



TECHNOLOGY
SUPPORT

EXCEL 2013

TIPS & TRICKS



TEXAS TECH UNIVERSITY
Information Technology Division

Texas Tech University | Heide Mansouri

Table of Contents

Entering data more efficiently	4
Using a Drop-down list.....	4
Using the Fill Handle.....	5
Entering Date or Time instantly.....	7
Instantly Entering Today's Date or Time.....	7
Entering data or formulas in non-adjacent cells simultaneously	8
Data Clean Up	10
Adjust all or selected column widths or row heights in a flash	15
To adjust all of our columns at the same time rather than individually	15
Select all	15
Sort data with single buttons	16
Before sorting your data:	16
Clean up Spaces Quickly (trailing Spaces and Leading Spaces)	18
Identify and eliminate duplicates.....	18
To Remove Duplicates	20
Flash Fill	21
Create chart titles from cell content.....	22
To add a Title to this chart:	22
How to Use Autofilter in Excel	23
Prepare your data for Autofilter.....	23
Enable Autofilter	25
Using Excel's Autofilter feature to filter your list	26
Using Autofilter to filter by more than one criteria	28
Ten Double-Click Tricks.....	28
Recommended Online Resources.....	29

Excel 2013 Tips & Tricks

This document will show you how to use Tools and Techniques in **Excel 2013** that will increase your Excel productivity!

Credit: This document is adapted mostly from a course by Dennis Taylor @ lynda.com

Topics

- Entering data more efficiently;
- Using the Drop-down list;
- Using the Fill handle;
- Entering today's date or time instantly;
- Enter data or formulas in non-adjacent cells simultaneously;
- Converting formulas to values with a simple drag;
- Data Clean-Up;
- Adjust all or selected column widths or row heights in a flash;
- Performing calculations without formulas;
- Applying formatting with keyboard shortcuts;
- Identify and eliminate duplicates;
- Sort data with single buttons;
- Clean up Spaces Quickly (trailing Spaces and Leading Spaces);
- Identify and eliminate duplicates;
- Using the Flash Fill; and
- Using Excel's Autofilter feature to filter your list.

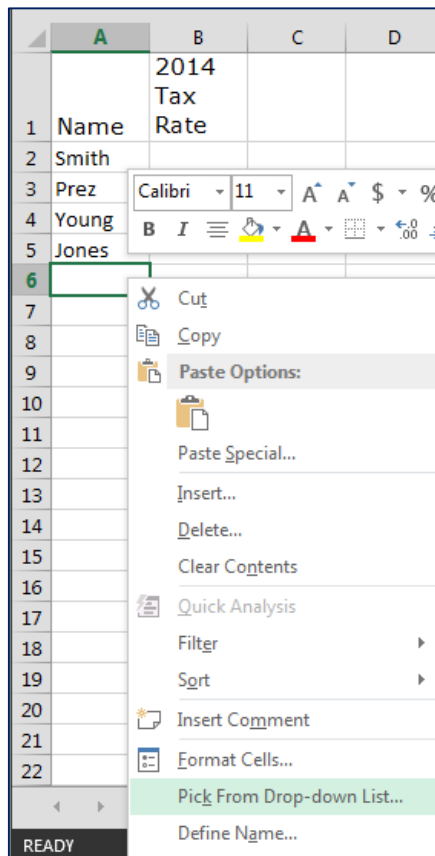
Entering data more efficiently

- Pressing (**Alt+ Enter**), forces a line break so that you can type additional data in the same cell below the other data. This is useful when a column doesn't need to be very wide, but a long label will make it considerably wider.
 - For example, if you need to type in "**2014 Tax Rate**", in **cell B1**, you type **2014** (**Alt + Enter**), then **Tax**, (**Alt + Enter**), then type **Rate**, and then **Enter**.

	A	B	C	D	E
1	Name	2014 Tax Rate			
2					
3					
4					
5					

Using a Drop-down list


Suppose that some names in column A are going to be repeating, then instead of typing repeated entries, simply **Right-click** in the next cell and choose **Pick from Drop-Down List** and click the one you want and move on. **Remember**, (**Alt + down arrow**) will activate the list as will **Right – click**, by way of **Pick from Drop-Down List** (one of the **AutoComplete** feature in Excel).



Using the Fill Handle

Instead of entering data manually on a worksheet, you can use the Auto Fill feature (Fill Handle) to fill cells with **data that follows a pattern** or that is based on data in other cells.

- If you are creating a number series, such as 1010, 1020 ..., for example.
 - Type the first two numbers.
 - Highlight the first two numbers, and drag from the **Fill Handle** as far as you need to.
- Let's type **January** in **cell A1**, and fill in the remaining cells below, by dragging the lower right-hand corner of **A1**, called Fill Handle, as far as you need this.
- If you dragged it farther than **December**, the list will simply start all over again.
- If you use all upper case, you'll get all upper case.
- If you start with a three-letter abbreviation **Jul** in **cell G1**, for example and drag from the corner of the cell G1, you will simply get abbreviations for the various months.
- And any time you drag downward or rightward, you move ahead chronologically as you use these different features.
- If you drag upwards, from that lower right-hand corner, you go backward in time, or leftward. **Note:** this technique works only with **three-letter abbreviations** or **full spellings**. Same thing is true with **days of the week**.

	A	B	C	D
1	Name	2014 Tax Rate	ID Number	
2	Smith		1010	
3	Prez		1020	
4	Young			
5	Jones			
6	Sanders			
7	Jones			
8	Prez			
9	Johnson			
10	Johnson			

	A	B	C	D	E	F	G	H	I
1	January		JULY		SUNDAY		Jul		Sept
2	February		AUGUST		MONDAY		Aug		Sept
3	March		SEPTEMBER		TUESDAY		Sep		Sept
4	April		OCTOBER		WEDNESDAY		Oct		Sept
5	May		NOVEMBER		THURSDAY		Nov		Sept
6	June		DECEMBER		FRIDAY		Dec		Sept
7	July		JANUARY		SATURDAY		Jan		Sept
8	August		FEBRUARY		SUNDAY		Feb		Sept
9	September		MARCH				Mar		
10	October		APRIL				Apr		
11	November		MAY				May		
12	December		JUNE				Jun		
13	January		JULY				Jul		
14	February		AUGUST				Aug		
15			SEPTEMBER				Sep		
16			OCTOBER				Oct		
17									

