Computer and Artificial Intelligence Principles

Computing is not about computers any more. It is about living

Al-Zahra University, Department of Pharmacy

COMPUTER AND ARTIFICIAL INTELLIGENCE PRINCIPLES

First Stage

ASS .Lec : Kawther AL.bayati

Introduction to the computer
Computer Components

Presentation Software
Presentation Software (Cont.):

Operating system and interface Graphical user
Operating System and Graphical User Interface GUI(Cont.):

Word Processing:
Word Processing (Cont.):

the Spread Sheet:
Spread Sheet (Cont.):

Introduction to Internet and Web Browsers
Introduction to Internet and Web Browsers software's, (Cont.):
Communications and Emails:

Introduction to Cloud Computing and Services

Introduction to the computer

Computer and ICT Basics

Important terms

Data: is a set of symbols, numbers and images that are entered for processing.

Processing: is the process of performing mathematical operations (addition, subtraction, multiplication, division) and logical operations (. . .) on data.

Information: The results you get from the data processing process.

Basic computer operations

The basic operations of the computer are based on the following:

Data Input
Data is entered by the computer user through a set of devices called input units.

Data Processing
Perform arithmetic and logical operations on data entered through input units.
Obtain information.

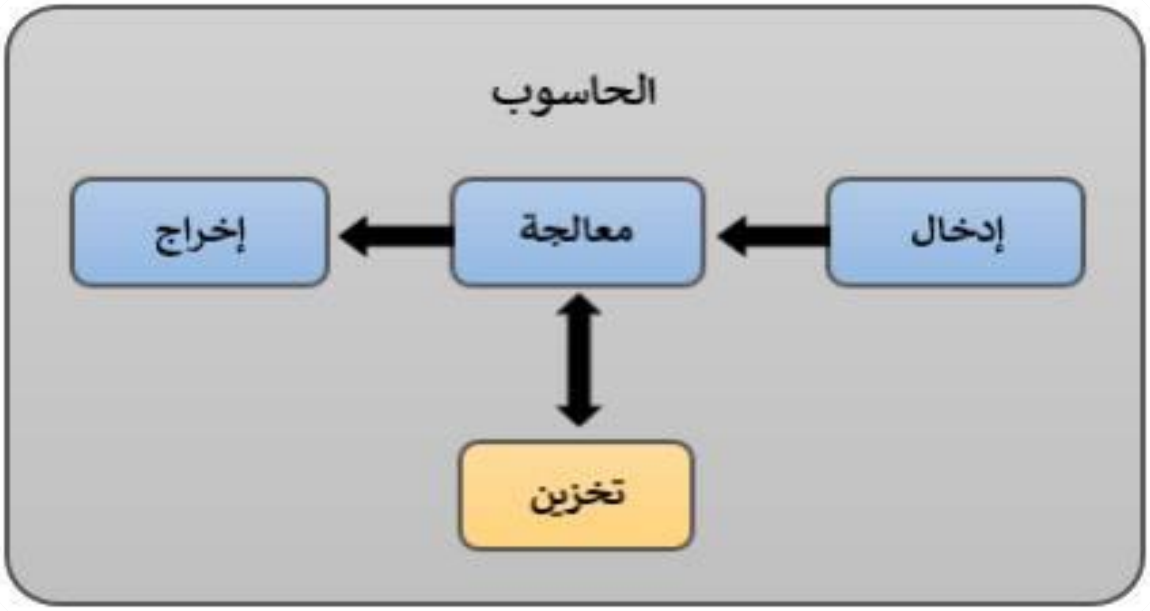
Data Output:
It is the process of displaying the information we obtained as a result of processing the input data.

Data Storage:
It is the process of saving and storing data on different storage units.

Computer basics

Basic computer operations

The computer receives, processes, stores and displays data to the user as visual information...



Definition of computer Computer

It is an electrical and electronic device whose function is to receive, process, store data and display its results to the user.

Computer components

The computer consists of two parts:

Hard Ware components

Soft Ware Components

First: Hard Ware components.

They are the tangible components, and the physical entity is composed of many components. Most of these components are (internal), i.e. placed inside the computer case (system unit). However, some of these components are connected externally using the ports that are located behind the system case. These components are called Peripheral Devices, and they consist of:

Material components of:-

Input Unit

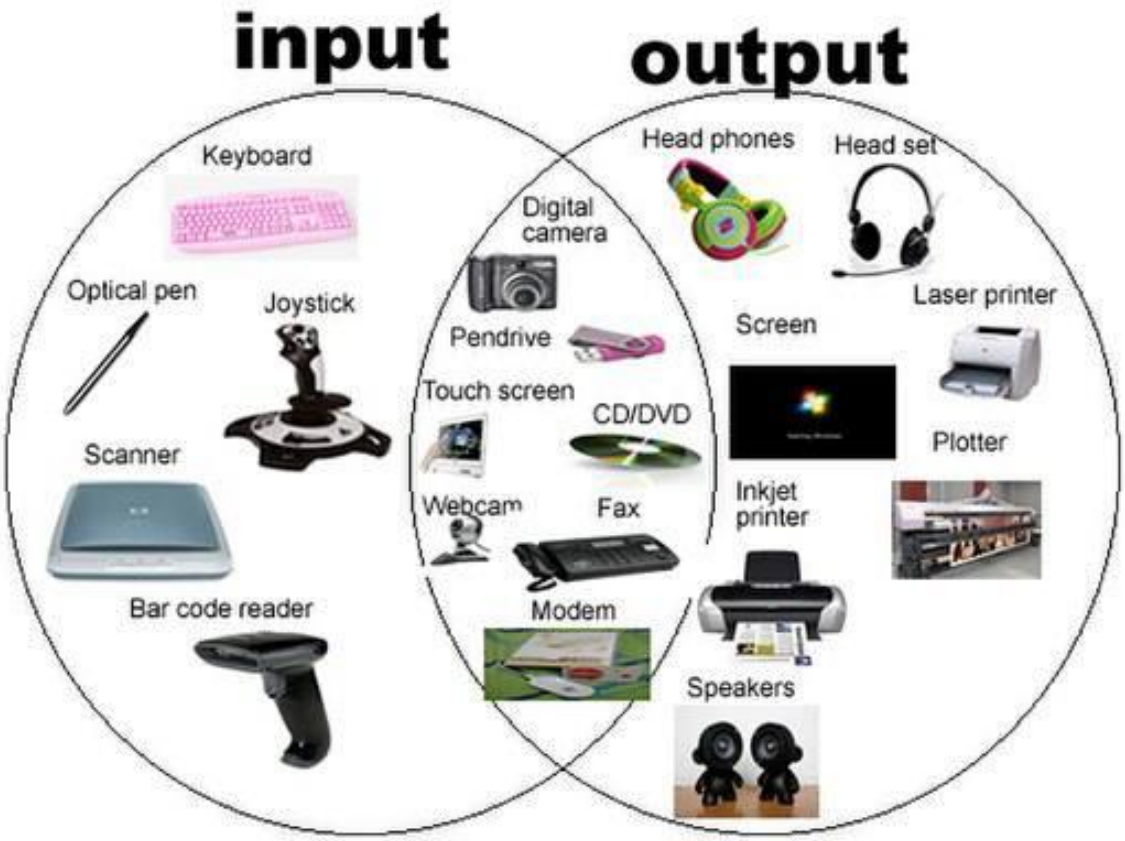
It is all the components or peripheral devices that are used to enter data into the computer.

- Key Board
- Mouse continent
- Scanner
- Microphone
- Joy Stick
- Light Pen
- Web Camera
- Digital Camera
- Magnetic Card

Output Unit

It is all the components through which the results are displayed to the user, whether on the screen or printed.

- Monitor
- Flat screen
- Printer
- Plotter
- Data Show
- Speakers
- Headphone
- Magnetic Card
- Touch Pad



Central Processing Unit

It is the most important unit of all, and data is processed in it. It is the brain of the computer, similar to the brain in humans. It is symbolized by the CPU.

The CPU consists of three main components:

1- Arithmetic Logical Unit (ALU)

It performs arithmetic and logical operations, such as (addition, subtraction, multiplication, and division), for example: 8/5 + 10 =, and logical operations that are implemented in the ALU, such as comparisons that allow the computer to evaluate IF AVG>= 50; PRINT "PASS" (positions, for example:

2- Registers

These are special high-speed storage locations that temporarily store data and information for use by the ALU. The processing unit contains different types of registers, each specialized in storing a specific type of data.

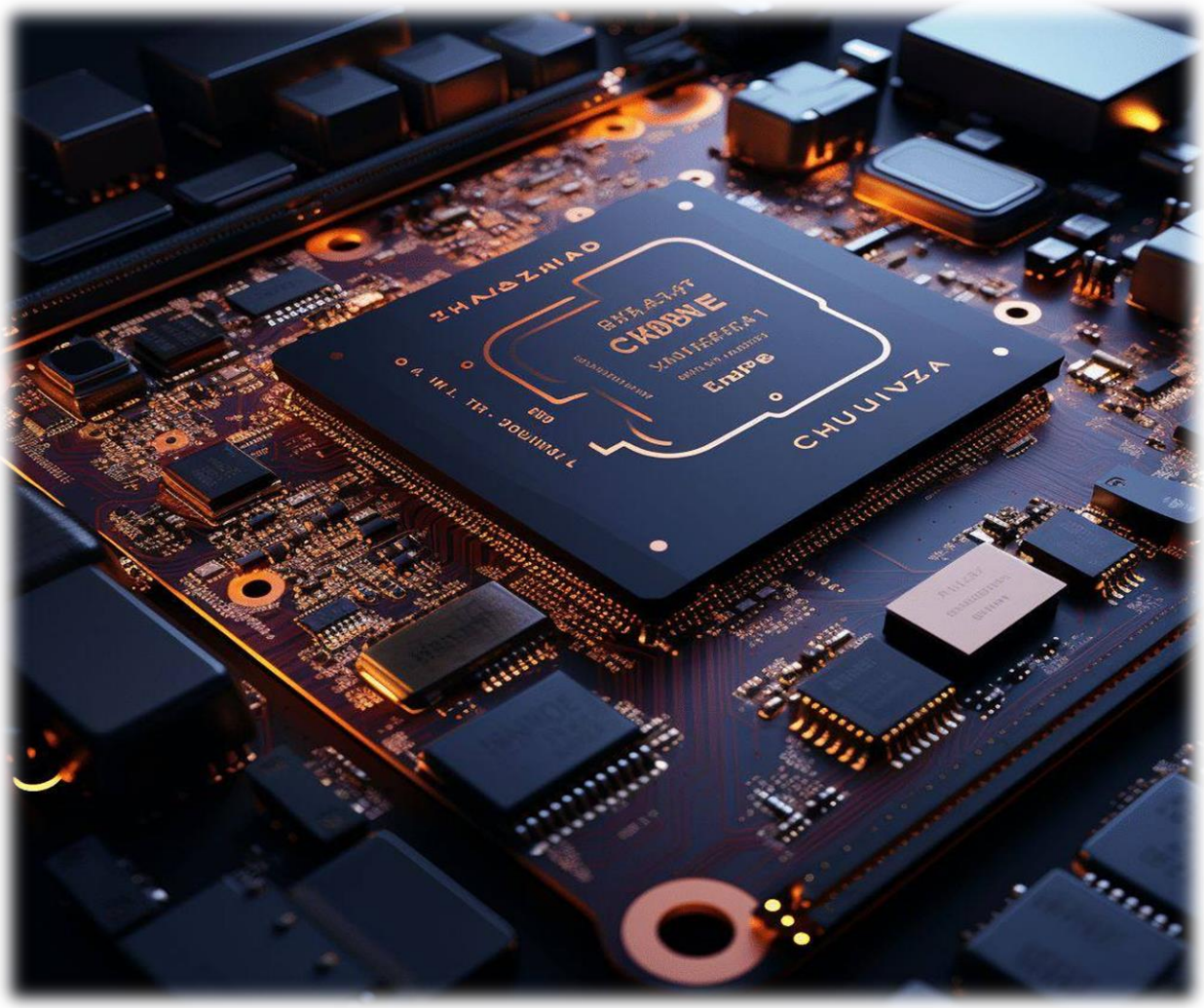
- **3 Control Unit**

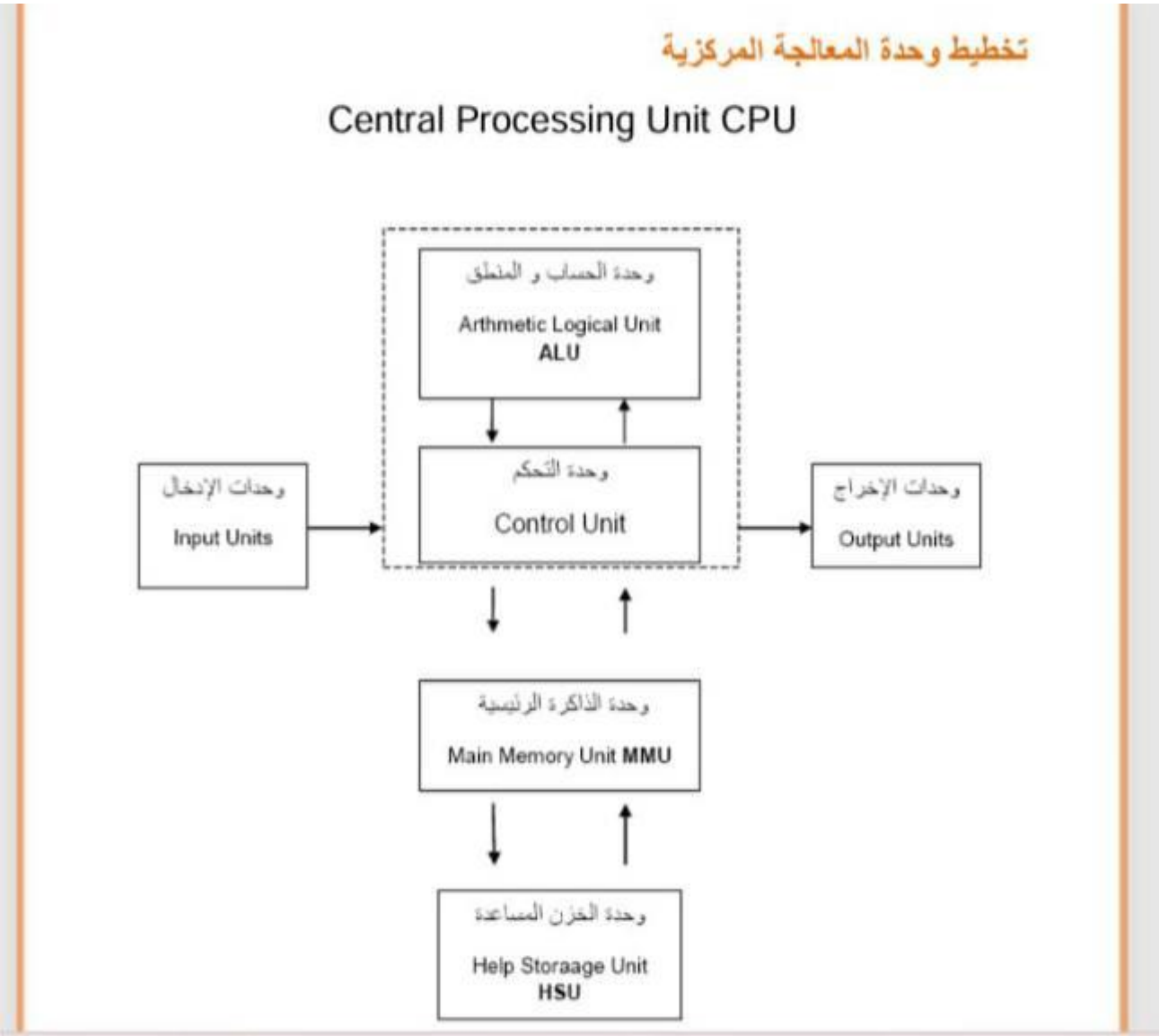
It is a group of circuits responsible for interpreting program instructions and supervising their proper execution inside computer devices. It works on transferring data to and from the ALU, registers, and input/output units, and it also tells about the operations that must be executed.

You can say that the control unit performs the following functions:

- **Read the explanation of the program instructions**
- **Directing processes within the CPU**
- **Controlling the flow of data and instructions to and from main memory**

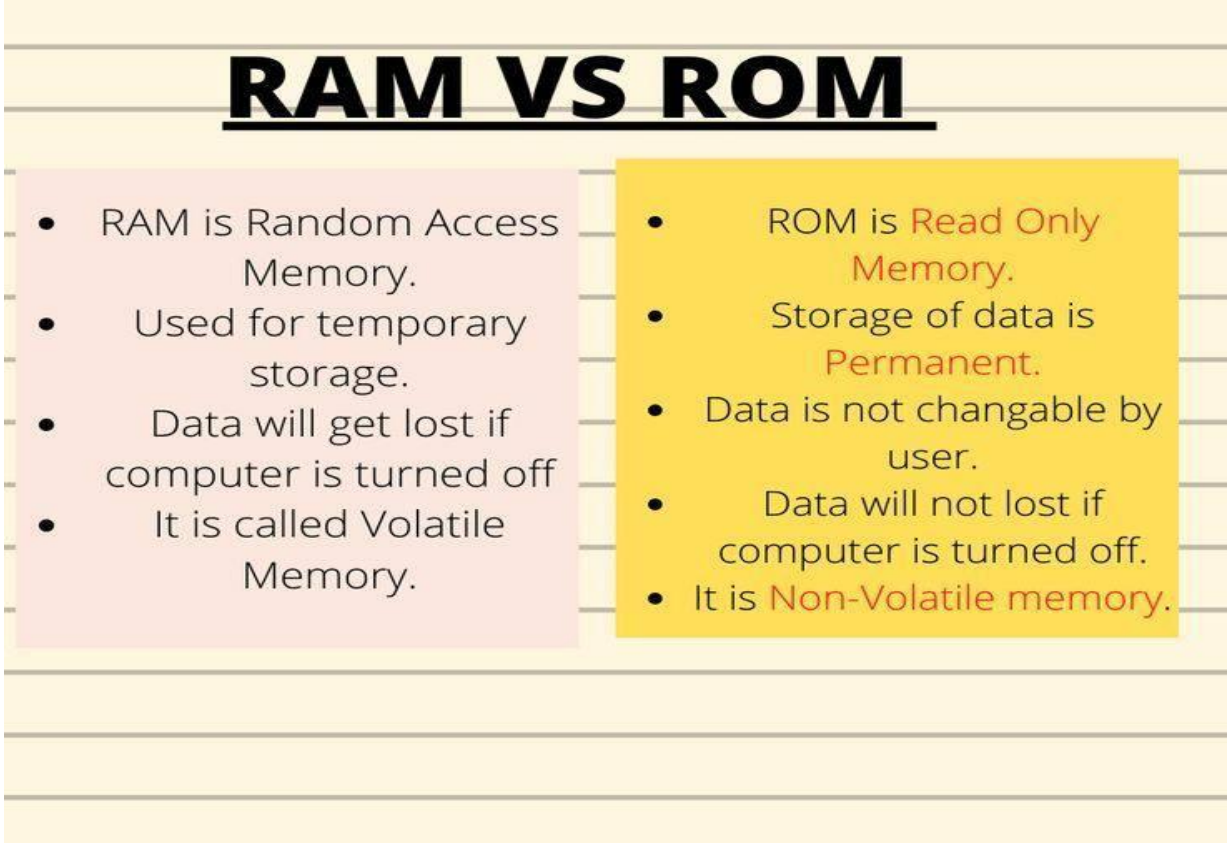
Input and output unit controllers




تخطيط وحدة المعالجة المركزية
Central Processing Unit CPU
وحدة الحساب و المنطق
Arthmetic Logical Unit
ALU
وحدات الإدخال
Input Units
وحدة التحكم
Control Unit
وحدات الإخراج
Output Units
وحدة الذاكرة الرئيسية
Main Memory Unit MMU
وحدة الخزن المساعدة
Help Storaage Unit
HSU

RAM .ROM memory unit

A place to temporarily store data, the larger the size, the faster the computer, and vice versa.



