

Introduction

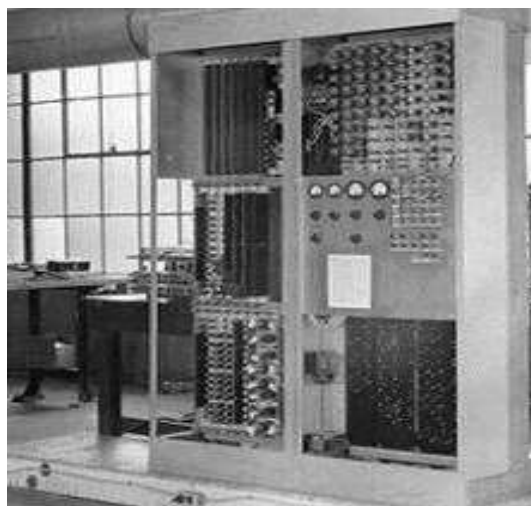
Computers are information processing machines used in different departments and organizations. They can be connected all over the world. Therefore, more productivity and good quality with less cost and legal constraints. Computers perform three main operations:

- 1- Receive input (data raw facts).
- 2- Process it according to predefined instructions.
- 3- Produce output (information which is meaningful data).

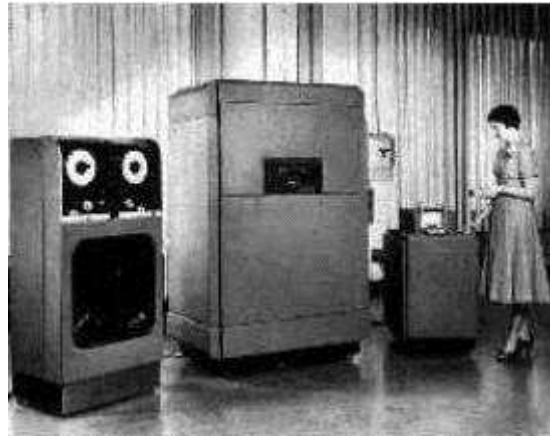


The Computer Generations:

- 1- The first generation:** This generation started when making the first computer in 1954 and depended on tube.



2- The second generation: Appeared in 1958 when using transistor distinguish this generation using high level language but the cost is high such as (IBM 1400).



3- The third generation: Starting in 1965 and using integrated circuit.



4- The fourth generation: Appeared in 1971 using integrated circuit
Wide-integration is distinguish (increase number of transistor).



5- The fifth generation: Appeared in 1980 such as robotics that is able on simulation.



Types of Computers:

- 1- Super Computers.
- 2- Main Frame Computers.
- 3- Mini Computers.
- 4- Micro Computers.

Computer system:

The components of a computer system are :

- 1- **Hardware:** Physical components like Screen, Cables, Keyboard, System box and Printer. The hardware cannot do anything without software .

- 2- **Software:** A set of instructions that tells the computer what to do and how to do it, such as word processing , computer games and graphics programs.
- 3- **Users:** Are people who use the software on the computer to do some tasks.

Hardware:

- **Input Devices:**

Enable the user to input data tell the CPU what to do with it.

- 1- keyboard.
- 2- Mouse.



- 3- Touch screen.
- 4- Light pen.
- 5- Scanners.



- 6- Joystick.
- 7- Microphone.

- 8- Disk drives.
- 9- Digital camera.
- 10- Video camera.

- Digital Camera
- Digital Video Camera
- Web cam

Create images that can be stored on magnetic media or DVD disk or on flash memory.



• Output Devices:

Enable the user to display or print the information from CPU.

1- Video display units(VDU):

- A- Cathode Ray Tube (CRT).
- B- Panel display flat.

Monitors

Cathode-ray tube (CRT)

Liquid crystal display (LCD)



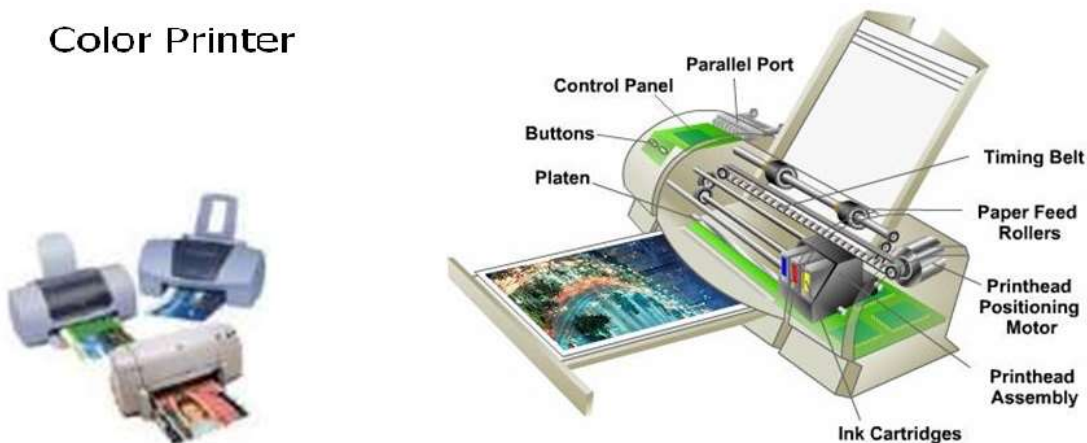
Characteristics of monitors:

- Colors: Depends on the construction of the monitor and the graphic adapter.
- Size.
- Resolution: The number of dots or pixels that can be displayed on the screen.
High resolution means better quality and a clearer display.

2- LED Display: Light Emitting Diodes (LED), small light sources that are used to indicate that equipment is switched on, as well as, to indicate the level of activity.

3- Printers.

Color Printer



- 4- Plotters.
- 5- Speakers.



- 6- Speech synthesizes.
- 7- Removable media.
- 8- Projectors (Data Show).



- **CPU (Central Processing Unit):**

It is also called microprocessor, it's the brain of computer and interprets and executes the instruction contained in software program, and determine how fast your computer will run, and it is measured by MHz (Mega Hertz) speed.

Three main parts of a (CPU):

- 1- ALU (Arithmetic Logic Unit), Carries out arithmetical, Comparative and logical processes.
- 2- Registers (is where the data used by the ALU is stored).
- 3- Control Unit (ensure that the program instruction are followed in correct sequence).

Input / Output Ports

Serial

- A serial port can be either a DB-9, as shown, or a DB-25 male connector.
- A serial cable has a maximum length of 50 feet (15.2 m).



Input / Output Ports

USB

- USB devices are hot-swappable. And found on computers, cameras, printers, scanners, storage devices, and many other electronic devices.
- A single USB port in a computer can support up to 127 separate devices with the use of multiple USB hubs.



Input / Output Ports

FireWire

- FireWire is a high-speed, hot-swappable interface.
- A single FireWire port in a computer can support up to 63 devices.



Input / Output Ports

Parallel

- Parallel ports can transmit 8 bits of data at one time and use the IEEE 1284 standard.
- To connect a parallel device, such as a printer, a parallel cable must be used.



Input / Output Ports

PS/2

- A PS/2 port connects a keyboard or a mouse to a computer.
- The PS/2 port is a 6-pin mini-DIN female connector.



Input / Output Ports

Network

- A network port, also known as an RJ-45 port, connects a computer to a network.
- Standard Ethernet can transmit up to 10 Mbps.
- Fast Ethernet can transmit up to 100 Mbps.
- Gigabit Ethernet can transmit up to 1000 Mbps.
- The maximum length of network cable is 328 feet (100 m).



Input / Output Ports

- **SCSI**
- A SCSI port can transmit data at rates in excess of 320 Mbps and can support up to 15 devices.
- Three different types of SCSI ports:
 - DB-25 female connector
 - High-density 50-pin female connector
 - High-density 68-pin female connector



25-Pin SCSI Connector



50-Pin SCSI Connector



68-Pin SCSI Connector

Input / Output Ports

- **Audio**
- Line In connects to an external source
- Microphone In connects to a microphone
- Line Out connects to speakers or headphones
- Game port/MIDI connects to a joystick or MIDI-interfaced device



Computer Components

Hardware is the physical equipment such as the:-

- Case
- Storage drives
- Keyboard & Mouse
- Monitors
- Cables
- Speakers
- Printers



Case Components

- Power Supply
- Motherboard
- Central Process Unit
- Cooling System
- ROM & RAM
- Adapter Cards
- Hard Drives & CD
- Cables



Power Supply

- The power supply converts alternating-current (AC) power coming from a wall outlet into direct-current (DC) power, which is a lower voltage.



Motherboards

- Also known as the system board, or the main board.
- Contains the buses, or electrical pathways found in a computer. **Buses** allow data to travel among the various components.



Random Access Memory (RAM)

- Temporary storage for data and programs that are being accessed by the CPU
- Volatile memory, which means that the contents are erased when the computer is powered off



Central Processing Unit (CPU)

- Most important element of a computer system. Executes a program, which is a sequence of stored instructions.

Two major CPU architectures related to instruction sets:

- **Reduced Instruction Set Computer (RISC)**
- **Complex Instruction Set Computer (CISC)**



Read Only Memory (ROM)

- Basic instructions for booting the computer and loading the operating system are stored in ROM.



Hard Drives & Optical Drives

- The **hard disk drive (HDD)** is a magnetic storage device installed inside the computer. The storage capacity is measured in gigabytes (GB).



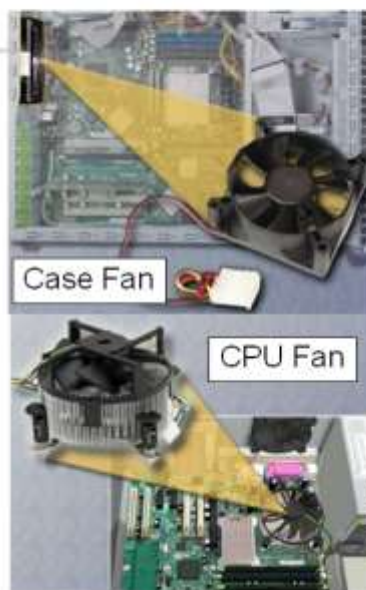
- An **optical drive** is a storage device that uses lasers to read data on the optical media.



The two types are CD and DVD.

Cooling System

- Electronic components generate heat. Too much heat can damage components.
- A **case fan** makes the cooling process more efficient.
- A **heat sink** draws heat away from the core of the CPU. A fan on top of the heat sink moves the heat away from the CPU.



Internal Cables

- Data cables connect drives to the drive controller, which is located on an adapter card or on the motherboard.
- Floppy disk drive (FDD) data cable
- PATA (IDE) data cable
- PATA (EIDE) data cable
- SATA data cable
- SCSI data cable



Storage Drives

- Floppy Disk Drive
- Hard Drive
- CD Drive
- DVD Drive
- Flash Drive
- Stick Memory, mobile or camera memories





Software:

Set of instruction , which tell the computer what to do and how to do it.

Software types :

Divided into two categories:

- 1- Software used by computer (System Software)
- 2- Software used by the user (Application Software)

System Software (operating system): Type of programs that hold all instruction that make the computer loaded automatically when start the computer.

Ex.: Mac OS , MS-DOS , Windows

Graphical User Interface:

Interface: Enable two-way communication between the user of an application and the computer.

GUI: Part of operating system, uses picture or icons to represent object of information on the monitor.

Advantages of using GUI:

- 1- Fast process.
- 2- Making computer easy to use, as all programs look similar.
- 3- Do not required high degree of computer knowledge.
- 4- Transition is easy between different manufactured computers.

Application Software: All other software that run of a computer.

Examples on application software:

Word processing Application (**word**)for producing letters memos.

Spreadsheet Application (**Excel**) for doing accounts and working with numbers.

Database Application (**Access**) for organizing large amounts of information .

Presentation Application (**Power Point**) for producing picture advertisements and manuals.

Photoshop , Publisher , Auto Cad (CAD).

Multimedia: The use of different media in a computer program, text , graphic, audio , video and animation .



Advantages: Facilitate the interactive with the user by presenting information in an attractive and effective way by using sound , image ,and animation.

Commercial Software: Any software you buy is commercial .

Shareware: Is copyrighted software that allows you to try it before purchase for limited period distributed freely via internet or CDs distributed with magazine .

Freeware: Is copyrighted software , freely distributed the version of their product .

Public Domain Software: It is freely available and can be copied and no payment.



Operating System

An operating system is a collection of many programs used by the computer to manage resources and operations. These programs control the execution of other programs. They schedule, assign resources, monitor, and control the work of the computer, these action are carried out without human intervention, assemblers and compilers.

Programming Languages:

There are two major types of programming languages:

1- Low Level Languages:

(a) Machine Language:

Machine Language is the only language that is directly understood by the computer. It does not needs any translator program. We also call it machine code and it is written as strings of 1's (one) and 0's (zero). When this sequence of codes is fed to the computer, it recognizes the codes and converts it in to electrical signals needed to run it. For example, a program instruction may look like this: 1011000111101 .

(b) Assembly Language:

It is the first step to improve the programming structure. You should know that computer can handle numbers and letter. Therefore some combination of letters can be used to substitute for number of machine codes. The set of symbols and letters forms the Assembly Language and a translator program is required to translate the Assembly Language to machine language. This translator program is called 'Assembler'. It is considered to be a second generation language.

2- High Level Languages:

Higher level languages are simple languages that use English and mathematical symbols like +, -, %, / etc. for its program construction. You should know that any higher level language has to be converted to machine language for the computer to understand.

Example for High Level Language:

- **COBOL** (Common Business Oriented Language) is mostly suitable for business oriented language.
- **FORTRAN** (Formula Translation) there are mathematical oriented languages.
- **BASIC** (Beginners All-purpose Symbolic Instruction Code) where very large processing is required.



Disks Types:

- 1- Hard Disk: symbol is **D** or **C**.
- 2- Floppy disk: symbol is **A** or **B**, can be divide to:
 - A-** Floppy disk in 5.25":
 - Floppy disk **DD** (Double **D**ensity).
 - Floppy disk **HD** (High **D**ensity).
 - B-** Floppy disk in 3.5":
 - Floppy disk **DD** or **2D**.
 - Floppy disk **HD**.
- 3- Compact **D**isk (**CD**): symbol is **E** or **F**.

MS-DOS

MS-DOS, also known simply as DOS, was developed to run single-user, stand-alone desktop computers. When the personal computer market exploded in the 1980s, MS-DOS was the standard operating system delivered with millions of these machines. In many ways, MS-DOS exemplifies early operating systems because it manages jobs sequentially from a single user. **DOS: Disk Operating System**.

The basic files in MS-DOS:

- 1- BIO.SYS
- 2- MS-DOS.SYS
- 3- COMMAND.COM
- 4- DBLSPACE .BIN

Dos File : Can be divide name file in the dos into two parts:

Part one: This part represent the basic (ROOT) we can't disregard and must be would not increase the length's in (8)characters this part not optional.

Part two: This part calling (EXTENSION) and must be would not increase the length's in (3) characters, this part optional .



The table following represent ROOT and EXTENSION:

ROOT	EXTENSION
COMMAND	COM
EXECUTABLE	EXE
DOCUMENT	TXT
ASSEMBLY	ASM
BACKUP	BAK
BASIC	BAS
PASCAL	PAS
SYSTEM	SYS
C	C

Key Terms:

- ☐ ☐ **Batch file:** a file that includes a series of commands that are executed in sequence without any input from the user.
- ☐ ☐ **BIOS:** an acronym for basic input output system, a set of programs (firmware) that are held On ROM, used to perform hardware initialization during the booting process (power-on startup).
- ☐ ☐ **Bootstrapping:** the process of starting an inactive computer by using a small initialization program to load other programs.
- ☐ ☐ **Extension:** the part of the file name that indicates which compiler or software package is needed to run the files.
- ☐ ☐ **File allocation table (FAT):** the table used to track segments of a file.
- ☐ ☐ **Filter command:** a command that directs input from a device or file, and then sends the result to a printer or display.
- ☐ ☐ **Interrupt handler:** the program that controls what action should be taken by the operating system when a sequence of events is interrupted.
- ☐ ☐ **Path:** the sequence of directories and subdirectories the operating system must follow to find a specific file.
- ☐ ☐ **System prompt:** the signal from the operating system that it is ready to accept a user's command, such as C:\> or C:\Documents>.



Storage Capacity Units:

Bit Byte Word K-Byte M-Byte

- (1) Byte = 8 Bit
- (1) Word = 2 Byte = 16 Bit
- (1) K-Byte = 1024 Byte
- (1) M-Byte = 1024 kB

Running MS-DOS:

- 1- Start → program → Accessories → Command Prompt.
- 2- Start → run → write CMD → click on the OK.

What is command:

A command is a way of communicating with the computers by typing MS-DOS command at your terminal, you can ask the computer to perform useful risks.

Types of MS-DOS command:

There are two types of MS-DOS commands:

- 1- Internal commands.
- 2- External commands.

Internal commands	External commands
Stored in memory through running computer	Need is file is exist in the drive when running computer
Always exist in the memory	Not found in the in memory and must be need loading in every time

(Internal & External) Commands:

Write **help** in **Command Prompt** as follow:

C:\>help

The Internal & External Commands will display as follow:



For more information on a specific command, type HELP command-name

ASSOC	Displays or modifies file extension associations.
AT	Schedules commands and programs to run on a computer.
ATTRIB	Displays or changes file attributes.
BREAK	Sets or clears extended CTRL+C checking.
CACLS	Displays or modifies access control lists (ACLs) of files.
CALL	Calls one batch program from another.
CD	Displays the name of or changes the current directory.
CHCP	Displays or sets the active code page number.
CHDIR	Displays the name of or changes the current directory.
CHKDSK	Checks a disk and displays a status report.
CHKNTFS	Displays or modifies the checking of disk at boot time.
CLS	Clears the screen.
CMD	Starts a new instance of the Windows command interpreter.
COLOR	Sets the default console foreground and background colors.
COMP	Compares the contents of two files or sets of files.
COMPACT	Displays or alters the compression of files on NTFS partitions.
CONVERT	Converts FAT volumes to NTFS. You cannot convert the current drive.
COPY	Copies one or more files to another location.
DATE	Displays or sets the date.
DEL	Deletes one or more files.
DIR	Displays a list of files and subdirectories in a directory.
DISKCOMP	Compares the contents of two floppy disks.
DISKCOPY	Copies the contents of one floppy disk to another.
DOSKEY	Edits command lines, recalls Windows commands, and creates macros.
ECHO	Displays messages, or turns command echoing on or off.
ENDLOCAL	Ends localization of environment changes in a batch file.
ERASE	Deletes one or more files.
EXIT	Quits the CMD.EXE program (command interpreter).
FC	Compares two files or sets of files, and displays the differences between them.
FIND	Searches for a text string in a file or files.
FINDSTR	Searches for strings in files.
FOR	Runs a specified command for each file in a set of files.
FORMAT	Formats a disk for use with Windows.
FTYPE	Displays or modifies file types used in file extension associations.
GOTO	Directs the Windows command interpreter to a labeled line in a batch program.
GRAFTABL	Enables Windows to display an extended character set in graphics mode.
HELP	Provides Help information for Windows commands.
IF	Performs conditional processing in batch programs.
LABEL	Creates, changes, or deletes the volume label of a disk.



