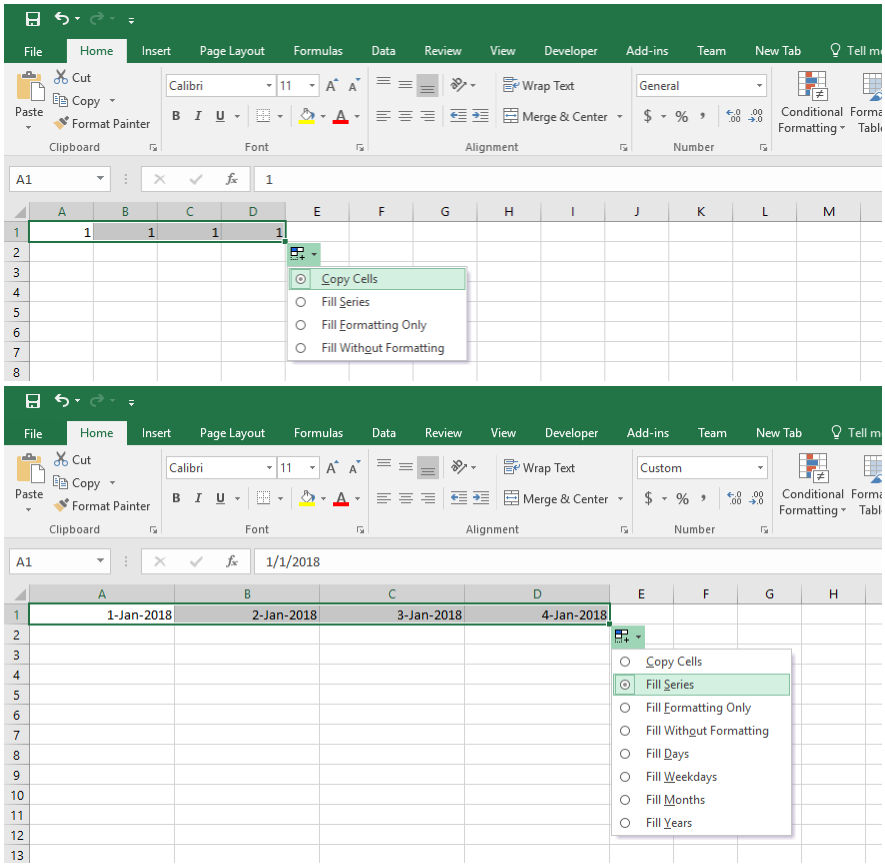
To fill data in a series, enter the beginning of the series in two cells: such as Jan and Feb; or 2014 and 2015. Select the two cells containing the series, and then drag the fill handle Fill handle across or down the cells.



2.2.1 Fill Series

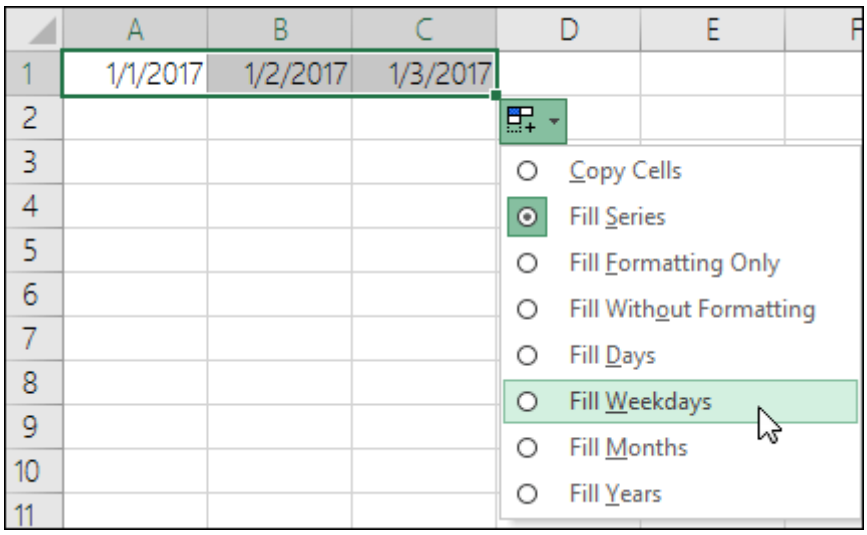
Uses of the fill handle include quickly and easily filling cells and creating data series using the incredibly useful AutoFill feature.

- If you choose **Fill Series** on the smart tag action menu, Excel creates the simple series 1, 2, 3 instead of copying the contents of cell.
- If you choose **Copy Cells** on the **AutoFill Options** menu, instead of extending the series, Excel copies the cells, repeating the pattern of selected cells as necessary to fill the range.
- Moreover, **AutoFill** normally increments recognizable date and time values when you drag the fill handle, even if you initially select only one cell.



2.2.2 Create a List of Sequential Dates

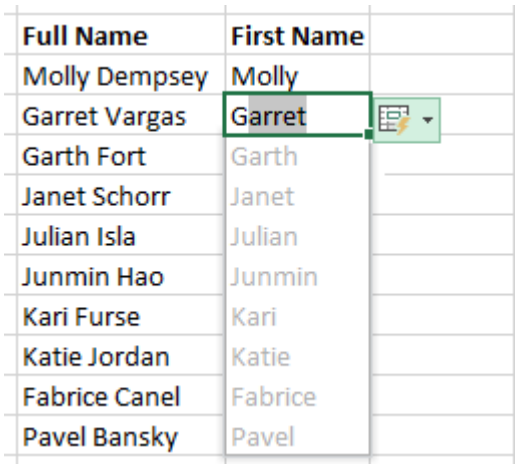
1. In order to create a list of sequential data by using the Fill Handle, select the cell that contains the first date. Drag the fill handle across the adjacent cells that you want to fill with sequential dates.
2. Select the fill handle  at the lower-right corner of the cell, hold down, and drag to fill the rest of the series. Fill handles can be dragged up, down, or across a spreadsheet.



2.2.3 Flash Fill

Flash Fill is one of the most amazing features of Excel. It grabs a tedious task that would take hours to be performed manually and executes it automatically in a flash. And it does so quickly and simply without you having to do a thing, but only provide an example of what you want. For example, automatically fill a First Name column from a Full Name column.

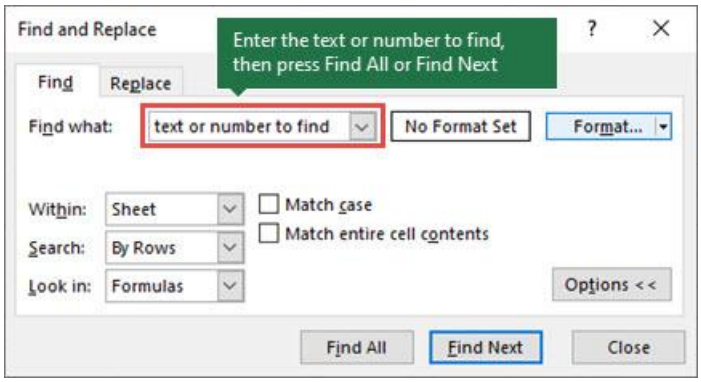
1. In the cell under First Name, type Molly and press Enter.
2. In the next cell, type the first few letters of Garret.
3. When the list of suggested values appears, press **[Enter]**.
4. Select **Flash Fill Options** for more options.



3. Find and Replace

3.1 Find a String

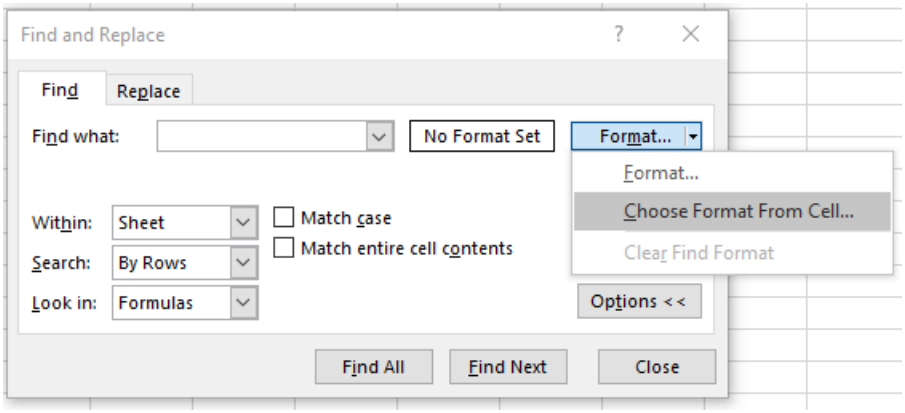
1. To find something, select **Home ➔ Editing ➔ Find & Select ➔ Find**, or press **[Ctrl]** + **[F]**.



2. In the Find what: box, type the text or numbers you want to find, or click the arrow in the Find what: box, and then select a recent search item from the list. You can use wildcard characters — question mark (?), asterisk (*), tilde (~) — in your search criteria.
   - Use the question mark (?) to find any single character — for example, s?t finds "sat" and "set".
   - Use the asterisk (*) to find any number of characters — for example, s*d finds "sad" and "started".
   - Use the tilde (~) followed by ?, *, or ~ to find question marks, asterisks, or other tilde characters — for example, fy91~? finds "fy91?".
3. Then click [Find All] or [Find Next] to run your search. When you click [Find All], every occurrence of the criteria that you are searching for will be listed, and clicking a specific occurrence in the list will select its cell. You can sort the results of a [Find All] search by clicking a column heading. If you need to further define your search, you can click **[Options]** button.
   - **Within:** To search for data in a worksheet or in an entire workbook, select Sheet or Workbook.
   - **Search:** You can choose to search either **By Rows** (default), or **By Columns**.
   - **Look in:** To search for data with specific details, in the box, click Formulas, Values, Notes, or Comments.
     - Formulas, Values, Notes and Comments are only available on the **Find** tab;
     - Only Formulas are available on the **Replace** tab.
   - **Match case**: Check this if you want to search for case-sensitive data.
   - **Match entire cell contents:** Check this if you want to search for cells that contain just the characters that you typed in the Find what: box.
4. If you want to search for text or numbers with specific formatting, click **[Format]**, and then make your selections in the **Find Format** dialog box.

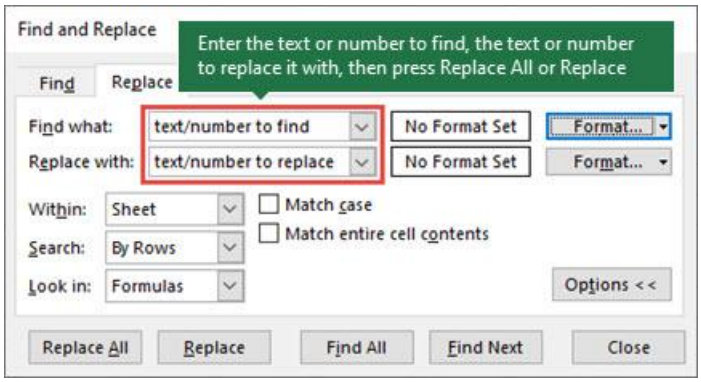
3.2 Finding Formatting

Excel provides a way to find cells based on formatting in conjunction with other criteria, and even to find and replace specifically formatted cells, regardless of their content. You can select any number of options in this dialog box, and when you are finished, click **[OK]** to add them to your criteria. If you click the **[▼]** button next to the **Format** button to display the Format menu, you can select **Choose Format From Cell**.



3.3 Replacing What You Find

Replace works much like Find by choosing **Replace**. You can also find and replace formats using the dual **[Format]** buttons. To replace every occurrence of a string or formatting, click **Replace All**. Instead of pausing at each occurrence to allow you to change or skip the current cell, Excel locates all the cells that contain the **Find What** string and replaces them.

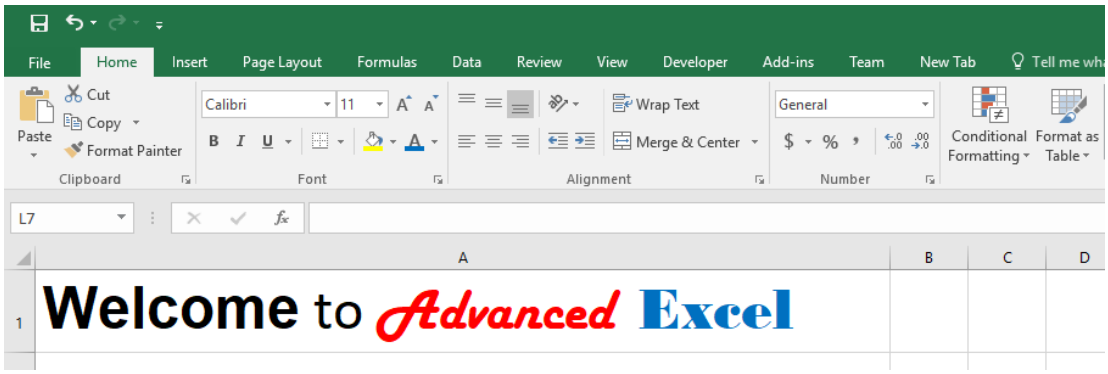


1. To replace text or numbers, select **Home ➔ Editing ➔ Find & Select ➔ Replace**, or press **[Ctrl] + [H]**
2. In the **Find what:** box, type the text or numbers you want to find, or click the arrow in the **Find what:** box, and then select a recent search item from the list.
3. In the **Replace with:** box, enter the text or numbers you want to use to replace the search text. Then click **[Replace All]** or **[Replace]**.

4. Worksheet Formatting Techniques

4.1 Formatting Individual Characters

If you select a cell and apply formats, the entire contents of the cell receive the formats. However, you can also apply formatting to individual text characters within cells (but not numeric values or formulas). Select individual characters or words, and apply the attributes you want. When you are finished, press **[Enter]** to see the results.



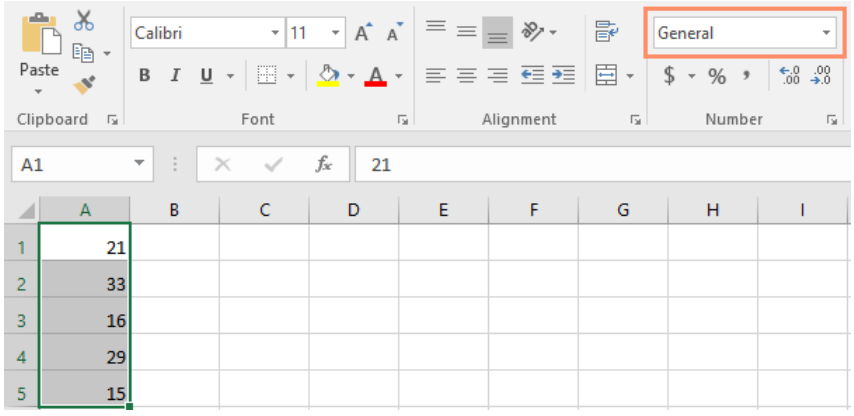
4.2 Format Cell

In Excel, you can format numbers in cells for things like currency, percentages, decimals, dates, phone numbers, or social security numbers. Number formats don't just make your spreadsheet easier to read—they also make it easier to use. When you apply a number format, you're telling your spreadsheet exactly what types of values are stored in a cell. For example, the date format tells the spreadsheet that you're entering specific calendar dates. This allows the spreadsheet to better understand your data, which can help ensure that your data remains consistent and that your formulas are calculated correctly.

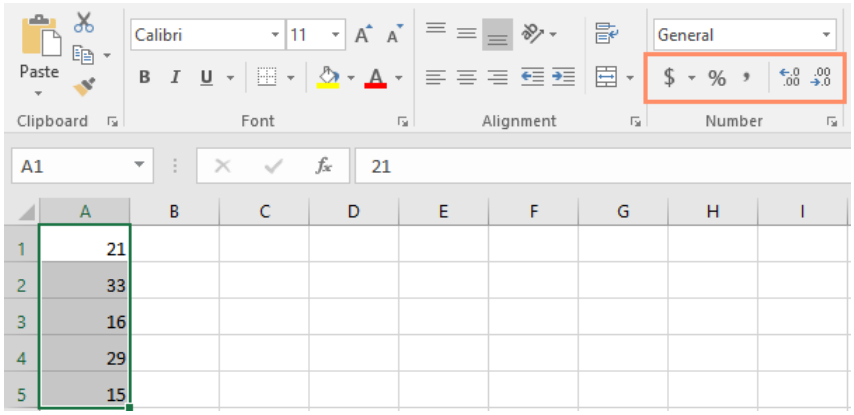
4.2.1 Applying Number Formats

Just like other types of formatting, such as changing the font color, you'll apply number formats by selecting cells and choosing the desired formatting option. There are two main ways to choose a number format:

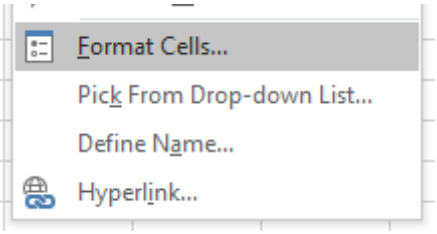
The first method is going to the Home tab, click the Number Format drop-down menu in the Number group, and select the desired format.



You can also click one of the quick number-formatting commands below the drop-down menu.

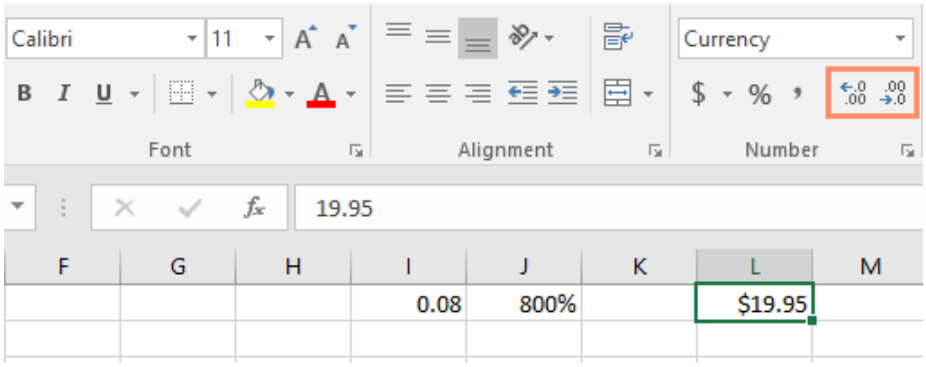


On the other hand, you can select a cell or a cell range, right click and choose "**Format Cell…**". You can also press **[Ctrl] + [1]** to call up the Format Cell dialog.

