

Microsoft Excel 2016: Part 5 Naming Cells Creating a Drop-down List, Conditional Formatting, Sort/Filter/Divide Data

Naming Cells in Excel

A name is a meaningful shorthand that makes it easier to understand the purpose of a cell reference, constant, formula, or table, each of which may be difficult to comprehend at first glance. For example, when you are adding up a range of cells that include first quarter sales, such as (C20:C30), compare how meaningful if you name that range as "first quartersales" and use in the formula as follows:

Regular formula to sum up:=SUM(C20:C30)With the named range:=SUM(firstquartersales)

Syntax Requirements for Naming Source: Microsoft.com

Be aware of the following rules when you create and edit names.

- Valid characters: The <u>first</u> character of a name <u>must be</u> a letter, an underscore character (_), or a backslash (\). Remaining characters in the name can be letters, numbers, periods, and underscore characters.
- Cell references disallowed: Names cannot be the same as a cell reference, such as Z\$100 or R1C1.
- **Spaces are not valid**: Spaces are not allowed as part of a name. Use the underscore character (_) and period (.) as word separators; for example, Sales_Tax or First.Quarter.
- Name length: A name can contain up to 255 characters.
- **Case sensitivity:** Names can contain uppercase and lowercase letters. Excel does not distinguish between uppercase and lowercase characters in names. For example, if you created the name Sales and then create another name called SALES in the same workbook, Excel prompts you to choose a unique name.
- NOTE: You cannot use the uppercase and lowercase characters "C", "c", "R", or "r" as a defined name, because they are all used as a shorthand for selecting a row or column for the currently selected cell when you enter them in a Name or Go To text box. If your data is formatted as a Table, Excel automatically names that table by using a generic pattern name such as "Table 1".

Defining Names

You can define names in three ways:

1. **Typing in the Name box in the left of the formula bar:** This is best used for creating a workbook level name for a selected range.

Pro	duce	:	\times
	А	В	

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MS2016-ExcelPart5 MMS 9/1/2020

Let's use *WeekTwo* worksheet in the **ExcelPart5.xlsx** workbook to practice this concept. Assume you are trying to figure out how much total spent on Produce and Meat only.

- Select cell ranges F4:F8 (cells for produce).
- Click in the name box and type in "Produce". After typing, hit **Enter** button to complete.
- Select cell ranges F13:F15(cells for meat).
- Click in the name box and type in "Meat", then hit Enter.
- Now you have two cell ranges named Produce, and Meat to use in formula.

Let's use these two names in a formula:

- Select an empty cell, cell H2.
- Start typing the =SUM formula "=SUM" followed by the open parenthesis and the letter "pr" to look for the name "Produce". The name "Produce" will show up on from the Formula AutoComplete drop-down list. Double-click on it to select it. [Alternatively, you can type in the entire word "Produce".]
- Type in comma "," on keyboard to add "Meat" cells into the formula. Start typing the letter "me" and "Meat" will show up top on the list.

Double-Click to include that in the formula and then type in close parenthesis ")" on keyboard to end the formula. Then hit **Enter.**

- Place close parenthesis and hit **Enter.** You will get the sum result of those cell ranges (F4:F8 and F13:F15) in cell H2. The answer should be 47.31.
- 2. Select existing row and column labels: You can use the Create from Selection command

(under **Formulas** tab in **Defined Names** group) to conveniently create names from existing row and column labels by using a selection of cells in the worksheet. Let's use *My List* worksheet to practice the following concept.

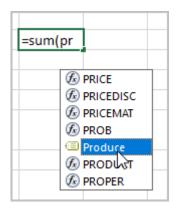
FORMULAS		REVI	EW	VIEW	ADD-INS
Lookup & Reference	<u>-</u>		⊡D	efine Nam	e ₹
Math & Trig -		Name	°f₁ U	se in Form	ula -
More Functions *		Manager	🔓 C	reate from	Selection
			Defir	ned Names	

• On the *My List* worksheet, select the entire column A or block cell ranges A1:A10, and click on **Create from Selection** command. **Note:** If you use the range of cells, you will have to extend the cell ranges later if you add more on the named list. By using the entire column

would give you a freedom of adding to or deleting from your list in later.

- Create Names from Selection box comes up. Accept to use **Top row** as the name and click on OK. Now you have the name "Category", the same as your column heading.
- Do the same for the columns with headings: Unit.

Create Names from Selection
Create names from values in the:
Top row
🔲 Left column
<u>B</u> ottom row
🔲 <u>R</u> ight column
OK Cancel



=SUM(Produce,Meat)

- You should be able to see two names in the drop-down list on the name box. If your column heading has more than one word, an "underscore" will be automatically placed between those we
- 3. Clicking on the Define Name in the Defined Names group will bring up New Name dialog box. This is best used for when you want more flexibility in creating names, such as specifying a local worksheet level scope or creating a name comment.
 - In the same worksheet My List, select the cell ranges C1:C19.
 - New Name dialog box will appear.
 - The name "Monthly_Expense" will appear (Note the underscore as names has space in between two words) in the Name box.
 - To specify the scope of the name, in the **Scope** drop-down list box, select Workbook or the name of a worksheet in the workbook. (Using the Workbook will allow you to use this name anywhere in the entire workbook while selecting a particular worksheet will only allow you to use the name for the chosen worksheet.)

