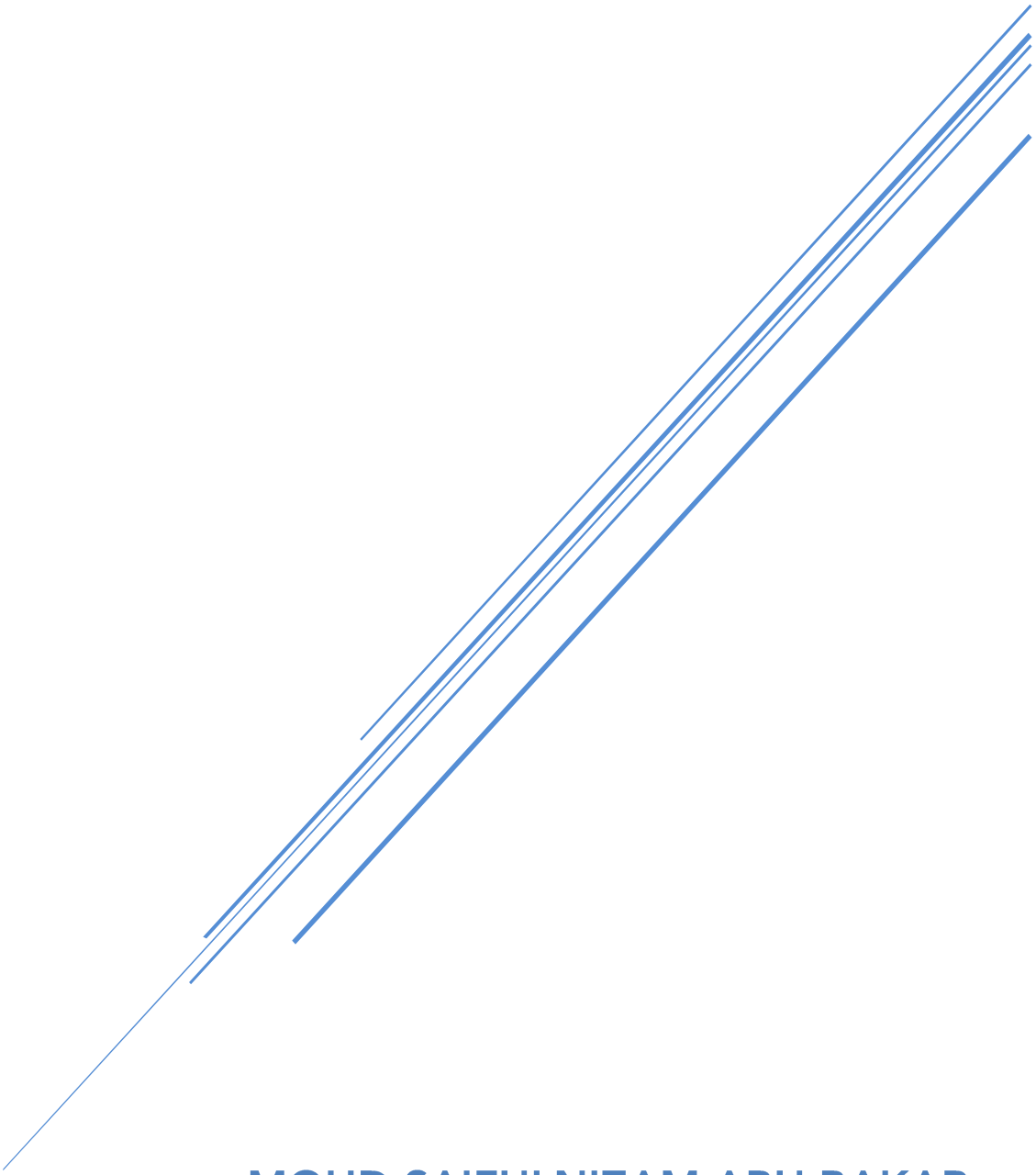
EXCEL FOR BEGINNER



MOHD SAIFULNIZAM ABU BAKAR

TABLE OF CONTENTS

Introduction

Excel and Word are the two powerhouses of the Microsoft Office family. While Word lets you create and edit documents, Excel specializes in letting you create, edit, and analyze data that's organized into lists or tables. This grid-like arrangement of information is called a spreadsheet.

Some common spreadsheets include:

Business documents like financial statements, invoices, expense reports, and earnings statements.

Personal documents like weekly budgets, catalogs of your book, exercise logs, and shopping lists.

Scientific data like experimental observations, models, and medical charts.

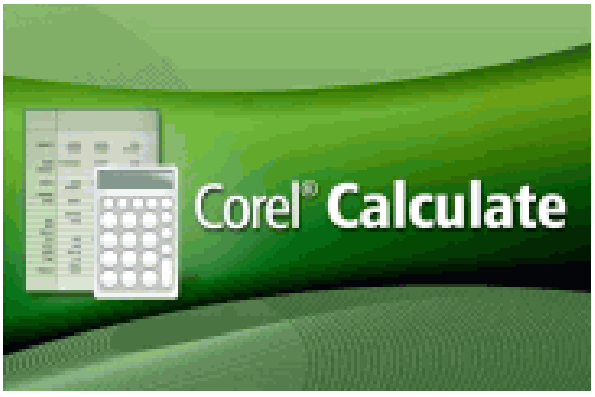
Excel really shines in its ability to help you analyze a spreadsheet's data. The bottom line is that once you enter raw information, Excel's built-in smarts can help compute all kinds of useful figures. Excel's not just a math wizard. If you want to add a little life to your data, you can inject color; apply exotic fonts to help speed up repetitive formatting or editing chores.

Format :

