EXCEL FOR BEGINNER

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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

	А	В	С	D	E	F	G	Н
1			М					
2		U					W	
3				Р				в
4		1				PP		
5								
6		Т						
7								

	Cell Number		Cell Number
U		Р	
I		PP	
Т		W	
Μ		В	

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 I	nsert			
		А			А		
	1	First Row		1	First Row		
	2	Second Row		2			
	З			3	Second Row		
				4			
			_			<i>v</i>	
		А			А	E	3
	1	Column A	Colur	1	Column A		jc
	-			2			

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

16 Sheet1 Sheet2 Sheet2	neet3 / 🔁
Ready	[Insert Worksheet (Shift+F11)]
<u>۲</u>	
31	
32 <u>Insert</u>	
33 Delete	
34 Rename	
35 Move or Copy 36 View Code	
37 38 Protect Sheet	
39 Tab Color	
40 <u>H</u> ide	
41 <u>U</u> nhide	
42 Select All Sheets	
H + + H Sheet1 / Sheet2 / Sheet3 / 🖏	

Exercise 3

Create worksheet as follow

•	HM1101A 🖌	HM1101B	HM1101C	(HM1113A)	HM1113B	

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

				_	
5		X	Cut		
6		b	 ору		
7	6	2	<u>P</u> aste		
8			Paste Special		
9			<u>I</u> nsert Delete		
10			Clear Co <u>n</u> tents		
11			Filt <u>e</u> r S <u>o</u> rt	*	
12	1	<u>_</u>	Insert Co <u>m</u> ment		
13	Ľ	2	Format Cells		
14			Pic <u>k</u> From Drop-down List		

Number Alignment Font Border Fill Protection Category: General Number Sample Number Currency General format cells have no specific number format. Date Time Percentage General format cells have no specific number format.	Number Alignment Font Border Fill Protection Category: General Sample Number Currency Accounting General format cells have no specific number format. Date Time Percentage Fraction Scientific Text Special Custom	Format Cells				2 X
Fraction Scientific Text Special	Custom	Number Alignme Category: General Number Currency Accounting Date Time Percentage Fraction Scientific Text Special	ent Font Border	Fill Protec	tion number format.	

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)



	Filter	Select *	
Edi	A↓	Sort Oldest to Newest	
	Ă↑	Sort Newest to Oldest	≯

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
1	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!!

Α	В	С	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

	А	В	С		
1	MY PART TIME BUSINESS				

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

	А	В	
1	MY PA	ART TIME BUSINE	ESS
2			
3		Monday	
	Maggi Kari		

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:

	B 3	- (*	f_{x}	Monday
	А		В	
1		MY PART	TIME BUS	SINESS
2				
3			Monday	
	Maggi Kari	<u> </u>		_γ

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: \

	B3		(•	∫ _∞ Mond	ау			
	А	В	С	D	E	F	G	Н
1								
2								
3		Monday						+
4							Sunday	1
5								_

	А	В	С	D	E	F	G	Н	
1	MY PART T	IME BUSINE	ESS						
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								

7. Finalize the table as shown below

	А	В	С
1	MY PART T	IME BUSINE	ESS
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	= <mark>B4+</mark> B5+B	6+B7+B8
11			

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

Get the total from cell I4 by entering formula =i4

15		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						
22							

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

9	Advanced	General
	Customize Ribbon	Ignore other applications that use Dynamic Data Exchange (DDE)
1	Ouick Access Toolbar	Ask to update automatic links
		Show add-in user interface errors
	Add-ins	✓ Scale content for <u>A</u> 4 or 8.5 x 11" paper sizes
	Trust Center	At startup, open all fi <u>l</u> es in:
		Web Options
		✓ Enable multi-threaded processing
		Create lists for use in sorts and fill sequences: Edit Custom Lists

3. Type entries and click Add

ustom Lists		?	×
Custom Lists			
Custom lists: NEW LIST Sun, Mon, Tue, Wed, Thu, Fri, Sat Sunday, Monday, Tuesday, Wednes Jan, Feb, Mar, Apr, May, Jun, Jul, Au January, February, March, April, Ma Sun, Mon, Tue, Wed, Thu, Fri, Sat Sunday, Monday, Tuesday, Wednes Jan, Feb, Mar, Apr, May, Jun, Jul, Au January, February, March, April, Ma	List <u>entries:</u> Isnin Selasa Rabu Khamis Jumaat Sabtu Ahad	<u>A</u> dd Delete	
Press Enter to separate list entrie Import list from cells:	5.	l <u>m</u> port	
	ОК	Cance	ł

- 4. Test autofill
- 5. You can also import from available sheet by click Add



MICROSOFT EXCEL BEGINNER

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:



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:

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:

	D5		- (°	f_{x}	=COUNT	BLANK(A1:	:A9)
4	А	В		С		D	E
1	1	L					
2	2	2					
3			COUN	T(A1:A9)	5	
4	Text		COUN	TA(A1:A	9)	6	
5			COUN	TBLANK	(A1:A9)	3	
6	3	3				Ī	
7	4	1					
8					Ŭ.		
9	1-Jar	1					