NOTE: By default, names use absolute cell references.

Click on OK.

Besides, typing the entire name out in the	. 👝 🖻 Define Name 🔹		\mathcal{T}_{x} Use in Formula+
formula or selecting from the Formula	🗍 📆 Use in Formula 🔹	·r	Category
AutoComplete as shown previously, you can	Name Manager 🔓 Create from Selection		Monthly_Expense
use Use in Formula command in the	Defined Names		
Defined Names group. This command will bec	ome active after you create		Unit
a name. Click on the drop-down arrow and sel	ect a defined name from a		Paste Names

list available to include in your formula.

We are going to use these names in formulas in creating drop-down list in next section.

Editing or Deleting Names

You can use the Name Manager command in the Defined Names group to: create a new name, edit an existing name or delete a name. Note: if you delete an existing name being used in a formula, deleting that particular name here will create an error in the cell that contains that formula.

ords.		A2	+
		Categ	ory
New Nam	e	?	×
<u>N</u> ame:	Monthly_Expense		
<u>S</u> cope:	Workbook	\sim	
C <u>o</u> mment:			^
-			
			×
Refers to:	='My List'!\$C\$1:\$C\$1	9	1
	OK		Cancel
L			

Name Manager				? ×
<u>N</u> ew <u>E</u> c	lit <u>D</u> elete			<u>F</u> ilter ▼
Name	Value	Refers To	Scope	Comment
Category	{"Bakery";"Dairy";"D	='My List'!\$A\$2:\$A\$	Workbo	
Monthly_Expense	{"Monthly Expense"	='My List'!\$C\$1:\$C\$	Workbo	
💷 Unit	{"Bag";"Bunch";"Ca	='My List'!\$B\$2:\$B\$	Workbo	

To delete, select a name by clicking on it. Then **Delete**.

- To select more than one name in a contiguous group, click and drag the names, or press **SHIFT** and click the mouse button for each name in the group.
- To select more than one name in a noncontiguous group, press **CTRL** and click the mouse button for each name in the group.
- Click Delete. You can also press the **DELETE** key. Click **OK** to confirm the deletion.

Creating a Drop-down List:

You can make a worksheet more efficient by providing drop-down lists. It is especially useful when you want users to limit the data entry to what's available in the list. Users can click an arrow and then click an entry in the list. **Note:** You can create a drop-down list for a single cell or block of cells. You can copy and paste a list. You can also use the fill-handle to copy the list to adjacent cells like a formula.

We have named a number of block of cells above ("Category", "Unit", "Monthly_Expense") to use in our formula. Look in *My List* worksheet in **Excel Part5.xlsx.**

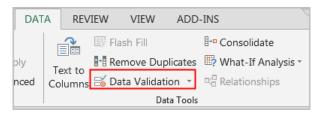
Let's use the *Practice* worksheet from same workbook to practice this concept. Things to consider before creating a drop-down list.

- It is recommended to create entries for your list in a row or a column in a separate worksheet in the same workbook. (We have this done in our workbook. The worksheet *My List* contains the lists we want to use.)
- You should sort your list the way you want it to appear. (Our lists are sorted.)
- You should name the block of lists to use in the formula. (We have named our lists.)

Drop-down list in Settings:

Let's create a drop-down list for Category in cell A2 in *Practice* worksheet.

- Click cell A2 in *Practice* worksheet.
- Click Data >Data Validation in the Data Tools group.



- On the **Settings** tab, in the **Allow** box, click **List**.
- Check the In-cell dropdown box.
- If it's OK for people to leave the cell empty, check the **Ignore blank** box.
- Click inside the Source box; click on Formula tab; Click on the arrow next to the Use in Formula and select "Category" from the list.
- Now you will see an arrow next to the Cell A2 from which you can select your category form the drop-down list.
- You can copy and paste that list to as many rows below as you may fill in with other categories in

Data Validation	?	×
Settings Input Message Error Alert		
Validation criteria		
Allow:		
List V Ignore blank		
Data:		
between 🗸		
Source:		
=Category		
Apply these changes to all other cells with the same	settings	
<u>C</u> lear All OK	Ca	ncel

those rows. Copy Cell A2 up to row 9 before selecting any particular category either by copypaste or using your fill handle.

- Select Cell D2 to fill in with "Unit" from the list as explained in same steps above. Copy cell D2 up to row 9 too.
- Select Cell I2 to fill in with "Monthly_Expense" from the list as explained in same steps above. Copy cell I2 up to row 9 as well.

Now practice filling in data in a few rows beginning in row 2 through 9 in Category, Unit and Monthly_Expense columns. Your data should look like the data shown in rows 12 through 19 when finished.