	Format Excel
Office 2003 and below	.xls
Office 2007, 2010,2016, 365	.xlsx

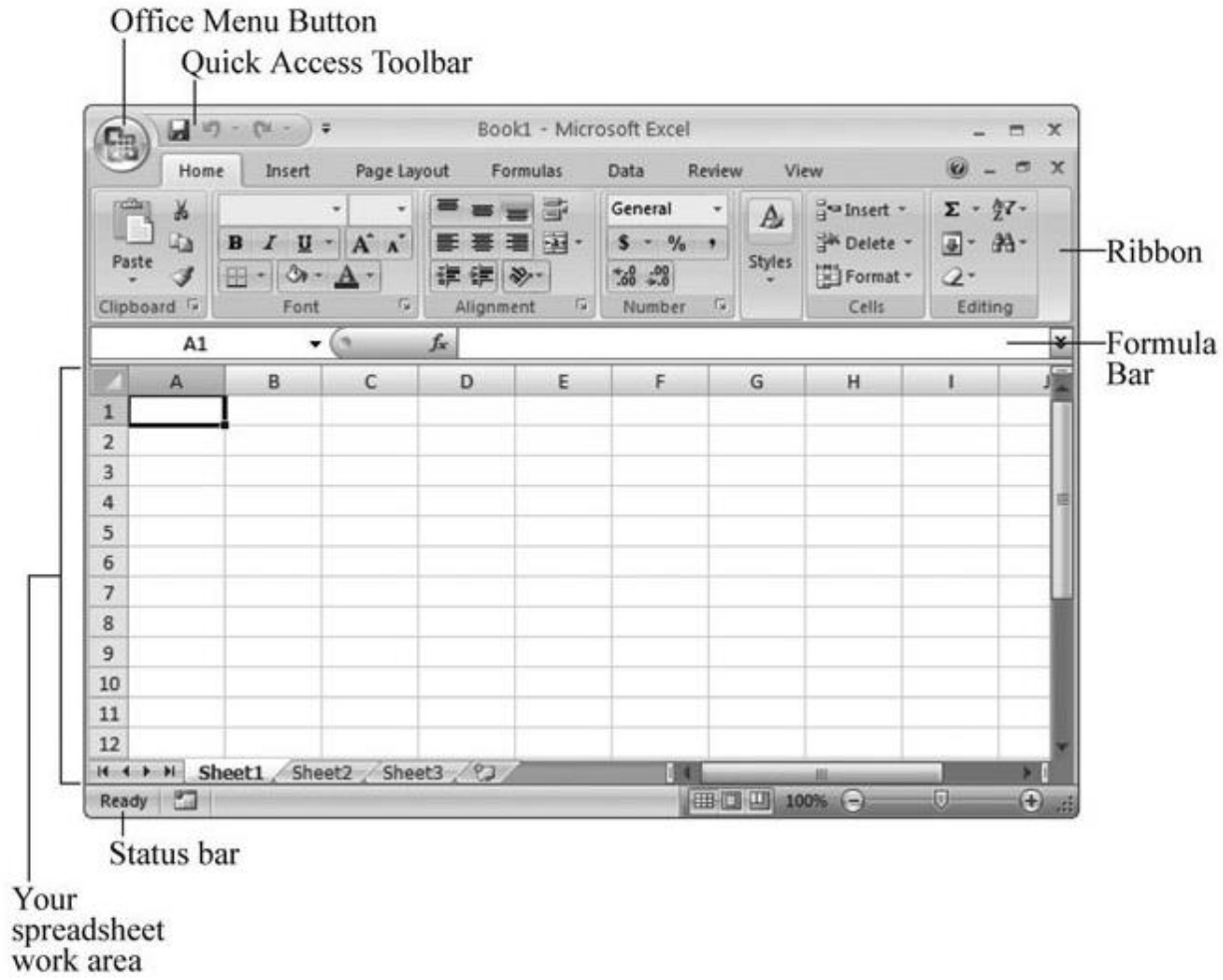
Other Software

Corel Calculate



IBM Lotus 123

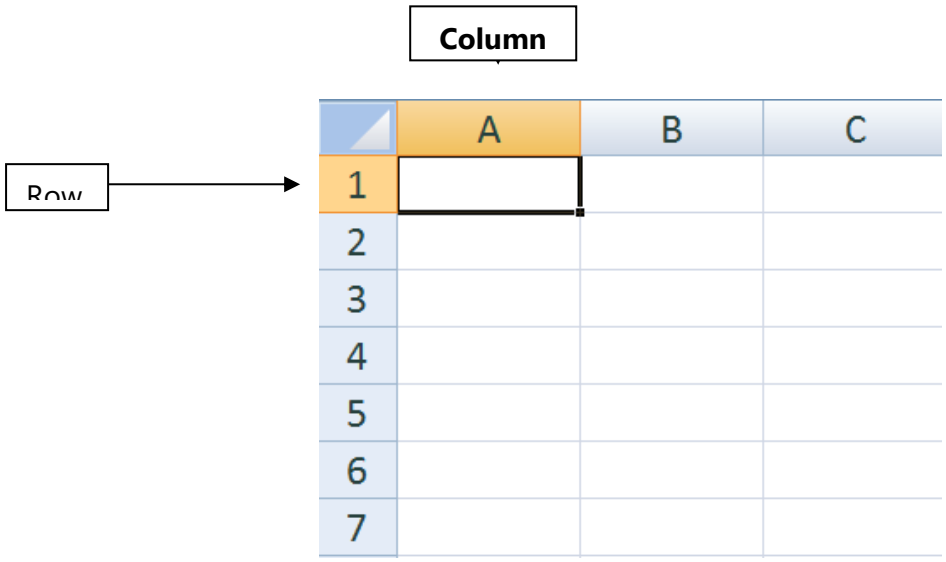
1.0 The Interface



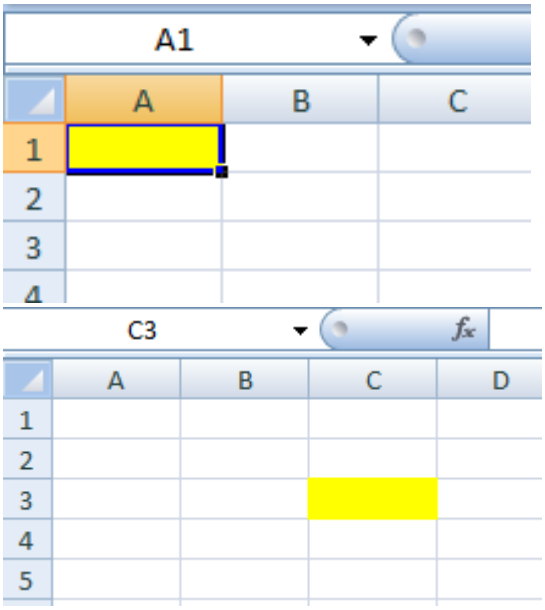
** You can collapse the ribbon (as shown below) by double-clicking any tab. Click a tab to pop it open temporarily, or double-click a tab to bring the ribbon back for good. And if you want to perform the same trick without raising your fingers from the keyboard, you can use the shortcut key Ctrl+F1.*

1.1 Creating a Basic Worksheet

- The grid divides your worksheet into rows and columns. Columns are identified with letters (A, B, C…), while rows are identified with numbers (1, 2, 3…).



- The smallest unit in your worksheet is the **cell**. Cells are identified by column and row. For example, C3 is the address of a cell in column C (the third column), and row 3 (the third row).



- A worksheet can span an eye-popping 16,000 columns and 1 million rows.
- When you enter information, you enter it one cell at a time. However, you don't have to follow any set order. For example, you can start by typing information into cell A40 without worrying about filling any data in the cells that appear in the earlier rows.

Exercise 1:

1. Download **Excel Exercise** from website and click on sheet **Cell number**
2. Identify Cell Number for this worksheet

	A	B	C	D	E	F	G	H
1			M					
2		U					W	
3				P				B
4		I				PP		
5								
6		T						

	Cell Number		Cell Number
U		P	
I		PP	
T		W	
M		B	

3. Fill in all the alphabet cells with **red color** using multiple selection.*(hold CTRL key while selecting cell)*

1.2 Insert & Delete Row/Column

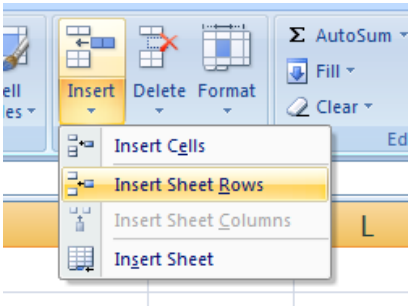
Inserting rows is just as easy as inserting new columns. Just follow these steps:

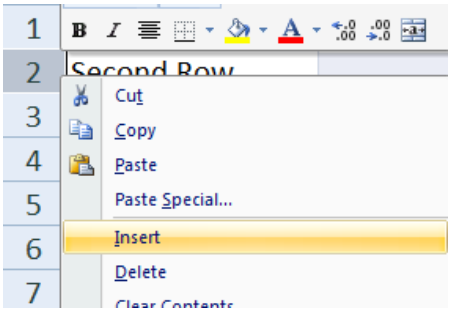
1. Select the row that's immediately below where you want to place the new row.

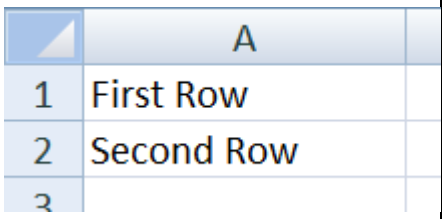
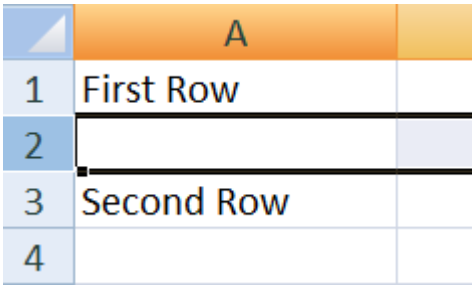
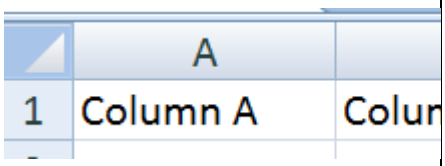
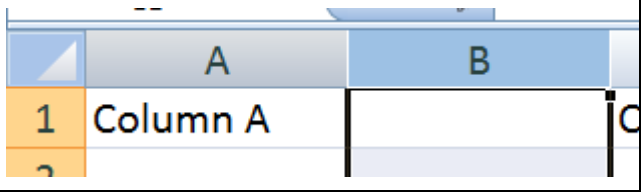
   That means that if you want to insert a new, blank row between rows 6 and 7, start by selecting the existing row 7. Remember, you select a row by clicking the row number header.

2. Choose **Home >>Cells >>Insert >>Insert Sheet Rows. /or RIGHT CLICK**

   Excel inserts a new row, and all the rows beneath it are automatically moved down one row.





Before Insert	After Insert
	
	

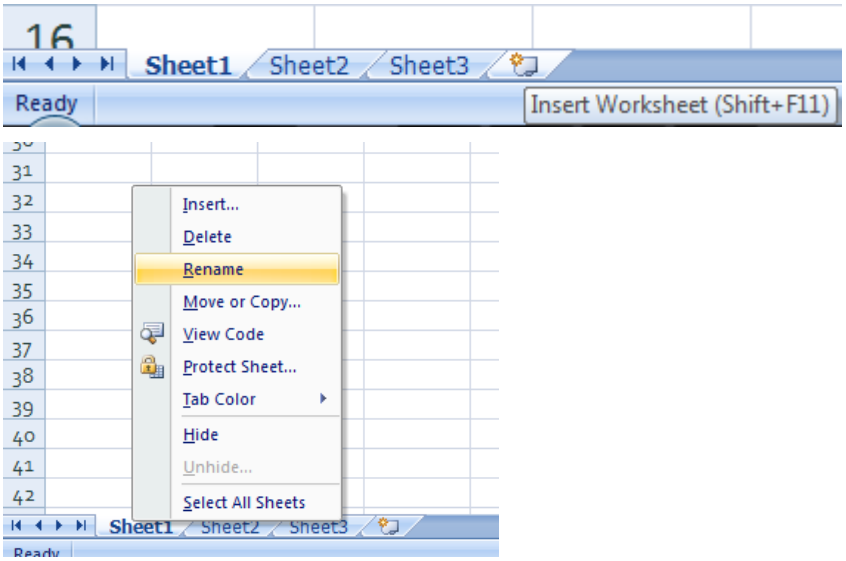
Exercise 2:

1. Go to sheet Insert Row
2. Insert a row Between Perak and Selangor and add text **Perlis**
3. Insert another two rows between Johor and Pahang with **Sarawak and Sabah**
4. Insert a column next to state and label with **No**
5. Insert a column between State and Point and add text **Name**

1.3 Insert & Renaming Sheet

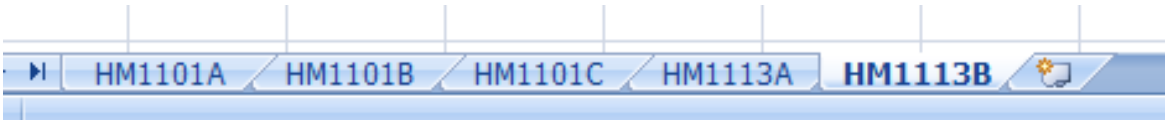
Sheet1 + sheet2 + Sheet3 =Spreadsheet

Worksheet1 + Worksheet2 + Worksheet 3 = Workbook



Exercise 3

Create worksheet as follow



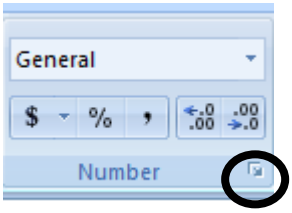
2.0 Formatting Cell Value - Adding Different Types of Data

Most of the time, when you enter information in Excel, you don't explicitly indicate the type of data. Instead, Excel examines the information you've typed in, and, based on your formatting and other clues, classifies it automatically. Excel distinguishes between four core data types:

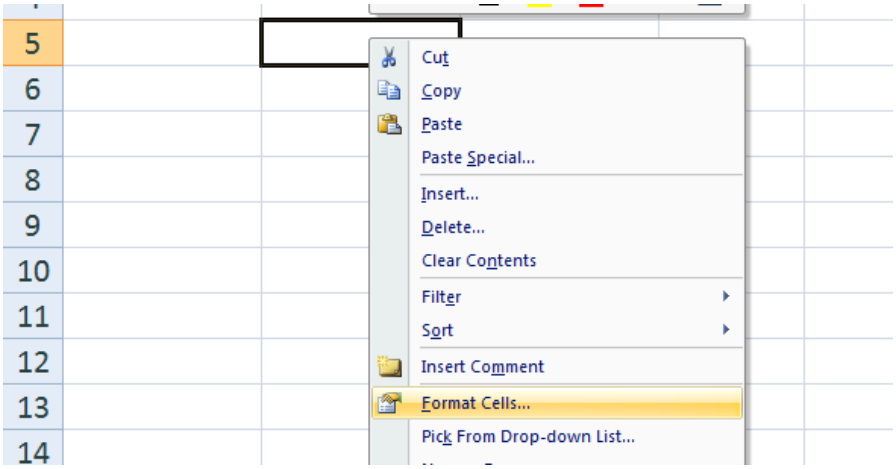
- **Ordinary text**. This data type includes column headings, descriptions, and any content that Excel can't identify as one of the other data types.
- **Numbers**. This data type includes prices, integers, fractions, percentages, and every other type of numeric data. Numbers are the basic ingredient of most Excel worksheets.
- **Dates and times.** This data type includes dates (like Oct 3, 2007), times (like 4:30 p.m.), and combined date and time information (like Oct 3, 2007, 4:30 p.m.). You can enter date and time information in a variety of formats.