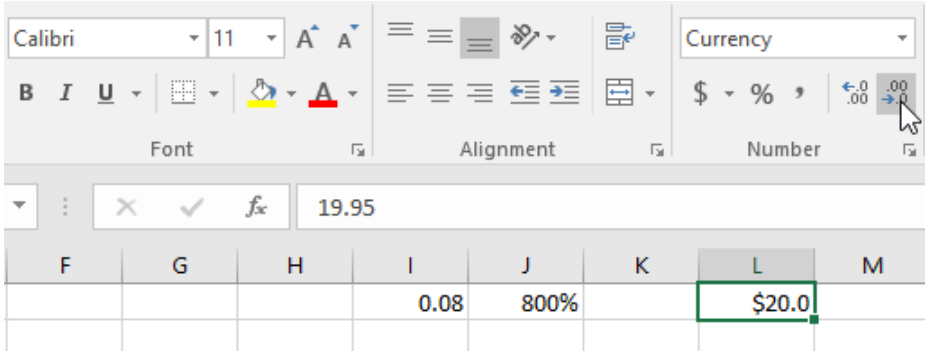


4.2.2 Increase and Decrease Decimal

The Increase Decimal and Decrease Decimal commands allow you to control how many decimal places are displayed in a cell. These commands don't change the value of the cell; instead, they display the value to a set number of decimal places.



Decreasing the decimal will display the value rounded to that decimal place, but the actual value in the cell will still be displayed in the formula bar.

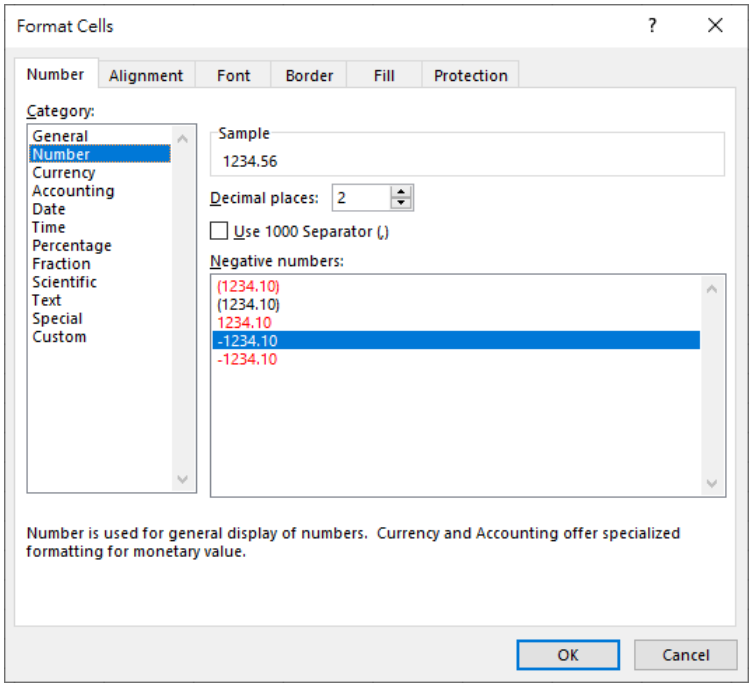


4.2.3 Available Format

Format	Description
General	The default number format that Excel applies when you type a number. For the most part, numbers that are formatted with the General format are displayed just the way you type them. However, if the cell is not wide enough to show the entire number, the General format rounds the numbers with decimals. The General number format also uses scientific (exponential) notation for large numbers (12 or more digits).
Number	Used for the general display of numbers. You can specify the number of decimal places that you want to use, whether you want to use a thousand separator, and how you want to display negative numbers.
Currency	Used for general monetary values and displays the default currency symbol with numbers. You can specify the number of decimal places that you want to use, whether you want to use a thousand separator, and how you want to display negative numbers.
Accounting	Also used for monetary values, but it aligns the currency symbols and decimal points of numbers in a column.
Date	Displays date and time serial numbers as date values, according to the type and locale (location) that you specify. Date formats that begin with an asterisk (*) respond to changes in regional date and time settings that are specified in Control Panel. Formats without an asterisk are not affected by Control Panel settings.
Time	Displays date and time serial numbers as time values, according to the type and locale (location) that you specify. Time formats that begin with an asterisk (*) respond to changes in regional date and time settings that are specified in Control Panel. Formats without an asterisk are not affected by Control Panel settings.
Percentage	Multiplies the cell value by 100 and displays the result with a percent (%) symbol. You can specify the number of decimal places that you want to use.
Fraction	Displays a number as a fraction, according to the type of fraction that you specify.
Scientific	Displays a number in exponential notation, replacing part of the number with E+n, where E (which stands for Exponent) multiplies the preceding number by 10 to the nth power. For example, a 2-decimal Scientific format displays 12345678901 as 1.23E+10, which is 1.23 times 10 to the 10th power. You can specify the number of decimal places that you want to use.
Text	Treats the content of a cell as text and displays the content exactly as you type it, even when you type numbers.
Special	Displays a number as a postal code, phone number, or Social Security number.
Custom	Allows you to modify a copy of an existing number format code. Use this format to create a custom number format that is added to the list of number format codes. You can add between 200 and 250 custom number formats, depending on the language version of Excel that is installed on your computer.

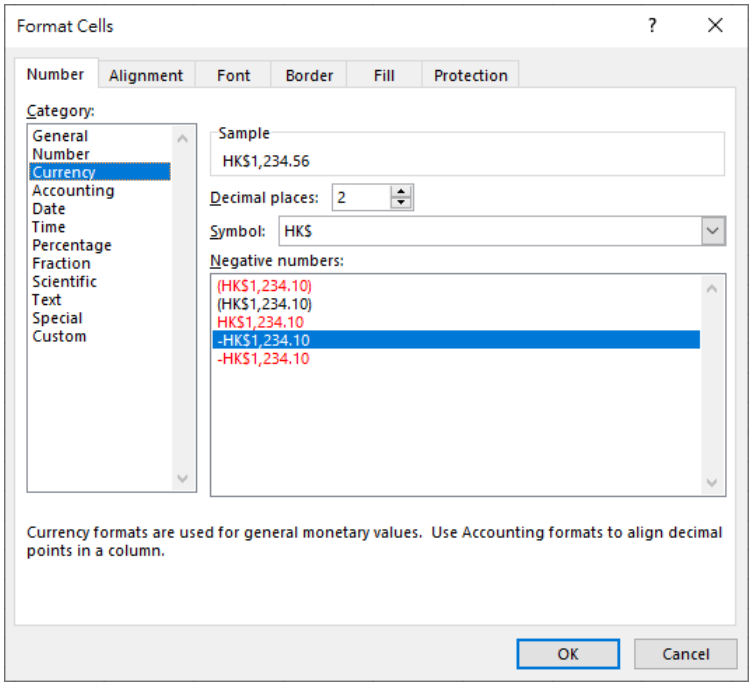
4.2.3.1 Number Format

The **Number** category in the **Format Cells** dialog box contains options for displaying numbers in integer, fixed-decimal, and punctuated formats. It is essentially the **General** format with additional control over displayed decimal places, thousand separators, and negative numbers. You can use this category to format any numbers that do not fall into any of the other categories.



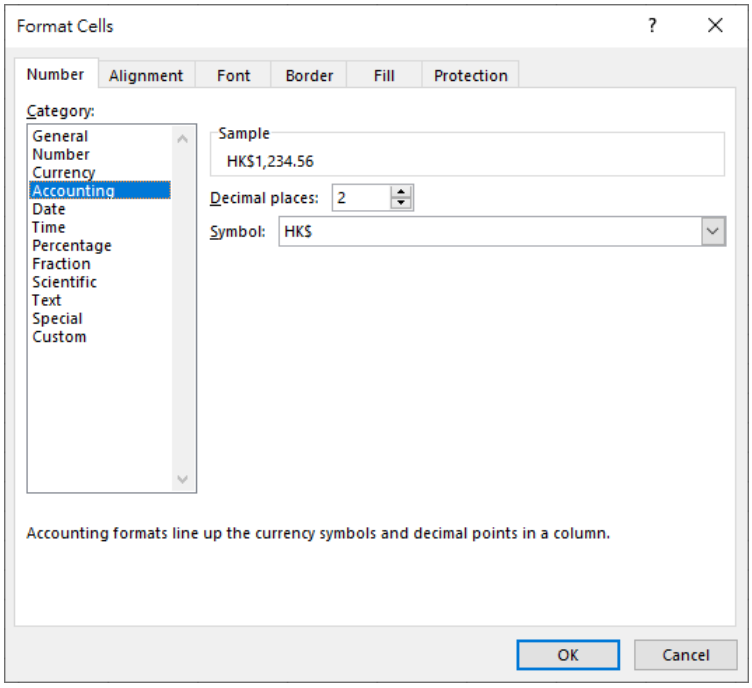
4.2.3.2 Currency Format

The **Currency** formats are similar to the **Number** formats except that instead of selecting the thousands separator (which accompanies all currency formats by default), you can select which currency symbol, if any, precedes (or trails) the number. Select the currency symbol in the **Symbol** drop-down list, which includes more than 250 different currency symbols from around the world.



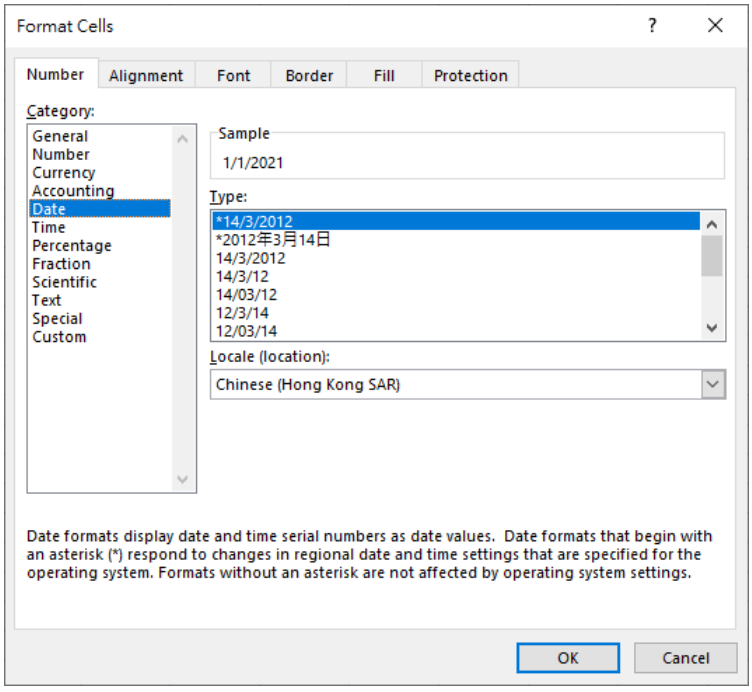
4.2.3.3 Accounting Format

The Accounting format in excel is like the Currency format and can be connected to numbers where required. The contrast between the Accounting format and the Currency format is that the Accounting format puts the dollar sign, for instance, at the extreme left end of the cell, and showcases zero as a dash. Format numbers are the same as currency.



4.2.3.4 Date and Time Format

You can format dates and times as you type. For example, if you type 1/1 in a cell, Excel automatically interprets this as a date and displays 1-Jan in the cell. If you would show 1 January 2021 or 1/1/21 in the cell, you can choose a different date format in the Format Cells dialog box. Similarly, if you type 9:30, Excel will interpret this as a time and display 9:30 am.

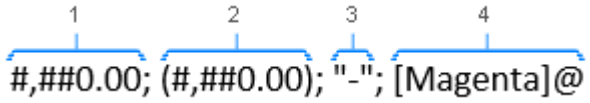


4.3 Custom Formats

Excel Custom Number formatting is the clothing for data in excel cells. You can dress these the way you want. An Excel number format consists of 4 sections of code, separated by semicolons:

{Positive} **;** ***{Negative}*** **;** ***{Zero}*** **;** ***{Text}***

Consider the following example:



- Format for positive numbers (display 2 decimal places and a thousand separator).
- Format for negative numbers (the same as for positive numbers but enclosed in parenthesis).
- Format for zeros (display dashes instead of zeros).
- Format for text values (display text in magenta font color).

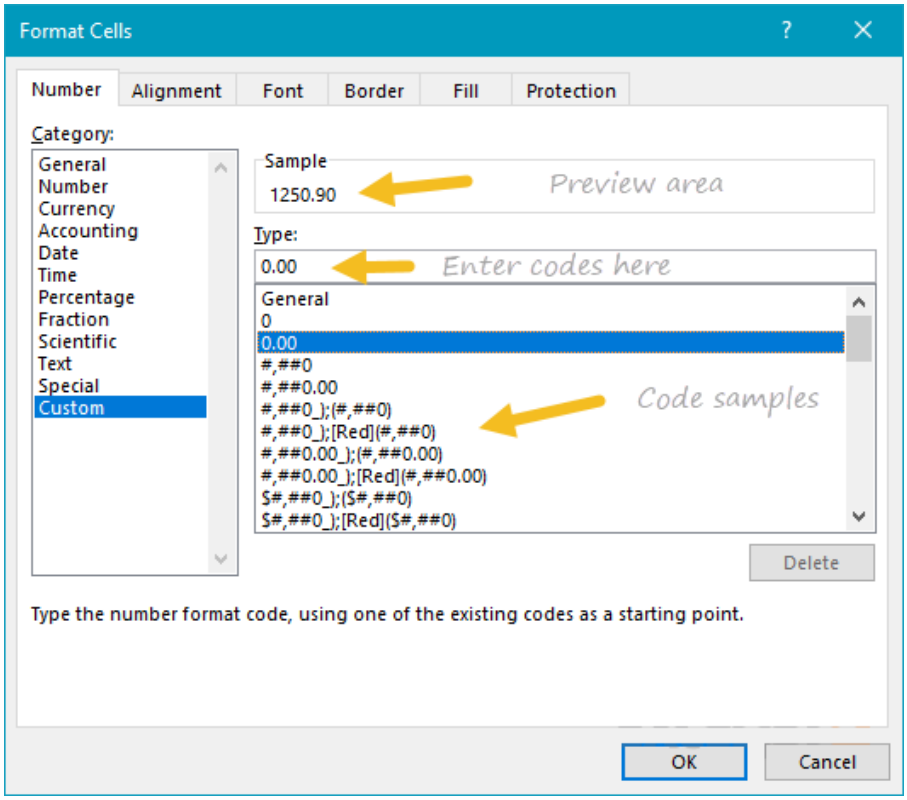
4.3.1 Excel Formatting Rules

When creating a custom number format in Excel, please remember these rules:

- A custom Excel number format changes only the visual representation, i.e. how a value is displayed in a cell. The underlying value stored in a cell is not changed.
- When you are customizing a built-in Excel format, a copy of that format is created. The original number format cannot be changed or deleted.
- Excel custom number format does not have to include all four sections.
  - If a custom format contains just 1 section, that format will be applied to all number types - positive, negative and zeros.
  - If a custom number format includes 2 sections, the first section is used for positive numbers and zeros, and the second section - for negative numbers.
  - A custom format is applied to text values only if it contains all four sections.
- To apply the default Excel number format for any of the middle sections, type General instead of the corresponding format code. For example, to display zeros as dashes and show all other values with the default formatting, use this format code: *General; -General; "-"; General*
- To hide a certain value type(s), skip the corresponding code section, and only type the ending semicolon. For example, to hide zeros and negative values, use the following format code: General; ; ; General. As the result, zeros and negative value will appear only in the formula bar but will not be visible in cells.
- To delete a custom number format, open the Format Cells dialog, select Custom in the Category list, find the format you want to delete in the Type list, and click the Delete button.

4.3.2 Creating New Formats

Use the **Custom** tab in the **Format Cells** dialog box to create custom number formats using special formatting codes. Excel adds new formats to the bottom of the list of formatting codes in the **Type** list, which also includes built-in formats. To delete a custom format, select the format in the **Format Cells** dialog box and click **Delete**. However, you cannot delete built-in formats.



4.3.3 Custom Format Symbols

Symbol	Meaning
General	Number in General (serial value) format
0	**Digit Placeholder.** This symbol ensures that a specified number of digits appear on each side of the decimal point. If a number has more digits to the right of the decimal point than the number 0s specified in the format, the number in the cell is rounded. *(E.g. the value .98 is displayed as 0.980 if the format is 0.000; .98 is rounded to 1.0 if the format is 0.0)*
?	**Digit Placeholder.** This symbol follows the same rules as the 0 placeholder, except that space is left for insignificant zeros on either side of the decimal point. This placeholder aligns numbers on the decimal points. *(E.g., 1.4 and 1.45 would line up on the decimal point if both were formatted as 0.??*)
#	**Digit Placeholder.** This symbol works like 0, except that extra zeros do not appear if the number has fewer digits on either side of the decimal point than #s specified in the format. This symbol shows Excel where to display commas or other separating symbols. *(E.g. the format #,### display a comma after every 3rd digit to the left of the decimal point)*
.	**Decimal Point.** This symbol determines how many digits (0 or #) appear to the right and left of the decimal point. *(E.g. if you want Excel to include commas and display at least one digit to the left of the decimal point in all cases, specify the format #,##0).*

%	**Percentage Indicator.** This symbol multiplies the entry by 100 and insert the % character.
/	**Fraction Format Character.** This symbol displays the fractional part of a number in a non-decimal format. The number of digit placeholders that surround this character determines the accuracy of the display. *(E.g. the decimal fraction 0.269 when formatted with # ?/? is displayed as 1/4, but when formatted with # ???/??? is displayed as 46/171*)
,	Thousands separator. If the format contains a comma surrounded by #s, 0s, or ?s, Excel uses commas to separate hundreds from thousands, thousands from millions, and so on. *(E.g. the format code #,###,###, would round 4567890 to 4,568, whereas the format code #,###,###,, would round it to 5)*
E– E+	**Scientific Format Characters.** If a format contains one 0 or # to the right of an E– or E+, Excel displays the number in scientific notation and inserts E in the displayed value. The number of 0s or #s to the right of the E determines the minimum number of digits in the exponent. Use E– to place a negative sign by negative exponents; use E+ to place a negative sign by negative exponents and a positive sign by positive exponents.
\	**Literal demarcation character.** Precede each character you want to display in the cell (except for : $ – + / ( ) and space) with a backslash. *(E.g. the format code #,##0 \D;-#,##0 \C displays positive numbers followed by a D, and negative numbers followed by a C. To insert several characters, use the quotation-mark technique described in the "Text" table entry)*
$ – + / ( ) space	**Standard formatting characters.** These symbols type these characters directly.
_	**Underscore.** This code leaves space equal to the width of the next character. Use this formatting character for alignment purposes. *(E.g. _) leaves a space equal to the width of the close parenthesis)*
" "	**Literal Character String.** This formatting code works like the backslash technique except that all text can be included within one set of double quotation marks without using a separate demarcation character for each literal character.
*****	**Repetition Initiator.** Repeats the next character in the format enough times to fill the column width. Use only one asterisk in the format.
@	**Text Placeholder.** If the cell contains text, this placeholder inserts that text in the format where the @ appears. *(E.g. the format code "Hello" @ displays "Hello World" in a cell containing the text "World"*)
[ ]	**Conditional Formats.** Conditional formatting can be applied to number format. To create a conditional format, you set up the condition inside square brackets using the same comparative operators