Input-Message: When you want to caution the user before entering data or give reminder for a desired result in any particular cell, use this function.

- Click Data >Data Validation in the Data Tools group.
- Click the Input Message tab.
- If you want a message to pop up when the cell is clicked, check the Show input message when cell is selected box, and type a title and message in the boxes (up to 225 characters). Example on the right show a reminder

Data Validation			?	×
Settings Input Message Erro	or Alert			
✓ Show input message when ce	ll is selecte	ed		
When cell is selected, show this i	nput mess	age:		
Title:				
Reminder				
Input message:				
Weekly grocery cannot go over	r \$70.			\sim
-				
				\sim
Clear All	100	OK	6	neel
<u>C</u> lear All		ОК	Ca	ncel

message appear in a particular cell to remind the limit of weekly grocery expense. Try that in cell F10.

2.22	2.22
	\$64.11
	Reminder
1.99	Weekly grocery
1.29	cannot go over
3.99	\$70.
1.29	57.58:

Error Alert:

This function is used to "stop" the user from inputting the invalid data. You will have to use it in combination with the "settings" function. Assume, in this Practice sheet example that you want to limit the user not to exceed the monthly food expense of \$750.

You can place your limits as follows:

- Let's create the rule in Cell J9.
- Click on **Data>Data Validation**.
- In the **Settings** tab, select:
 - Whole number in the Allow section
 - Less than or equal to in the Data section
 - Set the number to **750** as shown.
- Next, click the Error Alert tab to enter your "error message" if an invalid data is placed in those cells. Under Style, using Stop will <u>not</u> let the user input any invalid data while Warning and Information will show the error message but will still let the user input invalid data. Make sure the Show error alert after invalid data is entered box is checked to show the Error

Data Validation	?	×
Settings Input Message Error Alert		
Validation criteria <u>A</u> llow: Whole number		
Data:		
Ma <u>x</u> imum:		
Apply these changes to all other cells with the same se	ttings	
<u>C</u> lear All OK	Can	cel

Data Validation	? ×	
Settings Input Message	Error Alert lid data is entered	
When user enters invalid data Style: Stop		
Warning Information	Monthly food expense cannot exceed \$750.	
<u>C</u> lear All	OK Cancel	

Message. Enter the proper error message in Error message box. Click OK.

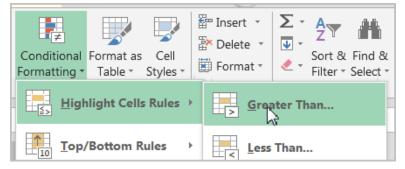
- Entering any data more than 750 will give you an error message in cell J9.
- If invalid data is placed in those cells and if you had used the Stop under the Style to stop the user for doing so, a window will pop up and make the user correct the data until it meets the criteria.

Warning!			>	<
\bigotimes	Monthly food	expense cannot	exceed \$750.	
Ē	letry	Cancel	<u>H</u> elp	

Conditional Formatting

This command can give you a visual analysis of your raw data to detect critical issues and identify patterns and trends by applying formatting—such **as colors, icons**, and **data bars**—to one or more cells based on the cell value. **To detect the trend correctly over a period of time, it is recommended to exclude the column or row with** *total values***. To learn this command, open** *ExcelPart5.xlsx* **workbook and use the worksheet** *ConditionalFormatting***.**

- We want to learn whether all sales people are meeting their monthly quota of \$5000. We will apply the rule as "If the value is greater than \$5000, color the cell green." By applying this rule, you'd be able to quickly see which cells contain values over \$5000.
- Select the desired cells for the conditional formatting rule. In our example, cells B3:G23.
- From the Home tab, click the **Conditional Formatting** command. A drop-down menu will appear.
- Hover the mouse over the desired **conditional formatting type**, then select the **desired rule** from the menu that appears. In our example, we want to highlight cells that are **greater than \$5000**.



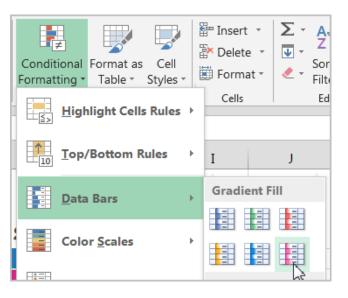
• A dialog box will appear. Enter the desired value(s) into the blank field. In our example, we'll enter **5000**. If you'd like to have a different **formatting**, click the drop down arrow and change the style to your choice such as "Red Text" or "Red Border", etc.

Gre	ater Than	10127528	? ×						
Fo	rmat cells that are GRE	ATER THAN:							
50	5000 with Green Fill with Dark Green Text Light Red Fill with Dark Red Text Yellow Fill with Dark Yellow Text Green Fill with Dark Green Text								
.00 .00	\$9,543.00 \$10,468.00	\$11,967.00 \$12,677.00	Light Red Fill Red Text Red Border Custom Format						

• The conditional formatting will be applied to the selected cells. In our example, it's easy to see which salespeople reached the **\$5000** sales goal for each month.