Samples of Series you can create with AutoFill

Initial Value	Series Created by AutoFill in the Next Three Cells
September	October, November, December
Sep	Oct, Nov, Dec
Monday	Tuesday, Wednesday, Thursday
Fri	Sat, Sun, Mon
3/13/1999	3/14/1999, 3/15/1999, 3/16/1999
4-Jan	5-Jan, 6-Jan, 7-Jan
Dec-04	Jan-05, Feb-05, Mar-05
8:00 AM	9:00 AM, 10:00 AM, 11:00 AM
11:03	12:03, 13:03, 14:03
Quarter 1	Quarter 2, Quarter 3, Quarter 4
Qtr 4	Qtr 1, Qtr 2, Qtr 3
Q2	Q3, Q4, Q1
40 Mill Road	41 Mill Road, 42 Mill Road, 43 Mill Road
'00945	'00946, '00947, '00948
L17-800	L17-801, L17-802, L17-803

Entering Date or Time instantly

- If you simply want to put in **today's date** quickly, Type (**Ctrl + ;**).
- If you want to put in the date in such a way that it will adjust all the time, use **=today(**, and **Enter**. There is no need to type the right parenthesis.
- Any time you drag a **date** entry that's simply a date, and drag from the **Fill Handle**, you automatically will get the next day, next day, and next day.
- To type dates of seven-day interval:
 - Type the first two dates.
 - Highlight both of these dates.
 - Drag from the right lower corner of the cell (Fill Handle), as far as you need. And of course, that could be a 14-day interval, a 10-day interval, or a four-day interval, as needed, based on the context that you need it for.
 - If you want to repeat the same data entry, you hold down the **Control** key, while dragging the Fill Handle (January in cells A2:A5).

	A	B	C	D	E	F	G	H	I
1									ADC
2	January	Mon	JUL	SUNDAY	45	5/20/2014	5/20/2014		Admin Training
3	January	Tue	AUG	MONDAY	46	5/21/2014			Audit Services
4	January	Wed	SEP	TUESDAY	47	5/22/2014			Compliance
5	January	Thu	OCT	WEDNESDA	48	5/23/2014			Engineering/Maintenance
6		Fri	NOV	THURSDAY	49	5/26/2014			Engineering/Operations
7		Sat	DEC	FRIDAY	50	5/27/2014			Environmental Health/Safety
8		Sun	JAN	SATURDAY	51	5/28/2014			Executive Education
9		Mon	FEB	SUNDAY	52	5/29/2014			International Clinical Safety
10			MAR	MONDAY		5/30/2014			Logistics
11				TUESDAY		6/2/2014			Major Mfg Projects
12			Sept			6/3/2014			Manufacturing
13			Sept			6/4/2014			Manufacturing Admin
14			Sept			6/5/2014			Operations
15						6/6/2014			Peptide Chemistry

Instantly Entering Today's Date or Time

- Press (**Ctrl + ;**) for today's date. This date is "**static**" and will stay there indefinitely, until you put other data in there.
- If you do want to enter today's date, so that it will adjust as you open and close the file, you want to put in the function **=NOW(**. There is no need to type the right parenthesis. This puts the **date "dynamically"**. So, as you open and close this file and save it, this date will get adjusted automatically.

- If you want to put in the **current time**, press (**Ctrl + Shift + ;**). If you would like that to be a dynamic entry (will change as you open and close files), type the **=NOW()**. Initially, this will put in **date and time**. But with dates and date-like information, any time you drag an entry without doing anything special, you automatically get incrimination.

Entering data or formulas in non-adjacent cells simultaneously

- Anytime you need to copy information down a column, whether it be a formula or text or a value, it's nearly always more efficient to **Double-click** the **Fill Handle** (lower right hand corner of the selected cell) instead of either dragging the **Fill Handle** or using lengthy **Edit -> Copy/Paste** techniques.
- Suppose that, in cell **L2** of **Employees Data**, is a formula that's simply increasing the compensation amount from value in K2 by 3.73% (in cell N1) and here's the formula: **=ROUND(K2*\$N\$1+K2,0)**
- To copy this down the column L, rather than dragging from the corner in cell L2, you'll simply double-click the lower right hand corner (Fill Handle) of the cell L2.

	I	J	K	L	M	N
1	Benefits	Job Rating	Comp.	New Comp.	Tax Rate	3.73%
2	DMR	4	45,112	46,795		
3	DMR	5	46,800			
4	D	3	59,112			
5	R	1	29,808			
6	R	3	46,800			

	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Phone	Status	Hire Date	Years	Benefits	Job Rating	Comp.	New Comp.	Tax Rate	3.73%			Code #	Month
2	3034729409	Full Time	11/22/2002	12	DMR	4	45,112	46,795					51762	January
3	7193838954	Full Time	1/15/1998	17	DMR	5	46,800						23263	
4	9704194193	Full Time	12/11/1998	16	D	3	59,112						90185	
5	3037785583	Full Time	12/22/1993	21	R	1	29,808						13012	
6	5053976775	Full Time	3/31/2002	13	R	3	46,800						93967	
7	7197045091	Contract	7/19/2003	11		4	89,400						74425	
8	3038560698	Full Time	2/20/2000	15	DMR	2	95,676						18619	
9	5055786813	Full Time	12/1/1994	20	M	5	99,000						94360	
10	9704518022	Half-Time	8/12/1994	20	DM	4	42,054						42102	
11	3033558443	Contract	1/4/1994	21		2	107,340						80382	
12	9704045531	Contract	6/24/2002	13		5	85,560						24902	
13	7195842116	Hourly	7/12/2001	13		3	20,026						60845	

- To know "How far did this get copied?" press (**CTRL+ period**). Maybe scroll just a little bit more to confirm that it went to the bottom of your list. You can press (**CTRL+ period**) again to go back up top. Over in columns Q and R, you've got similar kinds of data, but let's say you want to put in a month in cell R2.
- Now, if you put in January, or JAN in cell R2, Excel recognizes this as a special kind of entry. You can double-click the lower right hand corner in cell R2 (Fill Handle), Excel simply fills this in with subsequent months.
- If you had more numbers down in column Q, then after December, you would have seen January, February, March, all over again. However, if text in R2 is just pure text, you'll get the same text over and over again. This technique works with numbers as well as with text and also with formulas.
- Suppose that you want to find a median for each of the states for a six month period for columns I through M. You also want to do the same in columns B through F. So using the **CTRL** key, you will highlight these cells (select columns I through M, then press the **Ctrl** key, and select columns B through F, from left to right). Makes no difference which order you highlight these in. Now type the formula that you want, **=median(B2:B7)** and press (**Ctrl + Enter**) key. **Notice** that as you type this, it looks as if you are typing this only for column B. But instead of simply pressing **Enter**, you'll press (**CTRL + Enter**), and as you can see the same relative formula will go into all these

cells, using the median function, in every single one of these cells in the correct way.

