



**ICDL**  
International Computer  
Driving Licence

# Spreadsheets





Getting Started

Cells

Workbooks &  
Worksheets

Formatting

Formulas &  
Functions

Chart

Printing



## Getting Started

- Start a spreadsheet program
- Recognize the spreadsheet screen layout
- Use the ribbon ,quick access toolbar and use help
- Change preferences
- Close a spreadsheet program



## Getting Started

### Starting Excel

Click the title once. The Windows Desktop is displayed and Excel starts.

Excel 2016





## Getting Started

### The Excel Screen

Quick Access Toolbar

File Tab

Ribbon

Title Bar

Editing Cell

Status Bar

Zoom Control

Company	Q1 Sales	Q2 Sales
A. Datum Corporation	195449	746907
Adventure Works	123721	733396
Blue Yonder Airlines	934763	246554
City Power & Light	299293	674295
Coho Vineyard	228783	659385
Contoso, Ltd	239219	287989
Contoso Pharmaceuticals	371570	644368
Consolidated Messenger	579825	448399
Fabrikam, Inc.	639630	635474
Fourth Coffee	876740	567216
Graphic Design Institute	788390	540282
Humongous Insurance	682545	577599
Litware, Inc.	902264	206331
Lucerne Publishing	905906	443552
Margie's Travel	289570	843834



## Getting Started

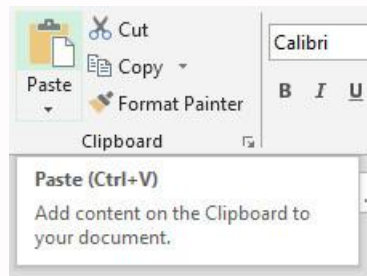
### The Ribbon

Ribbon Display Option



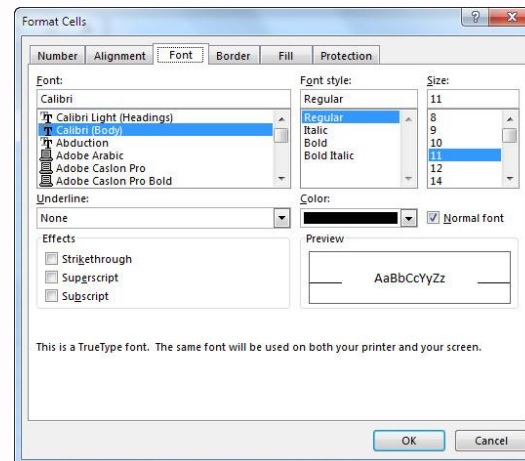
Part of the **Ribbon** displaying the **HOME** tab

Dialog box launcher



Hot-key

Collapse The Ribbon



Dialog box launcher

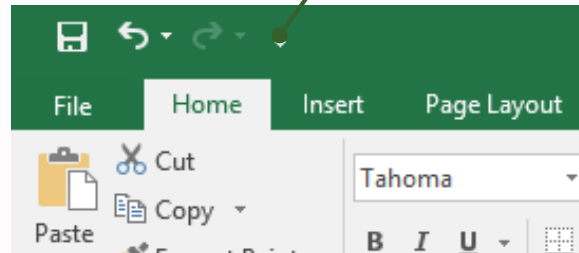




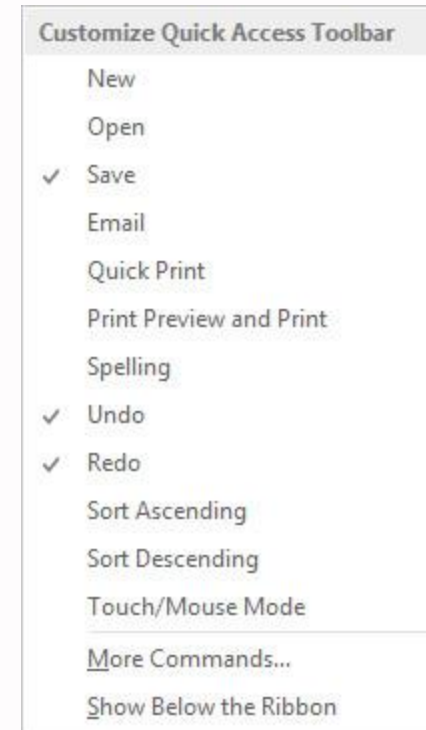
## Getting Started

### Quick Access Toolbar

Customize Quick Access Toolbar



Quick Access Toolbar

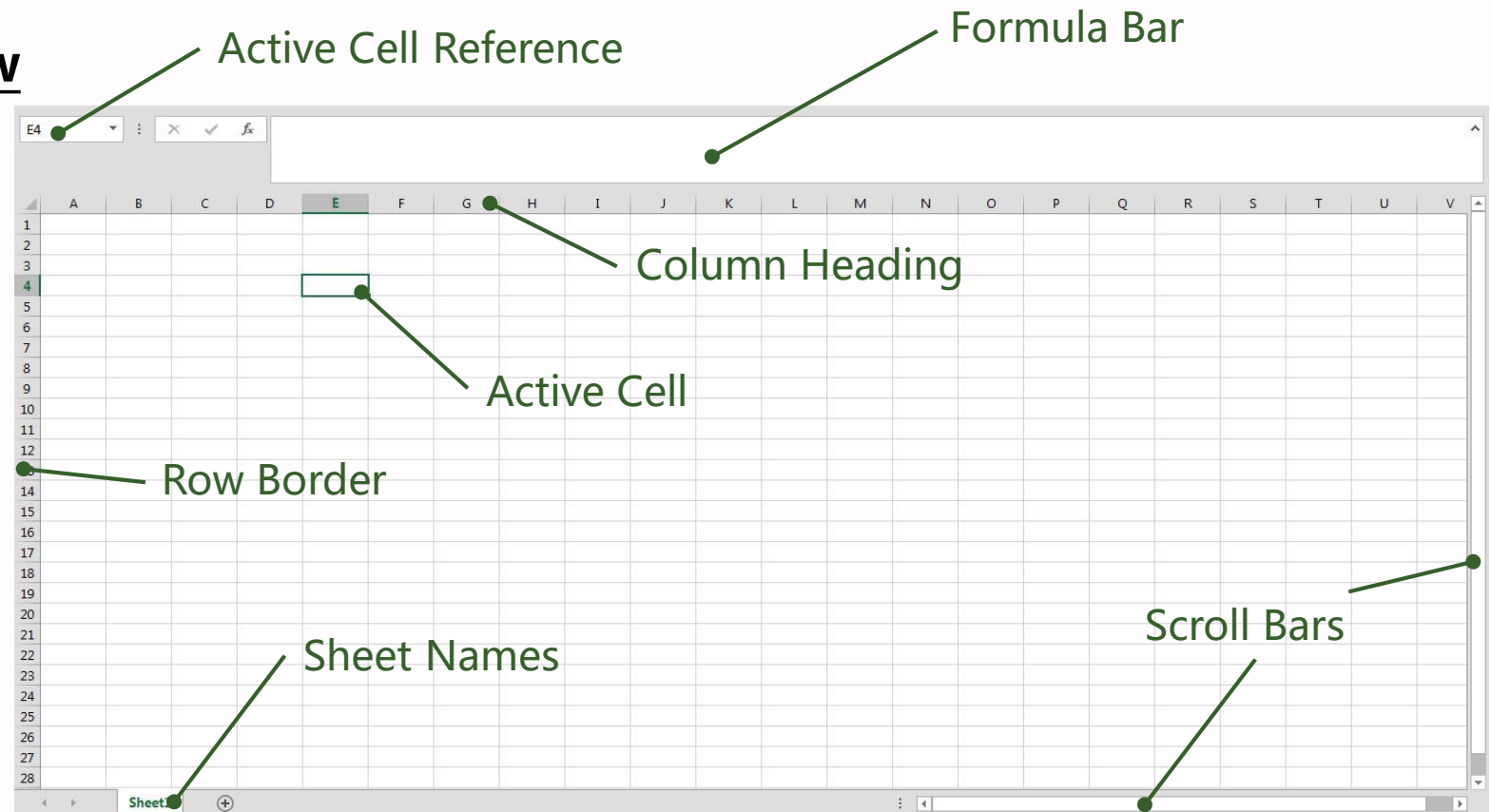


Customize Quick Access Toolbar



## Getting Started

### The Worksheet Window

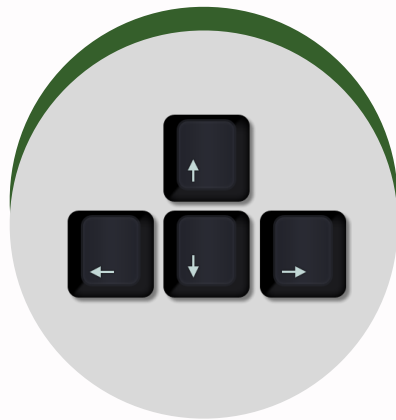






## Getting Started

### Moving Around



The Cursor Key



The <End> Key



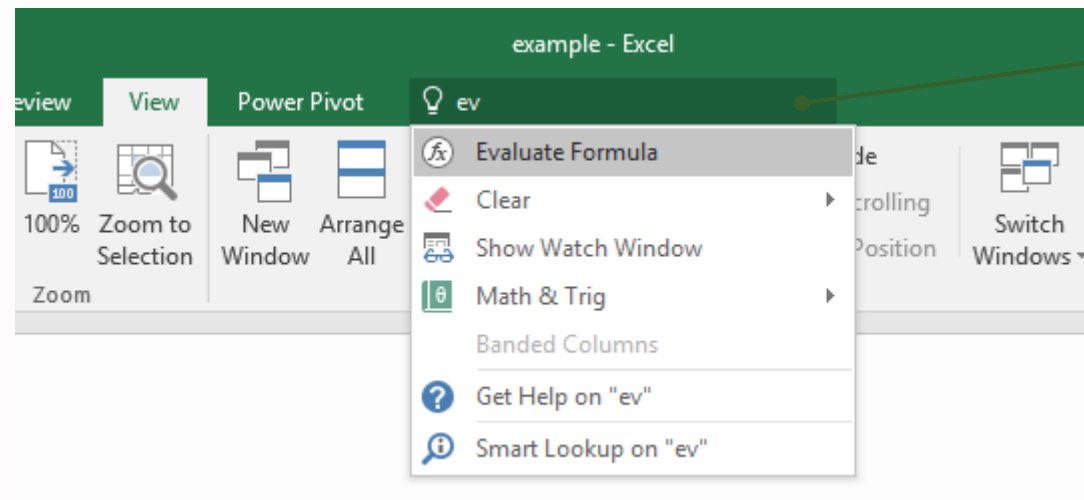
The <Home> key



## Getting Started

### Help Function (Tell me)

Excel has a comprehensive **Help** facility. This means that full advantage can be taken of the features incorporated in the program. Using Help can usually solve the majority of problems encountered.



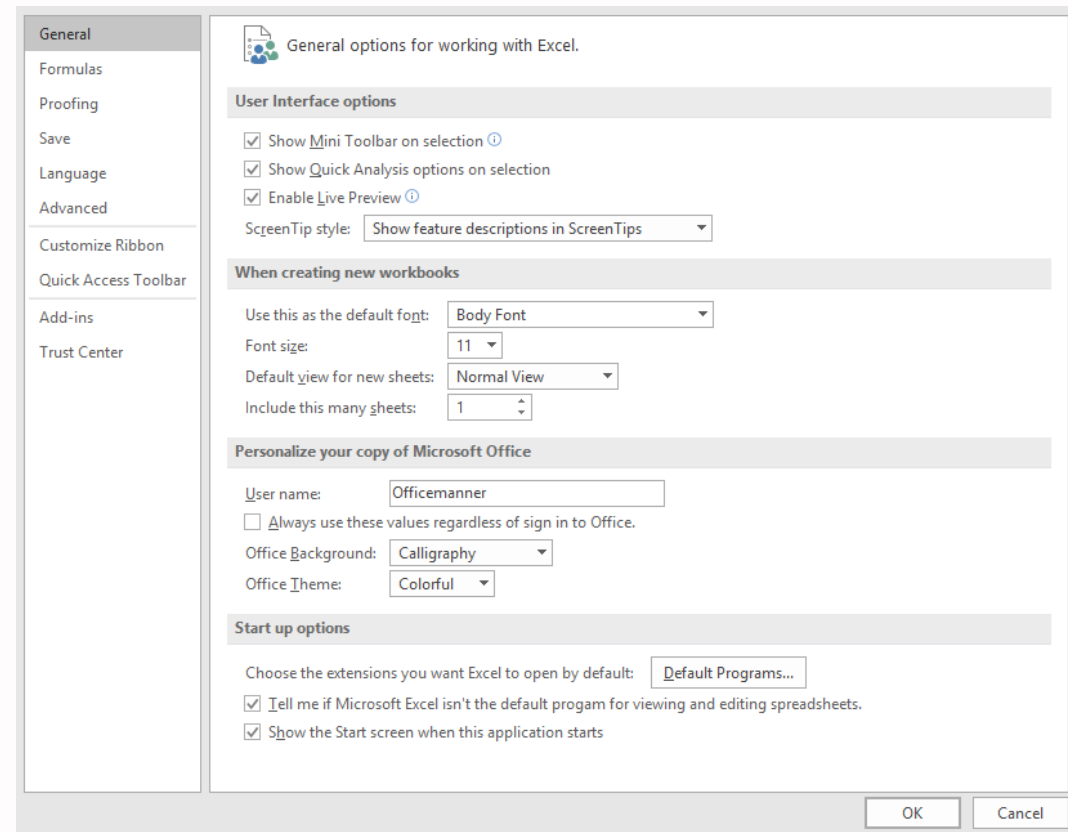
Tellme



## Getting Started

### Preferences

Basic Excel Options (preferences) can be changed, the user name, which is added to certain templates. By default workbook are opened from. And save to the Documents library. These Locations can also be changed.