MD	Creates a directory.
MKDIR	Creates a directory.
MODE	Configures a system device.
MORE	Displays output one screen at a time.
MOVE	Moves one or more files from one directory to another directory.
PATH	Displays or sets a search path for executable files.
PAUSE	Suspends processing of a batch file and displays a message.
POPD	Restores the previous value of the current directory saved by PUSH.D.
PRINT	Prints a text file.
PROMPT	Changes the Windows command prompt.
PUSH.D	Saves the current directory then changes it.
RD	Removes a directory.
RECOVER	Recovers readable information from a bad or defective disk.
REM	Records comments (remarks) in batch files or CONFIG.SYS.
REN	Renames a file or files.
RENAME	Renames a file or files.
REPLACE	Replaces files.
RMDIR	Removes a directory.
SET	Displays, sets, or removes Windows environment variables.
SETLOCAL	Begins localization of environment changes in a batch file.
SHIFT	Shifts the position of replaceable parameters in batch files.
SORT	Sorts input.
START	Starts a separate window to run a specified program or command.
SUBST	Associates a path with a drive letter.
TIME	Displays or sets the system time.
TITLE	Sets the window title for a CMD.EXE session.
TREE	Graphically displays the directory structure of a drive or path.
TYPE	Displays the contents of a text file.
VER	Displays the Windows version.
VERIFY	Tells Windows whether to verify that your files are written correctly to a disk.
VOL	Displays a disk volume label and serial number.
XCOPY	Copies files and directory trees.



Internal commands

Internal commands are simplest most commonly used commands they are part of large file named (command.com).

قبل توضيح هذه الأوامر يجب توضيح انه توجد العديد من الطرق التي يمكن كتابة الأمر بها في الـ DOS ويستخدم القوسان المربعان [] في شرح الصورة العامة لأي من الأوامر للدلالة على أن ما بينهما اختياري ، أي أنه يمكن توجيه الأمر بدون هذا الجزء.

1- Time : TIME [/T | time]

Displays or sets the system time.

TIME [HH [:MM[:SS .PP]]]

HH: represent the clocks from (0 – 23)

MM: represent the minutes from (0 – 59)

SS: represent the seconds from (0 -59)

PP: represent the parts from the second and must be the range (0 -99)

Note : must be in the computers the clock (1-24) and not only (1-12) because to display the time is day or night

Ex: change the time into 11:30

C:\> Time

The current time is : 8:30:58.77

Enter the new time: 11:30:55.88

2- Date:

Displays or sets the date.

DATE [MM/DD/YY]

MM: represent months.



DD: represent days.

YY: represent years.

Ex: Change the date 25 May 2011

C:\> Date

The current date :Thu 11/24/2011

Enter the new date :<mm-dd-yy>5/25/2011

3- CLS:

Clear the Screen.

Ex: clear the screen.

C:\> CLS

4- Ver:

Displays the Windows XP version.

Ex: Displays the Windows XP version.

C:\> Ver

5- PROMPT:

Prompt can be made up of normal characters and the following special codes:

\$A & (and)

\$B | (pipe)

\$C ((Left parenthesis)

\$D Curent date

\$E Escape code

\$F) (Right parenthesis)



\$G > (greater-than sign)

\$L < (less-than sign)

\$N Current drive

\$P Current drive and path

\$Q = (equal sign)

\$S (space)

\$T Current time

\$V Windows XP version number

\$ \$ (dollar sign)

Ex: Change the command prompt to &.

C:\>prompt \$A

&

6- Dir :

View the contents of a directory.

To view the contents of a directory:

Type the following at the command prompt :

dir

A list similar to the following appears:

Volume in drive C is MS-DOS_6.22

Volume Serial Number is 1E49-15E2

Directory of C:



```
WINDOWS <DIR> 09-08-92 10:27p
TEMP <DIR> 05-15-92 12:09p
CONFIG SYS 278 09-23-92 10:50a
COMMAND COM 53014 09-18-92 6:00a
WINA20 386 9349 11-11-91 5:00a
DOS <DIR> 09-02-92 4:23p
AUTOEXEC BAT 290 09-23-92 10:54a

7 file(s) 62931 bytes

8732672 bytes free
```

This is called a **directory list**. A directory list is a list of all the files and subdirectories that a directory contains. In this case, you see all the files and directories in the main or root directory of your drive. All the files and directories on your drive are stored in the root directory.

7- CD :

The **cd** command stands for "change directory".

Type the following at the command prompt :

```
cd windows
```

The command prompt changes. It should now look like the following:

```
C:\WINDOWS>
```

Next, you will use the **dir** command to view a list of the files in the DOS directory.

- To view a list of the files in the WINDOWS directory:

Type the following at the command prompt :



dir

A list of the files in the WINDOWS directory appears, but scrolls by too quickly to read. You can modify the dir command so that it displays only one screen of information at a time.

- To view the contents of a directory one screen at a time:

Type the following at the command prompt :

dir /p

One screen of information appears. At the bottom of the screen, you will see the following message:

Press any key to continue . . .

- To view the next screen of information, press any key on your keyboard. Repeat this step until the command prompt appears at the bottom of your screen. The **p** actually stands for "page" .
- To view the contents of a directory in wide format:

Type the following at the command prompt :

dir /w

The directory list appears, with the filenames listed in wide format. Note that only filenames are listed. No information about the files' size or date and time of creation appears.

If the directory contains more files than will fit on one screen, you can combine the /p and /w switches as follows:

dir /w /p

- Changing Back to the Root Directory:

You will change from the DOS directory to the root directory. The root directory is the directory you were in before you changed to the DOS directory.



Before you begin this section, make sure your command prompt looks like the following:

C:\DOS>

To change to the root directory :

Type the following at the command prompt :

**cd **

The command prompt should now look like the following:

C:\>

8- MD :

Creating a Directory. To create a directory, you will use the **md** command. The md command stands for "**make directory**".

Before you begin, make sure the command prompt looks like the following:

C:\>

- To create and change to a directory named **FRUIT**:

Type the following at the command prompt :

md fruit

You have now created a directory named FRUIT. You won't see the new FRUIT directory until you carry out the dir command in the next step.

To confirm that you successfully created the FRUIT directory, type the following at the command prompt:

dir

or

dir /p



Look through the directory list. A new entry somewhere in the list should look similar to the following:

FRUIT <DIR> 09-25-93 12:09p

- To change to the new FRUIT directory, type the following at the command prompt :

cd fruit

The command prompt should now look like the following:

C:\FRUIT>

You will now create a directory within the FRUIT directory, named **GRAPES** :

To create and work with a directory named GRAPES

Type the following at the command prompt :

md grapes

You will not see the new GRAPES directory until you carry out the dir command in the next step. To confirm that you successfully created the GRAPES directory, type the following at the command prompt :

dir

A list similar to the following appears:

Volume in drive C is MS-DOS-6

Volume Serial Number is IE49-15E2

Directory of C:\FRUIT

. <DIR> 09-25-93 12:08p

.. <DIR> 09-25-93 12:08p

GRAPES <DIR> 09-25-93 12:10p



3 file(s) 0 bytes

11534336 bytes free

Note that there are three entries in the FRUIT directory. One is the GRAPES directory that you just created. There are two other entries---one looks like a single period (.) and the other looks like a double period (..). These directory entries are important to MS-DOS, but you can ignore them. They appear in every directory and contain information relation to the directory structure.

The GRAPES directory is a subdirectory of the FRUIT directory. A subdirectory is a directory within another directory. Subdirectories are useful if you want to further subdivide information.

- To change to the GRAPES directory, type the following at the command prompt :

cd grapes

The command prompt should now look like the following:

C:\FRUIT\GRAPES>

- To switch back to the FRUIT directory, type the following:

cd ..

The command prompt should now look like the following:

C:\FRUIT>

When the cd command is followed by two periods (..), MS-DOS moves up one level in the directory structure. In this case, you moved up one level from the GRAPES directory to the FRUIT directory.

9- RD :

Deleting a Directory, The **rd** command stands for "**remove directory**".

You will delete the GRAPES directory. Before you begin, make sure the command prompt looks like the following:

C:\FRUIT>



To delete the GRAPES directory:

Type the following at the command prompt :

rd grapes

To confirm that you successfully deleted the GRAPES directory, type the following at the command prompt :

dir

The GRAPES directory should no longer appear in the directory list.

Note You cannot delete a directory if you are in it. Before you can delete a directory, you must make the directory that is one level higher the current directory. To do this, type **cd..** at the command prompt.

10- Changing Drives:

Describes how to change drives. Changing drives is useful if you want to work with files that are on a different drive.

Before you begin, make sure your command prompt looks like the following:

C:\FRUIT>

To change to and view files on a different drive, Type the following at the command prompt :

f:

Note that the command prompt changed to the following:

F :>

This message may appear:

The devise is not ready

C:\FRUIT>



If you see this message, the disk may not be inserted properly. Place it in the disk drive, and then Retry.

- To change back to drive **C** by typing the following at the command prompt :

c:

Your command prompt should return to the following:

C:\FRUIT>

When you type a drive letter followed by a colon, you change to that drive.

- To view the contents of the **WINDOWS** directory on drive **C**, type the following at the command prompt :

dir c:\windows

A list of the files in the DOS directory on drive **C** should scroll past on your screen.



11- Copy:

Copying the files. To copy a file, you will use the **copy command**. When you use the copy command, you must include two parameters. The first is the location and name of the file you want to copy, or the source. The second is the location to which you want to copy the file, or the destination. You separate the source and destination with a space. The copy command follows this pattern:

copy source destination

You will copy the **notepad.exe** files from the **WINDOWS** directory to the **FRUIT** directory. Before you begin, make sure the command prompt looks like the following:

C:\FRUIT>

To copy the **NOTEPAD.EXE** files from the **WINDOWS** directory to the **FRUIT** directory:

1. Return to the root directory by typing the following at the command prompt :

cd

The command prompt should now look like the following:

C:\>

Change to the DOS directory by typing the following at the command prompt :

cd windows

The command prompt should now look like the following:

C:\WINDOWS>

2. Make sure the file you are going to copy, **NOTEPAD.EXE**, is located in the **WINDOWS** directory by using the **dir** command followed by a filename.

dir notepad.exe

A list similar to the following appears:



C:\Windows>dir notepad.exe

Volume in drive C has no label.

Volume Serial Number is CAE8-E54B

Directory of C:\Windows

```
07/14/2009  04:14 AM          179,712 notepad.exe
               1 File(s)      179,712 bytes
               0 Dir(s)  1,743,269,888 bytes free
```

C:\Windows>

3. To copy the NOTEPAD.EXE file from the WINDOWS directory to the FRUIT directory, type the following at the command prompt:

copy c:\windows\notepad.exe c:\fruit

The following message appears:

1 file(s) copied

4. To confirm that you copied the files successfully, view the contents of the FRUIT directory by typing the following at the command prompt:

dir \fruit

You should see the file listed in the FRUIT directory.

12- Ren:

Used to rename a file. The **ren** command stands for "**rename**" When you use the ren command, you must include two parameters.

The first is the file you want to rename, and the second is the new name for the file. You separate the two names with a space. The **ren** command follows this pattern:



ren old name new name

You will rename the **NOTEPAD.EXE** file.

Before you begin, make sure your command prompt looks like the following:

C:\FRUIT>

1. To rename the **NOTEPAD.EXE** file to **PADNOTE.TXT**, type the following at the command prompt:

ren notepad.exe padnote.txt

2. To confirm that you renamed the file successfully, type the following at the command prompt:

dir

13- Del:

Used to delete a file. The **del** command stands for "**delete**".

You will delete **PADNOTE.TXT** file using the **del** command.

Before you begin, make sure your command prompt looks like the following:

C:\FRUIT>

1. Delete the **PADNOTE.TXT** file by typing the following at the command prompt:

del PADNOTE.TXT

2. To confirm that you deleted the files successfully, type the following at the command prompt:

dir

• Deleting a Group of Files:

Before you begin, make sure your command prompt looks like the following:

C:\FRUIT>

To delete files in the current directory that end with the extension OLD :



1. View all files that end with the extension OLD by typing the following at the command prompt:

dir *.old

A list of all the files that end with the extension OLD appears. Make sure that these are the files you want to delete.

2. Delete all files ending with OLD by typing the following at the command prompt:

del *.old

3. To confirm that all the files with the extension OLD have been deleted, type the following at the command prompt:

dir

The **FRUIT** directory should contain no files.

Now that the **FRUIT** directory is empty, you can delete it by using the **rd** (remove directory) command .

- To delete the **FRUIT** directory:

1. Return to the root directory by typing the following at the command prompt:

**cd **

2. You can see the **FRUIT** directory in the directory list by typing the following at the command prompt:

dir or dir /p

3. Remove the **FRUIT** directory by typing the following at the command prompt:

rd fruit

4. To verify that the **FRUIT** directory has been removed, type the following at the command prompt:



dir or dir /p

The **FRUIT** directory should not appear in the directory list.

14- Vol:

Displays the volume information about the designated drive (disk volume label and serial number).

VOL [drive:]

Ex: Display the volume of drive c:

vol c:

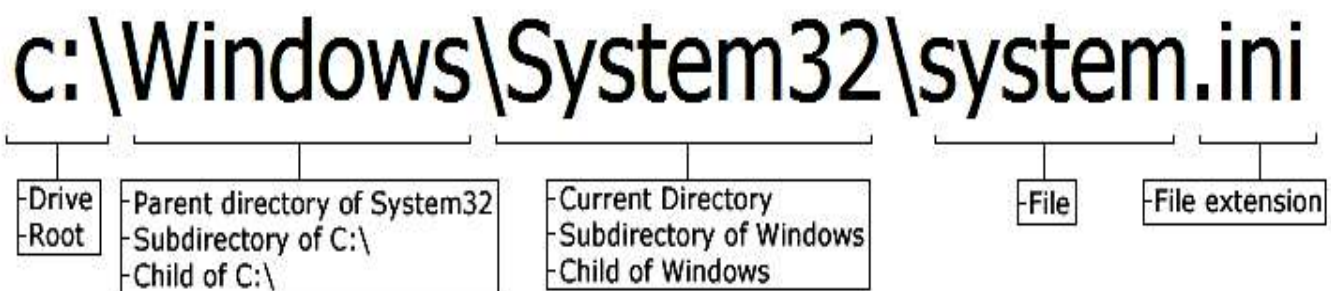
The message appears like the following:

**Volume in drive C has no label.
Volume Serial Number is 1C24-AB20**

15- Path:

Displays or sets a search path for executable files.

The following example shows an MS-DOS path or file path for **system.ini** file. When working with an MS-DOS, Windows, or Windows command line path. The drives, directories, and files are all separated by a backslash.





- Typing "**path**" by itself shows the current path information. Below is an example of the output you may get when typing this command. As can be seen in the example below, there are multiple directories in the path that are each separated by a semicolon:

C:\>Path

The message appears like the following:

```
PATH=C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;  
C:\Program Files (x86)\WinSCP;C:\Perl\site\bin;C:\Perl\bin; C:\WINDOWS\  
system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\  
System32\WindowsPowerShell\v1.0\;C:\Program Files (x86 )\Windows Live\  
Shared;C:\Program Files (x86)\FAHClient;
```

- Type "**Path;**" to clear all search-path settings and direct Windows to search only in the current directory.
- To set the path to C:\windows\command, which is where many of the Windows commands are located, type "**path=c:\windows\command** ":

C:\Users\dell>path=c:\windows\command

The following appears:

C:\Users\dell>

Then type:

C:\Users\dell>path

The following appears:

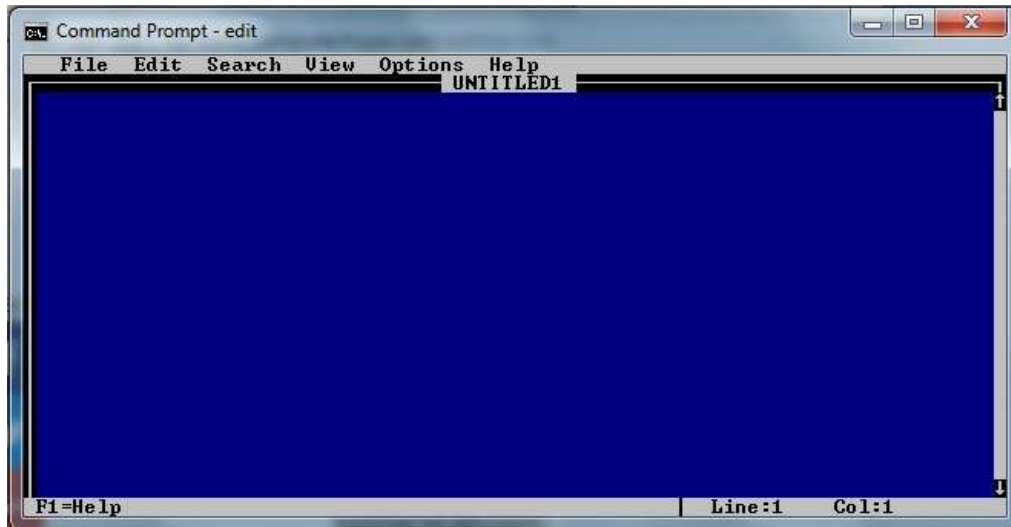
```
PATH=c:\windows\command  
C:\Users\dell>
```

16- Edit:

The MS-DOS editor is a command line text editor that allows you to view, create, or modify any file on your computer. When running the edit command:

C:\>edit

A screen similar to the picture below is shown:



- **Using edit to create a file:**

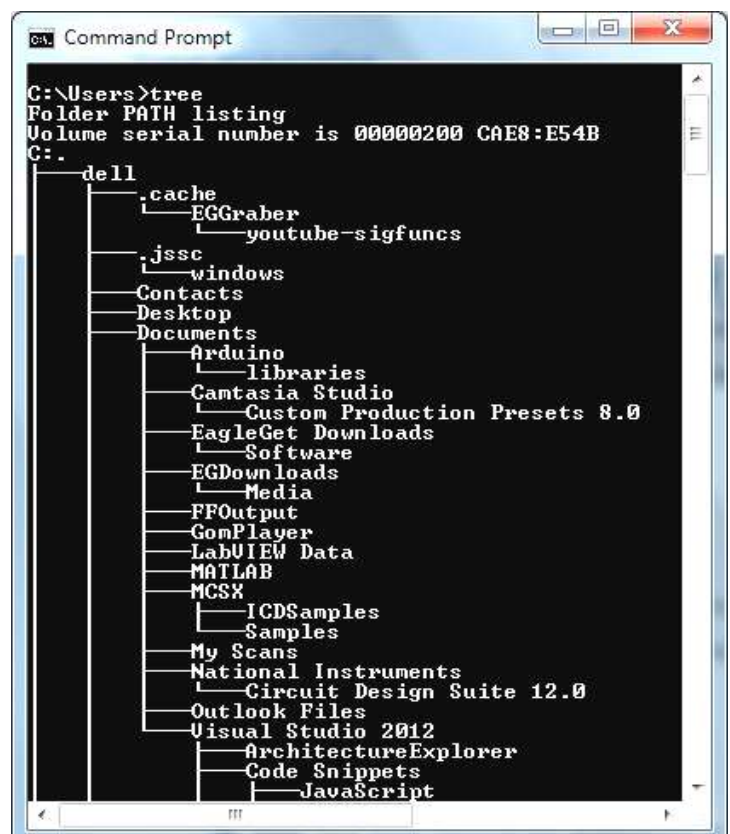
Using **edit** you can also create files; for example, if you wanted to create a file called **myfile.txt**, you would type the below command:

edit myfile.txt

This would bring up a blank edit screen, as long as the file is saved upon exit this will create the file myfile.txt.