B8		=median(B2:B7)													
	A	B	C	D	E	F	G	H	I	J	K	L	M		
1		CA	TX	NY	FL	IL			CA	TX	NY	FL	IL		
2	Jan	46	54	51	63	63		Jul	45	47	35	49	37		
3	Feb	49	52	50	63	55		Aug	39	35	45	34	30		
4	Mar	46	50	52	61	54		Sep	41	37	47	39	33		
5	Apr	49	61	58	63	62		Oct	46	40	45	45	37		
6	May	44	64	57	56	47		Nov	38	39	42	40	43		
7	Jun	57	52	58	58	53		Dec	30	47	46	42	34		
8		=median(B2:B7)													

B8		=MEDIAN(B2:B7)													
	A	B	C	D	E	F	G	H	I	J	K	L	M		
1		CA	TX	NY	FL	IL			CA	TX	NY	FL	IL		
2	Jan	46	54	51	63	63		Jul	45	47	35	49	37		
3	Feb	49	52	50	63	55		Aug	39	35	45	34	30		
4	Mar	46	50	52	61	54		Sep	41	37	47	39	33		
5	Apr	49	61	58	63	62		Oct	46	40	45	45	37		
6	May	44	64	57	56	47		Nov	38	39	42	40	43		
7	Jun	57	52	58	58	53		Dec	30	47	46	42	34		
8		48	53	55	62	55			40	40	45	41	36		

Data Clean Up

Suppose that you have entries in column A of a worksheet that are all **uppercase**, and also some of the entries have **leading spaces**, or **multiple embedded spaces**, and you want to clean that up. You will use functions **'Proper'** and also a function **'Trim'**, to clean up the data (as shown in cell B2).

- Inset a column next to column A
- In cell B2 type =TRIM(PROPER(A2)), and press the Enter key
- Use the Fill Handle to copy the formula from cell B2 to the rest of the cells. Appropriate letters are uppercased, and trim gets rid of the extra spaces. Now you would like take these results in column B (**values, not the formulas**), and put them in column A.

	A	B	C
1	Contact	Contact	Current Salary
2	BAKER, MARK	Baker, Mark	55,805
3	CATALANO, ROBERT	Catalano, Robert	98,728
4	O'BRIEN, DONNA	O'Brien, Donna	113,923
5	HANSEN, SHEILA	Hansen, Sheila	115,348
6	FIER, MARILYN	Fier, Marilyn	92,503
7	MACDONALD, MARK	Macdonald, Mark	74,980
8	HENDRICKS, ERIC	Hendricks, Eric	63,893
9	TODD-JONES, RYAN	Todd-Jones, Ryan	96,051
10	FITZGERALD, JACKIE	Fitzgerald, Jackie	112,571
11	TIDWELL, LIESL	Tidwell, Liesl	97,852
12	EATON, JEFFREY	Eaton, Jeffrey	106,920
13	CHAMBERS, KAREN	Chambers, Karen	75,064
14	PEREZ, BARNEY	Perez, Barney	65,950
15	WATANUKI, CATHY	Watanuki, Cathy	87,227
16	PRIEM, GEORGE	Priem, George	103,028
17	WAGNER, MAX	Wagner, Max	84,860
18	KONOPKA, ROBERT	Konopka, Robert	97,256
19	NICHOLS, DON	Nichols, Don	102,027
20	HARVEY, HARLON	Harvey, Harlon	61,339

- So, select values in column B (b2:b20), and with the **'right' mouse button**, point to either the **left edge**, the **top edge**, or the **right edge of the selected cells**.

- Hold down the 'right' mouse button, and drag the selected cells into column A, using the **'Copy here as values only'** from the short-cut menu. That's not a formula, it's the result that you actually saw over in B2, but no formulas are left here. Now you may delete column B.

	A	B	C
1	Contact	Contact	Curre Sala
2	BAKER, MARK	Baker, Mark	55,8
3	CATALANO, ROBERT	Catalano, Robert	98,7
4	O'BRIEN, DONNA	O'Brien, Donna	113,9
5	HANSEN, SHEILA	Hansen, Sheila	115,3
6	FIER, MARILYN	Fier, Marilyn	92,5
7	MACDONALD, MARK	Macdonald, Mark	74,9
8	HENDRICKS, ERIC	Hendricks, Eric	63,8
9	TODD-JONES, RYAN	Todd-Jones, Ryan	96,0
10	FITZGERALD, JACKIE	Fitzgerald, Jackie	112,5
11	TIDWELL, LIESL	Tidwell, Liesl	97,8
12	EATON, JEFFREY	Eaton, Jeffrey	106,9
13	CHAMBERS, KAREN	Chambers, Karen	75,0
14	PEREZ, BARNEY	Perez, Barney	65,9
15	WATANUKI, CATHY		
16	PRIEM, GEORGE		
17	WAGNER, MAX		
18	KONOPKA, ROBERT		
19	NICHOLS, DON		
20	HARVEY, HARLON		
21			
22			
23			
24			
25			
26			
27			
28			