[File] -> Option



## Getting Started

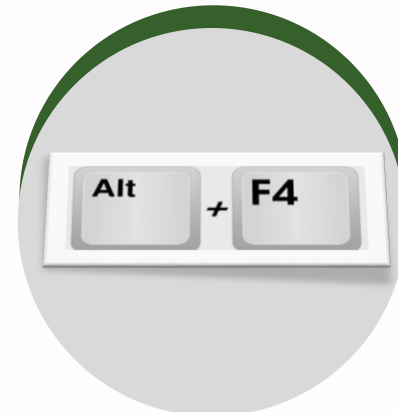
### Closing Excel



Close Button



Excel Button

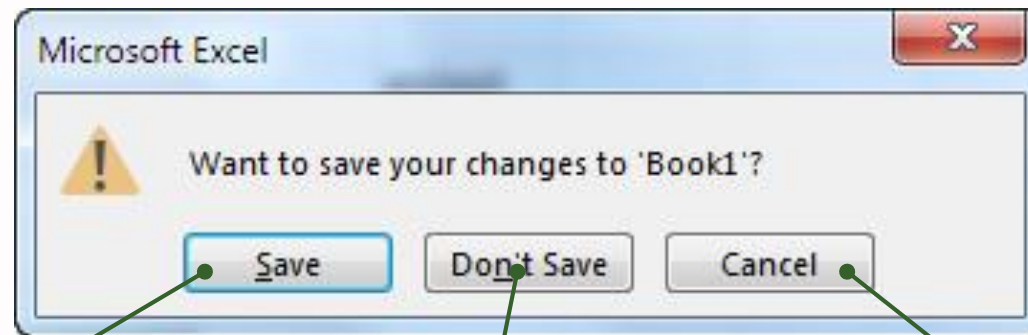


Alt + F4



## Getting Started

### Alert Popup



Save Excel Workbook  
and Excel is Close

The Workbook is  
Closed without saving  
and Excel is close

Cancel Excel is closed



## Cells

- Edit Data in the Formula Bar and Cell
- Delete Cell Contents
- Use Undo and Redo
- Select Ranges of Data
- Cut, Copy and Paste
- Find and Replace Text

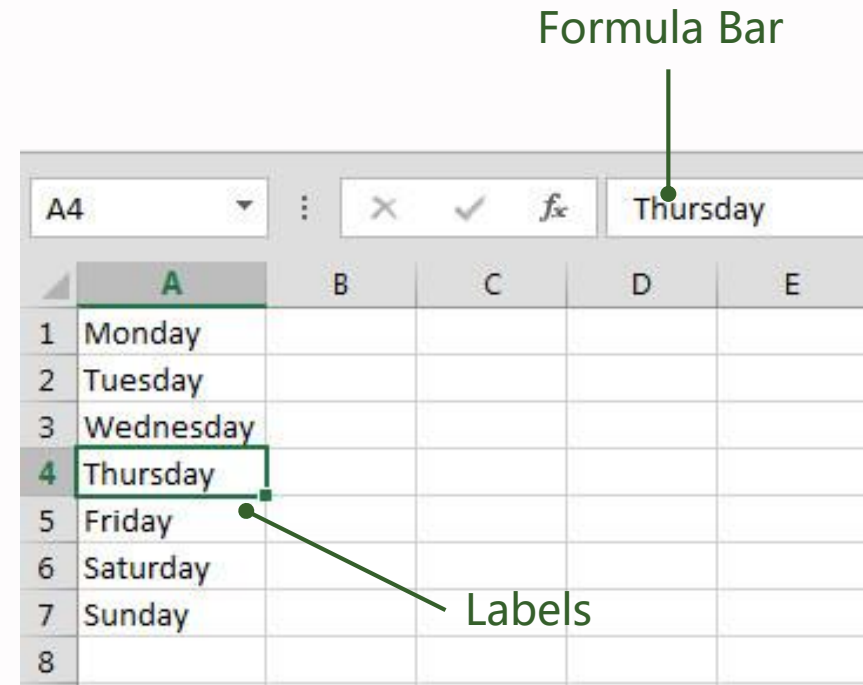




## Cells

### Entering Labels

Labels are normally used for describing the contents of the worksheet, as columns or titles when entering information into a cell, notice that the text appears in the formula bar as well as in the cell





## Cells

### Entering Number

Number must begin with one of the following character: 0 1 2 3 4 5 6 7 8 9 . + - or a currency symbol

Number

	A	B	C
1	Monday	1	
2	Tuesday	2	
3	Wednesday	3	
4	Thursday	4	
5	Friday	5	
6	Saturday	6	
7	Sunday	7	

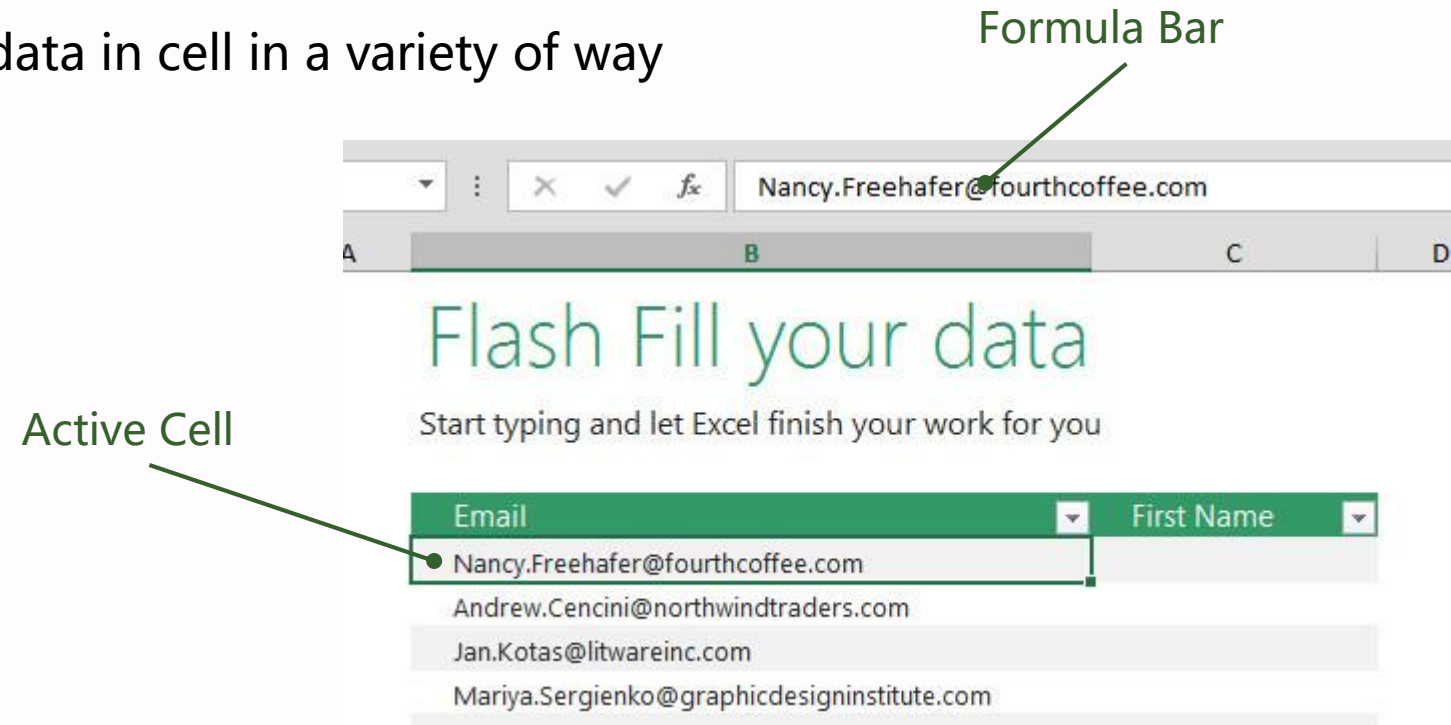
🌿 By default all numeric values are right aligned (placed to the right edge of the column) and the labels(text) are left aligned



## Cells

### Editing Cell

Changes can be made to data in cell in a variety of way



Editing Cell

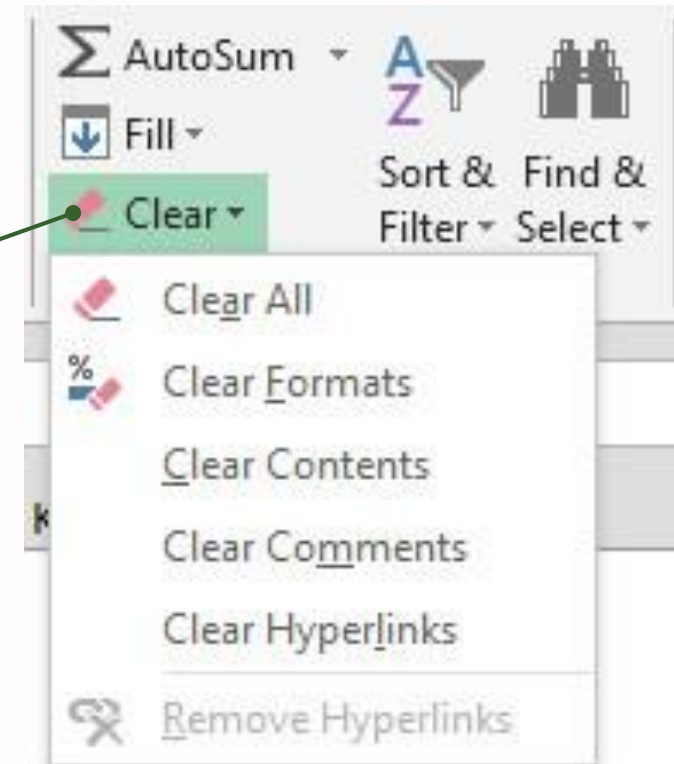


## Cells

### Deleting Cell Contents

Cell contents are erased using the Clear Contents command or by using <Delete> on the keyboard

Deleting Cell Contents



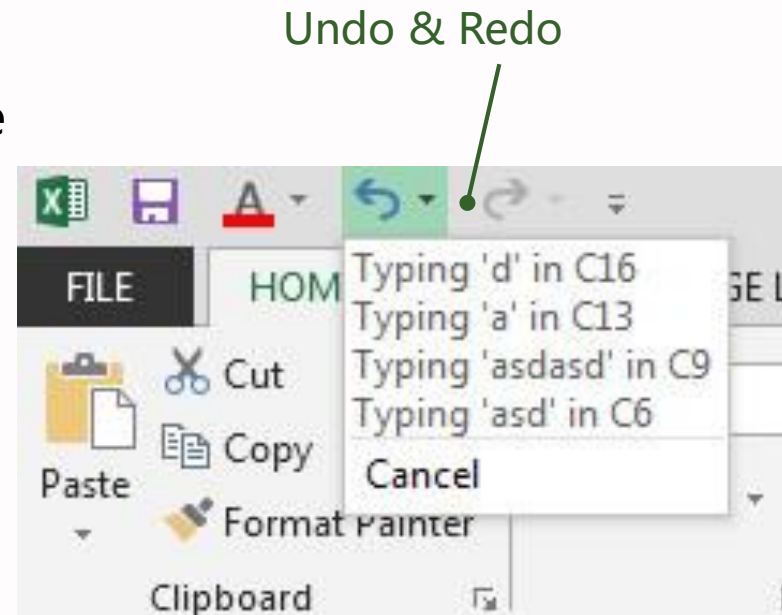
[Home] -> [Editing] -> Clear



## Cells

### Using Undo and Redo

As it is so easy to remove the contents of a cell, Excel has Undo to reverse any mistakes that may have been made



Undo & Redo

 The <Ctrl+z> key to Undo , The <Ctrl+y> key to Redo



## Cells

### Using the Fill Handle

The Fill Handle quickly copies or increments data to a range of cells, If the data is in the form of days, dates time, months or text with a number then the Fill Handle will increment as it fills

	Monday	1		
	Tuesday	2		
	Wednesday	3		
	Thursday			
	Friday			
	Saturday	6		

Fill Handle

Fill Handle

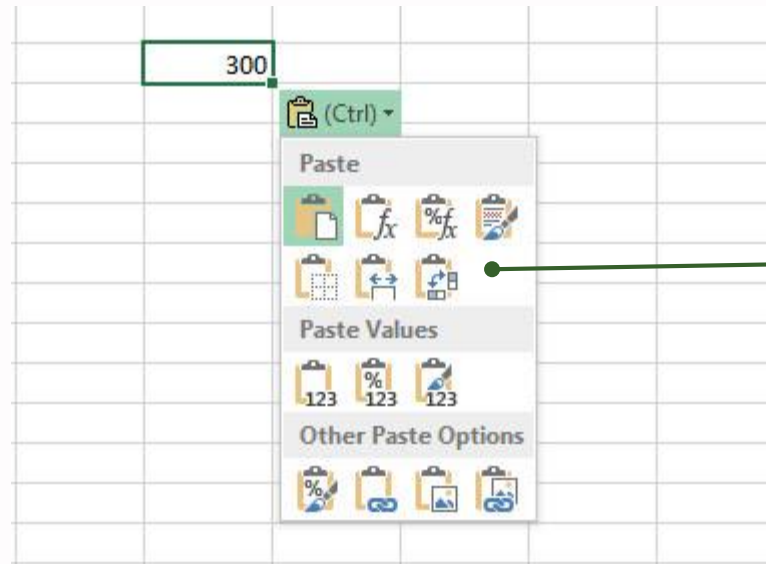




## Cells

### Copying Cells & Paste

Rather than repeatedly typing the same data into several cells, The copy command can be used to copy labels, values and formulas



Paste Options

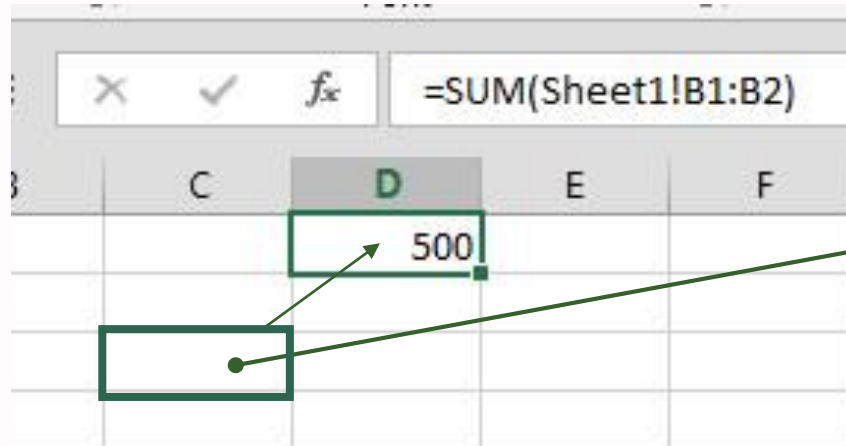
Copying Cells and Paste



## Cells

### Moving Cells

The Cut and Paste commands allow the user to move the content of a cell or a range of cells to other parts of the worksheet