Storage Unit

A place where data is permanently stored and can be retrieved at any time, which is:

HDD

Floppy disks

CD-ROM

Note: Hard disks are considered the most important part of the storage units because when they are completely disconnected, the computer will not work, while the rest of the disks will not be affected when they are completely disconnected from the computer

Introduction to software

Computer hardware needs software to run. Programs are a series of instructions that tell a computer what to do. Software is a general term for any single program or a combination of programs, data, and stored information. The person who creates the program is called a programmer.

Types of software

There are two types of software:
1) System Software
2 Applications Software

System Software

It is the software that the computer uses to do its job perfectly. Some of this software is built into the computer, and some of it is stored on magnetic disks and must be purchased separately, such as Dos Windows Mac OS
System Software programming languages
Computer programs are developed using programming languages.
A programming language consists of a set of symbols and rules - like any other language - to direct operations in the computer. The most important known programming languages are (JAVA, C++ PASCAL COBOL, FORTRAN). Anyone who aims to become a programmer can learn one of these languages and master it so that he can then give commands to the computer.
b Compilers and Interpreters
It is a program that converts the source code written in a high-level language into the object code written in machine language. The difference between a compiler and an interpreter is as follows:

Translator: translates all high-level programs only once and is faster than interpreter.
Interpreter: translates and executes one sentence at a time once it is entered into the computer.

Software components

They are the intangible components, and they are like the soul to the body in humans. Without the software components, the physical components become useless.

It is divided into:-

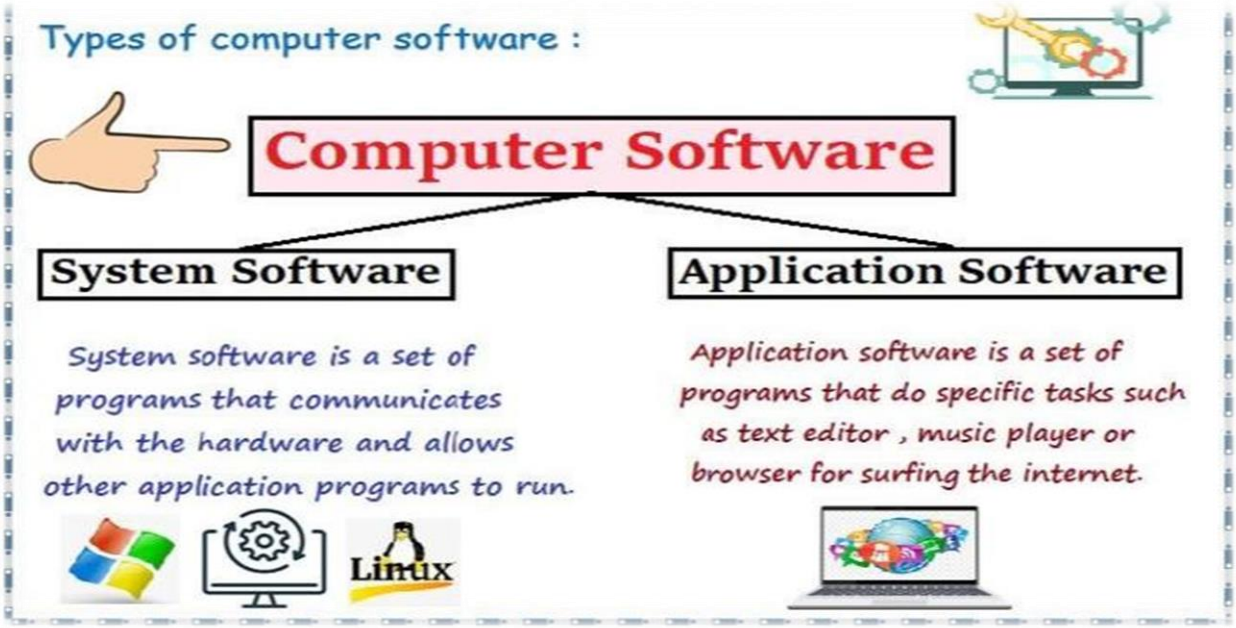
- **Application programs**
- **Programming languages**

1. **Application programs**

They are ready-to-use programs, such as audio player, PowerPoint, text editor, ... etc.)

2. **Programming languages**

They are the sources of manufacturing and designing application programs. If there were no programming languages, see Unit Five (Software).



Computer classifications

The most common type of computer used in homes and offices is known as a personal computer (PC). However, not all computers are considered personal computers. Different types of computers are used to perform various tasks, and the differences between them are as follows:

First (according to the purpose of use)

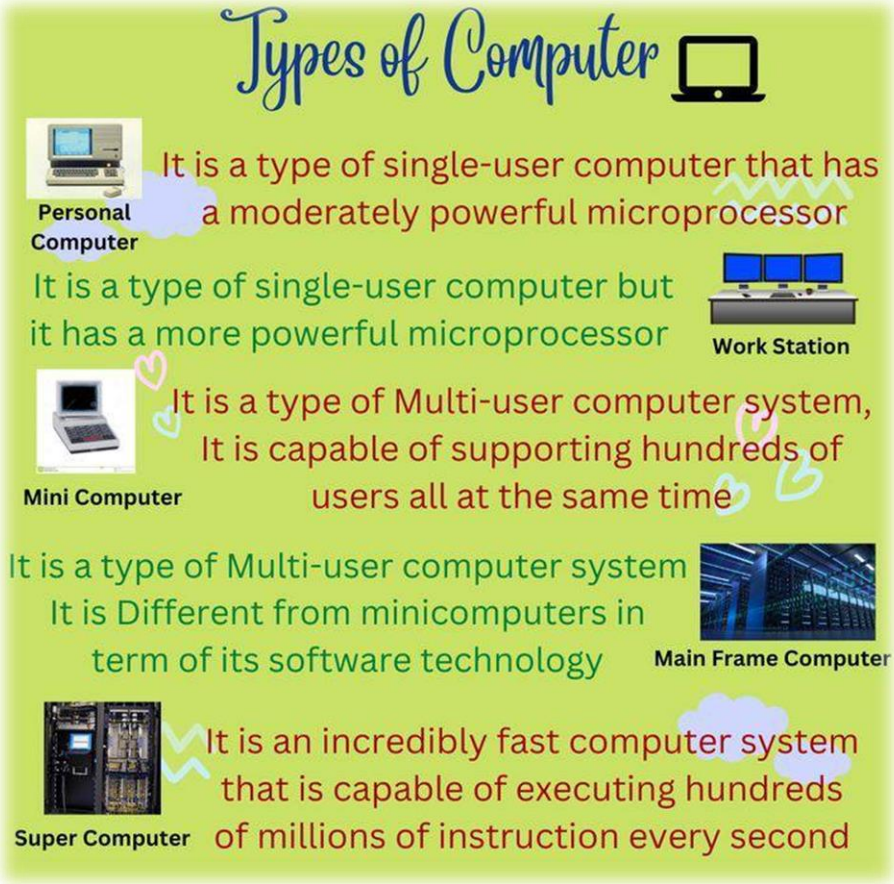
- **General Purpose Computer**
- **Special Purpose Computer**

Second) Calculating the type of data it processes

- **Analog Computer**
- **Digital Computer**
- **Hybrid Computer**

Third) According to size and performance

- **Microcomputers**
- **Minicomputers**
- **Main computers**
- **Super Computers**



Operating System

It is a set of programs that control, supervise, and support computer hardware and application packages.
No computer can work unless there is an operating system that loads the magnetic disks from the secondary memory to the main memory when the device is turned on to start managing the work in the device. The operating system consists of a group of integrated programs that work as a team, each of which performs specific tasks.

Operating system functions

1- Turn on the computer and get ready to work.

2- It represents an interface with the user that enables him to run other software.

3- Managing resources and tasks such as managing main memory, input and output units, processing unit, and secondary storage units.

4- Managing and organizing files.

5- Maintaining the confidentiality of the system and preventing unauthorized access to the device's data and software.

Applications Software

They are ready-made application programs for performing useful functions such as word processing, spreadsheets, databases, e-mail, paint program, games, multimedia and entertainment software

Types of software

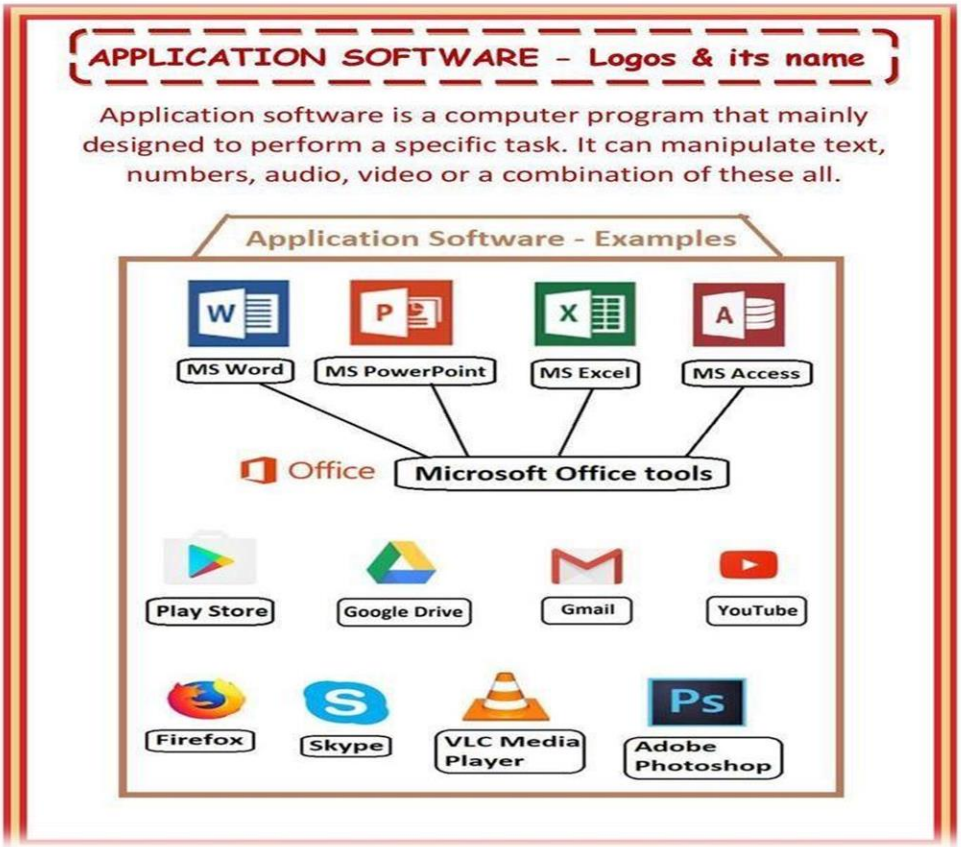
1- Commercial software is obtained by purchasing it from its source and is licensed to the user.

2 Free Software: Shop for free to use and take advantage of the notes. And user advice.

3- Software licensed for a period of time. This software can be purchased for free online or through

Magazines for a certain period and try them out and then pay for them if he wants to continue.

4- General software (public): It is available to everyone for free with the possibility of copying it.



Application software is a computer application that enables you to carry out particular personal, professional, and academic tasks.

Application software also referred to as end-user or productivity software, is made specifically to help users with specific productivity, efficiency, and communication tasks.

Always keep in mind the distinction between system and application software. App software is designed to do the goal for which it was created. The applications that we use on our smartphones are among the best examples of application software.

What are the Types of Business Application Software?

Application Software can be divided into two broad categories: **General Applications Software** and **Business Applications Software**.

Business Applications Software:

- Enterprise Resource Planning (ERP)
- Customer Relationship Management (CRM)
- Database
- Project Management Software
- Business Process Management (BPM)
- Resource Management Software

General Application Software:

- Word Processing Software
- Spreadsheet Software
- Presentation Software
- Multimedia Software
- Educational Software
- Graphics Software
- Simulation Software

Examples of Application Software

How Much Does it Cost to Create an Application Software?

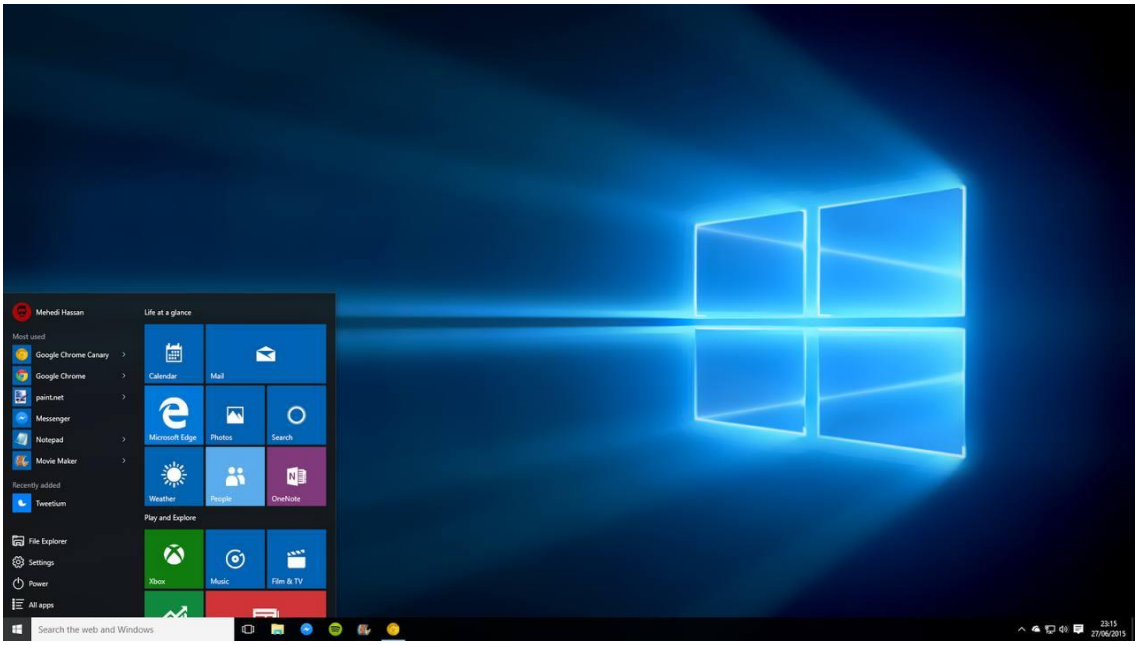
The pricing aspect is crucial to creating a successful software program for the company, but it cannot guarantee a set cost for the program; instead, it ultimately depends on the company's requirements.

However, the expenses associated with developing application software often rely on the many aspects listed below:

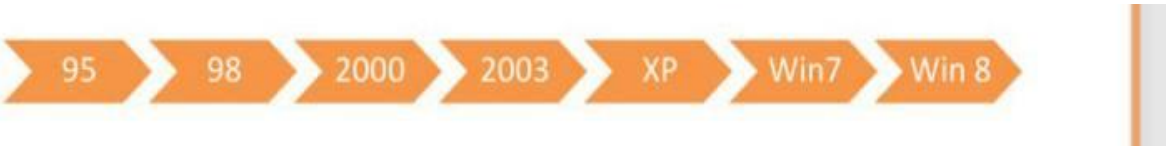
- Primary goals, functions, scope, and most notably, features
- Platforms and devices supported
- Third-party integrations required
- The application you want to develop like a web app, native, cross-platform, or hybrid apps
- Back-end development services
- Hardware components and compatibility
- The complexity of the application
- Maintenance and support requirements

Interface in software (graphical interfaces)

An interface is the way a software user communicates with a computer. This is done either by communicating by writing commands or by using the mouse and clicking on them to activate the commands. It uses images, icons and lists where the user chooses the desired command by directing the mouse to the drop-down lists or folders. This interface is called Graphic User Interface. This method is characterized by ease and fun like Windows in its versions.



Different as shown in the following figure about Microsoft Windows versions



Windows operating system features

Easy to use because it contains graphical interfaces.
Dealing with any type of modern programs.
Supports more than one language, including Arabic.
Use more than one program at the same time.

Definition of Windows XP operating system

It is a set of ready-made software responsible for controlling and managing all the basic units that make up the computer.

Definition of Windows

It is one of the auxiliary systems for dealing with physical computers in terms of running programs, reading data, and dealing with programs within a window or frame. It is produced by the company Microsoft

System Development System development

System development means the process of converting a manual system into a computerized system, such as converting a manual payroll or financial system into a computerized system. It includes several steps and is carried out by an integrated team that is responsible for determining the necessary equipment and software.

System development steps:

- **. Determine requirements**
- **. feasibility**
- **. Development**
- **. Test and check the system**
- **. User training**
- **. Deliver it to users**
- **System monitoring and maintenance**

Microsoft Word

Important Features of MS-Word.. MS-Word not only supports word processing features but also DTP features. Some of the important features of MS-Word are listed below:

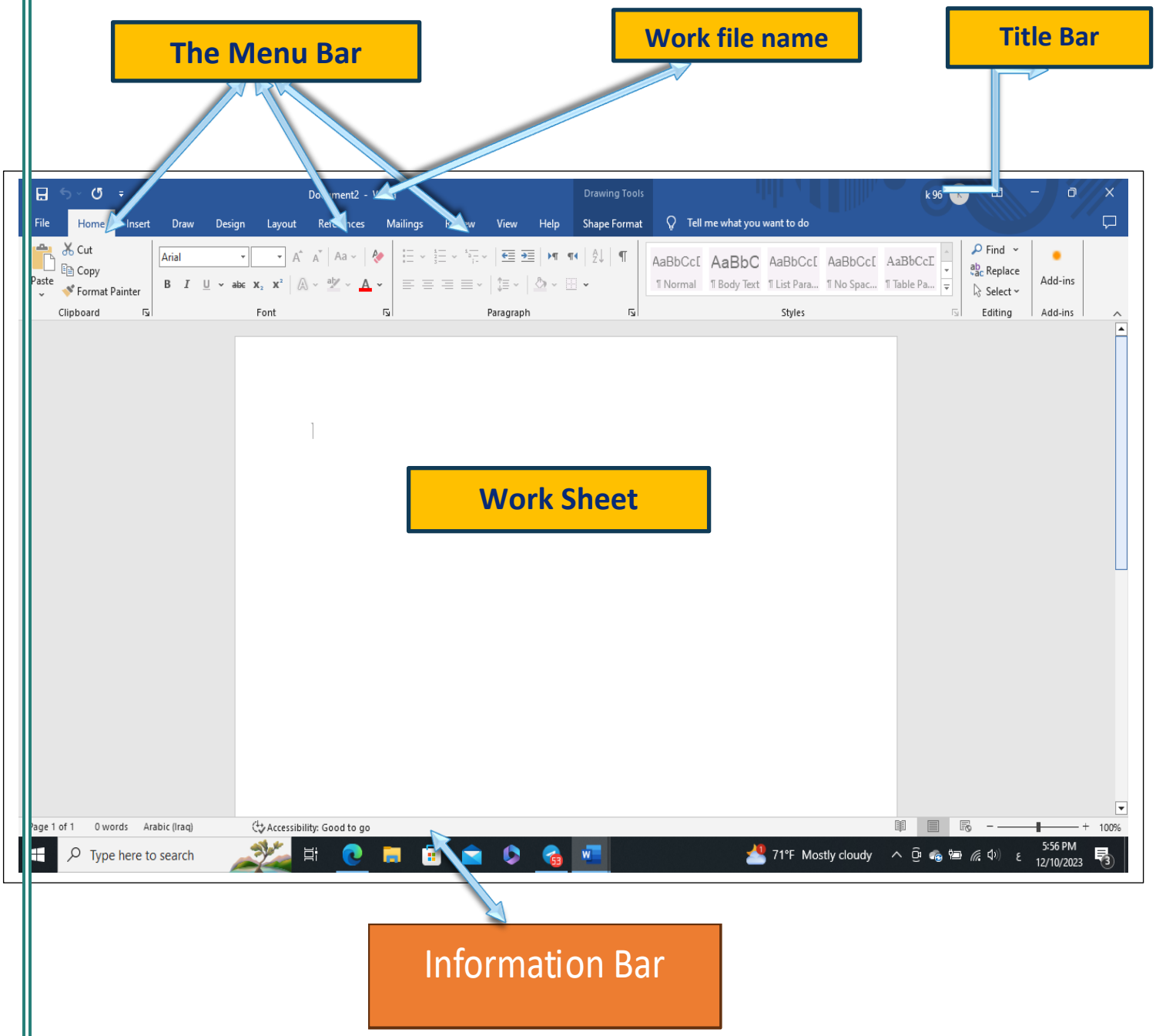
- **Using word you can create the document and edit them later, as and when required, by adding more text, modifying the existing text, deleting/moving some part of it.**
- **Changing the size of the margins can reformat complete document or part of text.**
- **Font size and type of fonts can also be changed. Page numbers and Header and Footer can be included.**
- **Spelling can be checked and correction can be made automatically in the entire document. Word count and other statistics can be generated.**
- **Text can be formatted in columnar style as we see in the newspaper. Text boxes can be made.**
- **Tables can be made and included in the text.**
- **Word also allows the user to mix the graphical pictures with the text. Graphical pictures can either be created in word itself or can be imported from outside like from Clip Art Gallery.**
- **Word also has the facility of macros. Macros can be either attached to some function/special keys or to a tool bar or to a menu.**
- **It also provides online help of any option.**