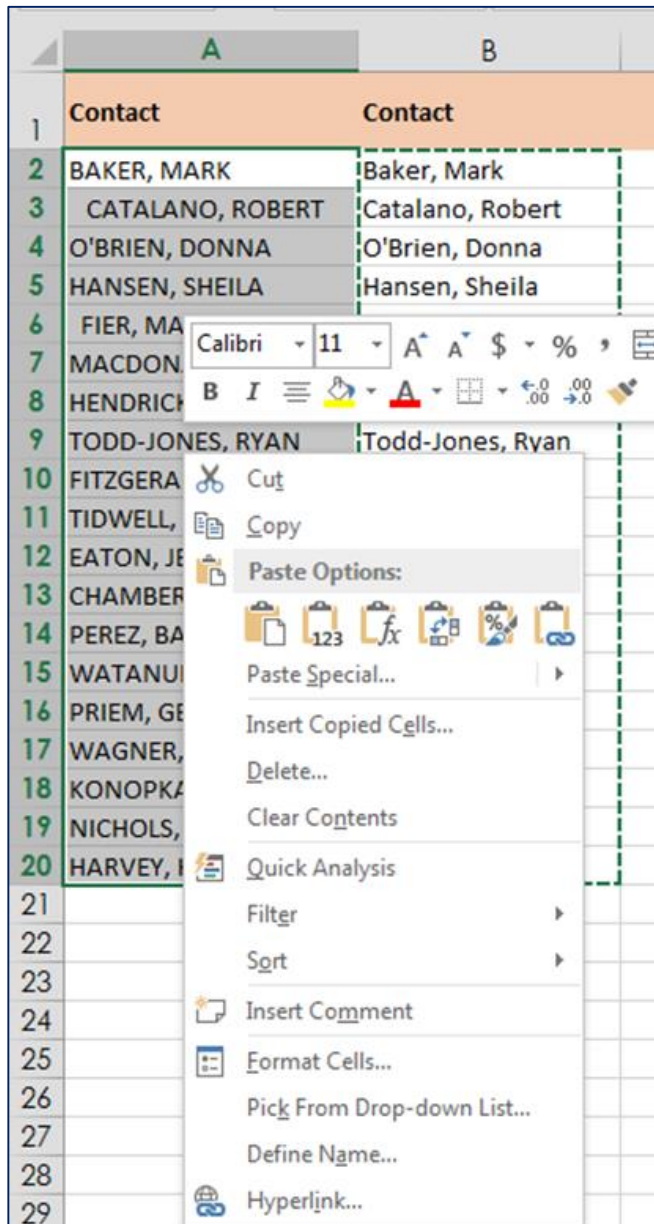
- Move Here
- Copy Here
- Copy Here as Values Only
- Copy Here as Formats Only
- Link Here
- Create Hyperlink Here
- Shift Down and Copy
- Shift Right and Copy
- Shift Down and Move
- Shift Right and Move
- Cancel

	A	B
1	Contact	Contact
2	Baker, Mark	Baker, Mark
3	Catalano, Robert	Catalano, Robert
4	O'Brien, Donna	O'Brien, Donna
5	Hansen, Sheila	Hansen, Sheila
6	Fier, Marilyn	Fier, Marilyn
7	Macdonald, Mark	Macdonald, Mark
8	Hendricks, Eric	Hendricks, Eric
9	Todd-Jones, Ryan	Todd-Jones, Ryan
10	Fitzgerald, Jackie	Fitzgerald, Jackie
11	Tidwell, Liesl	Tidwell, Liesl
12	Eaton, Jeffrey	Eaton, Jeffrey
13	Chambers, Karen	Chambers, Karen
14	Perez, Barney	Perez, Barney
15	Watanuki, Cathy	Watanuki, Cathy
16	Priem, George	Priem, George
17	Wagner, Max	Wagner, Max
18	Konopka, Robert	Konopka, Robert
19	Nichols, Don	Nichols, Don
20	Harvey, Harlon	Harvey, Harlon

You can also quickly do this by using the **Paste Special** option.

Here's how:

- Select cells that have the values you want to copy and press (**Ctrl + C**).
- Click the upper-left cell of the paste area and press (**Ctrl + Alt + V**).
- Pick **Values** (or press **V**), and then press Enter.
- You may also copy values in cell (b2:b20), and then select cells (a2:a20)
- Right-click, and select **Paste Special -> Values**.



Adjust all or selected column widths or row heights in a flash

In this table, you can see that some of the columns are not wide enough (seeing pound signs when that columns are not wide enough).

	A	B	C	D	E	F	G
1	Employee Name	Building	Departme	Status	Hire Date	Years	Benefits
2	Dawson, Jonath	West	ADC	Contract	#####	5	
3	Duran, Brian	Taft	ADC	Hourly	#####	19	
4	Page, Lisa	West	ADC	Full Time	#####	13	DMR
5	Taylor, Hector	West	ADC	Half-Time	#####	21	DM
6	Weber, Larry	Watson	ADC	Full Time	#####	4	M
7	Brewer, Ken	Main	Admin Trai	Half-Time	#####	20	DM
8	Burton, Cam	West	Admin Trai	Full Time	8/5/2011	3	D
9	Chase, Troy	Main	Admin Trai	Full Time	#####	8	DMR
10	Gallagher, John	West	Admin Trai	Hourly	#####	2	
11	Holland, Donald	South	Admin Trai	Hourly	#####	20	DMR
12	Oconnor, Kent	Taft	Admin Trai	Half-Time	#####	13	DMR
13	Phillips, Liesl	South	Admin Trai	Full Time	#####	14	R
14	Pratt, Erik	North	Admin Trai	Full Time	#####	15	DMR

To adjust all of our columns at the same time rather than individually

- Click in the upper-left corner of the worksheet (**Select All**) button, to select the entire worksheet.
- Double-click any column separator between column letters. All of the columns are now a so-called "**best fit**."
- You can also adjust row heights by selecting the entire worksheets (**Select All**), and then, double-click one of the row boundaries between row numbers.

Select all

Many people know the shortcut for "**select all**": **Control + A**. However, in Excel, this shortcut behaves differently in different contexts. If the cursor is in an empty cell, Control + A selects the entire worksheet. But if the cursor is in a group of contiguous cells, Control + A will select the entire group of cells instead.

The behavior changes again when the cursor is in an Excel Table. The first time you use Control + A, the table data is selected. The second time, both the table data +

table header are selected. Finally, the third time you use Control + A, the entire worksheet is selected.

Sort data with single buttons

In Excel, you can sort data according to specific sort order rules. You can sort the number data as per ascending order and descending order. And, you can also sort the text according to alphabets A to Z or Z to A, in Microsoft Excel 2013. This option is available in the **Data** Tab under the **Sort & Filter** group.

Before sorting your data:

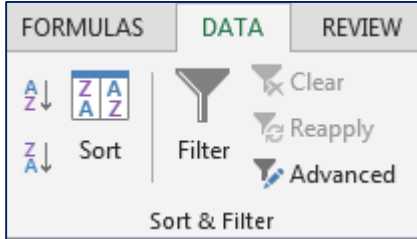
- The Table should have **only one header row**.
- Do not leave any empty cells in any cell of the header row.
- Do not leave empty rows or columns in the data area.
- **Sort** button (in **Editing** Group) is recommended if you only sort occasionally, sort on multiple layers, sort based on cell color, font color, or cell icon.
- If you wish to sort your data, based on a single column, you don't need to select the data before you do sorting. Instead, select only a single cell. Then, clicking the Sort icon automatically sorts the entire List and the data will be sorted according to the selected cell's field. **Remember** NOT to click the column letter, you could be on the path to only rearranging the data in that column only, so click on a **single cell**.

So suppose you want to sort the following table by **Building** within that by **Department**, and within that by **Employee Name (Data tab -> Sort)**.