Multiple Conditional Formatting Rules: You can apply **multiple conditional formatting rules** to a cell range or worksheet, allowing you to visualize different trends and patterns in your data.

- For example, if you wanted to see how many cells in that selected data has unusually high data, use the color data bar to identify the cells. The larger the data, the longer the color bar will be. In our example, select the Purple Color Bar for the same cells B3:G23.
- The new formatting with color data bar should apply over the previous conditional formatting of values more than \$5000. See below.



	А	В	С	D	E	F	G
1		D	We	estbroo	k Park	cer Sale	s Data
2	Salesperson	May	June	July	Aug.	Sept.	Oct.
3	Albertson, Kathy	\$3,947.00	\$557.00	\$3,863.00		\$8,237.00	\$8,690.00
4	Allenson, Carol	\$4,411.00	\$1,042.00	\$ <mark>9,355.00</mark>		\$10 ,185.00	\$18,749.00
5	Altman, Zoey	\$2,521.00	\$3,072.00	\$6,702.00		\$13,4 52.00	\$8,046.00
6	Bittiman, William	\$4,752.00	\$3,755.00	\$4,415.00		\$4,404.00	\$20,114.00
7	Brennan, Michael	\$4,964.00	\$3,152.00	\$11 <mark>,601.00</mark>		\$3,170.00	\$10,733.00
8	Carlson, David	\$2,327.00	\$4,056.00	\$3,726.00		\$8,817.00	\$18,524.00
9	Collman, Harry	\$3,967.00	\$4,906.00	\$9,007.00	\$2,113.00	\$13,0 90.00	\$13,9 ^{53.00}
10	Counts, Elizabeth	\$4,670.00	\$521.00	\$4,505.00	\$1,024.00	\$3,528.00	\$15,275.00
11	David, Chloe	\$3,379.00	\$3,428.00	\$3,973.00	\$1,716.00	\$4,839.00	\$13,0 85.00
12	Davis, William	\$5,363.00	\$1,562.00	\$2,945.00	\$1,176.00	\$9,642.00	\$13,714.00
13	Dumlao, Richard	\$3,275.00	\$2,779.00	\$7,549.00	\$1,101.00	\$5,850.00	\$15,065.00
14	Farmer, Kim	\$3,860.00	\$3,470.00	\$3,862.00	\$1,040.00	\$10,024.00	\$18,389.00
15	Ferguson, Elizabeth	\$4,685.00	\$1,913.00	\$4,596.00	\$1,126.00	\$5,503.00	\$10,686.00
16	Flores, Tia	\$4,052.00	\$2,883.00	\$2,142.00	\$2,012.00	\$13,5 47.00	\$21,983.00
17	Ford, Victor	\$5,541.00	\$4,931.00	\$8,283.00	\$1,054.00	\$9,543.00	\$11,967.00
18	Hodges, Melissa	\$5,667.00	\$4,798.00	\$8,420.00	\$1,389.00	\$10,468.00	\$12,677.00
19	Jameson, Robinson	\$4,269.00	\$4,459.00			\$6,267.00	\$14,982.00
20	Kellerman, Frances	\$3,502.00	\$4,172.00	\$11,074.00	\$1,282.00	\$2,365.00	\$ <mark>9,380.00</mark>
21	Mark, Katharine	\$5,853.00	\$2,011.00	\$3,807.00	\$1,348.00	\$11,110.00	\$18,047.00
22	Morrison, Thomas	\$2,586.00	\$2,398.00	\$2,453.00	\$1,020.00	\$4,612.00	\$20,525.00
23	Moss, Pete	\$5,714.00	\$4,960.00	\$11,507.00	\$1,010.00	\$6,599.00	\$11,626.00

To remove conditional formatting:

• Click the **Conditional Formatting** command. A drop-down menu will appear.

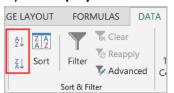
• Hover the mouse over **Clear Rules**, and choose which rules you wish to clear. In our example, we'll select **Clear Rules from Entire Sheet** to remove all conditional formatting from the worksheet.

Sorting

When your data has increased in size, you may want to organize more systematically for easy retrieval. Use **Sort** function to organize a list of information alphabetically, numerically, and in many other ways. When sorting data, it's important to first decide if you would like the sort to apply to the **entire worksheet** or just a **cell range**.

Sort Sheet by One Column: Organizes all of the data in your worksheet by one column. Related information across each row is kept together when the sort is applied. Let's use the same worksheet *Spring* to practice. In the example below, we want to sort by the name of the Employees (column A). Follow the steps. Click on *Data* tab.

- Click on any cell in the Employee column.
- Click on either AZ for **Ascending** or ZA for **Descending** order.
- The entire worksheet will be sorted by the **Employee** column.