17- Tree:

The tree command typed alone will produce a tree listing and overview of the current directory. The picture shows a basic example of how a directory tree overview looks in the Windows 7 Command Prompt.





18- XCopy:

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.

XCOPY source [destination]

Ex: Copies all files in the directory (elec) on C drive to the directory (cont) on E drive:

```
C:\Users\dell>xcopy c:\elec e:\cont
```

 └──┬──┘└──┬──┘
 source destination

The following appears: **C:\elec\zz.txt**

1 File(s) copied

C:\Users\dell>

To verify that the all files copied to directory (cont), type the following at the command prompt:

```
C:\Users\dell>dir e:\cont
```

The message appears like the following:

Volume in drive E has no label.

Volume Serial Number is 4E4C-FBA6

Directory of e:\cont

```
12/25/2016 10:07 PM <DIR> .
```

```
12/25/2016 10:07 PM <DIR> ..
```

```
12/25/2016 09:26 PM          5 zz.txt
```

1 File(s) 5 bytes

2 Dir(s) 6,819,971,072 bytes free

C:\Users\dell>



Ex: Copies all files in the directory (elec) on C drive to the current directory (C:\Users\dell):

C:\Users\dell>xcopy c:\elec

The following appears:

C:\elec\zz.txt

1 File(s) copied

C:\Users\dell>

To verify that the all files copied to current directory, type the following at the command prompt:

C:\Users\dell>dir

The message appears like the following:

Volume in drive C has no label.

Volume Serial Number is CAE8-E54B

Directory of C:\Users\dell

12/25/2016 10:24 PM <DIR> .

12/25/2016 10:24 PM <DIR> ..

12/25/2016 09:34 PM <DIR> Desktop

12/25/2016 09:26 PM 5 zz.txt

3 File(s) 1,783 bytes

18 Dir(s) 1,759,985,664 bytes free

C:\Users\dell>



19- Format:

Format is used to erase information of a computer diskette or fixed drive. When using the format command, remember all information on the drive you want to format will be completely erased.

Ex: To erase all the contents of a floppy disk. Commonly used on a diskette that has not been formatted or on a diskette you want to erase, type the following at the command prompt:

format a:

20- Diskcopy:

The diskcopy utility allows a user to copy the complete contents of a diskette to another diskette.

DISKCOPY [drive1: [drive2:]]

Ex: This would make a copy of the disk that is currently in your drive:

Diskcopy a:

21- Chkdsk:

Chkdsk is a utility that checks the computer's hard drive status for any cross-linked or any additional errors with the hard drive.

C:\>chkdsk



22- ECHO:

Displays messages, or turns command-echoing on or off.

ECHO [ON | OFF]

ECHO [message]

Type **ECHO** without parameters to display the current echo setting:

Ex: C:\>echo

ECHO is on.

To turns command-echoing **off**:

Ex: C:\>echo off

-

To displays messages on the screen:

Ex: C:\>echo Hello Student

Hello Student

C:\>

To create Text File contain the message (**Hello Student**):

Ex: C:\>echo Hello Student>ali.txt

To writing in the file **ali.txt** :

Ex: C:\>echo College of Technology -Kirkuk >>ali.txt

When open the file **ali.txt**, we find :

Hello Student

College of Technology –Kirkuk

External Commands

1-Doskey:

Doskey is an MS-DOS utility that allows a user to keep a history of commands used on the computer. Doskey allows frequently used commands to be used without having to type the command each time its needed. Doskey allows a user to edits command lines, recalls windows commands, and creates macros.



**DOSKEY [/REINSTALL] [/LISTSIZE=size] [/MACROS[:ALL | :exename]]
[/HISTORY] [/INSERT | /OVERSTRIKE] [/EXENAME=exename]
[/MACROFILE=filename] [macroname=[text]]**

/REINSTALL	: Installs a new copy of Doskey.
/LISTSIZE=size	: Sets size of command history buffer.
/MACROS	: Displays all Doskey macros.
/MACROS:ALL	: Displays all Doskey macros for all executables which have Doskey macros.
/MACROS:exename	: Displays all Doskey macros for the given executable.
/HISTORY	: Displays all commands stored in memory.
/INSERT	: Specifies that new text you type is inserted in old text.
/OVERSTRIKE	: Specifies that new text overwrites old text.
/EXENAME=exename	: Specifies the executable.
/MACROFILE=filename	: Specifies a file of macros to install.
macroname	: Specifies a name for a macro you create.
text	: Specifies commands you want to record.

UP and **DOWN ARROWS** recall commands; **ESC** clears command line; **F7** displays command history; **ALT+F7** clears command history; **F8** searches command history; **F9** selects a command by number; **ALT+F10** clears macro definitions.

Ex: Create a batch program named **MACINIT.BAT** that includes all Doskey macros .

doskey/macros>macinit.bat

Ex: Create a batch program named **TMP.BAT** that contains recently used Commands.

doskey /history > tmp.bat

2- ASSOC:

Displays or modifies file extension associations.

ASSOC [.ext[=[fileType]]]



.ext : Specifies the file extension to associate the file type with.
fileType : Specifies the file type to associate with the file extension.

Type **ASSOC** without parameters to display the current file associations:

```
C:\>assoc
```

```
.xsn=InfoPath.Solution.3  
.xss=VisualStudio.xss.11.0  
.xtp=XTPFile  
.xtp2=XTP2File  
.xxe=WinRAR  
.z=WinRAR
```

If **ASSOC** is invoked with just a file extension, it displays the current file association for that file extension:

```
C:\>assoc .doc
```

```
.doc=Word.Document.8
```

3-FTYPE:

Displays or modifies file types used in file extension associations.

لعرض انواع مشغلات الملفات الموجودة في النظام ومسارات برامج التشغيل.

FTYPE [fileType=[openCommandString]]

fileType : Specifies the file type to examine or change.

openCommandString : Specifies the open command to use when launching files of this type.

Type **FTYPE** without parameters to display the current file types that have open command strings defined:

Ex: C:\>ftype

```
XZIP_tar="C:\Program Files\XZip\XZip.exe" "%1"  
XZIP_taz="C:\Program Files\XZip\XZip.exe" "%1"  
XZIP_tbz="C:\Program Files\XZip\XZip.exe" "%1"  
XZIP_tbz2="C:\Program Files\XZip\XZip.exe" "%1"  
XZIP_zipx="C:\Program Files\XZip\XZip.exe" "%1"  
zapfile=%SystemRoot%\system32\NOTEPAD.EXE %1
```



FTYPE is invoked with just a file type, it displays the current open command string for that file type:

Ex: **C:\>ftype winrar**
 winrar="D:\Program Files\WinRAR.exe" "%1"

4- Title :

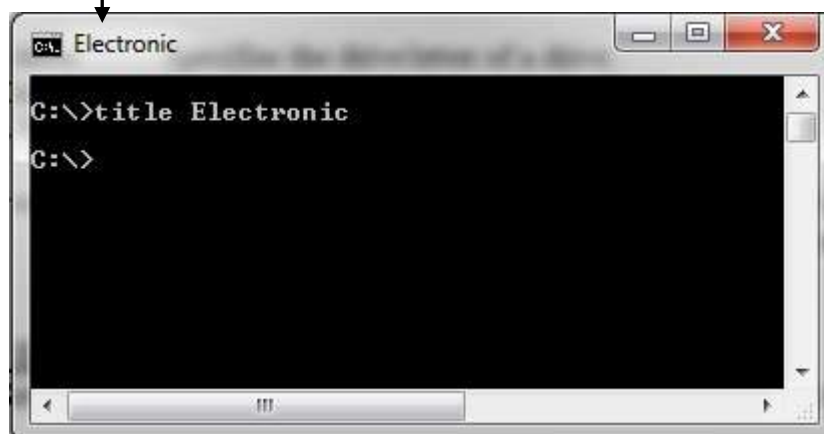
Sets the window title for the command prompt window.

TITLE [string]

string : Specifies the title for the command prompt window.

Ex: For change title dos from **Command Prompt** to **Electronic** :

C: \> title Electronic



5- MEM:

Displays the amount of used and free memory in your system.

MEM [/PROGRAM | /DEBUG | /CLASSIFY]

/PROGRAM or /P : Displays status of programs currently loaded in memory.

/DEBUG or /D : Displays status of programs, internal drivers, and other information.

/CLASSIFY or /C : Classifies programs by memory usage. Lists the size of programs, provides a summary of memory in use, and lists largest memory block available.



Ex: Display the status of programs currently loaded in memory:

C:\>MEM/p

Address	Name	Size	Type
-----	-----	-----	-----
000000		000400	Interrupt Vector
000400		000100	ROM Communication Area
000500		000200	DOS Communication Area
000700	IO	000370	System Data
000A70	MSDOS	001650	System Data
0020C0	IO	002100	System Data
	KBD	000D20	System Program
	HIMEM	0004E0	DEVICE=
		000490	FILES=
		000090	FCBS=
		0001B0	LASTDRIVE=
		0007D0	STACKS=
0041D0	COMMAND	000A20	Program
004C00	MSDOS	000070	-- Free --
004C80	COMMAND	000680	Environment
005310	MEM	0005B0	Environment
0058D0	MEM	0174E0	Program
01CDC0	MSDOS	083220	-- Free --
09FFF0	SYSTEM	030000	System Program
0D0000	IO	003100	System Data
	MOUSE	0030F0	System Program
0D3110	MSDOS	0005A0	-- Free --
0D36C0	MSCDEXNT	000160	Program
0D3830	REDIR	000880	Program
0D40C0	DOSX	0087A0	Program
0DC870	DOSX	000080	Data
0DC900	MSDOS	0136F0	-- Free --

655360 bytes total conventional memory

655360 bytes available to MS-DOS

632592 largest executable program size

1048576 bytes total contiguous extended memory

0 bytes available contiguous extended memory

941056 bytes available XMS memory

MS-DOS resident in High Memory Area



Ex: Display the status of programs, internal drivers, and other information:

C:\>MEM/d

Address	Name	Size	Type
-----	-----	-----	-----
000000		000400	Interrupt Vector
000400		000100	ROM Communication Area
000500		000200	DOS Communication Area
000700	IO	000370	System Data
	CON		System Device Driver
	AUX		System Device Driver
	PRN		System Device Driver
	CLOCK\$		System Device Driver
	COM1		System Device Driver
	LPT1		System Device Driver
	LPT2		System Device Driver
	LPT3		System Device Driver
	COM2		System Device Driver
	COM3		System Device Driver
	COM4		System Device Driver
000A70	MSDOS	001650	System Data
0020C0	IO	002100	System Data
	KBD	000D20	System Program
	HIMEM	0004E0	DEVICE=
	XMSXXXX0		Installed Device Driver
		000490	FILES=
		000090	FCBS=
		0001B0	LASTDRIVE=
		0007D0	STACKS=
0041D0	COMMAND	000A20	Program
004C00	MSDOS	000070	-- Free --
004C80	COMMAND	000680	Environment
005310	MEM	0005B0	Environment
0058D0	MEM	0174E0	Program
01CDC0	MSDOS	083220	-- Free --
09FFF0	SYSTEM	030000	System Program
0D0000	IO	003100	System Data
	MOUSE	0030F0	System Program
0D3110	MSDOS	0005A0	-- Free --
0D36C0	MSCDEXNT	000160	Program
0D3830	REDIR	000880	Program



0D40C0	DOSX	0087A0	Program
0DC870	DOSX	000080	Data
0DC900	MSDOS	0136F0	-- Free --

655360 bytes total conventional memory
 655360 bytes available to MS-DOS
 632592 largest executable program size

1048576 bytes total contiguous extended memory
 0 bytes available contiguous extended memory
 941056 bytes available XMS memory
 MS-DOS resident in High Memory Area

Ex: Classify the programs by memory usage:

C:\>MEM/c

Conventional Memory :

Name	Size in Decimal	Size in Hex
MSDOS	12144 (11.9K)	2F70
KBD	3360 (3.3K)	D20
HIMEM	1248 (1.2K)	4E0
COMMAND	4256 (4.2K)	10A0
FREE	112 (0.1K)	70
FREE	634064 (619.2K)	9ACD0

Total FREE : 634176 (619.3K)

Upper Memory :

Name	Size in Decimal	Size in Hex
SYSTEM	196592 (192.0K)	2FFF0
MOUSE	12528 (12.2K)	30F0
MSCDEXNT	352 (0.3K)	160
REDIR	2176 (2.1K)	880
DOSX	34848 (34.0K)	8820
FREE	1440 (1.4K)	5A0
FREE	79600 (77.7K)	136F0

Total FREE : 81040 (79.1K)

Total bytes available to programs (Conventional + Upper) : 715216 (698.5K)
Largest executable program size : 632592 (617.8K)
Largest available upper memory block : 79600 (77.7K)



1048576 bytes total contiguous extended memory
0 bytes available contiguous extended memory
941056 bytes available XMS memory
MS-DOS resident in High Memory Area

6- START:

Starts a separate window to run a specified program or command.

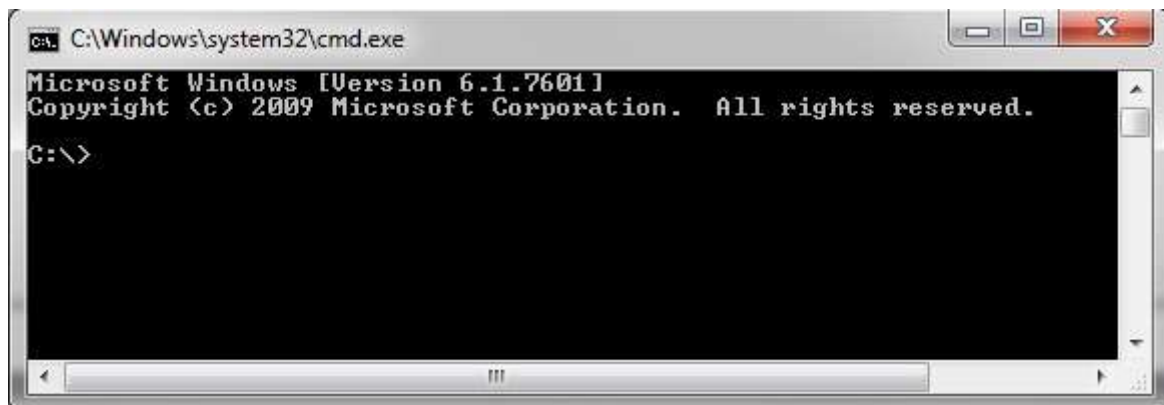
**START ["title"] [/D path] [/I] [/MIN] [/MAX] [/SEPARATE | /SHARED]
[/LOW | /NORMAL | /HIGH | /REALTIME | /ABOVENORMAL |
/BELOWNORMAL] [/NODE <NUMA node>]
[/AFFINITY <hex affinity mask>] [/WAIT] [/B] [command/program]
[parameters]**

"title" : Title to display in window title bar.
MIN : Start window minimized.
MAX : Start window maximized.

Ex: Start separate **Command Prompt** window:

C:\>start

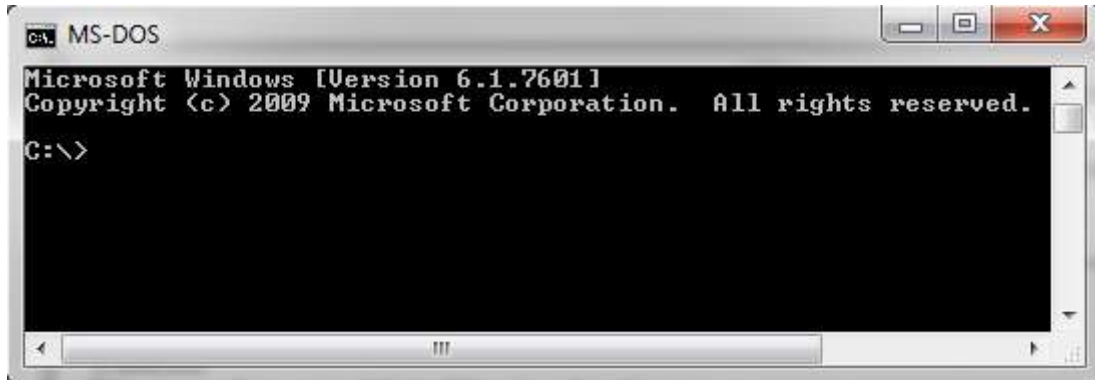
This window will appear:



Ex: Start separate **Command Prompt** window with title bar (**MS-DOS**):

C:\>start "MS-DOS"

This window will appear:



Ex: Start separate **Command Prompt** window minimized:

C:\>start/min

Ex: Start separate **Command Prompt** window maximized:

C:\>start/max

Ex: Start separate **Command Prompt** window maximized with title bar (**My program**):

C:\>start/max "My program"

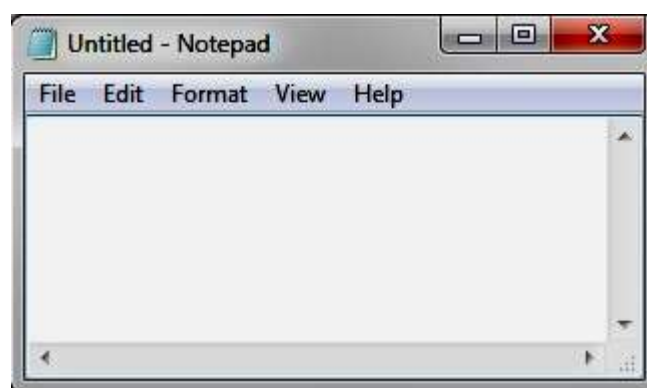
or

C:\>start "My program"/max

Ex: Start new Notepad:

C:\>start Notepad

This window will appear:





7- MOVE:

Moves files and renames files and directories.

To move one or more files:

MOVE [/Y | /-Y] [drive:][path]filename1[,...] destination

Ex: Move the file named **Ali** to file named **Ahmed**, the two files in the path (**c:\users\dell**):

```
c:\>move c:\users\dell\Ali c:\users\dell\Ahmed
```

To rename a directory:

MOVE [/Y | /-Y] [drive:][path]dirname1 dirname2

Ex: Rename the file named **Ali** to **Ahmed**, in the path (**c:\users\dell**):

```
c:\>move c:\users\dell\Ali c:\users\dell\Ahmed
```

8- EXIT:

Quits (close) the CMD.EXE program (Command Prompt window).

Ex: Close the Command Prompt window:

```
C:\>exit
```

9-SHUTDOWN:

Usage: **shutdown [/i | /l | /s | /r | /g | /a | /p | /h | /e] [/f][/m \\computer][/t xxx]
[/d [p|u:]xx:yy [/c "comment"]]**

No args : Display help. This is the same as typing **/?**.