Here is how it is done:

- You'll sort the Employee Name first. Click in column A, do an **AZ Sort**.
- Click in column C, do an **AZ sort**.
- Click in column B, do an **AZ Sort**.

Note: The **LAST** Sort always overrides the previous ones.



	A	B	C
1	Employee Name	Building	Department
2	Allison, Timothy	Main	Executive Education
3	Adams, David	Main	Logistics
4	Allen, Thomas	Main	Manufacturing
5	Ayers, Douglas	Main	Manufacturing
6	Alvarado, Sonia	Main	Process Development
7	Banks, Ryan	Main	Process Development
8	Austin, William	Main	Project & Contract Services
9	Ayala, Polly	Main	Project & Contract Services
10	Bean, Deborah	Main	Project & Contract Services
11	Acosta, Robert	Main	Quality Assurance
12	Avila, Jody	Main	Quality Assurance
13	Barnes, Grant	Main	Quality Assurance
14	Beck, Craig	North	Compliance
15	Barnett, Brenda	North	International Clinical Safety
16	Bass, Justin	North	Logistics
17	Atkins, Kevin	North	Manufacturing
18	Barber, Robbie	North	Manufacturing
19	Bates, Verna	North	Manufacturing
20	Barr, Jennifer	North	Operations
21	Arnold, Cole	North	Peptide Chemistry
22	Ball, Kirk	North	Peptide Chemistry
23	Barton, Barry	North	Professional Training Group
24	Andrews, Diane	North	Project & Contract Services
25	Ashley, Michael	North	Project & Contract Services
26	Atkinson, Danielle	North	Project & Contract Services
27	Abbott, James	North	Quality Assurance
28	Adkins, Michael	North	Quality Assurance
29	Armstrong, David	North	Quality Control
30	Barrett, John	North	Quality Control
31	Beasley, Timothy	North	Quality Control
32	Bell, David	South	Manufacturing
33	Ballard, Martin	South	Process Development

Clean up Spaces Quickly (trailing Spaces and Leading Spaces)

Spaces will cause problems, when you sort data. You also might have **trailing spaces** in some of the data that could cause problems if you're trying to set up some checks using the "**if function**" for example. Multiple **Enter** spaces might also cause problems.

	A	B	C
1	Employee Name	Building	Department
2	Abbott, James	North	Quality Assurance
3	Acosta, Robert	Main	Quality Assurance
4	Adams, David	Main	Logistics
5	Adkins, Michael	North	Quality Assurance
6	Aguilar, Kevin	West	Quality Assurance
7	Alexander, Charles	West	Manufacturing Admin

Usually what you need to do in these situations is to insert a new column to the right of the column you are working with. And then, the function you want to use in the new inserted column to clean up the data is **Trim()**, one of the **Text functions**.

Trim Function does three things. It returns the data without leading spaces, without trailing spaces, and multiple consecutive inter spaces. If you trim a cell, and press (**Ctrl + Enter**), the active cell does not move downward. Then double click the lower right hand corner (Fill Handle), to copy this down the column.

Identify and eliminate duplicates

Duplicate records seem to be a fact of life these days as you look at this list here on a worksheet called '**HR List with Duplicates**'. You probably already have seen rows 10 and 11.

	A	B	C	D	E	F	G
1	Employee Name	Building	Department	SS#	Status	Hire Date	Years
2	Anderson, Terry	West	ADC	100-43-2924	Full Time	6/3/2001	14
3	Bailey, Victor	West	ADC	948-19-5711	Contract	7/28/2007	8
4	Bishop, Juan	Watson	ADC	991-65-6720	Full Time	5/23/2010	5
5	Carr, Susan	West	ADC	914-42-8485	Half-Time	7/14/1993	22
6	Hardy, Svetlana	Taft	ADC	311-52-6157	Hourly	1/21/1995	20
7	Bishop, Juan	Watson	ADC	991-65-6720	Full Time	5/23/2010	5
8	Day, David	Main	Admin Training	535-53-9723	Half-Time	1/14/1994	21
9	Diaz, David	South	Admin Training	415-07-6748	Hourly	1/22/1994	21
10	Frost, Adam	North	Admin Training	608-79-6012	Full Time	1/6/1995	20
11	Frost, Adam	North	Admin Training	608-79-6012	Full Time	1/6/1995	20
12	Hood, Renee	Main	Admin Training	202-81-5919	Contract	9/8/1995	20
13	Hoover, Evangeline	North	Admin Training	768-68-1542	Full Time	6/27/1999	16

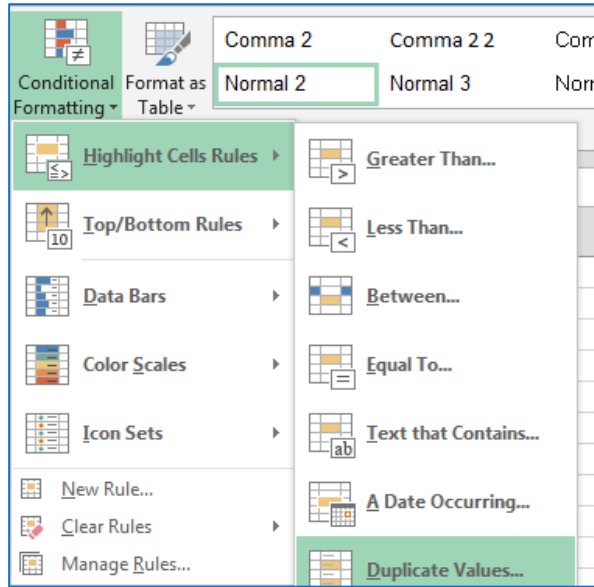
Those are duplicates. Adam Frost is in there twice. You need to get rid of that. You might also recognize, Juan Bishop, on rows 4 and 7.

Usually when you sort data the duplicate records are going to come together because based on how you sort, you will expect that, but for whatever reason in this list they are not together.

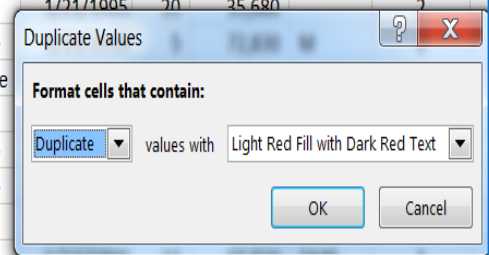
On the **Data** tab there is a command called '**remove duplicates**'. But what if you really want to, at first, identify which records are duplicated? For example, in the following table, all you need to really say is, "If you have a duplicate social security number, you've got a problem."