	Α	В	C	D	E	F	G
1		Travel	Expens	e Log	Sheet		
2	Employee	Registration	Plane Tickets	Taxi Fare	Car Rental	Meals	Total
3	John Close	\$ 692.25	\$ 2,507.50	\$ 521.60	\$ 543.00	\$2,726.10	\$ 6,990.45
4	John Watkins	\$ 450.00	\$ 1,925.00	\$ 240.00	\$ 450.00	\$1,800.00	\$ 4,865.00
5	Allison Charles	\$ 405.00	\$ 1,500.00	\$ 200.00	\$ 375.00	\$1,350.00	\$ 3,830.00
6	Margie Lyons	\$ 450.00	\$ 1,565.00	\$ 176.00	\$ 300.00	\$ 994.50	\$ 3,485.50
7	George Winkler	\$ 345.00	\$ 1,256.25	\$ 260.80	\$ 200.00	\$ 858.60	\$ 2,920.65
8	Jean Lawson	\$ 600.00	\$ 3,612.50	\$ 656.00	\$ 560.00	\$2,250.00	\$ 7,678.50
9	Harold Graening	\$ 300.00	\$ 1,000.00	\$ 104.00	\$ 200.00	\$ 540.00	\$ 2,144.00
10	Julie Baker	\$ 225.00	\$ 562.50	\$ 89.60	\$ 100.00	\$ 450.00	\$ 1,427.10
11	Carol Sundry	\$ 618.75	\$ 2,000.00	\$ 344.00	\$ 255.00	\$ 2,925.00	\$ 6,142.75
12	Thomas Bernard	\$ 243.75	\$ 802.50	\$ 80.00	\$ 230.00	\$ 774.00	\$ 2,130.25
13	Sandi McLean	\$ 600.00	\$ 2,312.50	\$ 409.60	\$ 610.00	\$2,655.00	\$ 6,587.10

Sort Sheet by One or More Columns: You can use this command when you have more than one column to sort your data.



- 1. Click the sort command shown on right.
- 2. The **Sort** dialog box will appear.

Sort	LA PROPERTY AND			? <mark>x</mark>		
(<mark>*</mark> ▲ <u>A</u> dd	Level X Delete Level	<u>C</u> opy Level	Options	✓ My data has <u>h</u> eaders		
Column		Sort On		Order		
Sort by	Car Rental 👻	Values		Smallest to Largest		
Then by	Plane Tickets 👻	Values	-	Smallest to Largest		
				OK Cancel		
_	the second se					

- 3. Under **Column**, in the **Sort by** box, select the column that you want to sort. Select **Car Rental**.
- 4. Under **Sort On**, select the type of sort. In our example, keep at **values** since we are sorting the number values.

- 5. Under **Order**, do one of the following:
 - For text values, select A to Z or Z to A.
 - For number values, select **Smallest to Largest** or **Largest to Smallest.** We will select **Smallest to Largest** for this example.
 - For date or time values, select **Oldest to Newest** or **Newest to Oldest.**
- 6. Check the My data has headers box to indicate if you have a Header row (labels at the top row of the columns like in this example) or No header row (if none). Normally, Excel can sense the column headings and the selection box is already marked if number values are detected in one of the column.
- 7. To add another column to sort by, click **Add Level** (up to 64 levels) and then repeat steps 3 through 5 as necessary. To delete a level, click **Delete Level**.

Note: If you are sorting rows, then click **Options** and change the **Orientation** to **Sort left to right**. Just remember to change it back when you resume sorting columns.

Sort a Specific Cell Range: If your worksheet has different sets of data and you only want to sort a certain part of the worksheet, select that range of data only before you apply sort either by one column or by multiple columns as explained above. By selecting a specific range of cells, the other content in the worksheet was not affected by the sort.

Sort by Cell Formatting: One useful feature in Sort command is that you can sort your data based on the Cell Color. This feature can be found under the Sort On drop-down list in the Sort dialog box. This feature is especially useful if you format your cell to show with a particular color by using the Cell Formatting function then want to sort out those cells in color.

Sort On	
Values	Ŧ
Values	ŗ
Cell Color	
Font Color	
Cell Icon	

Assume we have a workbook tracking on payments for different regions by Sales Reps. Your conditionally formatted worksheet shows Full Payment in Green, Billed in Yellow, and Overdue in Red colors already. Open the worksheet **SortbyColor** in the same workbook to practice.

	А	В	С	D	Е	F	G	Н
1	OrderDate	Region	Rep	ltem	Units	Unit Cost	Total	Payment
2	1/6/13	East	Jones	Pencil	95	1.99	189.05	Full
3	1/23/13	Central	Kivell	Binder	50	19.99	999.50	Full
4	2/9/13	Central	Jardine	Pencil	36	4.99	179.64	Full
5	2/26/13	Central	Gill	Pen	27	19.99	539.73	Full
6	3/15/13	West	Sorvino	Pencil	56	2.99	167.44	Billed
7	4/1/13	East	Jones	Binder	60	4.99	299.40	Full
8	4/18/13	Central	Andrews	Pencil	75	1.99	149.25	Full
9	5/5/13	Central	Jardine	Pencil	90	4.99	449.10	Overdue
10	5/22/13	West	Thompson	Pencil	32	1.99	63.68	Full

You want to sort those lines with *Overdue* on top then *Billed* followed by *Full* in Payment column. Follow these steps:

- Click anywhere within the data on the sheet.
- Click on the **Sort** function under the **Data** tab.
- Select **Payment** for **Column** box; **Cell Color** for **Sort On** box; and Select the Red color first to show Overdue and select On Top in next box.
- Click on Add Level button to repeat the process above to add the Yellow color and Green color to be sorted in that order.
- Click on **OK**.