Moving Cell

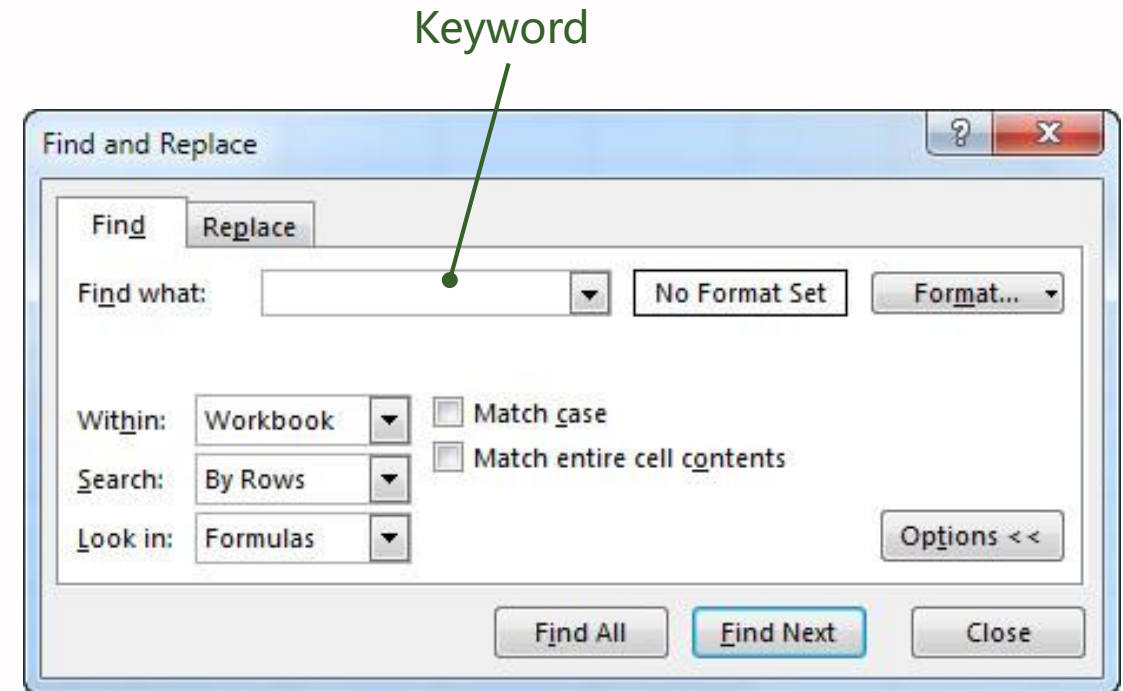
Moving Cells



## Cells

### Finding Specific Text

Specific text can be found in formulas, labels, comment, etc. and even replaced if necessary. The search start at the active cell



[Home] -> [Editing] -> Find & Select

 The <Ctrl+f> key to Find and Replace dialog



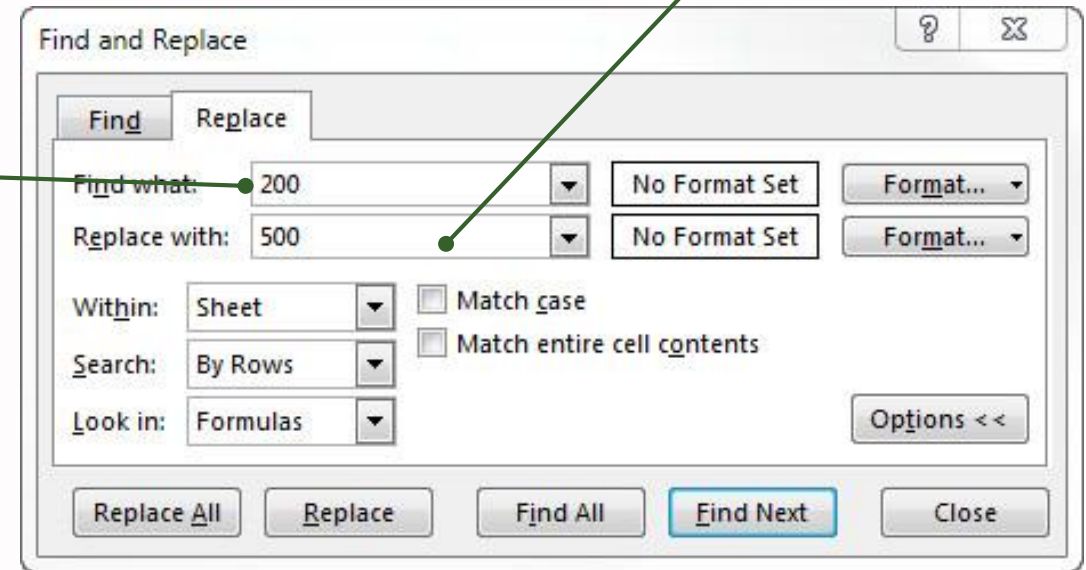
## Cells

### Replacing Text

in a similar manner to finding, it can be found then replaced

Keyword

Replacing Word



[Home] -> [Editing] -> Find & Select

 The <Ctrl+h> key to Find and Replace dialog

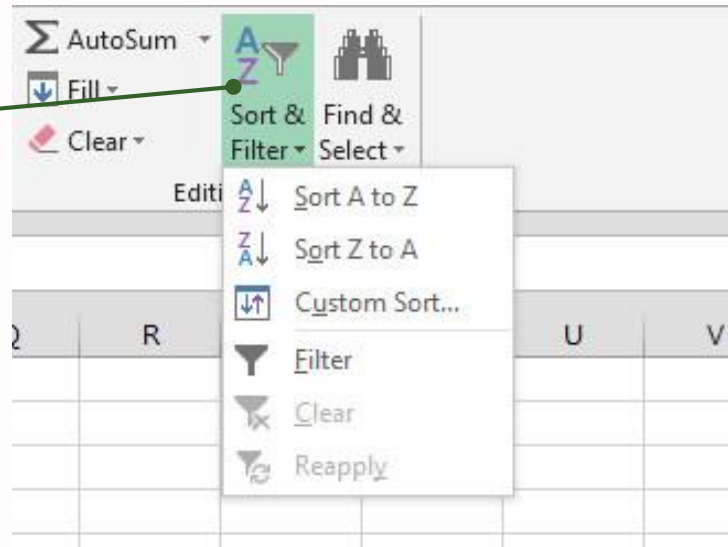


## Cells

### Sorting

in a list, the rows can be arranged in a specific order using the column heading, C , D, etc., or column titles

Sort & Filter



[Home] -> [Editing] -> Sort & Filter



## Workbooks & Worksheet

- Open & Close Workbook and Worksheet
- Start a New Workbook and Worksheet
- Open Multiple Workbooks
- Save a New and Named Worksheet
- Save Workbooks in Difference Formats

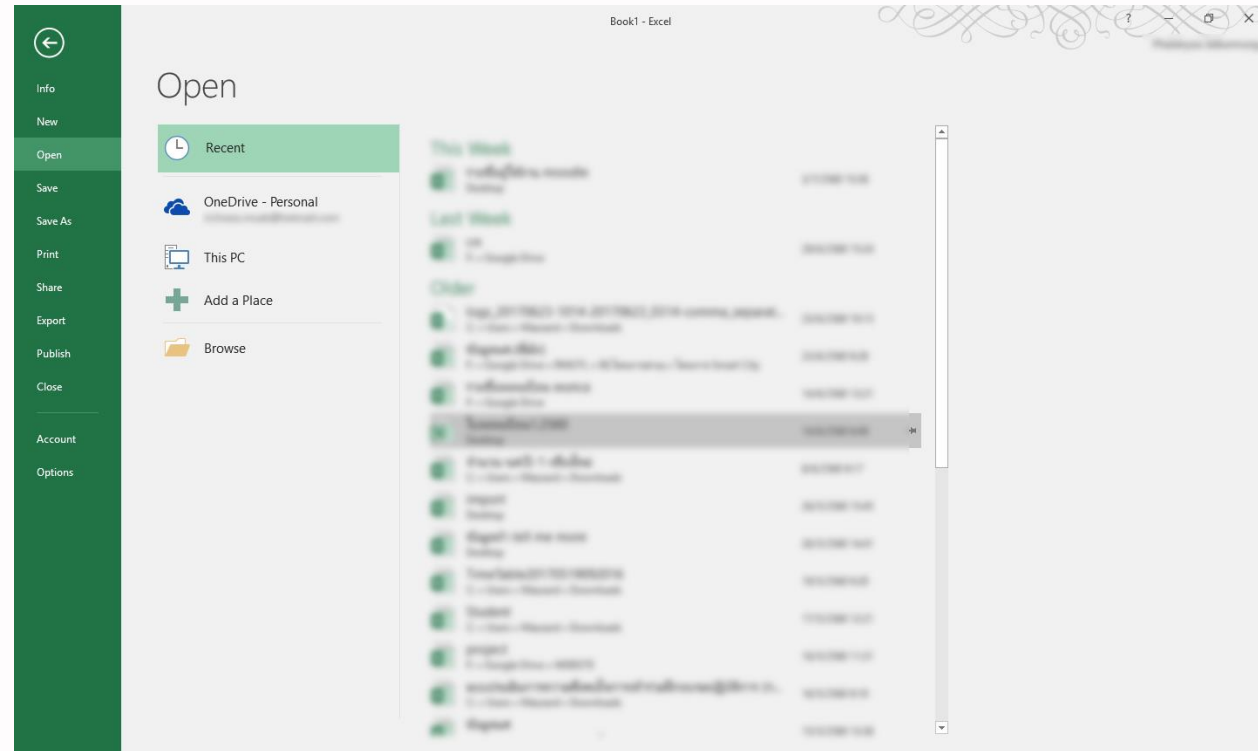




## Workbooks & Worksheet

### Opening a Workbook

Workbooks saved  
to disk be opened to use again



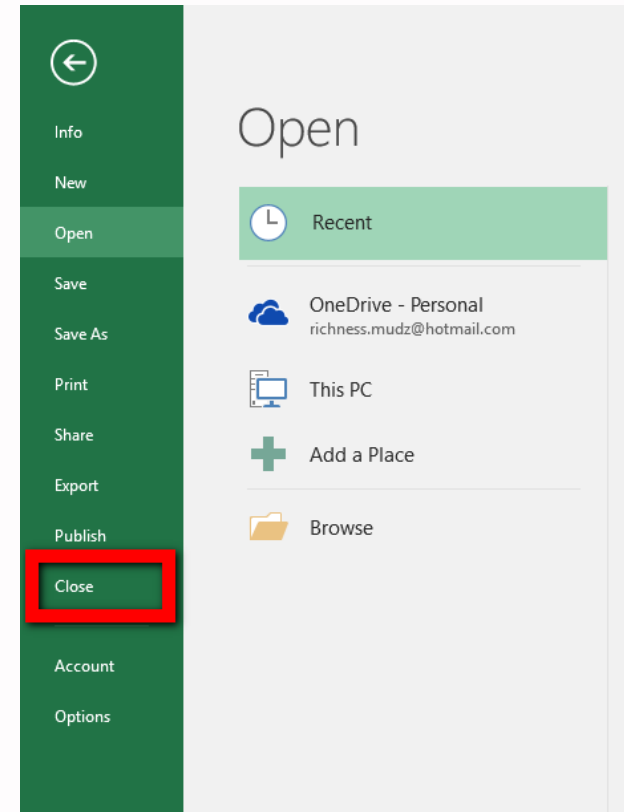
[File] -> Open



## Workbooks & Worksheet

### Closing a Workbook

If a workbook is to no longer to be used at this time, it needs to be closed



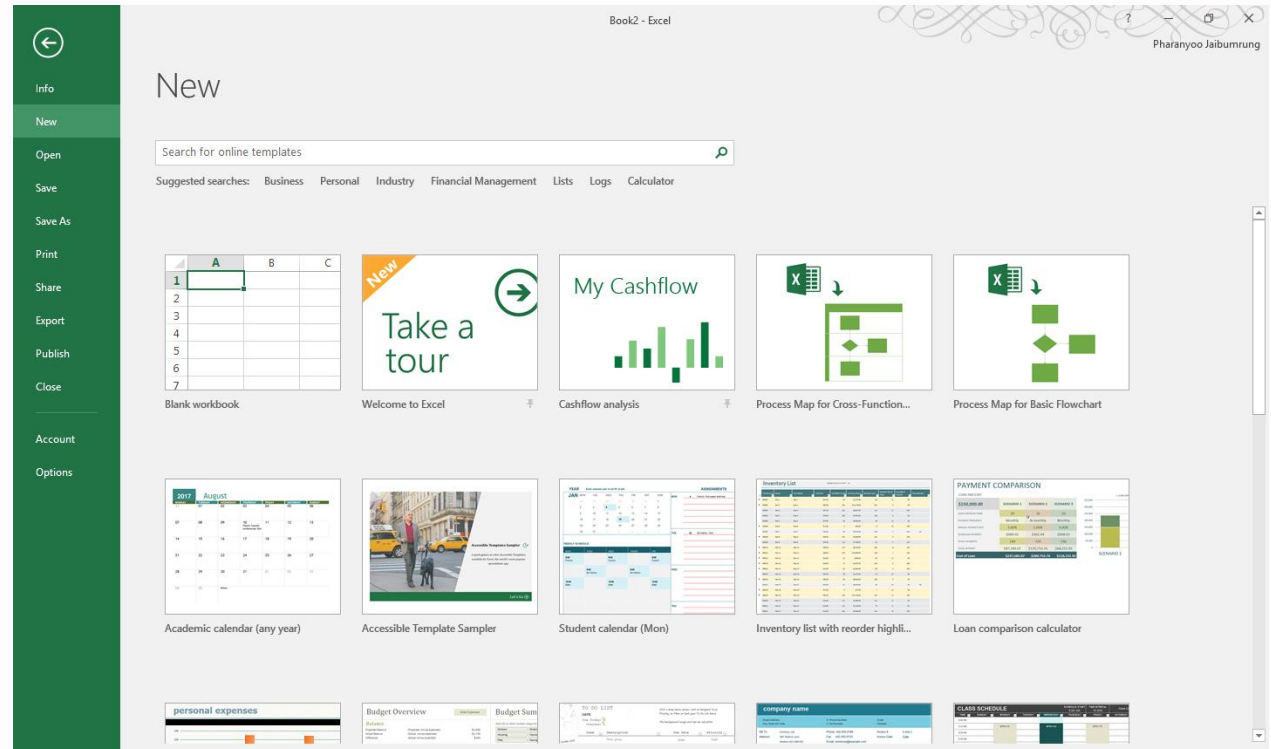
[File] -> Close



## Workbooks & Worksheet

### Starting a New Workbooks

A blank workbook based on the default template must be started to begin creating a new spreadsheet.