So let's just select **column D** and then on the '**Home**' tab in the **Ribbon**, go to **Conditional Formatting**.

As you slide over the first choice, '**Highlight Cell Rules**', the last entry on the right, **Duplicate Values** -> click **OK**. **Notice** that some records have duplicate social security number.



	A	B	C	D	E	F	G	H	I	J
1	Employee Name	Building	Department	SS#	Status	Hire Date	Years	Comp.	Benefits	Job Rating
2	Anderson, Terry	West	ADC	100-43-2924	Full Time	6/3/2001	14	24,550	DMR	1
3	Bailey, Victor	West	ADC	948-19-5711	Contract	7/28/2007	7	42,540		5
4	Bishop, Juan	Watson	ADC	991-65-6720	Full Time	5/23/2010	5	72,830	M	2
5	Carr, Susan	West	ADC	914-42-8485	Half-Time	7/14/1993	21	26,795	DM	4
6	Hardy, Svetlana	Taft	ADC	311-52-6157	Hourly	1/21/1995	20	35,680		2
7	Bishop, Juan	Watson	ADC	991-65-6720	Full Time					
8	Day, David	Main	Admin Training	535-53-9723	Half-Time					
9	Diaz, David	South	Admin Training	415-07-6748	Hourly					
10	Frost, Adam	North	Admin Training	608-79-6012	Full Time					
11	Frost, Adam	North	Admin Training	608-79-6012	Full Time					
12	Hood, Renee	Main	Admin Training	202-81-5919	Contract					
13	Hoover, Evangeline	North	Admin Training	768-68-1542	Full Time	0/27/1999	10	60,830	DMR	1



To Remove Duplicates

- Click anywhere within the data, on **Data** tab, click **Remove Duplicates**. You probably don't have to check duplicates in every single column out.
- Click **OK**.



Flash Fill

One **new addition to Excel 2013** is a feature called '**Flash Fill**'. And on the following table, you cannot sort your list by last name, or by state, or by zip code.

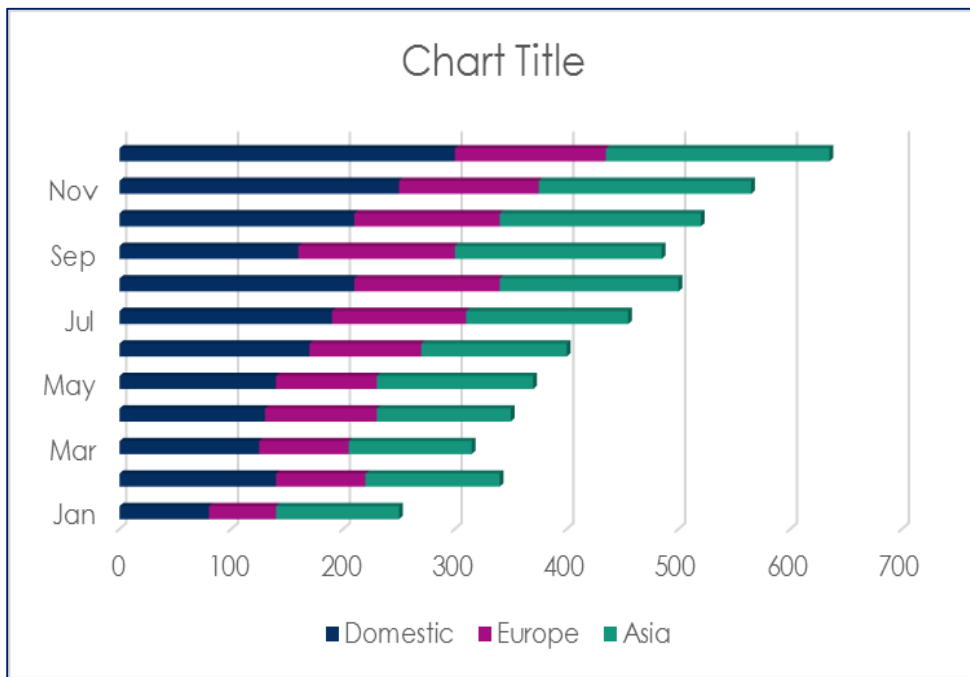
	A	B	C	D
1	Contact			City, State Zip
2	ERIC GOMEZ			Boulder, CO 80304
3	MAX WAGNER			Kenton, OH 43326
4	DONNA O'BRIEN			Bardstown, KY 40004
5	LIESL TIDWELL			Arvada, CO 80002
6	MARK BAKER			Wheat Ridge, CO 80033
7	ROBERT CATALANO			Pueblo, CO 81008
8	WALTER WHITE			Albuquerque, NM 85234
9	JESSE TODD-JONES			Cincinnati, OH 45220
10	MARILYN SMITH			Walnut Creek, CA 94596
11	FRANCIS UNDERWOOD			Washington, DC 20036
12	SHEILA HANSEN			Aurora, CO 80014
13	LEONARD WARREN			San Francisco, CA 94111

- Insert a new column to the right of column A.
- **Right click column B** and **Insert**. Suppose that you want these names to appear in last name, first name order and, not capitalized.
- **Type** Gomez with only the G capitalized. Comma, space, Eric, enter.
- Now for the next name type Wagner, Max but you'll just type the W and Excel recognizes the pattern already and you see this being displayed in the background in grey. Press Enter. All cleaned up with a few flaws. The B in O'Brien is not capitalized. And hyphenated names, Jessie Todd-Jones that comes out as Jessie, Jones. All the others are taken care of nicely.
- Delete **Column A** after moving contact over to **column B**.
- Now a different way to approach this, press **Ctrl + Z** again.
 - If you simply type in the name column B, and then go to **Flash Fill** immediately you get an answer. Now, the first cell is not quite what you want, but everything else is looking the same as it was.

Create chart titles from cell content

Suppose that we have used the following data to create a 3D- Stacked Bar Chart.

World-wide Sales - Millions of Dollars				
	Domestic	Europe	Asia	Total
Jan	80	60	110	250
Feb	140	80	120	340
Mar	125	80	110	315
Apr	130	100	120	350
May	140	90	140	370
Jun	170	100	130	400
Jul	190	120	145	455
Aug	210	130	160	500
Sep	160	140	185	485
Oct	210	130	180	520
Nov	250	125	190	565
Dec	300	135	200	635
Total	2,105	1,290	1,790	5,185



To add a Title to this chart:

- Click the chart to activate the **Design** tab, the **contextual tab** that appears when you have charts selected, and the second button from the left is called **Quick Layout**. As you drag over them, you see how various elements of charts appear. **Chart Title** appears on most of them at the top.