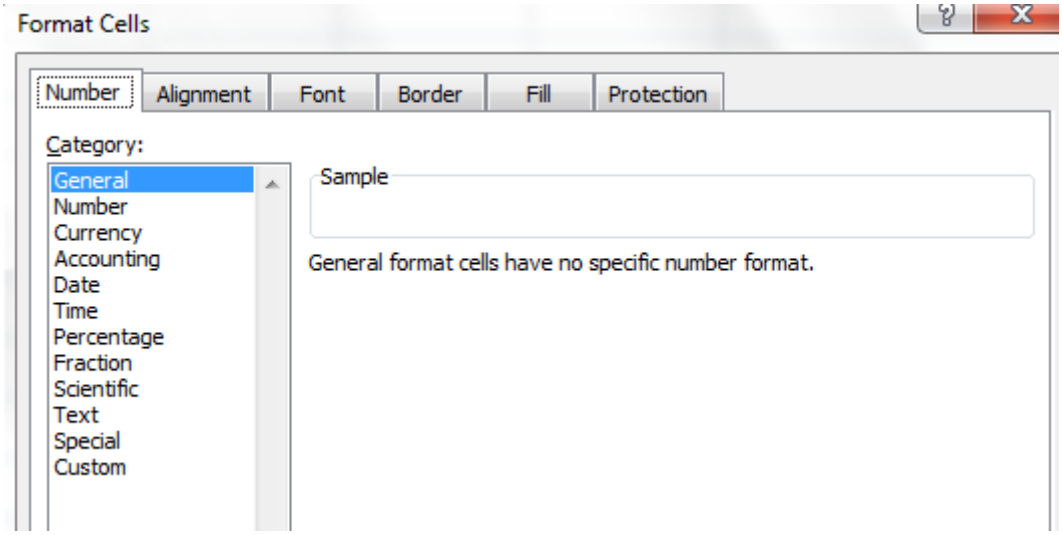
2.1 Format Cells menu

1. Use dialog launcher in ribbon



2. Or,**right click** on selected cell





Exercise 4 – Formatting Number

Identify the result for each data entry

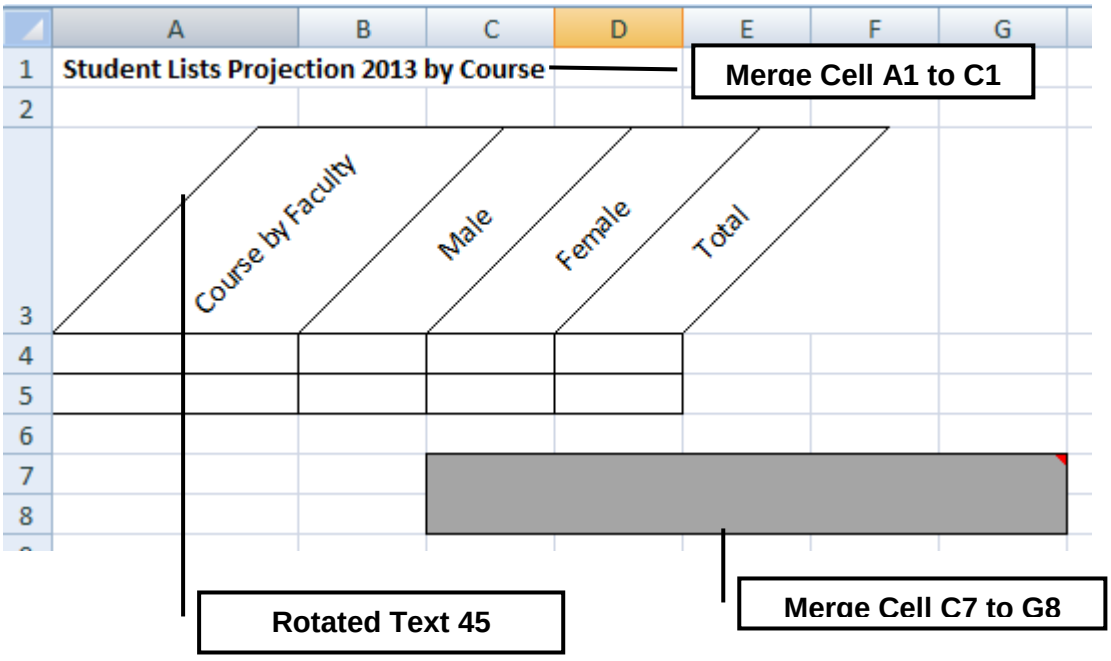
Data	Format	Result
32	Number (3 Decimal Place)	
1765.34	Currency (Malaysia Ringgit)	
31/8/1957	MY Date (date,month,year)	
0.4365	Percentage (2 decimal)	
13500	Special - English US ZipCode+4	
10.34	Fraction(up to 2 digits)	
240000000	Number (with 1000 separator)	

2.2 Formatting Cell Appearance - Text And Alignment

To format a cell's appearance, first select the single cell or group of cells that you want to work with, and then choose **Home >>Cells >>Format >>Format Cells,** or just right-click the selection, and then choose **Format Cells**. The Format Cells dialog box that appears is the place where you adjust your settings.

Exercise 4:

Open a worksheet name **Formatting Text** and edit based on this format using instruction below



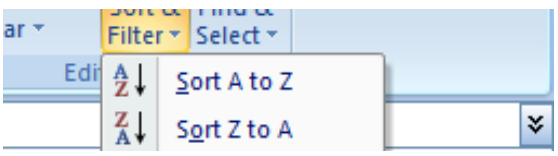
2.3 Sort data in a range or table

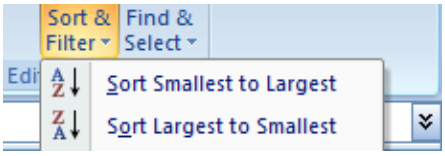
Sorting data is an integral part of data analysis. You might want to put a list of names in alphabetical order, compile a list of product inventory levels from highest to lowest, or order rows by colors or icons.

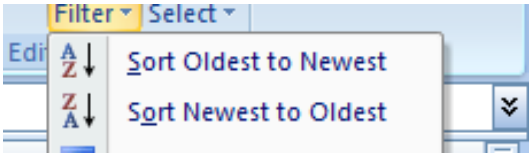
TRY THIS

Sort		
Alphabet	**Viewer (mil)**	**Date On Air**
Imam Muda	2.2	19 Mei 2011
Mentor	3.5	01 April 2012
On Air	1.8	04 April 2012
AF	3.2	29 Mac 2011
MasterChef	1.6	20 Oktober 2011
Versus	2.5	03 Februari 2012

Hightlight cell and select sorting A to Z (lowest to highest)







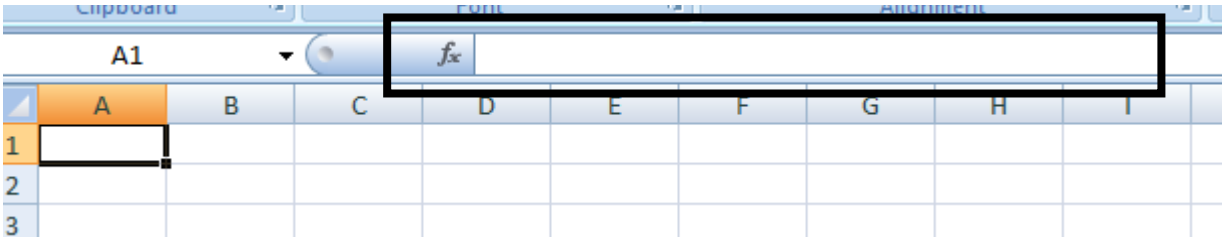
3.0 Building Basic Formulas

3.1 Formula and Math Operator

Formulas start with the equal sign (=), which tells Excel you want to perform a calculation. After the equal sign, you must specify two more types of information:

- the values you want to calculate
- the cell located the value
- The arithmetic operator(s) or function name(s) you want to use to calculate the values.

Formula Bar



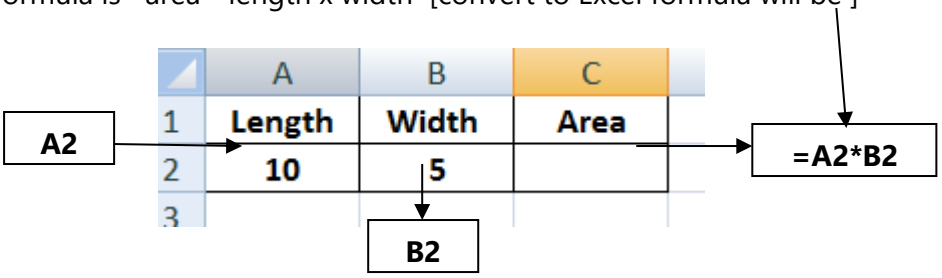
Operator or Function Name	*Purpose*	*Example*
=	All formulas must start with an equal sign	
+	Performs addition between values	=A1+B1
-	Performs subtraction between values	=A1-B1
*	Performs multiplication between values	=B1*2
/	Performs division between values	=A1/C2
SUM	Adds all the numbers in a range	=SUM(A1:A3)
AVERAGE	Calculates the average of all the numbers in a range	=AVERAGE(A2,B1,C3)
COUNT	Counts the number of items in a range	=COUNT(A2:C3)

Excel's Arithmetic Operators

TRY THIS!!

The value of area came from the value of length and width.

So the formula is area= length x width [convert to Excel formula will be]



Complex formulas piece-by-piece in this order:

1. Parentheses (any calculations within parentheses are always performed first)
2. Percent
3. Exponents
4. Division and Multiplication
5. Addition and Subtraction

Consider This , what is the answer?

Without Parentheses (Bracket)	With Parentheses (Bracket)
=2+3*10	=(2+3)*10

For example, notice how adding parentheses affects the result in the following formulas:

```
5 + 2 * 2 ^ (3 - 1) = 13
(5 + 2) * 2 ^ 3 - 1 = 55
(5 + 2) * 2 ^ (3 - 1) = 28
5 + (2 * (2 ^ 3)) - 1 = 20
```

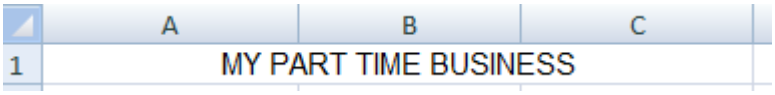
Try This!!