[File] -> New



## Workbooks & Worksheet

### Open Multiple Workbooks

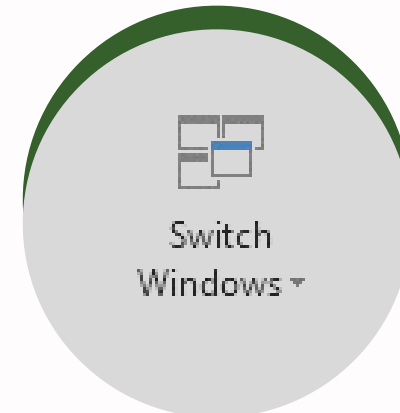
More than one workbook can be open at the same time



Excel Icon in The  
Taskbar



Alt + Tab



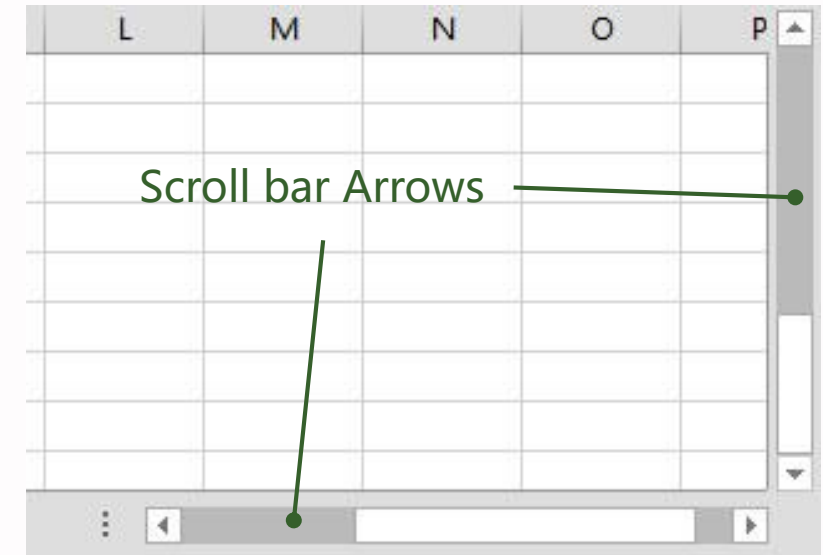
Switch Windows on  
View Tab



## Workbooks & Worksheet

### Using Scroll Bars

Small movements between adjacent cells are usually achieved using the cursor keys. However, when moving to a different area of the worksheet, the mouse and scroll bars are used.

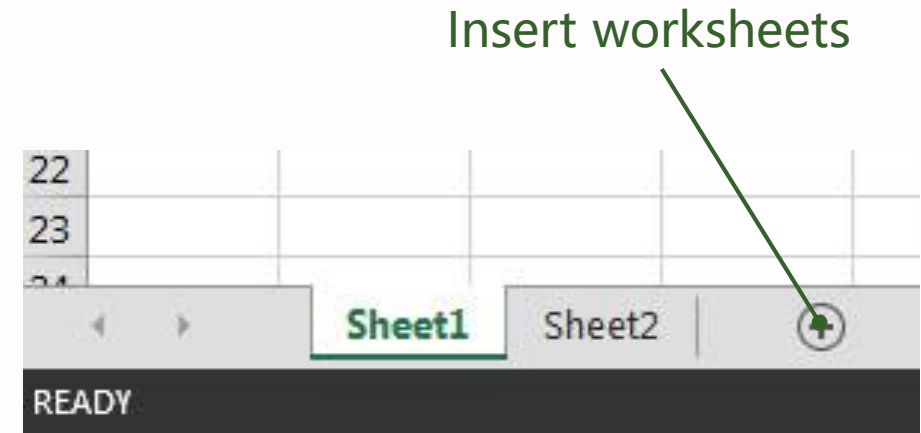




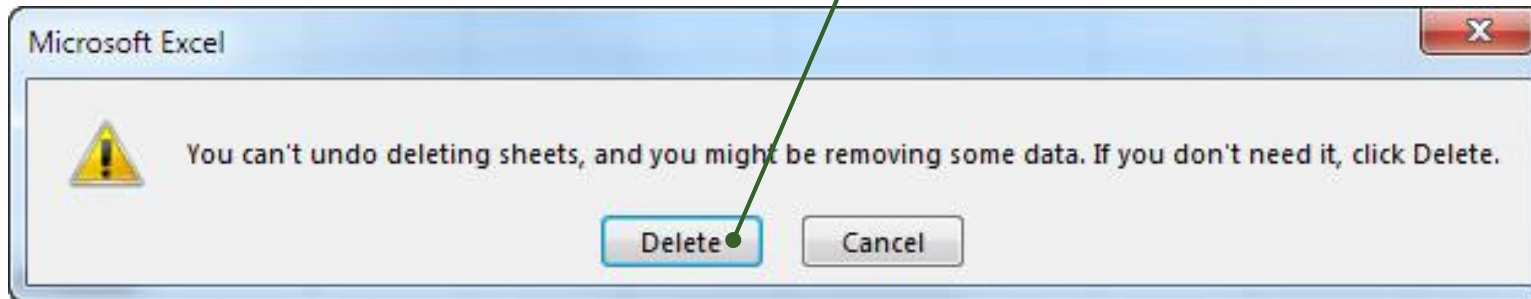
## Workbooks & Worksheet

### Inserting and Deleting Sheets

Once a workbook is open, sheet can be inserted or deleted to suit. The maximum number of sheets in a worksheet is limited only by available memory



Insert worksheet



Delete worksheet



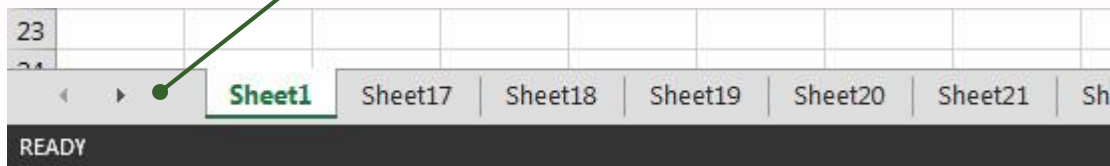


## Workbooks & Worksheet

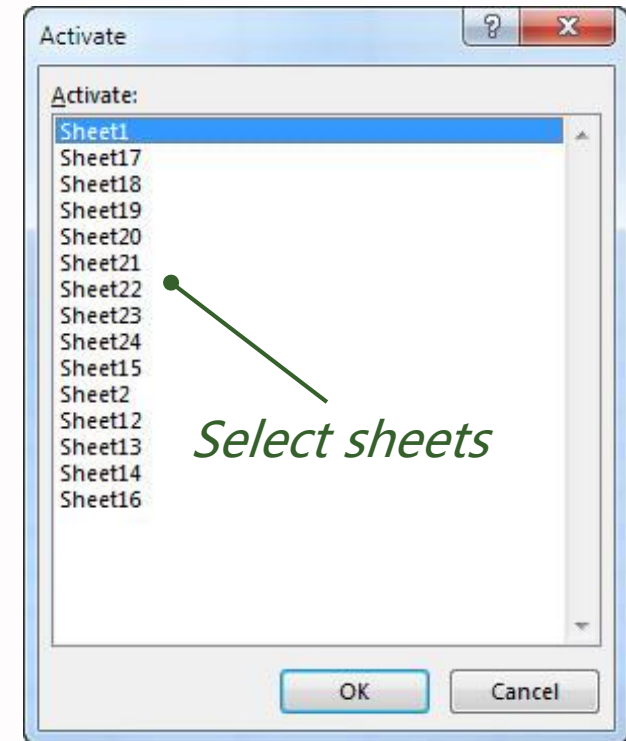
### Multiple Worksheets

A workbook can contain an unlimited number of worksheets, limited only by the available memory

Right Click to See all Sheets



Sheets Tab



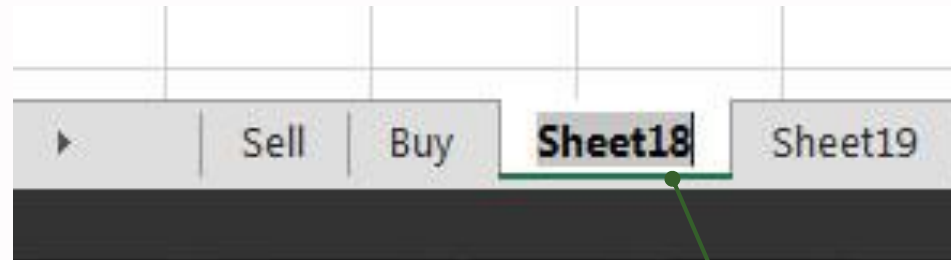
See all Sheets



## Workbooks & Worksheet

### Renaming Sheets

The names Sheet1 , Sheet2, etc., are not very helpful for finding information, It makes much more sense to use meaningful names, which give a good idea of the content of the worksheets



Sheets Tab

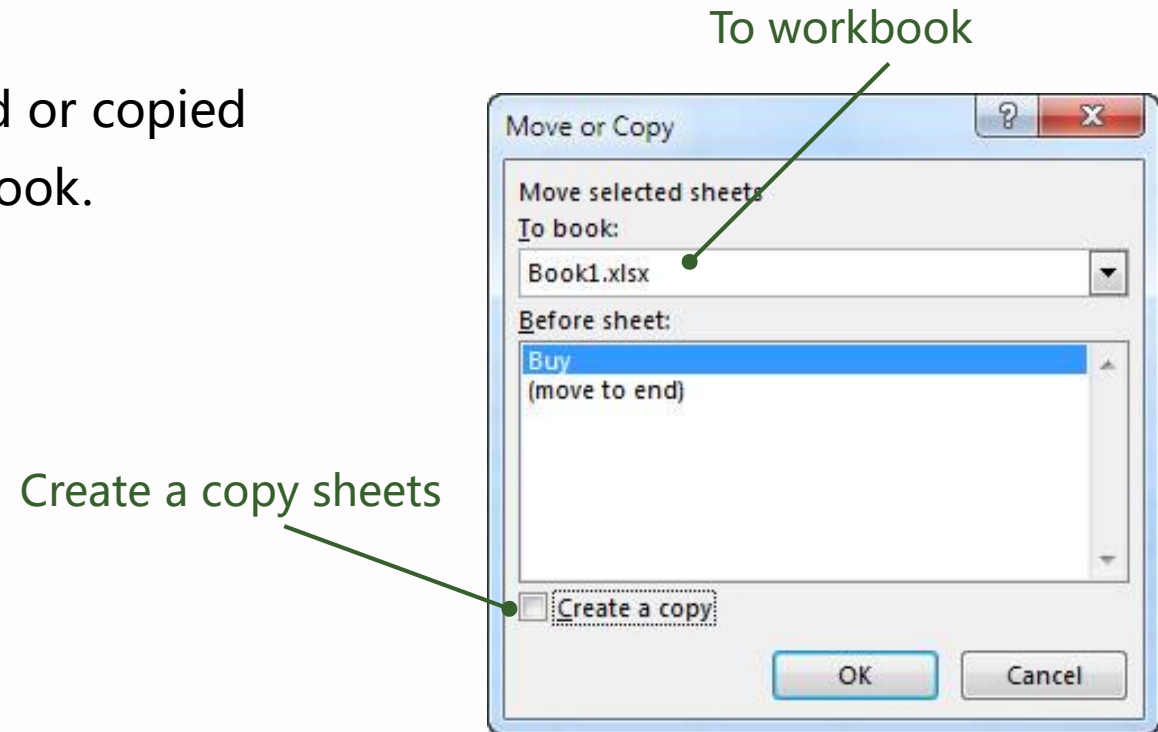
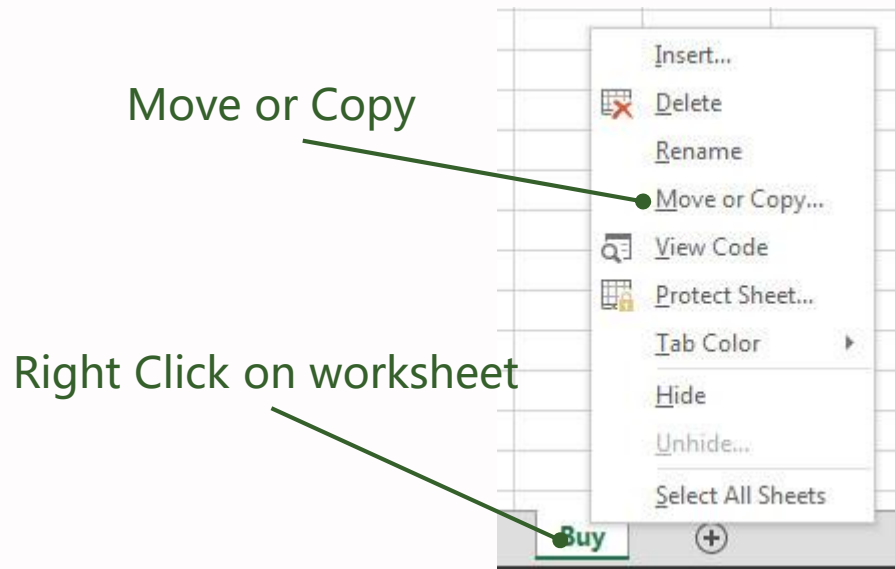
Rename Sheets



## Workbooks & Worksheet

### Copying and Moving Sheet

Sheets within a workbook can be moved or copied within the same, or to a different workbook.