=COUNT(A2:A12)

Exercise 7

Go to sheet Exe 7-Math and get the answer

	A	В	С	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		
Мах		
Min		
Second Largest		
Third Lowest		
Rank 66		

3.5 Count Item

1	HM111 We	eight Surve	≥y						
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 anguments. 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

Insert Function	8 X
Search for a function:	
COUNTIF	Go

ſ	Function Argument	ts			
	COUNTIF				
	Range	A3:I11	E	=	{78,57,67,57,66,62,
	Criteria	>75	E	=	
				=	
	Counts the number	of cells within a	range that meet the given	cor	ndition.

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	FREQUENC	CY	
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

Frequency	

3. Insert Function > type frequency and click go

Insert Function	? ×
Search for a function:	
frequency	Go

4. Select frequency function and click OK

Select a function:	
FREQUENCY	×
COUNTIF	
COUNT	=
SUM	
AVERAGE	
	-
HYPERLINK	· ·
FREQUENCY(data_array,bins_array)	
Calculates how often values occur within a vertical array of numbers having one more	range of values and then returns a element than Bins_array.
Help on this function	OK Cancel

FREQUENCY Data_array A3:I11 B17:B23 Bins_array В G Н І І Α D F E HM111 Weight S irvev 7/1 Function Arguments FREQUEN FREQUENCY Range Bin Frequency Data_array A3:I11 90-100 1;B17:B23) Bins_array B17:B23 80-89 70-79 Calculates how often values occur within a range of values and then rei 60-69 more element than Bins_array. 50-59 Bins_array is an array of or reference to values in data_array. 40-49 30-39

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

6. PRESS CTRL+SHIFT+ENTER

7. The result will be updated

12	Range	Bin	Frequency
13	91-100	100	0
14	81-90	90	2
15	71-80	80	2
16	61-70	70	3
17	51-60	60	22
18	41-50	50	12
19	31-40	40	1
20			

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		
EC110		

4	Α	В	С		D	E	F		G	Н
1	Fee P	ayment					Analyis			
2										
3	Bil	Student ID	Course	Pa	yment	_	Course	Tota	al Payment	
4	1	2008310191	EE112	RM	12.00		EE111	42;F4	;D4:D42)	
5	2	2008747315	HM115	RM	25.00		EE112			
6	3	2009195117	HM110	RM	12.00		EE113			
7	4	2009593953	EE113	RM	14.00		HM110			
8	5	2009693942	EE111	RM	15.00		HM111			
9	6	2009797373	EM110	RM	16.00	ſ	Function Ara	uments		
0	7	2009807438	HM110	RM	18.00					
1	8	2009903979	EE111	RM	45.00		SUMIF			
2	9	2009972069	EM110	RM	61.00		F	Range	C4:C42	
.3	10	2010111463	HM110	RM	12.00		Ci	riteria	F4	
4	11	2010116417	EE111	RM	17.00		Sum	range	D4:D42	
.5	12	2010130971	HM110	RM	51.00			/		
.6	13	2010136279	EC110	RM	21.00		Adds the cells	s specifie	d by a given con	dition or crit
.7	14	2010140295	EC110	RM	114.00				6	
.8	15	2010148605	EE112	RM	32.00				Sum_ran	ge are the
9	16	2010151759	EE111	RM	12.00					
20	17	2010152859	EH110	RM	15.00		_			
21	18	2010155235	EC110	RM	16.00		Formula resu	t = 0		
22	19	2010160593	HM111	RM	17.00		Help on this f	unction		
23	20	2010186071	HM112	RM	13.00					
		0040400055								

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< td=""></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.

	А	В	С	
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)

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

1. Select IF function

S	elect a functio <u>n</u> :	
	IF	
	FREQUENCY	

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

TE				
11				
	Logical_test	B2>=50] =	TRUE
	Value_if_true	"PASS"] =	"PASS"
	Value_if_false	FAIL] =	

being retror ter te get the status for an stat								
	А	В	С					
1	NAME	Mark	Status					
2	Zikri	74	PASS	ι.				
3	Aron	67						
4	Zaki	34						
5	Fahmi	49						
6	Zul	80						
7	Abe	78						
8				▼				

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

4.2 Multiple IF Function

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

	A	В	С	D	E	
1	MARKS					
2	NAME	BEL	CSC	CITU	HTC	
3	Zikri	89	75	64	74	
4	Aron	85	74	95	<mark>58</mark>	
5	Zaki	82	66	99	<mark>69</mark>	
6	Fahmi	75	50	78	78	
7	Zul	51	48	81	77	
8	Abe	66	35	52	92	
0						

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";	
В	IF(B3>=60;"B";	
С	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					
10						