Computing is not about computers any more. It is about living

لتشغيل برنامج Microsoft Word :

Start> All program> Microsoft Office >Microsoft word

وكذلك يمكن تشغيل البرنامج من خلال الاختصار الموجود على سطح المكتب .فعند تشغيل البرنامج ستظهر واجهة البرنامج



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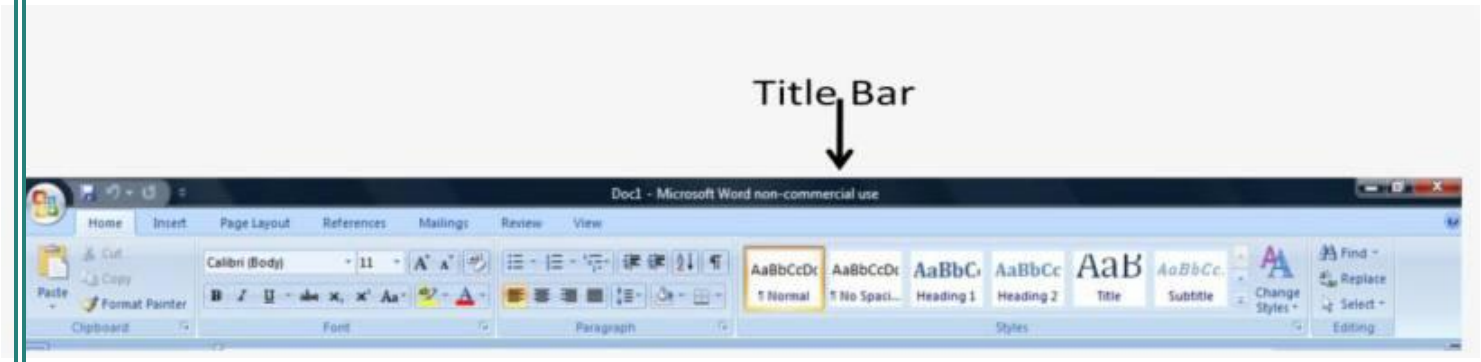
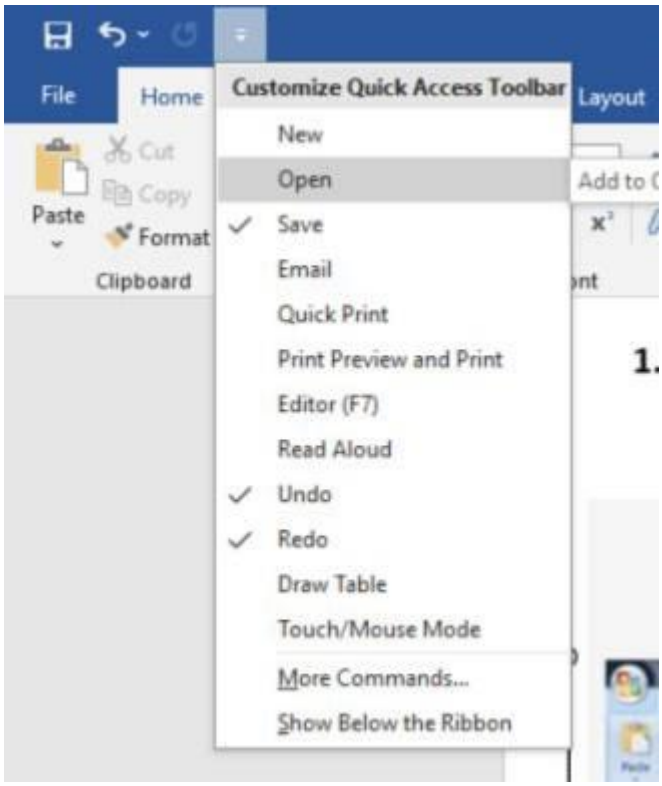
Main Interface Components :

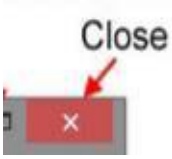
1. **Title Bar : It is called the title bar because it contains the title of the open program, as well as the zoom-in and zoom-out buttons and quick access tools**



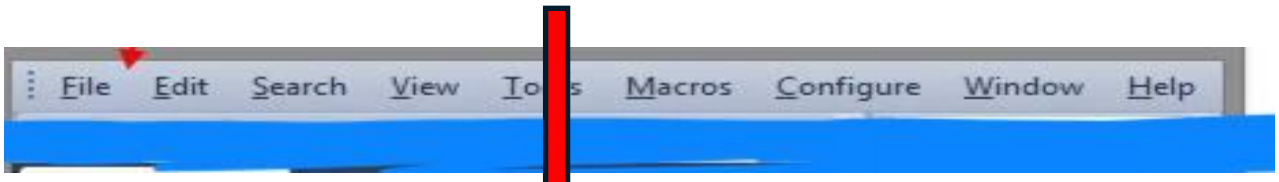


- **Close**
- **Minimize**
- **Restore**
- **Redo**
- **CTRL+Z**
- **Undo**
- **CTRL+Y**

- **There are several ways to close files or documents :**

  - ***Ctrl +f4***
  - ***File > close***
  - 

Alt+f4 ⟶ MS word لاغلاق



Menu Bar

File

Used to open a new document

Opens a previously stored inventory file

To show information about the document or file you

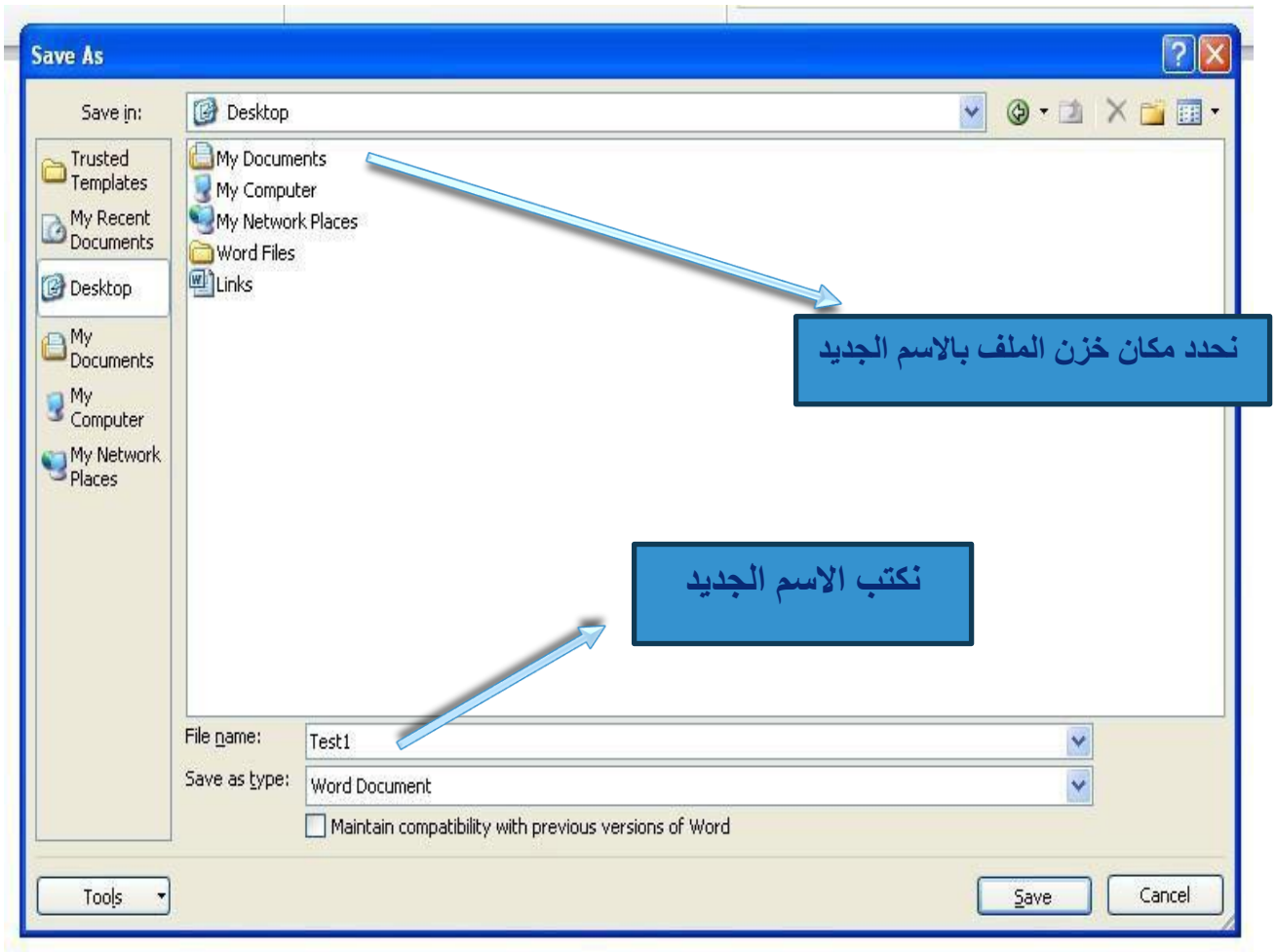
It is used to save a file or document

It is also used to save a file or document, but with a new name, or to save the file for the first time

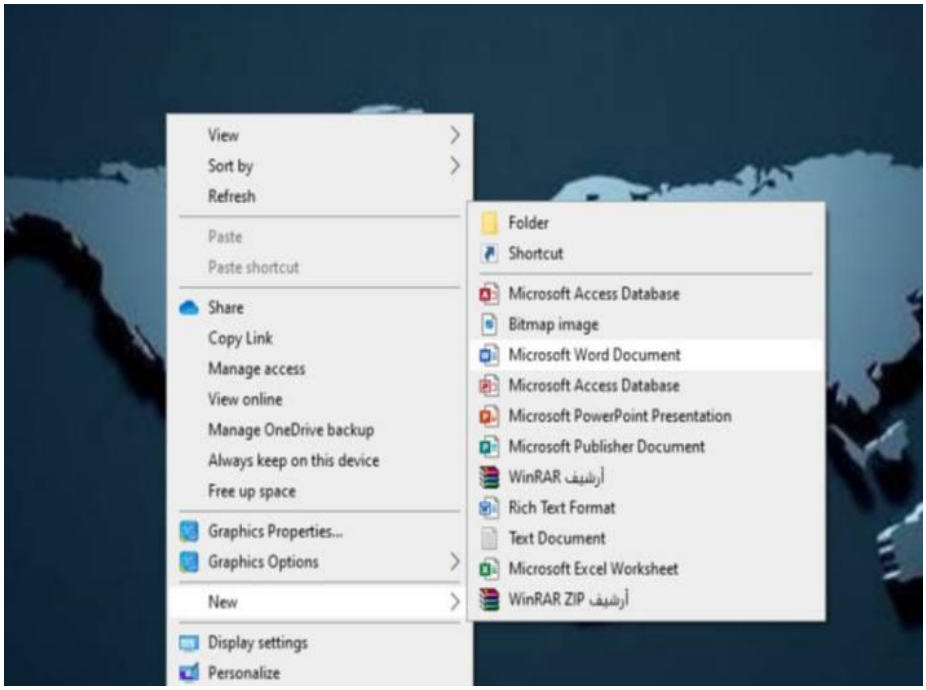
Used for printing

to send and share a file

Used to close the file

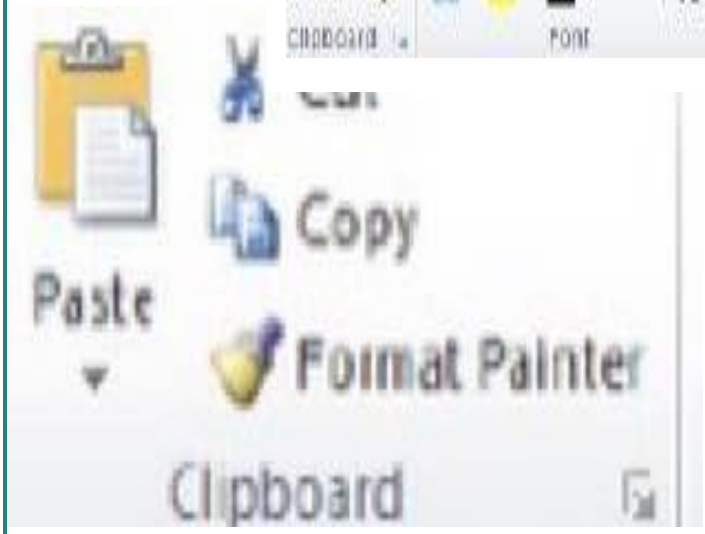


to add a new Word file in another way



New > MS.WORD

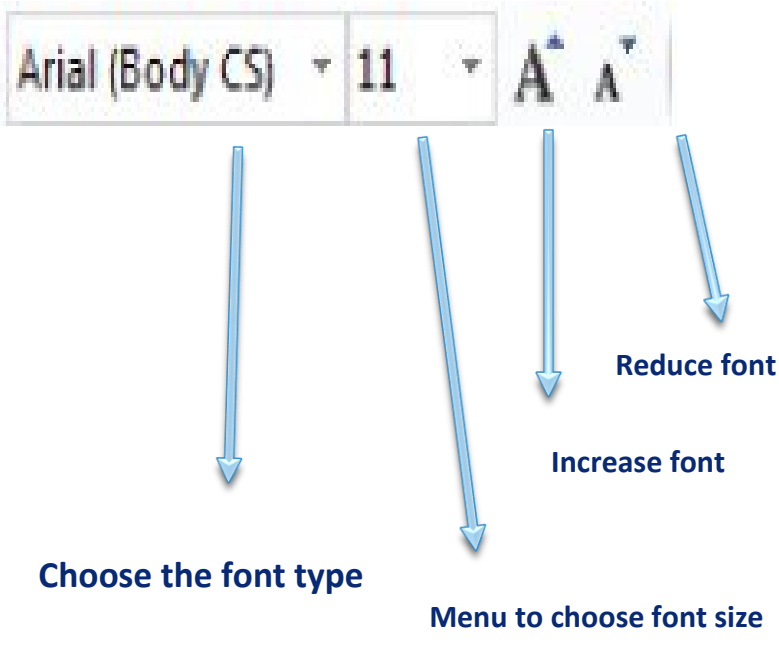
Home



Clipboard

Cut : Cuts the text (CTRL+X)
Copy : Copy the text (CTRL + C)
Paste : Paste text (CTRL + V)
Format painter : Format Copy

Font :



Aa : small letter or capital letter.

B : line exposure (CTRL + B).

I : ***Make the line italics.***

U : Make a line under the text (CTRL + U)

~~abc~~ : Underline the middle of the line .

x^2 : Make the text small, slightly upwards.

X_2 : Make text small and low.

A : Text coloring.

ab : Make a color as a background for the selected text.

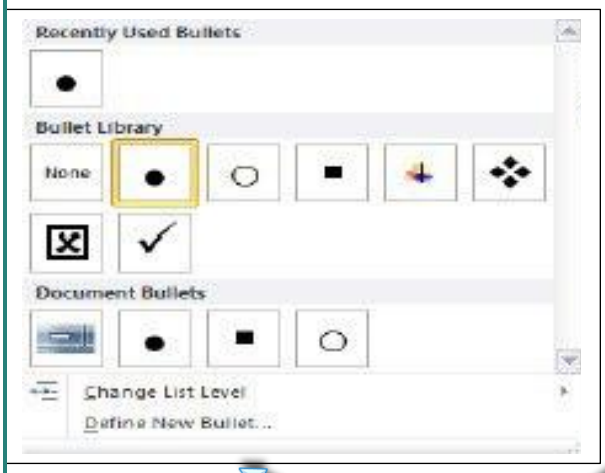
A : Make effects for the selected text

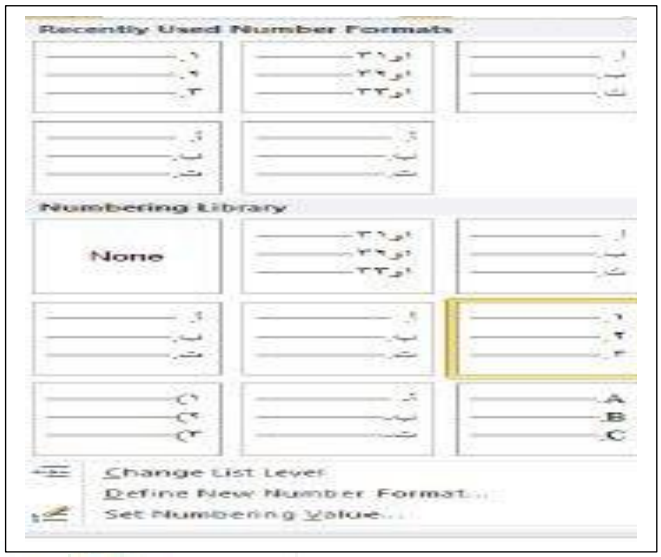
Outline :
Outline of text.

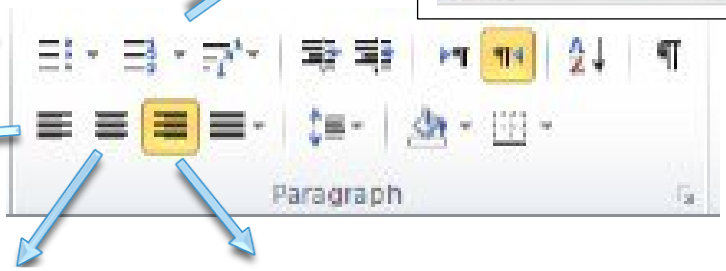
Shadow :
Make a shadow for the selected text.

Reflection :
Reflection effect of text.

Glow :
Text glow.