/? : Display help. This is the same as not typing any options.

/i : Display the graphical user interface (**GUI**). This must be the first option.

/l : Log off. This cannot be used with **/m** or **/d** options.

/s : Shutdown the computer.

/r : Shutdown and restart the computer.

/g : Shutdown and restart the computer. After the system is rebooted, restart any registered applications.

/a : Abort a system shutdown. This can only be used during the time-out period.

/p : Turn off the local computer with no time-out or warning. Can be used with **/d**



- and /f options.
- /h** : Hibernate the local computer. Can be used with the /f option.
- /e** : Document the reason for an unexpected shutdown of a computer.
- /m \\computer** : Specify the target computer.
- /t xxx** : Set the time-out period before shutdown to **xxx** seconds. The valid range is **0 - 315360000** (10 years), with a default of **30**. If the timeout period is greater than **0**, the /f parameter is implied.
- /c "comment"** : Comment on the reason for the restart or shutdown. Maximum of **512** characters allowed.
- /f** : Force running applications to close without forewarning users. The /f parameter is implied when a value greater than **0** is specified for the /t parameter.
- /d [p|u:]xx:yy** : Provide the reason for the restart or shutdown.
p indicates that the restart or shutdown is planned.
u indicates that the reason is user defined.
If neither **p** nor **u** is specified the restart or shutdown is unplanned.
xx is the major reason number (positive integer less than **256**).
yy is the minor reason number (positive integer less than **65536**).

Ex: Use the **SHUTDOWN** command to:

- 1- Display help of shutdown command.
- 2- Display the graphical user interface (GUI).
- 3- Log off the computer.
- 4- Shutdown the computer.
- 5- Shutdown and restart the computer.
- 6- Abort a system shutdown.
- 7- Turn off the local computer.
- 8- Hibernate the local computer.

- 1- C:\>shutdown
- 2- C:\>shutdown/i
- 3- C:\>shutdown/l
- 4- C:\>shutdown/s
- 5- C:\>shutdown/r
- 6- C:\>shutdown/a
- 7- C:\>shutdown/p
- 8- C:\>shutdown/h

*Northern Technical University
Technical College / Kirkuk
Electronic & Control Techniques
Engineering Department*

*Computer Applications Lectures
2016 - 2017
First Year*

Microsoft Windows

Windows 7

Prepared by Assist. Lecturer : Bassam F. M.

THE WINDOWS OPERATING SYSTEM

Every computer needs an operating system which lets you, literally, operate your computer. There are a few around and Microsoft Windows is just one of them, albeit one of the most popular ones.

Some of the functions the Windows operating system allows you to do are:

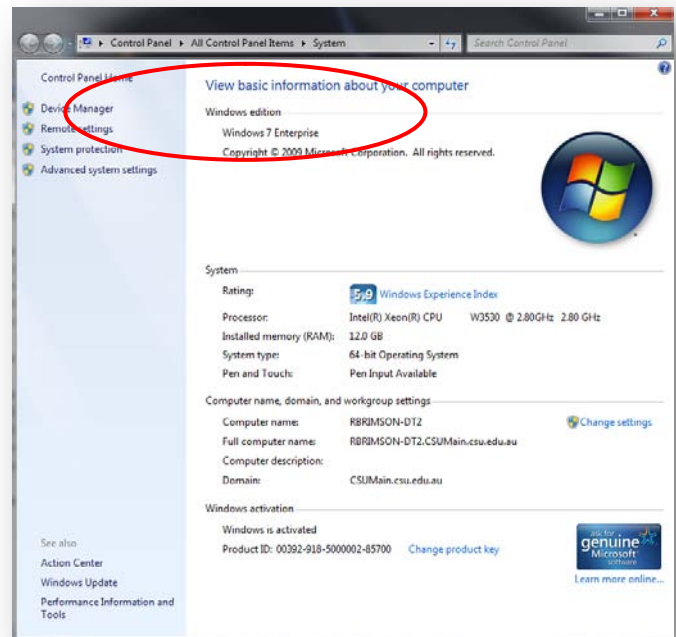
- Access applications (programs) on your computer (word processing, games, spread sheets, calculators and so on)
- Load any new programs on to the computer
- Manage hardware such as printers, scanners, mice, digital cameras
- Manage how files are stored on your computer (File Management, covered later in this module)
- Change computer settings such as colour schemes, screensavers, and the resolution of your monitor.

What software versions do I have and what is on my computer?

There are several versions of Microsoft Windows in existence.

You can tell what version you have (either at work, or at home) by:

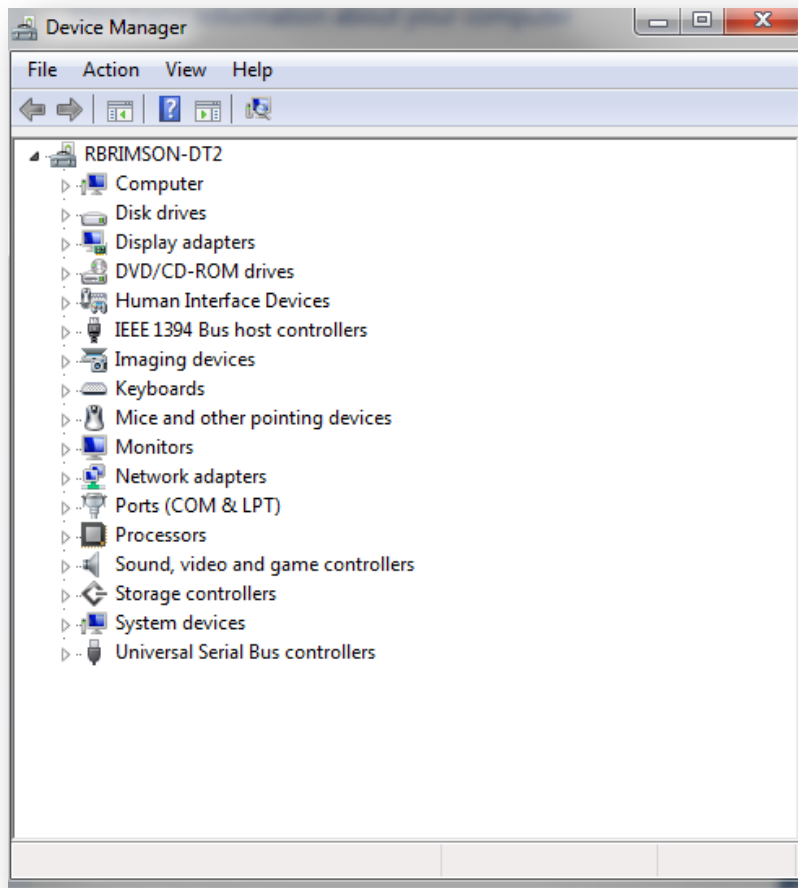
1. Find the MY COMPUTER icon on the desktop;
2. Right mouse click on this icon and select PROPERTIES from the shortcut menu. The SYSTEM PROPERTIES dialog box will appear. This shows what version of Windows you are currently operating in.



It is useful to know what version you are operating in because some instructions in learner guides are for specific versions.

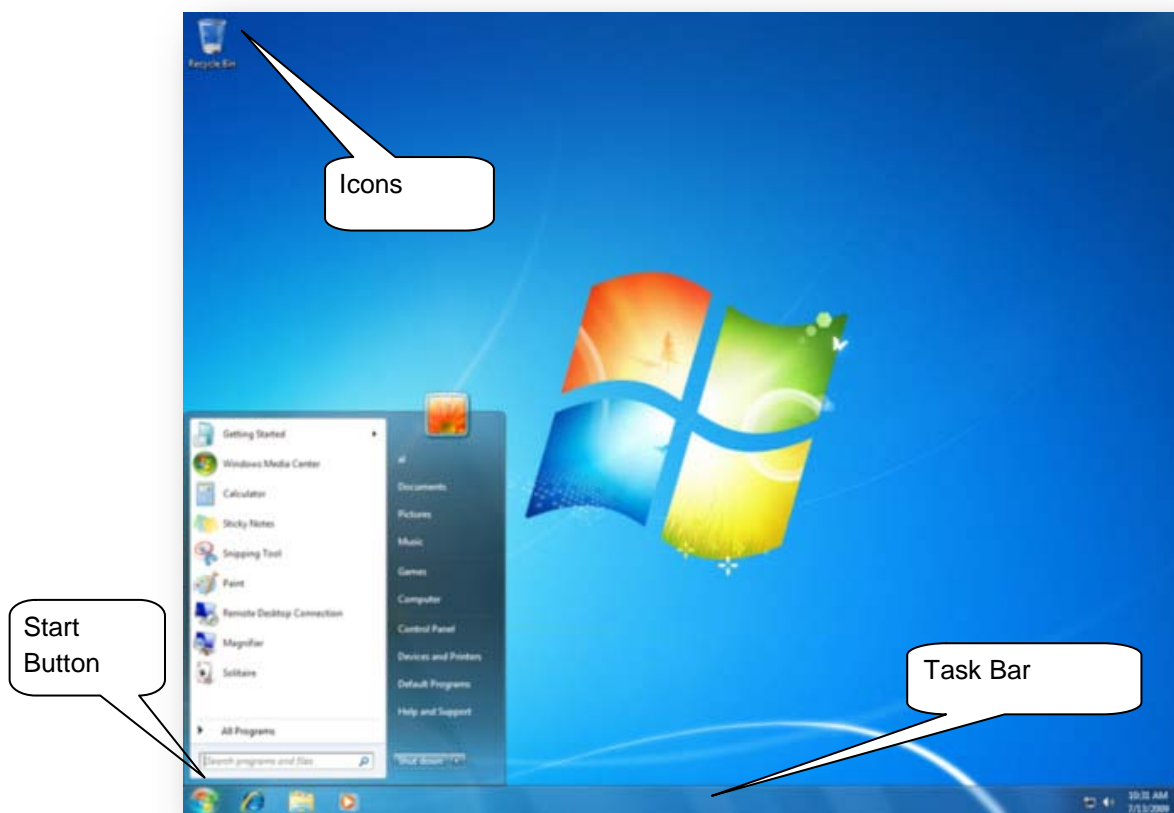
Other useful information you may be required to know, either because a technician or support officer asks you over the phone, or you are working at home, is what system configuration you have. The Device Manager can tell you this by clicking on the DEVICE MANAGER link on the left.

The DEVICE MANAGER dialog box has a list of devices attached to your PC. More information about each can be obtained by clicking on the icon with the plus sign located in front of each device. **NOTE: you might not have permission to view this!**



Introduction to the Desktop

You should start thinking of your screen as your DESKTOP. Your DESKTOP is what you now see on the screen (as shown below). As you are logged into the University desktop, it will look a little different to your desktop if you have a computer at home.



Let's have a look at what is on your DESKTOP. You will have a few pictures on your desktop, these are called ICONS. To access the program the icon represents, or the contents of these icons they must be opened. To open an icon you point to it with your mouse and then double-click on it using the left mouse button.

Glossary of Icons:

My Documents



MY DOCUMENTS is the default storage folder for your files that you create. When you save or open a file, Microsoft Windows initially opens the MY DOCUMENTS dialog box. At this time you can navigate to where you want to save your file.



My Computer

MY COMPUTER displays information about your computer, such as the contents of your computer drives and which printers you have installed. It also allows you to find, view and organise files.



The Recycle Bin

This is where you place files you no longer need. Your computers data files should be tidied up regularly and any unwanted files deleted from the system. Any file you delete from your

hard drive will be placed first in the RECYCLE BIN. Files you delete from the University Network drives will not go into the recycle bin.

You may decide to leave those files in the RECYCLE BIN if you think you might need to retrieve them later. However, you should empty the recycle bin so it does not fill up. We will look at the recycle bin in more detail later in this module.



Internet Explorer

With INTERNET EXPLORER and an Internet connection, you can search for and view information on the World Wide Web. You can search the Internet for people, businesses, and information about subjects that interest you, download music, copy graphics, stay in touch with or meet new friends, and a host of other activities.



Microsoft Outlook

MICROSOFT OUTLOOK is an e-mail program that lets you exchange mail with friends and colleagues as well as manage appointments through the calendar function.



Microsoft Excel

MICROSOFT EXCEL is a spread sheet application which allows users to enter text and numbers into rows and columns. This data can be manipulated and analysed by using formulas and functions and reporting and charting can be done on the results,



Microsoft PowerPoint

MICROSOFT POWERPOINT is a presentation program. It turns text, numbers and graphics into a presentation which can be shown to an audience in a slideshow, or printed off as handouts.



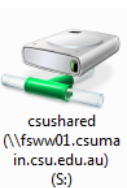
Microsoft Word

MICROSOFT WORD is a word processing application used for creating documents such as reports, letters, business plans, and more.



My Personal Drive (P)

This is a University network drive where you are able to save any files you create. You will learn more about your P: drive later in this module.




My Shared Drive (S)

This is a University network drive where you are able to save any files you create. You will learn more about your S: drive later in this module.

The Taskbar

The taskbar is the long horizontal bar at the bottom of your screen. Unlike the desktop, which can get obscured by open windows, the taskbar is almost always visible. It has three main sections:

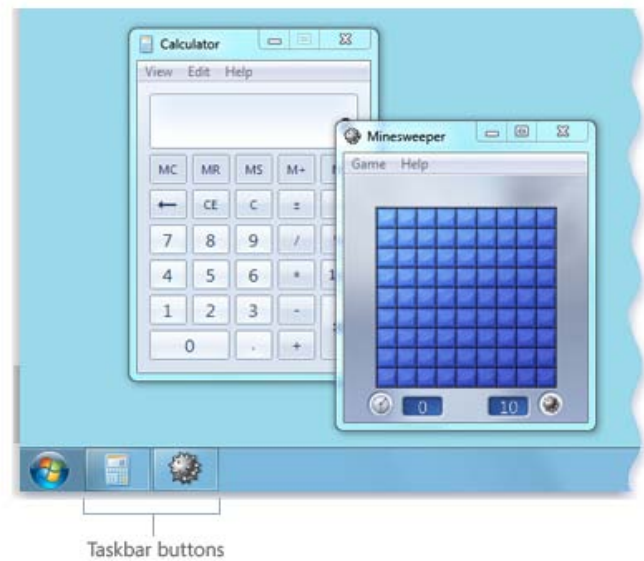
- The Start button , which opens the Start menu.
- The middle section, which shows you which programs and files you have open and allows you to quickly switch between them.
- The notification area, which includes a clock and icons (small pictures) that communicate the status of certain programs and computer settings.

You're likely to use the middle section of the taskbar the most, so let's look at it first.

Keep track of your windows

If you open more than one program or file at a time, you can quickly start piling up open windows on your desktop. Because windows often cover each other or take up the whole screen, it's sometimes hard to see what else is underneath or remember what you've already opened.

That's where the taskbar comes in handy. Whenever you open a program, folder, or file, Windows creates a corresponding button on the taskbar. The button shows an icon that represents the open program. In the picture below, two programs are open—Calculator and Minesweeper—and each has its own button on the taskbar.



Each program has its own button on the taskbar

Minimize and restore windows

When a window is active (its taskbar button is highlighted), clicking its taskbar button minimizes the window. That means that the window disappears from the desktop. Minimizing a window doesn't close it or delete its contents—it temporarily removes it from the desktop.

In the picture below, Calculator is minimized, but not closed. You can tell it's still running because it has a button on the taskbar.



Minimizing Calculator leaves only its taskbar button visible

You can also minimize a window by clicking the minimize button in the upper-right corner of the window.



Minimize button (left)

The notification area



The notification area, on the far right side of the taskbar, includes a clock and a group of icons. It looks like this.



The notification area of the taskbar

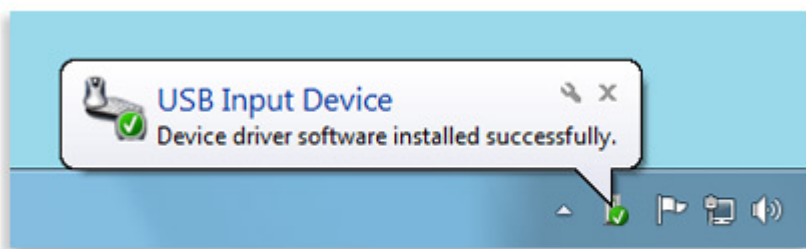
These icons communicate the status of something on your computer or provide access to certain settings. The set of icons you see depends on which programs or services you have installed and how your computer manufacturer set up your computer.

When you move your pointer to a particular icon, you will see that icon's name or the status of a setting.


For example, pointing to the volume icon  shows the current volume level of your computer. Pointing to the network icon  displays information about whether you are connected to a network, the connection speed, and the signal strength.

Double-clicking an icon in the notification area usually opens the program or setting associated with it. For example, double-clicking the volume icon opens the volume controls. Double-clicking the network icon opens Network and Sharing Center.

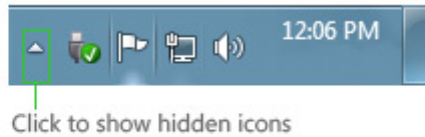
Occasionally, an icon in the notification area will display a small pop-up window (called a notification) to notify you about something. For example, after adding a new hardware device to your computer, you might see this.



The notification area displays a message after new hardware is installed

Click the Close button  in the upper-right corner of the notification to dismiss it. If you don't do anything, the notification will fade away on its own after a few seconds.

To reduce clutter, Windows hides icons in the notification area when you haven't used them in a while. If icons become hidden, click the Show hidden icons button to temporarily display the hidden icons.



Click the Show hidden icons button to display all icons in the notification area

Customize the taskbar

There are many ways to customize the taskbar to suit your preferences. For example, you can move the entire taskbar to the left, right, or top edge of the screen. You can make the taskbar larger, have Windows automatically hide it when you're not using it, and add toolbars to it.

To unlock the taskbar

- Right-click an empty space on the taskbar. If 'Lock the taskbar' has a check mark next to it, the taskbar is locked. You can unlock it by clicking 'Lock the taskbar', which removes the check mark.

To move the taskbar

- Click an empty space on the taskbar, and then hold down the mouse button as you drag the taskbar to one of the four edges of the desktop. When the taskbar is where you want it, release the mouse button.

Note: To lock the taskbar into place, right-click an empty space on the taskbar, and then click Lock the taskbar so that the check mark appears. Locking the taskbar helps prevent it being moved or resized accidentally.

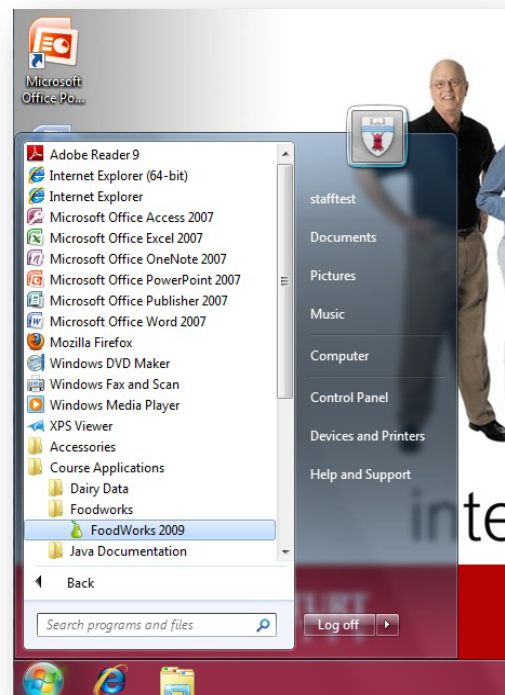


The START Button

The START button is located at the bottom of the screen on the left-hand side of the taskbar and gives you access to most things available on your computer.