Sort					? <mark>×</mark>				
Add	Level X Delete Level	E Copy Level	 Options 	M	y data has <u>h</u> eade	ers			
Column Sort On Order									
Sort by	Payment 💌	· Cell Color			On Top 🔹				
Then by	Payment 💌	Cell Color		•	On Top 🔹				
Then by	Payment 💌	Cell Color		On Top		-			
_				ОК	Cancel				

• Your data should be sorted by *Overdue* rows followed by the *Billed* and *Full* in Payment column as below.

	А	В	С	D	Е	F	G	Н
1	OrderDate	Region	Rep	ltem	Units	Unit Cost	Total	Payment
2	5/5/13	Central	Jardine	Pencil	90	4.99	449.10	Overdue
3	6/25/13	Central	Morgan	Pencil	90	4.99	449.10	Overdue
4	9/1/13	Central	Smith	Desk	2	125.00	250.00	Overdue
5	10/5/13	Central	Morgan	Binder	28	8.99	251.72	Overdue
6	3/7/14	West	Sorvino	Binder	7	19.99	139.93	Overdue
7	4/10/14	Central	Andrews	Pencil	66	1.99	131.34	Overdue
8	6/17/14	Central	Kivell	Desk	5	125.00	625.00	Overdue
9	7/21/14	Central	Morgan	Pen Set	55	12.49	686.95	Overdue
10	11/17/14	Central	Jardine	Binder	11	4.99	54.89	Overdue
11	12/21/14	Central	Andrews	Binder	28	4.99	139.72	Overdue
12	4/1/13	East	Jones	Binder	60	4.99	299.40	Billed
13	6/8/13	East	Jones	Binder	60	8.99	539.40	Billed
14	10/22/13	East	Jones	Pen	64	8.99	575.36	Billed
15	11/8/13	East	Parent	Pen	15	19.99	299.85	Billed
16	4/27/14	East	Howard	Pen	96	4.99	479.04	Billed
17	5/31/14	Central	Gill	Binder	80	8.99	719.20	Billed
18	12/4/14	Central	Jardine	Binder	94	19.99	1,879.06	Billed
19	1/6/13	East	Jones	Pencil	95	1.99	189.05	Full
20	1/23/13	Central	Kivell	Binder	50	19.99	999.50	Full



Filtering Data:

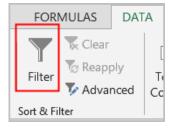
If you further want to filter out your data into a smaller list to view or print for a particular purpose, use **AutoFilter** function in Excel. In order for filtering to work correctly, your worksheet should include a header row, which is used to identify the name of each column such as in our example, Order Date, Item, Region, etc. Let's say, in our example, we want to just view data for a region separately.

(Select All)
 Central
 East
 West

22

- Click anywhere within the data. Select the **Data** tab, then click the **Filter** command.
- A drop-down arrow will appear in the header cell for each column.
- Click the drop-down arrow for the column you wish to filter. In our example, we will filter column **B** to view only certain regions.
- The **Filter** menu will appear.
- Uncheck the box next to **Select All** to quickly deselect all data.
- Check the boxes next to the data you wish to filter, then click **OK**. In this example, we will check **Central** to view only that region.
- The data will be filtered, temporarily hiding any content that doesn't match the criteria. In our example, only Central Region is visible.

	А	В	С	D	Е	F	G	Н
1	OrderDa 👻	Regic 🚛	Rep 🚽 👻	ltem 🔽	Unit 👻	Unit Cc 🛩	Total 🛛 👻	Paymer 👻
3	1/23/13	Central	Kivell	Binder	50	19.99	999.50	Full
4	2/9/13	Central	Jardine	Pencil	36	4.99	179.64	Full
5	2/26/13	Central	Gill	Pen	27	19.99	539.73	Full
8	4/18/13	Central	Andrews	Pencil	75	1.99	149.25	Full
9	5/5/13	Central	Jardine	Pencil	90	4.99	449.10	Overdue
12	6/25/13	Central	Morgan	Pencil	90	4.99	449.10	Overdue
16	9/1/13	Central	Smith	Desk	2	125.00	250.00	Overdue
18	10/5/13	Central	Morgan	Binder	28	8.99	251.72	Overdue
21	11/25/13	Central	Kivell	Pen Set	96	4.99	479.04	Billed
22	12/12/13	Central	Smith	Pencil	67	1.29	86.43	Full
24	1/15/14	Central	Gill	Binder	46	8.99	413.54	Full
20	0/4/44	Control	Conith	Dindor	07	15.00	1 205 00	E.JI