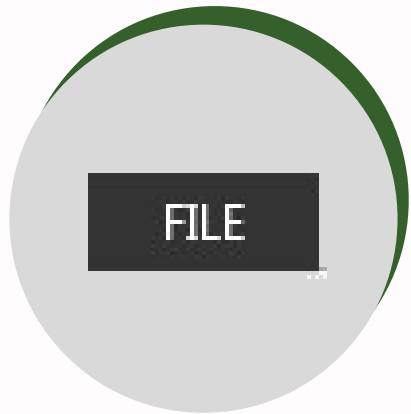
[Home] -> [Cells] -> Format -> Move or Copy Sheet



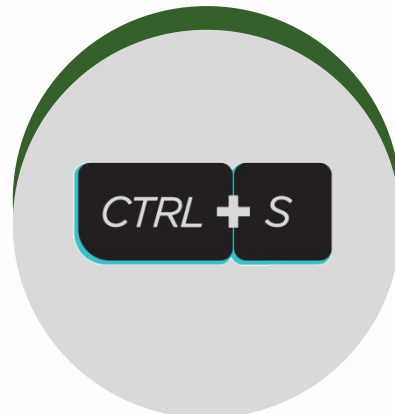
## Workbooks & Worksheet

### Saving a New Workbooks

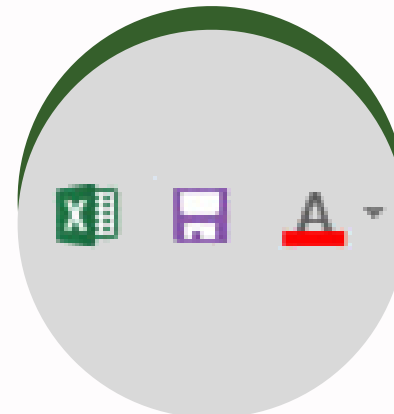
After creating a worksheet, it needs to be saved as a workbook so it can be used again



File Tab -> Save or Save as



Ctrl + S



Quick Access Toolbar

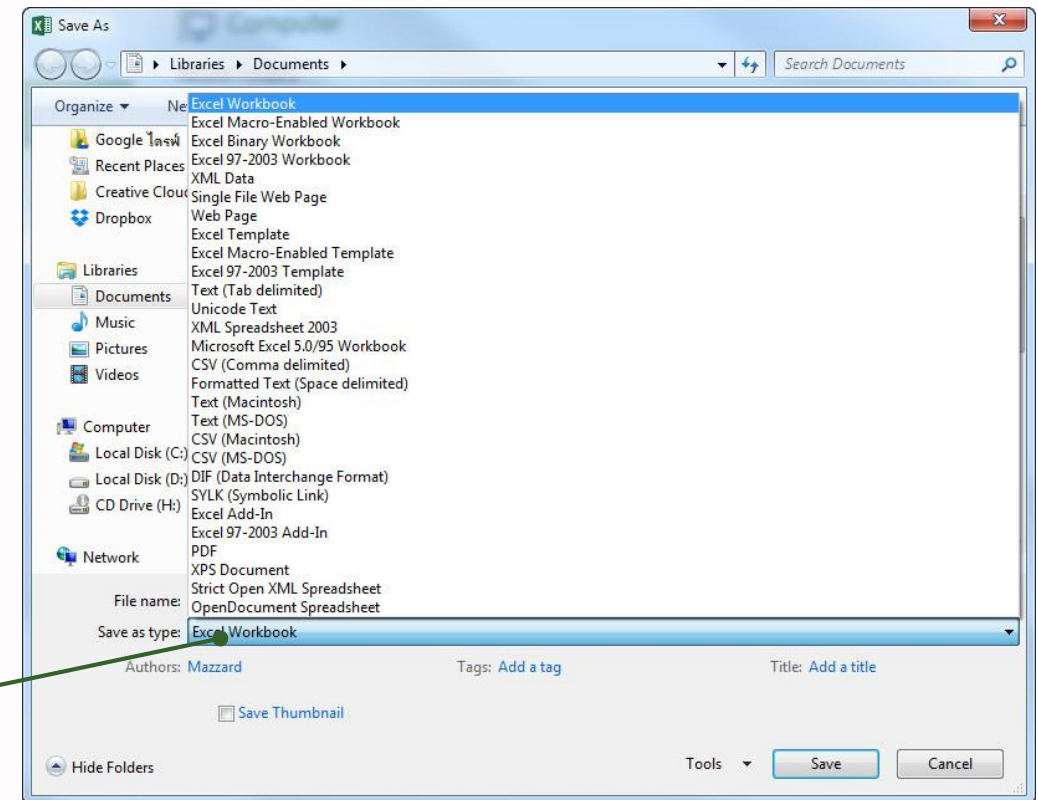


## Workbooks & Worksheet

### Saving in Different Formats

workbooks can be saved in a variety of formats: Text, template older versions of Excel and associated products

Formats



[File] -> Save or Save as -> Save as type



## Formatting

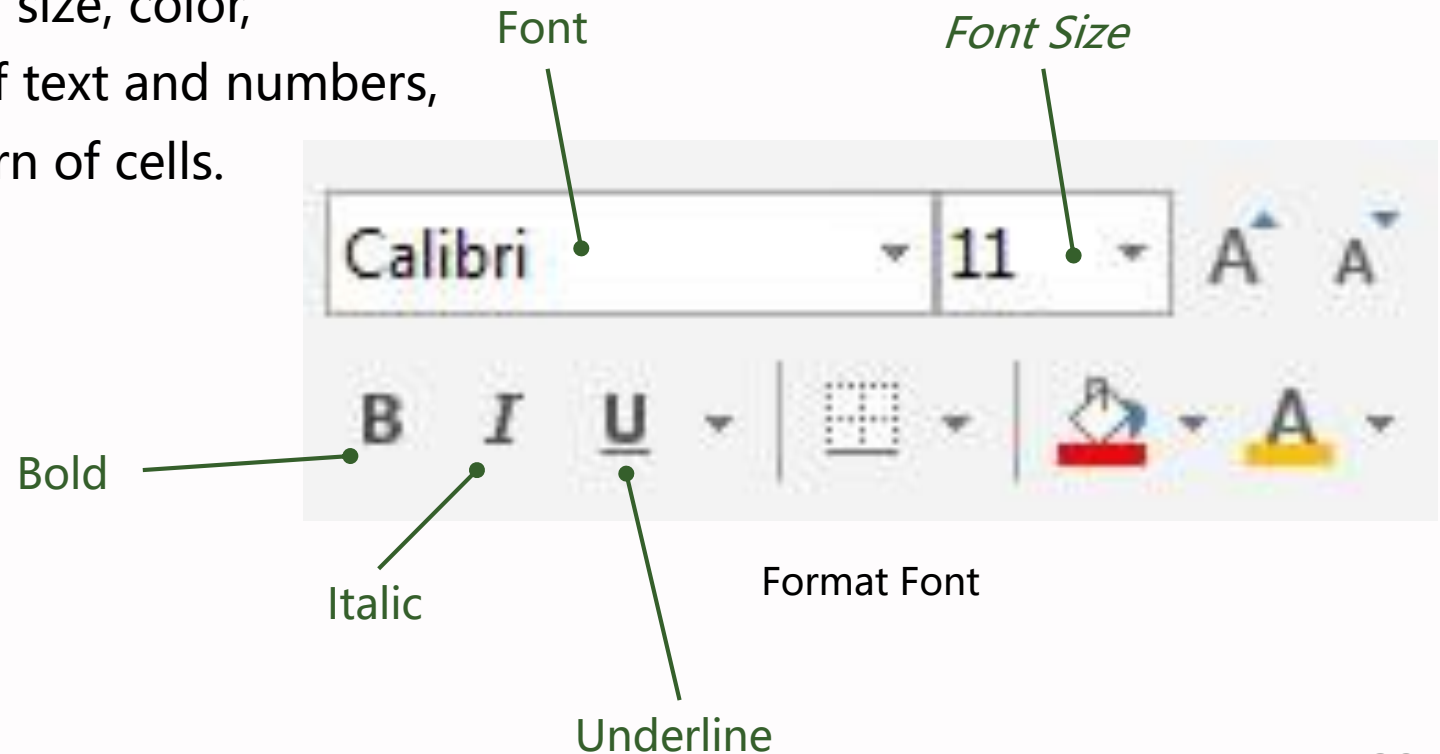
- Format Number, Dates & Percentages
- Change Cell Alignment and Rotate Text
- Add Borders and Color
- Change Row Height and Column Width
- Insert and Delete Rows and Columns
- Freezing Panes, Zoom



## Formatting

### Formatting

Formatting can change the style, size, color, alignment and number format of text and numbers, the border style, color and pattern of cells.





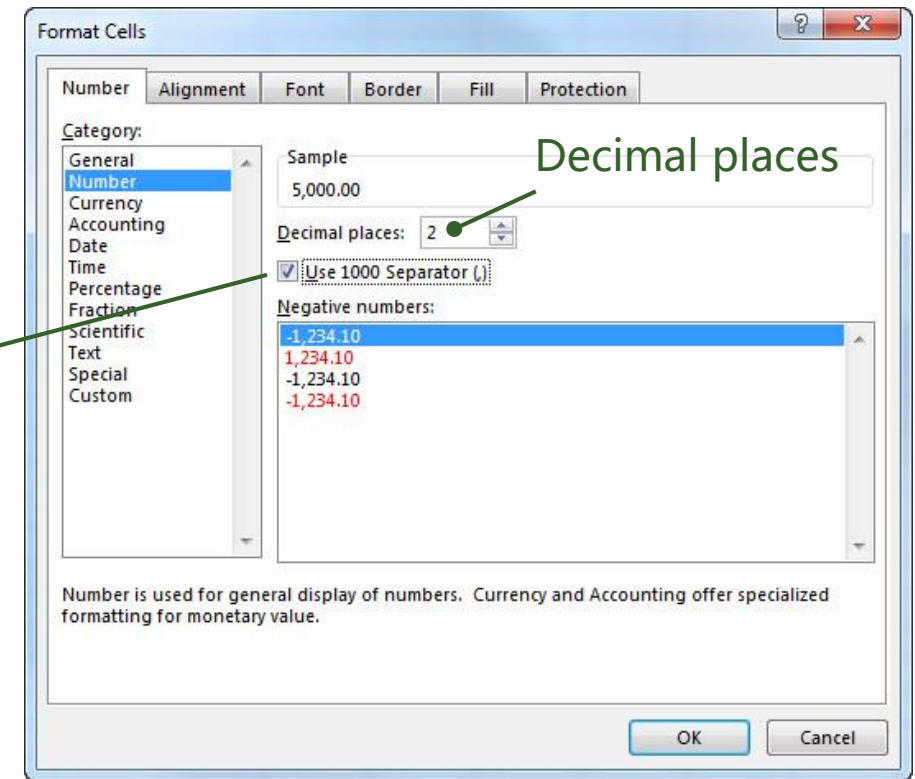


## Formatting

### Number

Number can be displayed in various style,  
with decimal places, include % sign,  
with or without a separator to indicate thousands, etc.

Use 1000 separator (,)



[Home] -> [Number] -> Dialog box launcher



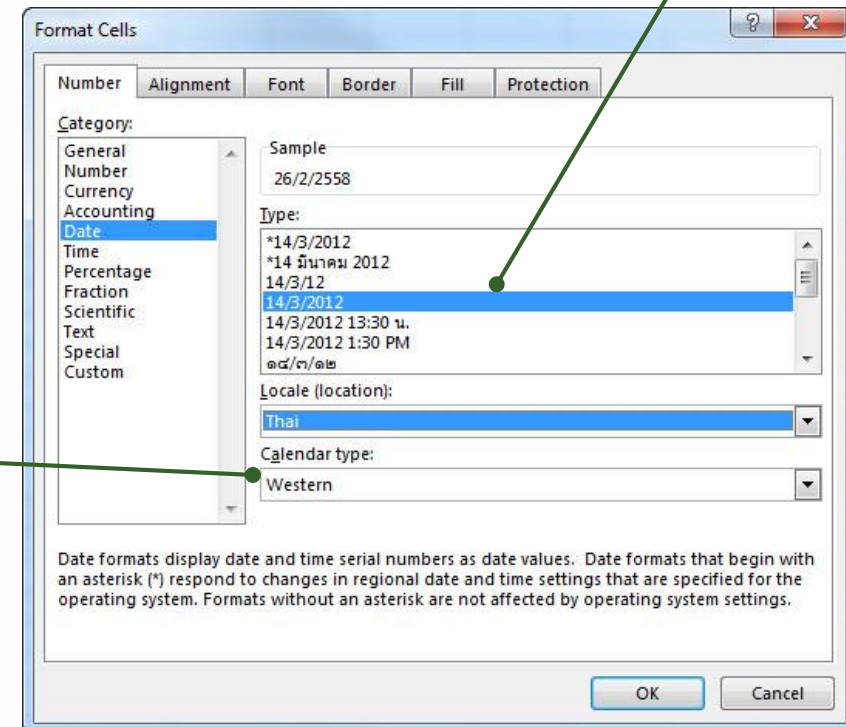
## Formatting

### Dates

Date and time are stored as number.  
Both the day and Time can be displayed in various  
formats including numbers and text

Regional Setting

Type format dates



[Home] -> [Number] -> Dialog box launcher

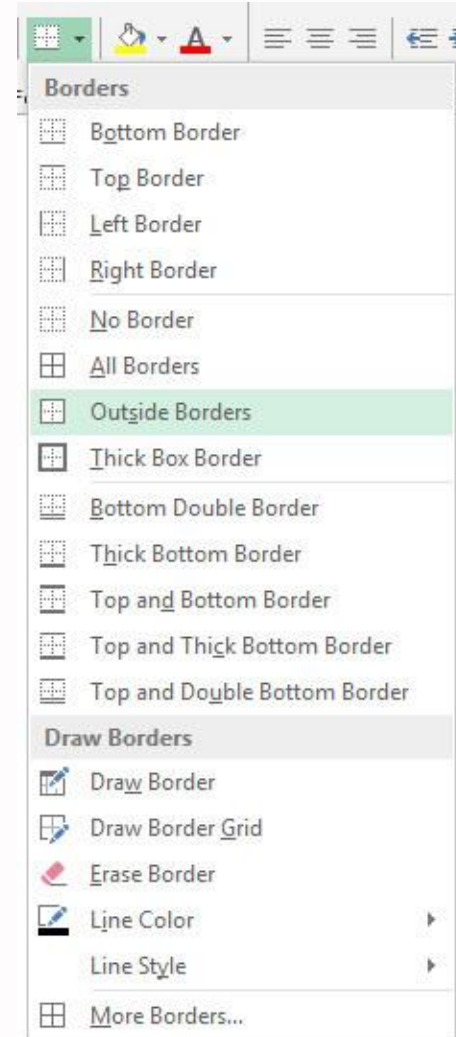


## Formatting

### Adding Borders

Border are lines around the edges of cells.

Border options are available to change the line style, color and placement of border lines.