When you click on the START button, you will see a menu. Clicking on this item will run the application.

Some of the items you may see in the START Menu are:



Documents: The DOCUMENTS menu links you to your documents.

Pictures: This will link you to your pictures folder

Music: This links you to a folder for storing music

Computer: Clicking this link will show you the drives connected to this computer

Control Panel: Allows you to make changes to the current settings on the computer.

Devices and Printers:

Search programs and files: Allows you to search for files, folders, printers, software applications etc. by entering search criteria

Help and Support: Gives you access to a help facility where you can find out how to do certain things on your computer.

Log Off: Allows you to log off as a User without turning off the computer. This would allow someone else can log on.

Help and Support

Help is always available as you learn about the different functions on your computer. You can access the HELP AND SUPPORT function by clicking on the START button and selecting HELP AND SUPPORT. The HELP AND SUPPORT CENTER dialog box will appear:

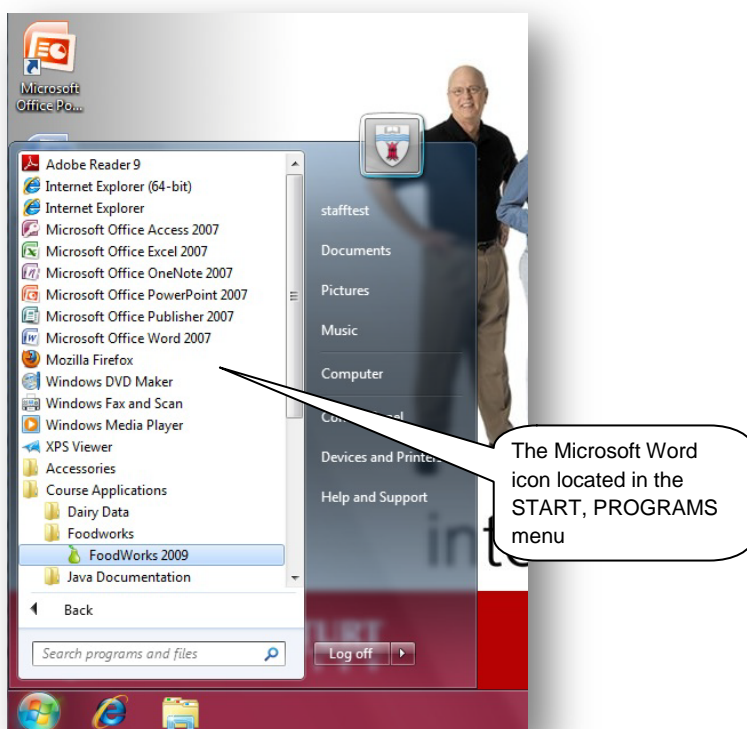


Find the support you need by either clicking on a topic under the section called NOT SURE WHERE TO START? or type what you are looking for in the SEARCH field and press ENTER. A list of matching criteria will be compiled. Click on the underlined topic to display the full help text.

NOTE: You can also hit F1 on your keyboard at any time to launch the HELP menu. You need to click on the desktop first then press F1

Opening an Application

There are many ways to open an application; it is up to the user to find one or two that suit you. The most common ways are:



1. By clicking on the START button, going to the PROGRAMS menu and locating the application in the list that appears.
2. By double clicking with the mouse on a shortcut icon on the desktop if one has been created. The icon shown here is the shortcut for the Microsoft Word application. You can create your own shortcuts for applications you use frequently, this is covered on page 23.
3. Some applications may be located on the taskbar as a quick link (look at the left hand side of the taskbar, just after the START button). These quick links only need to be clicked on once.



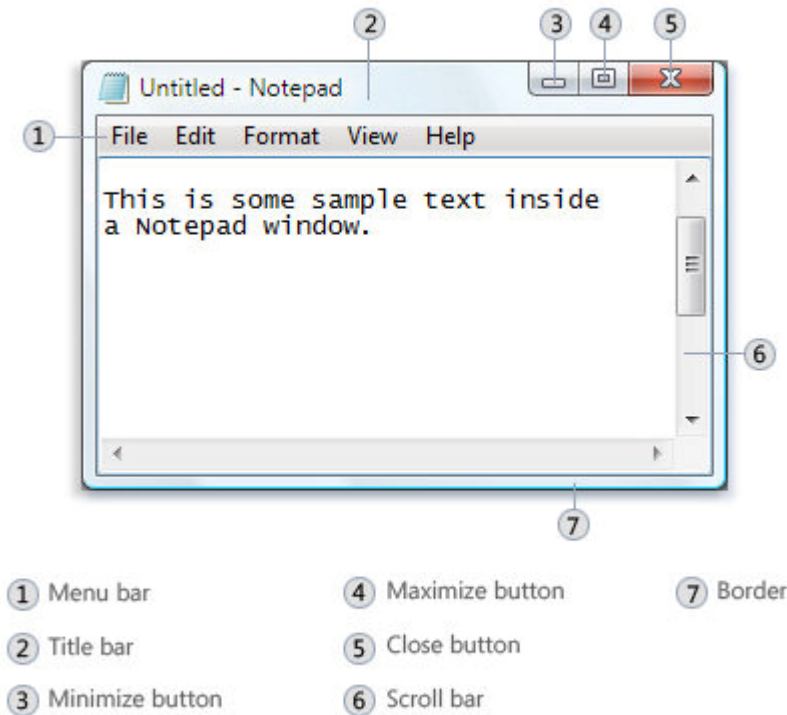
When you open an application it will open up in what is known as a WINDOW.

Windows

What is a Window?

A *window* is a boxed area in which you view programs, files, folders, drives, icons representing programs, files or folders, and other elements. A WINDOW sits on the desktop much the same as a book might sit on your desk. All windows have similar features. This makes it easier for the user to use, even when they are unfamiliar with an application.

Let's take a look at a typical WINDOW.




Parts of a typical window



- **Title bar.** Displays the name of the document and program (or the folder name if you're working in a folder).
- **Minimize, Maximize, and Close buttons.** These buttons hide the window, enlarge it to fill the whole screen, and close it, respectively (more details on these shortly).
- **Menu bar.** Contains items that you can click to make choices in a program.
- **Scroll bar.** Lets you scroll the contents of the window to see information that is currently out of view.
- **Borders and corners.** You can drag these with your mouse pointer to change the size of the window.

Other windows might have additional buttons, boxes, or bars. But they'll usually have the basic parts, too.

Moving a window

To move a window, point to its title bar with the mouse pointer . Then drag the window to the location that you want. (Dragging means pointing to an item, holding down the mouse button, moving the item with the pointer, and then releasing the mouse button.)

Changing the size of a window

- To make a window fill the entire screen, click its Maximize button  or double-click the window's title bar.
- To return a maximized window to its former size, click its Restore button  (this appears in place of the Maximize button). Or, double-click the window's title bar.
- To resize a window (make it smaller or bigger), point to any of the window's borders or corners. When the mouse pointer changes to a two-headed arrow (see picture below), drag the border or corner to shrink or enlarge the window.



Drag a window's border or corner to resize it


A window that is maximized cannot be resized. You must restore it to its previous size first.

Note

- Although most windows can be maximized and resized, there are some windows that are fixed in size, such as dialog boxes.

Hiding a window


Hiding a window is called minimizing it. If you want to get a window out of the way temporarily without closing it, minimize it.

To minimize a window, click its Minimize button . The window disappears from the desktop and is visible only as a button on the taskbar, the long horizontal bar at the bottom of your screen.



To make a minimized window appear again on the desktop, click its taskbar button. The window appears exactly as it did before you minimized it.

Closing a window

Closing a window removes it from the desktop and taskbar. If you're done with a program or document and don't need to return to it right away, close it. To close a window, click its Close button .

Note

- If you close a document without saving any changes you made, a message appears that gives you the option to save your changes.

Switching between windows

If you open more than one program or document, your desktop can quickly become cluttered with windows. Keeping track of which windows you have open isn't always easy, because some windows might partially or completely cover others.

Using the taskbar. The taskbar provides a way to organize all of your windows. Each window has a corresponding button on the taskbar. To switch to another window, just click its taskbar button. The window appears in front of all other windows, becoming the active window—the one you're currently working in.

To easily identify a window, point to its taskbar button. When you point to a taskbar button, you'll see a thumbnail-sized preview of the window, whether the content of the window is a document, a photo, or even a running video. This preview is especially useful if you can't identify a window by its title alone.




Note

Pointing to a window's taskbar button displays a preview of the window

- To see thumbnail previews, your computer must support Aero. This might be disabled on CSU computers.

Using Alt+Tab. You can switch to the previous window by pressing Alt+Tab, or cycle through all open windows and the desktop by holding down Alt and repeatedly pressing Tab. Release Alt to show the selected window.

Using Aero Flip 3D. Aero Flip 3D arranges your windows in a three-dimensional stack that you can quickly flip through. To use Flip 3D:

1. Hold down the Windows logo key  and press Tab to open Flip 3D.
2. While holding down the Windows logo key, press Tab repeatedly or rotate the mouse wheel to cycle through open windows. You can also press Right Arrow or Down Arrow to cycle forward one window, or press Left Arrow or Up Arrow to cycle backward one window.
3. Release the Windows logo key to display the front most window in the stack. Or, click any part of any window in the stack to display that window.



Aero Flip 3D

- Flip 3D is part of the Aero desktop experience. If your computer doesn't support Aero, you can view the open programs and windows on your computer by pressing Alt+Tab. To cycle through the open windows, you can press the Tab key, press the arrow keys, or use your mouse.

Arranging windows automatically

Now that you know how to move and resize windows, you can arrange them however you like on your desktop. You can also have Windows automatically arrange them in one of three ways: cascading, vertically stacked, or side by side.



Arrange windows in a cascade (left), vertical stack (center), or side-by-side pattern (right)

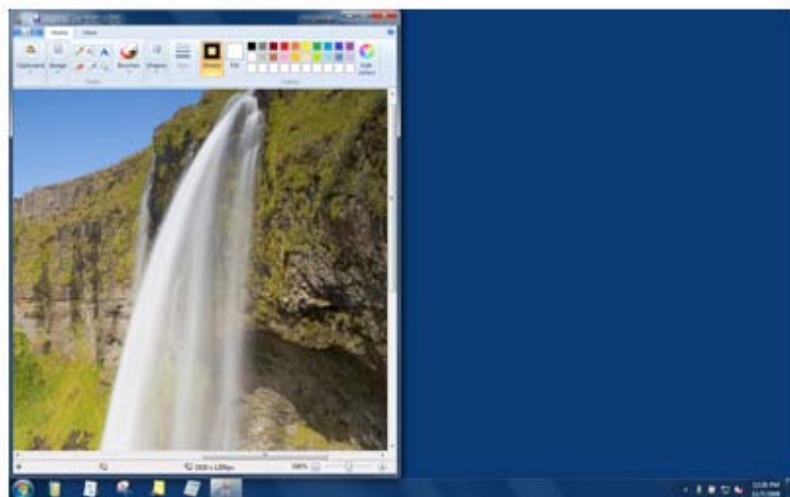
To choose one of these options, open some windows on your desktop, then right-click an empty area of the taskbar and click Cascade windows, Show windows stacked, or Show windows side by side.

Arranging windows using Snap

Snap will automatically resize your windows when you move, or snap, them to the edge of the screen. You can use Snap to arrange windows side by side, expand windows vertically, or maximize a window.


To arrange windows side by side

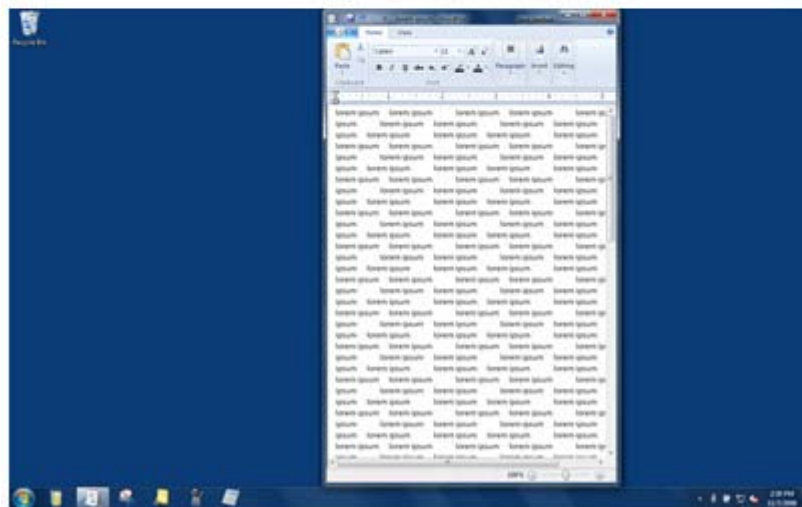
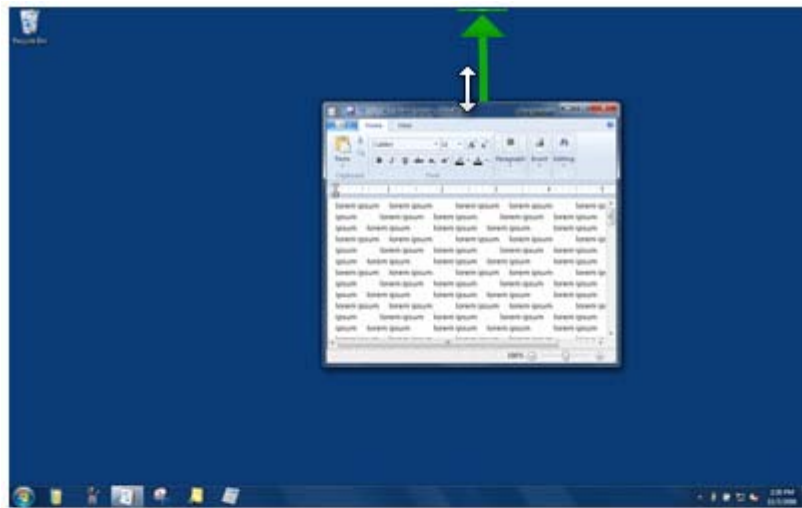
1. Drag the title bar of a window to the left or right side of the screen until an outline of the expanded window appears.
2. Release the mouse to expand the window.
3. Repeat steps 1 and 2 with another window to arrange the windows side by side.



Drag a window to the side of the desktop to expand it to half of the screen

To expand a window vertically

1. Point to the top or bottom edge of an open window until the pointer changes into a double-headed arrow .
2. Drag the edge of the window to the top or bottom of the screen to expand the window to the entire height of the desktop. The width of the window doesn't change.

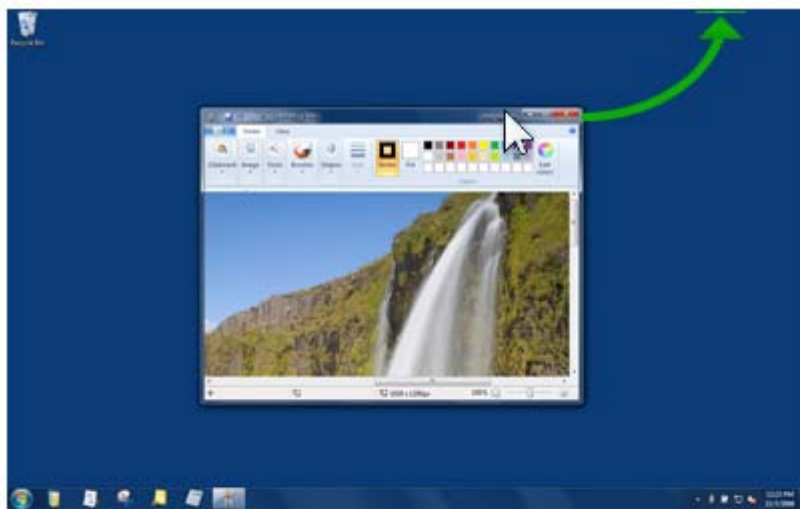


Drag the top or bottom of a window to expand it vertically

To maximize a window

1. Drag the title bar of the window to the top of the screen. The window's outline expands to fill the screen.

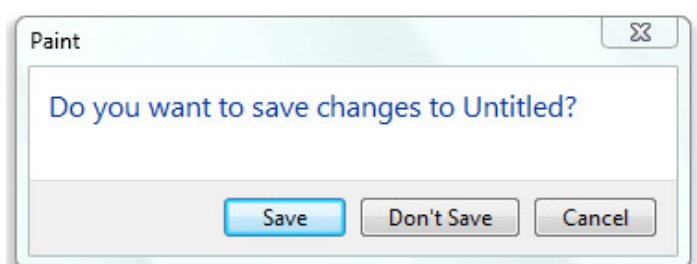
2. Release the window to expand it to fill the entire desktop.