	Α	С		D							
1	OrderDa 👻	Regic 🔻	Rep	-	ltem 🔽						
₽↓	Sort A to Z										
Ă↑	S <u>o</u> rt Z to A										
	Sor <u>t</u> by Colo	r			+						
5	<u>C</u> lear Filter F	rom "Regi	on"								
	Filter by Cold	or									
	Text <u>F</u> ilters				+						
	Search 🔎 -										
		AID									
		(ОК	C	ancel						

Applying Multiple Filters:

You can apply multiple filters to help narrow down your results. In our example, we've already filtered our worksheet to show the Central Region only, and we'd like to narrow it down further to only show rows with Overdue in Payment column. In the same worksheet SortbyColor.

- Click the drop-down • arrow for the column you wish to add filter. In this example, we will add a filter to column H to view information by **Payment**.
- The Filter menu will • appear.
- Check or uncheck the boxes depending on the data you wish to filter, then click OK. In our example, we'll uncheck everything except for Overdue.
- The new filter will be • applied. In our example, the worksheet is now filtered to show only Overdue from Central Region.

	А	В	С)	Е	F	G		Н
1	OrderDa 👻	Regic 🚛	Rep 🚽 👻	ltem	-	Unit 🚽	Unit Cc	 Total 	-	Paymer 🚽
3	1/23/13	Central	Kivell	Bind	₽↓	<u>S</u> ort A t	οZ			
4	2/9/13	Central	Jardine	Pen	Z↓	S <u>o</u> rt Z t	οA			
5	2/26/13	Central	Gill	Pen		Sort by	Color			•
8	4/18/13	Central	Andrews	Pen	_					
9	5/5/13	Central	Jardine	Pen	×	<u>C</u> lear Fi	lter From '	'Payment"		
12	6/25/13	Central	Morgan	Pen		Filter by	/ Color			►.
16	9/1/13	Central	Smith	Des		Text <u>F</u> ilt	ers			Þ
18	10/5/13	Central	Morgan	Bind		Search				Q
21	11/25/13	Central	Kivell	Pen			1			~
22	12/12/13	Central	Smith	Pen			elect All) Iled			
24	1/15/14	Central	Gill	Bind		Fi				
25	2/1/14	Central	Smith	Bind			verdue			
28	3/24/14	Central	Jardine	Pen		15				
29	4/10/14	Central	Andrews	Pen						
31	5/14/14	Central	Gill	Pen						
32	5/31/14	Central	Gill	Bind						
33	6/17/14	Central	Kivell	Des						
35	7/21/14	Central	Morgan	Pen			ſ	ОК		Cancel
36	8/7/14	Central	Kivell	Pen						
2-4		B	С	D		E	F	G		H

	Α	В	С	D	E	F	G	H
1	OrderDa 👻	Regic 🐙	Rep 🚽	ltem 🔽	Unit 👻	Unit Cc 👻	Total 🛛 👻	Paymer 🔳
9	5/5/13	Central	Jardine	Pencil	90	4.99	449.10	Overdue
12	6/25/13	Central	Morgan	Pencil	90	4.99	449.10	Overdue
16	9/1/13	Central	Smith	Desk	2	125.00	250.00	Overdue
18	10/5/13	Central	Morgan	Binder	28	8.99	251.72	Overdue
28	3/24/14	Central	Jardine	Pen Set	50	4.99	249.50	Overdue
29	4/10/14	Central	Andrews	Pencil	66	1.99	131.34	Overdue
33	6/17/14	Central	Kivell	Desk	5	125.00	625.00	Overdue
35	7/21/14	Central	Morgan	Pen Set	55	12.49	686.95	Overdue
42	11/17/14	Central	Jardine	Binder	11	4.99	54.89	Overdue
44	12/21/14	Central	Andrews	Binder	28	4.99	139.72	Overdue

Clearing Filter: If you want to clear filters one at a time, click the drop-down arrow for the filter you wish to clear. Choose Clear Filter From [COLUMN NAME] from the Filter menu.

OR

To remove all filters from your worksheet, click the Filter command on the Data tab again. Clear all filters for next topic.



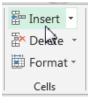
D	E	F	G	H	
n 🖵	Unit 👻	Unit Cc 👻	Total 🚽	Paymer 🖅	
ז ⊉↓	<u>S</u> ort A to	o Z			
ן א	S <u>o</u> rt Z to A				
s	Sor <u>t</u> by Color				
ı 🔽	<u>C</u> lear Fil	ter From "Pa	ayment"		

Divide Spreadsheet Data into the Smallest Parts:

Information in a column can be divided into the smallest parts for each filtering. For example, if a column contains both last and first names together, you can split that column into two separate columns; one for the last names, and the other for the first. By doing so, you can filter your data more efficiently. Let's use *summer* worksheet in the same workbook to practice. **First, select the entire first row that has the Title "Travel Expense Log Sheet" and delete it.** In your spreadsheet where in column A, both last and first names are entered. We want to separate column A into two columns: one for the last names and the other for the first.

