

MS-DOS

Short for **Microsoft Disk Operating System**, **MS-DOS** is a non-graphical command line operating system created for IBM compatible computers. MS-DOS was first introduced by Microsoft in August 1981 and was last updated in 1994 with **MS-DOS 6.22**. Although the MS-DOS operating system is rarely used today, the command shell commonly known as the **Windows command line** is still widely used.

The DOS operating system programs are stored on some secondary storage device. It is then loaded into **RAM** when required. The DOS software is divided into three parts stored in three different files on a disk. This disk which contains these three files is called a Bootable disk. The three files loaded on this disk are **IO.SYS**, **MSDOS.SYS** and **COMMAND.COM**.

- **IO.SYS** file contains the device drivers for the standard devices such as keyboard, disk, floppy, printer and monitor are present. The IO.SYS also contains SYS.INI file which loads MSDOS.SYS from hard disk into memory. The IO.SYS is also called IBMBIO.COM.
- **MSDOS.SYS** file is also called DOS Kernel. It contains all the modules for process management. These modules are written in machine independent manner so that they could be easily ported. The MSDOS.SYS is also called IBMDOS.SYS in some systems. The **DOS kernel** performs four basic important functions: -
 - **Memory Management-** It allocates memory to different application programs on demand.
 - **Process Management-** It does the management of the program by loading the program requested by the user from disk in memory and helps in execution of the program. It also helps to recover system files when unwanted termination occurs.
 - **File Management-** It does the management of files by reading, writing, displaying renaming, copying and removing the files.
 - **Provides an Interface-** It establishes interface between the user and the hardware. It works as an intelligent agent by

allotting various hardware device to various programs when needed.

- **COMMAND.COM**- The MS-DOS shell is known as COMMAND.COM. MS-DOS has about 70 or more commands that are partitioned into two categories- **Internal** & **External**.

Bootting process of MS-DOS

The **POST** (**P**ower **O**n **S**elf **T**est) begins the Booting in your PC. When you turn on your PC, the power supplied to the PC wakes up the processor and looks for the Start-up instructions. These start-up instructions are stored in the **BIOS** (**B**asic **I**nput **O**utput **S**ystem) chip.

The POST begins and the chip double checks their own code against the same code stored in memory. It then test for all the expansion slots plus the serial and parallel ports, whether they are working right or not. Then it checks the Clock chip. Then it gets into video adapter and sees the message of the Video BIOS. It also checks for the keyboard port and checks whether any key pressed or not. Then it writes the data to the RAM chips and reads it back, to double check for the accuracy again. The POST keeps going.

It then checks to disk drive and hard drive comparing these with the list in CMOS chip. Finally after all processes are done computer loads the operating system into its memory. DOS booting involves reading following files into memory namely **IO.SYS**, **MSDOS.SYS**, and **COMMAND.COM**.

Features of MS-DOS

It is a single user operating system and is a **CUI** (**C**ommand **U**ser **I**nterface). It interprets commands typed into the DOS mode.

- Standardization and openness of **MS-DOS** Architecture has greatly benefited software and hardware developers.
- Very good File, Client and Print server options.
- Most recent development in DOS i.e. **MS-DOS 7.0** (incorporated in Windows 95) has provided **GUI** (graphic user interface)

- It has a **CHKDSK** utility that helps to Detect, Diagnose and repair disk errors.
- It has ability to bypass some Startup commands when the user switches on the computer.
- The **VSAFE.COM** command helps to detect and remove viruses present in the user's system.

Types of DOS Commands

The command generally means an instruction written in computer language that user types to execute a specific operation on the DOS prompt. The specific operations on the DOS prompt. The command interpreter accepts our input in a specific form. This specification is known as the **syntax** and the output is known as DOS **command**.

There are two types of Commands:

1. **Internal Commands**
2. **External Commands**

Internal Commands

Internal commands are those commands that are loaded automatically in the memory when **DOS** is loaded into memory during booting process. These commands are easier to learn and use and require no external files for their storage as in case of external commands. These commands are always available at the console of the user and are executed much faster than external commands. The internal commands are used for common jobs such as copying, erasing and renaming files.

Some Common Internal Commands-

1.CLS

It is used to clear all the information from the display screen, bearing only the system prompt and a cursor on the upper left corner of the screen. It will display operating system prompt, if any, on the first line of the display.

Syntax:

C:\>CLS

2. COPY CON

This command is basically used to create a file. The only disadvantage of this command is that the file created by this command cannot be modified. If a user tries to do it then a message is displayed whether user wants to overwrite already existing file or not. There is no cursor upward or backward movement by using arrow keys when we use this command to make multiline file.

Syntax:

```
C:\>COPY CON <FILENAME>
```

3. CD or CHDIR

Change current directory. Displays the current working directory when used without a path parameter.

Syntax:

```
C:\>CD <DIRECTORY_NAME>
```

4. COPY

Copies files from one location to another. The destination defaults to the current directory. If multiple source files are indicated, the destination must be a directory, or an error will result.

Syntax:

```
C:\>COPY <FILE_NAME> <DESTINATION>
```

5. DEL OR ERASE

Deletes one or more files.

Syntax:

```
C:\>DEL <FILE_NAME>
```

6. DIR

The **DIR** command displays the disk's volume label and serial number, one directory or filename per line, including the filename extension, the file size in bytes, and the date and time the file was last modified and the total number of files listed, their cumulative size, and the free space (in bytes)

remaining on the disk. The command is one of the few commands that exist from the **first versions** of DOS.

Syntax:

C:\>DIR

7. MD OR MKDIR

Makes a New Directory. The parent of the directory specified will be created if it does not already exist.

Syntax:

C:\>MD <DIRECTORY_NAME>

8. RD OR RMDIR

Remove a directory, which by default must be empty of files for the command to succeed (the **/S** flag removes this restriction)

Syntax:

C:\>RD <DIRECTORY_NAME>

9. REN

Renames a file. Unlike the MOVE command, this command cannot be used to rename subdirectories, or rename files across drives.

Syntax:

C:\>REN <FILE_NAME> <NEW_NAME>

10. TREE

Shows the directory Tree of the current directory.

Syntax:

C:\>TREE

11. VER

Shows the version of **MS-DOS** you are using.

Syntax:

C:\>VER

12. TIME and DATE

Display and set the Time and Date.

Syntax:

C:\>TIME

C:\>DATE

13. EXIT

Exits the current command processor. If the exit is used at the primary command, it has no effect unless in a DOS window under Microsoft Windows, in which case the window is closed and the user returns to the Desktop.

Syntax:

C:\>EXIT

External Commands

The external commands are used less frequently and are stored in some external files which are in some secondary storage device. Whenever an external command is to be executed the external file in which that particular command is stored is transferred from the secondary storage i.e. disk to main memory i.e. RAM.

All executable files with extensions .COM, .EXE, and .BAT are the external commands. These commands are used for relatively jobs like comparing two files, formatting disk etc. For using external commands we need to use corresponding command file available in DOS.

Types of External Commands-

1. ATTRIB

Change or view the attributes of one or more files. It defaults to displaying the attributes of all files in the current directory.

Syntax:

C:\>ATTRIB [-ARGS] <FILE_NAME>

Options:

To add an attribute attach a '+' in front of it.

To remove an attribute attach a '-' in front of it.

Attributes include-

- **-R** -> Read-only
- **-A** -> Archive
- **-S** -> System
- **-H** -> Hidden

2. CHKDSK

Verifies a storage volume (Hard disk, Partition, Floppy disk, Flash drive, etc.) for file system integrity.

Syntax:

C:\>CHKDSK *DRIVE_LETTER*: [PATH|FILE_NAME] [-OPTIONS]

Options:

- **/F** -> Fixes errors on the volume (without /F , **CHKDSK** only detects errors)
- **/P** -> Forces a full verification.
- **/R** -> Searches for defective sectors and recovers legible information (applies /F)
- **/X** -> Unmounts the volume before processing if needed. (**Note:** An mounting temporarily invalidates all pointers/handlers to the volume until process is completed)

3. DEFRAG

Defragments a disk drive.

Syntax:

C:\>DEFRAG *DRIVE_LETTER*: [-ARGS]

Options:

- **-A** -> Analyses the fragmentation of a disk drive.
- **-F** -> Force defragmentation even if disk space is low.
- **-V** -> Verbose output mode.
- **-H** -> Defrag hidden files.

4. FC OR COMP

Compares two files or sets of files and displays the differences between them.

Syntax:

C:\>FC [-OPTIONS] [PATH1|FILE_NAME1] [PATH2|FILE_NAME2]

Options:

- **/A** -> Displays only first and last lines for each set of differences.
- **/B** -> Performs a Binary comparison.
- **/C** -> Disregards the case of letters.
- **/L** -> Compares files as ASCII text.
- **/LBN** -> Sets the maximum consecutive mismatches to the specified number of lines.
- **/N** -> Displays the line numbers on an ASCII comparison.
- **/T** -> Does not expand tabs to spaces.
- **/W** -> Compresses white space (tabs and spaces) for comparison.
- **/NNN** -> Specifies the number of consecutive lines that must match after a mismatch.

5. FIND

A Filter to find lines in the input data stream that contain or don't contain a specified string and send these to the output data stream. Find may also be used as a pipe.

Syntax:

C:\> FIND [-OPTIONS] "KEYWORD" [PATH | FILE_NAME]

Options:

- **/V** -> Displays all lines NOT containing the specified string.
- **/C** -> Displays only the count of lines containing the string.
- **/N** -> Displays line numbers with the displayed lines.
- **/I** -> Ignores the case of characters when searching for the string.

6. FORMAT

Delete all the files on the disk and Reformat it for MS-DOS. In most cases, this should only be used on Disk drives or other Removable media. This command can potentially erase everything on a computer's Hard disk.

Syntax:

C:\>FORMAT DRIVE_LETTER: [-OPTIONS]

Options:

- **/FS** -> Specifies the file system (FAT, FAT32, exFAT, NTFS, UDF)
- **/V** -> Specifies the volume label.
- **/Q** -> Performs a Quick Format.
- **/C** -> NTFS Only: Files created on the new volume will be compressed by default.

- **/X** -> Forces the volume to dismount first if necessary. All opened handles to the volume would no longer be valid.
- **/A** -> Overrides the default allocation unit size.

7. HELP

Help 'command' would give help on a specific command. By itself, it lists the contents of **DOSHELP.HLP**. Help for a specific command invokes the command with the **/?** Option.

Syntax:

C:\>HELP [-COMMAND]

8. MOVE

Moves files or renames directories.

Syntax:

C:\>MOVE [FILENAME] [NEWNAME]

C:\>MOVE [PATH|DIR_NAME] [NEWPATH]

9. XCOPY

Copy entire directory trees. XCOPY is a powerful version of the copy command with additional features, has the capability of moving files, directories, and even whole drives from one location to another.

Syntax:

C:\>XCOPY [PATH|DIR_NAME] [NEWPATH]

Batch Files

A batch file is an ASCII text file containing a list of DOS commands. Each line in a Batch file contains one DOS command plus any required parameters. Using batch files simplify repetitive file management tasks and saves a few keywords. Special DOS command apply to batch files which make them interactive, intelligent and capable of performing highly complex file management tasks.

Batch files can be given any valid DOS file name, but they must always have an extension **.BAT**. To open a batch file you can simply enter the name of a batch file at the DOS prompt. DOS open the file and executes the commands in it.

MS-WINDOWS

MS-Windows is a Multi User and Multitasking Operating system. Featuring the First **GUI** (Graphical User Interface) for IBM-compatible PCs, the Windows OS soon dominated the PC market. Approximately 90 percent of PCs run some version of Windows.

The first version of **Windows**, released in 1985, was simply a GUI offered as an extension of Microsoft's existing **MS-DOS**. Based in part on licensed concepts that Apple Inc. had used for its Macintosh System Software, Windows for the first time allowed DOS users to visually navigate a virtual desktop, opening graphical "**windows**" displaying the contents of electronic folders and files with the click of a mouse button, rather than typing commands and directory paths at a text prompt.

HISTORY

YEAR	WINDOWS VERSION LAUNCHED
NOV, 20 1985	Windows 1.0x Operating environment, First GUI from Microsoft for PC's.
DEC, 09 1987	Windows 2.x Launched.
MAY, 22 1990	Windows 3.0x Launched.
AUG, 24 1995	Windows 95 Operating System Launched.
JUN, 25 1998	Windows 98 Operating System Launched. It has improved Internet related Features.
FEB, 17 2000	Windows 2000 Launched.
OCT, 25 2001	Windows XP operating System Launched. XP version MS-Office also unveiled.
JAN, 30 2007	Windows Vista Launched.
JUL, 22 2009	Windows 7 Launched, Most successful & Widely used OS by Microsoft till Date.
OCT, 26 2012	Windows 8 Launched Featuring Live Tiles & Universal Apps.
JUL, 29 2015	Windows 10 Launched combining the best Features of Windows 7 and 8, With Rolling Release Update System, It is the Only Windows Branch in Active Development.

FEATURES OF MS-WINDOWS

It is a **GUI** (Graphical User Interface) Operating system. All the applications can be accessed with very fast speed and in efficient manner by clicking at their respective graphical symbols called **Icons**.

- It is capable of **Multitasking**. Graphics programs and character-based programs (DOS / Command Prompt) can be run concurrently i.e. it can execute more than one job simultaneously.
- It is based on the concept of WYSIWUG (i.e. **what you see is what you get**). Since it is a GUI so all the result are obtained from previous windows result and thus nothing is hidden from the user.
- It runs each programs or application in its own separate window. So if at any point the numbers of screens are open then user can easily **switch** between windows.
- Windows operating system is a **32/64 Bit** operating system. So as many as 32/64 Bit can flow from the data bus at the same, with maximum speed.
- Plug and Play frees you from manually setting up hardware devices. Windows detects and configures **Plug and Play** compatible devices automatically.
- Various operations like creating, deleting, copying files and folders can be done easily by just clicking on the icons.
- The feature of "**Control Panel**" in windows helps us to manipulate the various hardware and software components of the computer system. We can install new software, hardware devices, manage date and time, change users, apply passwords etc.
- The Password facility helps the data to be **Protected** from unauthorized users. The only user with the valid user name and passwords are given the right to enter windows and perform various operations.
- The **Multimedia** application programs supported by it help us to play song, movies and animations.
- The networking and internet facility helps users to communicate with each other.
- The **Screen Saver** facility protects our screen from burning when it is not being used over for a long period.
- The **OLE** i.e. **Object Linking and Embedding** facility provided by it helps to import and export different files in different applications. Moreover, charts, music, video, graphics could be inserted in a file.
- MS-Windows run under **protected** mode i.e. irregular programs cannot utilize the memory and other resources.
- It has a special **Disk Compression** program that helps to store the data in hard disk in a compressed manner thus saving a lot of disk space.

CONCEPT OF WINDOWS

Windows acts as a convenient platform to execute a number of applications and commands. Instead of typing lengthy and difficult commands to perform an operation we simply select an icon (small graphic representation or image) in a window. Its picture like environment saves a lot of time.

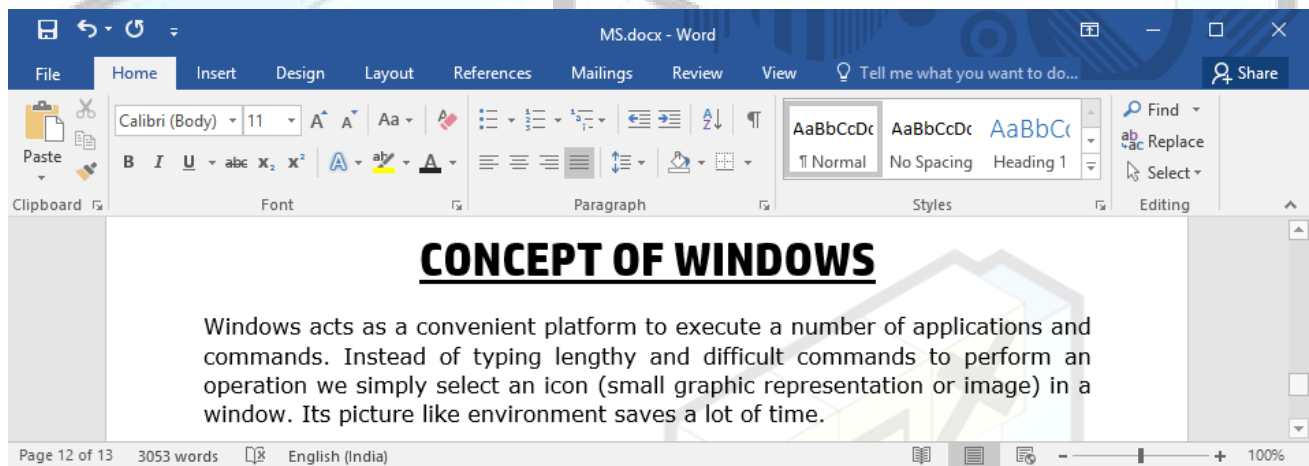
There are **two** types of windows:

(a) Application Window

(b) Document Window

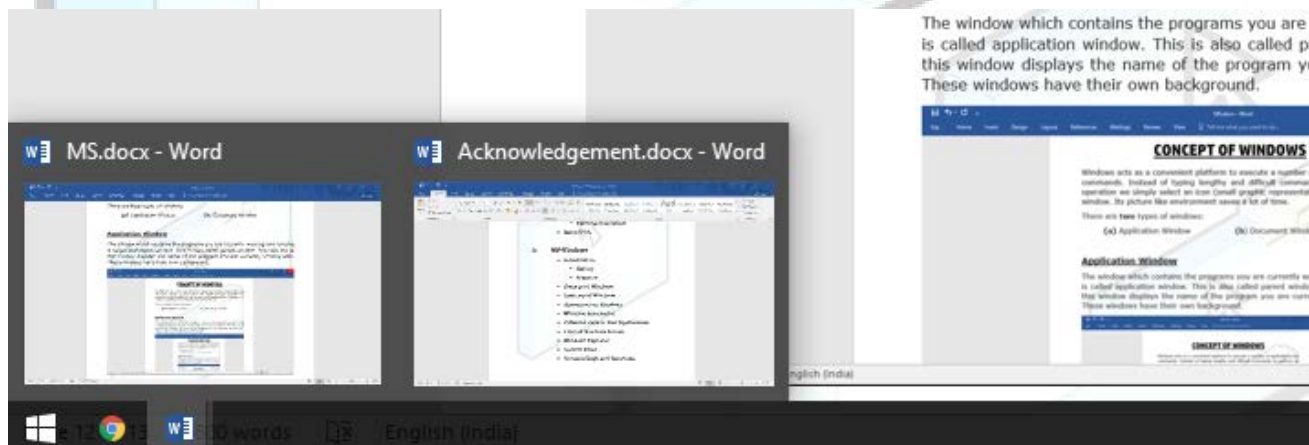
Application Window

The window which contains the programs you are currently working and running is called application window. This is also called parent window. The title bar of this window displays the name of the program you are currently working with. These windows have their own background.