4.3.4 Date and Time Formats

Code	Meaning
d	Day number without leading zero (1 – 31)
dd	Day number with leading zero (01 – 31)
ddd	Day-of-week abbreviation (Sun – Sat)
dddd	Complete day-of-week name (Sunday – Saturday)
m	Month number without leading zero (1 – 12)
mm	Month number with leading zero (01 – 12)
mmm	Month name abbreviation (Jan – Dec)
mmmm	Complete month name (January – December)
yy	Last two digits of year number (00 – 99)
yyyy	Complete four-digit year number (1900 – 2078)
h	Hour without leading zero (0 – 23)
hh	Hour with leading zero (00 – 23)
m	Minute without leading zero (0 – 59)
mm	Minute with leading zero (00 – 59)
s	Second without leading zero (0 – 59)
ss	Second with leading zero (00 – 59)
s.0	Second and tenths of a second without leading zero
s.00	Second without leading zero and hundredths of a second without leading zero
ss.0	Second without leading zero and tenths of a second with leading zero
ss.00	Second and hundredths of a second with leading zero
AM/PM	Time in AM/PM notation
am/pm	Time in am/pm notation

4.3.5 Escaping Characters

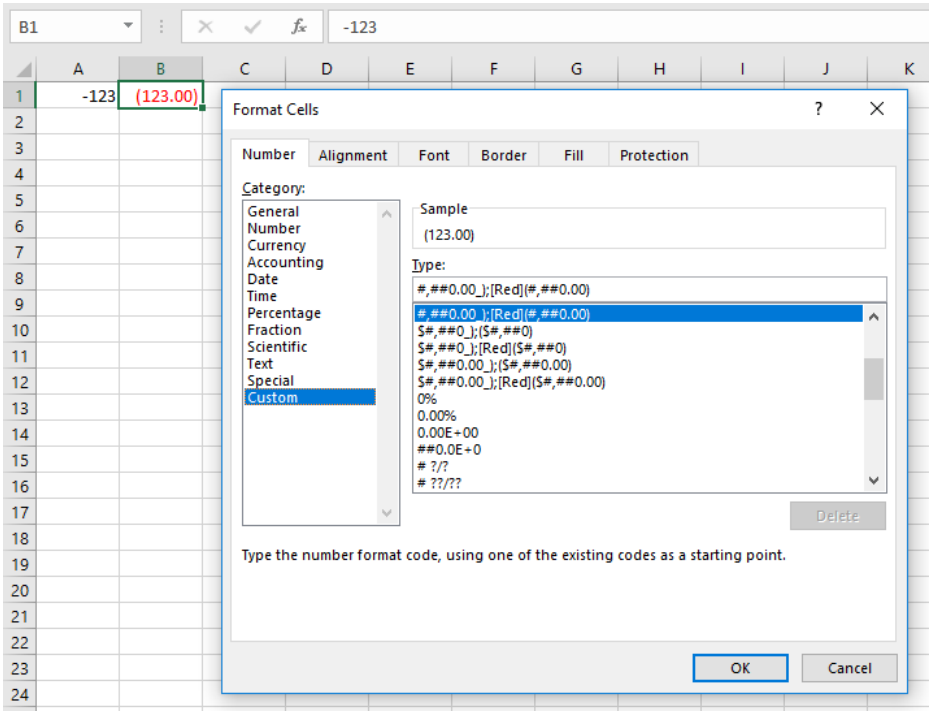
Some characters won't work correctly in a custom number format without being escaped. For example, the asterisk (*), hash (#), and percent (%) characters can't be used directly in a custom number format – they won't appear in the result. The escape character in custom number formats is the backslash (\). By placing the backslash before the character, you can use them in custom number formats:

Format	Value	Result
\#0	100	#100
*0	100	*100
\%0	100	%100

4.3.6 Example

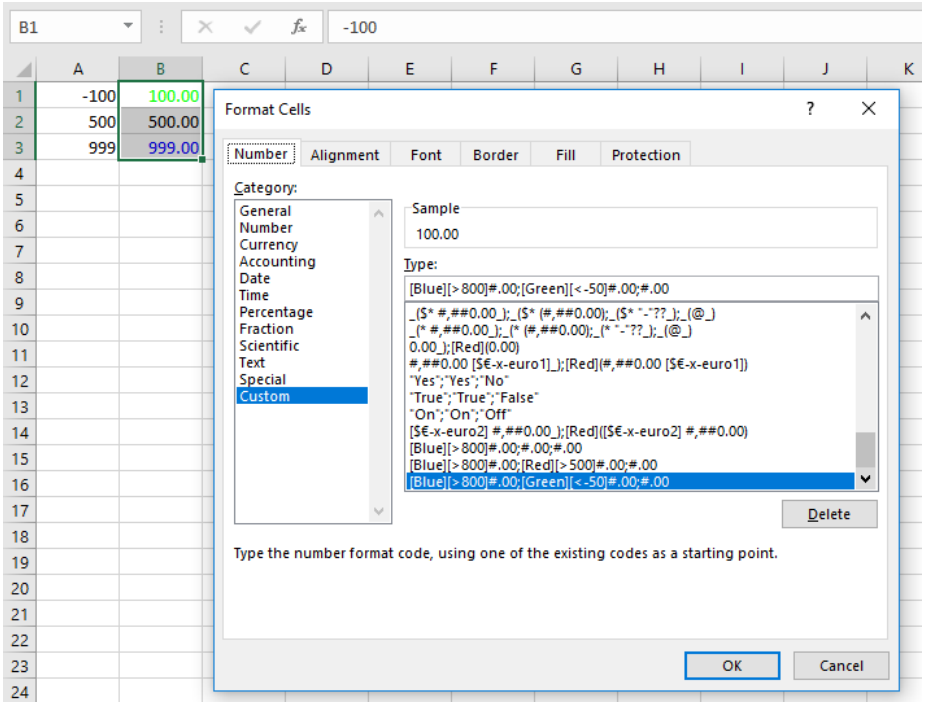
4.3.6.1 Adding Color to Formats

You can also use the **Number** formats to change the color of selected cell entries. You can even create formats that assign different colors to specific numeric ranges so that all values greater than or less than a specified value appear in a different color. To change the color of an entry, type the name of the new color in brackets (e.g. [BLUE]) in front of each segment of code.



4.3.6.2 Using Custom Format Condition Operators

You can create custom formats that are variable by adding a condition operator (<, >, =, <=, >=, or <>) to the Excel for conditional format.



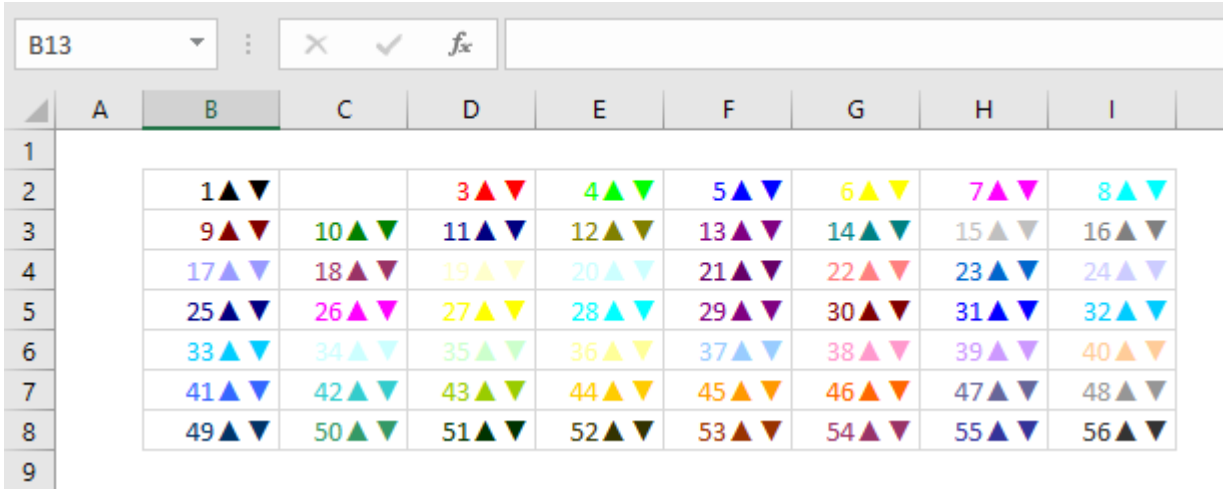
4.3.6.3 Number Formats for Elapsed Time

Elapsed time is a special case and needs special handling. By using square brackets, Excel provides a special way to display elapsed hours, minutes, and seconds.

Code	Output	Description
#.## "days"	1.25 days	Show in days
[h]	30	Elapsed hours
[h]:mm	30:00	Elapsed hours with minutes
[m]	1800	Elapsed minutes
[m]:ss	1800:00	Elapsed minutes with seconds
[ss]	108000	Elapsed second
[ss].00	108000.00	Elapsed second with milliseconds

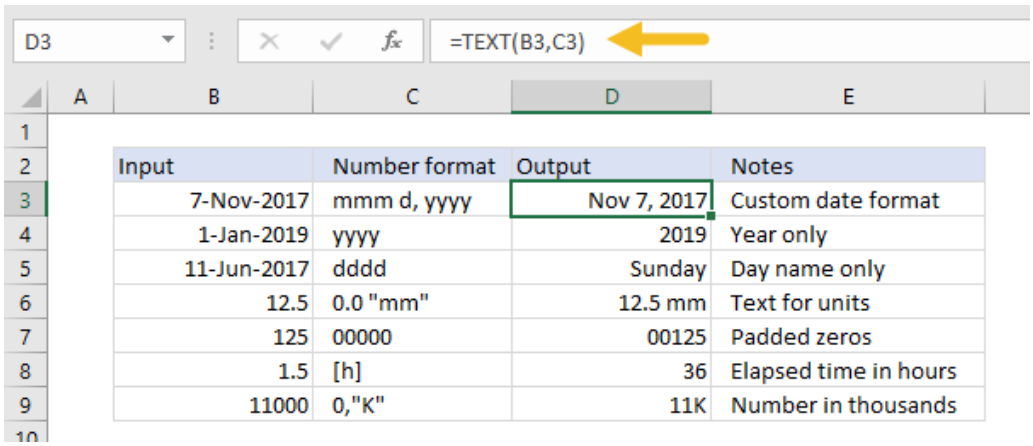
4.3.6.4 Colors by Index

In addition to color names, it's also possible to specify colors by an index number between 1-56 (Color1, Color2, Color3, etc.)



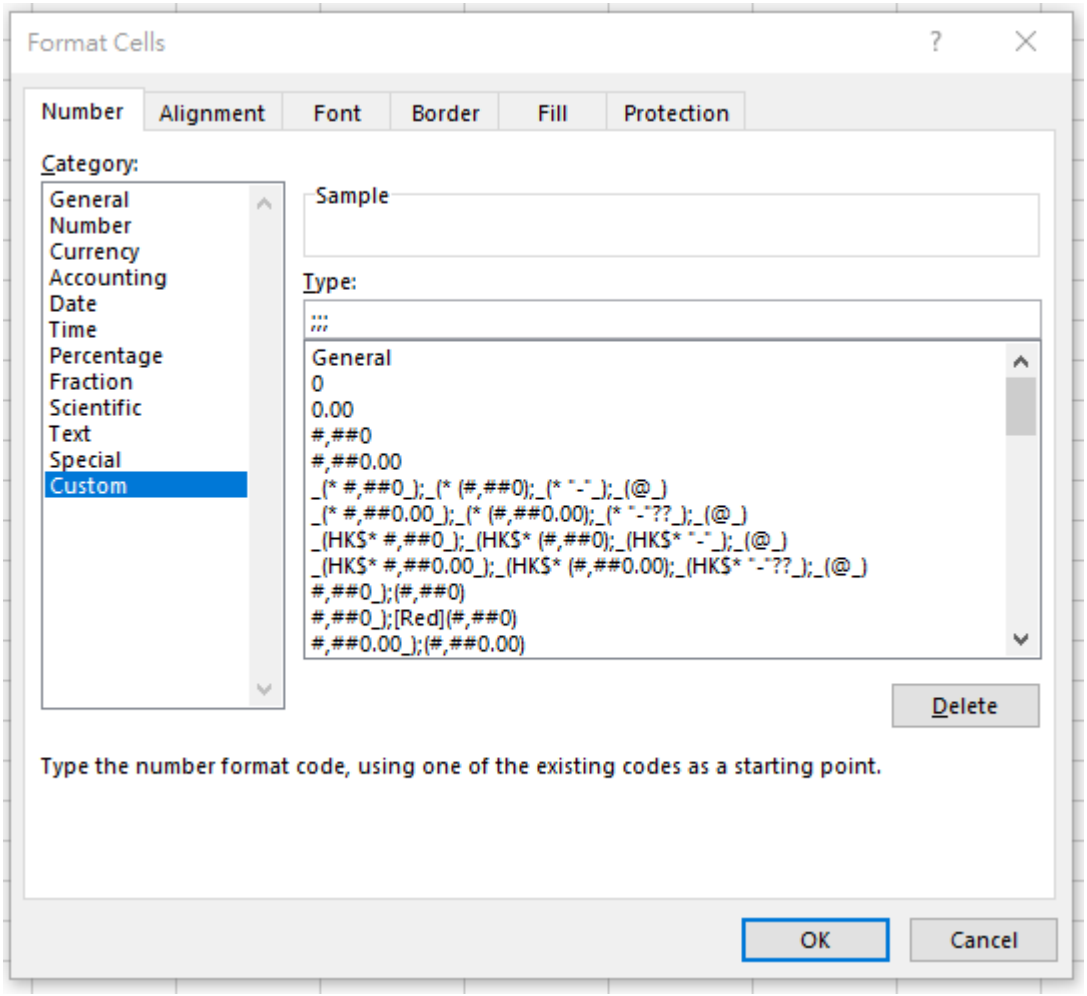
4.3.6.5 Apply Number Formats in Formula

Although most number formats are applied directly to cells in a worksheet, you can also apply number formats inside a formula with the TEXT function.



4.3.6.6 Hide all Content

You can actually use a custom number format to hide all content in a cell. The code is simply three semi-colons and nothing else ;;;



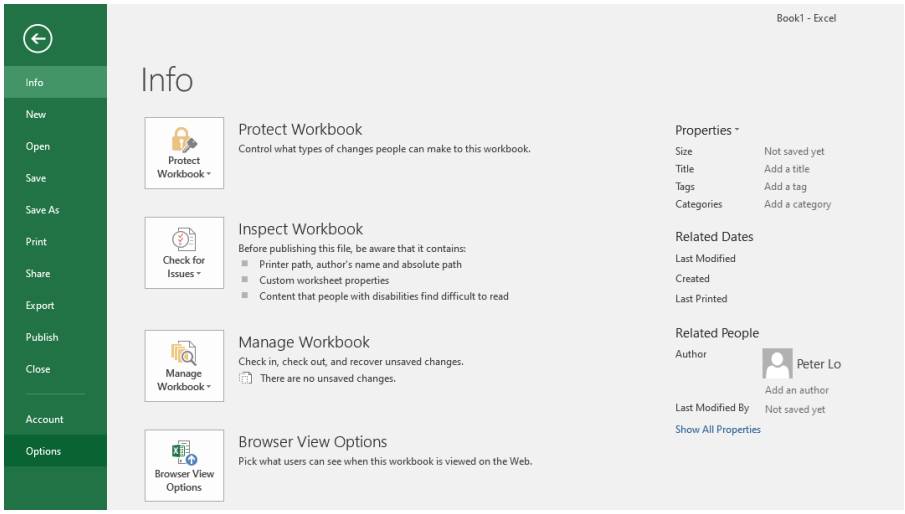
To reveal the content again, you can use the keyboard shortcut **[Ctrl]** + **[Shift]** + **[~]**, which applies the General format to the corresponding cells..

4.4 Display or Hide Zero Values

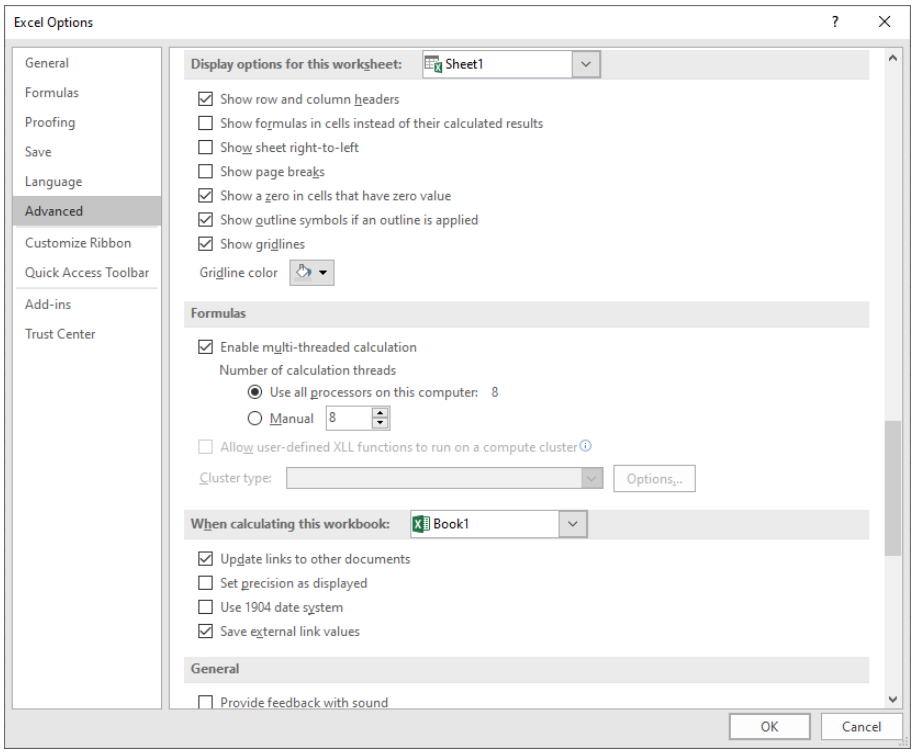
Sometimes you might not want zero (0) values showing on your worksheets, sometimes you need them to be seen. Whether your format standards or preferences call for zeroes showing or hidden, there are several ways to make it happen.