Align text to the left

Center alignment

Align text to the

The direction of writing from left to

The direction of writing is from

Sort text

Coloring the background of the text

Make a frame for the text

Text styles

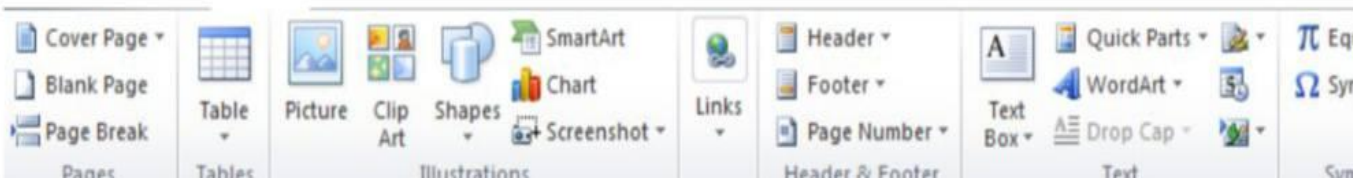
Search for word or text in a document

Replace a word or text instead of another word or text

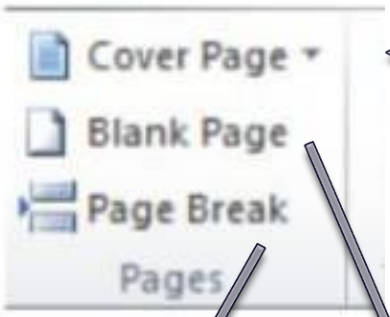
Makes distinct selections

3-3

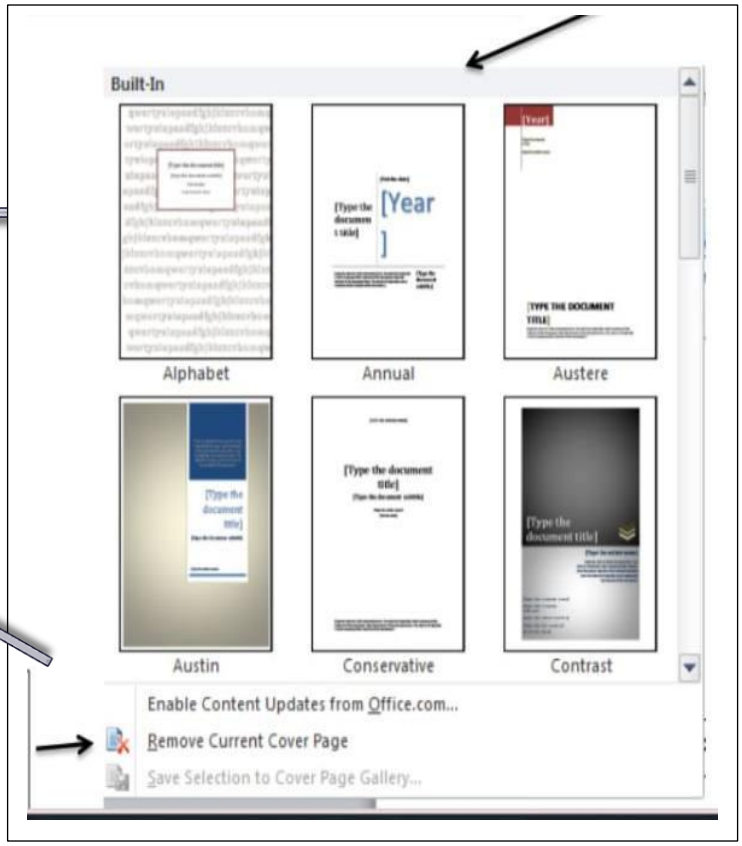
Insert :



➢ Pages :



Insert a cover with the ability to modify it

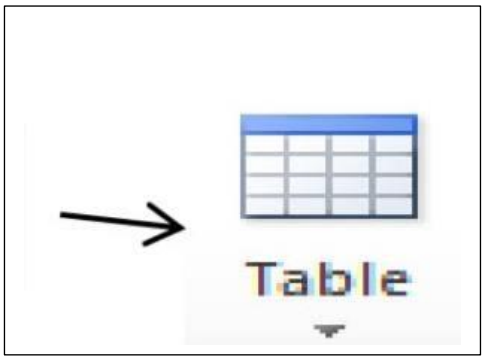


Page break, meaning starting a new page

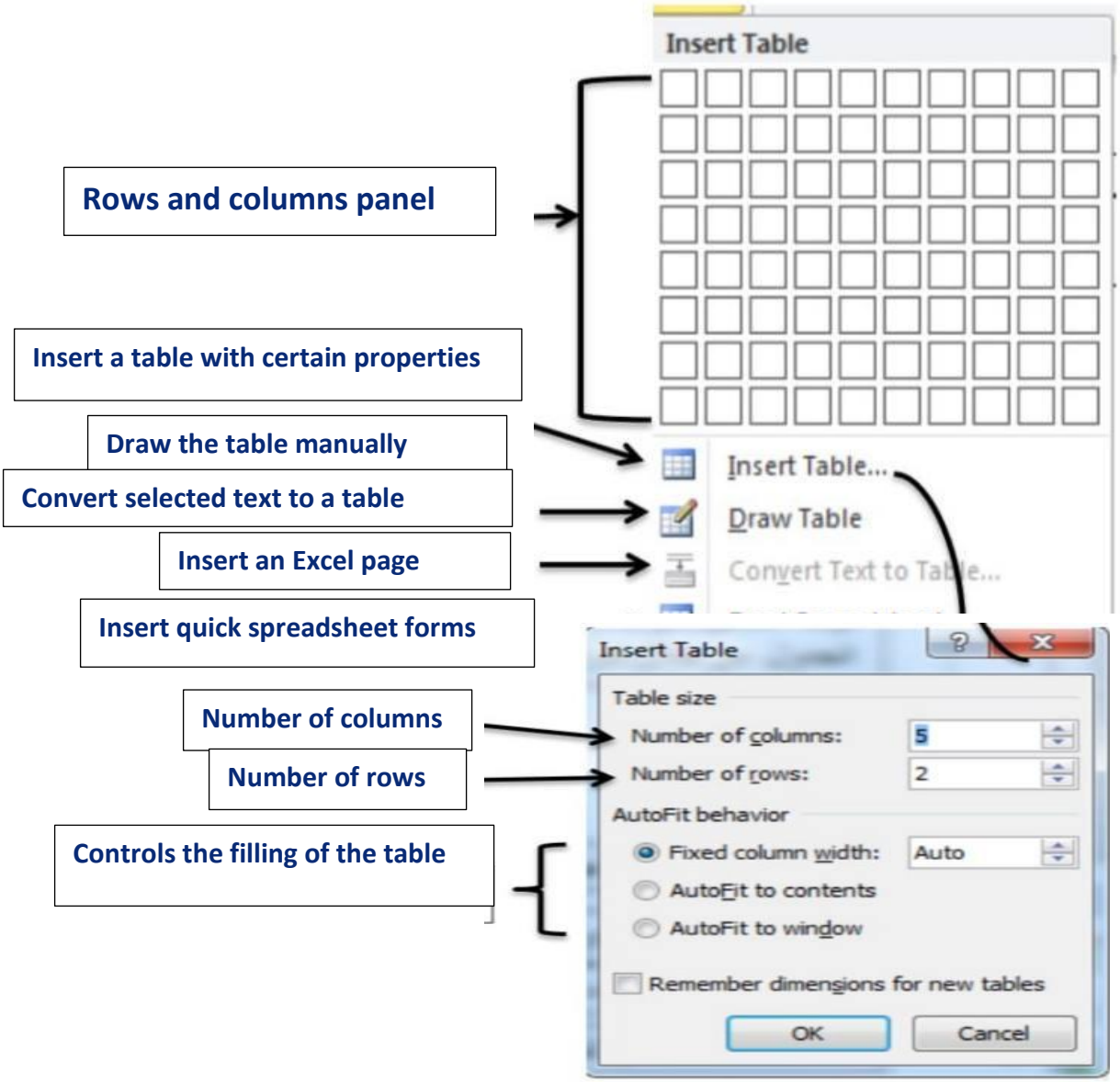
Insert a new, blank page

Remove Current page

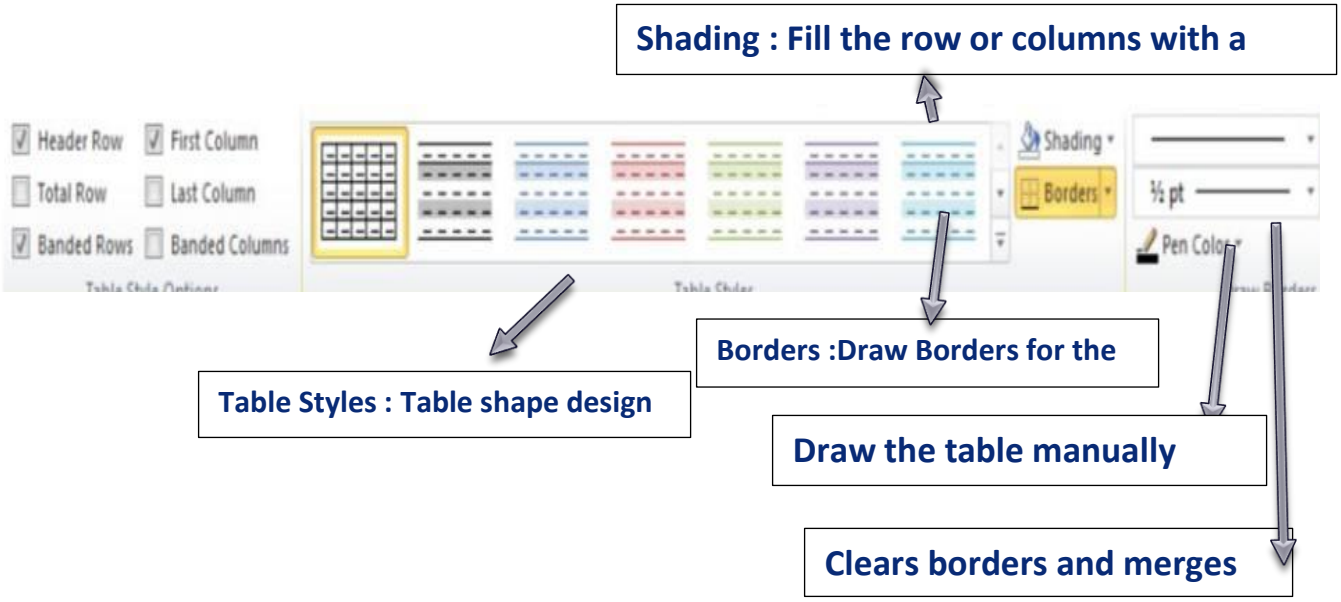
➢ Table :



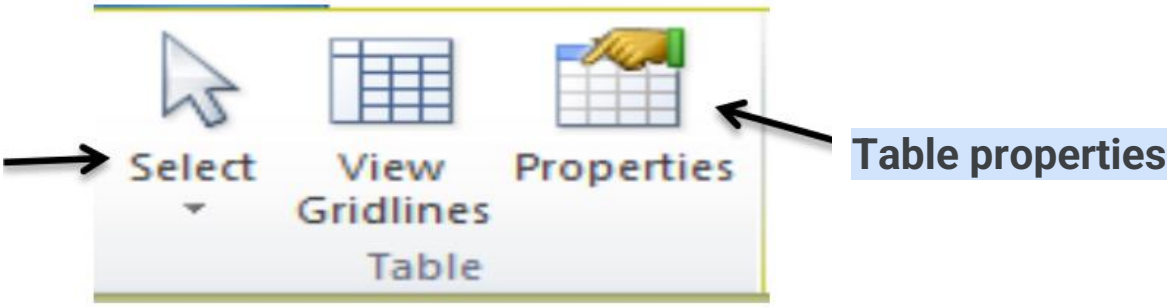
Insert Table


Rows and columns panel
Insert a table with certain properties
Draw the table manually
Convert selected text to a table
Insert an Excel page
Insert quick spreadsheet forms
Number of columns
Number of rows
Controls the filling of the table
Insert Table
Insert Table...
Draw Table
Convert Text to Table...
Insert Table
Table size
Number of columns:
5
Number of rows:
2
AutoFit behavior
Fixed column width:
Auto
AutoFit to contents
AutoFit to window
Remember dimensions for new tables
OK
Cancel

➢ Design Table



➢ Layout :

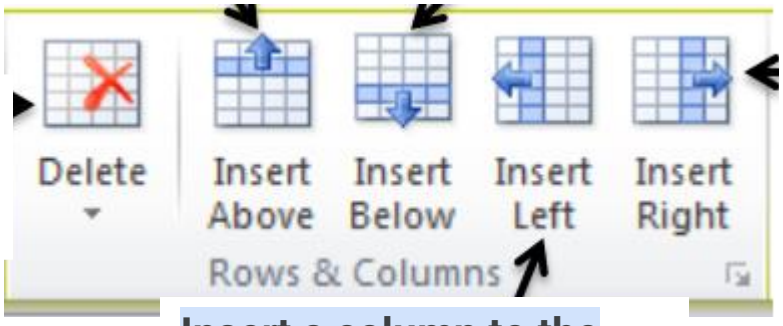


Select a row, column, or table

Insert a row above

Insert a row below

Delete a row, column, or cell

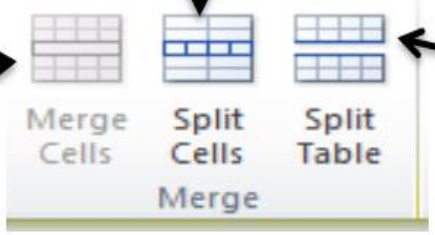


Insert a column to the right

Insert a column to the

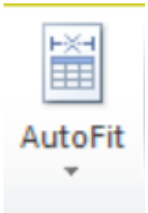
Splits the selected cells into a number of

Merge selected cells



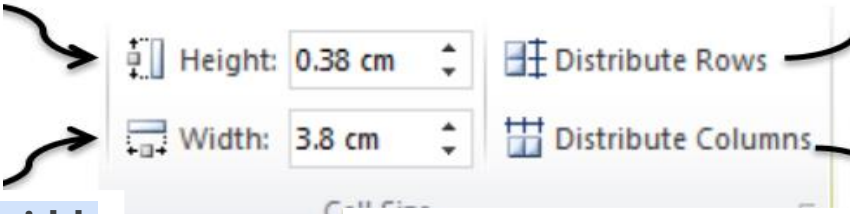
Splits the selected cells into a table

The cell size changes with the text size



Set the cell height

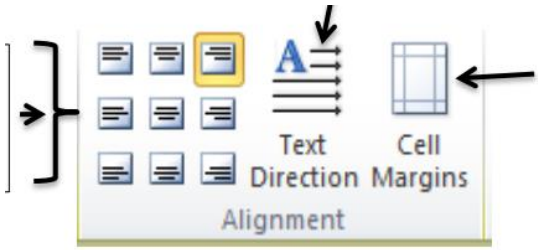
Make the selected rows equal in height



Set the cell width

Make the selected columns equal in width

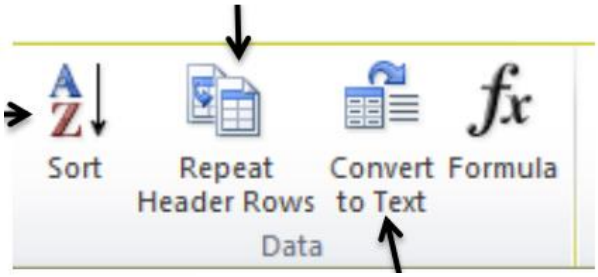
Text direction and flip the text left or right



Cell margins

Controls the location of text within a cell

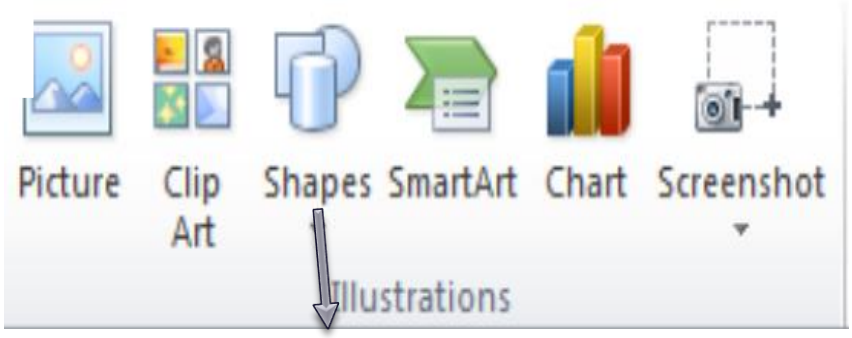
Repeat the first row in the table on each



Arrange the contents of the rows in the table in ascending or descending order

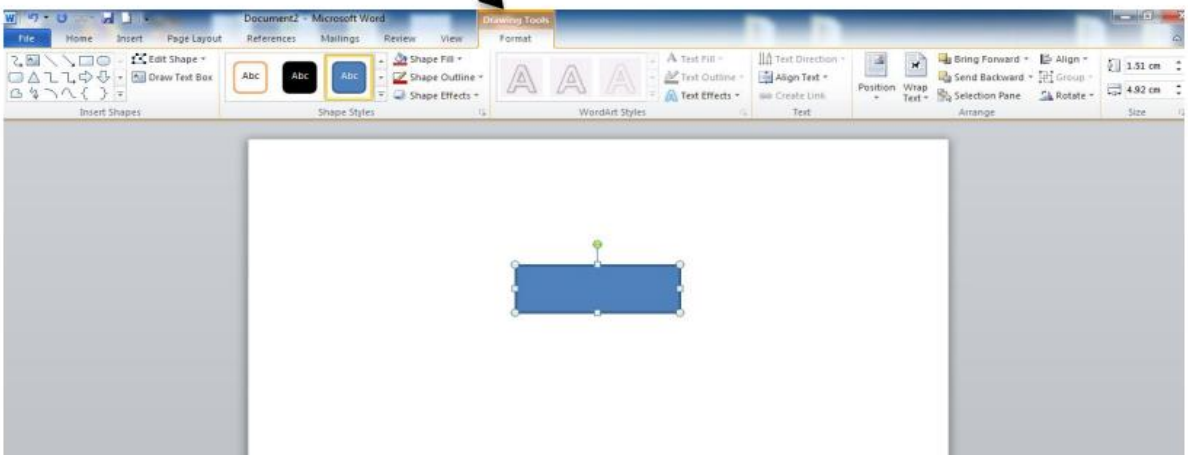
Convert table to

Insert an image into the document

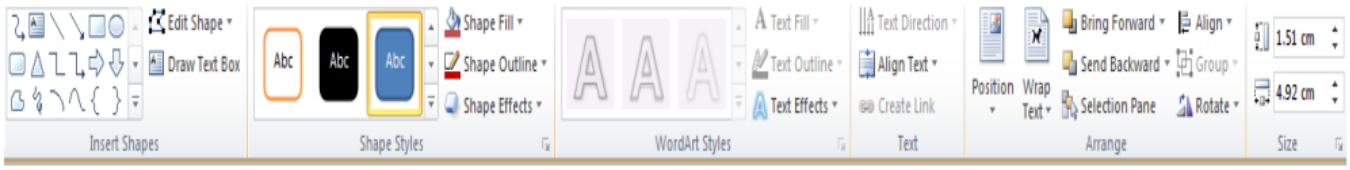


Insert a shape into the document

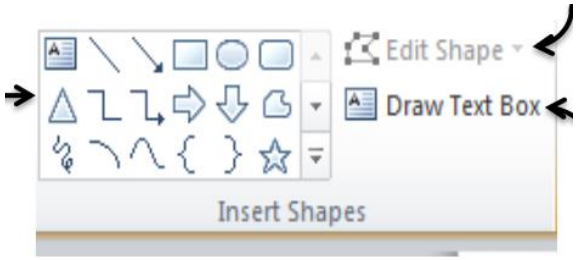
عند اختيار شكل معين ورسمه في المستند تظهر لنا قائمة التنسيق format الخاصة بالاشكال كما مبين ادناه



سنشرح الان قائمة التنسيق format الخاص بالاشكال (Shapes)



Change the shape to another

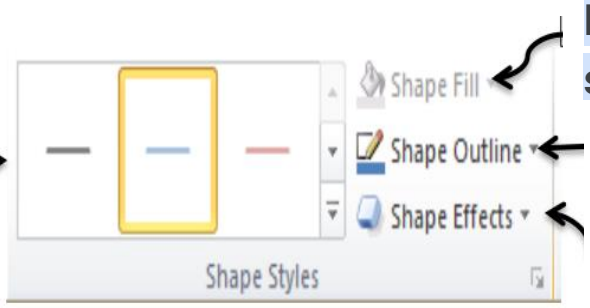


We choose a shape to insert into the worksheet

Insert a text box

Fill the shape with a specific color

Quick coordination of shapes



The outer border of the shape

Creating artistic effects for the

Inner color of text

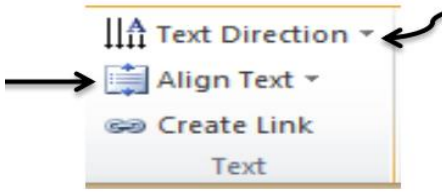
Text frame color

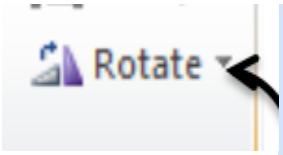
Quick formatting of text

Create text effects

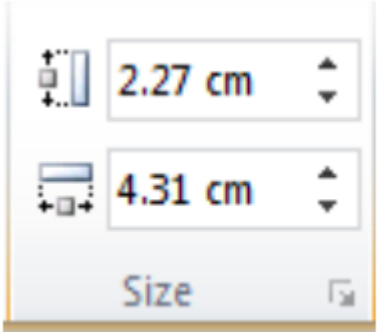
The direction of the text within the shape