Drag a window to the top of the desktop to fully expand it

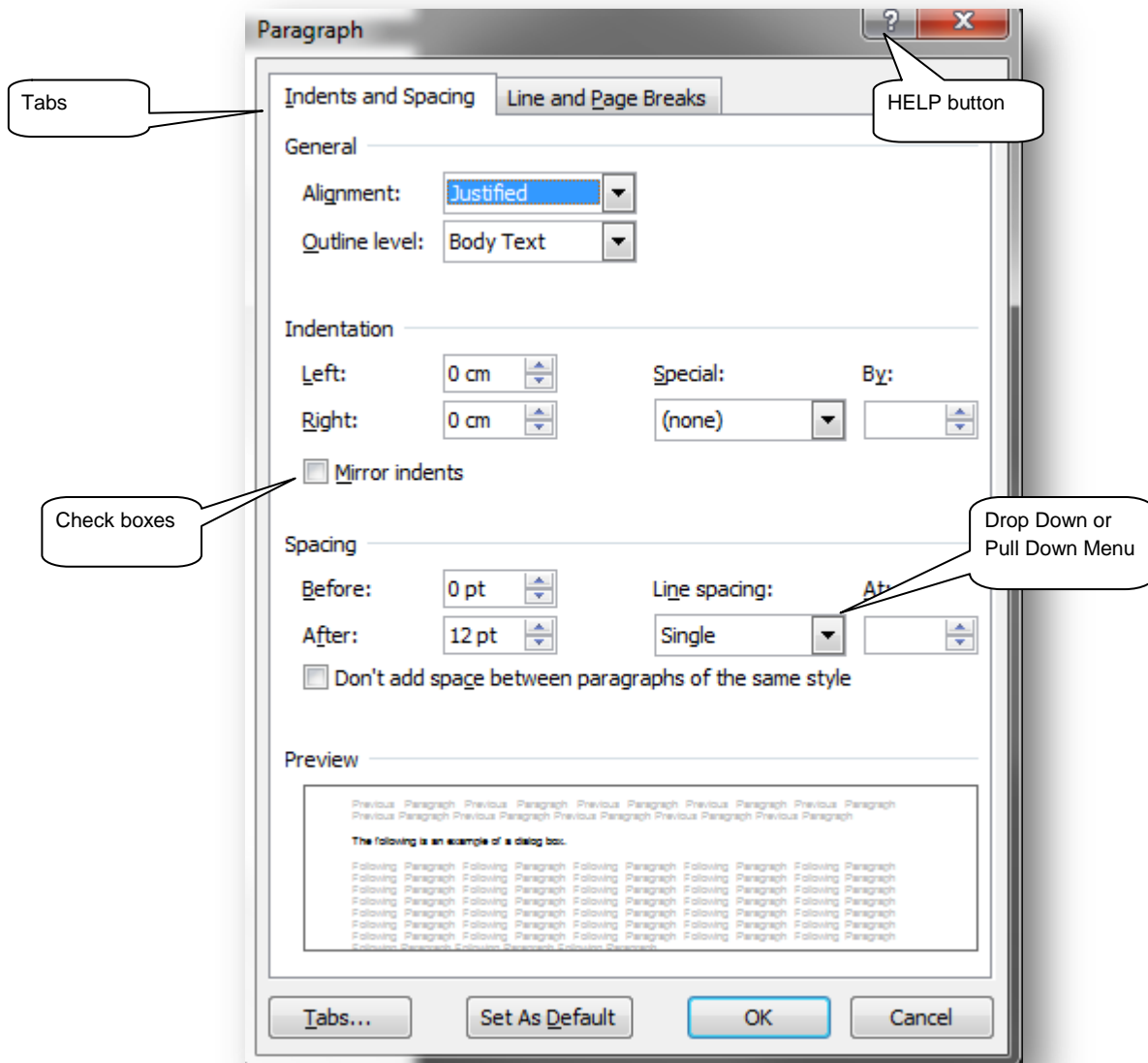
Dialog Boxes

DIALOG BOXES are special windows where you are asked to give details and select options. The choices you make are then sent as commands to the software you are using. DIALOG BOXES vary depending on the task requested as well as the application, however they do have several items in common.



A dialog box appears if you exit a program without saving your work

The following is an example of a DIALOG BOX.



Dialog boxes vary in appearance but some typical options and their uses are:

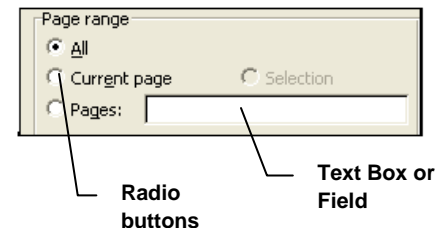
Check boxes – (see figure above) are selected if there is a tick in them. Clicking in the check box will select it, clicking a second time will deselect. You can have as many check boxes selected as you want or need.

Tabs – allow several dialog boxes to be in the one area. To change dialog boxes click on a Tab with the mouse or use CTRL + TAB on the keyboard.

Drop Down or Pull Down Menu – has a downward pointing arrow next to it. By clicking on this arrow, a list appears. When the list appears, make your selection by clicking on it, the drop down menu will then close and your choice will show in the field.

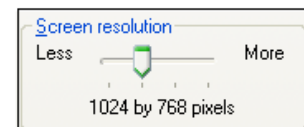
Help Button – is a handy help tool. It is located next to the CLOSE button on the title bar. If you aren't sure of what an option does, click on this icon with the mouse then click on the item you need more information about. A help window will open. The keyboard shortcut is SHIFT + F1.

Radio Buttons – clicking in a radio button selects it. It is a choice button and only one in the series can be selected. When you select a different radio button, the original is deselected.



Field or Text Box – is an area where you have to type information. For example, if you chose the radio button next to PAGES, you would type in the page numbers required in the field provided for that purpose.

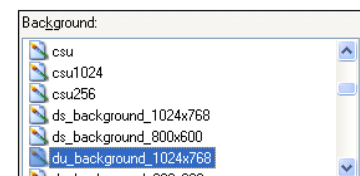
Slider – is a button you click and drag either to left or right to change a setting. Dragging to left decreases the value while dragging to the right increases the value.



Spinner – looks like miniature scroll bars. Clicking on the up arrow increases the value in the field, clicking on the down arrow decreases the value. You can also type in the value rather than using the spinners.

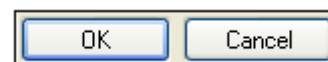


List Boxes – are lists of items in a box. If the list is too long to see, scroll bars are provided to enable you to navigate the list. Clicking on an item with the mouse selects that item.



Command Buttons

When you click on or accept a Command button, a command is passed on to the software you are using. Typical examples of command buttons are as shown in the screenshot at the right:



OK – Used to accept any changes you have made to a dialog box.

CANCEL – Cancels any changes you have made and returns you to the main window of the software you are using.

Notice that the emphasis around the OK button is darker. This means this button is in focus and if you use ENTER on the keyboard to accept a command instead of clicking with the mouse, this is the button that will take effect.

Buttons with ellipses after the name, such as CUSTOMIZE DESKTOP above, lead to another sub-menu when they are clicked on.

Buttons that are greyed out such as APPLY in the above example, are not available at the current time. In the example above nothing had been changed in the dialog box and therefore there was nothing to Apply.

Shortcuts

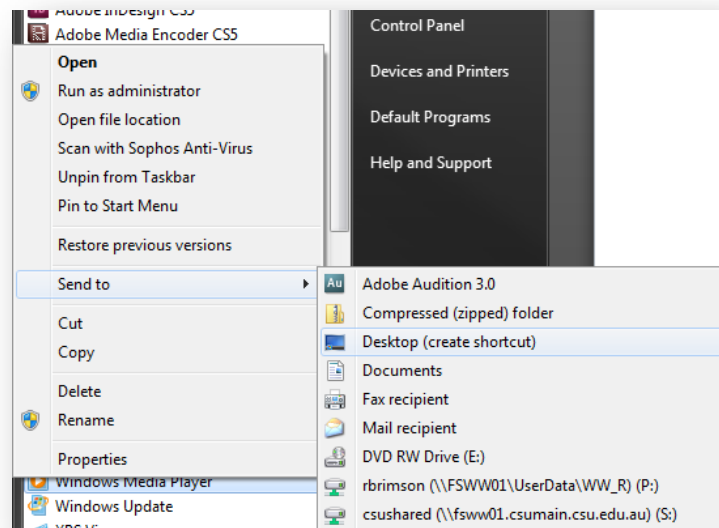
On your desktop there are many icons such as the RECYCLE BIN and MY COMPUTER. Double clicking on these icons opens the program or folder. You can create your own icons on the desktop to enable faster access of programs, folders, documents, printers etc. These are called SHORTCUTS. A SHORTCUT can be a program, document, folder or printer. These SHORTCUTS are then accessed the same way as other icons, by double clicking on them.

You can tell if an icon is a SHORTCUT or not by its appearance. If it has a little black arrow on the icon, then it is a SHORTCUT. This is important to know because if you delete one of these shortcuts, you will not hurt the original folder, document, program or printer, only the shortcut that gets to it.

There are a number of ways in which you can create a SHORTCUT on your desktop. We will be looking at how to create a SHORTCUT from the START menu and how to create one from the desktop. You will learn another way in the FILE MANAGEMENT section of this Learner Guide.

Creating Shortcuts Using START menu

1. Click on the START button
2. Move your mouse over either PROGRAMS to create a shortcut to a program, or DOCUMENTS to create a shortcut to a document.



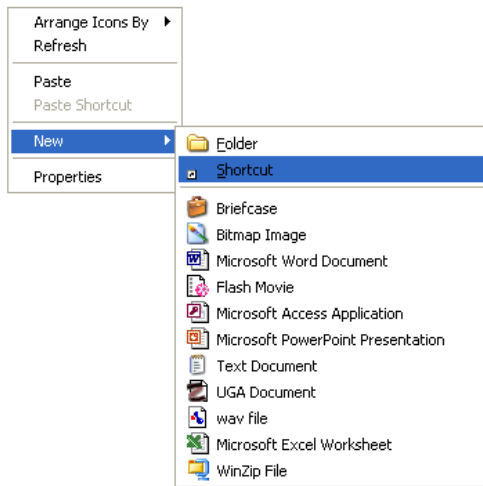
3. Right click on the file or program name and select the 'SEND TO' OPTION
4. Select DESKTOP (CREATE SHORTCUT)
5. The shortcut will then be created on your desktop

NOTE: If you are unable to Right Mouse click on any program or document in the START menu (no shortcut menu appears when you right mouse click), you may have to enable dragging and dropping.

1. Go to the START menu properties dialog box (right mouse click on the START button and select PROPERTIES from the shortcut menu).
2. Make sure the START menu tab is at the forefront, locate and click on the CUSTOMISE button.
3. In the CUSTOMIZE CLASSIC START MENU dialog box, make sure the ENABLE DRAGGING AND DROPPING option is ticked (click on it if it isn't, a tick should appear).
4. Click on OK twice to return to the desktop.

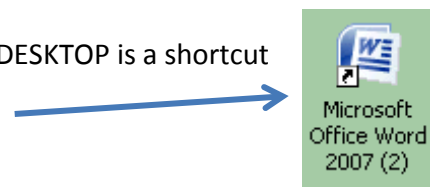
Creating a Shortcut from the Desktop

1. Right mouse click on an empty part of the desktop, click on NEW
2. Click on SHORTCUT



3. In the dialog box that appears, navigate to the file that you want by clicking on the BROWSE button
4. When you have located the file you want to create a shortcut to, select the file and click on OK.
5. Click on NEXT
6. Type in the name of your shortcut and click on OK
7. Your shortcut will now appear on the desktop.

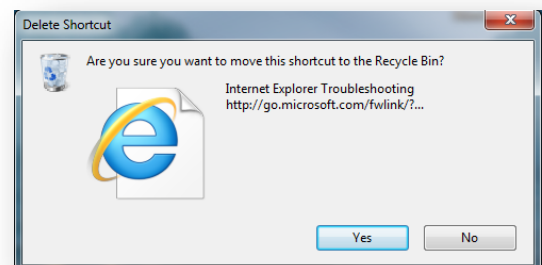
NOTE: Remember - you can always tell whether an icon on the DESKTOP is a shortcut because a little arrow appears beneath the icon



Deleting a Shortcut

To delete a shortcut from the desktop, click and drag the icon to the RECYCLE BIN, release the mouse. This does not delete the file, folder or program the shortcut represents, it only removes the shortcut from the desktop.

You can also click on the Shortcut icon once with the mouse to select it, then use the DELETE key on the keyboard. Using this method you will be asked to confirm the deletion, click on the YES button.



Arranging Icons on the Desktop

Occasionally you will want to tidy the desktop up – perhaps everything needs to be alphabetical order, or you want to put an icon in a different location (by dragging and dropping it). The different options for arranging icons are by name, size, type and when last modified.

To access these options, right mouse click on a free spot anywhere on the desktop. When the shortcut menu appears, select ARRANGE ICONS BY, then select your preference.

If you select AUTOARRANGE from these options, icons will automatically line themselves up in columns at the left of your screen, even if you drag one out and drop it, it will 'bounce' back to the left of the desktop.

Changing the Icon

One way of customizing your icons on the desktop is to change the image or graphic used. To do this:

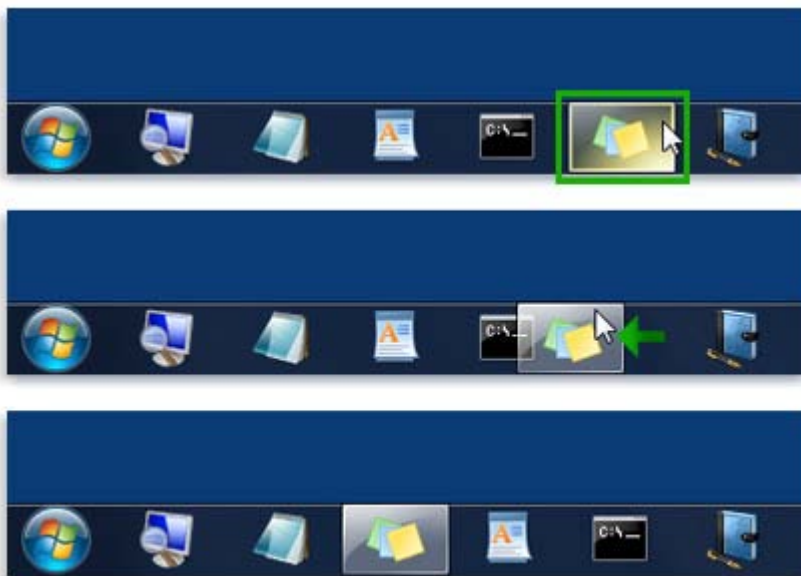
1. right mouse click on the icon then click on PROPERTIES in the shortcut menu;
2. select the CHANGE ICON button (located on the SHORTCUT tab);
3. if an error message comes up saying it can't find the icon, click on OK to cancel the message;
4. you will now be able to choose from a selection of default icons. When you have selected an icon, click on OK. Click on OK again to close the PROPERTIES dialog box.

Changing the size of the icons

Click and hold down the Ctrl key and then use your scroll wheel on your mouse to resize the icons.

Rearrange icons on the taskbar

You can rearrange and organize program icons on the taskbar, including pinned programs and running programs that aren't pinned, so they appear in the order you prefer.



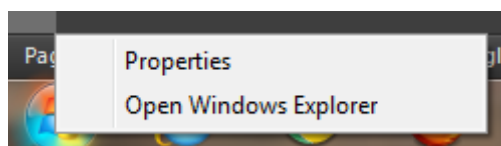
Drag an icon to a new position on the taskbar

File Management

On your computer there are many programs (applications). These applications have many files, each of which have instructions on how the application should work. In addition to all these files, there are the personal files that users create such as reports, letters, budgets, accounts etc. To make the best use of your computer you must know how to find and organise these files. WINDOWS EXPLORER is one area where you can view the file structure of your computer.

You can access WINDOWS EXPLORER a number of ways. The most common ways are:

1. Right click on the START Menu and select OPEN Windows EXPLORER;



OR

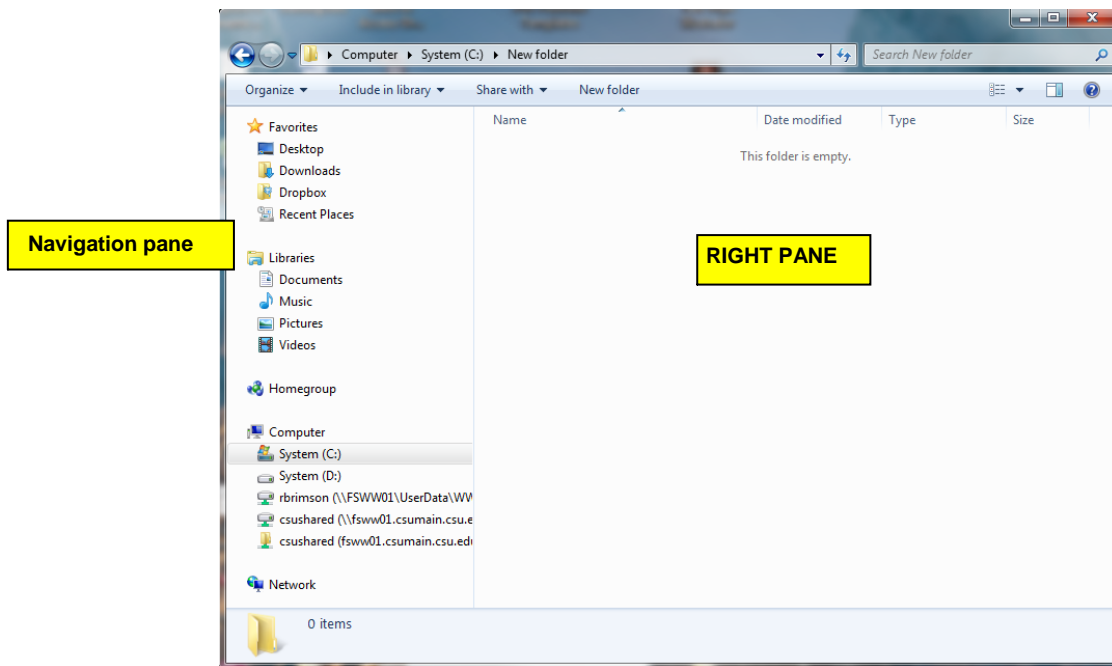


2. Click on the WINDOWS EXPLORER icon on the TASK BAR;


OR


3. Click on the START button, go to PROGRAMS, ACCESSORIES and select WINDOWS EXPLORER from the list of accessories, (for your convenience, CSU has also set up a Windows Explorer icon at the top of the START menu).


When you open up WINDOWS EXPLORER, you will see the following window:





One of the things WINDOWS EXPLORER will show is the different data storage areas available to save your files. These data storage areas are known as DRIVES. In the FOLDER LIST you will see:


 **System (C:)** This is known as a hard drive and is inside your computer. This drive is the area where all your program software is installed e.g. Microsoft Word, Excel etc

 **Storage (D:)** This is another hard drive in your computer into which you can save data

 **CD Drive (E:)** This is a CD drive where you are able to read CD data disks and listen to audio disks. You cannot save data to this drive without a special CD drive (CD burner).



 **Removable Disk (F:)** If you plug in a USB drive (sometimes known as a thumb or flash drive), Windows XP will recognise the addition and automatically give the drive a letter of its own – usually the next available letter that isn't being used by another drive.

 **sdixon on 'fsba02\userdata\ba\home' (P:)** The P: drive is your Personal or Private drive where you can save private and confidential work documents. It is an area that has been put aside on one of the university file servers and cannot be accessed by staff other than yourself. It is easy to determine as it starts with your username e.g. sdixon. This is a network drive.

 csushared on 'fsba01.mit.csu.edu.au' (S:) The S: drive is the Shared drive and is the recognised area on one of the University file servers where staff can save documents. This drive is used within CSU to share documents with other staff members. This is another network drive.

The P: and S: drives are secure and are backed up each night. Files can be restored from a backup tape. Because of this we suggest you save your files to the P: or S: drive rather than the C: or D: drive. You cannot get data from the C: or D: drive when there is a malfunction.

NOTE: If you do not see the P: or S: drive in the folder list, you may not have connected successfully to the network and may need to restart your computer. Refer to the section on SHUTTING DOWN YOUR COMPUTER OR LOGGING OFF on Page 42.

The shortcut key, and the quickest way of opening Windows Explorer is  + E. (The  key is next to the CTRL key on your keyboard).

Navigating within Windows Explorer

You can use the navigation pane (the left pane) to find files and folders. You can also move or copy items directly to a destination in the navigation pane.

If you don't see the navigation pane on the left side of an open window, click Organize, point to Layout, and then click Navigation pane to display it.