[Home] -> [Font] -> border

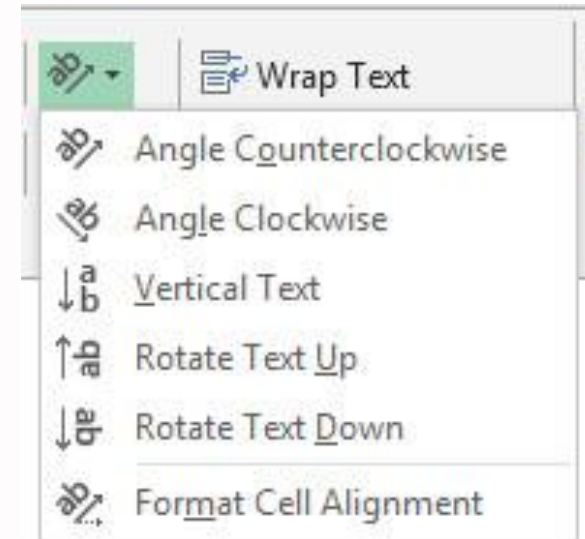


## Formatting

### Rotate Text

Border are lines around the edges of cells.

Border options are available to change the line style, color and placement of border lines.



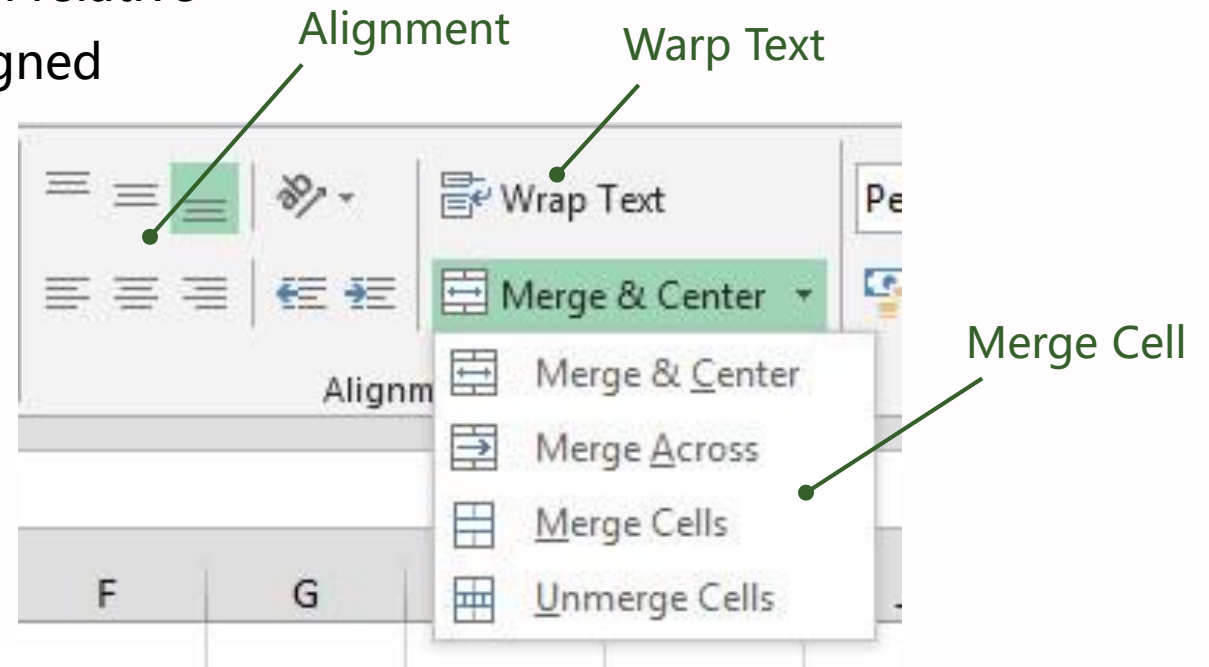
[Home] -> [Alignment] -> Orientation



## Formatting

### Alignment

Alignment is the positioning of text in a cell relative to its edges. By default Labels (text) are aligned to the left and numbers to the right



 Wrap text can be applied to a range of cells

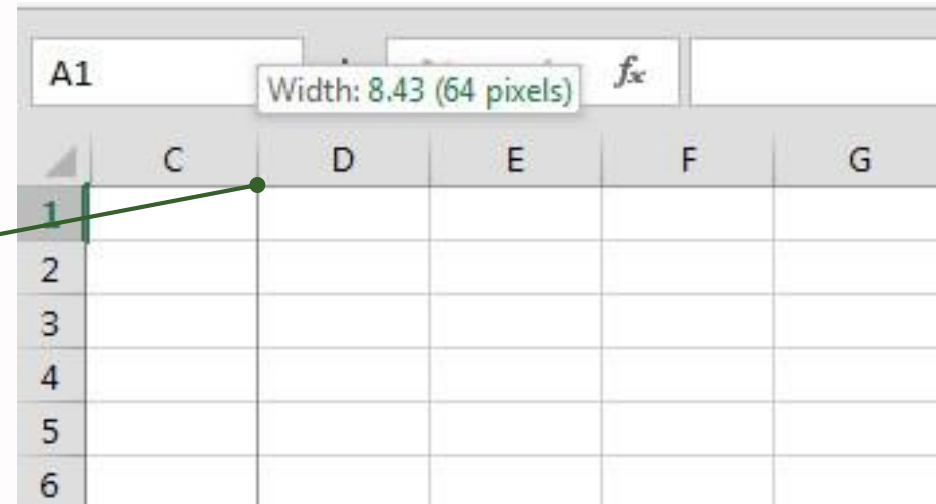
[Home] -> [Alignment]



## Formatting

### Changing Column Width

Column width is the distance across a column. It is measured in units. The size is 8.43 units – do not worry, as column widths are changed by dragging



Click and Drag to change the width of Column C

Changing Column Width

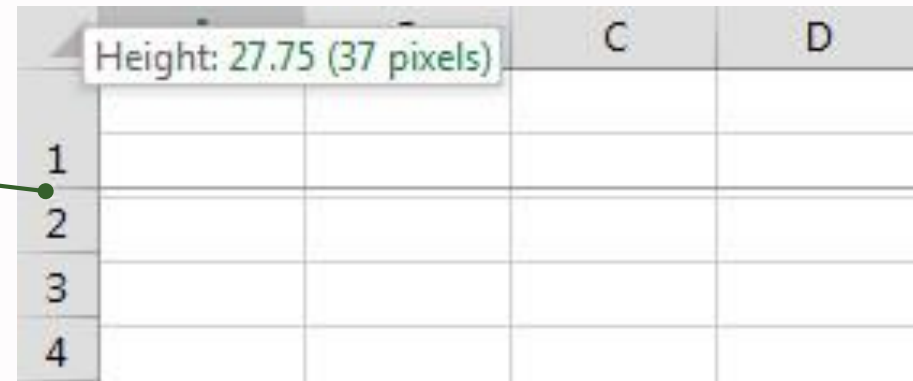


## Formatting

### Changing Row height

Row height are changed in the same way as changing column widths, Row heights are increased to create more spec between rows of data

Click and Drag to change the height of row 1



	A	B	C	D
1				
2				
3				
4				

Changing Row height

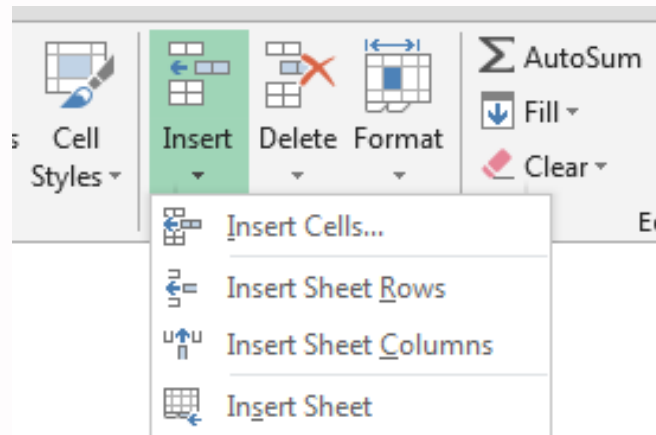




## Formatting

### Inserting Rows and Columns

Rows and column can be inserted into a worksheet between existing rows or columns when items have been forgotten or when new data is to be added



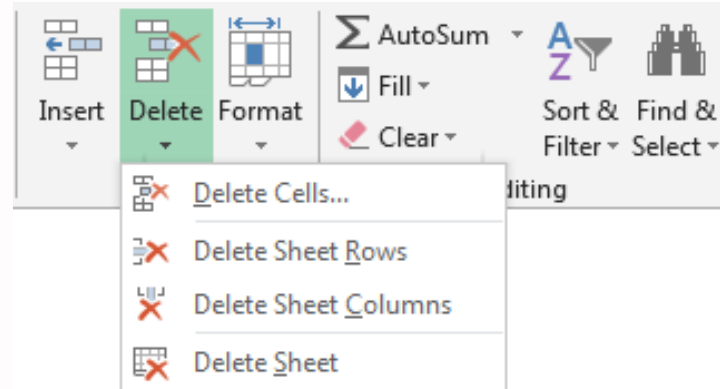
[Home] -> [Cells] -> Insert



## Formatting

### Deleting Rows and Columns

Unwanted extra rows or columns can be deleted



[Home] -> [Cells] -> Delete



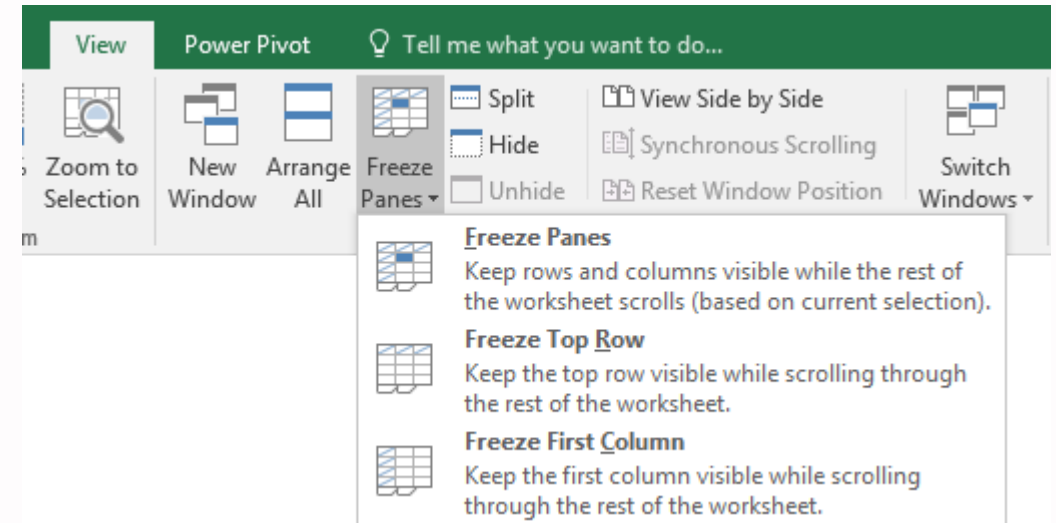
## Formatting

### Freezing Panes

Freeze Panes is used to keep some rows and/or columns in view all the time. This is generally used for label. While scrolling through a large worksheet.

	A	B	C	D	E
8		DO No.	Compar	Value	Date
37		DO11/053	BB	72,940	1-Dec-11
38		DO11/054	BC	60,594	5-May-13
39		DO11/055	BD	14,066	2-Jul-12
40		DO11/056	BE	43,888	1-Apr-12
41		DO11/015	BF	28,041	14-Oct-11
42		DO11/052	C	13,030	29-Jun-13

This freeze Pane row 8



[View] -> [Windows] -> Freeze Panes



## Formulas & Function

- Enter Basic Formulas
- Use AutoSum
- Sum, Count, Average , Max, Min and IF
- Relative And Absolute Addressing



## Formulas & Function

### Formulas

formulas are used to calculate answers from numbers that are entered into a sheet. To create formulas properly you should enter the cell references of those cells used in the calculation

#### Arithmetic operators

- + Addition
- Subtraction
- \* Multiplication
- / Division
- % Percent
- ^ Exponentiation

Calculate answers

Formulas

Formula

References Cells

	C	D	E	F
		50		
		55		
		105		



## Formulas & Function

### AutoSum

The most common mathematical operation is addition.

This calculation has been simplified by the use of a Function called AutoSum

Function

: X ✓ f <sub>x</sub> =SUM(C1:C5)						
B	C	D	E	F	G	
	1	2	3			
	2	3	4			
	3	4	5			
	4	5	6			
	5	6	7			
	=SUM(C1:C5)		25		60	

=SUM(C1:C5)

AutoSum

Total Sum



## Formulas & Function

### COUNT, COUNTA, COUNTBLANK

The function COUNT counts the cells that contain numbers in a range.

COUNTA counts the number of cells that are not empty and COUNTBLANK counts empty cells in a range

D	E	F	G	H
	100	100	100	
	101	101	101	
	a	a	a	
	b	b	b	

**Count Results:**

- 2** (for `=COUNT(E1:E5)`): Counts the two numeric cells (100, 101) in the range E1:E5.
- 4** (for `=COUNTA(F1:F5)`): Counts the four non-empty cells (100, 101, a, b) in the range F1:F5.
- 1** (for `=COUNTBLANK(G1:G5)`): Counts the one empty cell in the range G1:G5.





## Formulas & Function

### Average & Round

Average adds a list of numbers and divides by the number of numbers. Sometime it is required to show numerical data to a specific level of precision.