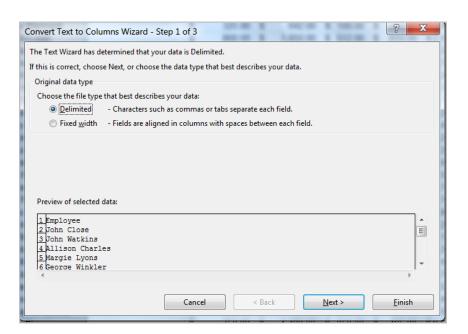
	Α		В		С	
1	Employee		Registration		Plane Tickets	
2	John Close	\$	923.00	\$	2,006.00	
3	John Watkins	\$	600.00	\$	1,540.00	
4	Allison Charles	\$	540.00	\$	1,200.00	
5	Margie Lyons	\$	600.00	\$	1,252.00	

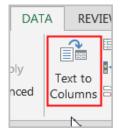
 First, an empty column needs to be inserted between columns A and B to make a space for the newly separated last name column. Select the entire column B and click on the **Insert** command under the **Home** tab in the **Cells** group. A new empty column will be inserted between Employee and Registration columns.



	А	в	С	
1	Employee		Registra	tion
2	John Close		\$ 9	23.00
•	1 1 10/01/01			00.00

 Select the entire column A (the column you wish to divide into two). Click the Data tab and click on the Text to Columns in the Data Tools Group. Convert Text to Columns Wizard dialog box will appear.

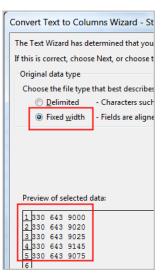




• You are asked to choose between the Delimited or Fixed width option buttons—although Excel

Convert Text to Columns Wizard - Step 2 of 3

automatically will suggest something for you. To understand the choices, you must understand what is meant by a **delimiter**. A **delimiter** is simply a character that identifies (delimits) the end of one number or word and the beginning of another. The character can be a comma, space or a tab. Excel is smart enough to examine your data and suggest whether you have delimited or fixed-width data. If your data appears in neatly aligned columns, as shown in the section of image on the right , it will select the **Fixed width option** button. If the data does not appear in neatly aligned columns such as in our example where the width of each first and last names are not aligned or even, it will choose the **Delimited** option button. Click the **Next** button to go onto step 2.



? X

- Check the space box as we have a space between the names; uncheck the Tab box; click on Next.
- Click *Finish* to finalize your process and confirm to replace the empty new column you just added above with the split data by clicking on *OK*.
- The names column now should split into two columns: last and first names. See below. You can rename the header rows appropriately if you desire.

	1000	A Long to the second seco				
his screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.						
Delimiters						
<u> </u>		_				
Se <u>m</u> icol		✓ Treat consecutive delimiters as one				
Comma Text gualifier: " ✓ Space ✓ ✓ Other:						
Data <u>p</u> reviev	v					
Employee John	Close		* E			
John	Watkins		=			
Allison Margie George	Charles Lyons Winkler		-			
			•			
		Cancel < <u>B</u> ack <u>N</u> ext > <u>F</u> in	ish			

A B C					
1	Employee		Regis	stration	
2	John	Close	\$	923.00	
3	John	Watkins	\$	600.00	
4	Allison	Charles	\$	540.00	
5	Margie	Lyons	\$	600.00	

Combine two or more columns by using a function

Suppose you like to put together two or more columns of data that you want to combine in a single column, such as the name and phone number of a person. To combine two or more columns, use the CONCATENATE function in a formula in a nearby cell (*typically to the right of the last column of data that you want to combine*), and then drag that formula down through the rows that contain the data. When you create your formula, you can add a space or comma to cleanly separate names and

addresses in the new column by enclosing them in quotation marks (" "). See below image. In this example, The CONCATENATE function combines column A, a space character (enclosed in quotation marks, like this: " "), column B, another space character, and column C into a single column D.

	Α	В	C	D	E
1	First Name	Last Name	Phone	Live Results	Formula
2	Terry	Adams	555-2306	Terry Adams 555-2306	=CONCATENATE(A2," ",B2," ",C2)
3	Steve	Riley	555-1875 ext. 2007	Steve Riley 555-1875 ext. 2007	=CONCATENATE(A3," ",B3," ",C3)

Open *CombineCols* worksheet and try formula in D2. Combine columns A, B, C into a single column D. **Alternatively**, you can also use the "&" in place of comma "," to get the same result as above.

	A	В	С	D
1	First Name	Last Name	Phone	Name & Phone
2	Terry	Adams	555-2306	=A2&" "&B2&" "&C2
3	Steve	Riley	555-1875 ext. 2007	=A3&" "&B3&" "&C3