4.4.1 Hide or Display all Zero Values in Worksheet

1. In order to control the display of zero values in worksheet, click **File ➔ Options**.



2. Select the "**Advanced**" tab, select a worksheet under "**Display options for this worksheet**".



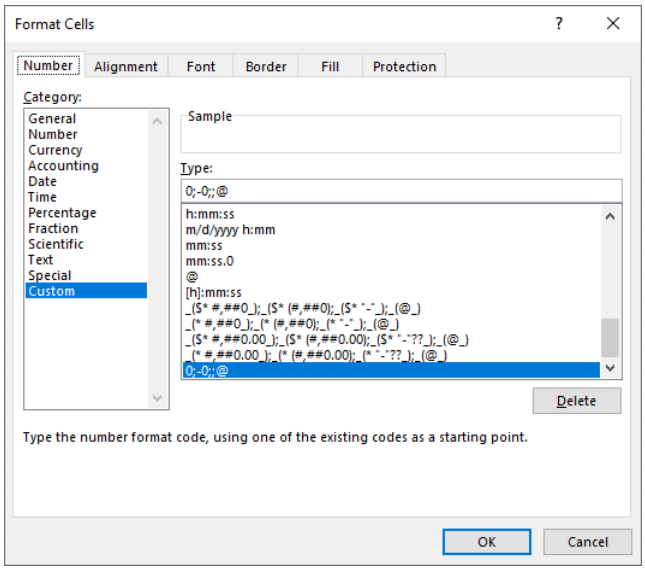
3. Setup the display of zero value as follow:
   - To display zero values in cells, check the "**Show a zero in cells that have zero value**" check box.
   - To display zero values as blank cells, uncheck the "**Show a zero in cells that have zero value**" check box.

4.4.2 Hide Zero Values in Selected Cells

These steps hide zero values in selected cells by using a number format. The hidden values appear only in the formula bar and are not printed. If the value in one of these cells changes to a nonzero value, the value will be displayed in the cell, and the format of the value will be similar to the general number format.

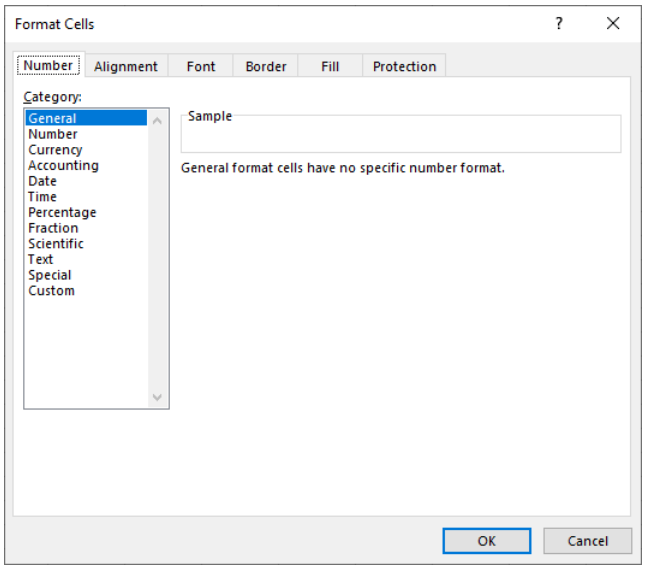
1. Select the cells that contain the zero values that you want to hide.

2. Right click and select **Format Cells**, or you can press **[Ctrl] + [1]**.
3. Go to **Number** tab, and select **Custom**.
4. Type **0;-0;;@** in the Type box, and then click **[OK]**.



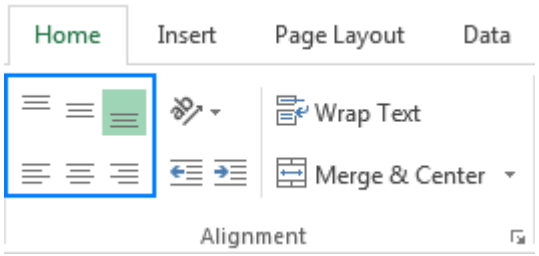
4.4.3 Display Hidden Zero Values

1. Select the cells with hidden zeros.
2. Right click and select **Format Cells**, or you can press **[Ctrl] + [1]**.
3. Go to **Number** tab, and select **General** to apply the default number format, and then click **[OK]**.



4.5 Aligning Data

The **Alignment** group in **Home** menu, positions text and numbers in cells. It also contains options you can use to create multi line text labels, repeat a series of characters within one or more cells, and orient text vertically or at any angle in cells.



4.5.1 Vertical Alignment

If you'd like to align data vertically, click one of the following icons:

- Top Align – Aligns the contents to the top of the cell.
- Middle Align – Centers the contents between the top and bottom of the cell.
- Bottom Align – Aligns the contents to the bottom of the cell (the default one).

Please note that changing vertical alignment does not have any visual effect unless you increase the row height.

4.5.2 Horizontal Alignment

To align your data horizontally, Microsoft Excel provides these options:

- Align Left – Aligns the contents along the left edge of the cell.
- Center – Puts the contents in the middle of the cell.
- Align Right – Aligns the contents along the right edge of the cell.

4.5.3 Combining Vertical and Horizontal Alignment

By combining different vertical and horizontal alignments, you can arrange the cell contents in different ways.



Align to Upper Left



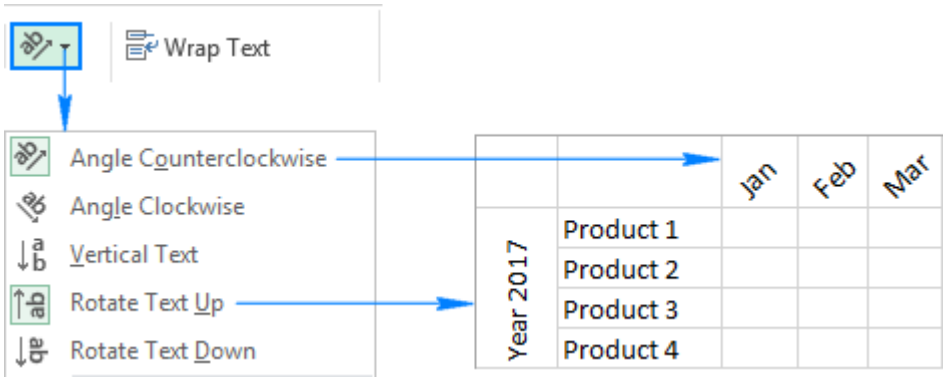
Align to Bottom Right



Align to Middle Center

4.5.4 Change Text Orientation (Rotate Text)

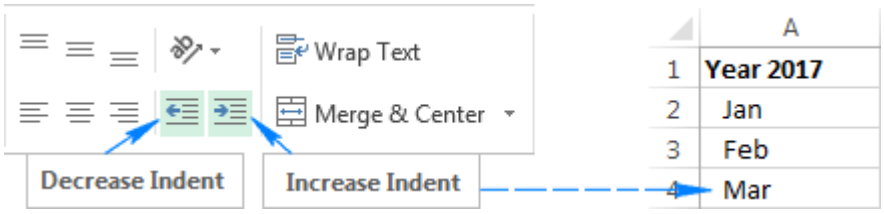
Click the Orientation button on the Home tab, in the Alignment group, to rotate text up or down and write vertically or sideways. These options come in especially handy for labeling narrow columns: Rotate text and write vertically or sideways.



4.5.5 Indent Text

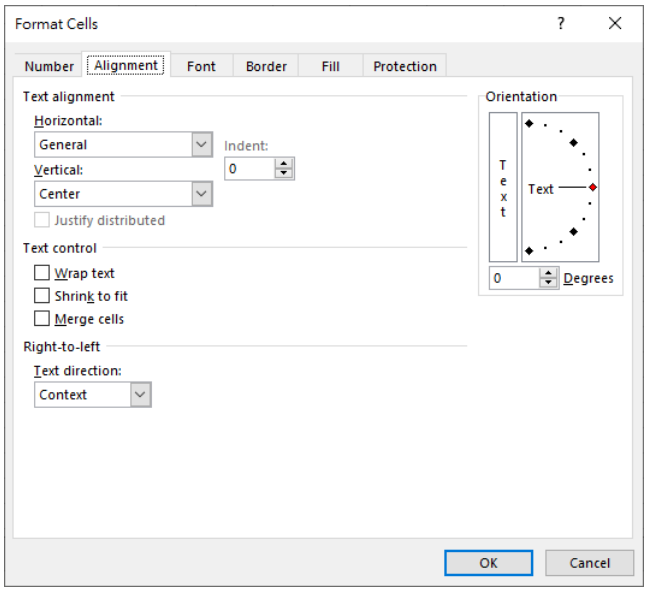
In Microsoft Excel, the Tab key does not indent text in a cell like it does, say, in Microsoft Word; it just moves the pointer to the next cell. To change the indentation of the cell contents, use the Indent icons that reside right underneath the Orientation button.

To move text further to the right, click the Increase Indent icon. If you have gone too far right, click the Decrease Indent icon to move the text back to the left.



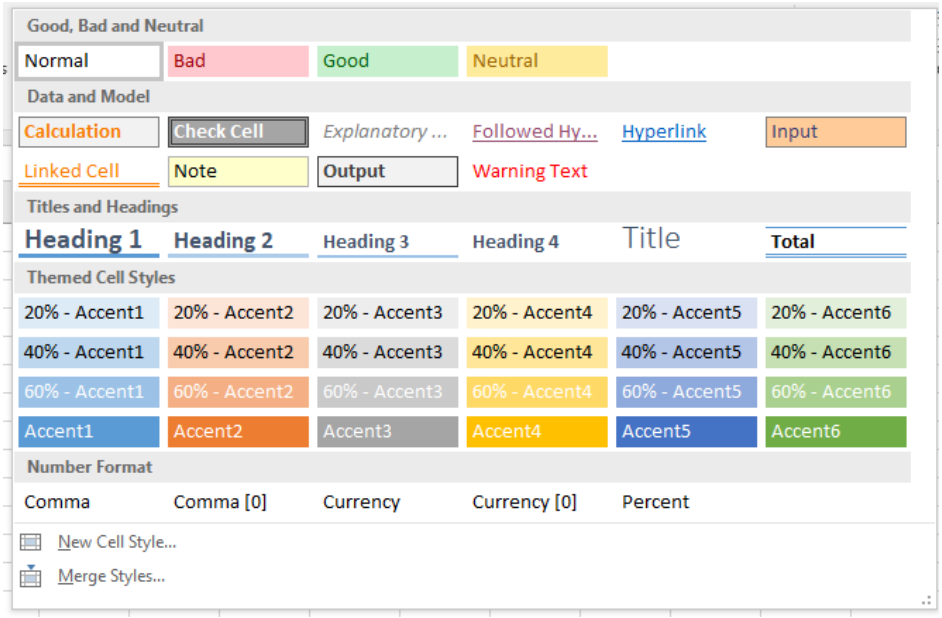
4.5.6 Align Text using the Format Cells dialog

In addition to the most used alignment options available on the ribbon, you can use the **Format Cells** dialog box (Right click the cell, and choose **Format Cell…**) for advance features



4.6 Formatting with Styles

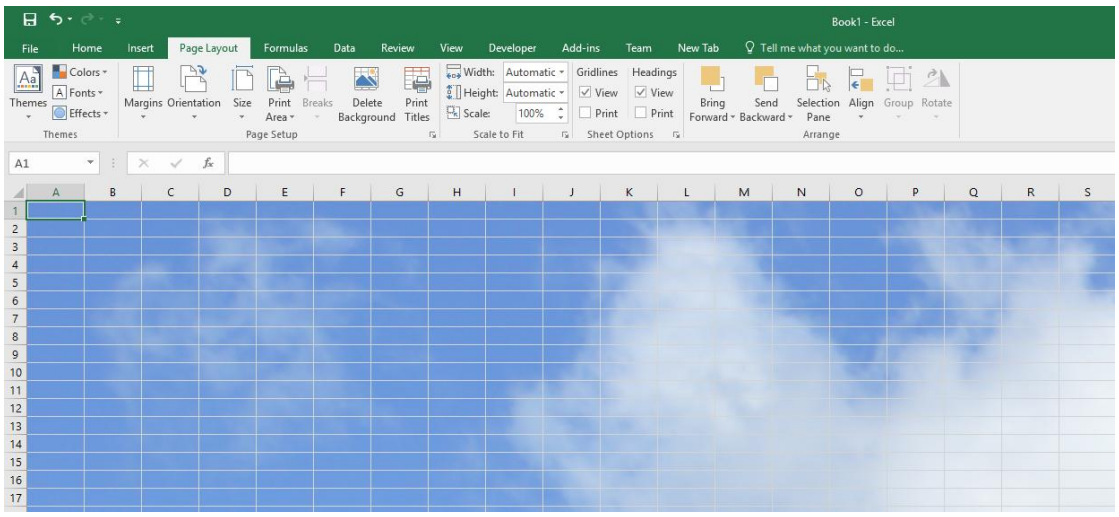
To apply several formats in one step, and to make sure that cells have consistent formatting, you can use a cell style. A cell style is a defined set of formatting characteristics, such as fonts and font sizes, number formats, cell borders, and cell shading. To prevent anyone from making changes to specific cells, you can also use a cell style that locks cells.



Microsoft Office Excel has several built-in cell styles that you can apply or modify. You can also modify or duplicate a cell style to create your own, custom cell style. Cell styles are based on the document theme that is applied to the whole workbook. When you switch to another document theme, the cell styles are updated to match the new document theme.

4.7 Background Image

Image the plain black and white data with some graphs being pre-presented in a meeting to some client or other audience. An excel sheet is something similar and is pretty plain and simple. Just open the excel sheet on which you want to add the background image. If you want to create a new one, just open a new blank sheet. Click on **Page Layout ➔ Background** to add a background image.



4.8 Add a Watermark

4.8.1 Create a watermark

1. Select **Insert ➔ Header & Footer**.
2. Tap on the header and on the **Header & Footer** tab on the ribbon, click **Picture**.
3. Select one of the available options to insert your image. In the header, you'll see & [Picture].
4. Tap anywhere outside the header to see the watermark.

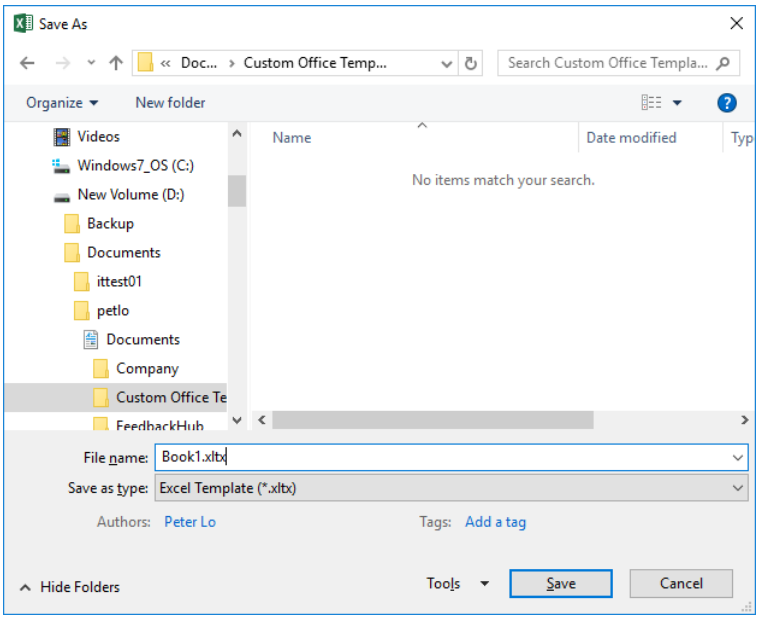
4.8.2 Format the Watermark picture

1. Click the header in the spreadsheet.
2. On the **Header & Footer** tab, click **Format Picture**.
3. In the **Format Picture** dialog box, select Picture tab ➔ Color ➔ select an option.

4.9 Using Template Files to Store Formatting

A template file is a model that can serve as the basis for new worksheets. A template can include both data and formatting information. The advantages to using templates are standardization and protection. To create a template file, follow these steps:

1. Open the workbook you want to use as a template.
2. Choose **Save As**, and supply a file name.
3. Choose **Excel Template** from the **Save as type** list, and click **[Save]** button.



5. Conditional Formats

5.1 Create Conational Formatting Rules

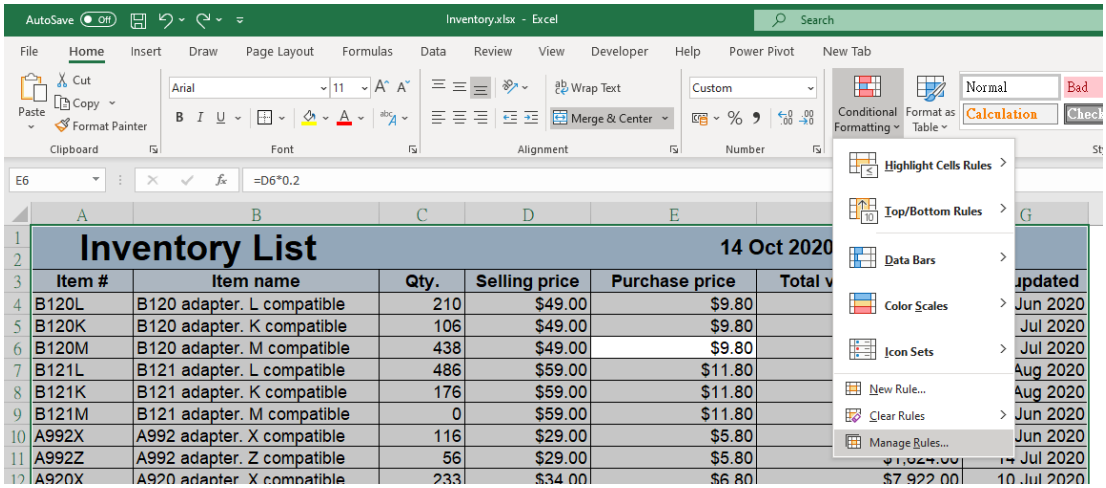
Use conditional formatting to help you visually explore and analyze data, detect critical issues, and identify patterns and trends. Conditional formatting makes it easy to highlight interesting cells or ranges of cells, emphasize unusual values, and visualize data by using data bars, color scales, and icon sets that correspond to specific variations in the data. A conditional format changes the appearance of cells on the basis of conditions that you specify. If the conditions are true, the cell range is formatted; if the conditions are false, the cell range is not formatted.