Document Window

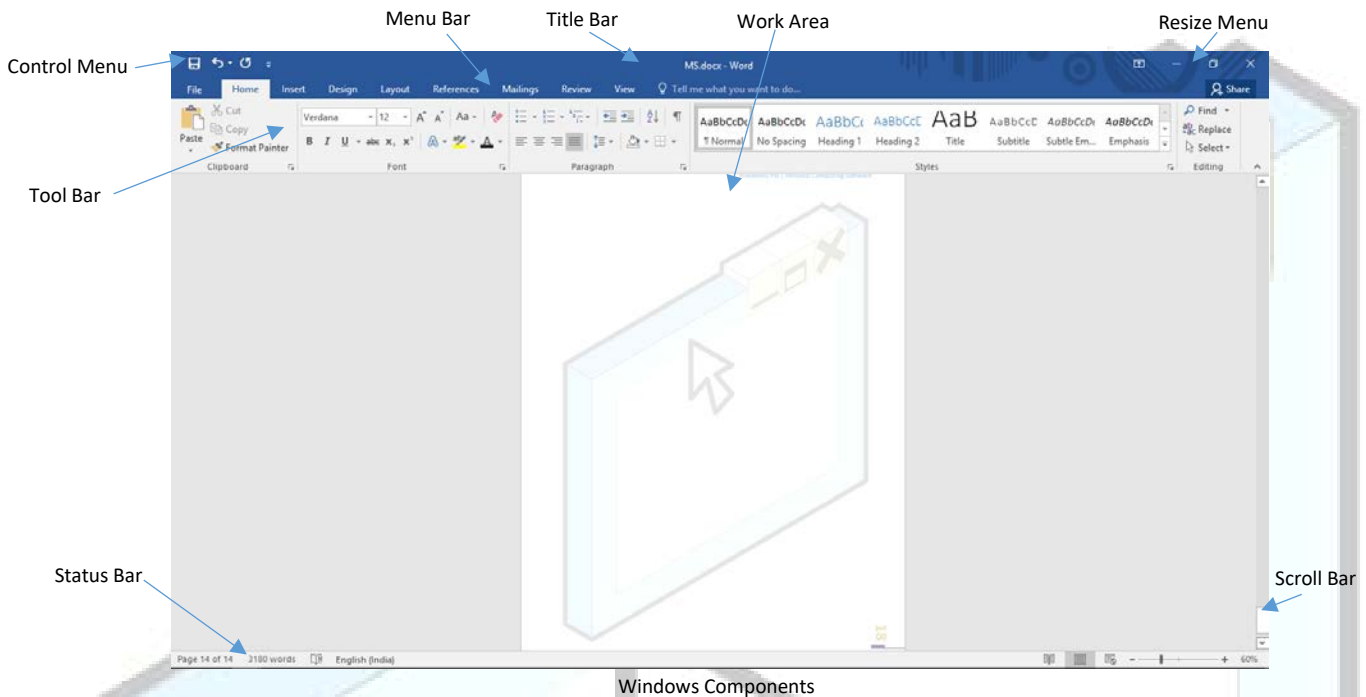
A window in the application window is called the document window. This window is also known child window. We can open multiple document window for a Single Program. Once the application window is open, we can open a new document window from it.



ANATOMY OF WINDOWS

The Anatomy of Window means different parts of a window. The various components of a window are:-

- **Title Bar-** It is a horizontal bar that displays the title of the window with colour pattern. It also contains the control box that handles the window and the Maximize, Minimize and Close button.
- **Control Menu-** A small box on the left hand side of the title bar containing shortcuts of the window is known as a control box.
- **Minimize, Maximize, Restore & Close Button-** The title bar of a window contains three buttons on the top right hand corner of the window- Minimize, Maximize and Close buttons. When we click the minimize button, the active window is minimized to iconized window on the desktop. When we click the maximize button, the active window covers up the whole desktop and its shape changes to that of the restore button.
- **Menu Bar-** Below the Title bar of each application window appears a row of words which together are called Menu bar. To select any option from the menu bar you click on one of the words. On doing so, a pull down or side menu appears in which a series of options are being displayed. You can select any one option of your choice among them as per requirements.
- **Work Area-** It is the area of the window where you can read the typed text or write the text with the help of keyboard.
- **Scroll Bar-** When the contents of the currently opened window are not visible i.e. they are unable to be seen in the work area then scroll bars help to view those contents. The **Vertical scroll** bar helps in vertical movement of the page and the **Horizontal scroll** bar helps in the horizontal movement.
- **Status Bar-** It is located at the bottom of the window. It shows the status of a particular window.
- **Tool Bar-** The Tool Bar consists of various tools which help the processes to be executed faster by the use of various tools available in the toolbar. These tools depend upon the application which we are using.
- **Borders and Corners-** They appear in each window. You can drag them with the mouse pointer as per your requirements (outwards or inwards) so as to change the size of the window.



Windows Components

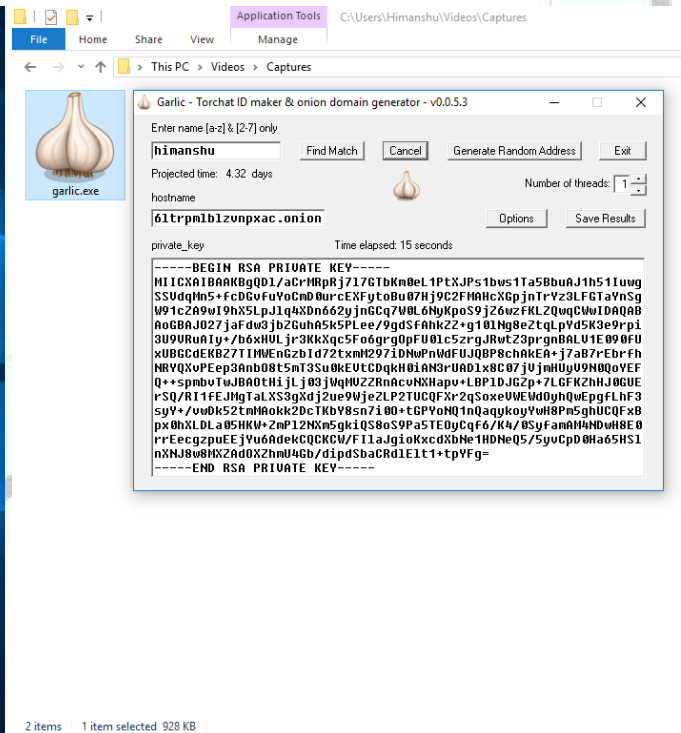
OPERATIONS ON WINDOWS

Opening an Application Window

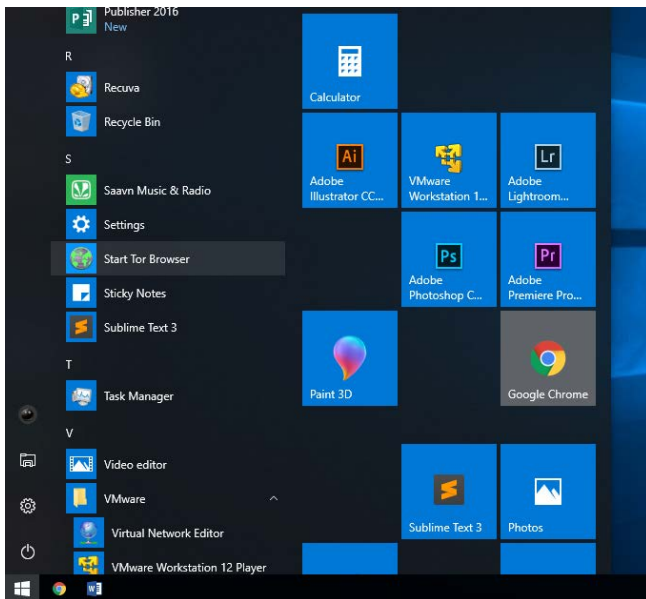
To open a window we can click at the icon or folder present at the desktop or any other drive in the computer. We can also open a window from the menu items present in the start menu or from a dialog box.



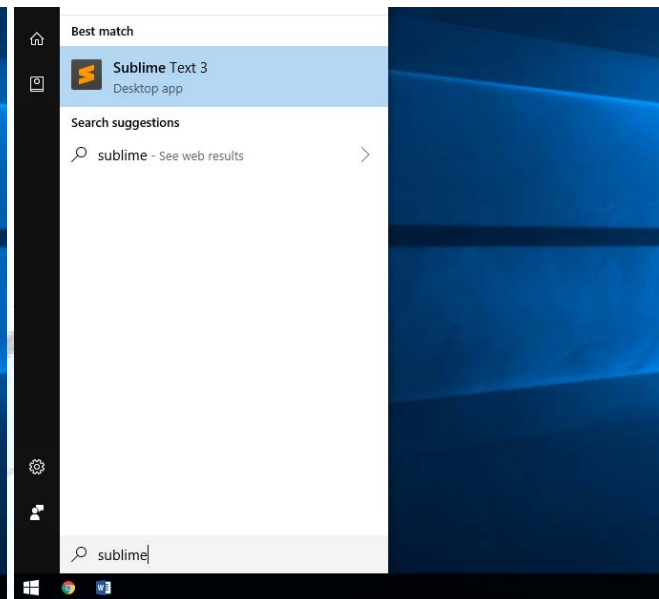
Launching Application from Desktop



Launching Application from Windows Explorer



Launching Application from Start Menu



Launching Application using Search Context

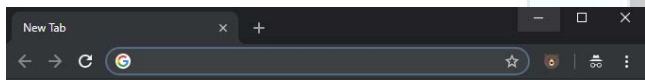
Minimize / Maximize Window

To maximize a window, click at the **Maximize** button on the Top Right corner of the title bar. When you click on it, the window would be maximized to full screen from its normal position. It would occupy the entire desktop.

To minimize a window, click at the **Minimize** button at the Top Right corner of the title bar. When you click on it, the window would be reduced to iconized button on the taskbar.



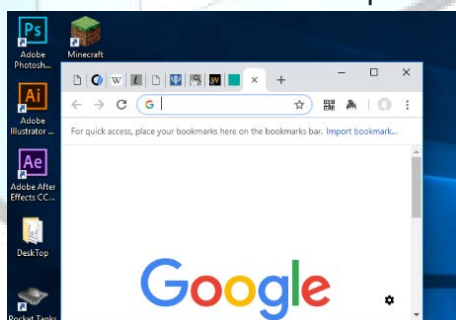
Maximize Button



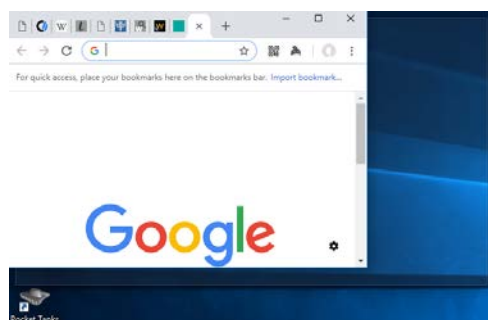
Minimize Button

Moving a Window

Moving of window is essential when we have opened two or more windows on the desktop and all of them are overlapping. As all the windows open at the center of the desktop automatically so we need to move them. In order to do so, we need to place our mouse pointer on the title bar area and keeping its pressed we drag the mouse in the direction in which we want to move the window. The window moves according to the movement of the mouse. When you release the mouse the Movement Stops.



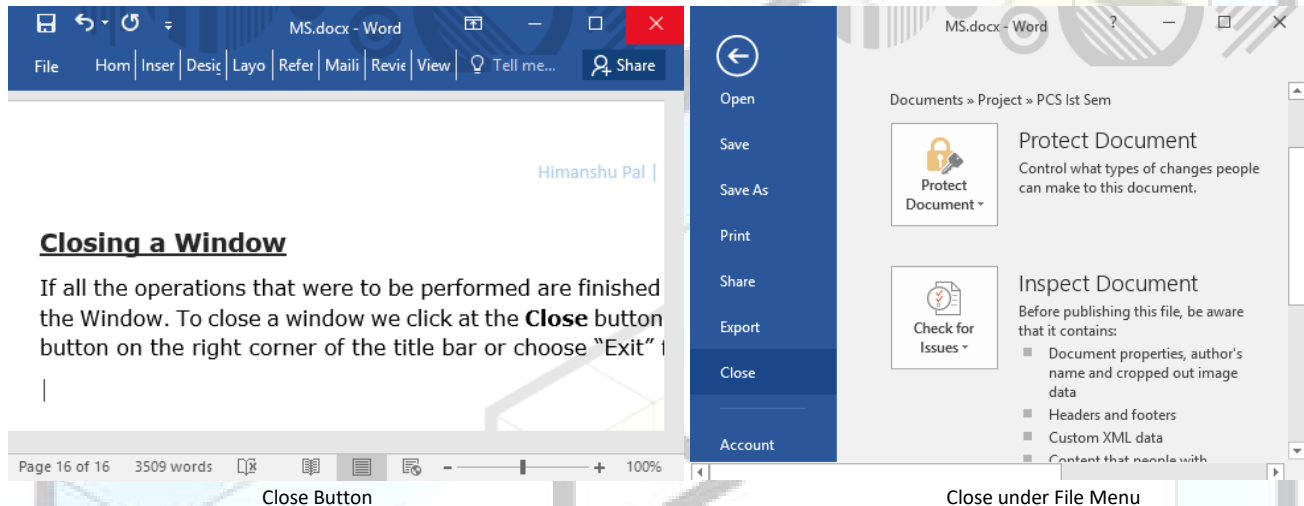
Dragging Title Bar



Snapping to Corner

Closing a Window

If all the operations that were to be performed are finished then we need to close the Window. To close a window we click the **Close** button, next to the maximize button on the right corner of the title bar or choose *Exit/Close* from the File menu.



WINDOWS ACCESSORIES

To access the Windows Accessories click the start button, You will be greeted with some preinstalled Feature rich applications from Microsoft. Select Accessories Folder option and further a cascading submenu appears. It has following options in it-

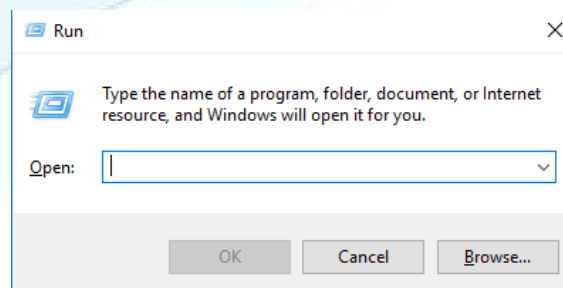
- **Calculator-** It is used to perform calculations. By default a standard calculator is shown. You can also view a scientific calculator by changing the view.
- **Notepad-** It is a word processor which is used for preparing various text documents only and save these files in your hard disk.
- **Paint-** It is an application which helps in painting of drawings with the help of tools available in the toolbox. You can edit a drawing or draw a new one.
- **WordPad-** Another type of Word Processor is available in Accessories. Large number of tools are available in this which helps to format the contents of a file as per the requirement of the user.
- **Character Map-** Character Map is used to view the characters in any installed font, to check what keyboard input is used to enter those characters, and to copy characters to the clipboard in lieu of typing them.

- **Snipping Tool-** It can take still screenshots of an open window, rectangular areas, a free-form area, or the entire screen.

WINDOWS UTILITIES

RUN

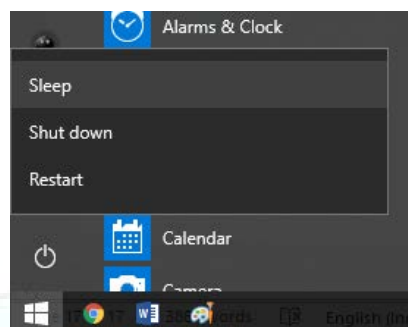
On clicking Run, a dialog box is displayed that we can use to run programs. This can be used to run programs that may not appear on any shortcut or in any other place in some folder. You can type the proper path in the text line box and click OK button. Then it would execute the entered command.