The result

10	GRADE					
11	NAME	BEL	CSC	CITU	HTC	
12	Zikri	Α	А	В	В	
13	Aron	Α	В	А	C	
14	Zaki	Α	В	Α	В	
15	Fahmi	Α	С	А	А	
16	Zul	С	С	А	А	
17	Abe	В	F	С	А	
18						



Using COUNTIF function, please add the following table below

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	Mile Chales	Minuman V	LOOKUPRM5.90
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

Produk ID	Nama Produk	Kategori	Harga							
A101	Ivilio Ais	Minuman	RM2.90		Produk ID					
A102	Milo Tabur	Minuman	RM3.50							
A103	Milo Shake	Minuman	RM5.90		Nama Produk	=VI	OKUP(I3,B3:E13,2,2)			
A104	Milo 3 in 1	Minuman	RM3.70							
B101	Spagetti	Makanan	RM9.00		Kategori					
B102	Lasagna	Makanan	RM12.00							
B103	Chicken Chop	Makanan	RM16.00		Harga					
C101	Roti Canai	Makanan	RM1.50							
C102	Roti Telur	Makanan	RM2.50	Functio	n Arguments					
C103	Roti Sardin	Makanan	RM2.70				3			
C104	Roti Kaya	Makanan	RM2.50		UP					
					lookup_value	13	•	Î	=	0
	L				Table_arra,	B3	:E13	Î	=	{"A101","Milo Ais","Mir
				-	a tradeu aug	2		Î	=	2
				_	Range_lookup	2		Î	=	TRUE
				Looks fo	r a value in the leftmost o	olumn	of a table, and then returns a valu	ie in the same	= e rov	v from a column you sp

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

VLOOKUP From Another Sheet

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

Change sheet in Table Array

Function Arguments	?	\times
VLOOKUP		
Lookup_value	1 = any	
Table_array	1	
Col_index_num	= number tukarkan sheet	
Range_lookup	= logical yang dikehendaki	
	₌ dan pilih senarai	
must be sorted in an ascending order.	,,,,	
Lookup_v	value is the value to be found in the first column of the table, and can be a value, a refer a text string.	rence, or
Lookup_v Formula result =	value is the value to be found in the first column of the table, and can be a value, a refer a text string.	rence, or
Lookup_v Formula result = Help on this function	value is the value to be found in the first column of the table, and can be a value, a refer a text string. OK Can	rence, or ncel
Lookup_v Formula result = Help on this function	value is the value to be found in the first column of the table, and can be a value, a refer a text string. OK Can	ncel

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.

Agen	Saiful	Nizam	ismail	Zuraidi	Hashim	Taib
Jualar	RM17,100.00	RM93,500.00	RM151,200.00	RM119,850.00	RM89,450.00	RM109,200.00
	L					
Masukkan Lama	Nizam	Function Argu	ments			
, Ben		HLOUND				
Jualan	H3,2,FALSE)		Lookup_value	C6	1	= "Nizam"
			Table_array	С2:Н3	1	= {"Saiful ","Nizam",
•			Row_index_num	2	1	= 2
HLOOK	JP		Range_lookup	FALSE	1	= FALSE
						= 93500

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

Data	Review	View	Help	ACROBAT	٦٩	ell me what you	want to d	0					
	Querie	es & Conr	nections		Y	Clear Reapply			⇒		0		
Refresh All -	Edit Li	nks		Z↓ Sort	Filter	V Advanced	Text to Columns	Flash Fill	Remove Duplicates	C Valic)ata lation •	Consolidate	Relati
	Queries & C	onnection	s		Sort & F	ilter				=	Data <u>\</u>	/alidation	1
										ø	C <u>i</u> rcle	Invalid Data	L
					-					R	Clea <u>r</u> \	Validation Ci	rcles
					_								

D	E	F	G	Н	1	J	К	L	М	N	
legeri											

5. Select List

Data Validation	?	×
Settings Input Message Error Alert		
Validation criteria <u>A</u> llow:		
List Ignore <u>b</u> lank Any value In-cell dropdown		
Whole number Decimal List		
Time 1		
Apply these changes to all other cells with the same settings		
<u>C</u> lear All	Cance	ł

Johor	Negeri				
Kedah	Data Validation	? ×			
Kelantan	=\$B\$2:\$B\$14				
Melaka					
Negeri Sembilan					
Pahang					
Perak					
Perlis					
Pulau Pinang					
Sabah					
Sarawak					
Selangor					
Terengganu					

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

7. Press OK

Data Validation	?	×
Settings Input Message Error Alert Validation criteria Allow:		
List Ignore blank Data: In-cell dropdown between		
<u>Source:</u> =\$8\$2:\$8\$14		
Apply these changes to all other cells with the same settings		
<u>C</u> lear All OK	Cance	el

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

2Chart 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.

2The 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.

5The legend (legend: 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.

	\mathcal{N}	٢	=		:÷.:	O
Column	Line	Pie	Bar	Area	Scatter	Other
			*	×	*	Charts 👻
		(Charts			G.

What you can do on the chart

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