There are two ways to create conditional formatting rules:

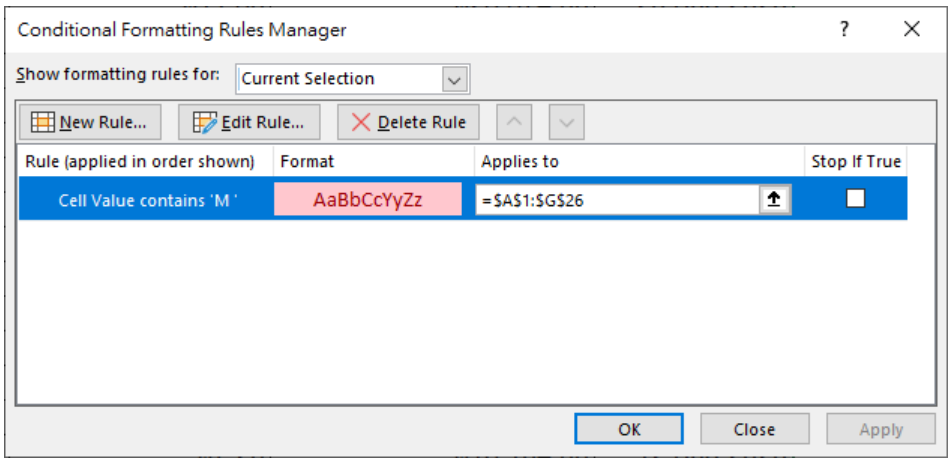
- Build-in Rules: There are many built-in conditions, you can select them under **Conditional Formatting** in Home tab.
- Custom Rules: Select **Conditional Formatting ➔ New Rules** to create your own.

5.2 Edit Conditional Formatting Rule

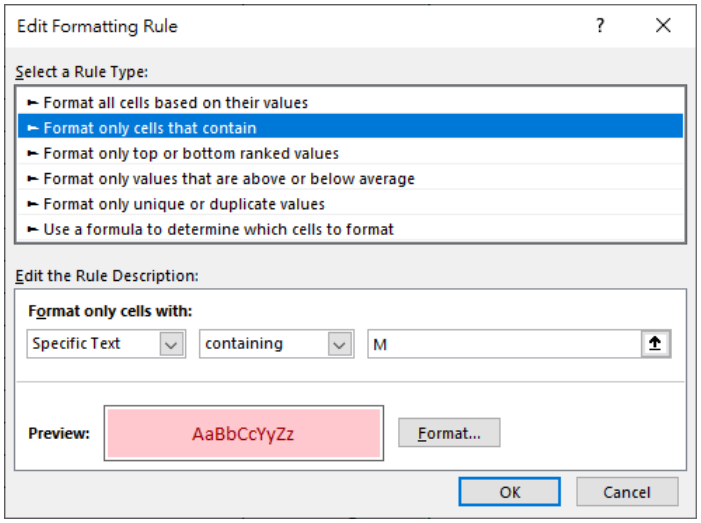
1. You can edit the entire rule from the conditional formatting rules manager by accessing **Conditional Formatting ➔ Manage Rules …** in the **Home** tab.



2. "**Show formatting rules for:**" is set to "**Current Selection**" by default. You can change to "**This Worksheet**" if you want to list all rules within worksheet. Then find out the rule that you want to change and press the **[Edit Rule…]** button.



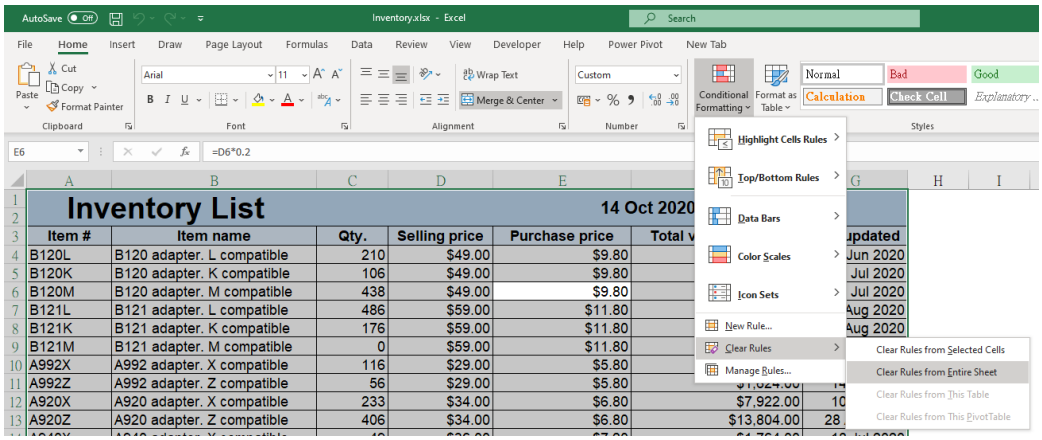
3. You can change the condition and format in this “Edit Formatting Rules” dialog box.



5.3 Delete Conditional Formatting Rule

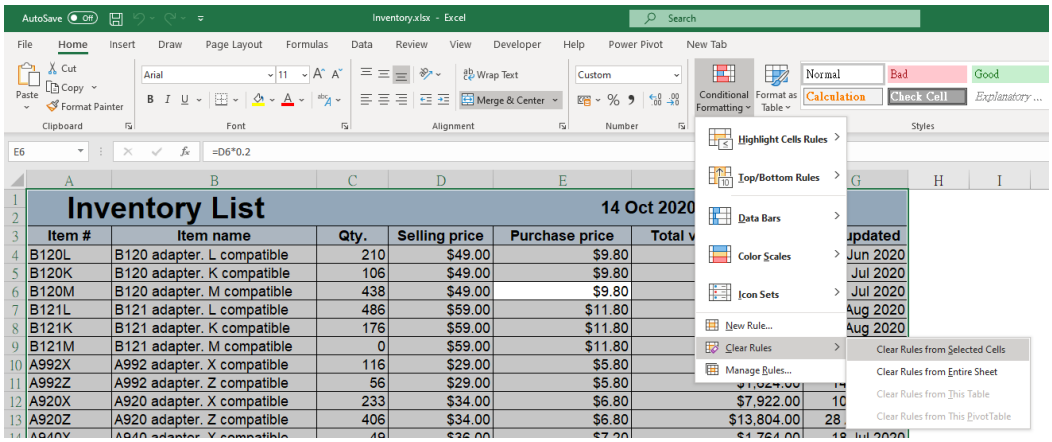
5.3.1 Delete All Rules

Removing all conditional formatting rules in a sheet is very straightforward, select **Conditional Formatting ➔ Clear Rules ➔ Clear Rules from Entire Sheet**, then all rules will be removed.



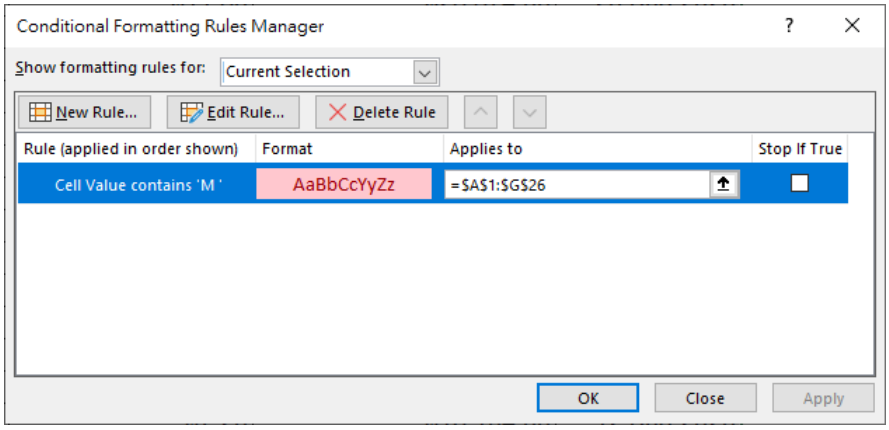
5.3.2 Delete Rules from Selected Cell

If you only want to remove the conditional format rules from the select cell, press **Conditional Formatting ➔ Clear Rules ➔ Clear Rules from Selected Cells**. Then the rule for the selected cell will be removed.



5.3.3 Delete Rules by Conational Formatting Rules Manager

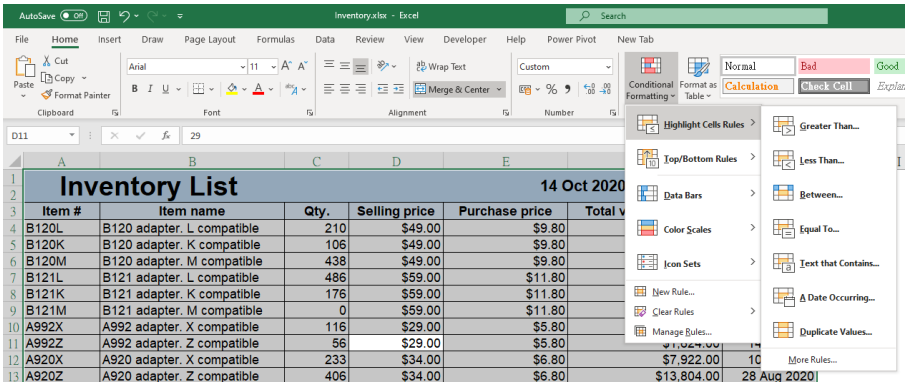
You can also delete the whole rule that apply to multiple cells from **Conditional Formatting ➔ Manage Rules …**. Then select the rule and press **[Delete Rule]** in Conational Formatting Rules Manager. Remember to press **[OK]** to confirm the change.



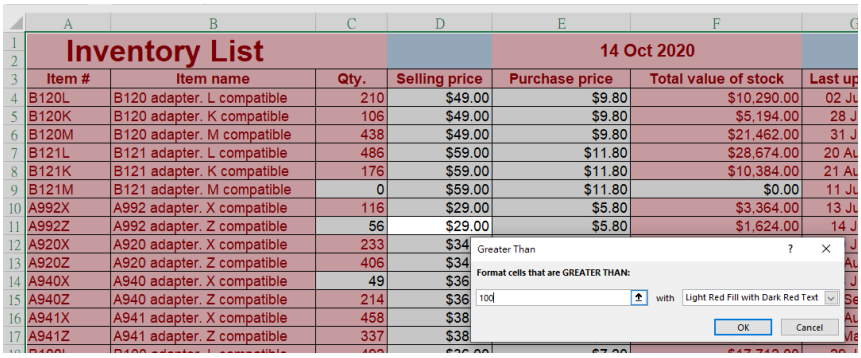
5.4 Highlight Cells using Comparison Operators

To more easily find specific cells within a range of cells, you can format those specific cells based on a comparison operator. For example, in an inventory worksheet sorted by categories, you can highlight the products with fewer than 10 items on hand in yellow. Or, in a retail store summary worksheet, you can identify all stores with profits greater than 10%, sales volumes less than $100,000, and region equal to "SouthEast".

1. Select the cells, and click **Conditional Formatting ➔ Highlight Cells Rules**, then select the comparison operators (Greater Than…, Less Than…, Between… , or Equal To…).

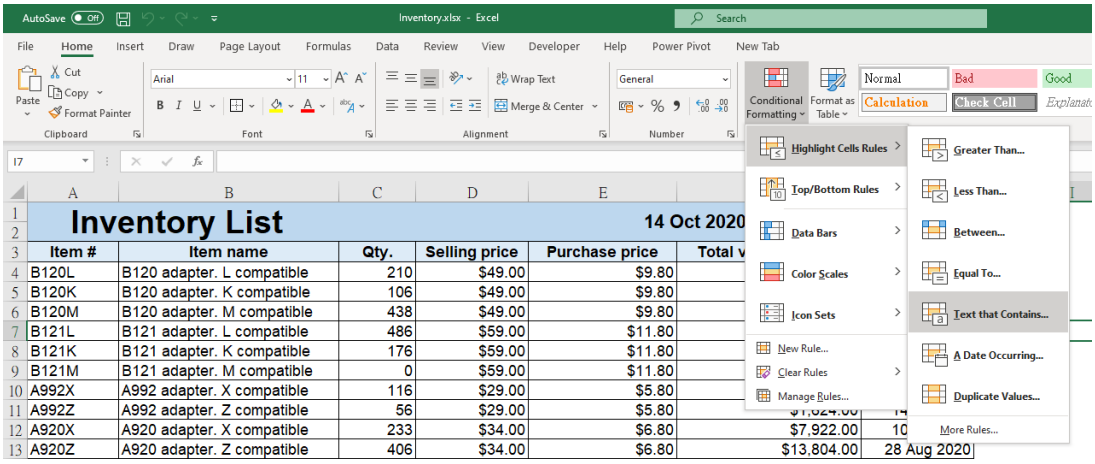


2. Input the value in the dialog box. Strong recommend selecting numeric value only when using comparison operator to prevent invalid output.



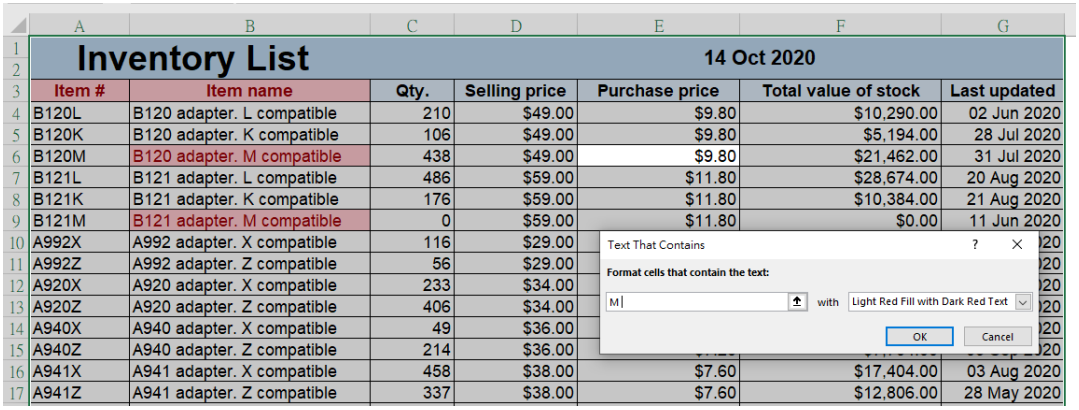
5.5 Highlight Cells that Contain Specified Text

1. Select the table and click **Conditional Formatting ➔ Highlight Cells Rules ➔ Text that Contains…**.



Item #	Item name	Qty.	Selling price	Purchase price	Total v
B120L	B120 adapter. L compatible	210	$49.00	$9.80	
B120K	B120 adapter. K compatible	106	$49.00	$9.80	
B120M	B120 adapter. M compatible	438	$49.00	$9.80	
B121L	B121 adapter. L compatible	486	$59.00	$11.80	
B121K	B121 adapter. K compatible	176	$59.00	$11.80	
B121M	B121 adapter. M compatible	0	$59.00	$11.80	
A992X	A992 adapter. X compatible	116	$29.00	$5.80	
A992Z	A992 adapter. Z compatible	56	$29.00	$5.80	
A920X	A920 adapter. X compatible	233	$34.00	$6.80	$7,922.00
A920Z	A920 adapter. Z compatible	406	$34.00	$6.80	$13,804.00

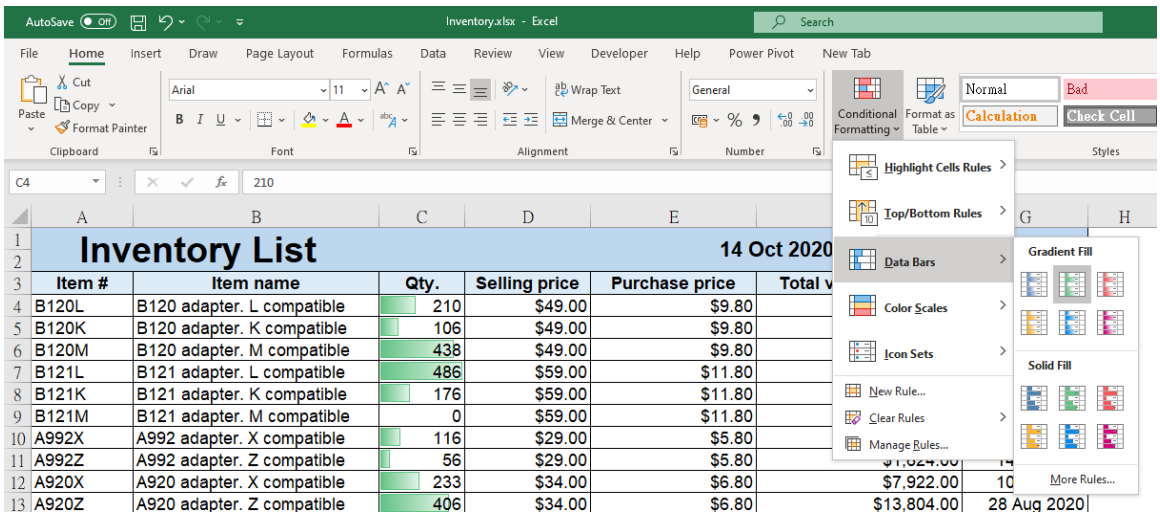
2. Type the specified text in the dialog box, and press **[OK]** button.



Item #	Item name	Qty.	Selling price	Purchase price	Total value of stock	Last updated
B120L	B120 adapter. L compatible	210	$49.00	$9.80	$10,290.00	02 Jun 2020
B120K	B120 adapter. K compatible	106	$49.00	$9.80	$5,194.00	28 Jul 2020
B120M	B120 adapter. M compatible	438	$49.00	$9.80	$21,462.00	31 Jul 2020
B121L	B121 adapter. L compatible	486	$59.00	$11.80	$28,674.00	20 Aug 2020
B121K	B121 adapter. K compatible	176	$59.00	$11.80	$10,384.00	21 Aug 2020
B121M	B121 adapter. M compatible	0	$59.00	$11.80	$0.00	11 Jun 2020
A992X	A992 adapter. X compatible	116	$29.00			20
A992Z	A992 adapter. Z compatible	56	$29.00			20
A920X	A920 adapter. X compatible	233	$34.00			20
A920Z	A920 adapter. Z compatible	406	$34.00			20
A940X	A940 adapter. X compatible	49	$36.00			20
A940Z	A940 adapter. Z compatible	214	$36.00			20
A941X	A941 adapter. X compatible	458	$38.00	$7.60	$17,404.00	03 Aug 2020
A941Z	A941 adapter. Z compatible	337	$38.00	$7.60	$12,806.00	28 May 2020

5.6 Using Data Bars for High / Low Overview

A data bar helps you see the value of a cell relative to other cells. The length of the data bar represents the value in the cell. A longer bar represents a higher value, and a shorter bar represents a lower value. Data bars are useful in spotting higher and lower numbers, especially with large amounts of data, such as top selling and bottom selling toys in a holiday sales report.