Align text at the top, bottom, or center



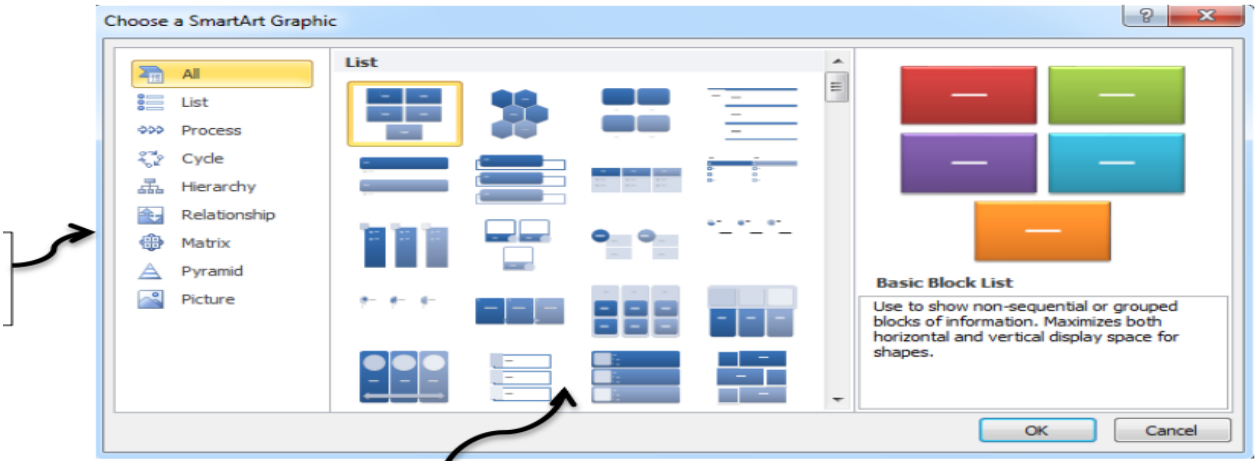


Invert and rotate the selected shape

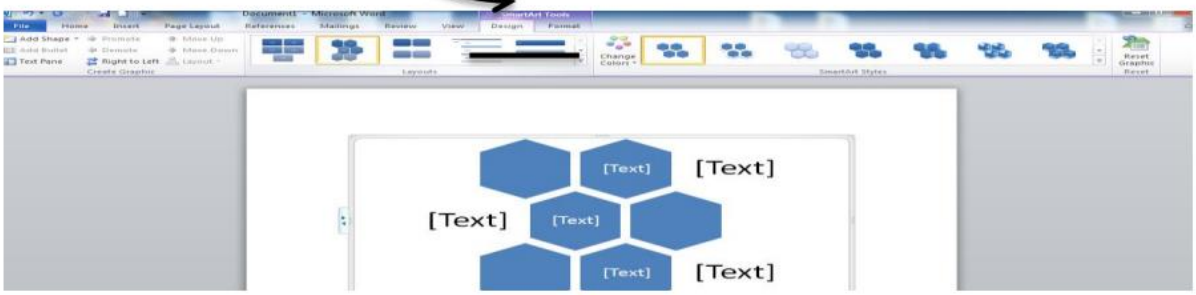


Set length and width measurements for a specific shape

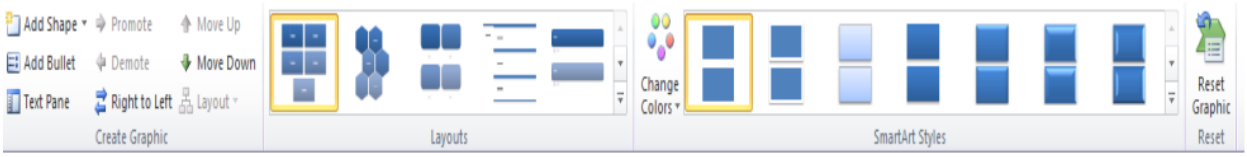
- ادراج SmartArt



بعد ادراج المخطط المطلوب في ساحة العمل تظهر لنا قائمتي Format و Design الخاصة ب smartart كما مبين ادناه

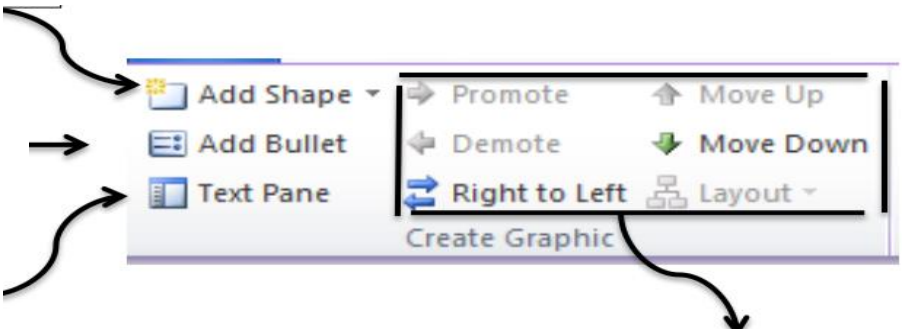


قائمة التصميم Design الخاصة ب SmartArt



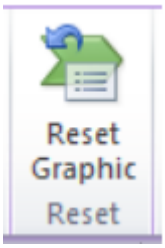
Move the selected shape from the chart

Add subtext to the shape selected in the chart



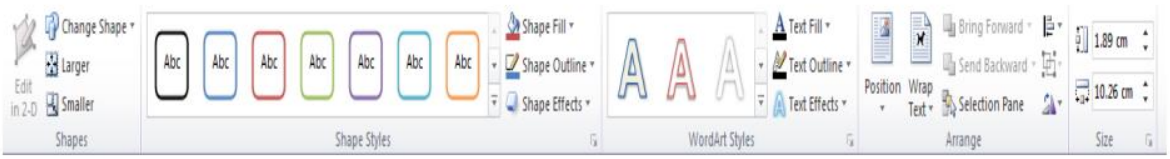
Show a window to add text inside the chart

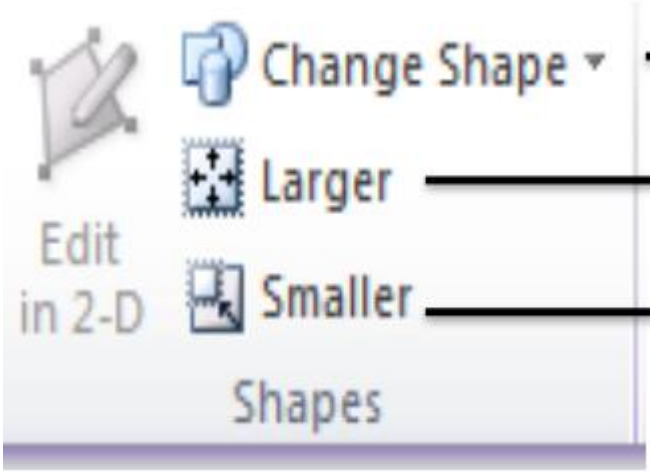
From these options, we move the selected shape within the chart in all directions or flip it from right to left



Revert all changes made from the beginning

قائمة التنسيق Format الخاصة ب SmartArt





Change the selected shape to any other shape

Zoom in on the selected shape

Reduce the selected shape

- راس وتذليل الصفحة (Header and Footer)

Page numbering

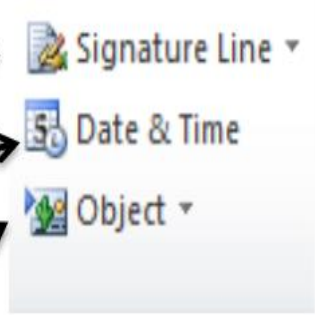
Place a footnote at the top of the page to write a title

Place a footnote at the bottom of the page

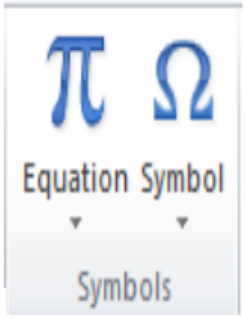
Insert signature

Insert the current date

Insert an object such as an Excel

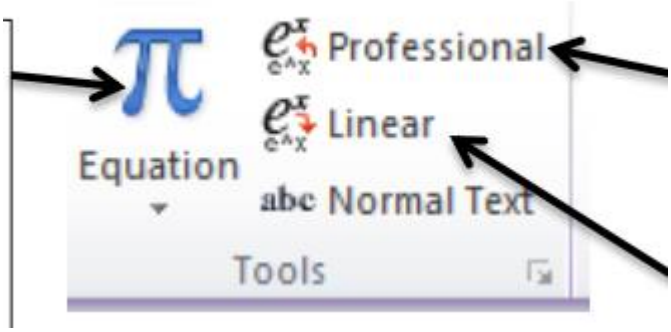


- ادراج رموز (Symbols)



Insert symbol

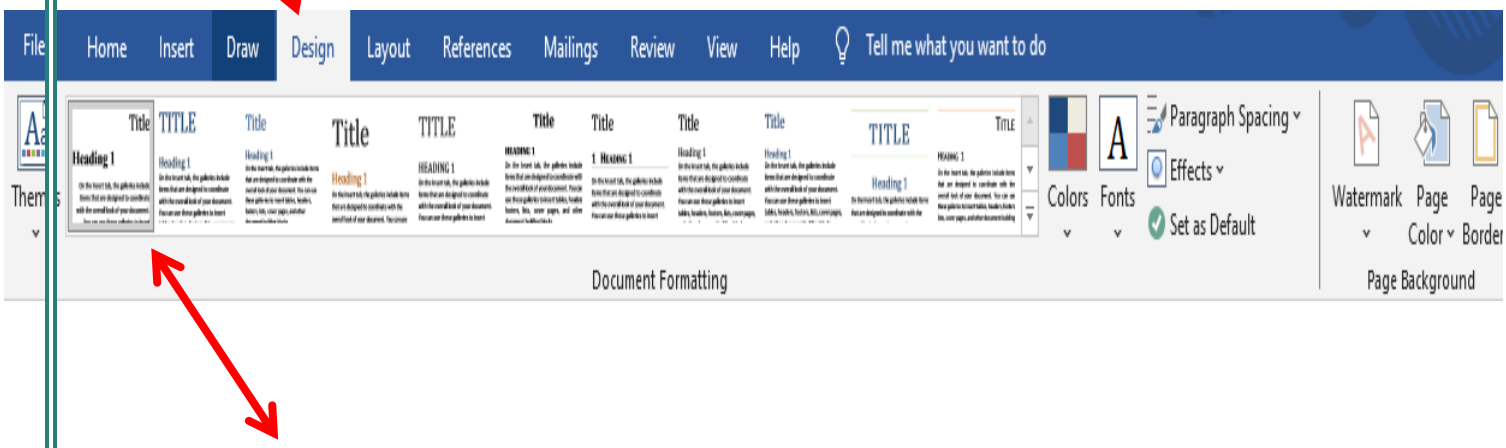
Insert equation



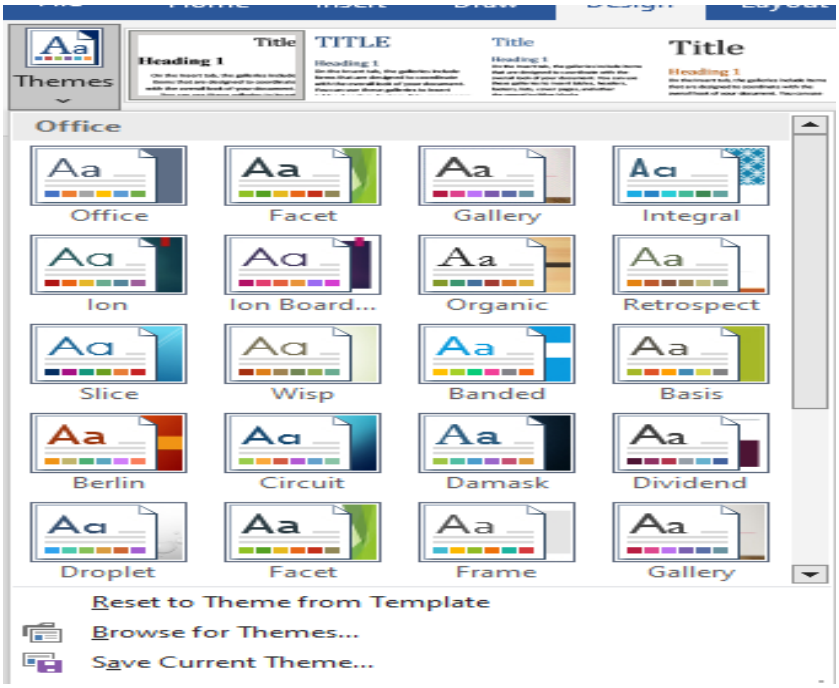
Insert a professional equation

Make the equation on one row

Design :

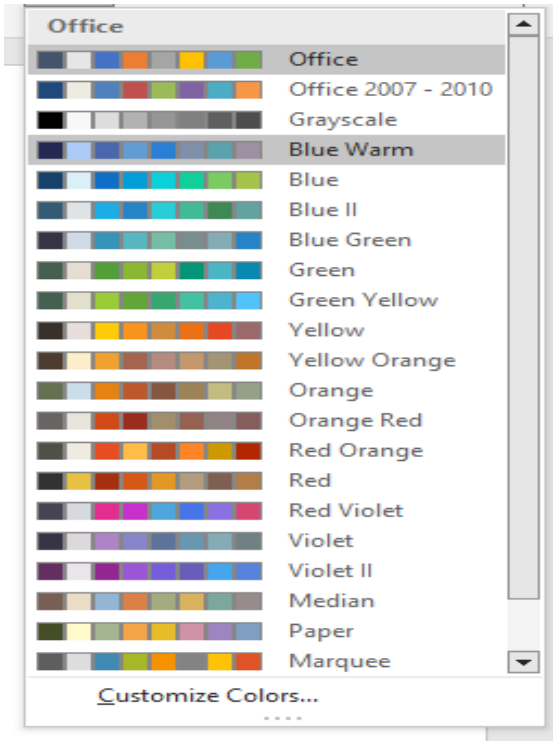


Different styles can be applied directly to the d Document

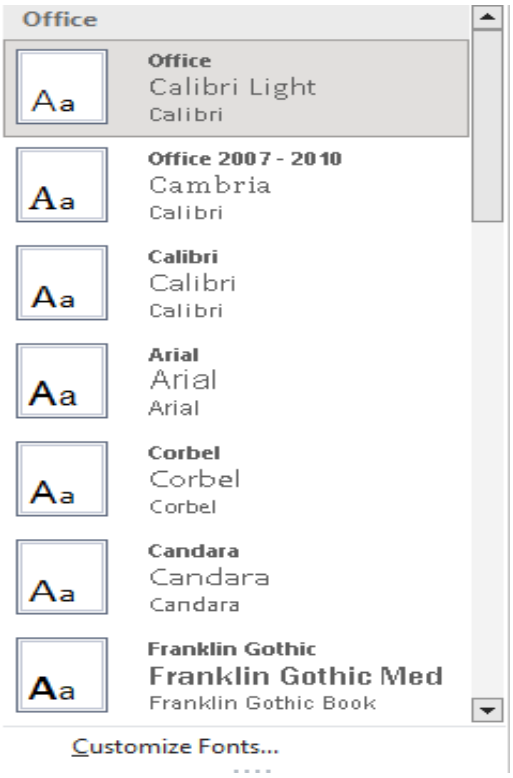


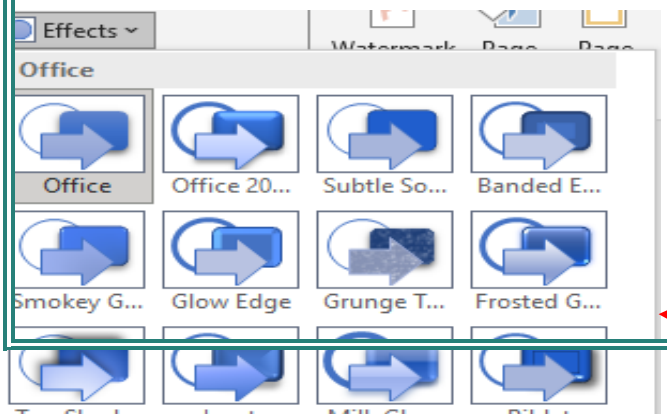
Computing is not about computers any more. It is about living

Change the colors of shapes, so when you click on them, a list of colors



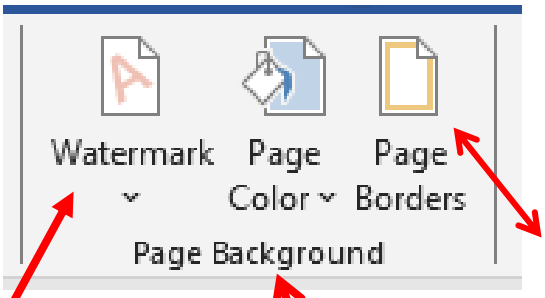
Change the font type for text in a

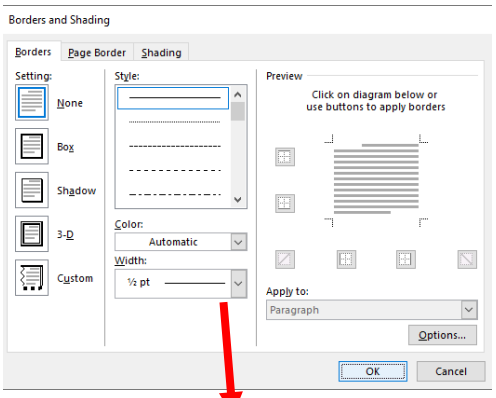




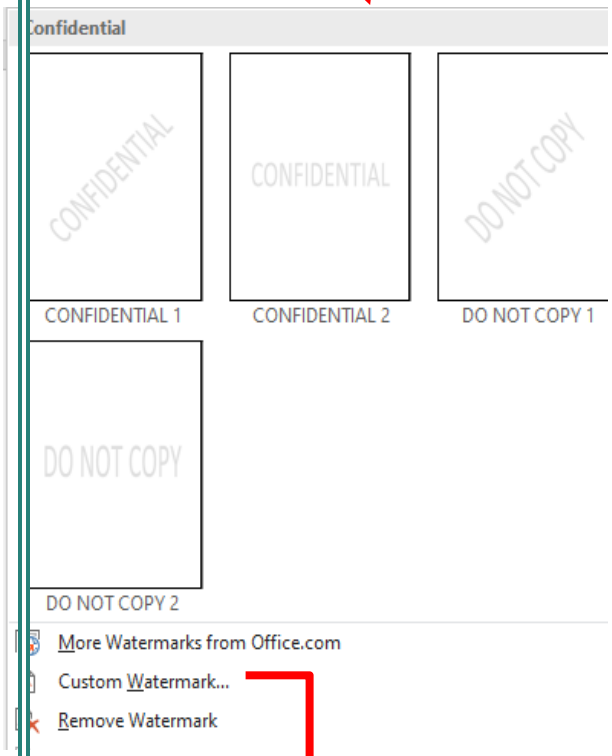
Effects : Apply specific effects to shapes

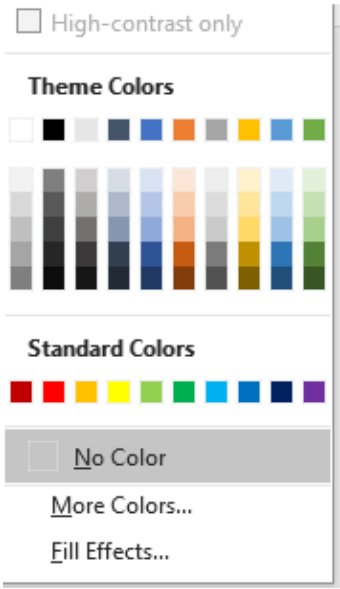
Page Background :