Run Dialog

POWER

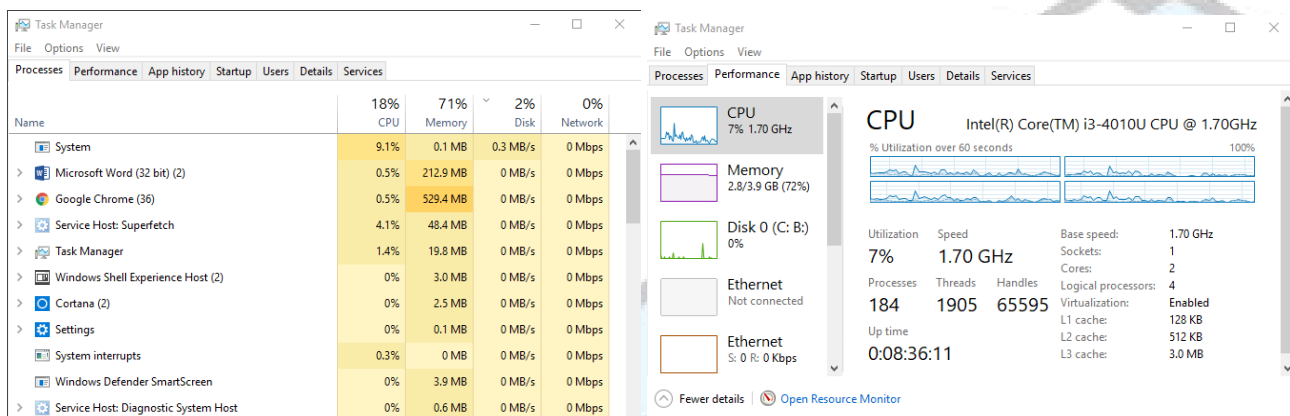
To switch off the computer, in case of windows we have to adopt a specific procedure, we cannot directly Shut Down from the cabinet itself. The Power utility helps us to do the shutdown. When we click at this command, a dialog box appears that has a list box. It contains the option such as: Switch User, Log Off, Restart, Sleep, Hibernate, and Shut Down. We can select the available option and perform the desired operation by clicking OK.



Power Options

TASK MANAGER

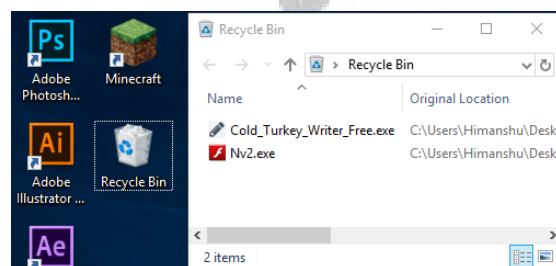
It is a system monitor program used to provide information about the processes and applications running on a computer, as well as the general status of the computer.



Task Manager showing per Program and Overall Resources Utilization

RECYCLE BIN

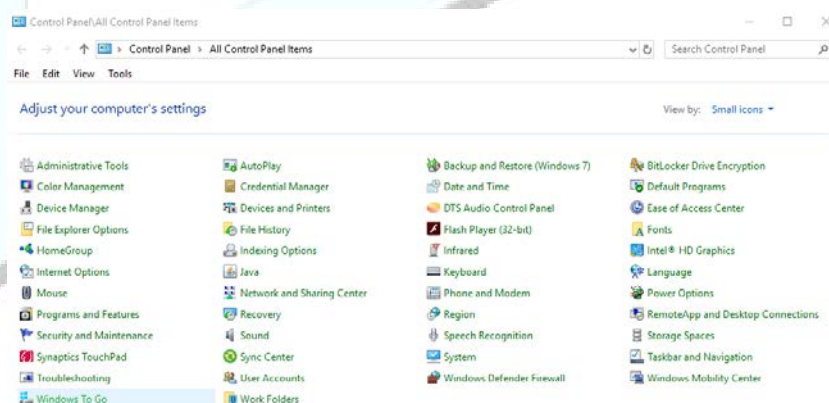
The Recycle Bin is reserved space on your hard disk to store the deleted files and folders. Whenever you delete folders or files, they are **not Deleted permanently** instead they move to the Recycle Bin just as if you moved them to different folder on your hard disk. The deleted files remain safe until you empty the Recycle Bin, even if you turn off the computer.



Recycle Bin

CONTROL PANEL

The Control Panel is an application used for doing **Settings** and **Maintenance** of the computer system. It is from where the user can change various properties of the system as per his requirements. It is full of specialized tools that are used to change the way Windows look and behaves; e.g.: We can install new programs using *Programs & Features* icon, we can change date and time by clicking at *Date and Time* icon etc.



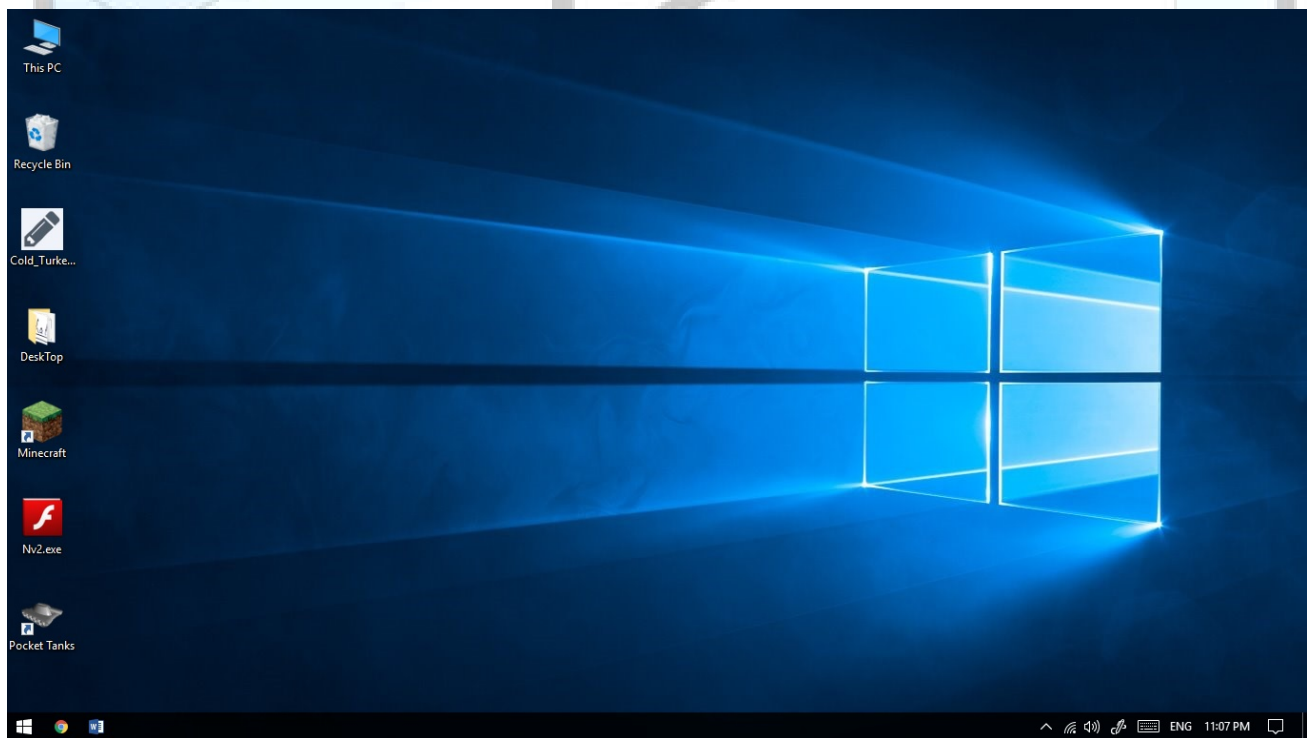
Control Panel

PARTS OF DESKTOP

When you start your computer in MS-Windows operating system it loads some appropriate files and then asks you for the UserName and password by prompting a message window. Then after few seconds, the windows Startup screen appears on the computer. The windows startup screen consists of the following components:

DESKTOP

The main screen which is full of graphics that appears on the computer's monitor when you turn on the computer and log on to Windows is called the Desktop. It is the overall on screen work area on which windows, dialog boxes, menu appears. The Desktop consists of a number of icons representing application programs, shortcuts to programs, files, folder and various types of documents which you can access.



Desktop

ICONS

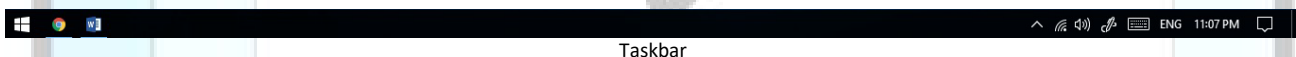
An **Icon** is a small graphical representation of a program or file. When you double-click an icon, the associated file or program will be opened. We can perform a number of operations on the icons like selecting, dragging and dropping, changing, renaming icons. The various icons available are My

Computer, Recycle bin, Network etc. Besides, the standardize icon we can also add icons of the applications we want to run from the desktop.



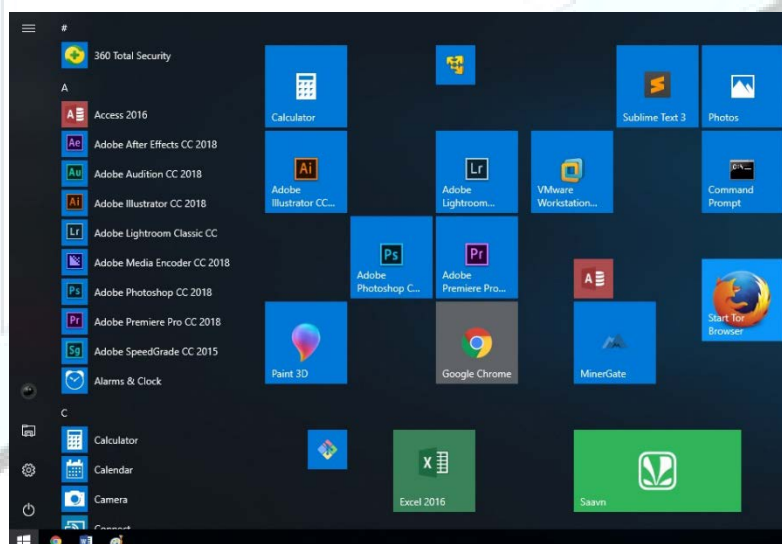
TASKBAR

The Taskbar is the long horizontal bar at the bottom on your desktop by default. It includes *Start* button, *Time*, *Date*, *Day* and buttons for computer programs currently running. The taskbar can be placed on any four edges of the screen. You can also resize the taskbar by using mouse. A taskbar basically performs two primary functions. A Program Launcher which launches the pinned programs by selecting appropriate icons in Taskbar and a **Task Switch** which helps to switch between various tasks or Applications.



START

When we start our computer in Windows operating system then a Start button appears on the left hand side of the Taskbar on the Desktop. When we click at the Start button, the Start menu appears. Using the start menu you can open application programs, change system settings, get Help, search for a file or folder and much more according to our choice.



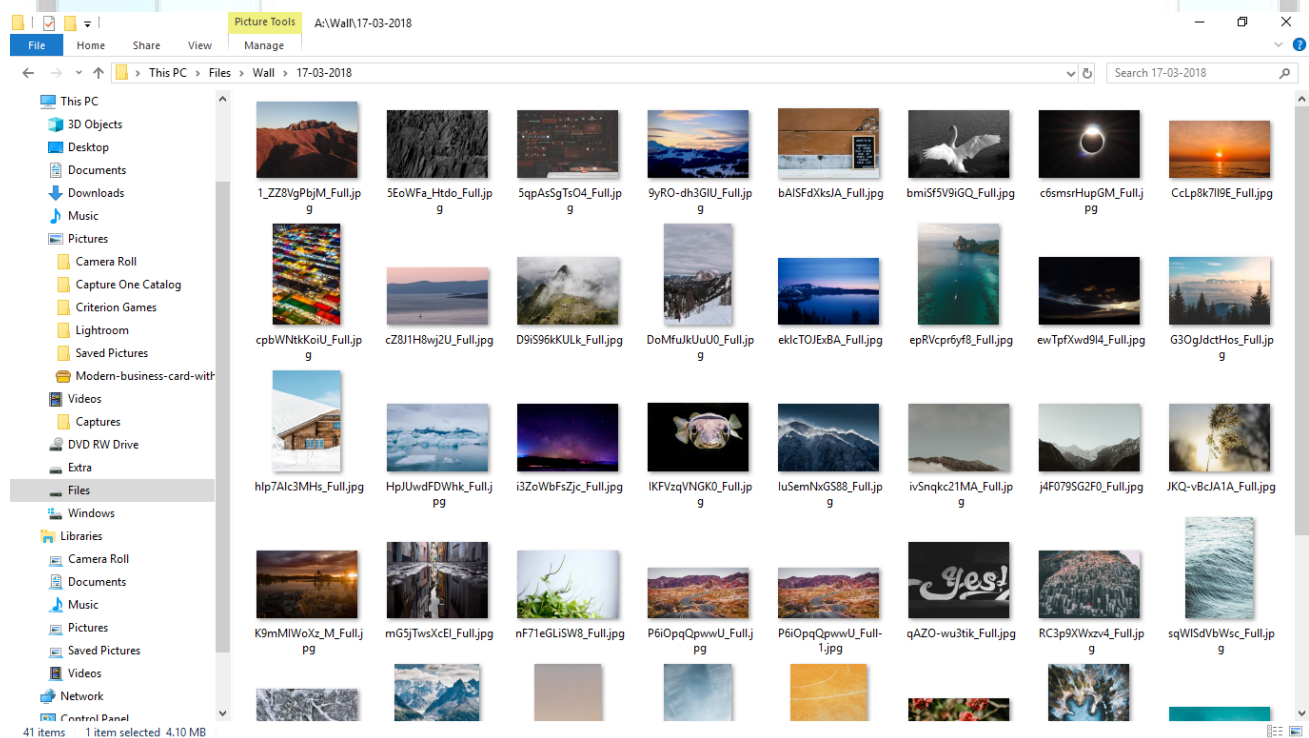
Start Menu

WINDOWS EXPLORER

Windows Explorer is an advanced Folder and File management tool. It provides us with the information about various resources in a hierarchical manner. It basically consists of two parts called panes. The left part displays a list of disks and folders on the computer. The right part displays the contents of a selected folder. To display the contents of a disk or folder you can just click disk and folder icons. In addition to it, we can drag files from one pane to another to quickly copy or move data.

While 'Windows Explorer' or 'File Explorer' is a term most commonly used to describe the file management aspect of the operating system, the Explorer *process* also houses the operating system's search functionality and File Type associations (based on filename extensions), and is responsible for displaying the Desktop icons, the Start Menu, the Taskbar, and the Control Panel. Collectively, these features are known as the **Windows Shell**.

The simple method to run the Windows Explorer is to right click the start button. As a result, a popup menu would be displayed from this menu, select the option **File Explorer**. The Windows Explorer will be displayed.



Windows Explorer

COMMON KEYBOARD SHORTCUTS

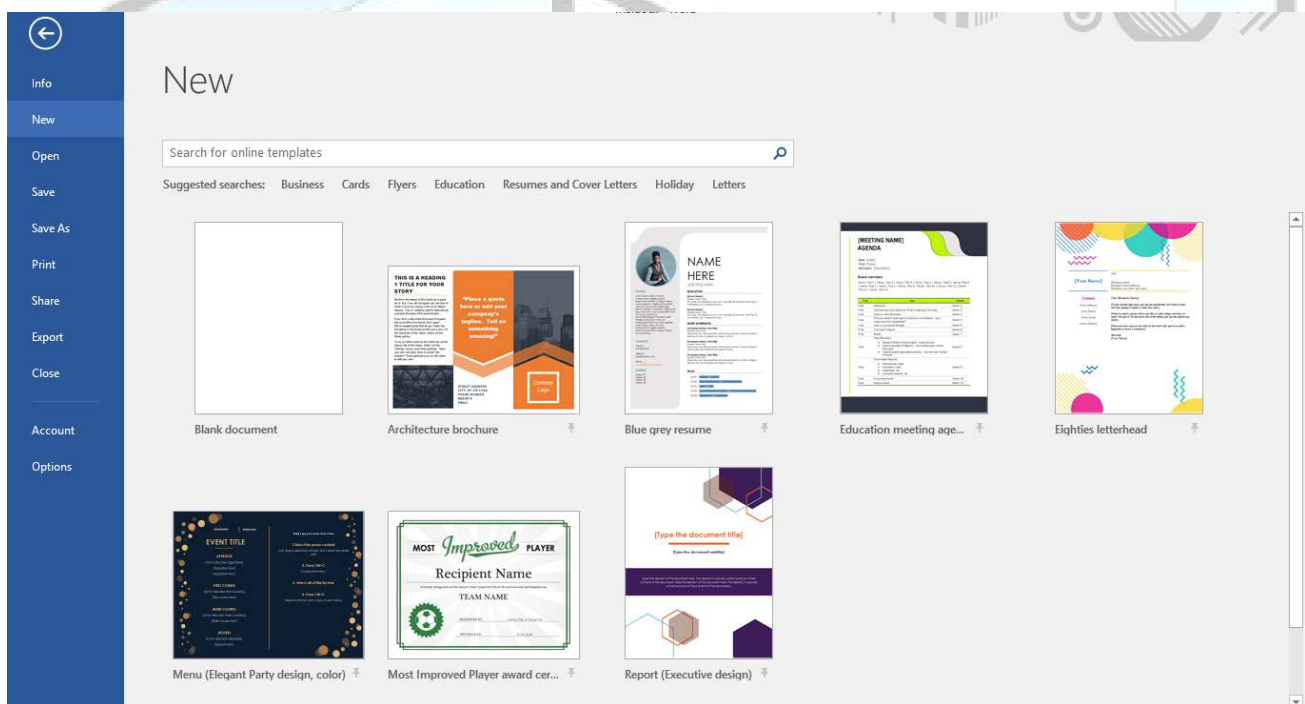
SHORTCUT	PURPOSE
CTRL+C	Copy
CTRL+X	Cut
CTRL+V	Paste
CTRL+Z	Undo
CTRL+Y	Redo
CTRL+A	Select All
CTRL+B	Bold Text
CTRL+I	Italicise Text
CTRL+U	Underlines Text
CTRL+S	Save
CTRL+O	Opens a File
CTRL+N	Open New Window / Create New Document
CTRL+P	Prints
CTRL+ESC	Displays Start Menu
CTRL+SHIFT+ESC	Opens Task Manager
DELETE	Deletes
SHIFT+DELETE	Deletes Permanently
ALT+ENTER	Show Properties
ALT+TAB	Switches between open Programs
ALT+ENTER	Display Properties of Selected Item
WINDOWS+E	Opens Windows Explorer.
WINDOWS+R	Open Run Dialog
WINDOWS+M	Minimizes All Windows
WINDOWS+D	Hide / Display Desktop
WINDOWS+L	Locks PC
WINDOWS+TAB	Open Task View
F1	Shows Help for Current Program
F2	Rename / Edit
F5	Refreshes a window
F11	Toggles Fullscreen

MS-WORD

Microsoft Word is a Word processing software Package. You can use it to type Letters, Reports & Other Documents. It gives you the ability to use your home computer as well as your Business Computer for Desktop Publishing.