G	H	I	J
	Price	1	
		3	
		1	
		2	
	average	1.75	
	Round	2	

=AVERAGE(I2:I5)

=ROUND(I6)



## Formulas & Function

### Maximum and Minimum

**MAX** the functions for maximum,  
finds and displays the largest number in the selected range

**MIN** the functions for minimum,  
finds and displays the smallest number in the selected range

G	H	I	J
	Price	1	
		3	
		1	
		2	
	Min	1	
	MaX	3	

=MAX(I2:I5)

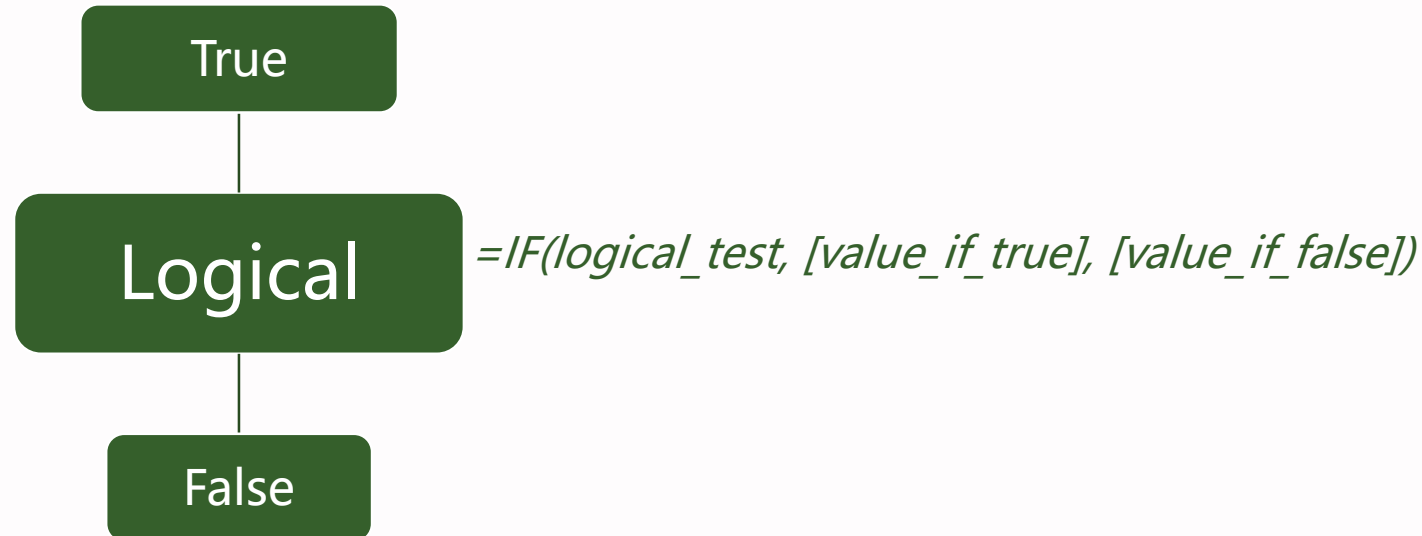
=MIN(I2:I5)



## Formulas & Function

### IF

The logical function IF compares the contents of a cell and, if a logical test is met, performs one action; if not, it performs another



### COMPARISON OPERATOR

=	Equal
<	Less than
>	Greater than
<>	Not equal to
>=	Greater than or equal to
<=	Less than or equal to



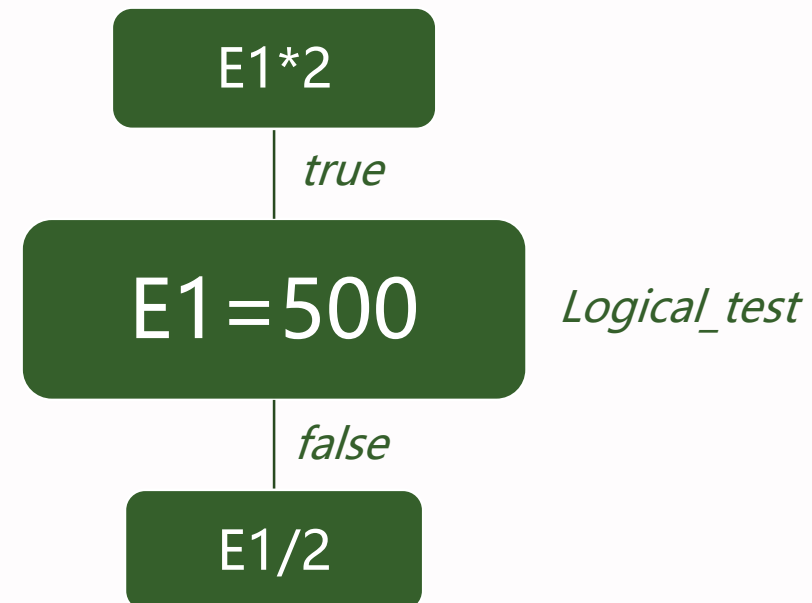
## Formulas & Function

### IF

The logical function IF compares the contents of a cell and, if a logical test is met, performs one action; if not, it performs another

<i>f<sub>x</sub></i>	<code>=IF(E1=500,E1*2,E1/2)</code>	
	D	E
	Logical TEST (E1=500)	500
	False (E1/2)	1000
	True (E1*2)	

Function IF



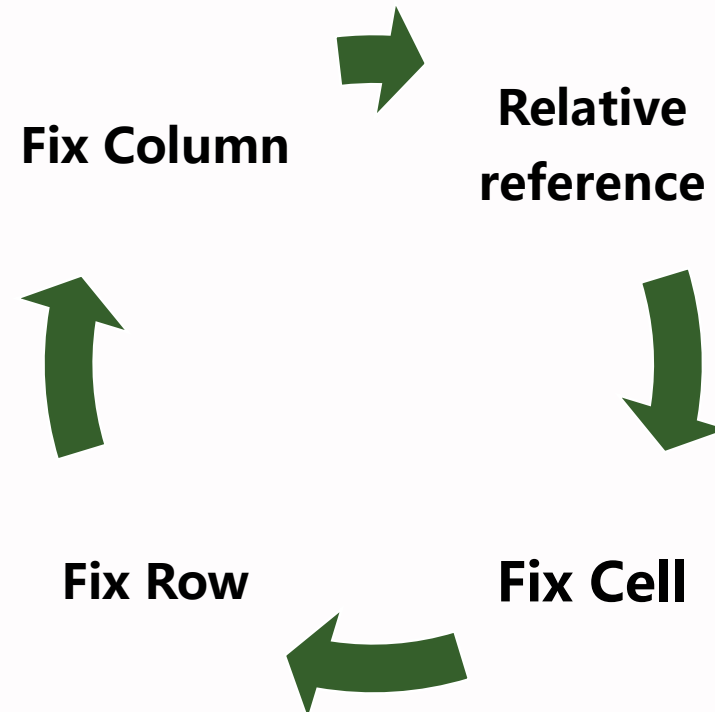


## Formulas & Function

### Absolute Addressing

The **Absolute** reference key is \$ sign. D7 is a Relative address that will change if the formula is copied and \$D\$7 is an Absolute address that will stay the same.

=A1	Relative reference
=\$A1	Fix Column
=A\$1	Fix Row
=\$A\$1	Fix Cell





## Charts

- Create a Chart
- Select Chart Type
- Move, Copy and Resize Charts
- Format a Chart
- User Chart Options
- Print Charts



## Charts

### Introducing Charts

A picture of the figures, a graph or chart, help to identify subtle changes that may have otherwise been missed some of the standard chart type



Column



Bar



Pie



Line

Standard Chart type

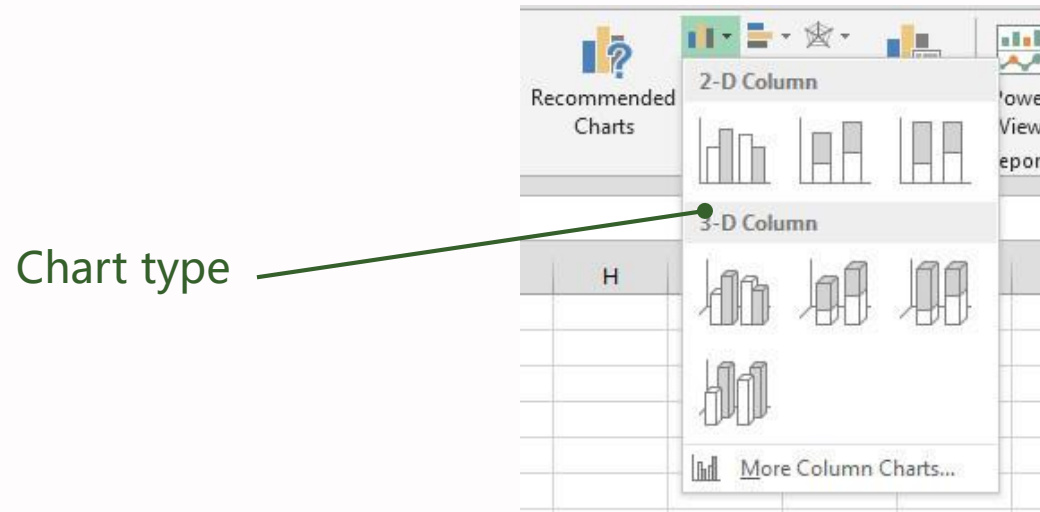




## Charts

### Creating Charts

Create charts are, by default placed on the same sheet as the data. This is called an Embedded Chart. Embedded charts can be moved, resized or deleted



[Insert] -> [Charts] -> Chart type

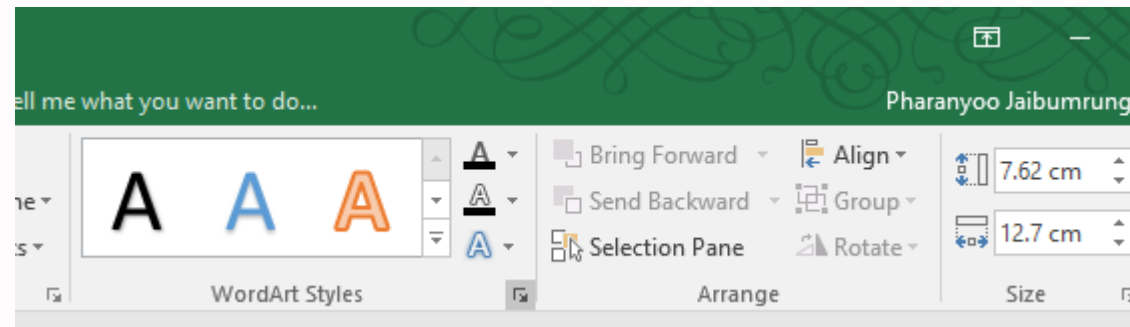
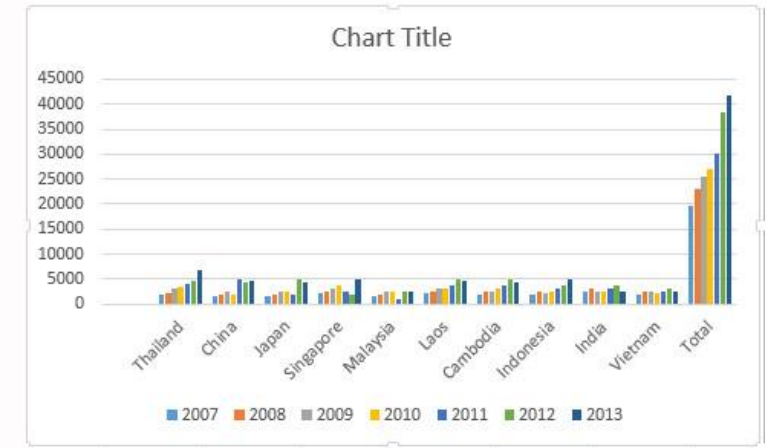


## Charts

### Copy, Move & Resize Charts

First select the chart. From the Chart Tools Format tab, click the Width or Height in the Size Group and

Embedded Charts are move from book to book using Cut or <**Ctrl+X**> and Paste, or <**Ctrl+V**>



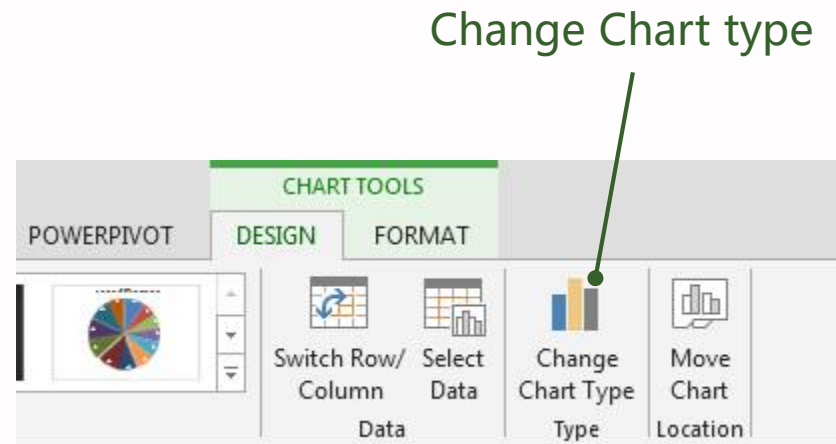
[Chart Tools] -> [Format] - > Size



## Charts

### Chart Types

To Change the chart type, first select the chart. From the Chart Tools Design tab, click the Change Chart Type button in the Type Group and select an alternative



[Chart Tools] -> [Design] -> Change Type Chart



## Charts

### Moving Charts Between Worksheet

After the chart has been created it can be moved and placed on a separate worksheet

Move and Create new Worksheet

Move Between Worksheet

Move Chart

[Chart Tools] -> [Design] -> Move Chart

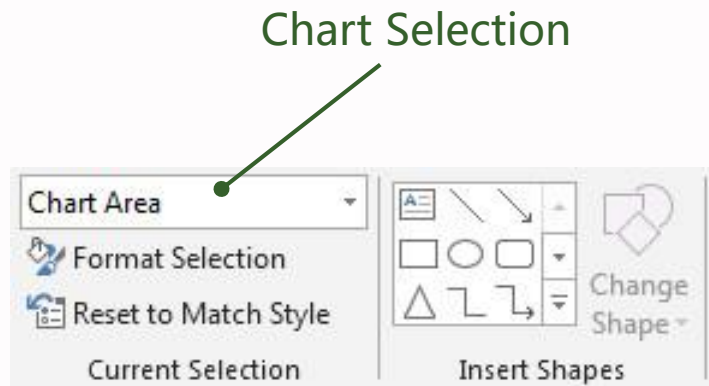
[Chart Tools] -> [Design] -> Move Chart



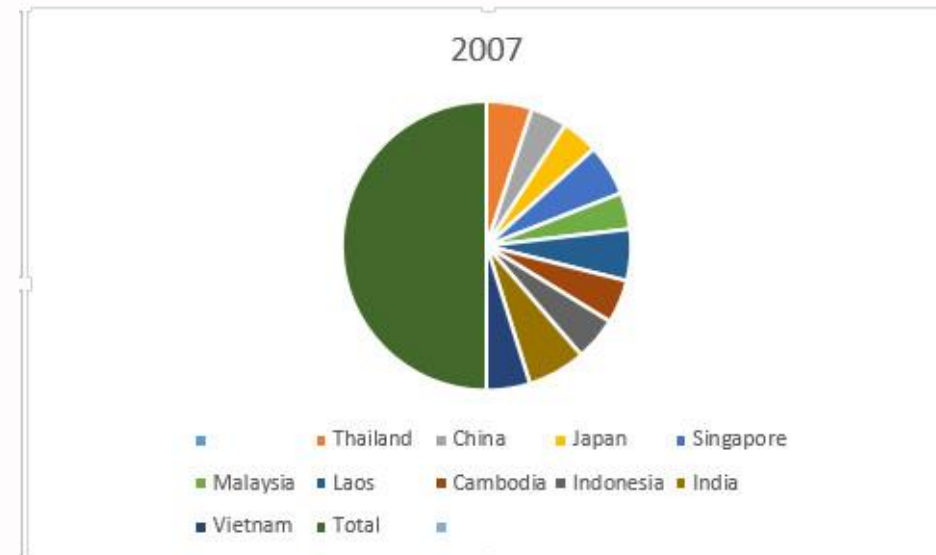
## Charts

### Formatting Charts

All parts of chart, including the colors, axes, text, gridlines, charts and plot area, can be change