A	B	C	RESULT	OPERATION	FORMULA
1	2	3		ADDITION	=C4+D4+E4
4	3	12		SUBSTRACT	=C4-D4-E4
12	23	11		MULTIPLY	=C4*D4*E4
8	-9	-12		DIVIDE	=C4/D4/E4

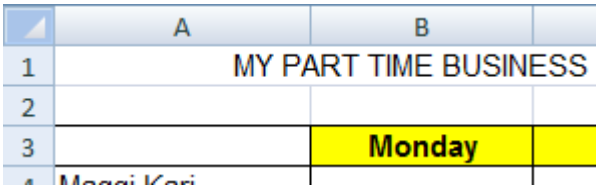
Exercise 5

Follow this step:

1. Merge Title from A1 to B1
2. Highlight the cells A1, B1 and C1, and Merge the cells
3. Your spreadsheet will look like this

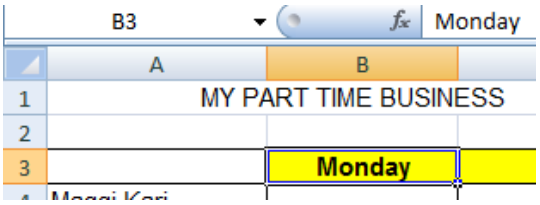


4. Click inside cell B3 of your spreadsheet, and type Monday, as in the image below:

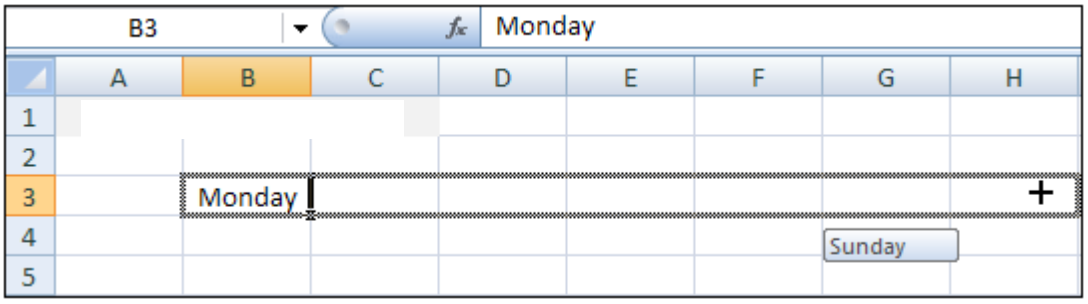


5. Position your mouse pointer to the bottom right of the B3 cell

The mouse pointer will change to a black cross, as in the images below. The image on the left shows the normal white cross; the image on the right, the black cross, tells you AutoFill is available:



6. When you can see the AutoFill cursor, hold down your left mouse button and drag to the right - Drag your mouse all the way to cell H3, as in the following image: \



7. Finalize the table as shown below

	A	B	C	D	E	F	G	H
1	MY PART TIME BUSINESS							
2								
3		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
4	Maggi Kari	1	2	1	6	10	6	13
5	Maggi Ayam	7	5	3	3	12	4	4
6	Maggi Asam Laksa	8	3	5	6	34	5	0
7	Maggi In Cup	1	2	2	8	12	1	12
8	Maggi Kari Berapi	4	5	3	2	9	1	1
9								
10	Day Total							

	A	B	C
1	MY PART TIME BUSINESS		
2			
3		Monday	Tuesday
4	Maggi Kari	1	2
5	Maggi Ayam	7	5
6	Maggi Asam Laksa	8	3
7	Maggi In Cup	1	2
8	Maggi Kari Berapi	4	5
9			
10	Day Total	=B4+B5+B6+B7+B8	
11			

8. Locate cell B16 on your spreadsheet and click on it

Get the total from cell I4 by entering formula **=i4**

		Total	Cost		Sales		Profit
16	Maggi Kari		RM	0.70	RM	1.50	
17	Maggi Ayam		RM	0.65	RM	1.50	
18	Maggi Asam Laksa		RM	0.90	RM	2.00	
19	Maggi In Cup		RM	1.54	RM	2.40	
20	Maggi Kari Berapi		RM	0.90	RM	1.90	
21	Total						

9. To calculate profit for Maggi Kari , click into cell **E16** on your spreadsheet

Type the following formula: **=(B16*D16)-(B16*C16)**

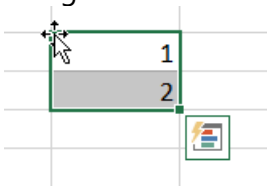
Hit the enter key on your keyboard, and you should get an answer

10. Use autofill to calculate the following rows

	Total	Cost	Sales	Profit
Maggi Kari	39	RM 0.70	RM 1.50	RM 31.20
Maggi Ayam	38	RM 0.65	RM 1.50	RM 32.30
Maggi Asam Laksa	61	RM 0.90	RM 2.00	RM 67.10
Maggi In Cup	38	RM 1.54	RM 2.40	RM 32.68
Maggi Kari Berapi	25	RM 0.90	RM 1.90	RM 25.00

Autofill Easy

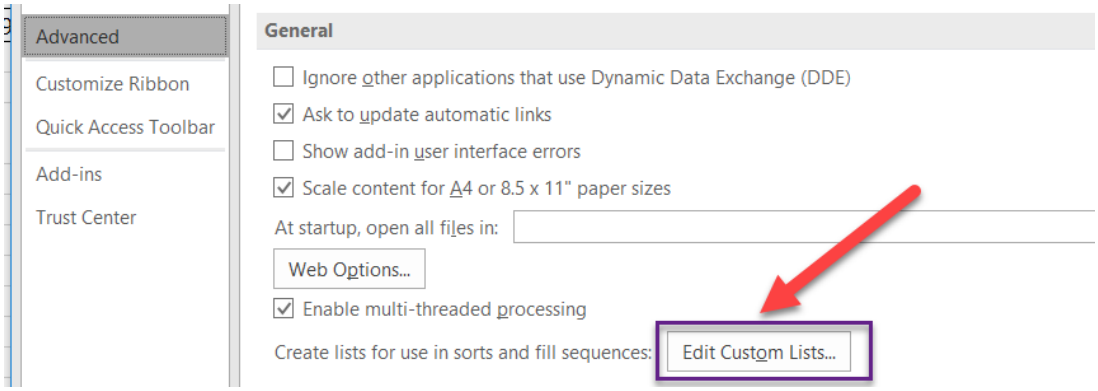
1. Type 1 and 2 in separate cell
2. Using arrow and shift to select both cell



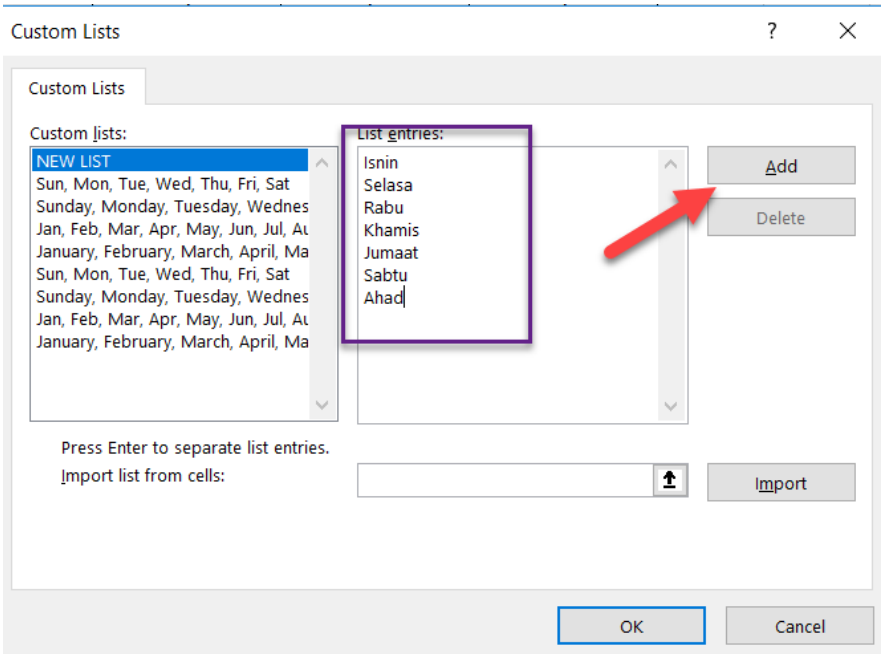
3. Make sure arrow is Black.
4. Drag below to generate autofill list.

Creating Custom List For Autofill

1. File > Option
2. Advanced > Edit Custom Lists

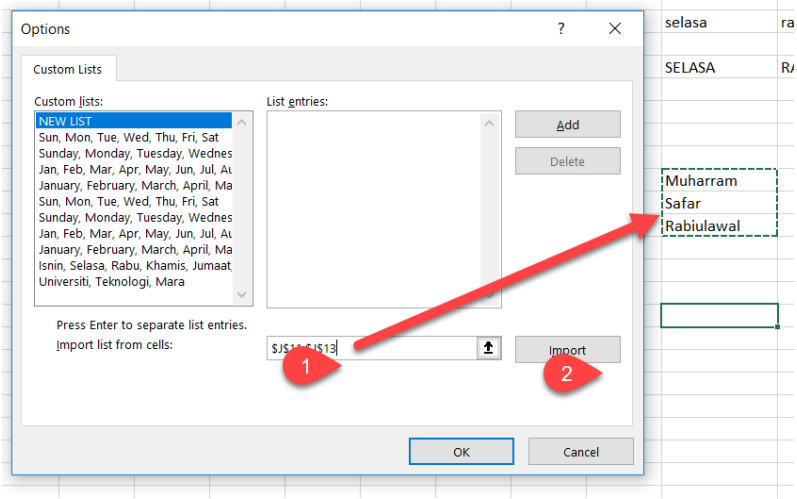


3. Type entries and click Add



4. Test autofill

5. You can also import from available sheet by click Add



Exercise 6

Attending college is an expensive proposition and your resources are limited. To plan for your four-year college career, you have decided to organize your anticipated resources and expenses in a worksheet. The data required to prepare your worksheet is shown below.