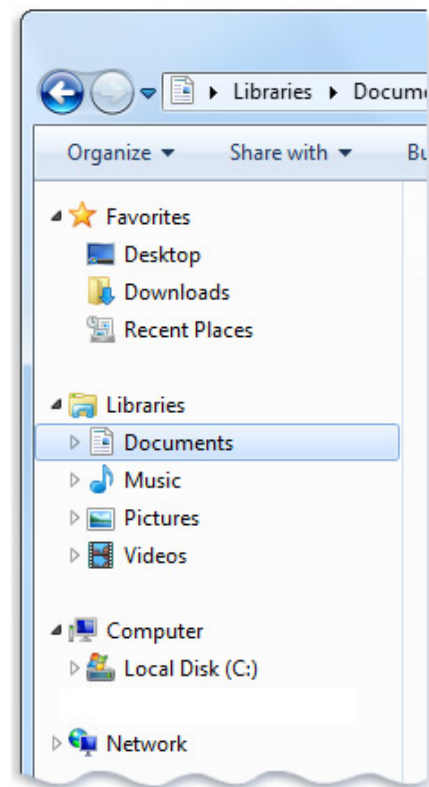
Use libraries to find files

Libraries let you access folders from various locations, such as your computer or an external hard drive.

The navigation pane is the easiest place to access libraries. Click a library to open it, and the content from all the folders that are included in your library appears in the file list.

Here are some other things you can do with libraries using the navigation pane:

- To create a new library, right-click Libraries, point to New, and then click Library.
- To move or copy files from the file list to a library's default save location, drag the files to the library in the navigation pane. If the files are on the same hard disk as the library's default save location, they'll be moved. If they're on a different hard disk, they'll be copied.
- To rename a library, right-click it, click Rename, type a new name, and then press Enter.
- To see the folders that have been included in a library, double-click the library name to expand it—the folders will be listed below the library.
- To remove a folder from a library, right-click the folder that you want to remove, and then click Remove location From library. This only removes the folder from the library—it doesn't delete the folder from its original location.

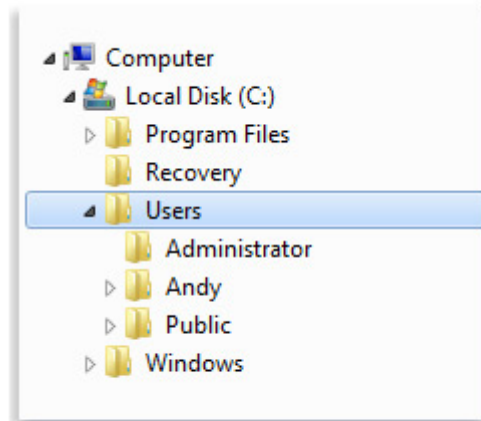


The navigation pane

- To hide a library, right-click the library, and then click Don't show in navigation pane. This is a good solution if you're running out of space in the navigation pane but don't want to delete a library.
- To show a hidden library, click Libraries, right-click the library in the file list, and then click Show in navigation pane.

Browse the Computer folder to find files

Using libraries is only one way to find files. You can also browse through folders and drives the classic way by expanding Computer in the navigation pane.



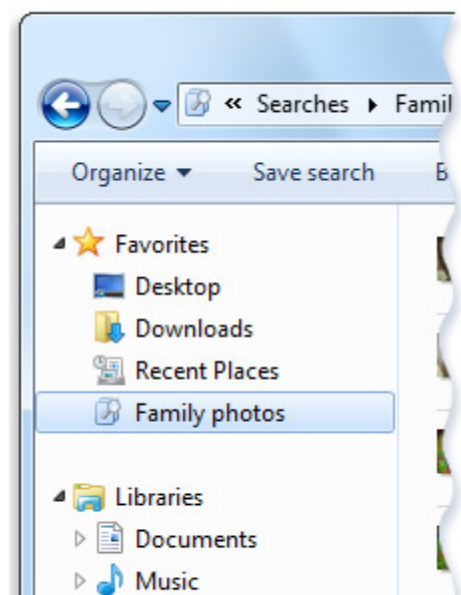
The Computer folder expanded

Here are some of the things you can do while browsing for files:

- To move or copy items from the file list to the navigation pane, drag the items to the folder that you want in the navigation pane. If an item is on the same hard disk as the folder, it will be moved. If it's on a different hard disk, it will be copied.
- To view the different hard disks or other storage devices connected to your computer, click Computer.
- To create a new folder, right-click the folder that you want to put it in, point to New, and then click Folder.
- To see your saved searches, double-click Computer, double-click your primary hard disk, double-click Users, double-click your user name, and then double-click Searches.

Customise your favorites

To add a folder, a saved search, a library, or even a drive as a favorite, drag it to the Favorites section in the navigation pane.



The Favorites list in the navigation pane

Here are some other ways to customize your favorites:

- To change the order of favorites, drag a favorite to a new position in the list.
- To restore the default favorites in the navigation pane, right-click Favorites, and then click Restore Favorite Links.
- To view the folder where your favorites are stored, click Favorites in the navigation pane. Favorites are stored as shortcuts.
- To remove a favorite, right-click the favorite, and then click Remove. This removes the favorite from the navigation pane—it doesn't delete the files or folders that the shortcut points to.

Note

- You can't add files or websites as favorites.


Change navigation pane settings

1. In an open window, click Organize, and then click Folder and search options.
2. In the Folder Options dialog box, click the General tab, and then do one or both of the following:
 - To show all the folders on your computer in the navigation pane, including your personal folder, select the Show all folders check box, and then click OK.
 - To automatically expand the navigation pane to the folder that's selected in the folder window, select the 'Automatically expand to current folder check box', and then click OK.

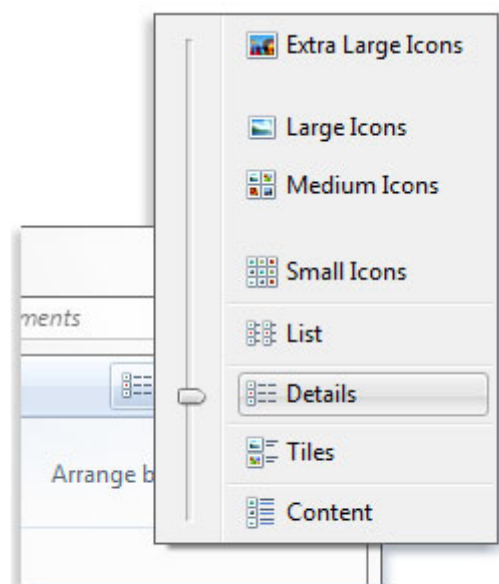
Change thumbnail size and file details

You can change the size and appearance of your files and folders by using the Views button located on the toolbar of every open folder.

To change how items appear in a folder


1. Open the folder that you want to change.
2. Click the arrow next to the Views button on the toolbar.

3. Click a view or move the slider to change the appearance of your files and folders.

You can move the slider to a specific view (such as to the Details view), or fine-tune the icon size by moving the slider to any point between Small Icons and Extra Large Icons.



The Views menu

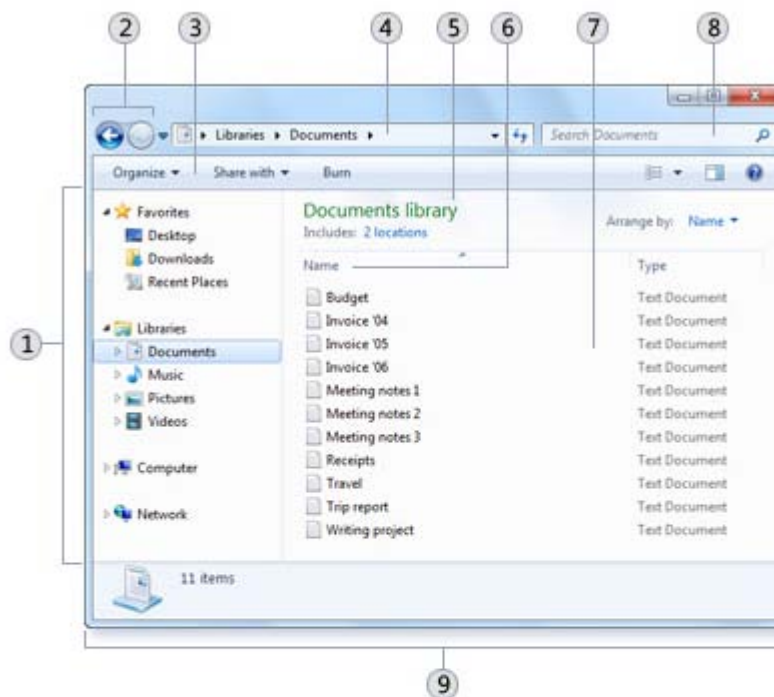
Tips

- To quickly switch between views, click the Views button  rather than the arrow next to it. Each time you click, the folder switches to one of these five views: List, Details, Tiles, Content, and Large Icons.

- When using libraries, you can arrange your files and folders in different ways by using the Arrange by list, as well as by using the Views button. When you make a change using the Arrange by list, and then change the view using the Views button, you can go back to the default view by clicking Clear changes in the Arrange by list.

Arranging Folders

When you open a folder or library, you see it in a window. The various parts of this window are designed to help you navigate around Windows or work with files, folders, and libraries more easily. Here's a typical window and each of its parts:





- | | |
|----------------------------|-------------------|
| ① Navigation pane | ⑥ Column headings |
| ② Back and Forward buttons | ⑦ File list |
| ③ Toolbar | ⑧ The search box |
| ④ Address bar | ⑨ Details pane |
| ⑤ Library pane | |

Navigation Pane

Use the navigation pane to access libraries, folders, saved searches, and even entire hard disks. Use the Favorites section to open your most commonly used folders and searches; use the Libraries section to access your libraries. You can also use the Computer folder to browse folders and subfolders.

Back and Forward Buttons

Use the Back button  and the Forward  button to navigate to other folders or libraries you've already opened without closing the current window. These buttons work together with the address bar; after you use the address bar to change folders, for example,

you can use the Back button to return to the previous folder.

Toolbar	Use the toolbar to perform common tasks, such as changing the appearance of your files and folders, burning files to a CD, or starting a digital picture slide show. The toolbar's buttons change to show only the tasks that are relevant. For example, if you click a picture file, the toolbar shows different buttons than it would if you clicked a music file.
Address bar	Use the address bar to navigate to a different folder or library or to go back to a previous one.
Library pane	The library pane appears only when you are in a library (such as the Documents library). Use the library pane to customize the library or to arrange the files by different properties.
Column headings	Use the column headings to change how the files in the file list are organized. For example, you can click the left side of a column heading to change the order the files and folders are displayed in, or you can click the right side to filter the files in different ways. (Note that column headings are available only in Details view. To learn how to switch to Details view, see 'Viewing and arranging files and folders' later in this topic.)
File list	This is where the contents of the current folder or library are displayed. If you type in the search box to find a file, only the files that match your current view (including files in subfolders) will appear.
The search box	Type a word or phrase in the search box to look for an item in the current folder or library. The search begins as soon as you begin typing—so if you type "B," for example, all the files with names starting with the letter B will appear in the file list.
Details pane	Use the details pane to see the most common properties associated with the selected file. File properties are information about a file, such as the author, the date you last changed the file, and any descriptive tags you might have added to the file.
Preview pane	Use the preview pane to see the contents of most files. If you select an e- mail message, text file, or picture, for example, you can see its contents without opening it in a program. If you don't see the preview pane, click the Preview pane button in the toolbar to turn it on.

Selecting Files and Folders

Before you move, copy or delete files and folders, they must be selected so that Windows (and the computer) knows which files and folders to work with.

In WINDOWS EXPLORER, you can select multiple files and folders by combining the use of the keyboard with the mouse

Single Selection – point your mouse over the item you want to select and click once. The item will be highlighted (usually blue highlight)

Scattered Selection – hold down the CTRL key and then click on each item you want to select

Block Selection – click on the first item you want to select, hold down the SHIFT key and then click the last item to be included in the selection

Selecting All – To select everything in a folder, use the EDIT MENU, SELECT ALL option, or the keyboard shortcut - CTRL+A

Working with Folders

Accessing Folders and Drives

To access your different drives and folders you can either, double click on “My Computer” and then select the relevant drive where your folders reside. Or single click the “Windows Explorer” icon on the task bar



to navigate to your folder.

Creating New Folders

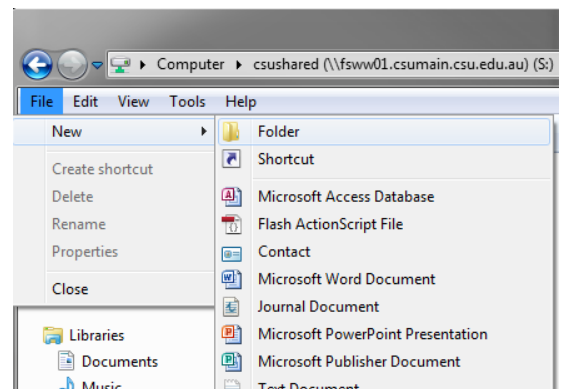
All users have been given the ability to create folders in their P: Personal drive, however only the Share Administrators have access to create folders on the S: Shared drive. It is important that you are in the correct drive and folder before you create a new one. When you create a new folder it will be created within the active folder (the folder which is currently open).

The names you give Folders should be descriptive, and not too long. It can include letters and numbers but should not include special characters such as full stops, exclamation marks, asterisks, back or forward slashes etc). (.!/*)

There are two ways in which you can create a new folder:

1. Locate and select the folder on the drive where you want to create a new folder. The folder must be selected before continuing (if you aren't sure, look at the yellow icon representing a manila folder, this must be open);
2. Click on FILE menu, select NEW, then select FOLDER;

NOTE: If you cannot see the menu bar, click Organize, layout, and select Menu bar.



3. Type in the folder name and press ENTER TO FINALISE (YOU CAN ALSO CLICK AWAY FROM THE NEW FOLDER, OUTSIDE ITS SURROUNDING RECTANGLE TO FINALISE).

OR

1. Locate and select the folder on the drive where you want to create a new folder;
2. Right click the mouse in the RIGHT PANE;
3. Select NEW from the shortcut menu, then click on FOLDER;
4. Type in the folder name and press ENTER OR CLICK AWAY FROM THE SURROUNDING RECTANGLE.

THE SECOND WAY IS TO NAVIGATE TO THE PLACE WHERE YOU WANT THE FOLDER AND RIGHT CLICK IN THE RIGHT HAND PANE AND SELECT NEW AND THEN FOLDER.

Working with Files

Files and Path names

Files are documents which have been created using different software applications e.g. a letter you may have created in Microsoft Word or a spread sheet in Microsoft Excel etc. The programs you use (Word, Excel etc) are also made up of many (sometimes hundreds) of files, each having instructions on how the program should work.

A filename consists of a descriptive name to describe the contents and a three letter file extension which follows the name you have given the file. This extension indicates the type of application used to create the document. Some common file extensions are:

- .doc - Microsoft Word files
- .xls - Microsoft Excel files
- .pdf - Adobe Acrobat files
- .ppt - Microsoft PowerPoint files

These extensions are automatically added to your filename when you save your file. They are separated from the name you give the file by a full stop (period), therefore you should not use full stops when you name a file as the program may think you are trying to add your own extension.

As there are so many files on your computer, a filing system must be maintained to keep some sort of order. For example, if you keep all your letters in a folder called LETTERS, then you will be able to locate them faster. Similarly budgets and financial files could be kept in a folder called ACCOUNTS. Files are kept separate from one another by keeping them in folders, folders are located in drives (either hard drives, network drives, diskettes, CDs, thumb drives etc).

All files have a path name. This gives you (and the computer) the exact details of which drive and which folder(s) the file(s) are located in. A path name may be as simple as C:\ or it can be many characters long. A path name starts with the drive the file is on, it is then followed by the folder and any subfolders where the file is stored. Each bit of information is separated with a backslash (\). For example the path name **P:\data\personal\timesheet.xls** means that a file called TIMESHEET.XLS is stored on your P: drive under the folder named DATA and then under the sub folder named PERSONAL. It is important that you become familiar with path names.

Opening Files

The most common way of opening a file from Windows Explorer is to double click on the filename. It will open within its original application (i.e. Microsoft Word, Excel etc).

RENAMING, DELETING, MOVING AND COPYING FILES AND FOLDERS

Renaming Files and Folders

There are a number of ways to rename files and folders. You can rename by using the FILE menu, left mouse button or right mouse button.

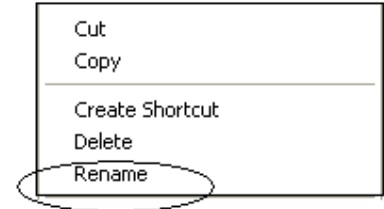
Method 1 - Using the FILE Menu

1. Select the file or folder you wish to rename;
2. Click on the FILE menu and select RENAME;

3. Type in the new name. NOTE: If you are renaming a file you must keep the same file extension (e.g. “.doc”) as it had, or the file will no longer be associated with the program that created it;
4. To FINALISE THE RENAMING OPERATION press ENTER OR CLICK AWAY FROM THE RECTANGLE THAT SURROUNDS THE FILE OR FOLDER NAME.

Method 2 – Using the Right Mouse Button

1. Select the file or folder you wish to rename;
2. Click the right mouse button while still pointing to the file;
3. Select RENAME from the shortcut menu;
4. Type in the new name (if renaming a file, remember to include the file extension (e.g. “.doc”));
5. To FINALISE THE RENAMING OPERATION press ENTER OR CLICK AWAY FROM THE RECTANGLE THAT SURROUNDS THE FILE OR FOLDER NAME.



Method 3 – Using the Left Mouse Button

1. Select the file or folder you wish to rename;
2. Wait a moment then click again (not in quick succession like a double click). A surrounding rectangle will appear around the name;
3. Type in the new name (if renaming a file, remember to include the file extension (e.g. “.doc”));
4. To FINALISE THE RENAMING OPERATION press ENTER OR CLICK AWAY FROM THE RECTANGLE THAT SURROUNDS THE FILE OR FOLDER NAME.

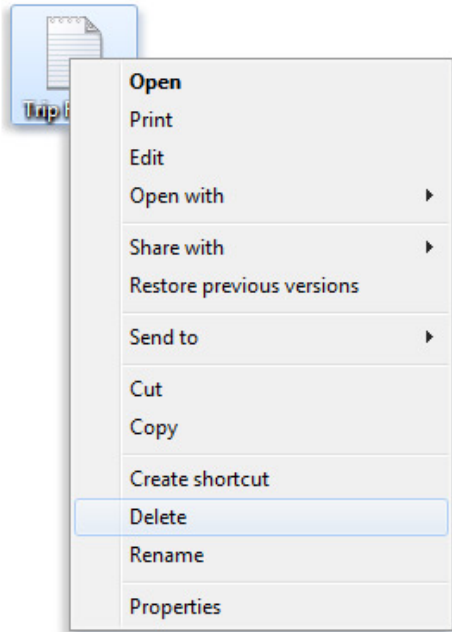
Deleting Files and Folders

When you delete a folder, the folder and its entire contents (any files or sub-folders) will also be deleted. When you delete a file, the whole file and its contents are deleted.

If you delete a file or folder from the C: or D: drives (your local hard drives), they will go into your RECYCLE BIN WHICH MEANS YOU HAVE A CHANCE OF RECOVERING THEM. If you delete a file or folder from any other drive, including network drives, the A: drive or thumb drives, they are permanently deleted.