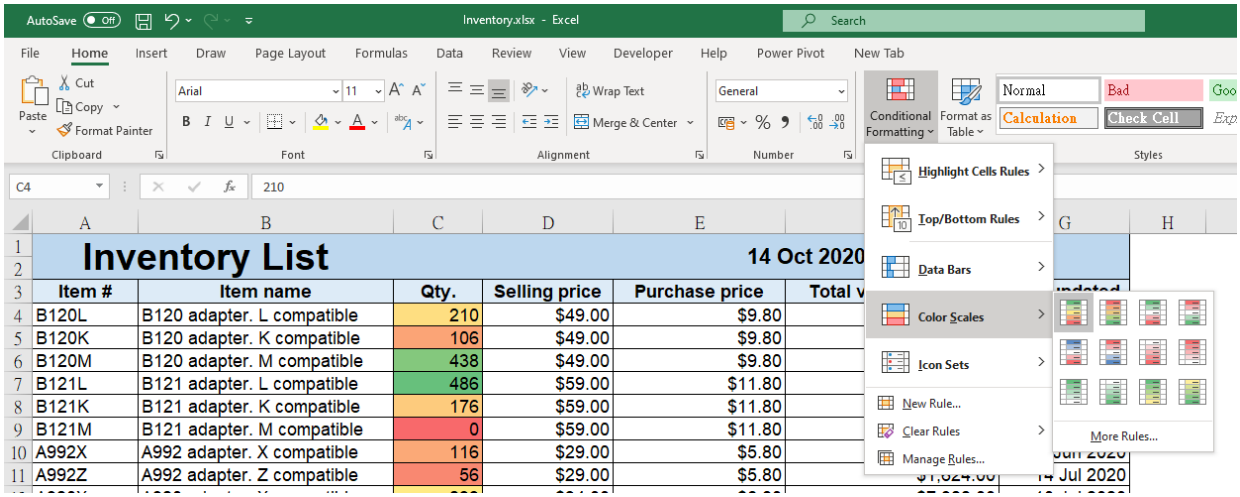
Item #	Item name	Qty.	Selling price	Purchase price	Total v
B120L	B120 adapter. L compatible	210	$49.00	$9.80	
B120K	B120 adapter. K compatible	106	$49.00	$9.80	
B120M	B120 adapter. M compatible	438	$49.00	$9.80	
B121L	B121 adapter. L compatible	486	$59.00	$11.80	
B121K	B121 adapter. K compatible	176	$59.00	$11.80	
B121M	B121 adapter. M compatible	0	$59.00	$11.80	
A992X	A992 adapter. X compatible	116	$29.00	$5.80	
A992Z	A992 adapter. Z compatible	56	$29.00	$5.80	
A920X	A920 adapter. X compatible	233	$34.00	$6.80	$7,922.00
A920Z	A920 adapter. Z compatible	406	$34.00	$6.80	$13,804.00

5.7 Create Heat Map by using Color Scale

Color scales are visual guides that help you understand data distribution and variation. A two-color / three-color scale helps you compare a range of cells by using a gradation of two / three colors. The shade of the color represents higher, (middle), or lower values.

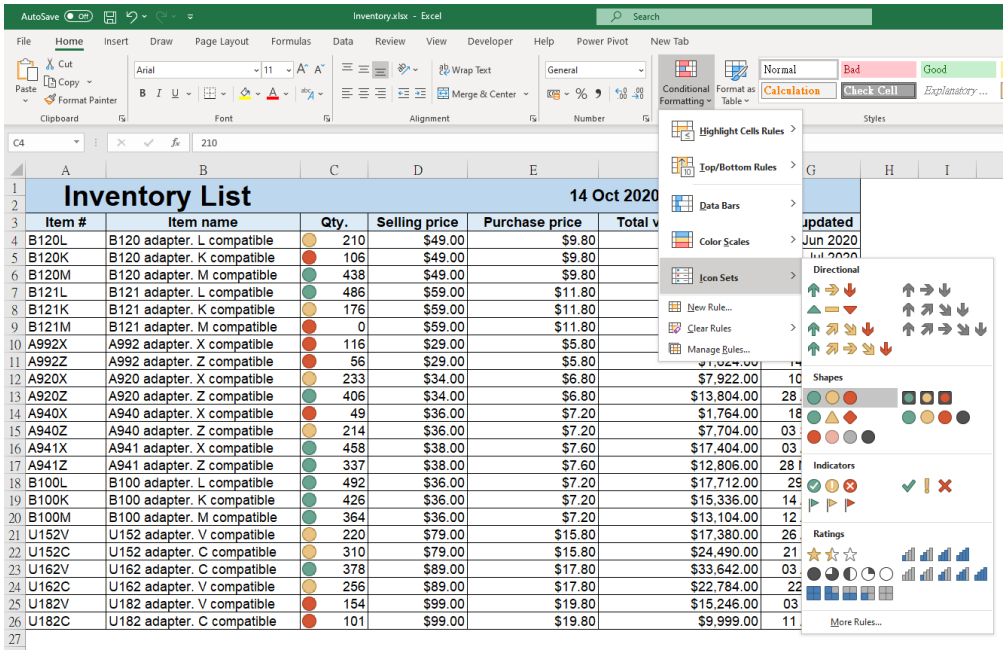
- One color is assigned to the cell with the lowest value
- Another color is assigned to the cell with the highest value.
- All cells and values in between are assigned colors that are a blend of those 2 colors.

For example, in a green, yellow, and red three-color scale, you can specify that higher value cells have a green color, middle value cells have a yellow color, and lower value cells have a red color.



5.8 Using Icon Set for Category

Use an icon set to annotate and classify data into three to five categories separated by a threshold value. Each icon represents a range of values. For example, in the 3 Arrows icon set, the green up arrow represents higher values, the yellow sideways arrow represents middle values, and the red down arrow represents lower values.

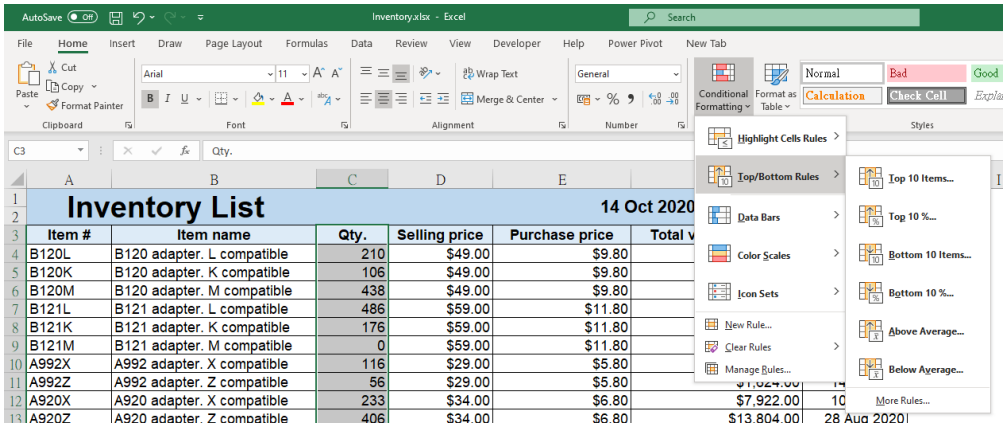


5.9 Highlight Cells by Ranking

5.9.1 Highlight Cells by Top or Bottom Rules

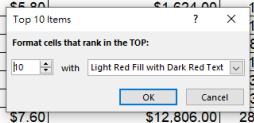
You can find the highest and lowest values in a range of cells based on a cutoff value that you specify. For example, you can find the top 5 selling products in a regional report, the bottom 15% products in a customer survey, or the top 25 salaries in a department personnel analysis.

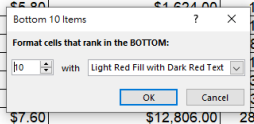
Select **Conditional Formatting ➔ Top/Bottom Rules**, then select the condition (Top 10 items…, Bottom 10 items…, Top 10 %…, Bottom 10 %…), you want to apply:

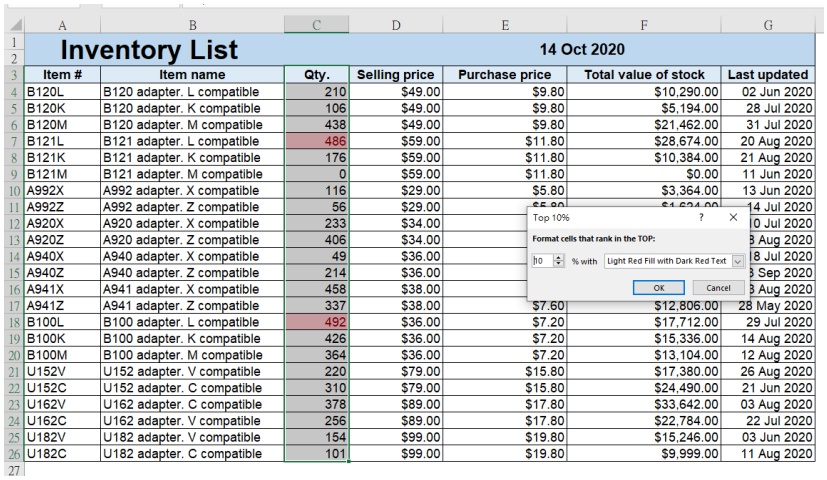


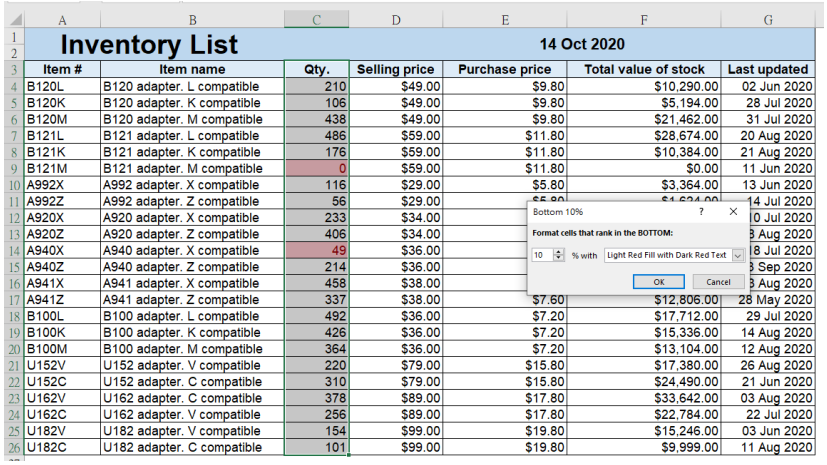
Inventory List — 14 Oct 2020

Item #	Item name	Qty.	Selling price	Purchase price	Total value of stock	Last updated
B120L	B120 adapter. L compatible	210	$49.00	$9.80	$10,290.00	02 Jun 2020
B120K	B120 adapter. K compatible	106	$49.00	$9.80	$5,194.00	28 Jul 2020
B120M	B120 adapter. M compatible	438	$49.00	$9.80	$21,462.00	31 Jul 2020
B121L	B121 adapter. L compatible	486	$59.00	$11.80	$28,674.00	20 Aug 2020
B121K	B121 adapter. K compatible	176	$59.00	$11.80	$10,384.00	21 Aug 2020
B121M	B121 adapter. M compatible	0	$59.00	$11.80	$0.00	11 Jun 2020
A992X	A992 adapter. X compatible	116	$29.00	$5.80	$3,364.00	13 Jun 2020
A992Z	A992 adapter. Z compatible	56	$29.00	$5.80	$1,624.00	14 Jul 2020
A920X	A920 adapter. X compatible	233	$34.00	$6.80	$7,922.00	10 Jul 2020
A920Z	A920 adapter. Z compatible	406	$34.00	$6.80	$13,804.00	28 Aug 2020
A940X	A940 adapter. X compatible	49	$36.00	$7.20	$1,764.00	18 Jul 2020
A940Z	A940 adapter. Z compatible	214	$36.00	$7.20	$7,704.00	3 Sep 2020
A941X	A941 adapter. X compatible	458	$38.00	$7.60	$17,404.00	3 Aug 2020
A941Z	A941 adapter. Z compatible	337	$38.00	$7.60	$12,806.00	28 May 2020
B100L	B100 adapter. L compatible	492	$36.00	$7.20	$17,712.00	29 Jul 2020
B100K	B100 adapter. K compatible	426	$36.00	$7.20	$15,336.00	14 Aug 2020
B100M	B100 adapter. M compatible	364	$36.00	$7.20	$13,104.00	12 Aug 2020
U152V	U152 adapter. V compatible	220	$79.00	$15.80	$17,380.00	26 Aug 2020
U152C	U152 adapter. C compatible	310	$79.00	$15.80	$24,490.00	21 Jun 2020
U162V	U162 adapter. C compatible	378	$89.00	$17.80	$33,642.00	03 Aug 2020
U162C	U162 adapter. V compatible	256	$89.00	$17.80	$22,784.00	22 Jul 2020
U182V	U182 adapter. V compatible	154	$99.00	$19.80	$15,246.00	03 Jun 2020
U182C	U182 adapter. C compatible	101	$99.00	$19.80	$9,999.00	11 Aug 2020



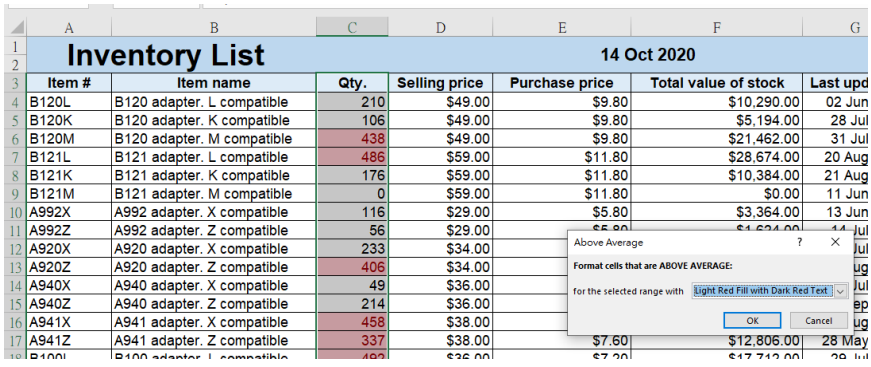


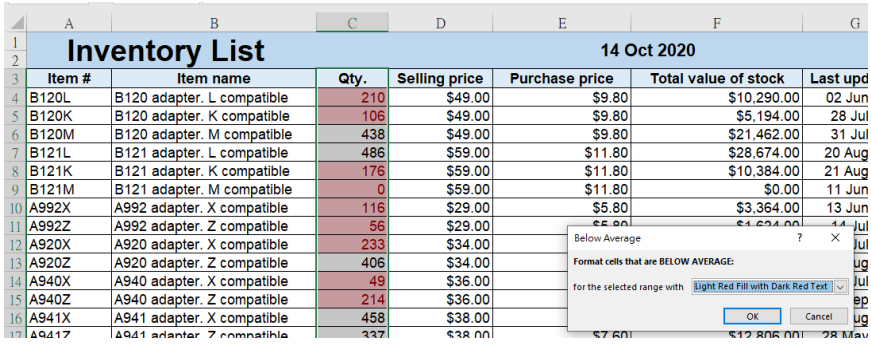




5.9.2 Highlight Cell by Above or Below Average

You can find values above or below an average or standard deviation in a range of cells. For example, you can find the above average performers in an annual performance review or you can locate manufactured materials that fall below two standard deviations in a quality rating.



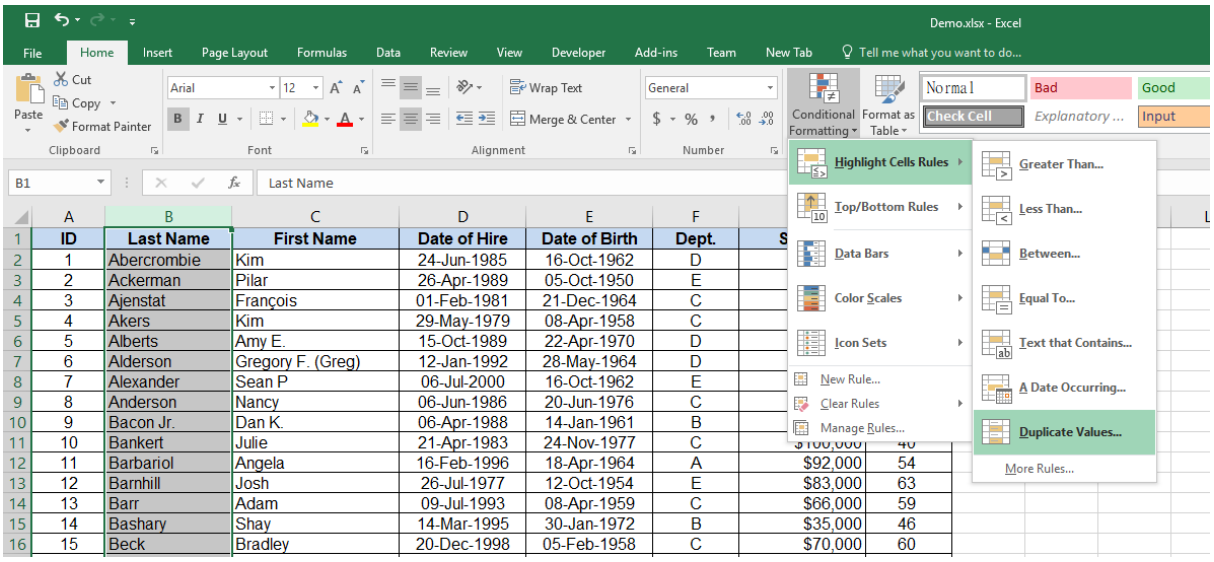


Inventory List — 14 Oct 2020

Item #	Item name	Qty.	Selling price	Purchase price	Total value of stock	Last updated
B120L	B120 adapter. L compatible	210	$49.00	$9.80	$10,290.00	02 Jun 2020
B120K	B120 adapter. K compatible	106	$49.00	$9.80	$5,194.00	28 Jul 2020
B120M	B120 adapter. M compatible	438	$49.00	$9.80	$21,462.00	31 Jul 2020
B121L	B121 adapter. L compatible	486	$59.00	$11.80	$28,674.00	20 Aug 2020
B121K	B121 adapter. K compatible	176	$59.00	$11.80	$10,384.00	21 Aug 2020
B121M	B121 adapter. M compatible	0	$59.00	$11.80	$0.00	11 Jun 2020
A992X	A992 adapter. X compatible	116	$29.00	$5.80	$3,364.00	13 Jun 2020
A992Z	A992 adapter. Z compatible	56	$29.00			14 Jul 2020
A920X	A920 adapter. X compatible	233	$34.00			0 Jul 2020
A920Z	A920 adapter. Z compatible	406	$34.00			8 Aug 2020
A940X	A940 adapter. X compatible	49	$36.00			8 Jul 2020
A940Z	A940 adapter. Z compatible	214	$36.00			8 Sep 2020
A941X	A941 adapter. X compatible	458	$38.00			8 Aug 2020
A941Z	A941 adapter. Z compatible	337	$38.00	$7.60	$12,806.00	28 May 2020
B100L	B100 adapter. L compatible	492	$36.00	$7.20	$17,712.00	29 Jul 2020
B100K	B100 adapter. K compatible	426	$36.00	$7.20	$15,336.00	14 Aug 2020
B100M	B100 adapter. M compatible	364	$36.00	$7.20	$13,104.00	12 Aug 2020
U152V	U152 adapter. V compatible	220	$79.00	$15.80	$17,380.00	26 Aug 2020
U152C	U152 adapter. C compatible	310	$79.00	$15.80	$24,490.00	21 Jun 2020
U162V	U162 adapter. C compatible	378	$89.00	$17.80	$33,642.00	03 Aug 2020
U162C	U162 adapter. V compatible	256	$89.00	$17.80	$22,784.00	22 Jul 2020
U182V	U182 adapter. V compatible	154	$99.00	$19.80	$15,246.00	03 Jun 2020
U182C	U182 adapter. C compatible	101	$99.00	$19.80	$9,999.00	11 Aug 2020