[Chart Tools] -> [Format]-> Current Selection

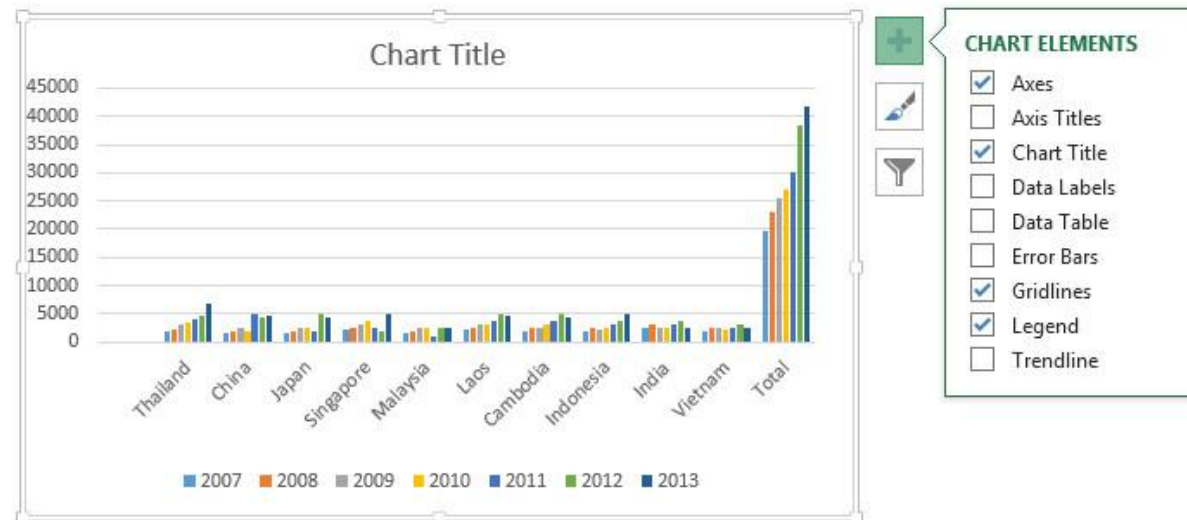




## Charts

### Chart Options

All parts of a chart, including the title, legend, data labels and axis can be changed. Text boxes can also be added to include supporting information. The chart type can be change using a button on the **DESIGN Tab**





## Charts

### Printing Charts

Charts created on a new worksheet are printed as a normal worksheet, via the **FILE** and the **Print option**.

The screenshot shows the Excel Print dialog box on the left and a grouped bar chart on the right.

**Print Dialog Box:**

- Print:** A button with a printer icon.
- Copies:** 1
- Printer:** Snagit 11, Ready. [Printer Properties](#)
- Settings:**
  - Print Selected Chart:** Only print the selected chart
  - Pages:** 1,2,3 to 1,2,3
  - Collated:** 1,2,3 1,2,3 1,2,3
  - Landscape Orientation:**
  - A4:** 21 cm x 29.7 cm
  - Last Custom Margins Setting:** Left: 1.78 cm Right: 1.78 cm [Page Setup](#)

**Chart:**

Chart Title

The chart is a grouped bar chart showing data for various countries and a Total. The Y-axis ranges from 0 to 45,000. The X-axis categories are Thailand, China, Japan, Singapore, Malaysia, Laos, Cambodia, Indonesia, India, Vietnam, and Total. The legend indicates data for the years 2007 (blue), 2008 (orange), 2009 (grey), 2010 (yellow), 2011 (dark blue), 2012 (green), and 2013 (dark green).

Country	2007	2008	2009	2010	2011	2012	2013
Thailand	~2000	~2000	~2000	~2000	~2000	~2000	~2000
China	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Japan	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Singapore	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Malaysia	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Laos	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Cambodia	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Indonesia	~2000	~2000	~2000	~2000	~2000	~2000	~2000
India	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Vietnam	~2000	~2000	~2000	~2000	~2000	~2000	~2000
Total	~20000	~25000	~30000	~35000	~40000	~45000	~48000





## Printing

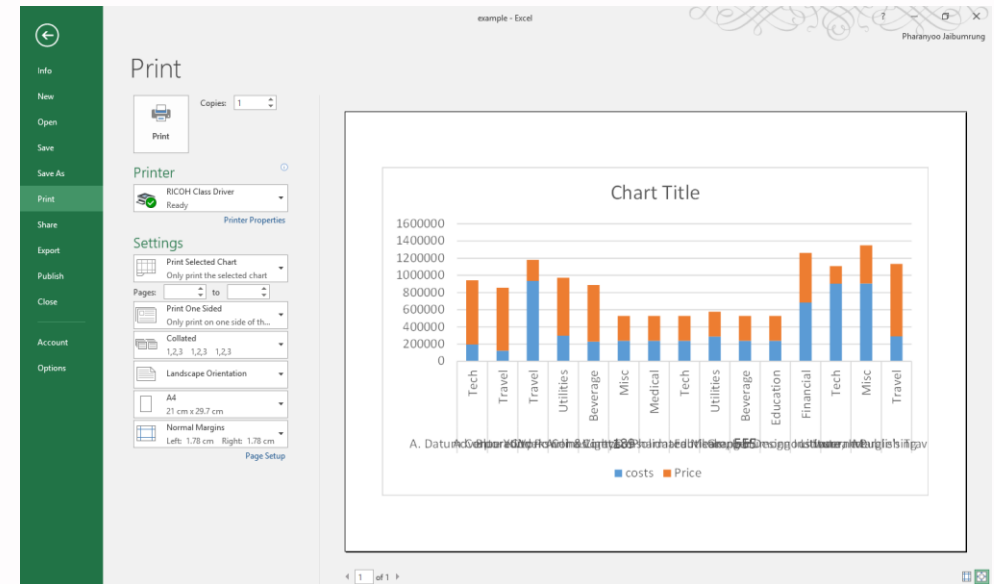
- Print a Worksheet and Workbook
- Use print Preview
- Change the Page Setup
- Add Header and Footers
- Use Print Titles



## Printing

### Printing

Worksheets can be printed out to give a hard copy. It is Possible to decide what to print: the sheet, the pages and the number of copies It is customary to **Print Preview** the worksheet before printing, as it may not fit on the paper, as you need it to



[File] -> Print



## Printing

### Print Preview

In this version of excel print preview is integrated into the Print option screen. The Preview is shown on the right.

Print

Copies: 1

Print

Printer

Ricoh Aficio MP 161 PCL Ready

Printer Properties

Settings

Print Active Sheets  
Only print the active sheets

Pages: 1 to 1

Print One Sided  
Only print on one side of th...

Collated  
1,2,3 1,2,3 1,2,3

Portrait Orientation

A4  
21 cm x 29.7 cm

Custom Margins

No Scaling  
Print sheets at their actual size

Page Setup

Print Preview

Page Setup

Next Page

[File] -> Print

1 of 8

Product 1 Revenue by Country (\$ in thousands)					
	1990	1991	1992	1993	1994
Asia Continent					
Taiwan	2000	2300	2800	3600	2900
China	1800	1900	2300	1900	2300
Japan	1800	1900	2300	2300	2300
Singapore	2200	2800	3000	3600	3000
Malaysia	1600	1900	2300	2300	2300
Laos	2200	2800	3000	3000	3000
Camodia	1900	2300	2800	3000	2900
Indonesia	1900	2300	2200	2200	2200
India	2800	3000	2300	2800	2300
Vietnam	1900	2300	2300	2200	2300
Europe Continent					
England	2300	2300	1020	1900	2300
France	3000	3000	3600	2800	3000
Spain	2800	3000	3600	2300	2800
Italy	2200	2800	3000	2300	2300
Greece	2200	2800	3000	2300	2300
Germany	2200	2800	3000	2300	2300
America Continent					
U.S.A	3000	3000	3600	3000	3600
Canada	2800	3000	3600	3000	3600
Mexico	2200	2800	3000	2800	3000
Brazil	2200	2800	3000	2800	3000
Argentina	2800	3000	3600	3000	3600
Product 2 Revenue by Country (\$ in thousands)					
Asia Continent					
Taiwan	2300	2600	3200	3800	3200
China	1900	2200	2600	2200	2600
Japan	1900	2200	2600	2600	2600
Singapore	2800	2800	3200	3900	3300
Malaysia	1900	2200	2600	2600	2600
Laos	2800	2800	3200	3300	3300
Camodia	2200	2800	2800	3200	2800
Indonesia	2200	2800	2800	2800	2800

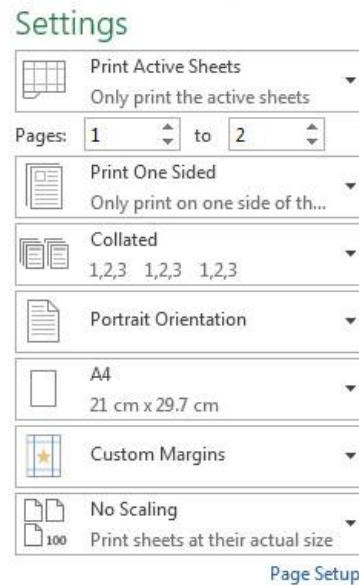


## Printing

### Page Setup

Page Setup is used to change the way a worksheet is displayed on the pages. However, many of these features can now be controlled within the Print option screen under **Setting**

### Print



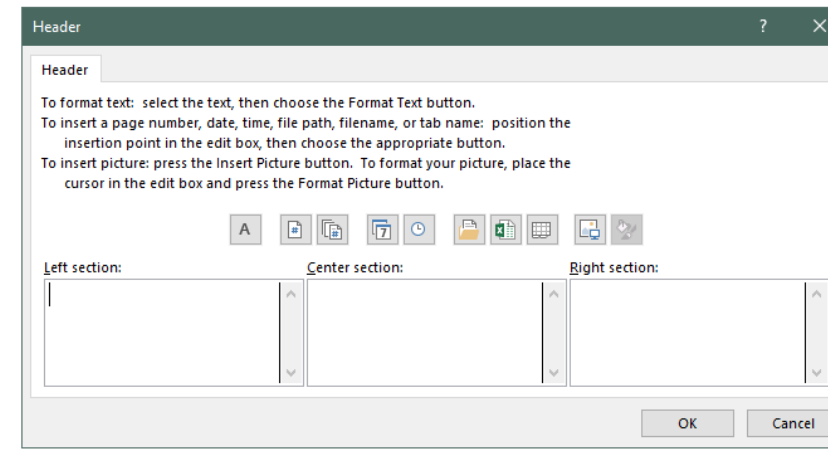
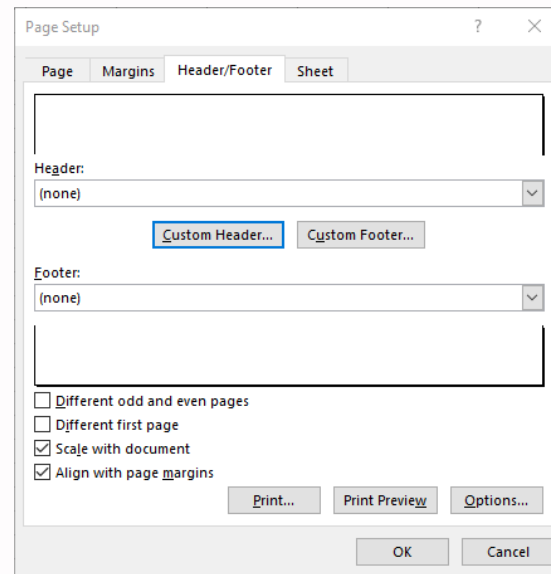
[File] -> Print



## Printing

### Header and Footer

Header and Footer are lines of text which appear at the top/bottom of every printed page. They can contain text or field codes in the three areas : Left **section**, Center **section** and Right **section**



[Page Layout] -> [Page Setup] -> Dialog box launcher

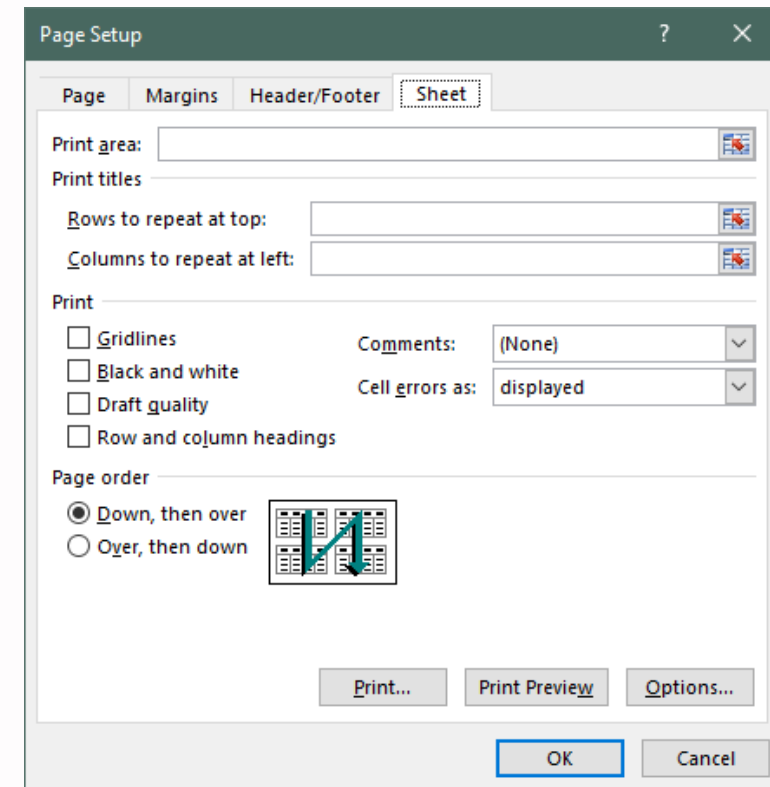


## Printing

### Print Titles

Row and columns of the worksheet may be specified as titles, and these can be display on each printed page.

This is often used to show labels on each page.



[Page Layout] -> [Page Setup] -> Print Titles