College Expenses and Resources					
Expenses	**1st Year**	**2nd Year**	**3rd Year**	**4th Year**	**Total**
Room & Board	3390				
Tuition & Books	4850				
Clothes	540				
Entertainment	635				
Miscellaneous	325				
Total					
Resources	**1st Year**	**2nd Year**	**3rd Year**	**4th Year**	**Total**
Savings	1700				
Parents	2390				
Job	1450				
Financial Aid	4200				
Total					

Instructions

1. Create an Excel worksheet using the numbers in table above.
2. Determine the expenses and resources for the each year by assuming that these figures will increase by 7% per year. Use an Excel formula to create these new figures.
3. Create the proper sums in the rows and columns. Your expense and resource totals should be $43,245.04

3.2 Math and Statistical Functions

3.2.1 SUM( ): SUMMING UP NUMBERS

Here's a SUM( ) formula that adds two cells:

=SUM(A1,A2)

And here's a SUM( ) formula that adds the range of 11 cells from A2 to A12:

=SUM(A2:A12)

3.2.2 AVERAGE

The AVERAGE( ) function uses just one argument: the cell range you want to average:

=AVERAGE(A2:A12)

3.2.3 MAX( ) AND MIN( ): FINDING MAXIMUM AND MINIMUM VALUES

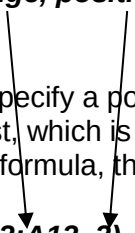
The MAX( ) and MIN( ) functions pick the largest or smallest value out of a series of cells

=MAX(range)

3.2.4 LARGE( ), SMALL( ), AND RANK( ): RANKING YOUR NUMBERS

Both the LARGE( ) and SMALL( ) functions require two arguments: the range you want to search, and the item's position in the list. The list position is where the item would fall if the list were ordered from largest to smallest (for LARGE( )), or from smallest to largest (for SMALL( )). Here's what LARGE( ) looks like:

LARGE(range, position)



For example, if you specify a position of 1 with the LARGE( ) function, then you get the largest item on the list, which is the same result as using MAX( ). If you specify a position of 2, as in the following formula, then you get the second largest value:

=LARGE(A2:A12, 2)

SMALL( ) performs the opposite task by identifying the number that's the smallest, second-smallest, and so on. For example, the following formula gives you the second-smallest number:

=SMALL(A2:A12, 2)

The RANK( ) function requires two parts: the number you're looking for and the range you're searching.

For example, imagine you have a range of cells from A2 to A12 that represent scores on a test. Somewhere in this range is a score of 77. You want to know how this compares to the other marks, so you create the following formula using the RANK( ) function:

=RANK(77, A2:A12)

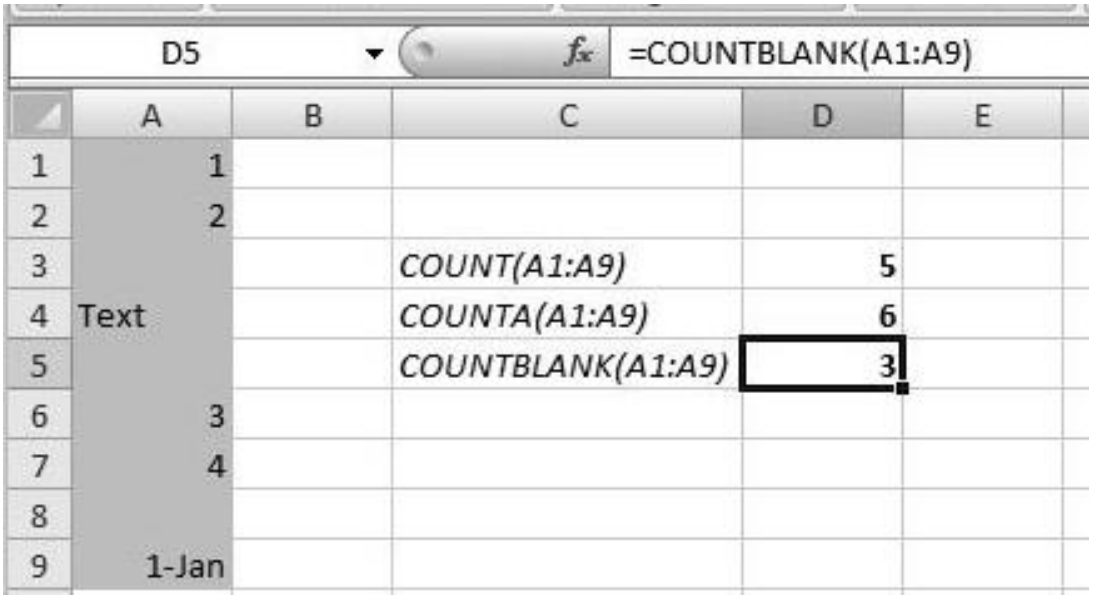
3.2.5 COUNT( ), COUNTA( ), and COUNTBLANK( ): Counting Items in a List

COUNT( ) function counts the number of cells that have numeric input (including dates). The COUNTA( ) function counts cells with any kind of content.

And finally, the COUNTBLANK( ) function takes a single argumenta range of cellsand gives you the number of empty cells in that range

Here's how you could use the COUNT( ) function with a range of cells:

=COUNT(A2:A12)



Exercise 7

Go to sheet **Exe 7-Math** and get the answer

	A	B	C	D	E
1	Weight Record			Analysis	
2					
3	**Student**	**Weight**			**Answer**
4	HADEERAH MIZA BINTI ABD HARIS	78		Average	
5	ANAS BIN SAHARI	49		Max	
6	MUHAMAD NUR IKHWAN BIN CHIK	56		Min	
7	MUHAMMAD AQIM SHIDDIQ BIN ROSLI	49		Second Largest	
8	RIDZAL IZWAN BIN RIDZUAN	52		Third Lowest	
9	ABDUL BARRI BIN ZULKARNAIN	56		Rank 66	
10	ARIF HAIQAL BIN JALILLUDDIN	70			
11	AIMAN FADZLI BIN KHALID @ OTHMAN	68			
12	ZAFIRAH BINTI CHE ALI	59			
13	MUHAMMAD SYAFIQ BIN MAZLAN	57			
14	IKA ADIBAH BINTI MAARUS	74			
15	NUR HIKMAH BINTI PAHROL	58			
16	MOHAMMAD SYAZWAN BIN ISMAIL	66			
17	SUKRI BIN MOHD NASIR	81			
18	AHMAD SOLAHUDDIN BIN SAAD	71			
19	SITI ZUBAIDAH BINTI BIBIT	54			

Write the formula

	Answer	Formula
Average		
Max		
Min		
Second Largest		
Third Lowest		
Rank 66		

3.5 Count Item

1	HM111 Weight Survey								
2									
3	78	57	67	57	66	62	57	47	49
4	49	68	65	74	69	50	51	65	64
5	56	58	84	58	65	54	44	84	45
6	49	56	52	66	48	55	65	57	69
7	52	87	53	81	72	56	48	61	57
8	56	45	71	71	81	59	49	60	50
9	70	74	59	54	50	74	51	53	71
10	68	71	65	60	57	84	58	52	72
11	59	68	64	63	55	54	59	57	56

3.5.2 COUNT

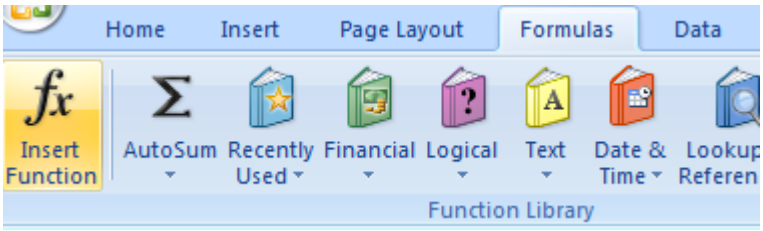
The COUNT function counts the number of cells that contain numbers, and counts numbers within the list of arguments. Example : count the numbers in the range

=COUNT (A3:i11)

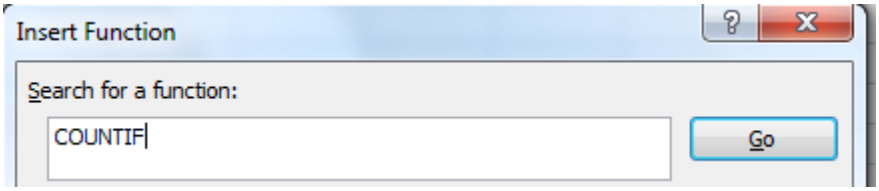
3.5.3 COUNTIF

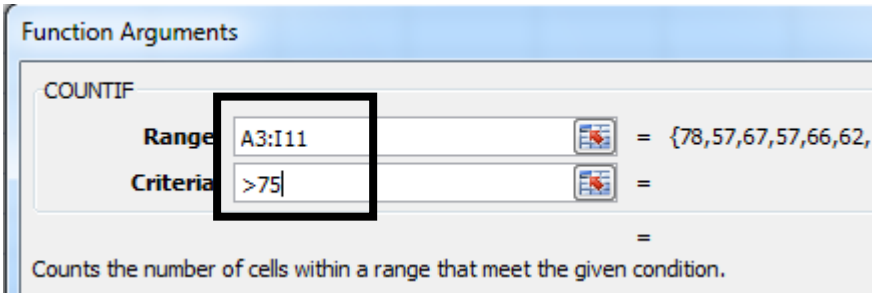
The **COUNTIF** function counts the number of cells within a range that meet a single criterion that you specify

=COUNTIF(A3:i11,"55")



Find COUNTIF function >go and select COUNTIF





3.5.3 FREQUENCY

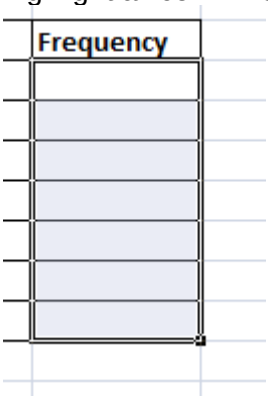
Calculates how often values occur within a range of values, and then returns a vertical array of numbers. For example, use FREQUENCY to count the number of test scores that fall within ranges of scores. Because FREQUENCY returns an array, it must be entered as an array formula.