Place text or an image as the background of the page as a





Make a regular frame for the page, or a drawing or decoration

Make the page color instead of white

Custom watermark where you write the options manually

Microsoft Office Excel

Excel

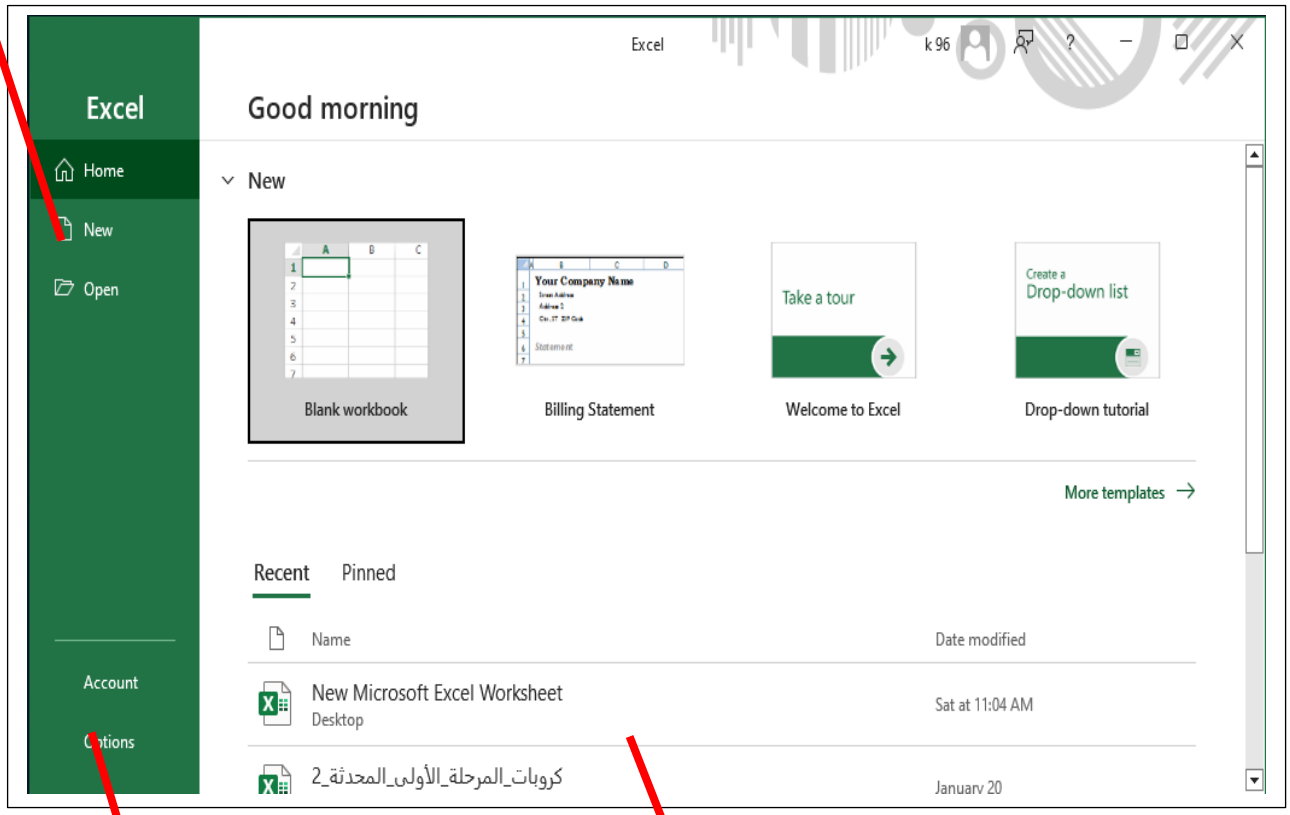
It is an electronic spreadsheet program that allows storing a huge amount of data in tables
And carry out calculations and statistical analysis on them and create graphs with high efficiency

To run the program, we follow the following steps:

1 Click on the Start button located on the left of the bottom of the screen.
2- Note that the programs installed on the calculator are arranged by alphabet in the list of programs,
So we will have all the programs that start
By searching for the letter E
With the letter E, including the Excel program. Excel luck figure below.

The main window of the Excel program :

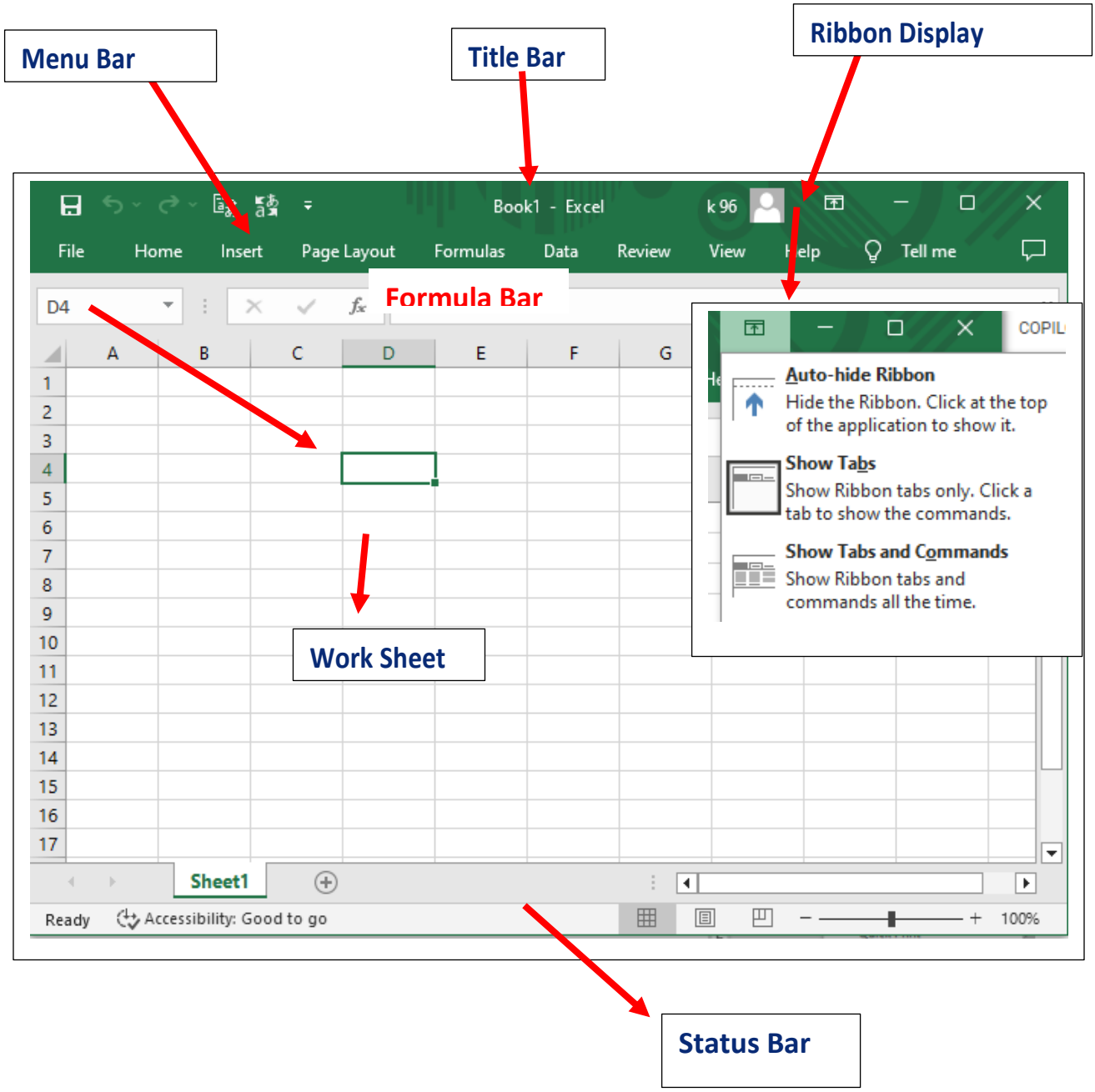
Open a previously

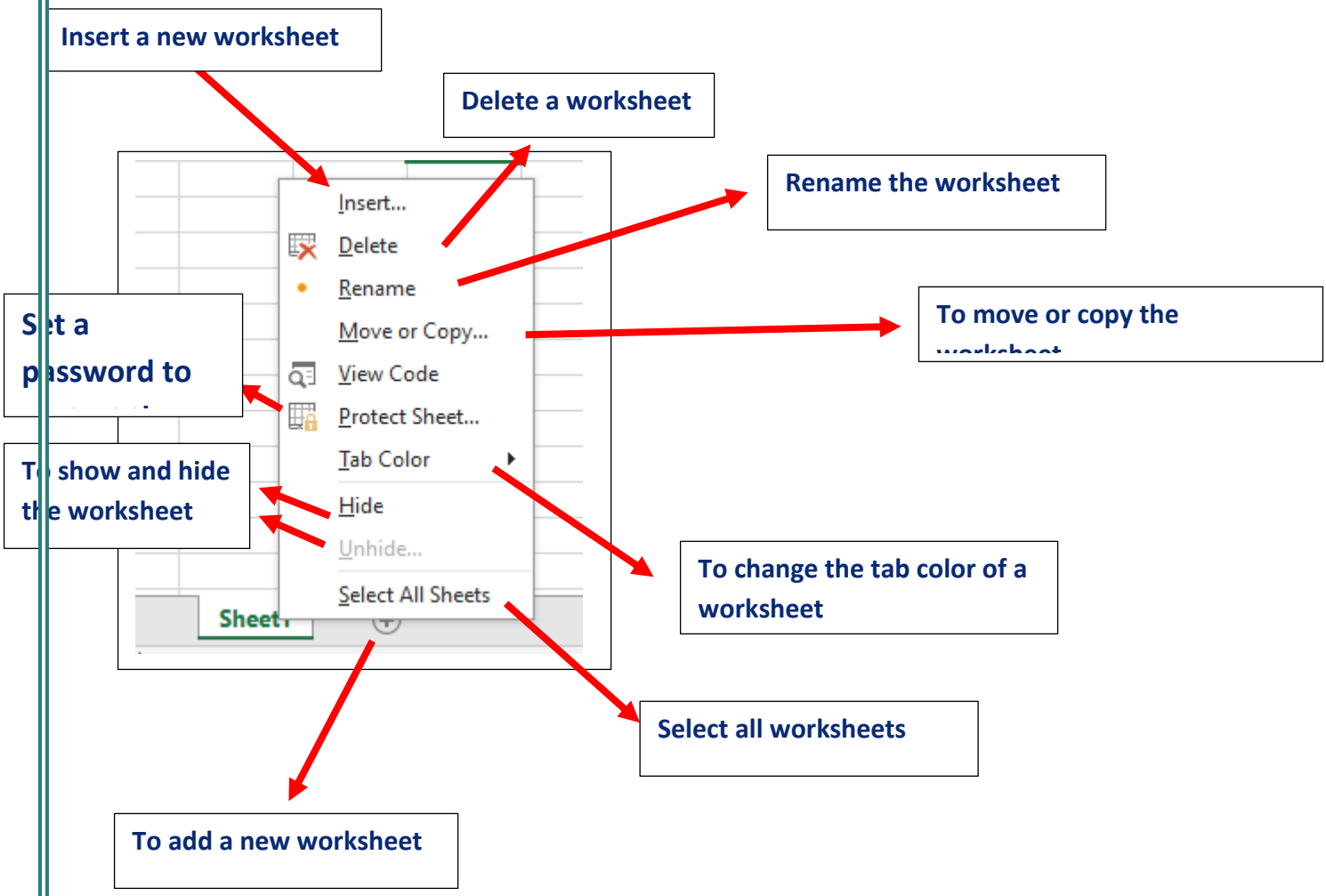


Excel options

Recently used files

In Excel file called Book workbook, we can open multiple workbooks at the same time and every The workbook will open in a separate window. Usually the Excel file takes the extension.(XLSX) - Each workbook contains the Worksheet the More, each worksheet consists of many blanks, each cell contains on a value, equation or text.




Insert a new worksheet
Delete a worksheet
Rename the worksheet
Set a password to
To move or copy the
To show and hide the worksheet
To change the tab color of a worksheet
Select all worksheets
To add a new worksheet
Insert...
Delete
Rename
Move or Copy...
View Code
Protect Sheet...
Tab Color
Hide
Unhide...
Select All Sheets
Sheet1

Dealing and navigating between empty worksheets:

We use the mouse to navigate between empty worksheets by clicking on the desired cell to be activated

- **But in many cases we use the keyboard by the following commands:**
- **Enter: to move to the cell just below the active cell.**
- **Shift +Enter: to move to the cell located directly above the active cell.**
- **TAB: to move to the cell to the left of the active cell Active Cell directly in**
- **If the direction of the worksheet is from the right to left**
- **+TAB: Shift to move to the cell to the right of the active cell Active Cell() directly**

If the worksheet orientation is from left to right.

- **Arrow: We can move between the empty ones through the arrows on the keyboard according to the direction.**
- **Up :P age Use this shortcut to navigate to the previous page.**
- **Down :P age Use this shortcut to navigate to the append page.**
- **Up Page :Ctrl+ Use this shortcut to move to the beginning of the first page.**
- **Down Page :Ctrl+ Use this shortcut to move to the end of the last page.**
- **We select a column by clicking on the column name as the letter A**
- **We select a row by clicking on a row number for example 2**
- **To select the entire worksheet we click from the keyboard (A + Ctrl)**

Hide and show rows or columns:

- **Invisibility row or column Select the row or column and then click with the right mouse button on any place in the selection**

- **And we choose Hide ( ) from the list.**

- **Hidden rows or columns We select a column before the hidden column and at least a column after it and then click**

  - **Show: Right-click on the selection and choose Show Unhide.**

- **and hidden rows select the entire worksheet columns full CTRL+A and then press Unhide**

File قائمة الملفات

- **Info: Displays information about the open workbook such as the name of the workbook, its size, and the composition of the workbook**

And see it as well as to create protection and password for the workbook in Excel.

- **New starch workbook (Book) is a blank workbook. Blank**
- **Open to open a stock workbook with the calculator.**
- **Save workbook (This command does the As Save command when you save the workbook for the first time.**
- **Save As the workbook with another name.**
- **6 :Print used to print the worksheet and we choose the settings as follows:**

• :Print executes the print command.
• Copies: Specify the number of print copies.
• :Printer Choose the printer to be printed from.
• Active Sheet :Print the active worksheet.
- Workbook Entire :Print full printing of the workbook.
- Selection Print: Print the selected data.
• Pages determine the number of pages to print.

- **Collated- Prints pages from the first to the last page**

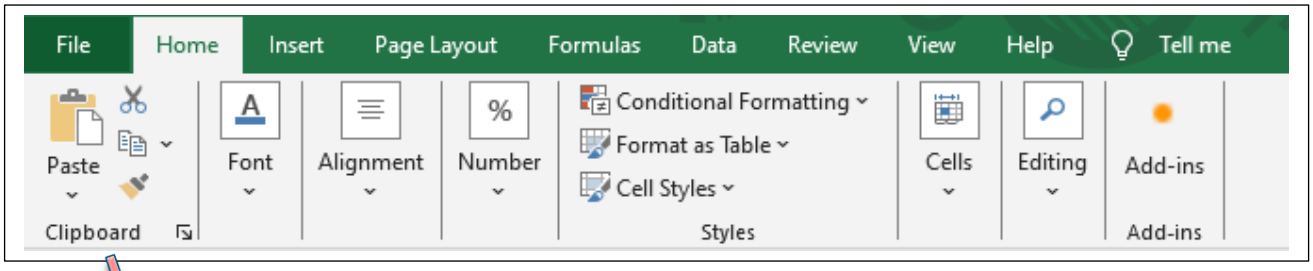
The printing process is repeated in the case of more than one copy.
Uncollected in case of third printing copies of a sheet
10-page work that will print the first page Third times then the second page three times.
• Orientation :Portrait make the paper direction vertical.
make paper Landscape Orientation Horizontal.
• A4: Printing paper size.
• Normal Margins: Footnotes and options Other.
• No Scaling: Scalable printing

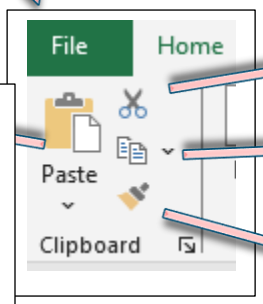
- **Share : Possible to share the book**

Computing is not about computers any more. It is about living

➢

قائمـةHome



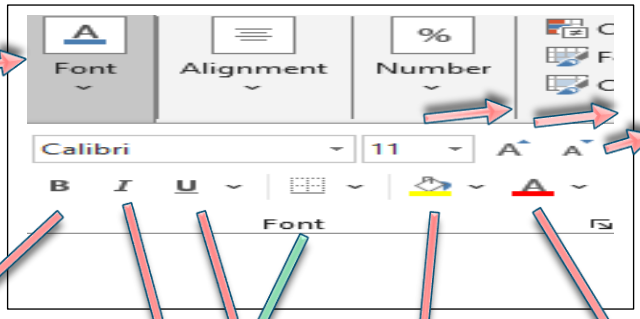


Cut is the process of cutting and shortening the contents of a cell. CTRL+X

• Paste : pastes copied or cut contents

• Copy: is the process of forgetting and abbreviating the contents of a

Format Painter forgets formats from a



Arial : choose the line type of arrow that is

• size font:Increase to increase the font size in the cell.

• Size font

• Bold: to make writing in bold and abbreviated it. CTRL+B

• Font color : change color of text

• Italic to make the font italic and shorten it. CTRL+I

• color Fill :to fill a selected cell with a

• Underline: to underline the text and shorten it. CTRL+U

• color Fill :to fill a selected cell with a

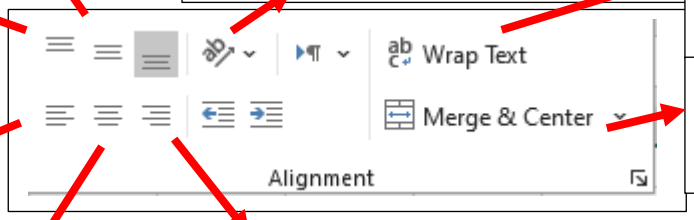
• Align Bottom : to make the cell contents below the cell.

• Align Middle: to make the cell contents in the middle of the

• Orientation: Change the orientation of cell contents

• text Wrap :is the process of rotating text by cell size.

Align Top :to make the contents of a cell above

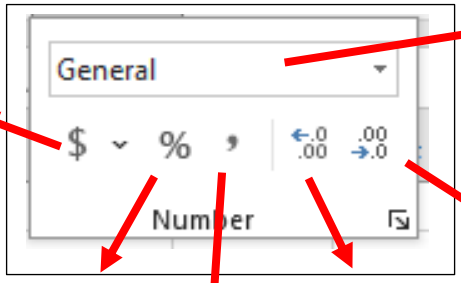


• Align left text to make the cell contents left-aligned.

• & center Merge : is a null merge and

• Center :to make the contents of the cell in the middle.

• Right text :Align to make the cell contents right-aligned.