THE WORD INTERFACE

When you open Word for the first time, the **Start Screen** will appear. From here, you'll be able to create a new document, choose a template, and access your recently edited documents. From the Start Screen, locate and select **Blank document** to access the Word interface.



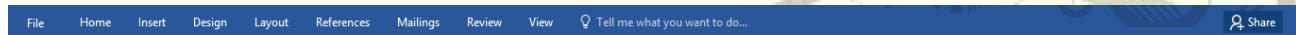
Title Bar

The Title bar displays the title of the document on which you are currently working. Word names the first new Document you open Document1. As you open additional new documents, Word names them sequentially. When you save your document, you assign the document a new name.

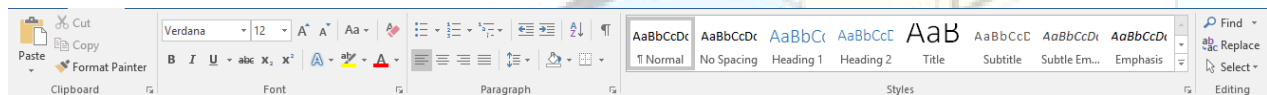


The Ribbon

Word uses a tabbed Ribbon system instead of traditional menus. The Ribbon contains Multiple tabs, which you can find near the top of the Word window.



Each tab contains several **groups of related commands**. For example, the Font group on the Home tab contains commands for formatting text in your document.



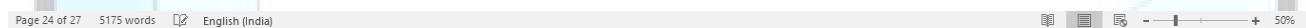
The Quick Access Toolbar

Located just above the Ribbon, the Quick Access Toolbar lets you access common commands no matter which tab is selected. By default, it shows the **Save**, **Undo**, and **Redo** commands, but you can add other commands depending on your needs.



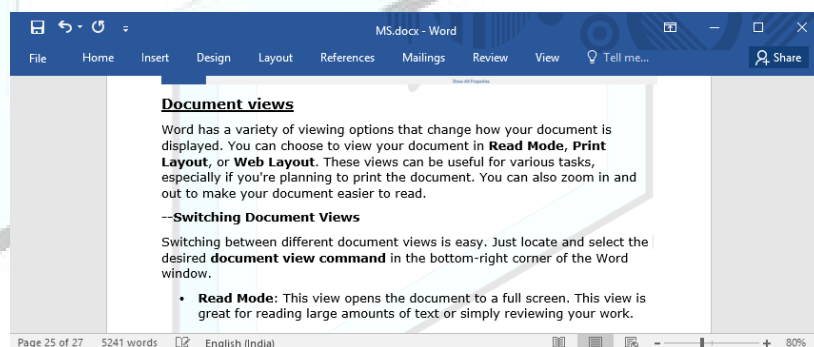
The Status Bar

The Status bar appears at the very bottom of your window and provides such information as the current page and the number of words in your document.



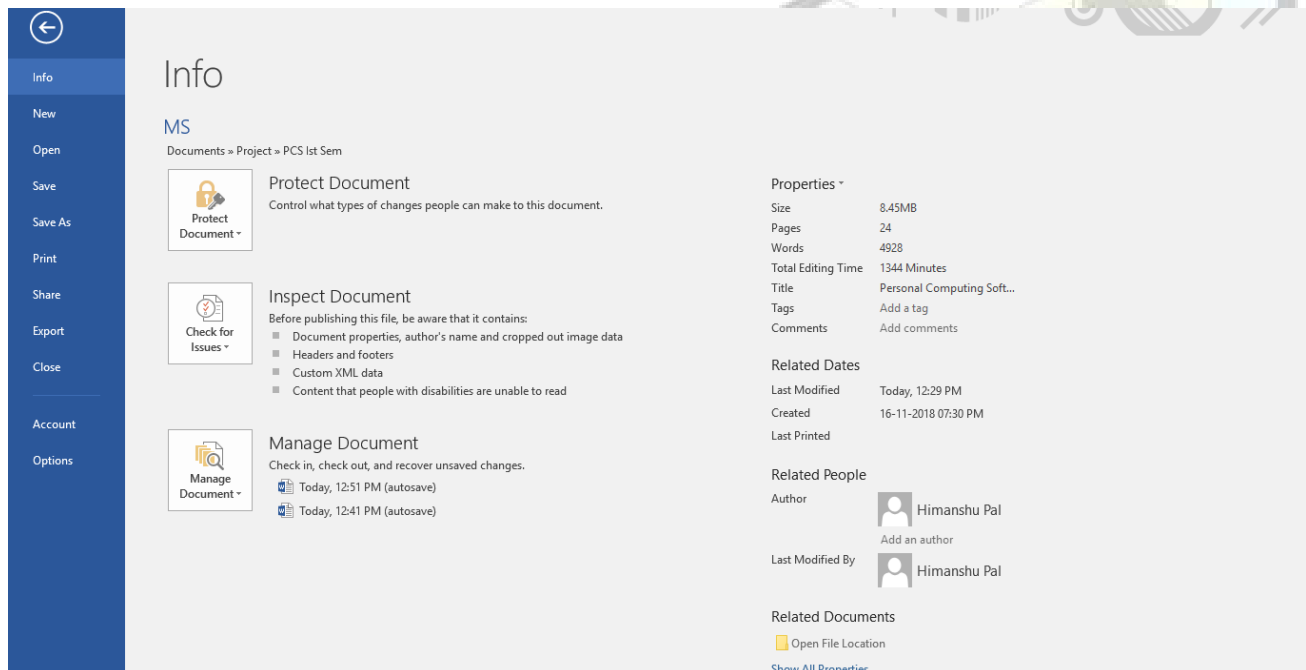
The Text Area

Just below the ruler is a large area called the text area. You type your document in the text area. The blinking vertical line in the upper-left corner of the text area is the cursor. It marks the insertion point. As you type, your text displays at the cursor location. The horizontal line next to the cursor marks the end of the document.



Backstage view

Backstage view gives you various options for saving, opening a file, printing, and sharing your document. To access Backstage view, click the File tab on the Ribbon.



Document views

Word has a variety of viewing options that change how your document is displayed. You can choose to view your document in **Read Mode**, **Print Layout**, or **Web Layout**. These views can be useful for various tasks, especially if you're planning to print the document. You can also zoom in and out to make your document easier to read.



--Switching Document Views

Switching between different document views is easy. Just locate and select the desired **document view command** in the bottom-right corner of the Word window.

- **Read Mode:** This view opens the document to a full screen. This view is great for reading large amounts of text or simply reviewing your work.
- **Print Layout:** This is the default document view in Word. It shows what the document will look like on the printed page.
- **Web Layout:** This view displays the document as a webpage, which can be helpful if you're using Word to publish content online.

CREATING / OPENING / SAVING DOCUMENTS

When beginning a new project in Word, we need to start with a new blank document.

To Create a New Blank Document

1. Click the File tab to access Backstage view, then select New.
2. Click on **Blank document**.
3. A new blank document will appear.

A **Template** is a predesigned document you can use to create a new document quickly. Templates often include custom formatting and designs, so they can save you a lot of time and effort when starting a new project.

To create a new document from a template

1. Click the **File** tab to access Backstage view, then select **New**.
2. Several templates will appear below the Blank document option.
3. When you find something you like, select a template to preview it.
4. A **preview** of the template will appear. Click **Create** to use the selected template.
5. A new document will appear with the selected template.

In addition to creating new documents, you'll often need to open a document that was previously saved.

To open an existing document

1. Navigate to Backstage view, then click **Open**.
2. The Open dialog box will appear. Locate and **select** your document, then click **Open**.
3. The selected document will appear.

It's important to **save your document** whenever you start a new project or make changes to an existing one. Saving early and often can prevent your work from being lost. You'll also need to pay close attention to where you save the document so it will be easy to find later.

To save a Document

1. Locate and select the **Save** command on the **Quick Access Toolbar**.

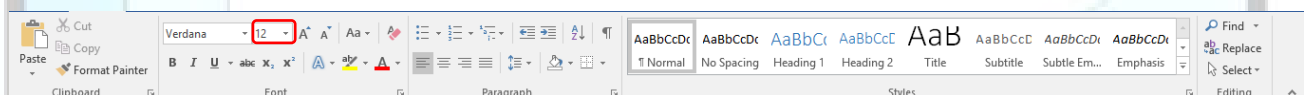
2. If you're saving the file for the first time, the Save As pane will appear in backstage view.
3. You'll then need to choose where to save the file and give it a **File name**. Click **Browse** to select a location on your computer.
4. The **Save As** dialog box will appear. Select the location where you want to save the document.
5. Enter a file name for the document, then click Save.
6. The document will be saved. You can click the Save command again to save your changes as you modify the document.

FORMATTING TEXT

Formatted text can draw the **reader's attention** to specific parts of a document and emphasize important information. In Word, you have several options for adjusting text, including font, size, and color. You can also adjust the alignment of the text to change how it is displayed on the page.

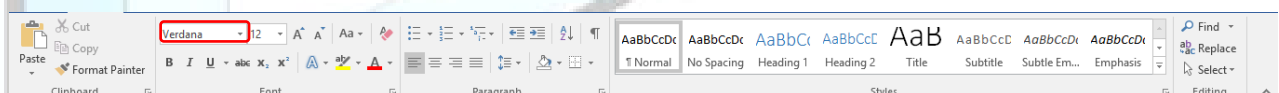
To Change the Font Size

1. Select the text you want to modify.
2. On the Home tab, click the Font size drop-down arrow. Select a font size from the menu. If the font size you need is not available in the menu, you can click the Font size box and type the desired font size, then press Enter.
3. The font size will change in the document.



To Change the Font Style

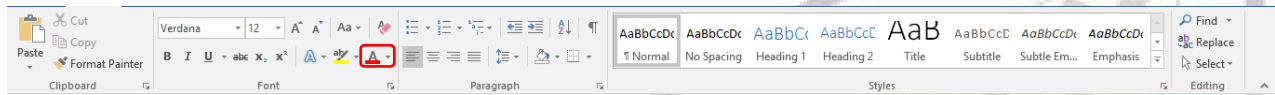
1. Select the text you want to modify.
2. On the Home tab, click the drop-down arrow next to the Font box. A menu of font styles will appear.
3. Select the font style you want to use.
4. The font will change in the document.



To Change the Font Color

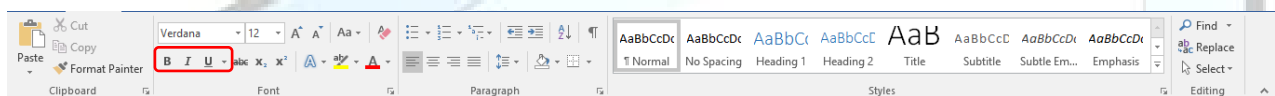
1. Select the text you want to modify.

2. On the Home tab, click the **Font Color** drop-down arrow. The Font Color menu appears.
3. Select the font color you want to use. The font color will change in the document.



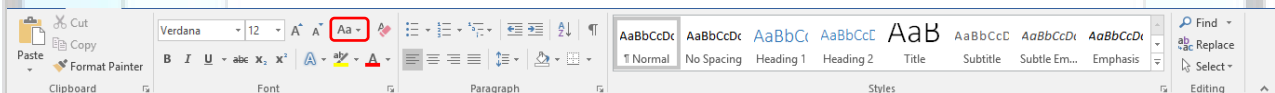
To Bold, Italic, and Underline Text

1. Select the text you want to modify.
2. On the Home tab, click the Bold (**B**), Italic (*I*), or Underline (U) command in the **Font** group. In our example, we'll click Bold.
3. The selected text will be modified in the document.



To Change Text Case

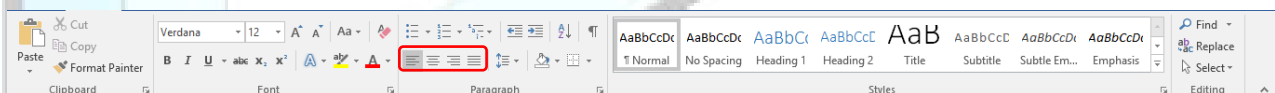
1. Select the text you want to modify.
2. On the Home tab, click the Change Case command in the Font group.
3. A drop-down menu will appear. Select the desired case option from the menu.
4. The text case will be changed in the document.



By **Default**, Word aligns text to the **Left Margin** in new documents. However, there may be times when you want to adjust text alignment to the center or right.

To change Text Alignment

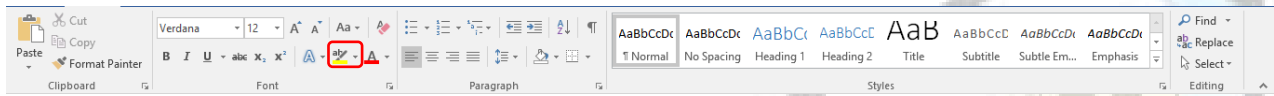
1. Select the text you want to modify.
2. On the Home tab, select one of the Four Alignment options from the Paragraph group.
3. The text will be realigned in the document.



To Highlight Text

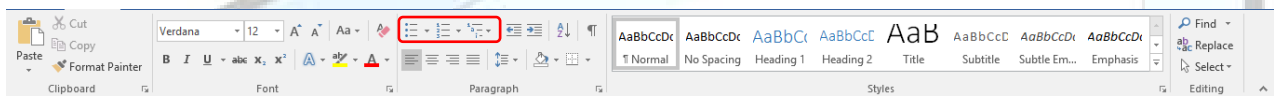
1. Select the text you want to highlight.
2. From the Home tab, click the Text Highlight Color drop-down arrow. The **Highlight Color** menu appears.

3. Select the desired highlight color. The selected text will then be highlighted in the document.



To create a List

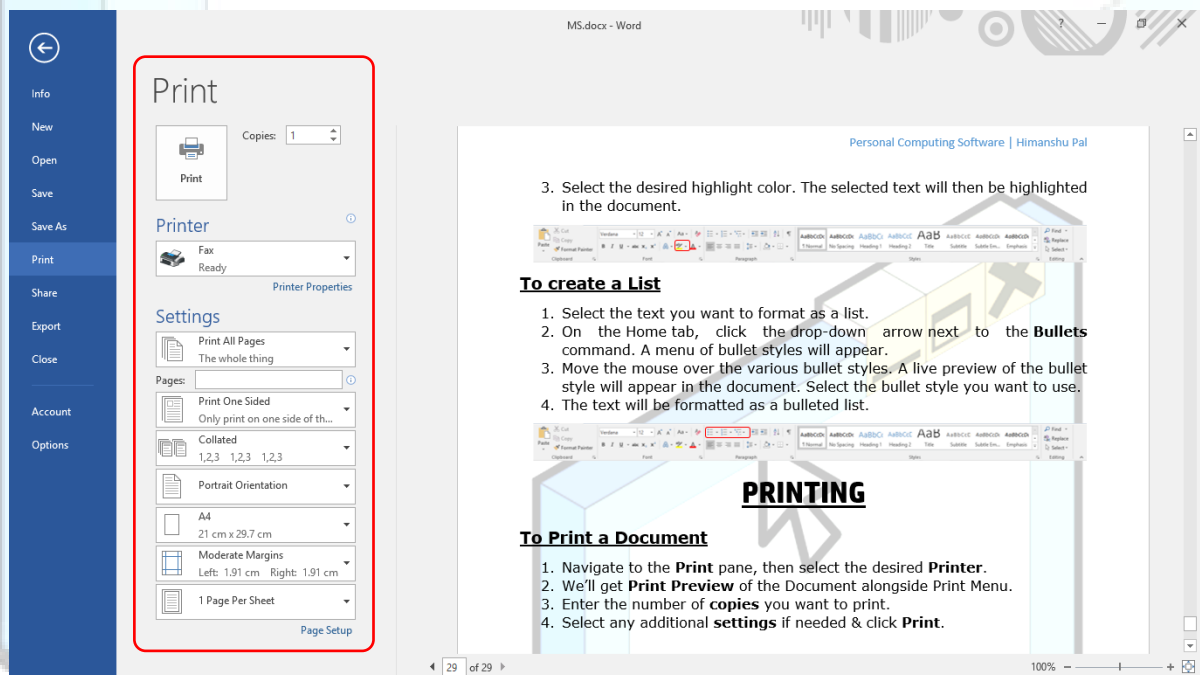
1. Select the text you want to format as a list.
2. On the Home tab, click the drop-down arrow next to the Bullets command. A menu of bullet styles will appear.
3. Move the mouse over the various bullet styles. A live preview of the bullet style will appear in the document. Select the bullet style you want to use.
4. The text will be formatted as a bulleted list.