FREQUENCY(data_array,bins_array)

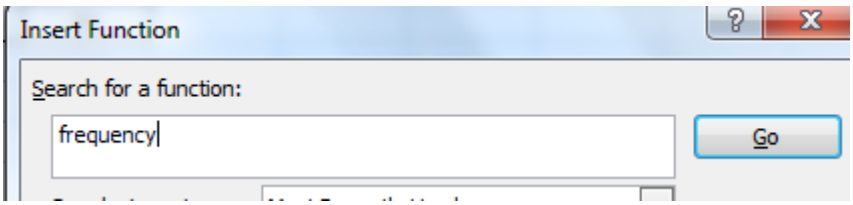
1. Add bin to your worksheet

14	FREQUENCY		
15			
16	**Range**	**Bin**	**Frequency**
17	90-100		
18	80-89		
19	70-79		
20	60-69		
21	50-59		
22	40-49		
23	30-39		

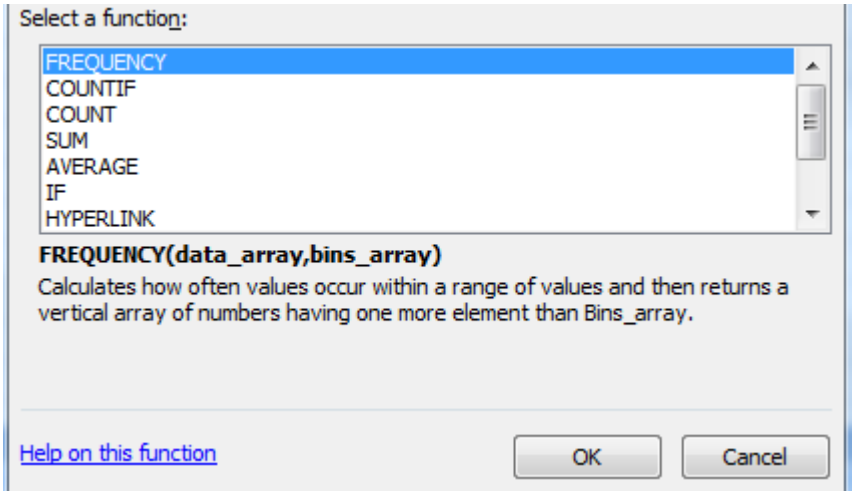
2. Highlight all cell in frequency



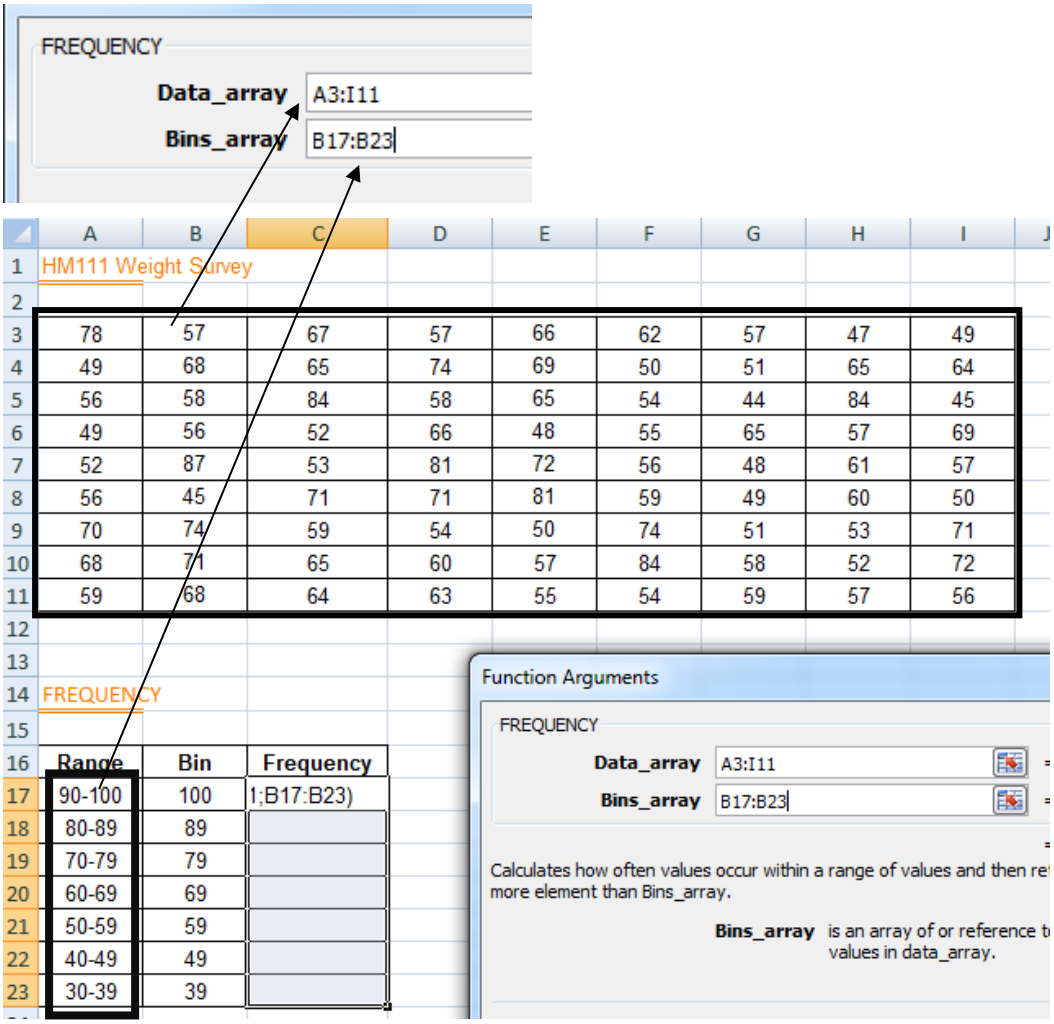
3. Insert Function > type frequency and click go



4. Select frequency function and click OK



5. Insert cell range for type of data array and bin array



6. PRESS **CTRL+SHIFT+ENTER**

7. The result will be updated

Range	Bin	Frequency
91-100	**100**	0
81-90	**90**	2
71-80	**80**	2
61-70	**70**	3
51-60	**60**	22
41-50	**50**	12
31-40	**40**	1

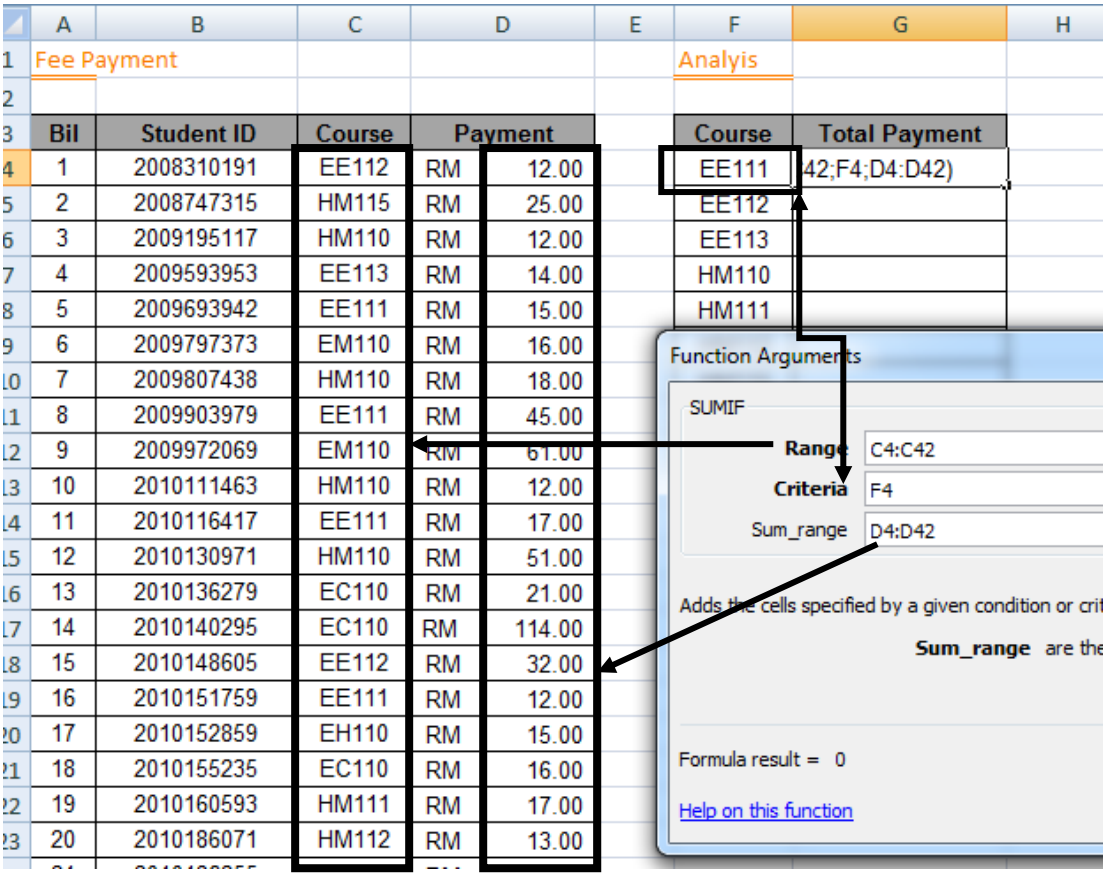
3.5.4 SUMIF

The SUMIF function is used to add up the values in cells in a selected range that meet certain criteria.

The syntax for the SUMIF function is:

= SUMIF (Range, Criteria, Sum Range)

Course	Total Payment
EE111	
EE112	
EE113	
HM110	
HM111	
HM112	
HM115	
EM110	
EC110	



4.0 Decision Making

You can compare two values with the following operators. When two values are compared by using these operators, the result is a logical value either TRUE or FALSE.

Comparison operator	Meaning	Example
= (equal sign)	Equal to	A1=B1
> (greater than sign)	Greater than	A1>B1
< (less than sign)	Less than	A1<B1
>= (greater than or equal to sign)	Greater than or equal to	A1>=B1
<= (less than or equal to sign)	Less than or equal to	A1<=B1
<> (not equal to sign)	Not equal to	A1<>B1

4.1 IF FUNCTION

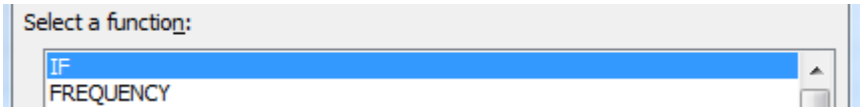
The IF function returns one value if a condition you specify evaluates to TRUE, and another value if that condition evaluates to FALSE. For example, the formula =IF(A1>10,"Over 10","10 or less") returns "Over 10" if A1 is greater than 10, and "10 or less" if A1 is less than or equal to 10.