General format Number : Choose the type of cell contents

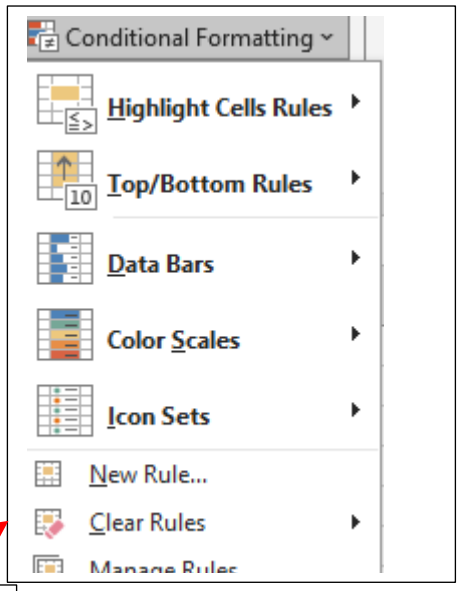
• format Number : Accounting to choose the

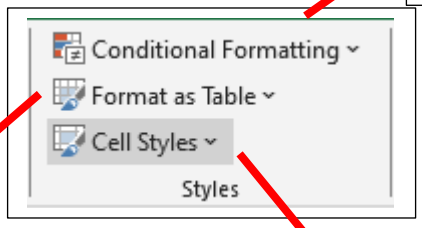
• style Percent: to make cell contents a percentage Its abbreviation is Shift+%+ CTRL

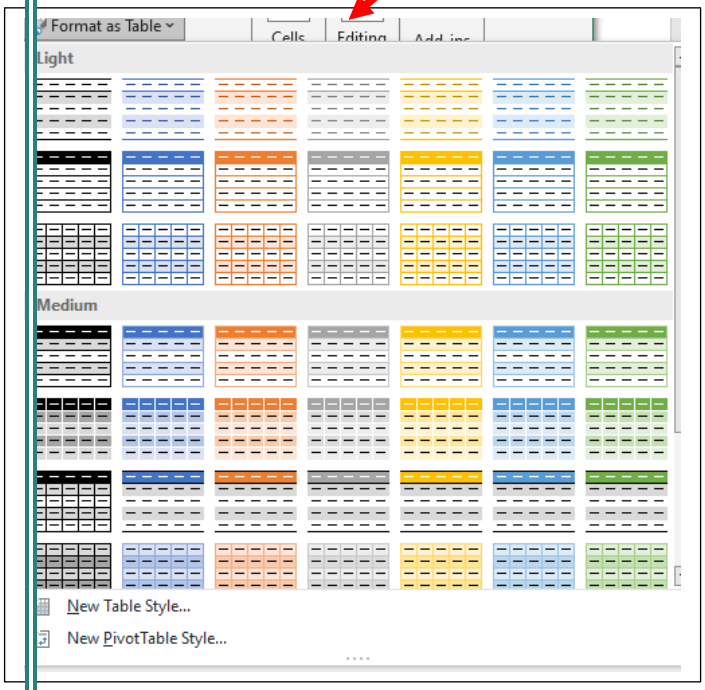
• Decimal: Increase to increase decimal numbers beyond

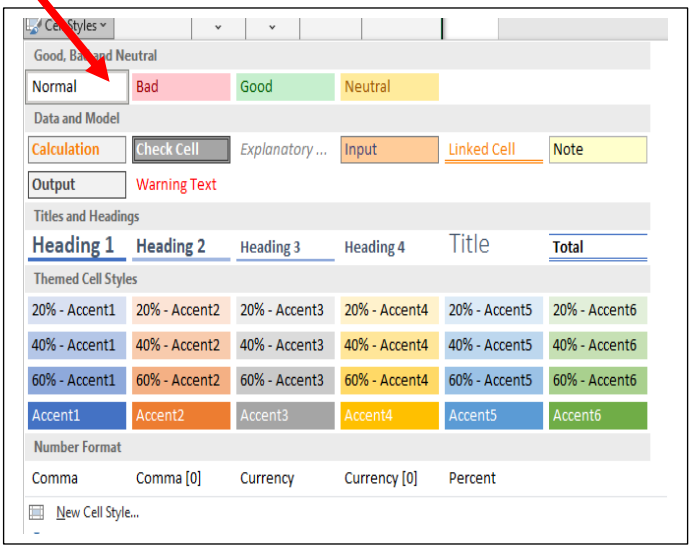
• Decimal :Decrease to decrease decimal digits

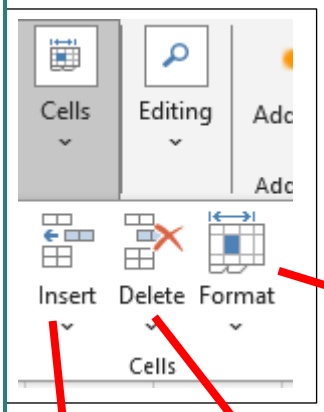
• Style: Comma to make cell numbers have a sorter up


Conditional Formatting
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules


Conditional Formatting
Format as Table
Cell Styles
Styles


Format as Table
Light
Medium
New Table Style...
New PivotTable Style...

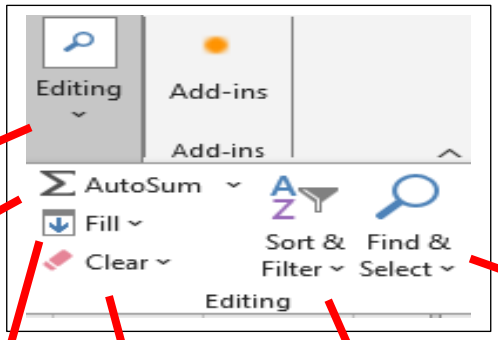

Normal
Bad
Good
Neutral
Data and Model
Calculation
Check Cell
Explanatory ...
Input
Linked Cell
Note
Output
Warning Text
Titles and Headings
Heading 1
Heading 2
Heading 3
Heading 4
Title
Total
Themed Cell Styles
Number Format
Comma
Comma [0]
Currency
Currency [0]
Percent
New Cell Style...



C:Format- Format cell size width and height

B- :Delete to delete a cell in the table.

A- Insert the cyclist cell in the table.



The process of combining several contents is empty and also contains five basic functions

AutoSum
, Sum, Average, Count Numbers, Max, Min

To search for a number, specific word, text, or

To filter data by certain conditions

B- Fill to fill the contents in a series of empty directions

Clear: To delete the contents of a cell or group empty, we select the desired empty and then press (Delete), moments.

Computing is not about computers any more. It is about living

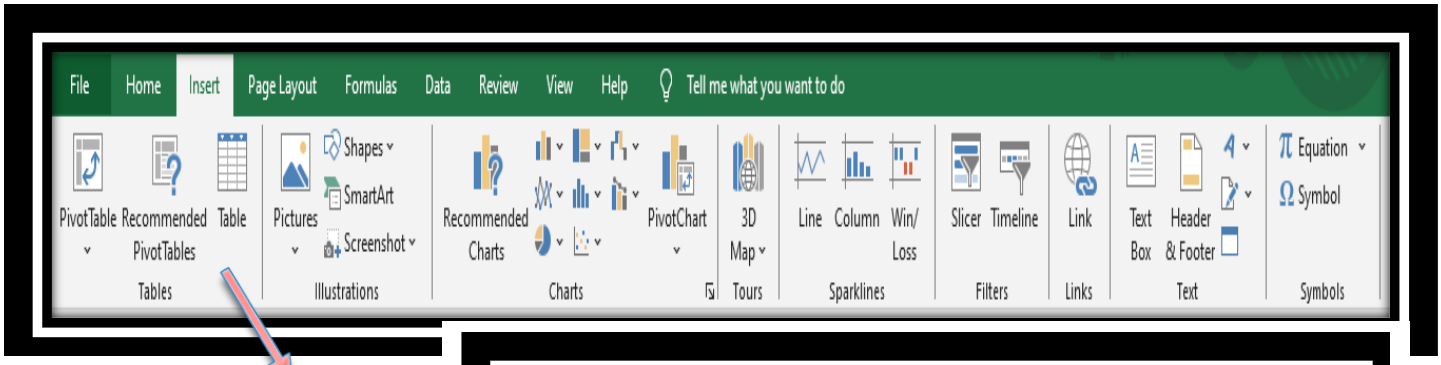
Insertقائمـة

is the third tab in Excel 2019. Microsoft This tab has a lot of features that insert elements and objects such as: table, pictures, graphic images, shapes, SmartArt graphics, and graphics.

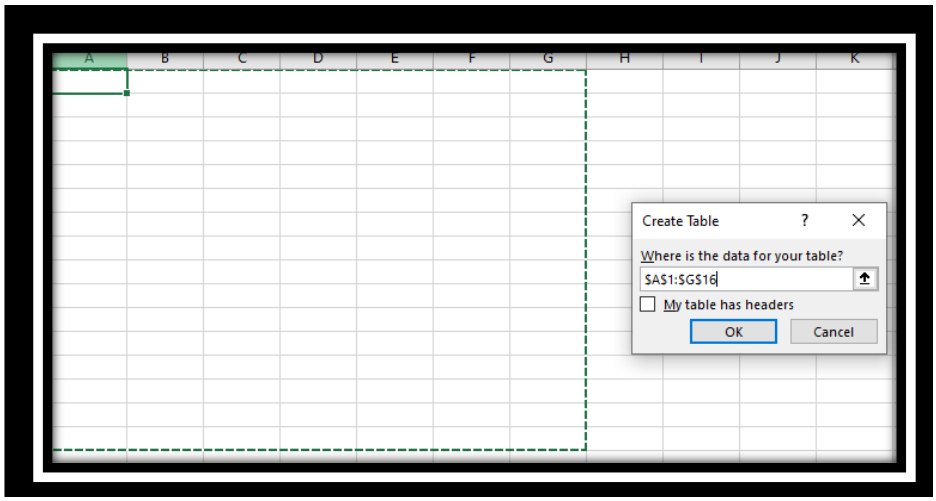
Charts as in the following figure.

Illustrations : This group's commands insert Different types of illustrations such as: images, shapes and clipart Pictures and fees Smart Art Shapes and Smart Shapes Charts and screenshots.

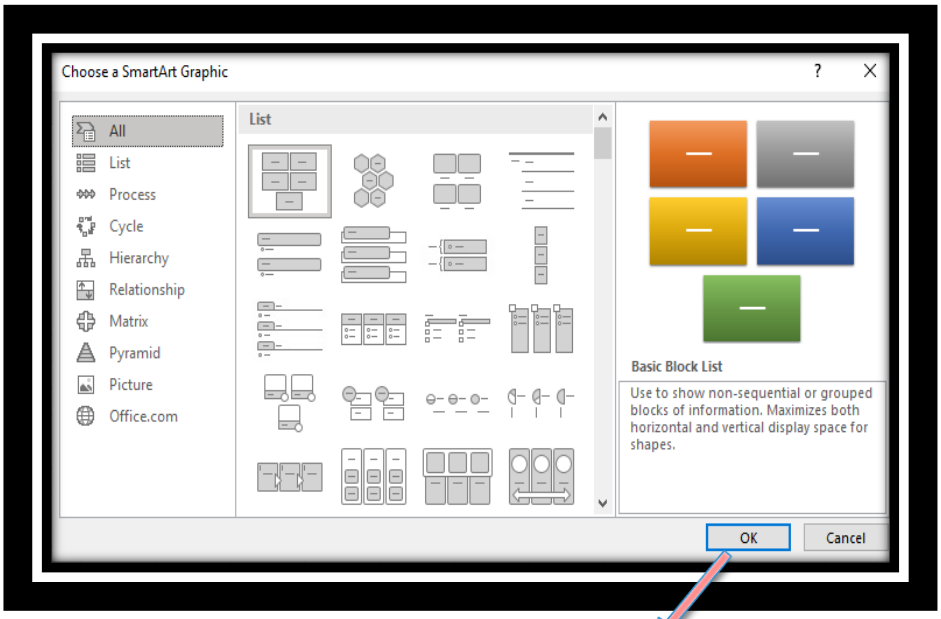
1. **Pictures insert a picture saved in the calculator.**
2. **ClipArt insert clip art and it is located in the system**
3. **Shapes insert different shapes.**
4. **Screenshot: The screenshot command allows you to take an image of all or part of any window that appears**



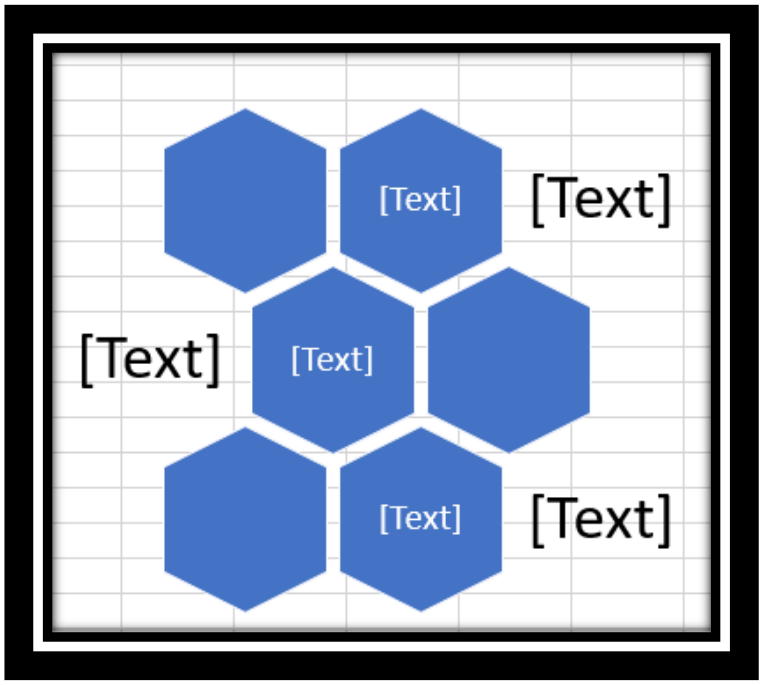
Click on the Table Create icon and select the required empty to make a table and then click .ok



Smart ART :

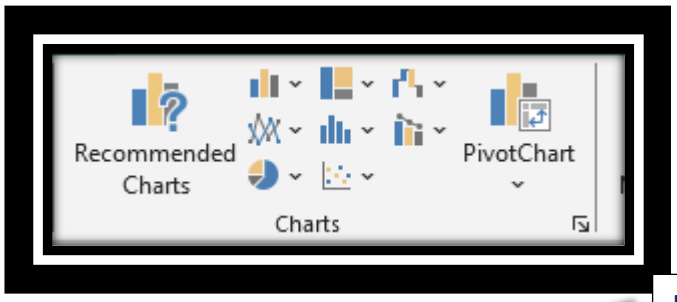


Choose the desired shape and click OK Two contextual tabs for the Design format will appear that can be used to change the color and design of the shapes and make

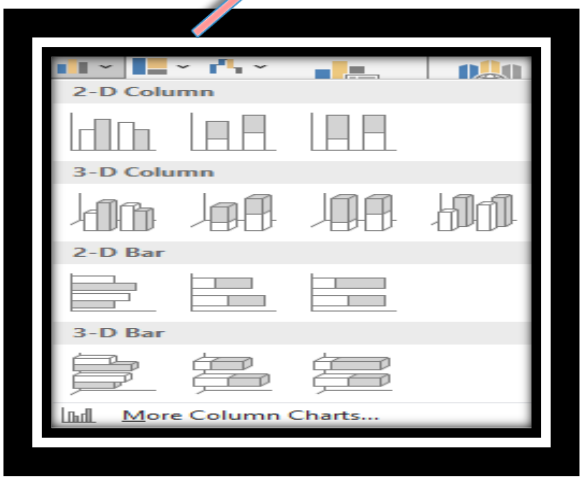


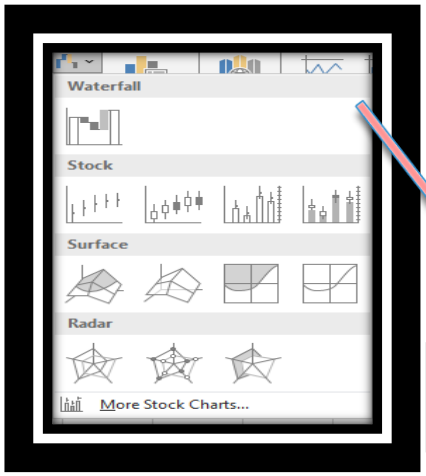
Charts :

Charts: A graph is a visual expression of data and shows data in an easy-to-understand way. Here are several types of charts such as column chart bar and

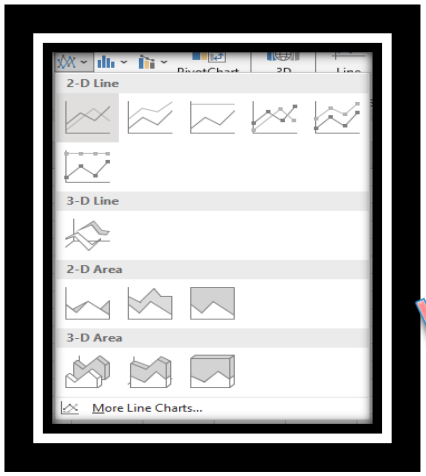


Insert column or bar

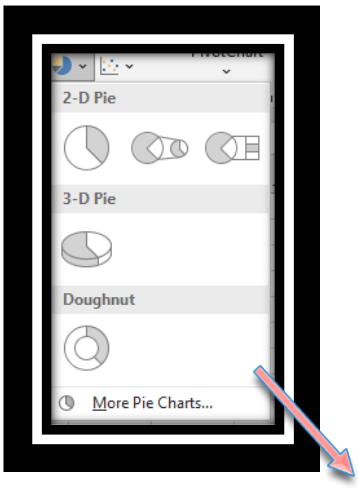




Insert waterfall ,funnel , stock ,surface or

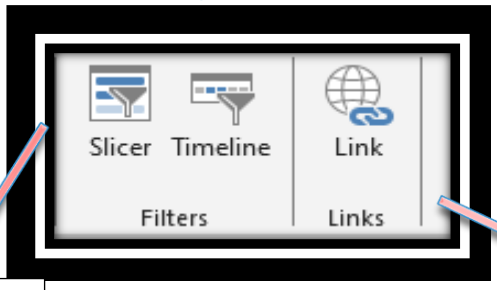


Insert line or area



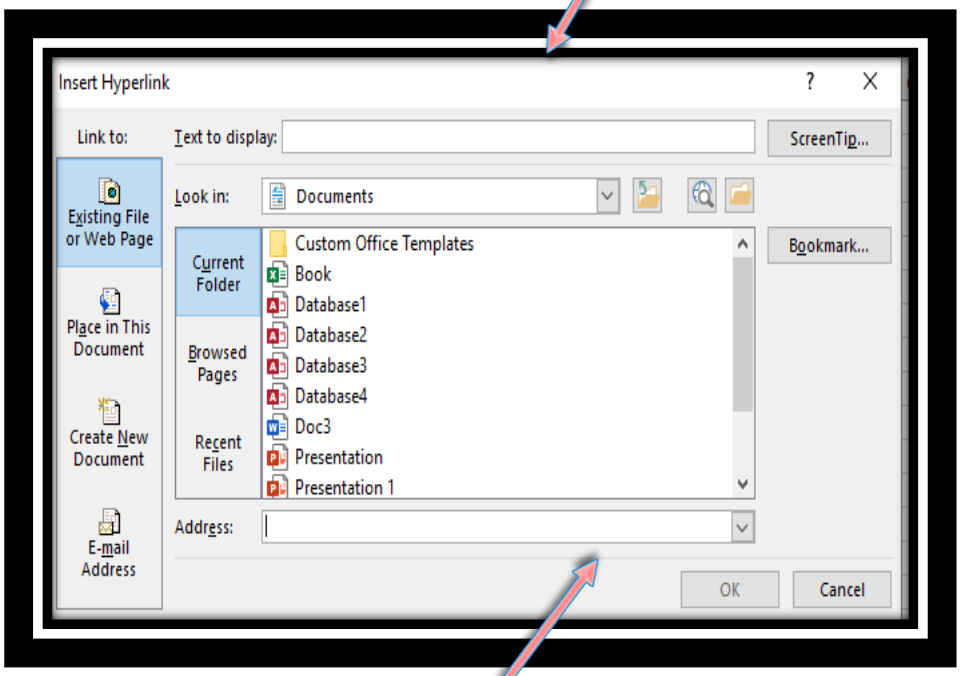
Insert pie or doughnut

Timeline : use a time line to filter dates interactively . Time lines make it faster and easier to select



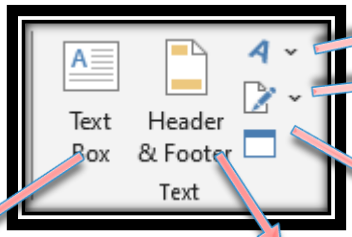
Slicer which is the order of the data descending example we specify the column of books

-Links Hyperlink : a link that links any other program such as (Power Word,
cad auto Access, Point, with Excel



We select the program and then click Ok the link appears in the selected cell.