PRINTING

To Print a Document

1. Navigate to the **Print** pane, then select the desired Printer.
2. We'll get **Print Preview** of the Document alongside Print Menu.
3. Enter the number of **copies** you want to print.
4. Select any additional settings if needed & click **Print**.

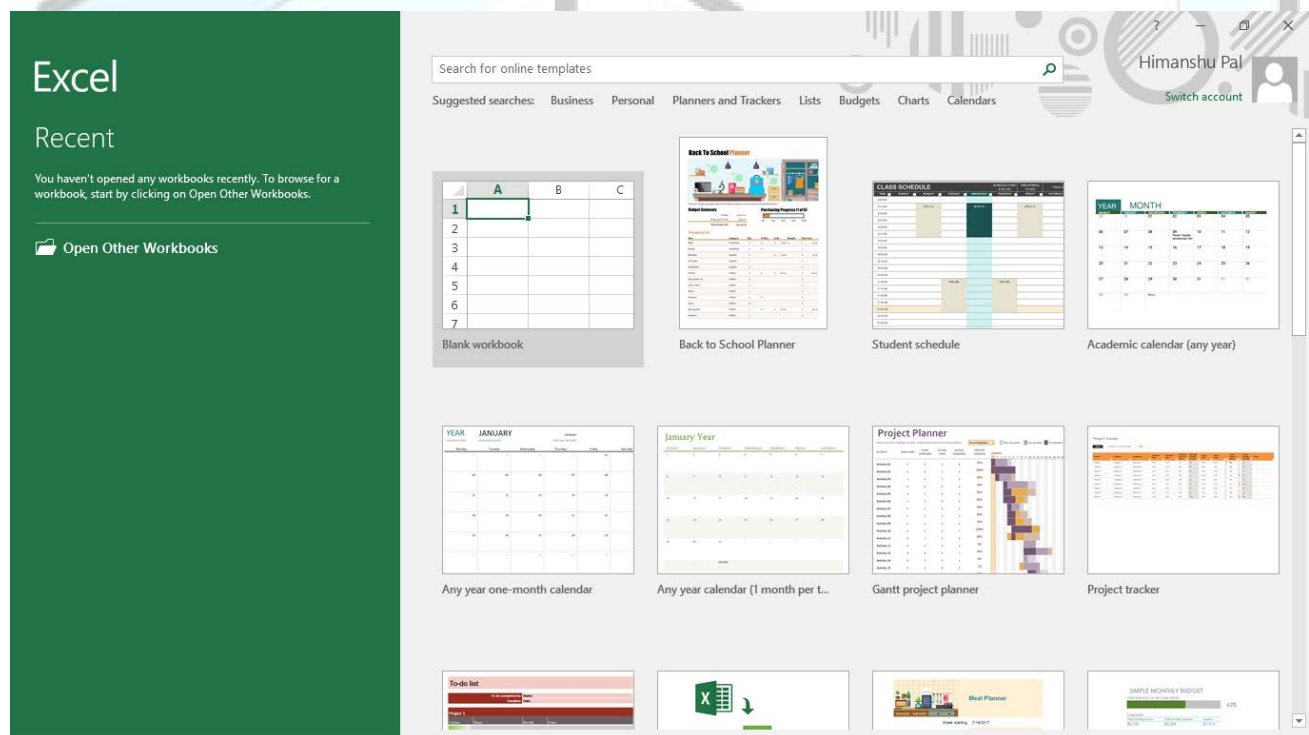


MS-EXCEL

Microsoft Excel is an electronic spreadsheet. You can use it to organize your data into rows and columns. You can also use it to perform mathematical calculations quickly.

THE EXCEL INTERFACE

When you open Excel 2016 for the first time, the **Excel Start Screen** will appear. From here, you'll be able to create a new workbook, choose a template, and access your recently edited workbooks. From the Excel Start Screen, locate and select Blank workbook to access the Excel interface.



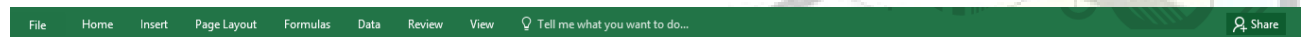
Title Bar

The Title bar displays the title of the Workbook on which you are currently working. Excel names the first new Workbook you open Book1. As you open additional new Workbooks, Excel names them sequentially. When you save your workbook, you assign the workbook a new name.

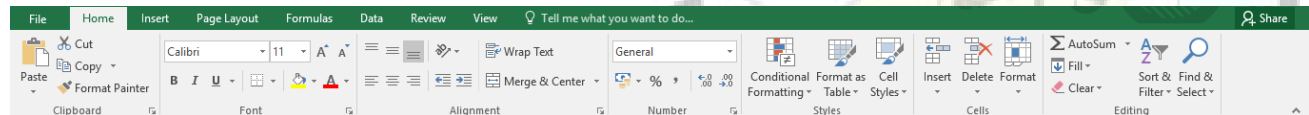


The Ribbon

Excel uses a tabbed Ribbon system instead of traditional menus. The Ribbon contains multiple tabs, each with several groups of commands. You will use these tabs to perform the most common tasks in Excel.

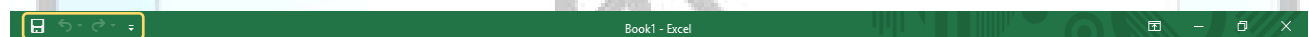


Each tab will have one or more groups. Click a tab to see more commands.



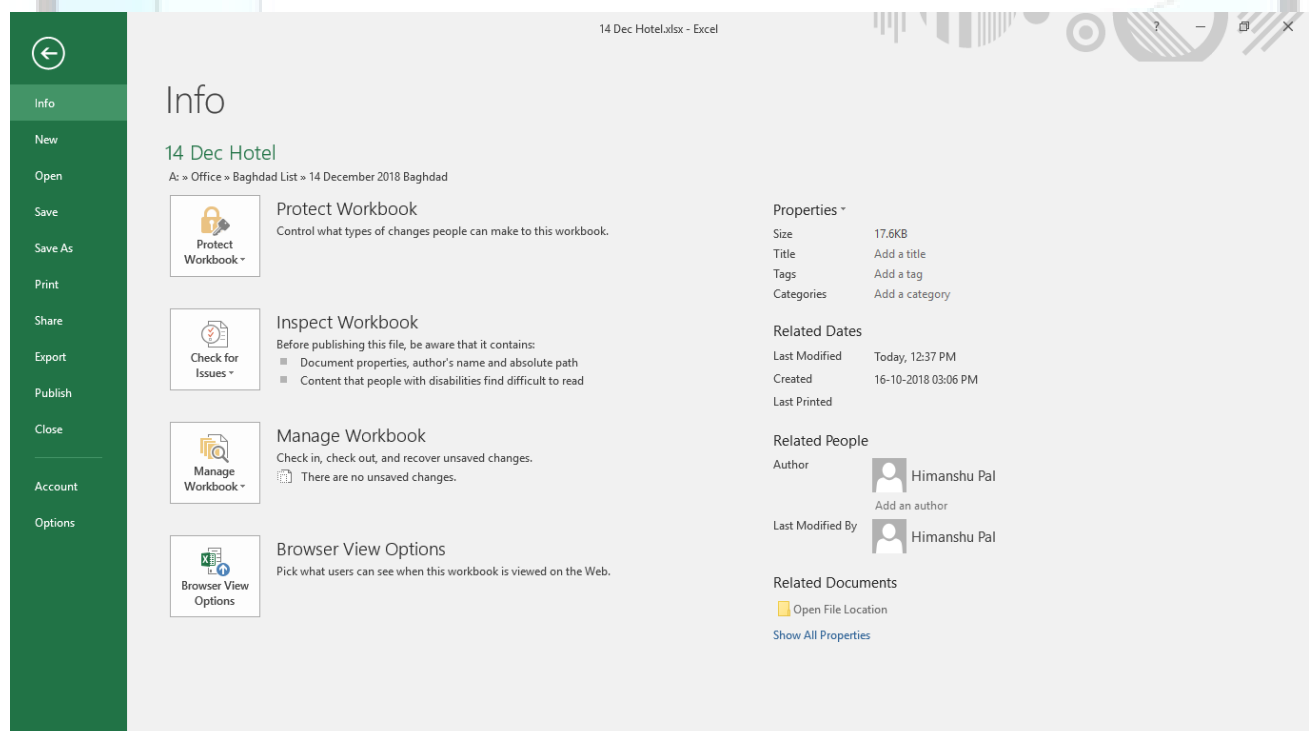
The Quick Access Toolbar

Located just above the Ribbon, the **Quick Access Toolbar** lets you access common commands no matter which tab is selected. By default, it includes the **Save**, **Undo**, and **Repeat** commands. You can add other commands depending on your preference.



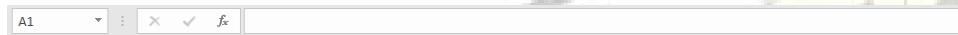
Backstage view

Backstage view gives you various options for saving, opening a file, printing, and sharing your Workbooks. To access Backstage view, click the File tab on the Ribbon.



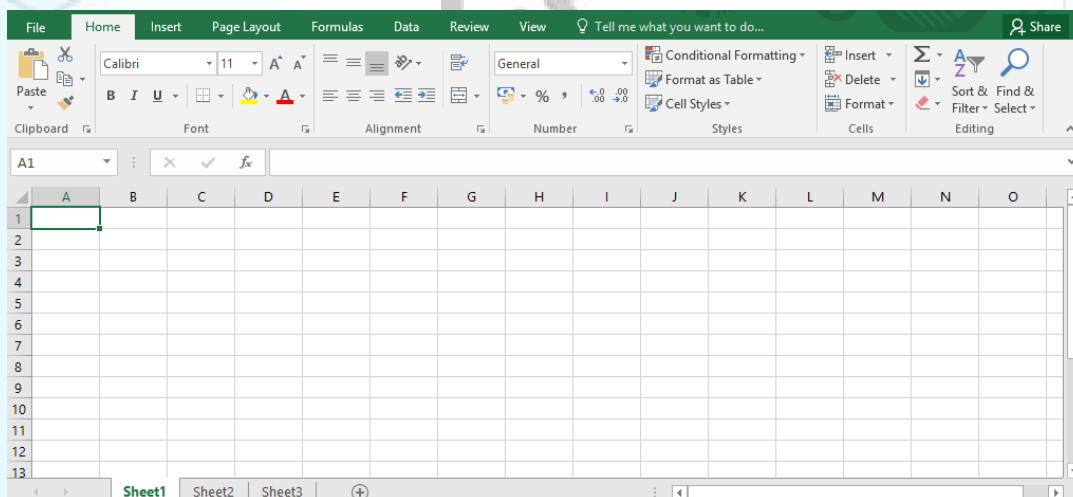
Formula Bar

A toolbar at the top of the Excel spreadsheet that you can use to enter or copy an existing formula in to cells or charts. It is labeled with function symbol (fx). By clicking the Formula Bar, or when you type an equal (=) symbol in a cell, the Formula Bar will activate.



Worksheet

Excel consists of worksheets. Each worksheet contains columns and rows. The columns are lettered A to Z and then continuing with AA, AB, AC and so on; the rows are numbered 1 to 1,048,576. The number of columns and rows you can have in a worksheet is limited by your computer memory and your system resources. The combination of a column coordinate and a row coordinate make up a **Cell address**. For example, the cell located in the upper-left corner of the worksheet is cell A1, meaning column A, row 1. Cell E10 is located under column E on row 10. You enter your data into the cells on the worksheet.



Worksheet Views

Excel 2016 has a variety of viewing options that change how your workbook is displayed. These views can be useful for various tasks, especially if you're planning to print the spreadsheet. To change worksheet views, locate the commands in the bottom-right corner of the Excel window and select **Normal view**, **Page Layout view**, or **Page Break view**.



- **Normal view** is the Default View for all worksheets in Excel.
- **Page Layout view** displays how your worksheets will appear when printed. You can also add headers and footers in this view.
- **Page Break view** allows you to change the location of page breaks, which is especially helpful when printing a lot of data from Excel.

CREATING / OPENING / SAVING WORKBOOKS

Excel files are called workbooks. Whenever you start a new project in Excel, you'll need to create a new workbook.

To Create a New Blank Workbook

1. Click the File tab to access Backstage view, then select New.
2. Click on **Blank workbook**.
3. A new blank worksheet will appear.

A template is a predesigned spreadsheet you can use to create a new workbook quickly. Templates often include custom formatting and predefined formulas, so they can save you a lot of time and effort when starting a new project.

To Create a Workbook using Template

1. Click the File tab to access Backstage view.
2. Select New. Several templates will appear below the Blank workbook option.
3. Select a **Template** to review it.
4. A preview of the template will appear, along with additional information on how the template can be used.
5. Click **Create** to use the selected template.
6. A new workbook will appear with the selected template.

In addition to creating new workbooks, you'll often need to open a workbook that was previously saved.

To Open an existing workbook

1. Navigate to Backstage view, then click Open.
2. Select **Computer**, then click **Browse**.
3. The **Open** dialog box will appear. Locate and select your workbook, then click Open.

It's important to **save your workbook** whenever you start a new project or make changes to an existing one. Saving early and often can prevent your work from being lost. You'll also need to pay close attention to **where you save** the workbook so it will be easy to find later.

To Save a Workbook

1. Locate and select the **Save** command on the **Quick Access Toolbar**.

2. If you're saving the file for the first time, the Save As pane will appear in Backstage view.
3. You'll then need to choose where to save the file and give it a file name. To save the workbook to your computer, select Computer, then click **Browse**.
4. The Save As dialog box will appear. Select the location where you want to save the workbook.
5. Enter a **File name** for the workbook, then click **Save**.
6. The workbook will be saved. You can click the Save command again to save your changes as you modify the workbook.

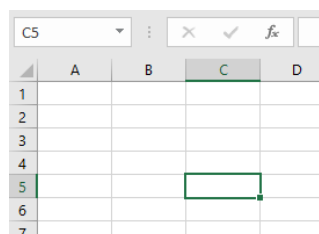
CELLS

Understanding cells

Every worksheet is made up of thousands of rectangles, which are called **cells**. A cell is the **intersection** of a **row** and a **column**—in other words, where a row and column meet.

Columns are identified by letters (A, B, C), while rows are identified by numbers (1, 2, 3). Each cell has its own name or cell address based on its column and row.

In the example below, the selected cell intersects **column C** and **row 5**, so the cell address is **C5**.



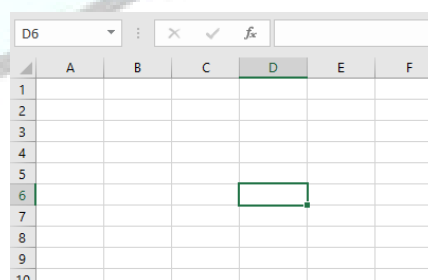
A screenshot of an Excel worksheet. The formula bar at the top shows 'C5'. The worksheet grid has columns A, B, C, and D, and rows 1 through 7. Cell C5 is highlighted with a green border, indicating it is the active cell.

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				

To input or edit cell content, you'll first need to **select** the cell.

To select a cell

1. Click a cell to select it. In our example, we'll select cell **D6**.
2. A **border** will appear around the selected cell, and the column heading and row heading will be highlighted. The cell will remain selected until you click another cell in the worksheet.



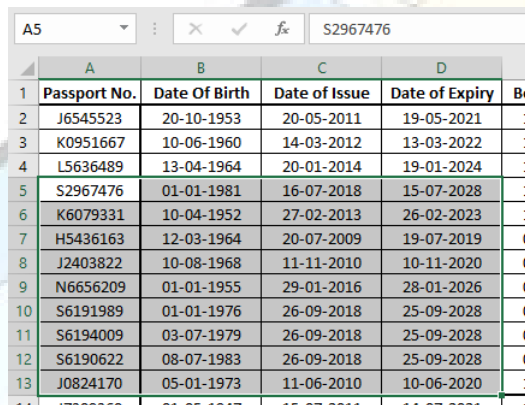
A screenshot of an Excel worksheet. The formula bar at the top shows 'D6'. The worksheet grid has columns A through F, and rows 1 through 10. Cell D6 is highlighted with a green border, indicating it is the active cell. The column header 'D' and row header '6' are also highlighted.

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Sometimes you may want to select a larger group of cells, or a **cell range**.

To select a cell range

1. Click and drag the mouse until all of the adjoining cells you want to select are highlighted. In our example, we'll select the cell range **A5:D13**.
2. Release the mouse to select the desired cell range. The cells will remain selected until you click another cell in the worksheet.