- You might also want the legend to be explained down the left hand side, so you might pick one of the layout styles that provides you with title locations. **Layout #9**, for example, gives you a **chart title placement on top** and on the left side and below the chart you see access titles.
- Choose that one, but let's not type actual titles here. Let's say for chart title it would be ideal to pick up the data that's in cell A1, the name of the company, and for the access title to explain those numbers, what you see in cell A2, **worldwide sales millions of dollars**, that would be ideal so let's not type them.
- Click **Chart Title**, type **=**, Click **cell A1**, and press **Enter**. And for the access title, click that, type **=**, Click **cell A2**, and press **Enter**. You don't have any text for the title below this, maybe you don't need anything at all, you can just press **Delete** if you want, but the main idea here is you can easily bring in titles from existing worksheet data rather than typing in that information and it does accelerate the idea of how you quickly create charts to make them look the way you want.
- One of the many tools available is that **Quick Layout** button, second button from the left on the **Design** tab, the tab that's present when you select a chart.

How to Use Autofilter in Excel

Autofilter is one of the most powerful features of Excel if you need to work with data in tabulated (table) format. It lets you treat a range of cells as a table and then filter out certain rows based on different criteria. It is very powerful if you need to "**mine**" data in a list and find out specific information about the data in that list.

Prepare your data for Autofilter

To use **Autofilter**, first ensure you have a table of data to work with. Follow these simple steps to check that your data table is ready to use with Autofilter:

- Check that your data is organized in **columns**.
- Each column should have a **heading** that explains what sort of data is in the column.

- Your column headings should occupy just one row of the spreadsheet, as shown in this example:

5	Date	Salesperson	Item	Quantity	Unit cost	Sales
6	Mon, 02 Jan 2012	Mike	Washing machine	5	500	2500
7	Mon, 02 Jan 2012	Mike	Dishwasher	5	350	1750
8	Mon, 02 Jan 2012	Mike	Microwave	14	220	3080

- You should avoid using column headings in two rows, as shown in the following example, because they can confuse Excel's Autofilter feature and stop it working as it should. While you *can* still use Autofilter if you have headings in two rows as shown here, it's much easier if you stick to headings in just one row:

5						
6			Sales Information	Sales Information		
7	Date	Salesperson	Item	Quantity	Unit cost	Sales

- Next, make sure there are **no empty columns or rows** in your data. Excel is good at sensing the start and end of a data table by looking for empty rows and columns, and will ignore data after an empty row or column.
- To check if your data is formatted in one **contiguous range** (a fancy way of saying "one block of data", which is used a lot in the Excel world) is to click a single cell in the table then press **CTRL+*** (or **CTRL+SHIFT+8** if you don't have a separate number keypad). This automatically selects the whole table. You'll then see if you have any problems with the layout of your table. This example shows a table that is in a contiguous range:

5	Date	Salesperson	Item	Quantity	Unit cost	Sales
6	Mon, 02 Jan 2012	Mike	Washing machine	5	500	2500
7	Mon, 02 Jan 2012	Mike	Dishwasher	5	350	1750
8	Mon, 02 Jan 2012	Mike	Microwave	14	220	3080
9	Mon, 02 Jan 2012	Mike	Refrigerator	7	650	4550
10	Mon, 02 Jan 2012	Abdul	Washing machine	5	500	2500
11	Mon, 02 Jan 2012	Abdul	Dishwasher	13	350	4550

- This table has an empty row; after pressing **CTRL+*** to select the table, you can see that the rows after the empty column have been ignored:

5	Date	Salesperson	Item	Quantity	Unit cost	Sales
6	Mon, 02 Jan 2012	Mike	Washing machine	5	500	2500
7	Mon, 02 Jan 2012	Mike	Dishwasher	5	350	1750
8						
9	Mon, 02 Jan 2012	Mike	Microwave	14	220	3080
10	Mon, 02 Jan 2012	Mike	Refrigerator	7	650	4550
11	Mon, 02 Jan 2012	Abdul	Washing machine	5	500	2500
12	Mon, 02 Jan 2012	Abdul	Dishwasher	13	350	4550

- Similarly, this table has an empty column, so the columns to the right of the empty column have been ignored:

5	Date	Salesperson	Item	Quantity	Unit cost	Sales
6	Mon, 02 Jan 2012	Mike	Washing machine	5	500	2500
7	Mon, 02 Jan 2012	Mike	Dishwasher	5	350	1750
8	Mon, 02 Jan 2012	Mike	Microwave	14	220	3080
9	Mon, 02 Jan 2012	Mike	Refrigerator	7	650	4550
10	Mon, 02 Jan 2012	Abdul	Washing machine	5	500	2500
11	Mon, 02 Jan 2012	Abdul	Dishwasher	13	350	4550

Note that empty cells within the table are OK. What *isn't* OK is a whole row or a whole column of empty cells.

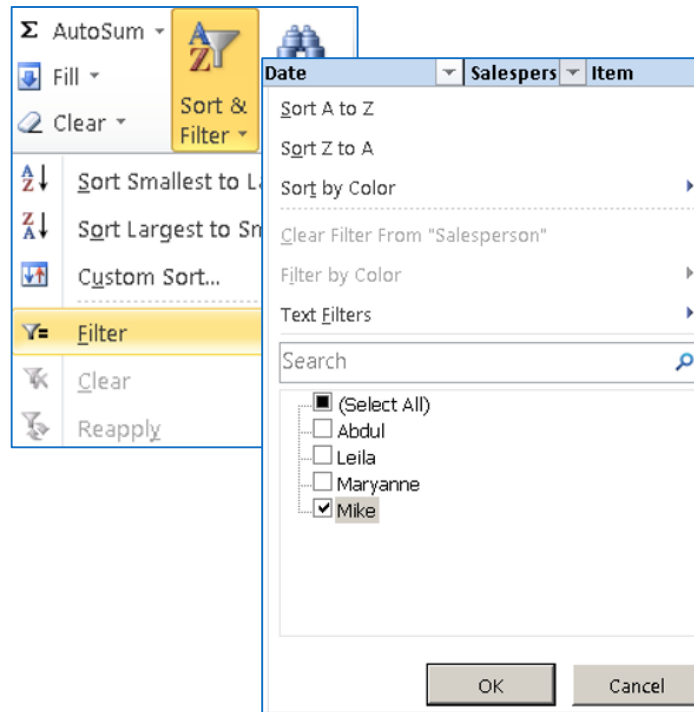
- Finally, check that you have consistent data types in all cells.
 - For example, if you have a date column, make sure all the values in that column are dates (or blank).
 - If you have a quantity column, make sure all the values are numbers (or blank) and not words.
 - This is not a hard and fast rule, but it will make it much easier to use the features of Autofilter if you follow them wherever possible. At this point, if everything is looking OK, you're ready to move on to the next step.