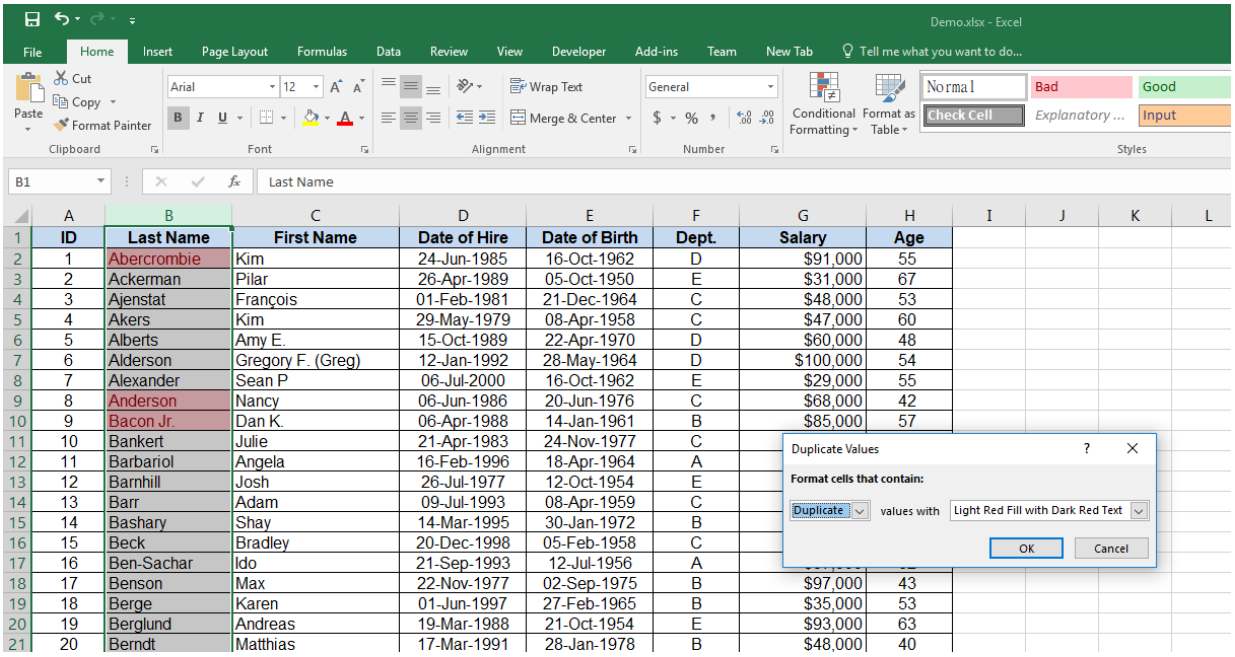
5.10 Highlight Duplicate Value

1. Select the table column that you want to check for duplicate values. For example, you could select the Product ID column to look for products that have the same ID value. Note: You can highlight more than one column, but if you do, Excel highlights identical values that appear in more than one column. For example, if the same number appears in the Product ID column and in the Price column, Excel highlights it even though it isn't really a duplicate.
2. Choose **Conditional Formatting➔Highlight Cells Rules➔Duplicate Values**.



	A	B	C	D	E	F	G	H
1	ID	Last Name	First Name	Date of Hire	Date of Birth	Dept.		
2	1	Abercrombie	Kim	24-Jun-1985	16-Oct-1962	D		
3	2	Ackerman	Pilar	26-Apr-1989	05-Oct-1950	E		
4	3	Ajenstat	François	01-Feb-1981	21-Dec-1964	C		
5	4	Akers	Kim	29-May-1979	08-Apr-1958	C		
6	5	Alberts	Amy E.	15-Oct-1989	22-Apr-1970	D		
7	6	Alderson	Gregory F. (Greg)	12-Jan-1992	28-May-1964	D		
8	7	Alexander	Sean P	06-Jul-2000	16-Oct-1962	E		
9	8	Anderson	Nancy	06-Jun-1986	20-Jun-1976	C		
10	9	Bacon Jr.	Dan K.	06-Apr-1988	14-Jan-1961	B		
11	10	Bankert	Julie	21-Apr-1983	24-Nov-1977	C		
12	11	Barbariol	Angela	16-Feb-1996	18-Apr-1964	A	$92,000	54
13	12	Barnhill	Josh	26-Jul-1977	12-Oct-1954	E	$83,000	63
14	13	Barr	Adam	09-Jul-1993	08-Apr-1959	C	$66,000	59
15	14	Bashary	Shay	14-Mar-1995	30-Jan-1972	B	$35,000	46
16	15	Beck	Bradley	20-Dec-1998	05-Feb-1958	C	$70,000	60

3. When the Duplicate Values dialog box appears, choose the type of formatting you'd like to use to highlight repeated values. People often choose to change the background color.



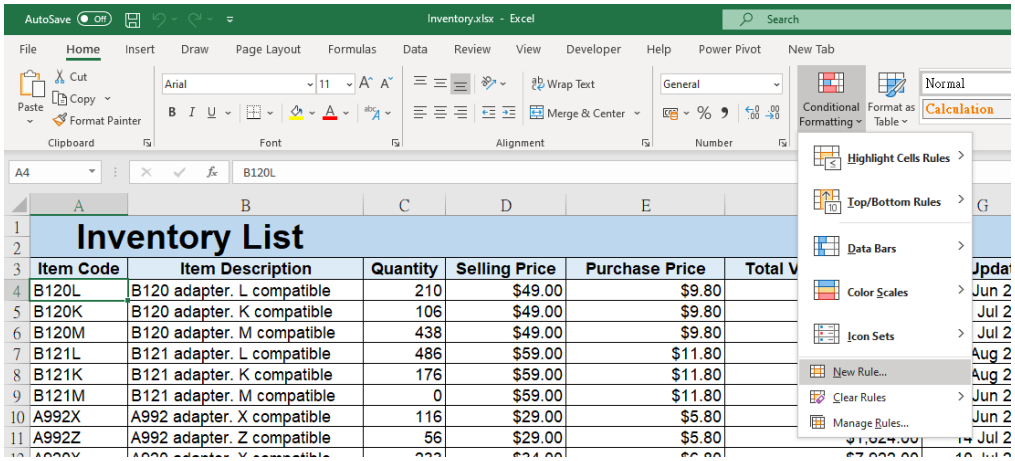
	A	B	C	D	E	F	G	H
1	ID	Last Name	First Name	Date of Hire	Date of Birth	Dept.	Salary	Age
2	1	Abercrombie	Kim	24-Jun-1985	16-Oct-1962	D	$91,000	55
3	2	Ackerman	Pilar	26-Apr-1989	05-Oct-1950	E	$31,000	67
4	3	Ajenstat	François	01-Feb-1981	21-Dec-1964	C	$48,000	53
5	4	Akers	Kim	29-May-1979	08-Apr-1958	C	$47,000	60
6	5	Alberts	Amy E.	15-Oct-1989	22-Apr-1970	D	$60,000	48
7	6	Alderson	Gregory F. (Greg)	12-Jan-1992	28-May-1964	D	$100,000	54
8	7	Alexander	Sean P	06-Jul-2000	16-Oct-1962	E	$29,000	55
9	8	Anderson	Nancy	06-Jun-1986	20-Jun-1976	C	$68,000	42
10	9	Bacon Jr.	Dan K.	06-Apr-1988	14-Jan-1961	B	$85,000	57
11	10	Bankert	Julie	21-Apr-1983	24-Nov-1977	C		
12	11	Barbariol	Angela	16-Feb-1996	18-Apr-1964	A		
13	12	Barnhill	Josh	26-Jul-1977	12-Oct-1954	E		
14	13	Barr	Adam	09-Jul-1993	08-Apr-1959	C		
15	14	Bashary	Shay	14-Mar-1995	30-Jan-1972	B		
16	15	Beck	Bradley	20-Dec-1998	05-Feb-1958	C		
17	16	Ben-Sachar	Ido	21-Sep-1993	12-Jul-1956	A		
18	17	Benson	Max	22-Nov-1977	02-Sep-1975	B	$97,000	43
19	18	Berge	Karen	01-Jun-1997	27-Feb-1965	B	$35,000	53
20	19	Berglund	Andreas	19-Mar-1988	21-Oct-1954	E	$93,000	63
21	20	Berndt	Matthias	17-Mar-1991	28-Jan-1978	B	$48,000	40

4. Click **[OK]**. Excel changes the background color of all values that appear more than once in the selected column. Conditional formatting keeps working even after you've applied it. So, if you add a new record that duplicates the value of an existing record in the column you're checking, Excel immediately highlights it. It's like having a duplicate value cop around at all times.

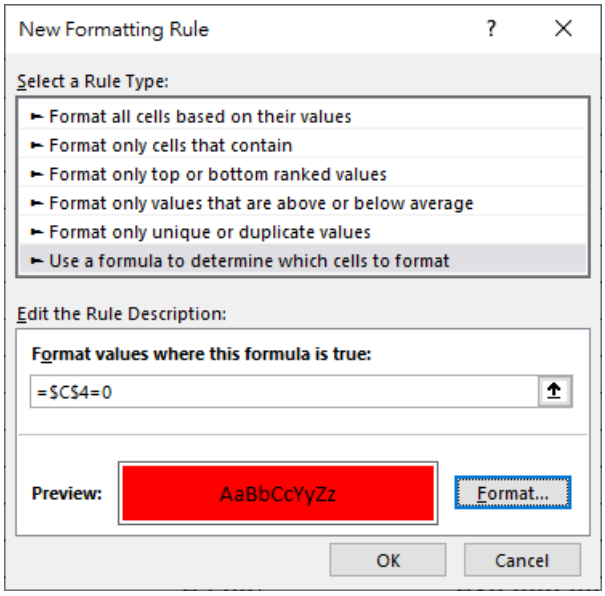
5.11 Highlight Cells by Determine another Cell

If your conditional formatting needs are more complex, you can use a logical formula to specify the formatting criteria. For example, you may want to compare values to a result returned by a function or evaluate data in cells outside the selected range.

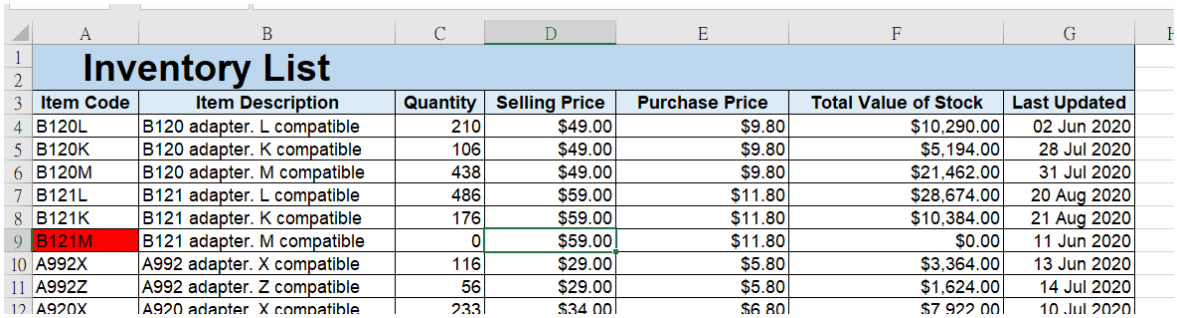
1. For example, we would like to highlight the Item Code if the quantity is zero. First, select **Conditional Formatting ➔ New Rule…**



2. Select "**Use a formula to determine which cells to format**" in the **New Formatting Rule** dialog box, then input the format and pick the formatting.



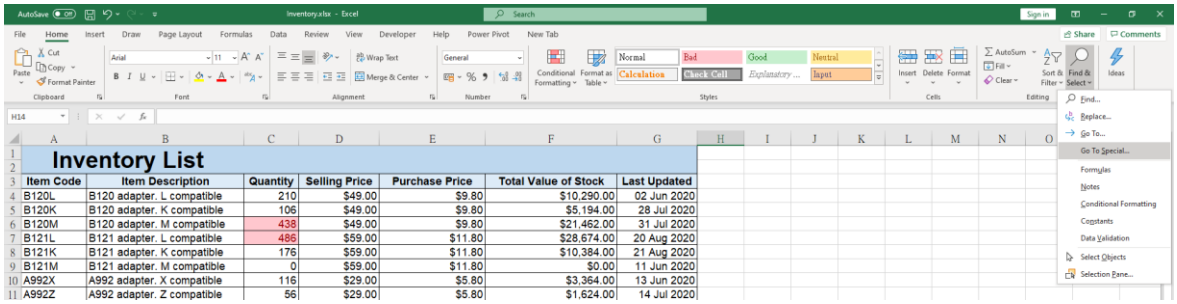
3. The cell will be highlight after you press **[OK]** button.



5.12 Find Cells that have Conditional Formats

If your worksheet has one or more cells with a conditional format, you can quickly locate them so that you can copy, change, or delete the conditional formats. You can use the Go To Special command to either find only cells with a specific conditional format or find all cells with conditional formats.

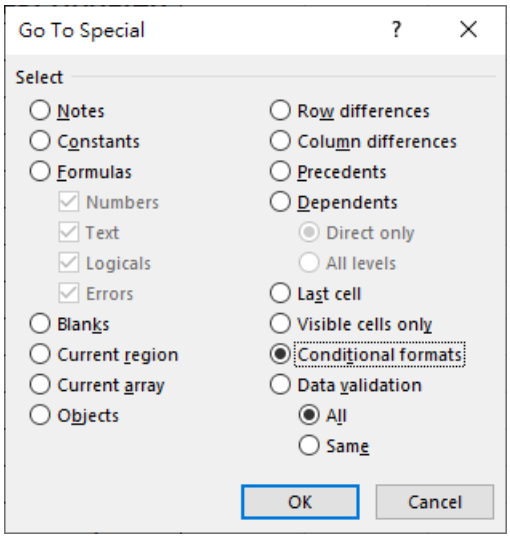
1. Select **Find & Replace ➔ Go To Special** in Home tab.



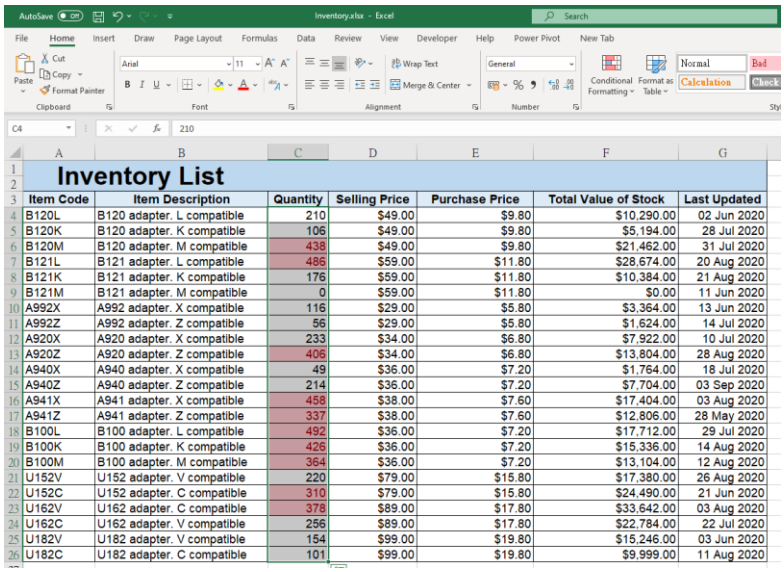
Inventory List

Item Code	Item Description	Quantity	Selling Price	Purchase Price	Total Value of Stock	Last Updated
B120L	B120 adapter. L compatible	210	$49.00	$9.80	$10,290.00	02 Jun 2020
B120K	B120 adapter. K compatible	106	$49.00	$9.80	$5,194.00	28 Jul 2020
B120M	B120 adapter. M compatible	438	$49.00	$9.80	$21,462.00	31 Jul 2020
B121L	B121 adapter. L compatible	486	$59.00	$11.80	$28,674.00	20 Aug 2020
B121K	B121 adapter. K compatible	176	$59.00	$11.80	$10,384.00	21 Aug 2020
B121M	B121 adapter. M compatible	0	$59.00	$11.80	$0.00	11 Jun 2020
A992X	A992 adapter. X compatible	116	$29.00	$5.80	$3,364.00	13 Jun 2020
A992Z	A992 adapter. Z compatible	56	$29.00	$5.80	$1,624.00	14 Jul 2020