	A	B	C	D	
1	Passport No.	Date Of Birth	Date of Issue	Date of Expiry	Bc
2	J6545523	20-10-1953	20-05-2011	19-05-2021	1
3	K0951667	10-06-1960	14-03-2012	13-03-2022	1
4	L5636489	13-04-1964	20-01-2014	19-01-2024	1
5	S2967476	01-01-1981	16-07-2018	15-07-2028	1
6	K6079331	10-04-1952	27-02-2013	26-02-2023	1
7	H5436163	12-03-1964	20-07-2009	19-07-2019	0
8	J2403822	10-08-1968	11-11-2010	10-11-2020	0
9	N6656209	01-01-1955	29-01-2016	28-01-2026	0
10	S6191989	01-01-1976	26-09-2018	25-09-2028	0
11	S6194009	03-07-1979	26-09-2018	25-09-2028	0
12	S6190622	08-07-1983	26-09-2018	25-09-2028	0
13	J0824170	05-01-1973	11-06-2010	10-06-2020	1

Cell Content

Any information you enter into a spreadsheet will be stored in a cell. Each cell can contain different types of content, including text, formatting, formulas, and functions.

- **Text:** Cells can contain text, such as letters, numbers, and dates.
- **Formatting attributes:** Cells can contain formatting attributes that change the way letters, numbers, and dates are displayed. For example, percentages can appear as 0.15 or 15%. You can even change a cell's text or background color.
- **Formulas and functions:** Cells can contain formulas and functions that calculate cell values.

To Insert Content

1. Click a cell to select it.
2. Type something into the selected cell, then press Enter on your keyboard. The content will appear in the cell and the formula bar. You can also input and edit cell content in the formula bar.

To delete cell content

1. Select the cell(s) with content you want to delete.
2. Select the **Clear** command on the Home tab, then click Clear Contents or press **Delete** key on keyboard.
3. The cell contents will be deleted.

MODIFYING COLUMNS / ROWS / CELLS

By default, every row and column of a new workbook is set to the same **height** and **width**. Excel allows you to modify column width and row height in different ways, including wrapping text and merging cells.

To modify column width

1. Position the mouse over the column line in the column heading so the cursor becomes a double arrow.
2. Click and drag the mouse to **increase** or **decrease** the column width.
3. Release the mouse. The column width will be changed.

The **AutoFit** feature will allow you to set a column's width to fit its content automatically.

To Autofit column width

1. Position the mouse over the column line in the column heading so the cursor becomes a double arrow.
2. Double-click the mouse. The column width will be changed automatically to fit the content.

To modify row height

1. Position the cursor over the row line so the cursor becomes a double arrow.
2. Click and drag the mouse to **increase** or **decrease** the row Height.
3. Release the mouse. The height of the selected row will be changed.

Instead of resizing rows and columns individually, you can modify the height and width of every row and column at the same time. This method allows you to set a **uniform size** for every row and column in your worksheet.

To modify all Rows and Columns

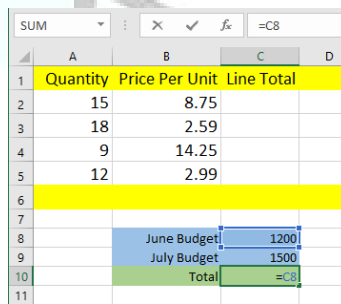
1. Locate and click the **Select All** button just below the name box to select every cell in the worksheet.
2. Position the mouse over a row line so the cursor becomes a double arrow.
3. Click and drag the mouse to **increase** or **decrease** the row height, then release the mouse when you are satisfied. The row height will be changed for the entire worksheet.

FORMULAS IN EXCEL

One of the most powerful features in Excel is the ability to **calculate** numerical information using **formulas**. Just like a calculator, Excel can add, subtract, multiply, and divide.

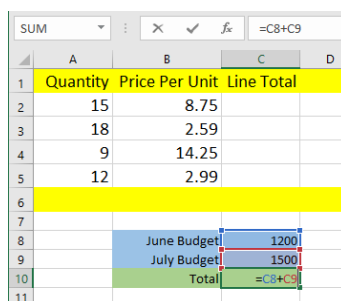
To create a formula

1. Select the cell that will contain the formula. In our example, we'll select cell **C10**.
2. Type the **equals sign (=)**. Notice how it appears in both the **cell** and the **formula bar**.
3. Type the cell address of the cell you want to reference first in the formula: cell **C8** in our example. A **blue border** will appear around the referenced cell.



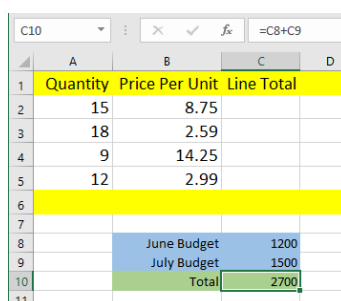
	A	B	C	D
1	Quantity	Price Per Unit	Line Total	
2	15	8.75		
3	18	2.59		
4	9	14.25		
5	12	2.99		
6				
7				
8		June Budget	1200	
9		July Budget	1500	
10		Total	=C8	
11				

4. Type the mathematical operator you want to use. In our example, we'll type the **addition sign (+)**.
5. Type the cell address of the cell you want to reference second in the formula: cell **C9** in our example. A **red border** will appear around the referenced cell.



	A	B	C	D
1	Quantity	Price Per Unit	Line Total	
2	15	8.75		
3	18	2.59		
4	9	14.25		
5	12	2.99		
6				
7				
8		June Budget	1200	
9		July Budget	1500	
10		Total	=C8+C9	
11				

6. Press **Enter** on your keyboard. The formula will be **calculated**, and the value will be displayed in the cell. If you select the cell again, notice that the cell displays the result, while the formula bar displays the formula.



	A	B	C	D
1	Quantity	Price Per Unit	Line Total	
2	15	8.75		
3	18	2.59		
4	9	14.25		
5	12	2.99		
6				
7				
8		June Budget	1200	
9		July Budget	1500	
10		Total	2700	
11				

WORKING WITH MULTIPLE WORKSHEETS

Every workbook contains at least one worksheet by default. When working with a large amount of data, you can create multiple worksheets to help organize your workbook and make it easier to find content. You can also group worksheets to quickly add information to multiple worksheets at the same time.

To insert a new worksheet

1. Locate and select the new sheet button near the bottom-right corner of the Excel window.
2. A new blank worksheet will appear.

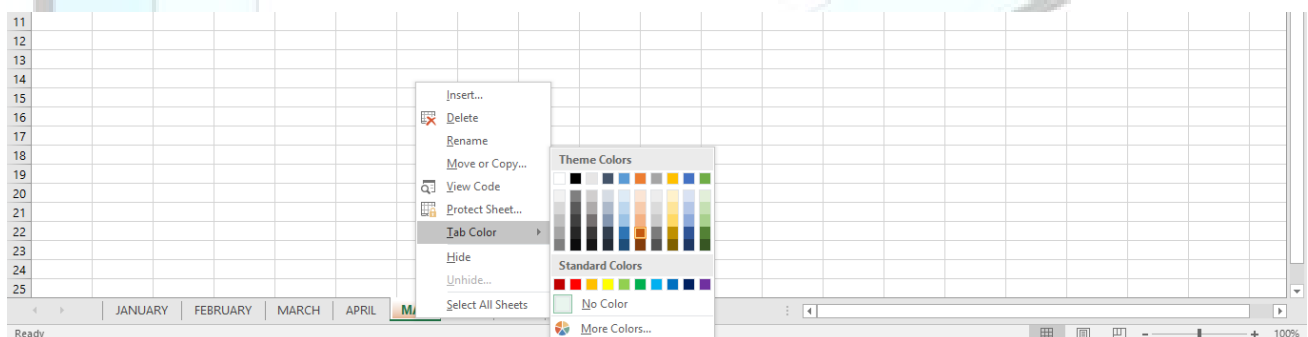


Deleting Worksheet

1. Right-click the worksheet you want to delete, then select **Delete** from the worksheet menu.
2. The worksheet will be deleted from your workbook.

To change the worksheet tab color

1. Right-click the desired worksheet tab, and hover the mouse over Tab Color. The **Color** menu will appear.
2. Select the desired color.



3. The worksheet tab color will be changed.

CHARTS IN EXCEL

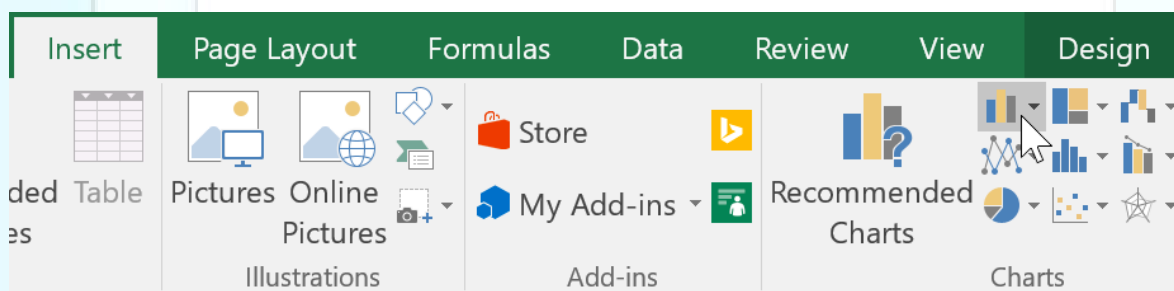
It can be difficult to interpret Excel workbooks that contain a lot of data. **Charts** allow you to illustrate your workbook data **graphically**, which makes it easy to visualize **comparisons** and **trends**. Excel has several different types of charts, allowing you to choose the one that best fits your data.

To insert a chart

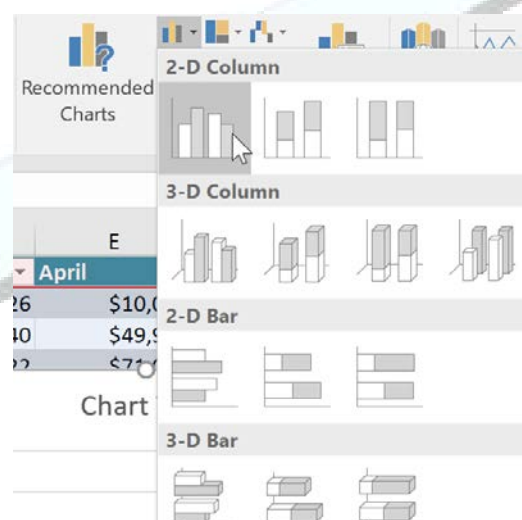
1. Select the cells you want to chart, including the column titles and row labels. These cells will be the source data for the chart. In our example, we'll select cells A1:F6.

	A	B	C	D	E	F	G
1	Genre	January	February	March	April	May	
2	Classics	\$18,580	\$49,225	\$16,326	\$10,017	\$26,134	
3	Mystery	\$78,970	\$82,262	\$48,640	\$49,985	\$73,428	
4	Romance	\$24,236	\$131,390	\$79,022	\$71,009	\$81,474	
5	Sci-Fi & Fantasy	\$16,730	\$19,730	\$12,109	\$11,355	\$17,686	
6	Young Adult	\$35,358	\$42,685	\$20,893	\$16,065	\$21,388	
7							
8							

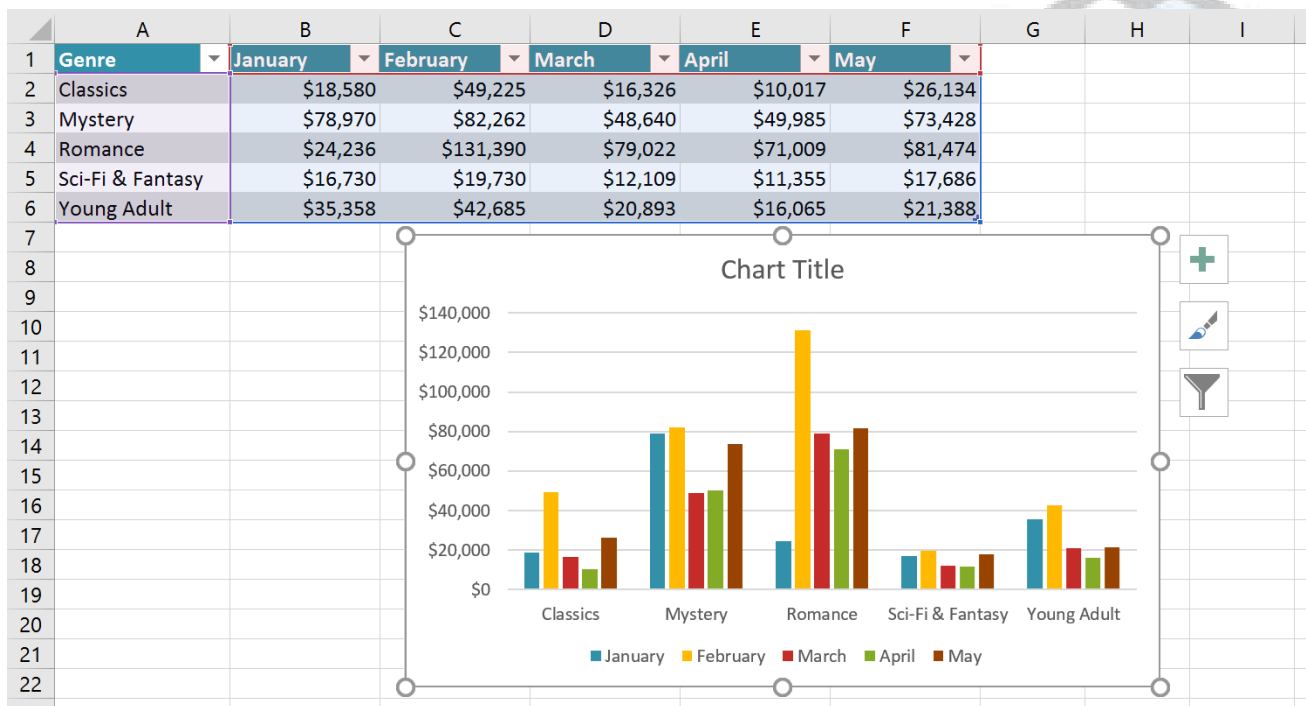
2. From the **Insert** tab, click the desired Chart command. In our example, we'll select Column.



3. Choose the desired **chart type** from the drop-down menu.



4. The Selected chart will be inserted into the worksheet.



Changing Chart Type

1. From the **Design** tab, click the Change Chart Type command.
2. The Change Chart Type dialog box will appear. Select a **new chart type** and layout, then click **OK**.
3. The selected chart type will appear.

Switching Row / Column Data

1. Select the chart you want to modify.
2. From the **Design** tab, select the Switch Row/Column command.
3. The rows and columns will be **switched**.

Whenever you insert a new chart, it will appear as an object on the same worksheet that contains its source data. Alternatively, you can move the chart to a new worksheet to help keep your data organized.

Moving a Chart

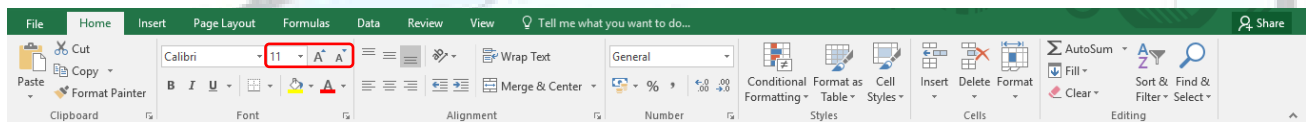
1. Select the chart you want to move.
2. Click the **Design** tab, then select the Move Chart command.
3. The **Move Chart** dialog box will appear. Select the desired location for the chart.
4. Click OK.

FORMATTING CELLS

All cell content uses the same formatting by default, which can make it difficult to read a workbook with a lot of information. Basic formatting can customize the look and feel of your workbook, allowing you to draw attention to specific sections and making your content easier to view and understand.

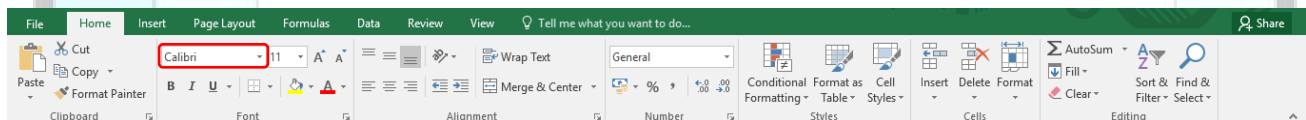
To Change the Font Size

1. Select the cell(s) you want to modify.
2. On the Home tab, click the drop-down arrow next to the Font Size command, then select the desired font size.
3. The text size will change to the selected font size.



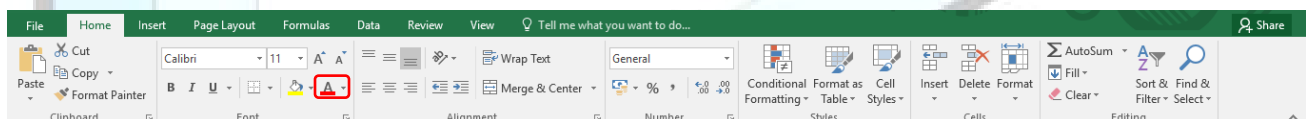
To Change the Font

1. Select the cell(s) you want to modify.
2. On the Home tab, click the drop-down arrow next to the Font command, then select the desired font.
3. The text will change to the selected font.