	A	B	C
1	**NAME**	**Mark**	**Status**
2	**Zikri**	**74**	
3	**Aron**	**67**	
4	**Zaki**	**34**	
5	**Fahmi**	**49**	
6	**Zul**	**80**	
7	**Abe**	**78**	
8			

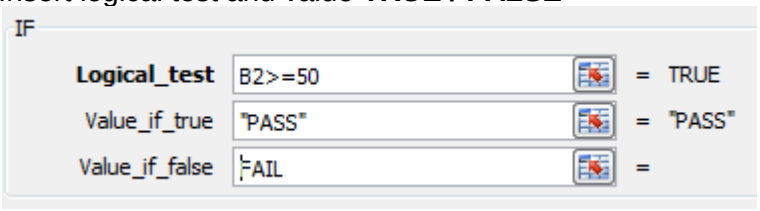
If mark >=50 then status (PASS) , if <50 then status (FAIL)

1. Select IF function

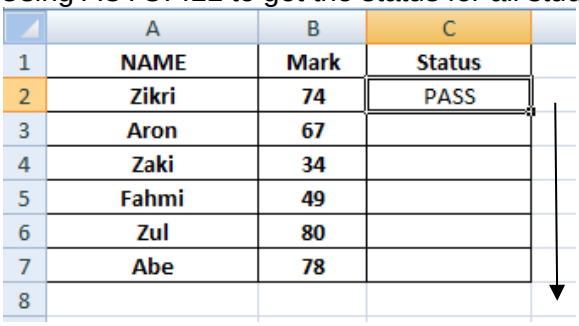
=IF(B2>=50;"PASS";"FAIL")



2. Insert logical test and value **TRUE / FALSE**



3. Using AUTOFILL to get the status for all students (drag to the bottom)



	A	B	C
1	NAME	Mark	Status
2	Zikri	74	PASS
3	Aron	67	
4	Zaki	34	
5	Fahmi	49	
6	Zul	80	
7	Abe	78	
8			

4.2 Multiple IF Function

Consider Student Exam problem. The spreadsheet we created to track student's mark

	A	B	C	D	E
1	**MARKS**				
2	**NAME**	**BEL**	**CSC**	**CITU**	**HTC**
3	**Zikri**	89	75	64	74
4	**Aron**	85	74	95	58
5	**Zaki**	82	66	99	69
6	**Fahmi**	75	50	78	78
7	**Zul**	51	48	81	77
8	**Abe**	66	35	52	92
9					

However, we want to display the following grades as well:

- **A** If the student scores 75 or above
- **B** If the student scores 60 to 74
- **C** If the student scores 47 to 59
- **D** If the student scores 40 to 46
- **F** If the student scores below 39

You are actually combined 4 IF statement in single formula

Condition	IF statement
A	**=IF(B3>=75; "A";**
B	**IF(B3>=60;"B";**
C	**IF(B3>=47; "C";**
D	**IF(B3 >=40;"D";**
F	**"F"))))**

Can you see the pattern? if you have **4 if statements**, there will be **4 brackets** at the end of formula

```
=IF(B3>=75, "A", IF(B3>=60,"B",IF(B3>=47, "C",
IF(B3 >=40,"D", "Fail" ) ) ) )
```

10	GRADE				
11	NAME	BEL	CSC	CITU	HTC
12	Zikri				
13	Aron				
14	Zaki				
15	Fahmi				
16	Zul				
17	Abe				
18					

The result

10	GRADE				
11	NAME	BEL	CSC	CITU	HTC
12	Zikri	A	A	B	B
13	Aron	A	B	A	C
14	Zaki	A	B	A	B
15	Fahmi	A	C	A	A
16	Zul	C	C	A	A
17	Abe	B	F	C	A
18					

Using COUNTIF function, please add the following table below

19	CountIF				
20	A	4	1	4	3
21	B	1	2	1	2
22	C	1	2	1	1
23	D	0	0	0	0
24	F	0	1	0	0

=COUNTIF(B12:B17,"A") =COUNTIF(B12:B17,"B")

=COUNTIF(B12:B17,"C")

4.3 VLOOKUP

Use VLOOKUP, one of the lookup and reference functions, when you need to find things in a table or a range by row. For example, look up a price of an automotive part by the part number.

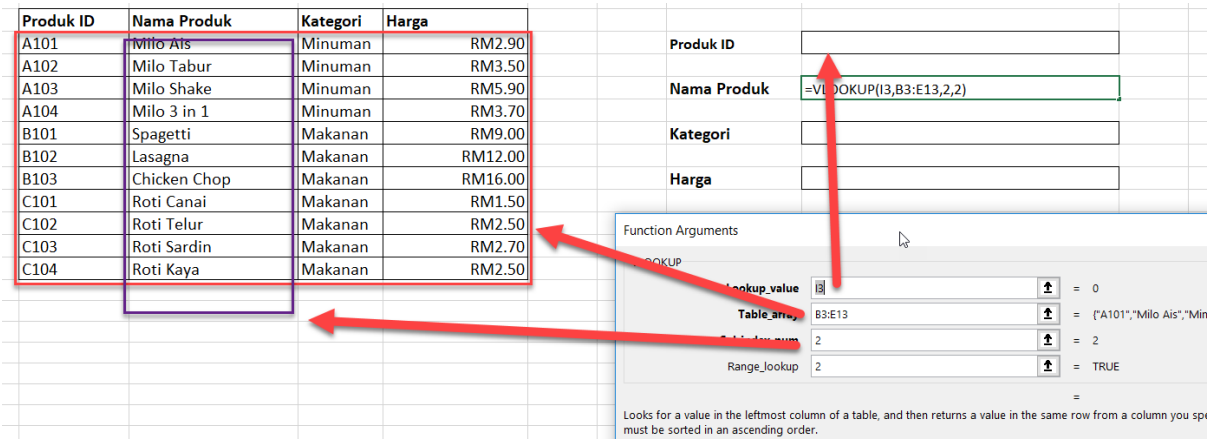
=VLOOKUP(value, table, column) // default, approximate match

=VLOOKUP(value, table, column, **TRUE**) // approximate match

=VLOOKUP(value, table, column, **FALSE**) // exact match

Produk ID	Nama Produk	Kategori	Harga
A101	Milo Ais	Minuman	RM2.90
A102	Milo Tabur	Minuman	RM3.50
A103	[illegible]	Minuman	RM5.90
A104	Milo 3 in 1	Minuman	RM3.70
B101	Spagetti	Makanan	RM9.00
B102	Lasagna	Makanan	RM12.00
B103	Chicken Chop	Makanan	RM16.00
C101	Roti Canai	Makanan	RM1.50
C102	Roti Telur	Makanan	RM2.50
C103	Roti Sardin	Makanan	RM2.70
C104	Roti Kaya	Makanan	RM2.50

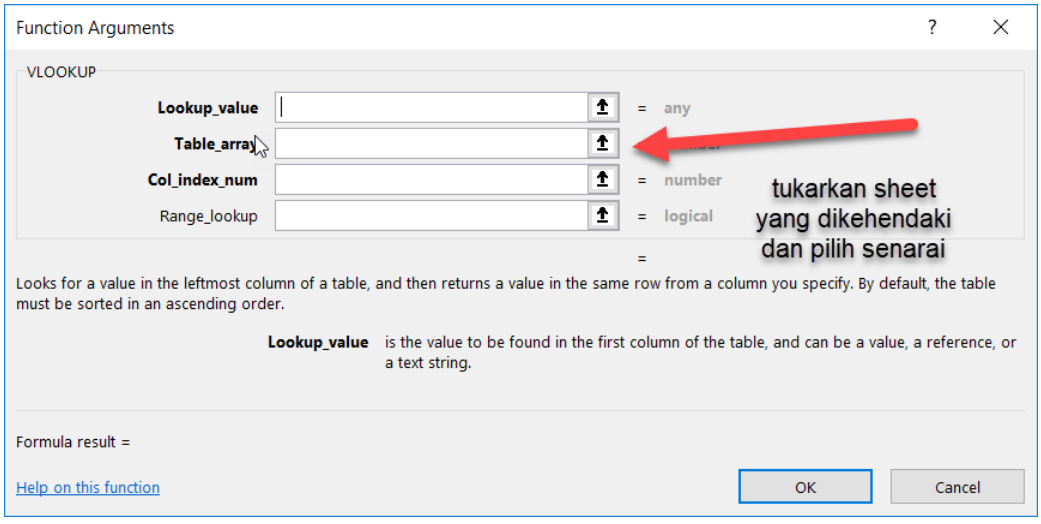
=VLOOKUP(I3,B3:E13,2,FALSE) - COLUMN NO 2

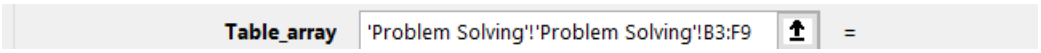


VLOOKUP From Another Sheet

=VLOOKUP(lookup,sheet!range,column,match)

Change sheet in Table Array

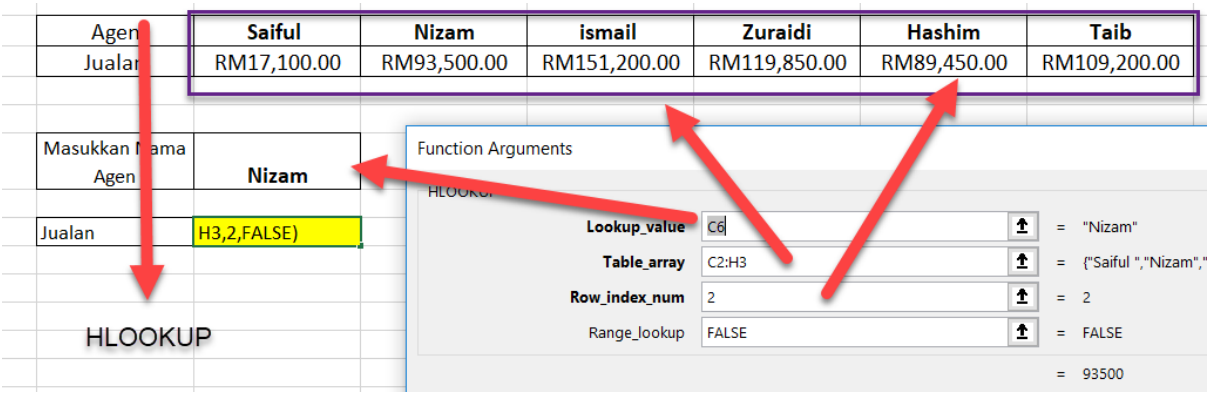




Press ENTER after selecting Sheet & Data Set

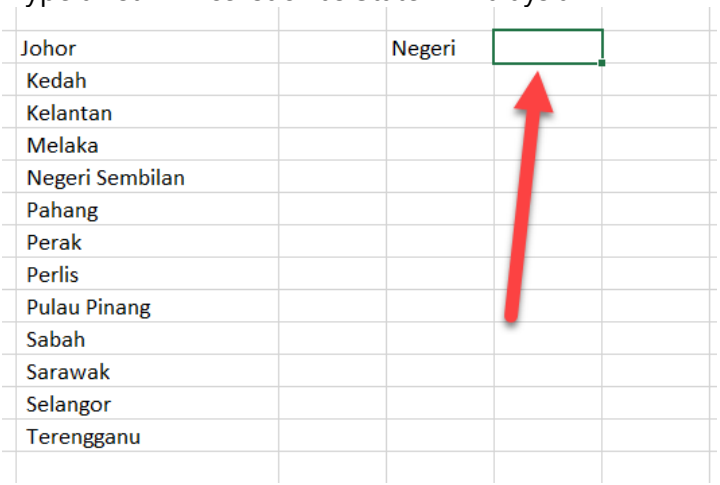
Excel HLOOKUP Function

HLOOKUP is an Excel function to lookup and retrieve data from a specific row in table. The "H" in HLOOKUP stands for "horizontal", where lookup values appear in the first row of the table, moving horizontally to the right. HLOOKUP supports approximate and exact matching, and wildcards (* ?) for finding partial matches.