2. Select "**Conditional formats**" in the "**Go To Special**" dialog box.



3. The cell with the conditional format will be selected



Inventory List

Item Code	Item Description	Quantity	Selling Price	Purchase Price	Total Value of Stock	Last Updated
B120L	B120 adapter. L compatible	210	$49.00	$9.80	$10,290.00	02 Jun 2020
B120K	B120 adapter. K compatible	106	$49.00	$9.80	$5,194.00	28 Jul 2020
B120M	B120 adapter. M compatible	438	$49.00	$9.80	$21,462.00	31 Jul 2020
B121L	B121 adapter. L compatible	486	$59.00	$11.80	$28,674.00	20 Aug 2020
B121K	B121 adapter. K compatible	176	$59.00	$11.80	$10,384.00	21 Aug 2020
B121M	B121 adapter. M compatible	0	$59.00	$11.80	$0.00	11 Jun 2020
A992X	A992 adapter. X compatible	116	$29.00	$5.80	$3,364.00	13 Jun 2020
A992Z	A992 adapter. Z compatible	56	$29.00	$5.80	$1,624.00	14 Jul 2020
A920X	A920 adapter. X compatible	233	$34.00	$6.80	$7,922.00	10 Jul 2020
A920Z	A920 adapter. Z compatible	406	$34.00	$6.80	$13,804.00	28 Aug 2020
A940X	A940 adapter. X compatible	49	$36.00	$7.20	$1,764.00	18 Jul 2020
A940Z	A940 adapter. Z compatible	214	$36.00	$7.20	$7,704.00	03 Sep 2020
A941X	A941 adapter. X compatible	458	$38.00	$7.60	$17,404.00	03 Aug 2020
A941Z	A941 adapter. Z compatible	337	$38.00	$7.60	$12,806.00	28 May 2020
B100L	B100 adapter. L compatible	492	$36.00	$7.20	$17,712.00	29 Jul 2020
B100K	B100 adapter. K compatible	426	$36.00	$7.20	$15,336.00	14 Aug 2020
B100M	B100 adapter. M compatible	364	$36.00	$7.20	$13,104.00	12 Aug 2020
U152V	U152 adapter. V compatible	220	$79.00	$15.80	$17,380.00	26 Aug 2020
U152C	U152 adapter. C compatible	310	$79.00	$15.80	$24,490.00	21 Jun 2020
U162V	U162 adapter. C compatible	378	$89.00	$17.80	$33,642.00	03 Aug 2020
U162C	U162 adapter. V compatible	256	$89.00	$17.80	$22,784.00	22 Jul 2020
U182V	U182 adapter. V compatible	154	$99.00	$19.80	$15,246.00	03 Jun 2020
U182C	U182 adapter. C compatible	101	$99.00	$19.80	$9,999.00	11 Aug 2020

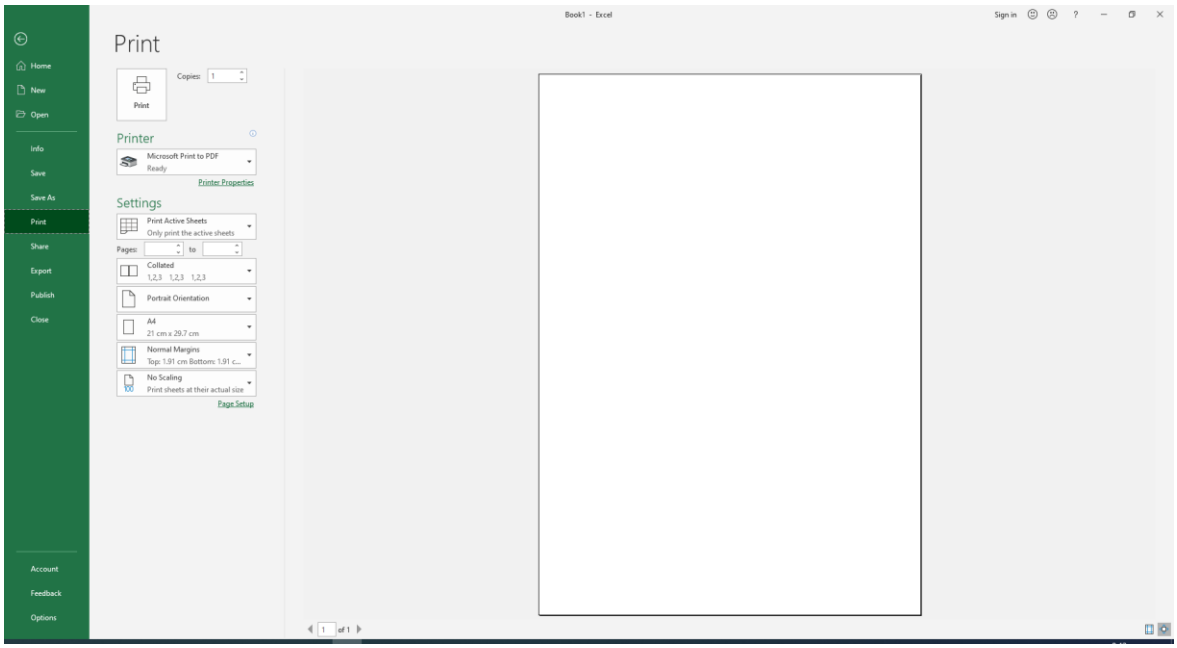
6. Pages Setup and Printing

6.1 Sample Printing

Before you print anything in Excel, remember that there are many options available for an optimal print experience. Some formatting, such as colored text or cell shading, may look good on the screen but not look how you expect when it prints on a black-and-white printer. You may also want to print a worksheet with gridlines displayed so that the data, rows, and columns stand out better.

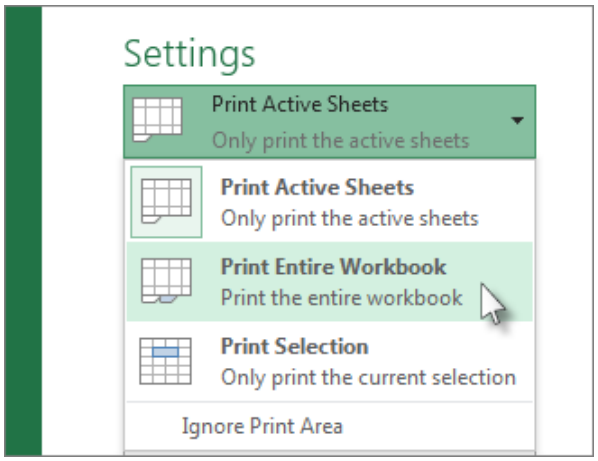
6.1.1 Print One or Several Worksheets

Select the worksheets that you want to print. Click **File➔ Print**, or press **[Ctrl]** + **[P]**. Click the [**Print]** button or adjust **Settings** before you click the **[Print]** button.



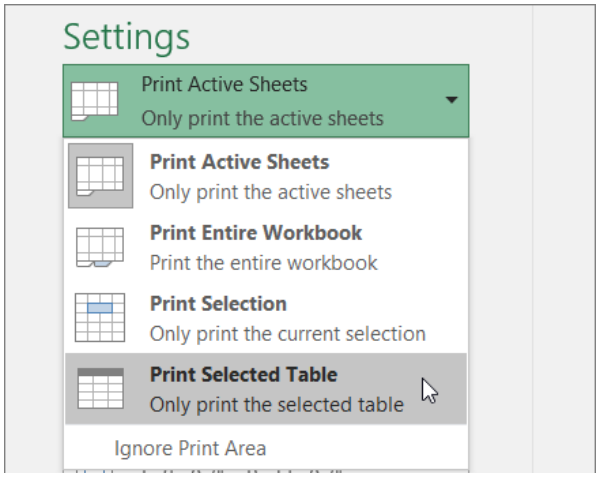
6.1.2 Print All or Part of a Worksheet

Select the range of data that you want to print in the worksheet, then click **File ➔ Print**. Under **Settings**, click the arrow next to **Print Active Sheets** and select the appropriate option before you click the **[Print]** button.



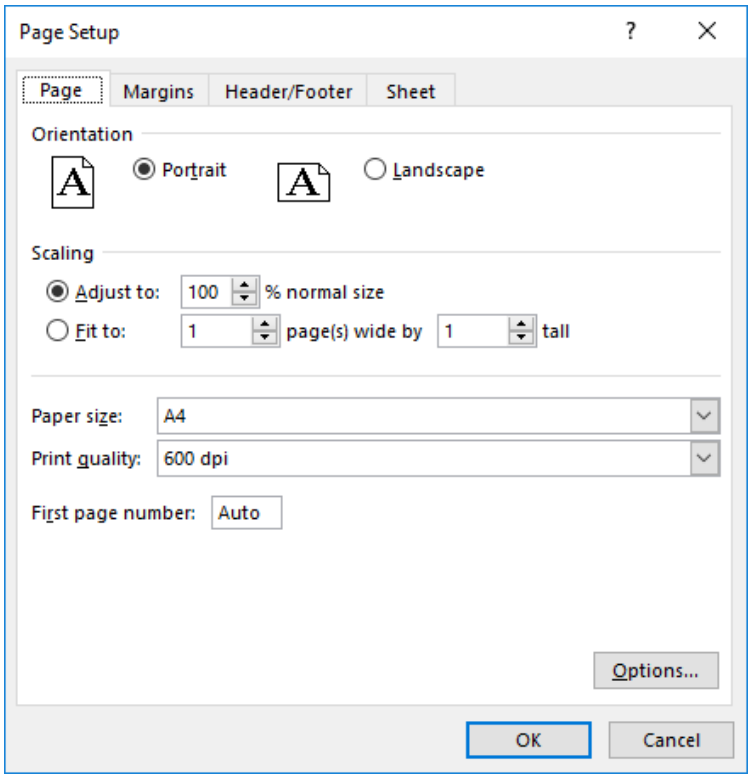
6.1.3 Print an Excel table

Select the table you want to print in the worksheet, then click **File ➔ Print**. Under **Settings**, click the arrow next to **Print Active Sheets** and select **Print Selected Table** before you click the **[Print]** button.



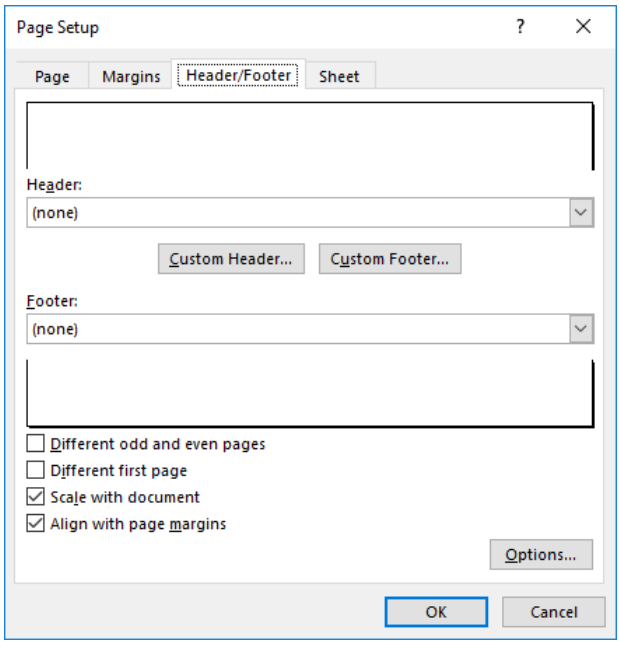
6.2 Setting the Scaling Ratio

Using the **Scaling** setting on the **Page** tab of the **Page Setup** dialog box, you can override the default size of your printouts in one of two ways: by specifying a scaling factor (10% - 400%) or by fitting the report to a specified number of pages. Excel always scales in both the horizontal and vertical dimensions.



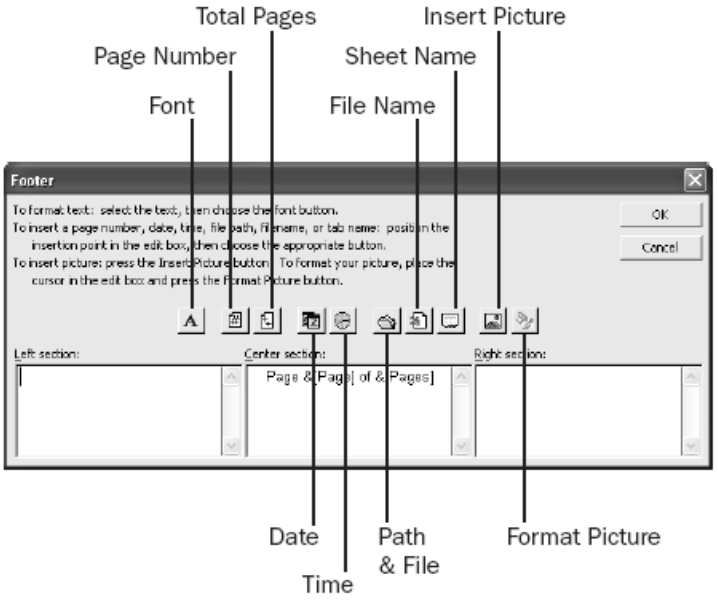
6.3 Creating Header and Footer

On the Header/Footer tab of the Page Setup dialog box, you can provide essential information about your printout (such as file name, creation date, page number, and author's name) by including a header (printed at the top of each page) or footer (printed at the bottom of each page).



6.3.1 Creating Custom Headers and Footers

If you don't find what you need in the list of predefined headers and footers, you can create your own or modify one of Excel's. If you create custom headers or footers for the current workbook, Excel adds them to these drop-down lists. Click the **[Custom Header…]** button to open the **Header** dialog box, or the **[Custom Footer…]** button to open the footer dialog box.



6.3.2 Adding Pictures to Headers and Footers

You can add pictures to custom headers and footers using the **[Insert Picture]** and **[Format Picture]** buttons. When you insert the picture, Excel displays **&[Picture]** in the section box of the Header or Footer dialog box. (Unlike other header and footer codes, you can't just type in this code). After you insert the picture, click the **[Format Picture]** button to specify the size, brightness, and contrast of the picture and to rotate, scale, or crop the picture.

6.4 Page Break

6.4.1 Adjusting Page Breaks

Excel makes it easy to adjust the positions of page breaks. You can do this by selecting **View** tab, and then **Page Break Preview**. You can move page breaks by dragging them with the mouse. You can even edit your worksheet while in **Page Break Preview** mode.

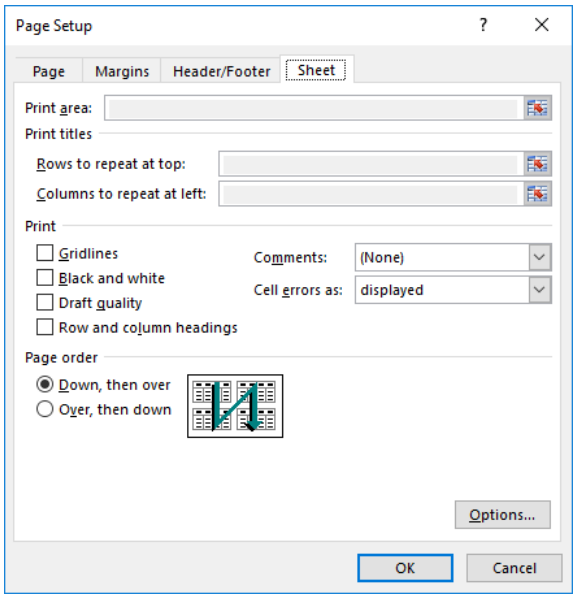
6.4.2 Inserting and Removing Manual Page Breaks

To add a page break, select any cell of the row directly beneath or in the column directly to the right of where you want the break to occur, and then choose **Layout** tab, **Breaks** group, **Insert Page Break**. If you select a cell where data appears both below and to the right, Excel applies page breaks both horizontally and vertically. To remove a break, position your mouse in the row below a horizontal break, or in the column to the right of a vertical break, and then choose **Layout** tab, **Breaks** group, **Remove Page Break**.

6.5 Printing

6.5.1 Printing Gridlines

By default, Excel does not print gridlines, regardless of whether you have them displayed on your worksheet. If you want to print gridlines, select the **Gridlines** check box on the **Sheet** tab of the **Page Setup** dialog box.



6.5.2 Printing Comments

To make sure the comments in your worksheet are included with your printout, select one of the Comments options on the **Sheet** tab of the **Page Setup** dialog box.

- If you select **At end of sheet** from the drop-down list, Excel adds a page to the end of the printout and prints all your notes together, starting on that new page.
- If you select **As displayed on Sheet**, Excel prints the comments where they are located on a worksheet

6.5.3 Printing Drafts

If your printer offers a draft-quality mode, you can obtain a quicker, though less attractive, printout by selecting the **Draft Quality** option on the **Sheet** tab of the **Page Setup** dialog box. This option has no effect if your printer has no draft-quality mode and is most useful for dot matrix or other slow printers, or if your worksheet contains a lot of graphics.

6.5.4 Printing Row and Column Headings

If you select the **Row and column headings** option on the **Sheet** tab of the **Page Setup** dialog box, Excel prints row letters to the left of and column numbers on top of worksheet data. This option is handy when you're using printouts to document the structure of a worksheet.

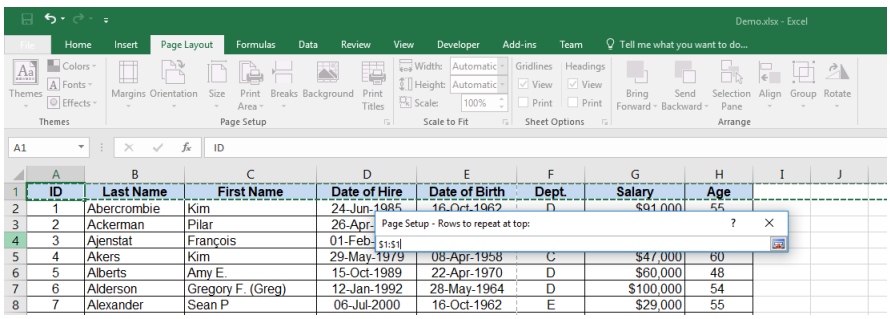
6.5.5 Setting the Printing Order of Large Print Ranges

When you print a large report, Excel breaks the report into page-size sections based on the current margin and page-size settings. If the print range is both too wide and too deep to fit on a single page, Excel normally works in **Down, then over** order. If you prefer to have Excel print each horizontal chunk before moving down to the next vertical chunk, select the **Over, then down** option on the **Sheet** tab of the **Page Setup** dialog box.

6.5.6 Print Titles

When Excel breaks up a large report into pages, the column and row labels might appear only on the first page of the printout. You can use the **Sheet** tab of the **Page Setup** dialog box to force Excel to print the contents of one or more columns, one or more rows, or a combination of columns and rows on every page of a report.

If the portion of the spreadsheet you want to select is not visible, click the button on the right side of the **Rows to repeat at top** box. The dialog box collapses to give you more room; to redisplay the full dialog box, click the button on the right side of the box. Click the **Columns to repeat at left** box, and then select the column.



	A	B	C	D	E	F	G	H
1	ID	Last Name	First Name	Date of Hire	Date of Birth	Dept.	Salary	Age
2	1	Abercrombie	Kim	24-Jun-1985	16-Oct-1962	D	$91,000	55
3	2	Ackerman	Pilar	26-Apr-				
4	3	Ajenstat	François	01-Feb-				
5	4	Akers	Kim	29-May-1979	08-Apr-1958	C	$47,000	60
6	5	Alberts	Amy E.	15-Oct-1989	22-Apr-1970	D	$60,000	48
7	6	Alderson	Gregory F. (Greg)	12-Jan-1992	28-May-1964	D	$100,000	54
8	7	Alexander	Sean P	06-Jul-2000	16-Oct-1962	E	$29,000	55