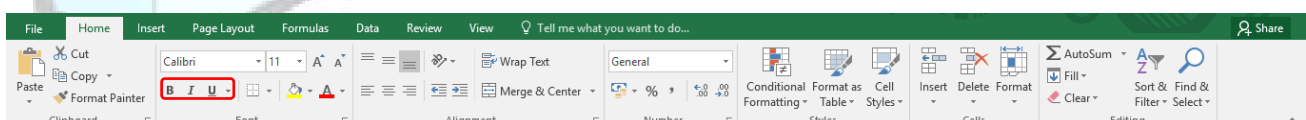
To Change the Font Color

1. Select the cell(s) you want to modify.
2. On the Home tab, click the drop-down arrow next to the Font Color command, then select the desired font color.
3. The text color will change to the selected font color.



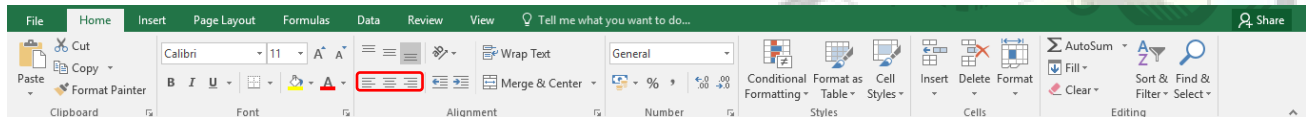
To Bold, Italic, and Underline Text

1. Select the cell(s) you want to modify.
2. On the Home tab, click the Bold (B), Italic (I), or Underline (U) command in the Font group.
3. The selected style will be applied to the text.



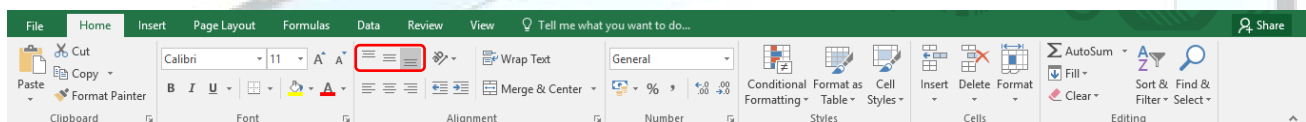
To Change Horizontal Text Alignment

1. Select the cell(s) you want to modify.
2. Select one of the three horizontal alignment commands on the Home tab.
3. The text will realign.



To change vertical text alignment

1. Select the cell(s) you want to modify.
2. Select one of the three vertical alignment commands on the Home tab.
3. The text will realign.

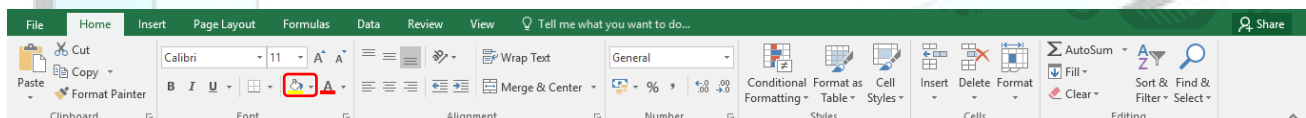


CELL BORDER AND FILL COLOR

Cell borders and **Fill colors** allow you to create clear and defined boundaries for different sections of your worksheet.

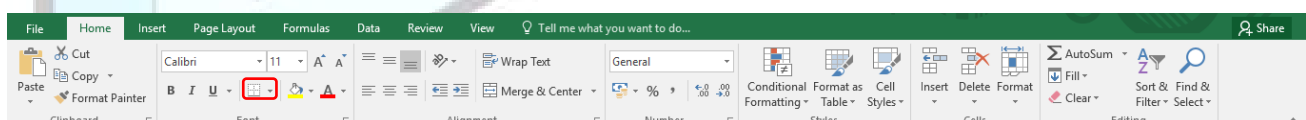
To add a fill color

1. Select the cell(s) you want to modify.
2. On the **Home** tab, click the drop-down arrow next to the **Fill Color** command, then select the fill color you want to use.
3. The selected fill color will appear in the selected cells.



To add a Border

1. Select the cell(s) you want to modify.
2. On the **Home** tab, click the drop-down arrow next to the **Borders** command, then select the border style you want to use.
3. The selected border style will appear.



PRINTING

There may be times when you want to print a workbook to view and share your data offline. Once you've chosen your page layout settings, it's easy to preview and print a workbook from Excel using the Print pane.

1. Select the File tab. Backstage view will appear.
2. Navigate to the Print pane, then select the desired **printer**.
3. Enter the number of **copies** you want to print.
4. Select any additional settings if needed.
5. A preview of your selection will appear in the **Preview** pane.
6. Click Print.

The screenshot shows the Excel Print pane with the following settings:

- Print**: 1 copy
- Printer**: Microsoft Print to PDF
- Settings**:
 - Print Active Sheets
 - Pages: 1 to 1
 - Collated
 - Landscape Orientation
 - A4 (21 cm x 29.7 cm)
 - Normal Margins (Left: 1.78 cm, Right: 1.78 cm)
 - No Scaling
- Preview**: A table with 10 columns: Passport No., Date Of Birth, Date of Issue, Date of Expiry, Booking Date, Book. Amount, Cheque Details, Cheque 2 Details, Credit 1, and Credit 2.

Passport No.	Date Of Birth	Date of Issue	Date of Expiry	Booking Date	Book. Amount	Cheque Details	Cheque 2 Details	Credit 1	Credit 2
16545523	20-10-1953	20-05-2011	19-05-2021	14-07-2018	55,000			45,000	25,000
K0951667	10-06-1960	14-03-2012	13-03-2022	12-07-2018	55,000			25,000	25,000
LS636489	13-04-1964	20-01-2014	19-01-2024	17-07-2018	55,000	UrbanCo 020809	UrbanCo 020811	25,000	25,000
S2967476	01-01-1981	16-07-2018	15-07-2028	17-07-2018	55,000			5,000	5,000
K6079331	10-04-1952	27-02-2013	26-02-2023	19-07-2018	60,000			5,000	5,000
H5436163	12-03-1964	20-07-2009	19-07-2019	09-08-2018	60,000			5,000	5,000
J2408222	10-08-1968	11-11-2010	10-11-2020	08-08-2018	60,000			5,000	5,000
N6656209	01-01-1955	29-01-2016	28-01-2026	06-08-2018	60,000			55,000	55,000
S6191989	01-01-1976	26-09-2018	25-09-2028	06-08-2018	60,000			55,000	55,000
S6194009	03-07-1979	26-09-2018	25-09-2028	06-08-2018	60,000			55,000	55,000
S6190622	08-07-1983	26-09-2018	25-09-2028	06-08-2018	60,000			55,000	55,000
J0824170	05-01-1973	11-06-2010	10-06-2020	15-09-2018	60,000			5,000	5,000
J7309360	01-05-1947	15-07-2011	14-07-2021	15-09-2018	62,500			25,000	25,000
J7304522	01-01-1954	23-06-2011	22-06-2021	15-09-2018	62,500			25,000	25,000
K712040	18-11-1964	18-12-2012	17-12-2022	19-10-2018					
K6082630	10-07-1970	07-12-2012	06-12-2022	19-10-2018					
K7115097	15-02-1960	08-11-2013	01-01-2023	19-10-2018					
LS637507	21-05-2001	06-11-2014	05-01-2019	19-10-2018					
R8020533	01-01-1975	28-02-2018	27-02-2028	28-09-2018	55,000			20,000	20,000

To print a Selection

1. Select the cells you want to print.
2. Navigate to the Print pane.
3. Select Print Selection from the Print Range drop-down menu.
4. A preview of your selection will appear in the **Preview** pane.
5. Click the **Print** button to print the selection.

The screenshot shows the Excel Print pane with the following settings:

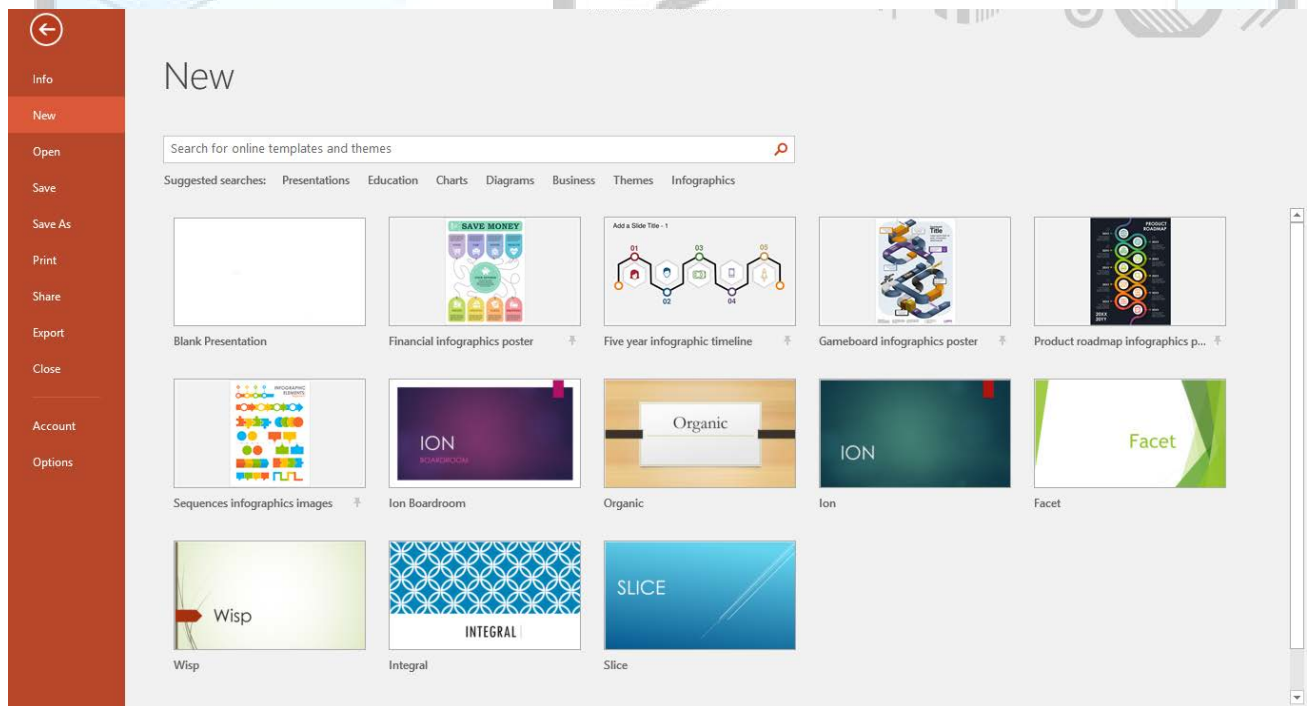
- Print**: 1 copy
- Printer**: Microsoft Print to PDF
- Settings**:
 - Print Selection
 - Pages: 1 to 1
 - Collated
 - Landscape Orientation
 - A4 (21 cm x 29.7 cm)
- Preview**: The same table as in the previous screenshot.

MS-POWERPOINT

PowerPoint is a **presentation program** that allows you to create dynamic slide presentations. These presentations can include animation, narration, images, videos, and much more. Trainers and other presenters use slide shows to illustrate their presentations.

THE POWERPOINT INTERFACE

When you open PowerPoint for the first time, the **Start Screen** will appear. From here, you'll be able to create a new presentation, choose a template, and access your recently edited presentations. From the Start Screen, locate and select Blank Presentation to access the PowerPoint interface.



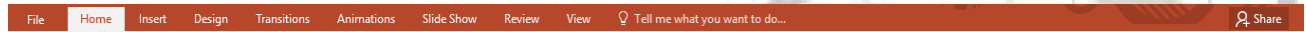
Title Bar

The Title bar displays the title of the Presentation on which you are currently working. PowerPoint names the first new presentation you open Presentation1. As you open additional new Presentation, PowerPoint names them sequentially. When you save your Presentation, you assign the presentation a new name.

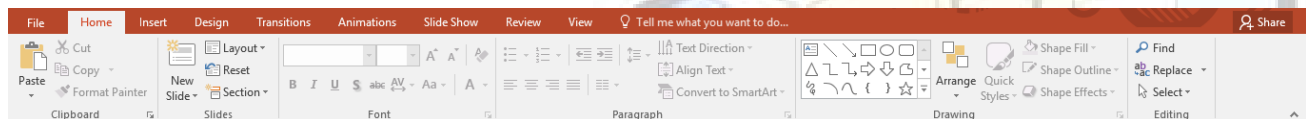


The Ribbon

PowerPoint uses a tabbed Ribbon system instead of traditional menus. The Ribbon contains multiple tabs, each with several groups of commands. We use these tabs to perform the most common tasks in PowerPoint.



Each tab will have one or more groups. Click a tab to see more commands.



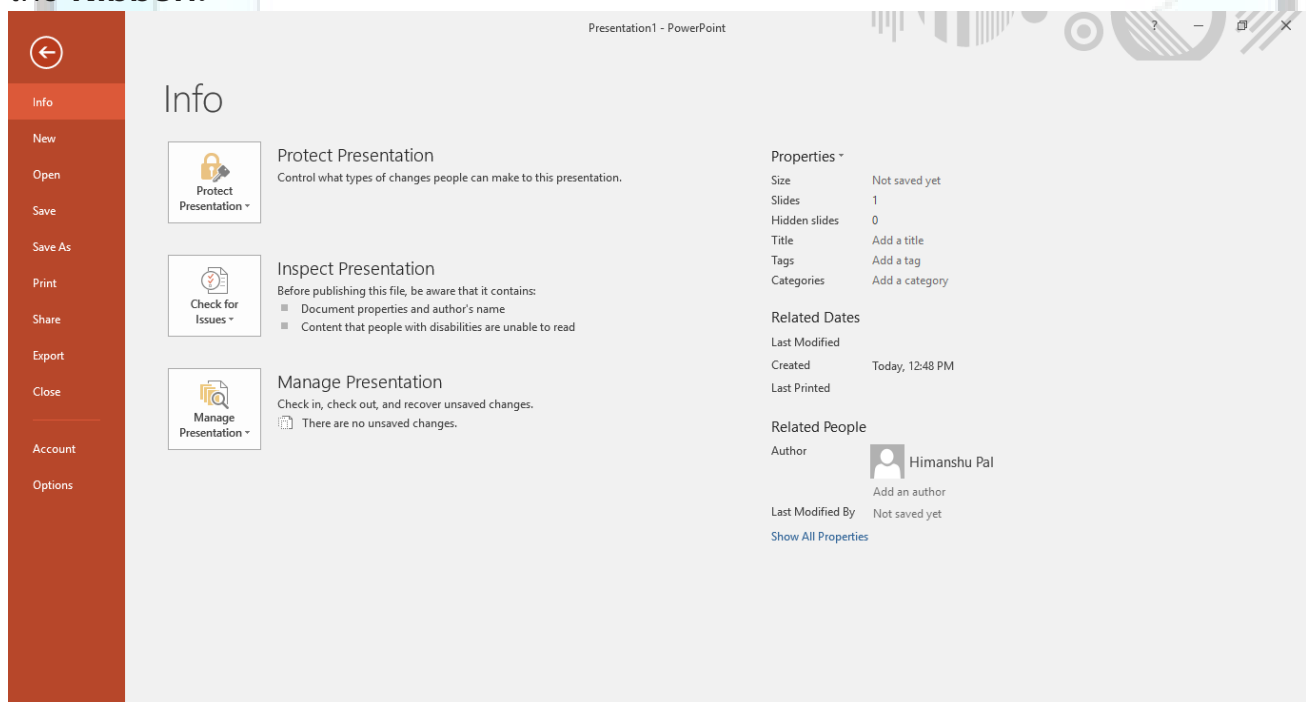
The Quick Access Toolbar

Located just above the Ribbon, the **Quick Access Toolbar** lets you access common commands no matter which tab is selected. By default, it includes the **Save**, **Undo**, and **Repeat** commands. You can add other commands depending on your preference.



Backstage View

Backstage view gives you various options for saving, opening, printing, and sharing your presentations. To access Backstage view, click the **File** tab on the **Ribbon**.



CREATING / OPENING / SAVING / PRESENTATIONS

PowerPoint files are called **presentations**. Whenever you start a new project in PowerPoint, you'll need to create a new presentation, which can either be blank or from a template. You'll also need to know how to open an existing presentation.

To create a new presentation

1. Select the **File** tab to go to Backstage view.
2. Select **New** on the left side of the window, then click **Blank Presentation**.
3. A new presentation will appear.

A **template** is a **predesigned presentation** you can use to create a new slide show quickly. Templates often include custom formatting and designs, so they can save you a lot of time and effort when starting a new project.

To create a new presentation from a template

1. Click the **File** tab to access Backstage view, then select **New**.
2. You can click a suggested search to find templates or use the search bar to find something more specific.
3. Select a **Template** to review it.
4. A preview of the template will appear, along with additional information on how the template can be used.
5. Click **Create** to use the selected template.
6. A new presentation will appear with the selected template.

In addition to creating new presentations, you'll often need to open a presentation that was previously saved.

To open an existing presentation

1. Select the **File** tab to go to Backstage view, then click Open.
2. Click **Browse**. The open dialog box will appear.
3. Locate and select your presentation, then click **Open**.

It's important to **save your presentation** whenever you start a new project or make changes to an existing one. Saving early and often can prevent your work from being lost. You'll also need to pay close attention to **where you save** the presentation so it will be easy to find later.