To delete a file or folder:

- Right-click the file or folder that you want to delete, and then click Delete.



The Delete command

NOTE: To permanently delete a file or folder (i.e. to avoid sending a file or folder to the Recycle Bin), hold down the **SHIFT** key, press delete on the keyboard. As previously mentioned, files and folders from the network drives do not go to the Recycle Bin. If you accidentally delete a file from one of the network drives, you may be able to log a job with the Service Desk to restore a copy from the previous night's backup. Files and folders from diskettes, thumb drives etc. cannot be recovered.

Moving Files and Folders

WINDOWS EXPLORER gives you the facility to move your files and folders to other areas if you need to. You can do this in a variety of ways.

Method 1 – Using CUT and PASTE

Cutting and pasting are typical Windows functions. Cutting means moving something (this can be a file or folder if working in Windows Explorer, or text, graphics, objects if actually working inside an application). Pasting is the action of bringing back the cut item in its new location. There are two different methods of cutting and pasting inside Windows Explorer and these are well worth learning as they are basically the same in every Windows program you work in.

1. To cut a file(s) or folder(s), first select the file(s) or folder(s) and then choose one of the following:
 - Click on the EDIT menu, select the CUT function;
 - Keyboard shortcut, CTRL + X;
 - Click on the selected item with the RIGHT mouse button and select "CUT" from the shortcut menu
2. To bring back the file(s) or folder(s) in the new location, navigate to the new location then paste using one of the following:
 - Click on the EDIT menu, select the PASTE function;
 - Keyboard shortcut, CTRL + V;

- In the position where you want the item to be pasted, click with the RIGHT mouse button and select “PASTE” from the shortcut menu.

Method 2 – Dragging and Dropping

1. In the right pane, select the file(s) or folder(s) you want to move;
2. Manipulate the FOLDER LIST on the left side of the Windows Explorer so that it shows the new location. Make sure you use the scroll bars and the + and – (collapse and expand buttons) to navigate, do not click on the names of the drives or folders as you will change to that drive or folder and lose your selection in the RIGHT pane;
3. Click and drag the selected file(s) or folder(s) from the RIGHT pane, over to the FOLDER LIST on the left. Release the mouse button when the target folder is highlighted (active);
4. Your file(s) or folder(s) will now appear in the new area

Copying Files and Folders

AS WELL AS MOVING FILES AND FOLDERS, WINDOWS EXPLORER can copy them, (just be aware you are not allowed to have two files or two folders called the same thing in the same location). There are a variety of ways you can choose to copy files and folders:

Method 1 – Using COPY and PASTE

Like cutting, copying is a typical Windows function. Copying does not damage or remove the selection being copied. To place the copy in a new location is known as pasting (and is done the same way as previously described). There are three different methods of copying in Windows Explorer and, as mentioned previously, these are well worth learning as they are basically the same in every Windows program you work in.

1. To copy file(s) or folder(s), first select the file(s) or folder(s) and then choose one of the following:
 - Click on the EDIT menu, select the COPY function;
 - Keyboard shortcut, CTRL + C;
 - Click on the selected item with the RIGHT mouse button and select “COPY” from the shortcut menu.
2. To place a copy of the file(s) or folder(s) in the new location, navigate to the new location then paste using one of the following:
 - Click on the EDIT menu, select the PASTE function;
 - Keyboard shortcut, CTRL + V;
 - In the position where you want the item to be pasted, click with the RIGHT mouse button and select “PASTE” from the shortcut menu.

Method 2– Dragging and Dropping

1. In the RIGHT pane, select the file(s) or folder(s) you want to copy
2. Manipulate the FOLDER LIST on the left side of the Windows Explorer so that it shows the new location. Make sure you use the scroll bars and the + and – (collapse and expand buttons) to navigate, do not click on the names of the drives or folders as you will change to that drive or folder and lose your selection in the RIGHT pane;

3. Hold down the CTRL key on the keyboard and at the same time, click and drag the selected file(s) and/or folder(s) over to the FOLDER LIST on the left, and drop it where you want to copy the file(s) and/or folder(s) to. Before dropping make sure the target folder is highlighted (active). Also make sure you release the mouse before you release the CTRL key when dropping.
4. Your file(s) and folder(s) will now appear in the new area

Folder and File Attributes

Files and folders have property sheets which display information such as size, location, and the date the file or folder was created. When you view the properties of a file or folder, you can also get information about the:

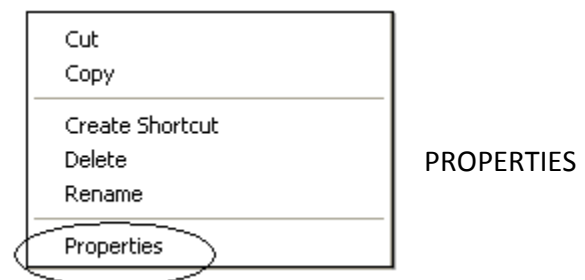
- Type of file;
- Size of file;
- Name of the program that opens the file;
- Last time the file was modified or accessed.

If looking at the properties of a folder:

- Number of files and subfolders contained it contains; and
- Space taken up by those files and subfolders

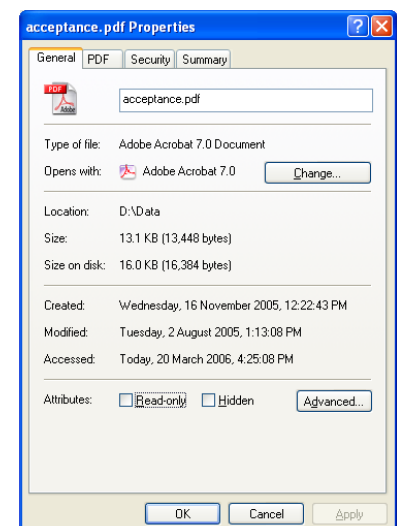
To determine the attributes of a file or folder:

1. Select the file or folder;
2. Right click on the file or folder;
3. Select Properties from the shortcut menu. The dialog box will open



The PROPERTIES dialog box gives you the following information:

- Type of File:** tells you what program your file was created in (e.g. Word)
- Opens with:** tells you what application (software) the file will open in
- Location:** the path name for the file
- Size:** the size of the file
- Size on disk:** how much room the file is taking in storage
- Created:** the date and time the file was originally created



- Modified:** the date and time the file was last modified
- Accessed:** the date and time the file was last accessed
- Hidden:** Usually hidden files are program or system files that should not be deleted or changed. Hidden files and folders will appear dimmed within WINDOWS EXPLORER to indicate they are not typical items.
- Read Only:** A read only file contains information you can read but not change, like a printed book. A read only file on your computer is a file you can open, read or print but not make any changes to.

Other Functions within Windows Explorer

Creating Shortcuts on the Desktop

Shortcuts to your most often used folders and files may be created and placed on the Desktop to help automate your work.

1. Select the file or folder that you wish to have as a shortcut on the Desktop;
2. Right click on the file or folder;
3. Select SEND TO from the shortcut menu, then select DESKTOP (CREATE SHORTCUT) FROM THE SUB-MENU;
4. A shortcut for the file or folder will now appear on your desktop and you can open it from the desktop in the same way as any other icon.

Restoring Deleted Files

When you delete folders and files from your local hard drives, they are moved to RECYCLE BIN and can be retrieved if desired. The RECYCLE BIN is a storage area used to store deleted files and folders. They will remain there until you empty the RECYCLE BIN. Once you have emptied the Recycle Bin it is not possible to retrieve deleted files.

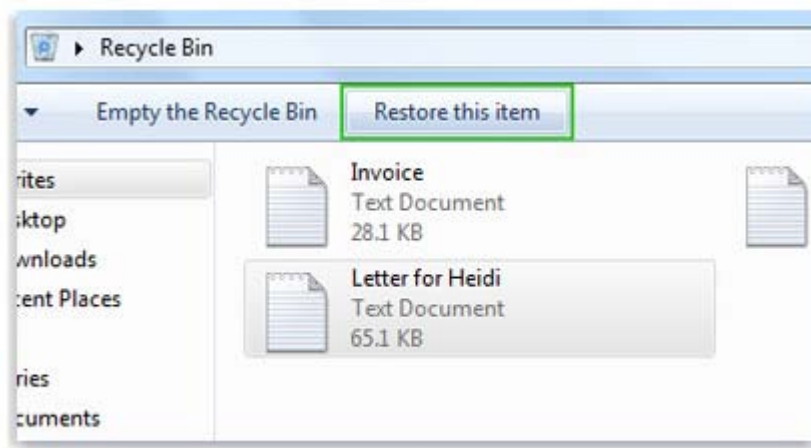


NOTE: Files and folders deleted from the network drives do not go to the RECYCLE BIN. If you need to restore a file that was on the P: or S: drives, you may be able to have them recovered from the overnight backups. Log a job with the Service Desk with the full details of the file name and location (see Page 6 for Service Desk contact details).

Recover files from the Recycle Bin

1. Open the recycle bin
2. Do one of the following:
 - To restore a file, click it, and then, on the toolbar, click Restore this item.
 - To restore all of the files, make sure that no files are selected, and then, on the toolbar, click Restore all items.

The files will be restored to their original locations on your computer.



Notes

Recovering an item from the Recycle Bin

- If you delete a file from a location not on your computer (such as a network folder), the file will be permanently deleted rather than stored in the Recycle Bin.

Emptying the Recycle Bin:

1. Select the RECYCLE BIN in the FOLDER LIST of WINDOWS EXPLORER;
2. Click on the FILE menu;
3. Select EMPTY RECYCLE BIN;
4. Click on YES to confirm.

Printing

Overview

A printer is a device that produces a paper copy of the documents on your computer. You can use a printer to produce letters, invoices, newsletters, reports, labels, and much more.

To print from your computer you select a printer to which you would like to send the file. There are two different ways that a printer can be connected to your computer, it can be a local printer or a Network printer.

A local printer is connected to your computer only and there will be a printer cable that runs from your computer to the printer. No-one else will have access to this printer unless they log on to your computer.

A network printer is connected to your computer via the file server and will usually sit in a room away from your computer. Other people within your department will also have access to the printer from their computer. There won't be a physical cable coming from your computer to the printer.

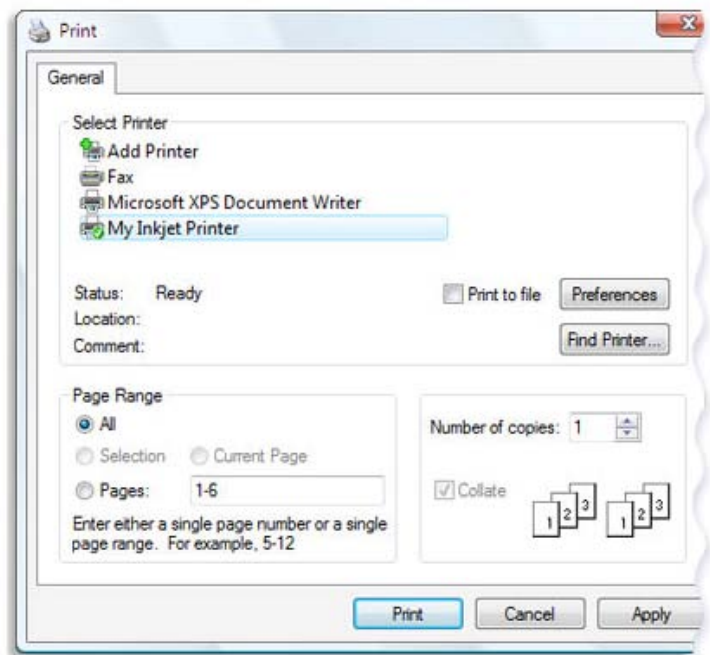
Most computers within the University are connected to network printers.

Printing a File

The quickest way to print a document or file is to print using Windows. You don't have to open any programs or change any settings.

- Right-click the file you want to print, and then click Print.

Doing so opens the Print dialog box. This is the place to change basic settings such as what printer to use or how many copies to print. (The dialog box you see might look different from the one shown here, depending on your software and printer.)



Print dialog box in WordPad

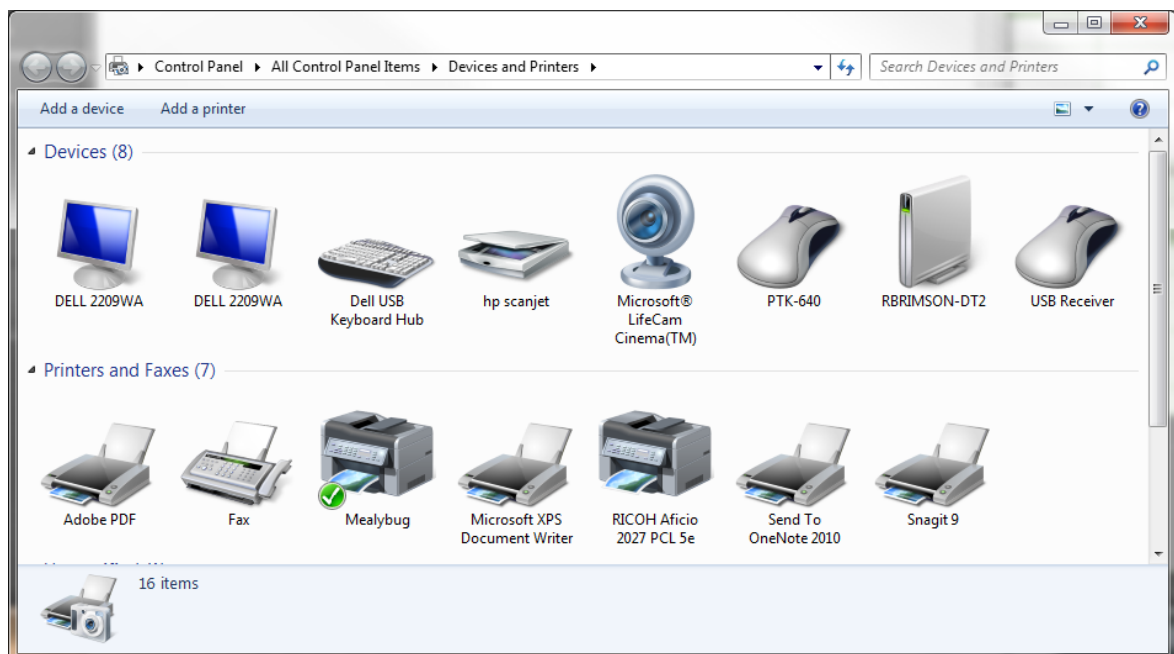
Changing your Default Printer

If your default printer is incorrect, you can change this through the PRINTERS AND FAXES Window.

To change your default printer:



1. Click on start button, then Devices and Printers
2. Right-click the printer you want to use, and then click Set as default printer. (You'll see a check mark on the printer's icon signifying that it's now your default printer.)



Notes

- A default printer doesn't have to be an actual physical device. Depending on your computer, you might have the option to send documents as faxes, or to save them as PDF or XPS files when you print. To learn more, see [Print to the Microsoft XPS Document Writer](#).

- You can change your default printer setting at any time.

Adding a new printer

Only under certain circumstances are you allowed to add a brand new local computer at the University (Administrative staff are not allowed to do this).

You can, however, add a network printer that is already on the system if you don't already have access to it.

Log a job with the Service Desk to organize installation; or

Use printer deployment page.

Navigate to the following page. My Csu > IT Services for staff > Printer Deployment > Select Campus > Select Building.

This will bring up a list of printers you are allowed access to.


Click on the "Install printer" and wait.

When its finished you will see a list of printers on your computer.

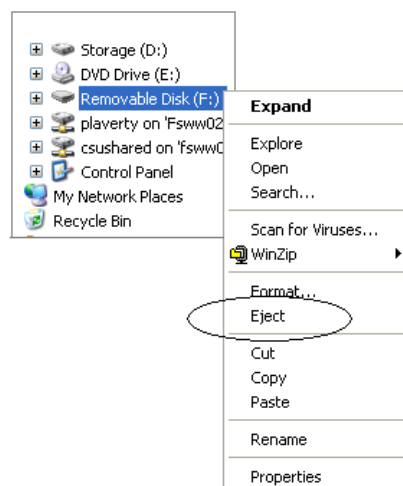
Shutting Down or Logging off a Computer

You SHUT DOWN your computer or LOG OFF when you have finished using it.

Before you can do either of these functions, any applications you have open must be closed. This is done by either:

- Clicking on the File menu within the application and then selecting EXIT (ALT + F4 is the keyboard shortcut for this function); or
- Click on the CLOSE button located on the top right hand side of the application. 

You should also remove any USB (thumb) drives from the computer. Open up Windows Explorer, locate the USB drive name in the FOLDER LIST. When you have located it, right mouse click on it and select EJECT from the shortcut menu. This will ensure that the drive is removed correctly without damaging any files it contains.



Log Off or Shut Down?

Once you have closed all open applications, you can either log off your computer or shut down. It will depend on whether someone else will be using your computer when you've finished as to which action you choose.

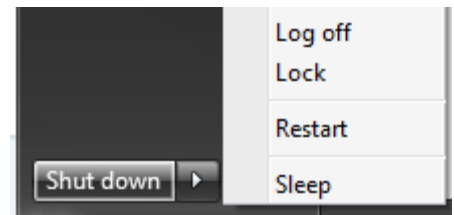
Log Off means that you log off as a User without turning the computer off. Someone else can then log on.

Shut Down means that you log off as a User and the computer is turned off at the same time. If you are leaving work for the day and no-one else will be using your computer, you will need to Shut Down your computer as this saves power.

Log Off

To log off from your computer:

1. Click on the START button;
2. Select LOG OFF (click the arrow next to Shut down);
3. If you have any open programs then you will be asked to close them down or to let Windows, Force them to shut down. You will lose any un-saved information if you do this.



Shut Down

To shut down your computer:

1. Click on the START button
2. Select SHUT DOWN
3. You will then see the SHUT DOWN WINDOWS dialog box
4. If you have any open programs then you will be asked to close them down or to let Windows, Force them to shut down. You will lose any un-saved information if you do this.

Restarting your Computer

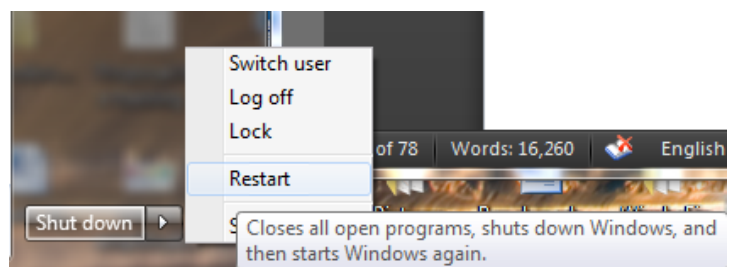
The RESTART command is occasionally used because:

- you do not have access to the network drives
- the Service Desk has asked you to restart your computer

Restarting your computer means that the computer logs you off the system, turns itself off and turns itself back on again so you can re-log on.

To restart your computer:

1. Follow Steps 1 – 3 of the SHUT DOWN instructions
2. Select RESTART from the drop down menu



3. Your computer will log you off, turn itself off and turn itself on again so you can re-log on.