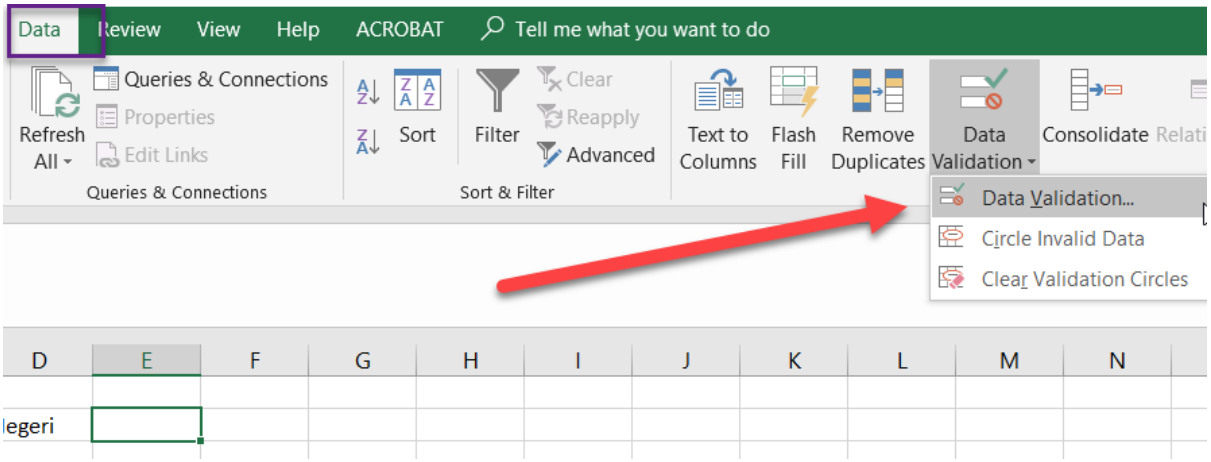


4.4 Create Form with Drop Down List

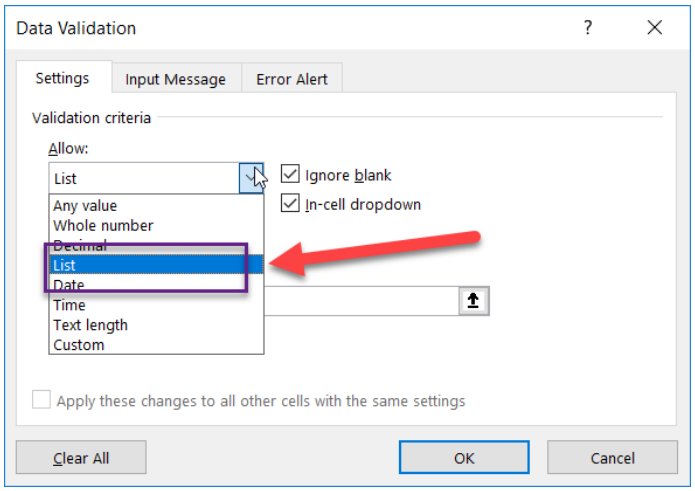
1. Go to sheet FORM LIST
2. Type a list in Excel such as State in Malaysia



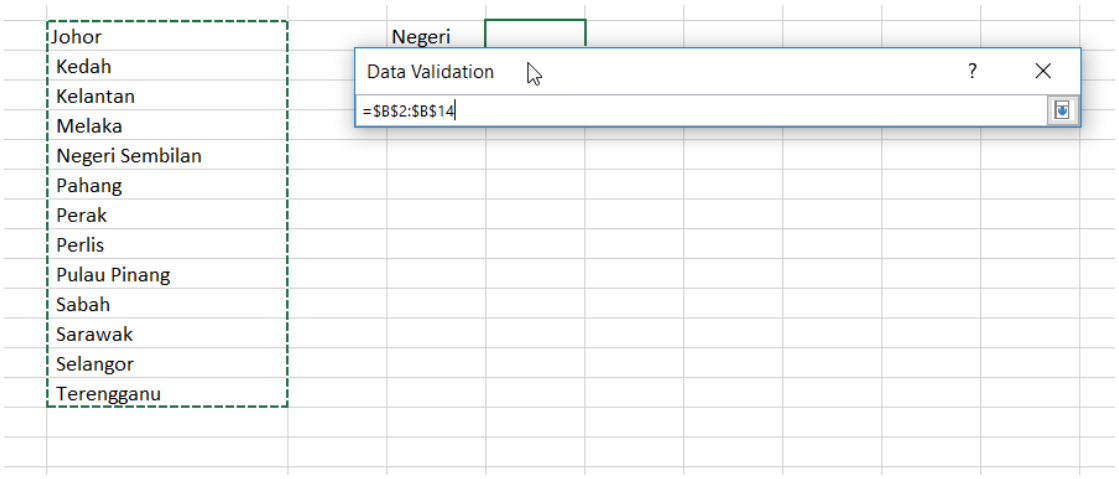
3. Select E2 cell.
4. Data > Data Validation



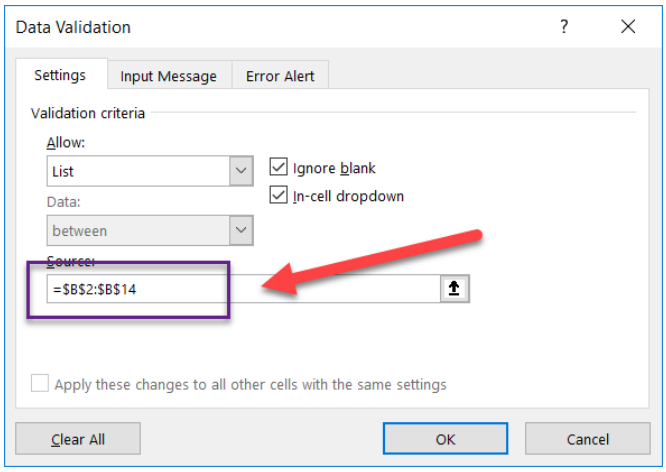
5. Select List



6. Click Source > Select All State in the sheet.



7. Press OK

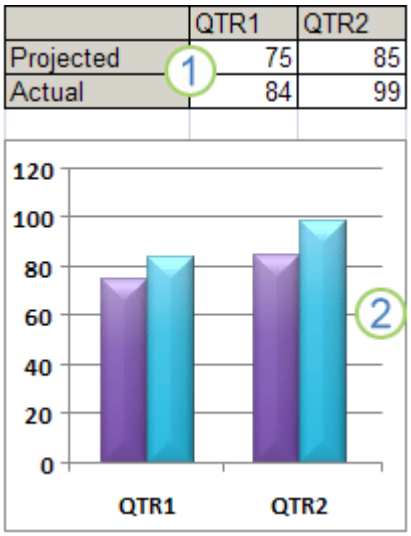


8. Check the list

5.0 Chart

Charts are used to display series of numeric data in a graphical format to make it easier to understand large quantities of data and the relationship between different series of data.

To create a chart in Excel, you start by entering the numeric data for the chart on a worksheet . Then you can plot that data into a chart by selecting the chart type that you want to use on the Office Fluent Ribbon (Insert tab, Charts group).



1 Worksheet data

2 Chart created from worksheet data

Excel supports many types of charts to help you display data in ways that are meaningful to your audience. When you create a chart or change an existing chart, you can select from a variety of chart types (such as a column chart or a pie chart) and their subtypes (such as a stacked column chart or a pie in 3-D chart). You can also create a combination chart by using more than one chart type in your chart.

5.1 Getting To Know The Elements Of A Chart

1 The chart area of the chart.

2 The plot area (*plot area: In a 2-D chart, the area bounded by the axes, including all data series. In a 3-D chart, the area bounded by the axes, including the data series, category names, tick-mark labels, and axis titles*.) of the chart.

3 The data points (*data points: Individual values plotted in a chart and represented by bars, columns, lines, pie or doughnut slices, dots, and various other shapes called data markers. Data markers of the same color constitute a data series.*) of the data series (data series: Related data points that are plotted in a chart. Each data series in a chart has a unique color or pattern and is represented in the chart legend. You can plot one or more data series in a chart. Pie charts have only one data series.) that are plotted in the chart.

4 The horizontal (category) and vertical (value) axis (axis: A line bordering the chart plot area used as a frame of reference for measurement. The y axis is usually the vertical axis and contains data. The x-axis is usually the horizontal axis and contains categories.) along which the data is plotted in the chart.

5 The legend (l*egend: A box that identifies the patterns or colors that are assigned to the data series or categories in a chart*.) of the chart.

6 A chart and axis title (*titles in charts: Descriptive text that is automatically aligned to an axis or centered at the top of a chart*.) that you can use in the chart.

7 A data label (*data label: A label that provides additional information about a data marker, which represents a single data point or value that originates from a datasheet cell.*) that you can use to identify the details of a data point in a data series.

TRY THIS

1. Create the table below and convert it into chart at your own choice

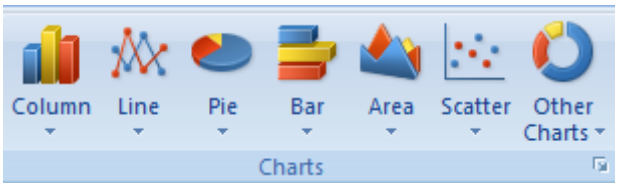
Country	Gold	Silver	Bronze
China	38	45	71
USA	34	56	55
Korea	28	28	23
Germany	28	21	13
France	26	35	55

2. Highlight (select) country and medal tally

China	38	45	71
USA	34	56	55
Korea	28	28	23
Germany	28	21	13
France	26	35	55

3. On the Insert tab, in the Charts group, do one of the following:

- Click the chart type, and then click a chart subtype that you want to use.
- To see all available chart types, click a chart type, and then click All Chart Types to display the Insert Chart dialog box, click the arrows to scroll through all available chart types and chart subtypes, and then click the ones that you want to use.



What you can do on the chart

1. Change the layout,format and title of chart elements manually