To save a presentation

1. Locate and select the **Save** command on the **Quick Access Toolbar**.
2. If you're saving the file for the first time, the Save As pane will appear in Backstage view.
3. You'll then need to choose where to save the file and give it a file name. Click **Browse** to select a location on your computer.
4. The Save As dialog box will appear. Select the location where you want to save the presentation.
5. Enter a file name for the presentation, then click **Save**.
6. The presentation will be saved. You can click the Save command again to save your changes as you modify the presentation.

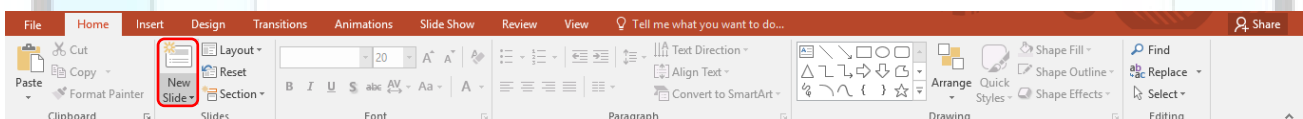
SLIDES

Every PowerPoint presentation is composed of a **series of slides**. To begin creating a slide show, you'll need to know the basics of working with slides. You'll need to feel comfortable with tasks such as inserting a new slide, changing the layout of a slide, arranging existing slides, changing the slide view,

Whenever you start a new presentation, it will contain one slide with the Title Slide layout. You can insert as many slides as you need from a variety of layouts.

To insert a new slide

1. From the **Home** tab, click the bottom half of the **New Slide** command.

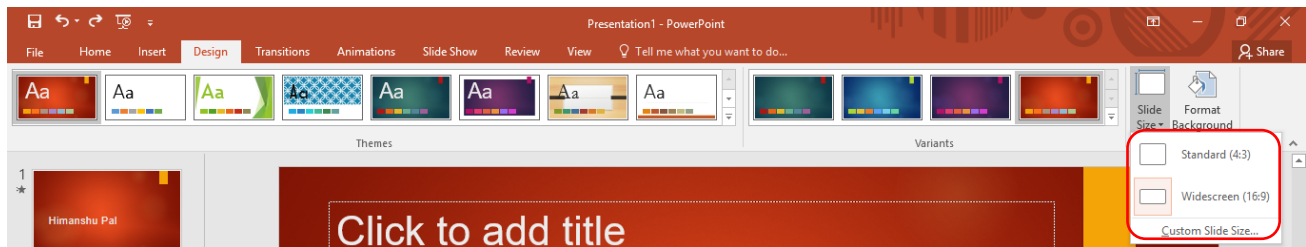


2. Choose the desired **slide layout** from the menu that appears.
3. The new slide will appear. Click any **placeholder** and begin typing to add text. You can also click an icon to add other types of content, such as a picture or a chart.

By default, all slides in PowerPoint use a **16/9** or **widescreen** aspect ratio. You might know that widescreen TVs also use the 16/9 aspect ratio. Widescreen slides will work best with widescreen monitors and projectors. However, if you need your presentation to fit a **4/3** screen, it's easy to change the slide size to fit.

To change the slide size

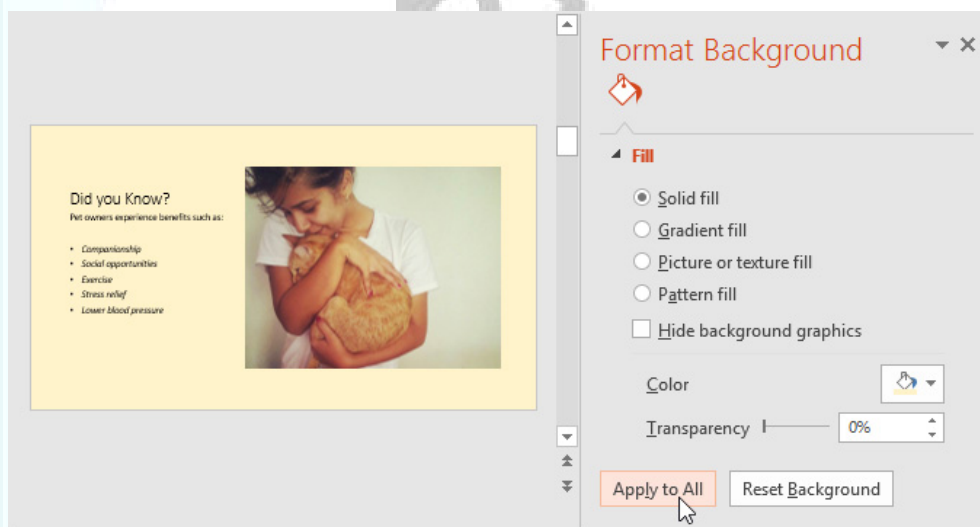
To change the slide size, select the **Design** tab, then click the **Slide Size** command. Choose the desired slide size from the menu that appears, or click Custom Slide Size for more options.



By default, all slides in your presentation use a **white background**. It's easy to change the background style for some or all of your slides. Backgrounds can have a **solid, gradient, pattern, or picture** fill.

To format the slide background

1. Select the **Design** tab, then click the **Format Background** command.
2. The Format Background pane will appear on the right. Select the desired fill options. In our example, we'll use a Solid fill with a light gold color.
3. The background style of the selected slide will update.
4. If you want, you can click **Apply to All** to apply the same background style to all slides in your presentation.



A theme is a **predefined combination** of colors, fonts, and effects that can quickly change the look and feel of your entire slide show. Different themes also use different slide layouts, which can change the arrangement of your existing placeholders.

To apply a theme

1. Select the **Design** tab on the Ribbon, then click the More drop-down arrow to see all of the available themes.
2. Select the desired theme.
3. The theme will be applied to your **entire presentation**.

SLIDES CUSTOMIZATION

To add a Picture

1. Select the **Insert** tab, then click the **Pictures** command in the **Images** group.
2. A dialog box will appear. Locate and select the desired image file, then click Insert.
3. The picture will appear on the currently selected slide.

To Insert a Shape

1. Select the **Insert** tab, then click the **Shapes** command in the Illustrations group. A drop-down menu of shapes will appear.
2. Select the desired **shape**.
3. Click and drag in the desired location to add the shape to the slide.

To add shape effects

1. Select the shape or text box you want to change.
2. On the **Format** tab, click the **Shape Effects** drop-down arrow. In the menu that appears, select your desired preset of styling effect.
3. The shape will appear with the selected effect.

Inserting Audio

1. From the **Insert** tab, click the **Audio** drop-down arrow, then select Audio on My PC.
2. Locate and select the desired audio file, then click Insert.
3. The audio file will be added to the slide.

Inserting Video

1. From the **Insert** tab, click the **Video** drop-down arrow, then select Video on My PC.
2. Locate and select the desired video file, then click Insert.
3. The video will be added to the slide.

Inserting Charts

1. Select the **Insert** tab, then click the Chart command in the Illustrations group.
2. A dialog box will appear. Select a category from the left pane, and review the charts that appear in the right pane.
3. Select the desired **chart**, then click **OK**.

4. A chart and a spreadsheet will appear. The data that appears in the spreadsheet is placeholder source data you will replace with your own information. The source data is used to create the chart.
5. Enter **data** into the worksheet.
6. Only the data enclosed by the blue lines will appear in the chart, but this area will expand automatically as you continue to type.
7. When you're done, click **[X]** to close the spreadsheet.
8. The chart will be completed and inserted in Presentation.

Inserting Tables

1. From the Insert tab, click the Table command.
2. Hover the mouse over the grid of squares to select the desired number of **columns** and **rows** in the table.
3. The table will appear on the currently selected slide.
4. Click anywhere in the table, and begin typing to add text. You can also use the Tab key or the arrow keys on your keyboard to navigate through the table.

Inserting Text Box

1. From the **Insert** tab, select the **Text Box** command.
2. Click and drag to draw the text box on the slide.
3. The text box will appear. To add text, simply click the text box and begin typing.

ADJUSTING PLACEHOLDERS

Sometimes you may find that a slide layout doesn't exactly fit your needs. For example, a layout might have too many—or too few—placeholders. You might also want to change how the placeholders are arranged on the slide. Fortunately, PowerPoint makes it easy to adjust slide layouts as needed.

To select a placeholder

Click the text in the placeholder then, Hover the mouse over the edge of the placeholder and click. A selected placeholder will have a **solid line** instead of a dotted line.

To move a placeholder

Select the placeholder, then click and drag it to the desired location.

To resize a placeholder

Select the placeholder you want to resize. **Sizing handles** will appear. Click and drag the sizing handles until the placeholder is the desired size. You can

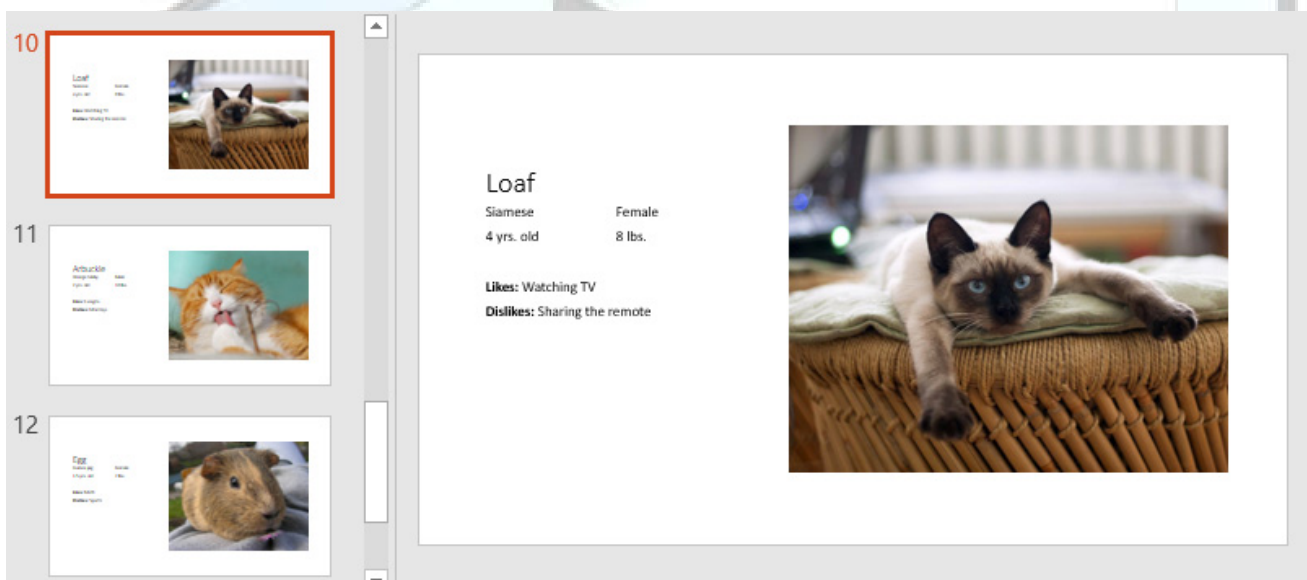
use the corner sizing handles to change the placeholder's **height** and **width** at the same time.

To delete a Placeholder

Select the placeholder you want to delete, then press the **Delete** or **Backspace** key on your keyboard.

ORGANIZING SLIDES

PowerPoint presentations can contain as many slides as you need. The **Slide Navigation pane** on the left side of the screen makes it easy to **organize** your slides. From there, you can duplicate, rearrange, and delete slides in your presentation.



Duplicate Slides

If you want to copy and paste a slide quickly, you can **duplicate** it. To duplicate slides, select the slide you want to duplicate, right-click the mouse, and choose Duplicate Slide from the menu that appears. You can also duplicate multiple slides at once by selecting them first using Ctrl key.

Move slides

It's easy to change the **order** of your slides. Just click and drag the desired slide in the Slide Navigation pane to the desired position.

Delete Slides

If you want to remove a slide from your presentation, you can delete it. Simply select the slide you want to delete, then press the **Delete** or **Backspace** key on your keyboard.

TRANSITIONS

Transitions determine how your presentations move from one slide to the next. For example, a slide can move up onto the screen and replace the previous slide. PowerPoint provides several transition methods. You can add sound to a transition and you can control its speed. You can apply a transition to selected slides or to all of the slides in your presentation.

A transition can occur when the presenter clicks the mouse or after the amount of time you specify.

To apply a transition

1. Select the desired slide from the **Slide Navigation** pane. This is the slide that will appear after the transition.
2. Click the Transitions tab, then locate the Transition to This Slide group. By default, None is applied to each slide.
3. Click the More drop-down arrow to display all transitions.
4. Click a **transition** to apply it to the selected slide. This will automatically preview the transition.

To modify the transition effect

1. Select the slide with the transition you want to modify.
2. Click the **Effect Options** command and choose the desired option. These options will vary depending on the selected transition.
3. The transition will be modified, and a preview of the transition will appear.

To modify the transition duration

1. Select the slide with the transition you want to modify.
2. In the **Duration** field in the Timing group, enter the desired time for the transition.

To add sound

1. Select the slide with the transition you want to modify.
2. Click the Sound drop-down menu in the Timing group.
3. Click a sound to apply it to the selected slide, then preview the transition to hear the sound.

Normally, in Slide Show view you would advance to the next slide by clicking your mouse or by pressing the spacebar or arrow keys on your keyboard. The **Advance Slides** setting in the Timing group allows the presentation to advance **on its own** and display each slide for a specific amount of time. This

feature is especially useful for **unattended presentations**, such as those at a trade show booth.

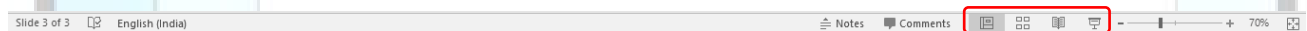
To advance slides automatically

1. Select the slide you want to modify.
2. Locate the Timing group on the Transitions tab. Under Advance Slide, uncheck the box next to On Mouse Click.
3. In the After field, enter the amount of time you want to display the slide.
4. Select another slide and repeat the process until all slides have the desired timing. You can also click the Apply to All command to apply the same timing to all slides.

SLIDE VIEWS

As you add more slides to a presentation, it can be difficult to keep everything organized. Fortunately, PowerPoint offers tools to help you organize and prepare your slide show.

PowerPoint includes several different **slide views**, which are all useful for various tasks. The **slide view commands** are located in the bottom-right of the PowerPoint window. There are four main slide views.



Normal view

This is the **default** view, where you create and edit slides. You can also move slides in the Slide Navigation pane on the left.

Slide sorter view

In this view, you'll see a **thumbnail version** of each slide. You can drag and drop slides to reorder them quickly.

Reading view

This view fills the PowerPoint window with a **preview** of your presentation. It includes easily accessible **navigation buttons** at the bottom-right.

Slide show view

This is the view you'll use to **present** to an audience. This command will begin the presentation from the current slide. You can also press **F5** on your keyboard to start from the beginning. A menu will appear in the bottom-left corner when

you move the mouse. These commands allow you to navigate through the slides and access other features, such as the **pen** and **highlighter**.

Outline view

Outline view shows your slide text in **outline** form. This allows you to quickly edit your slide text and view the content of multiple slides at once. You could use this layout to review the organization of your slide show and prepare to deliver your presentation.

1. From the View tab, click the Outline View command.
2. An outline of your slide text will appear in the slide navigation pane.
3. You can type directly in the outline to make changes to your slide text.



SLIDE SHOW PRESENTATION

Once your slide show is complete, you'll need to learn how to **present it** to an audience. PowerPoint offers several tools and features to help make your presentation smooth, engaging, and professional.

To start a slide show

There are several ways you can begin your presentation:

- Click the Start From Beginning command on the Quick Access Toolbar, or press the **F5** key at the top of your keyboard. The presentation will appear in full-screen mode.
- Select the Slide Show view command at the bottom of the PowerPoint window to begin a presentation from the current slide.
- Go to the Slide Show tab on the Ribbon to access even more options. From here, you can start the presentation from the current slide and access advanced presentation options.

To advance and reverse slides

You can advance to the next slide by clicking your mouse or pressing the **spacebar** on your keyboard. Alternatively, you can use or **arrow keys** on your keyboard to move forward or backward through the presentation.

To stop a Slideshow

You can exit presentation mode by pressing the **Esc** key on your keyboard. Alternatively, you can click the Slide Show Options button in the bottom-left and select End Show.

PRINTING

Even though PowerPoint presentations are designed to be viewed on a computer, there may be times when you want to print them. You can even print custom versions of a presentation, which can be especially helpful when presenting your slide show. The Print pane makes it easy to preview and print your presentation.

PowerPoint offers several layouts to choose from when printing a presentation. The layout you choose will mostly depend on why you're printing the slide show. There are four types of print layouts.

- **Full Page Slides:** This prints a full page for each slide in your presentation. This layout is most useful if you need to **review** or **edit** a printed copy of your presentation.
- **Notes Pages:** This prints each slide, along with any **speaker notes** for the slide. If you've included a lot of notes for each slide, you could keep a printed copy of the notes with you while presenting.
- **Outline:** This prints an overall **outline** of the slide show. You could use this to review the organization of your slide show and prepare to deliver your presentation.
- **Handouts:** This prints thumbnail versions of each slide, with optional space for notes. This layout is especially useful if you want to give your audience a physical copy of the presentation. The optional space allows them to take **notes** on each slide.

To print a presentation

1. Select the **File** tab. Backstage view will appear.
2. Select **Print**. The Print pane will appear.
3. Choose the desired **printer** and print **range**.
4. Chose the desired print **layout** and color settings.
5. When you're done modifying the settings, click **Print**.