Enable Autofilter

Once your data range that meets the criteria above, you are ready to apply the Autofilter feature:

- Select a cell in the range.

- Any cell will do, but make sure you don't select more than one cell or Excel will apply the Autofilter to the selected cells rather than the whole table.
- You may prefer to select all of the cells in the data range if you want - this is a good idea if you have columns with headings in two or more rows (as discussed above).
- Next, click the **Sort and Autofilter** button on the Home tab of the Excel ribbon toolbar, then click **Filter**.



- The first row in the table (the header row) should change, with a small drop-down arrow on each cell in the header row, similar to the example below:

Using Excel's Autofilter feature to filter your list

You can now filter the table based on the values in the table by clicking the buttons to the right of the column heading. This will show a drop-down list as shown here:

In this example, you've clicked the Autofilter button for the Salesperson. Based on the selection you have made, the list will be filtered to show only rows where **Mike** is the Salesperson. Other options you have here will allow the following:

- **Sorting** by Salesperson. In this case the list could be sorted alphabetically in ascending (A to Z) or descending (Z to A) order.
- If you are using **Color** formatting on the cells in the Salesperson column, you could also choose to sort by Color. This option also hides the very useful (and powerful) **Custom Sort** option which allows you to sort the list by multiple criteria, such as sorting by Salesperson and then by Item.
- You could also select more than one salesperson from the list by checking the box next to the name of each salesperson you want to filter by.
- **Text Filters** allow you to use various advanced text filtering options, rather than choosing specific people from the list. One example would be to filter by all salespeople whose name starts with M.
- The **Search** option is useful when you have a large list of unique records (in this case that would mean lots of different salespeople), so the quickest way to find a specific person is to type their name, rather than scrolling through the whole list. This option was introduced in Excel 2010, and is also available in Excel 2011 for Mac and Excel 2013 for Windows.
- Once you click OK with the selection above, the list will look like this:

5	Date	Salespers	Item	Quant	Unit c	Sale:
6	Mon, 02 Jan 2012	Mike	Washing machine	5	500	2500
7	Mon, 02 Jan 2012	Mike	Dishwasher	5	350	1750
8	Mon, 02 Jan 2012	Mike	Microwave	14	220	3080
9	Mon, 02 Jan 2012	Mike	Refrigerator	7	650	4550
22	Tue, 03 Jan 2012	Mike	Washing machine	4	500	2000
23	Tue, 03 Jan 2012	Mike	Dishwasher	13	350	4550
24	Tue, 03 Jan 2012	Mike	Microwave	14	220	3080
25	Tue, 03 Jan 2012	Mike	Refrigerator	9	650	5850
38	Wed, 04 Jan 2012	Mike	Washing machine	4	500	2000
39	Wed, 04 Jan 2012	Mike	Dishwasher	4	350	1400

It is important to note two things about this list now that it has been filtered:

1. There is a different filter icon at the top of the Salesperson column, indicating that this list has a filter applied on the Salesperson column.
2. The row numbers are now shown in blue, indicating that the list has been filtered. Note how the row numbers now skip row numbers for rows that don't match the filter.

Using Autofilter to filter by more than one criteria

The above example used just one criterion “**Salesperson**” to filter the list. However, you can filter by multiple criteria if you want. For example:

- Show only rows that include sales by Mike, where he sold Washing Machines (filter by Salesperson=Mike and Item=Washing Machine)
- Show only rows that include sales by Mike where he sold more than 10 units (filter by Salesperson=Mike and Quantity>10)
- Show only rows that include sales of Refrigerators that were made on the 2nd, 3rd or 4th of January.

Once you start working with Autofilter, you will find it an excellent and powerful tool for filtering and mining data from your spreadsheets. The next lesson will cover more advanced filtering options, and will also show you how to perform calculations that change according to criteria you have used to filter the list.

Ten Double-Click Tricks

1. Skip the OK button: Unless you're clicking a checkbox, double-click on your choice within any dialog box in Excel to select that option and click OK simultaneously. For instance, press Ctrl-1 to display the Format Cells dialog box. Double-click on any format within the Number tab to apply the formatting and close the dialog box in one step.

2. Maximize file windows: Double-click on the title bar of Excel's Open or Save As windows to see more files and folders. Double-click the title bar again to restore the default window size. You can double-click on Excel's title bar or a worksheet window as well.

3. Split a worksheet: Double-click either of the split handles in Figure 1 to view two sections of the same worksheet at the same time. Double-click on a split to remove it.

4. Fill handle: Just about everyone knows that you can grab the little black notch in the right-hand corner of a cell and drag down to fill a range of cells. Double-click this Fill Handle instead to copy data or formulas down until a blank cell is encountered in the adjacent column. In Excel 2010 and later, this feature copies down to the bottom of the contiguous block of cells, meaning it can skip past blanks in the immediately adjacent column.

5. Lock the Format Painter: Most users click once on the Format Painter to transfer formatting from one cell or drawing an object to another. To apply the same formatting to a number of non-contiguous cells, double-click the Format Painter and then format as many cells as you wish. Press Escape once you finish with the Format Painter.

6. Rename a worksheet tab: Although you can right-click on a worksheet tab and choose Rename, double-click the tab to immediately edit the name.

7. Adjust column widths: Double-click the right edge of any column on the worksheet frame to automatically resize that column to fit the width of the longest cell entry. Or, select two or more columns and double-click the right edge of a column to resize multiple columns at once.

8. Collapse the ribbon: Double-click any ribbon tab in Excel 2007 and later versions to collapse or expand the ribbon interface, thereby giving you more (or fewer) rows onscreen.

9. Edit a cell: Double-click any worksheet cell to edit its contents in place rather than moving your mouse to the formula bar.

10. Pivot Table Drill-Down: Double-click on any numeric value within a pivot table to create a new worksheet that reveals the underlying records that comprise that amount.

Recommended Online Resources

- Online **Video Training Library** <http://library.ttu.edu/lynda> and www.CBT.ttu.edu
- **Safari Books Online** <http://library.ttu.edu/arch/collections/ebooks.php>
 - **101 Excel 2013 Tips, Tricks and Timesavers** By: John Walkenbach, July 1, 2013

Please e-mail your questions, comments, or suggestions to heide.mansouri@ttu.edu.