Text allows you to view text in a variety of ways



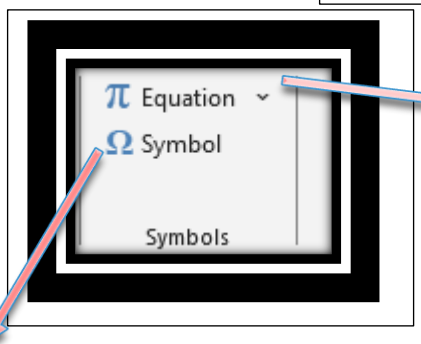
Insert Word ART

Add Signature line

Embedded Objects are documents or other files

Click on the "Box Text" button This will change the mouse pointer to + shape .
We press the left mouse button and drag
The text box is drawn and then

You can insert a header and footer for the pages with the following steps:
-1 In the Insert tab, from the Text group click Footer & Header, a place will open
Intended for writing the desired address.
-2 The header area will be activated on the page, now enter the text for the header in the header area.
3. A footer can be inserted in the

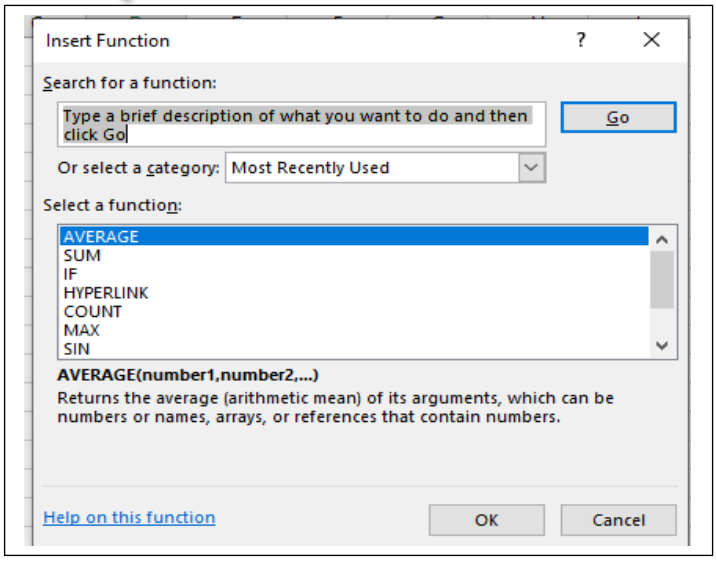


When you click on the equation symbol, several types of equations will appear that we may have difficulty typing using the keyboard. And choose one of the equations only we select it with the mouse and then add

Add Symbols that are not on

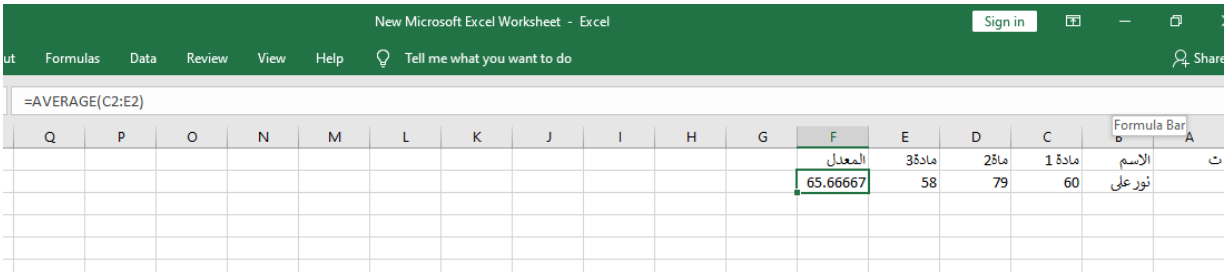
Formulas

Function Library Group



Average : This function is used to find the arithmetic mean of a set of numbers

.= AVERAGE(B2:E2)



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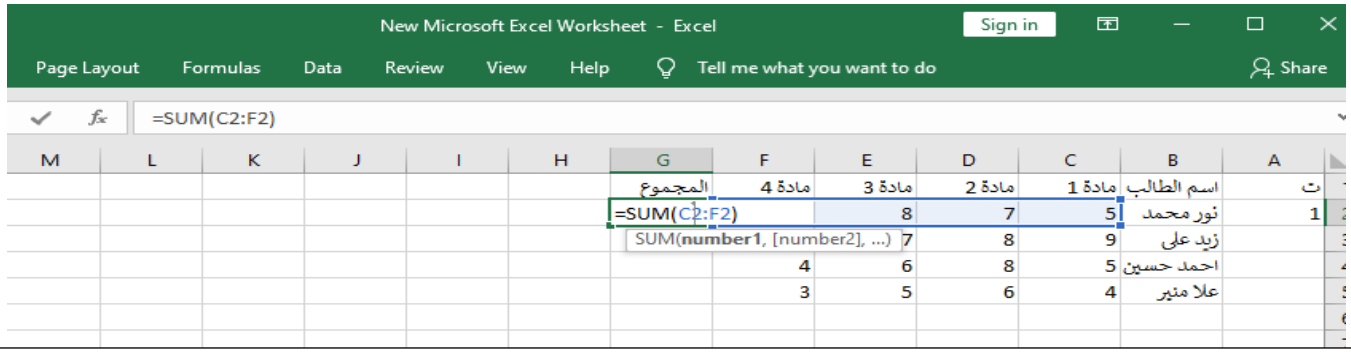
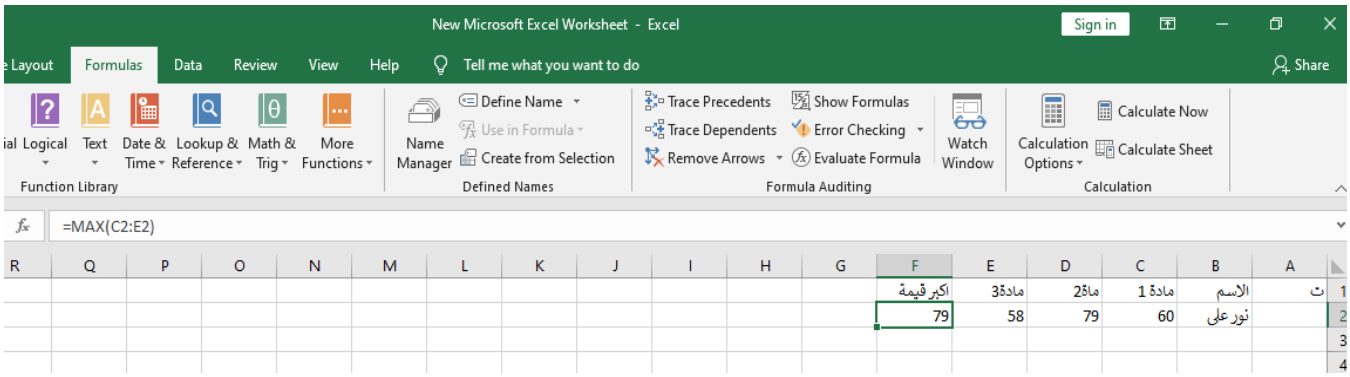
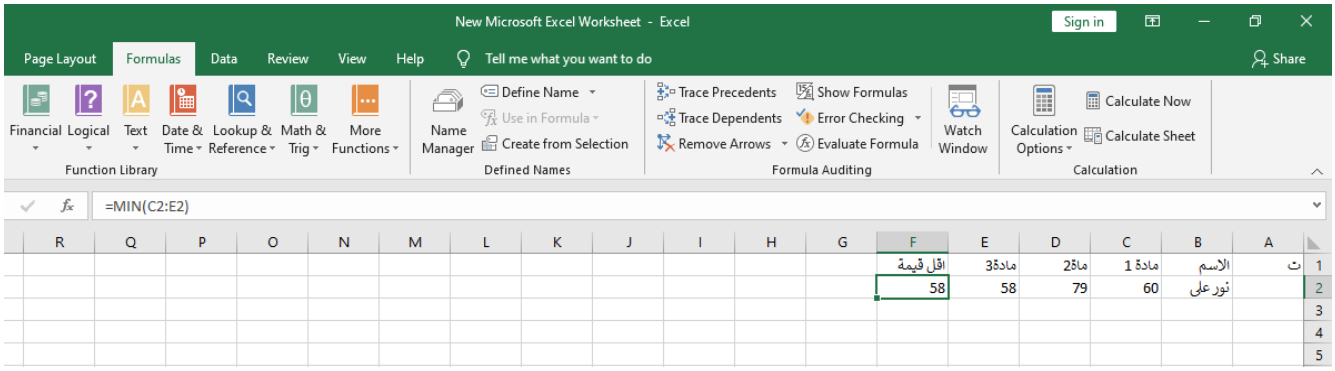
SUM : The addition function is the most important function of the excel function and perhaps the most used function at all, and it adds the numbers .= SUM(C2:F2)



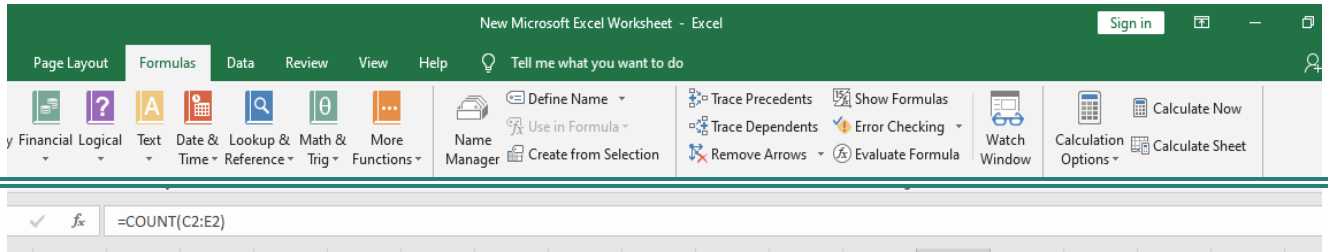
MAX : This function is used to find the greatest value of =MAX(C2:E2)



MIN: This function is used to find the smallest value =MIN(B2:E2)



COUNT : The COUNT function calculates the number of cells containing numbers =COUNT(C2:E2)



دالة IF():

تعد الدالة IF() اشهر الدوال الشرطية على الاطلاق وهي تأخذ شرط ما وترجع قيمة معينة حال تحقق الشرط وقيمة اخرى حال عدم تحققه وتأخذ الشكل التالي:

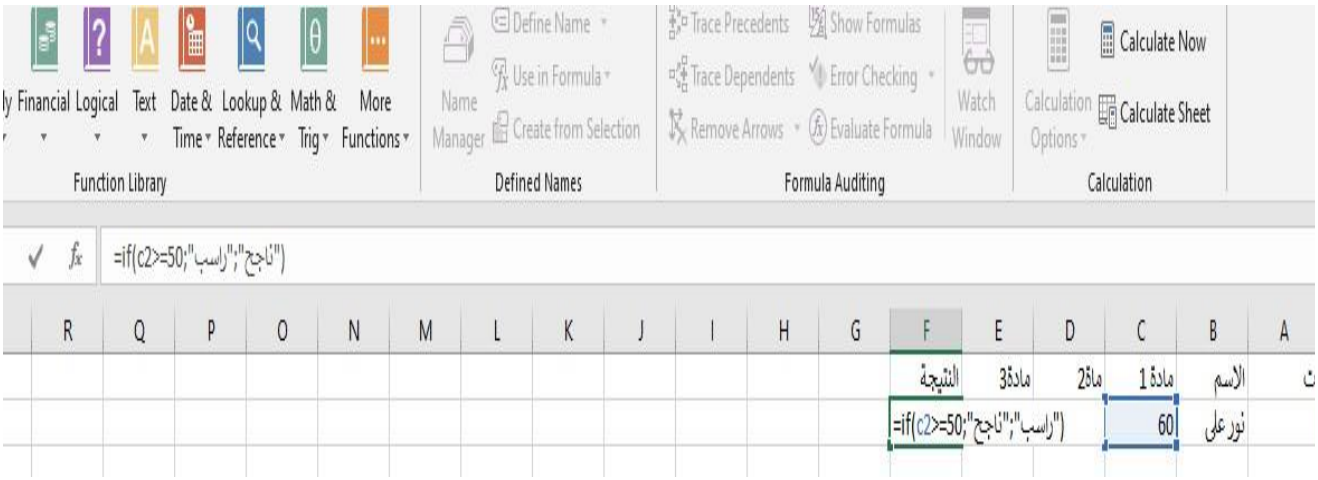
=IF (القيمة حالة عدم تحقق الشرط القيمة حالة تحقق الشرط شرط منطقي)

=IF (logical expression; true; false)

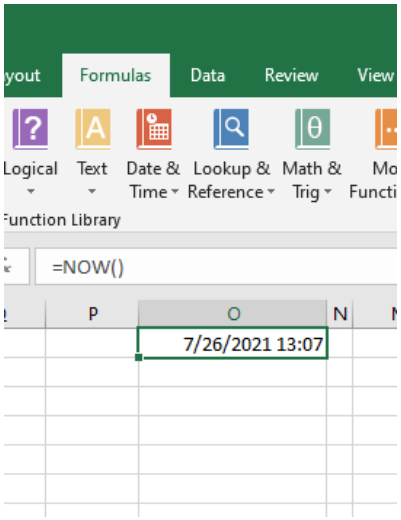
Function :IF()

The IF() function is the most famous conditional function on the length and it takes a condition and returns a certain value once the condition is met And another value if it is not achieved and takes the following form: (Value condition non-fulfillment condition value condition condition logical condition) =IF

=IF (logical expression; true; false)



NOW : This function uses to insert time and date in the worksheet and takes Figure follows =NOW ()

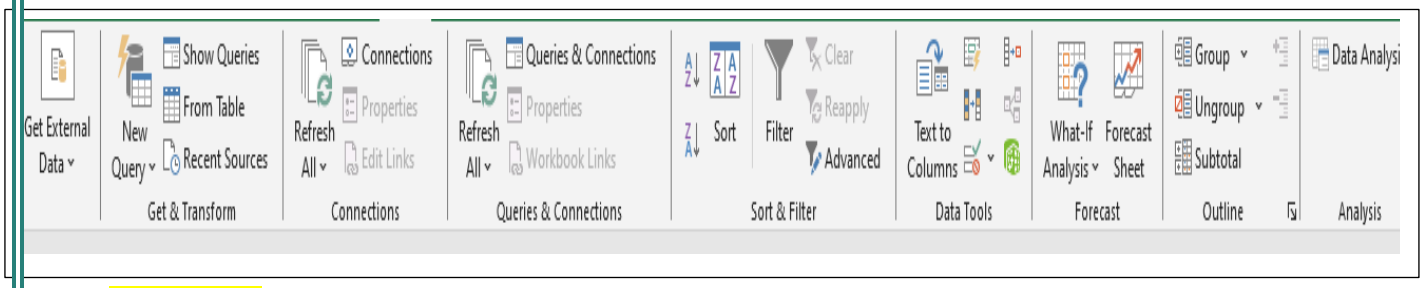


1. ####### : يعرض هذا الخطأ عندما يكون حجم الرقم اكبر من حجم الخليه ولحل هذا الخطأ يجب تكبير الخلية

2. # NAME : يعرض هذا الخطأ عند كتابة الدالة بشكل غير صحيح

3. #VALUE يعرض هذا الخطأ عند كتابة ادخال بيانات غير صحيحة

Data



Get data : This command is located in the data transform & Get group and is used to get data from
Different sources file or database

Refresh all : This prompt is in the Connections and Queries group and is used to update
Data received in the worksheet.

Connections: This command is used to show all the links that provide the worksheet with data.

Properties: from which the contents that are displayed from the source are determined and how to deal with changing the number of Rows and columns from the source.

Sort & Filter Group

A group of sorting and filtering data, from which we can sort the data ascending or descending, as well as filtering this data And according to specific values to obtain the required data.

Outline Group

Outline group is used to decode and merge a set of rows and columns to handle them as a single structure together

Group: (Data collection) is done after selecting the rows and columns to be grouped.

UN Group: Used to unlink threaded rows or columns (for removal data collection)

Subtotal: is used to partially sum selected data based on a column value Particular.

Detail: Show is used to show threaded rows or columns

Detail : Hide is used to hide threaded rows or columns. Information network

Information network

We will learn about the concept of both the local area network (LAN) and the wide area network (WAN).

What is LAN?

Or (Local Area Network) The local area network is abbreviated as (LAN); it is

Networks are used to cover limited and small areas such as a home or office. Local networks can be connected to each other via connectors from wide area networks using routers. For example: If there are ten people working together in an organization inside an office, it is better to link their computers, and in this way the office can have one printer that all ten people use. They can share other devices such as a modem and a scanner, and they can also share information among themselves.

What is WAN?
And its abbreviation is Wide Area Network.
WAN or Wide Area Network, as the name suggests, allows you to connect to other computers on a wider scale (i.e. the entire world).

What are computer workgroups?

A group of people who work together can share resources with each other. For example, when using a word processing program, you might use what are called templates. For example, your company might want to use a standard header for a fax page. If the template for this page is stored on one computer, it will be available to all the other computers. If you want to change the header on a fax page, you will have to change it on one machine instead of changing it on each computer.

Telephone networks and the computer world

We will learn about the use of the telephone network in the computer world and what is meant by its terms.

PSDN is the recognized name for the currently used telephone network.

ISDN stands for Integrated Service Digital Network, which allows for faster data transfer rates than modems. Using ISDN, you can transfer 64 or 128 kilobits of data per second.

Satellites: Satellite communications have allowed us to make a phone call or access the Internet from anywhere in the world.

FAX: A fax machine allows you to transmit printed material over a telephone system. The sending fax machine scans the page and converts the data into sound, and the receiving fax machine converts the sound back into an image of the transmitted page and prints it. Most modern computers include a modem that can send and receive faxes without the need to use a separate fax machine.

Telex: Telex is an old system used to send written messages via the telex network. The use of Telex has begun to decrease and is gradually being replaced by e-mail and fax.

Modem: Modem is an abbreviation for Modulate / Demodulate. The modem sends data from the computer you are working on through the telephone system, and the modem on the other side of the telephone line converts the signals so that the receiving computer can handle them

Digital Versus Analogue

Any digital system uses zeros and ones to represent and transmit data, so any digital clock will display time in hours, minutes, and seconds.

The analog system does not use zero or one like a conventional watch, but rather uses the full range of numbers including fractions. In this way, an analog watch can display fractions of a second.

Baud Rate

The baud rate refers to the speed at which a modem can send and receive data. The baud rate of most modern modems is 56 kilobits per second maximum.

Email Electronic Mail

Learn about email, its many uses, and what you need to send and receive emails.

When you send an email, the process is instantaneous. This is very useful when you are sending a message to someone in another country. The person receiving the message who lives on the other side of the world can read your message at any time and respond to it.

You can send the same email to many people at the same time, which is very useful in any work environment. However, this possibility can be exploited incorrectly. Now, anyone can send an email via the Internet to millions of people, which is a wrong practice that many condemn. These messages are called spam messages, and there is a folder designated for them in the email called Spam Folder.

What do you need to use email?

To send and receive email, you will need a computer, some computer hardware and software, and an Internet connection.

There are two basic types of email that you should know:

Internal company emails are sent and received over the company's local network. If you are connected to your organization's local network, you will need to install a network card (board) in the computer you are working on. In many cases, you can use Windows to connect to computers connected to your company's server. In other cases, your company may use special networking software such as Novell's Netware

In large companies, you are usually connected to the Internet via the company's local network, and sometimes you need to connect a modem to the computer you are working on so that you can access the telephone system and then the Internet. The support team in the IT department of your organization prepares the necessary procedures to complete the process of connecting to the local network and the Internet. Many companies use Outlook

The Internet

The Internet is a global network that connects millions of networks. One of the most important features of the Internet is the huge amount of data that you can access through it very quickly.

You can use the Internet as a marketing tool for your company, even if it is small, without the need for…

sales representative.

The problem these days is not finding information but dealing with the huge amount of information available. In addition, you do not know how accurate the information you are getting is and whether it is up to date or not.

There are many search engines, the most famous of which is currently Google www.Google.com. As an example of search engines in the world of the Internet:

http://www.altavista.com
http://www.excite.com
http://www.hotbot.com
http://www.go.com
http://www.lycos.com
http://www.metacrawler.com
http://search.msn.com
http://www.webcrawler com

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