

## ***Storage devices:***

RAM – (Random Access Memory) It is the working main memory of the computer. When a computer is running, the RAM is used for every simple thing that needs to be temporarily saved. RAM is volatile therefore if for a small number of milliseconds there is no electricity, RAM loses all the data. (Ex: Remembering the position of the mouse pointer).

ROM – (Read Only Memory) is a special type of memory which contains software to start the computer properly. It cannot be written or changed. It is only read to startup the computer.

Hard Disks – This device contains all the information of your computer. On it we can save, edit, delete and rename files, folders and programs. The Operating System, all programs and all your information on the computer is usually stored on the hard disk.

Diskettes – This disk is very small and very slow. Yet in the past it was the most common way to share information between computers.

CDs – CDs are nowadays the most common way to share programs and information. They contain a lot of data and many different types of CDs, including writable ones exist.

DVDs – These discs are very similar to CDs but contain much more data and can be read in a faster way.

USB drives – These drives (usually called Pen Drives) are very small in size and they store information on a microchip instead of a disc.

### Storage Units in a computer:

Name	Size	Approximate capacity
Bit	ON or OFF	Represents only 1 or 0
Byte (b)	8 bits	1 Character
Kilobyte (Kb)	1024 bytes	1000 characters (a long sentence)
Megabyte (Mb)	1024 Kb	A very big Word document
Gigabyte (Gb)	1024 Mb	One fourth a DVD video
Terabyte (Tb)	1024 Gb	Harddisk

Disk formatting – Before being able to use a Floppy disk or a Hard Disk we need to format it. In this way we prepare the disk for receiving data. Sometimes, while formatting we are also given the option to check out the disk surface for damage and errors.

## ***Software:***

Operating System - The operating system is a special type of program that loads automatically when you start your computer. The operating system allows us to use the advanced features of a modern computer without having to learn all the details of how the hardware works. It enables the computer to work properly. There are different types of operating systems ex: Windows, Linux, IBM (Virtualisation such as VirtualBox, Emulation such as WINE)

Application Program - Application programs are the programs that we use once the operating system has been loaded. It enables us to use the computer as we like. Ex: A Word Processor, Paint, Excel, Games etc. (Explorer & IE as an integral part of the OS, Google Documents on-line – in browser)

Word processor – A word processing program allows us to easily produce documents which at the end are going to be printed. Ex: MS Word, WordPerfect, Corel Word, OpenOffice Writer, Lotus Symphony

Spreadsheets - A spreadsheet program allows us to work out complex calculations in a fast way. In companies Excel can be used a company's income, expenditure and then calculate the balance while in schools Excel can be used to calculate final assessments of the students. Ex: MS Excel, Lotus 123, OpenOffice Spreadsheet

Databases - A database program allows us to gather information and then to search this information to extract just the information we require. Ex: MS Access, My SQL, Lotus Approach, Oracle

Presentation - A presentation program allows you to produce professional looking presentations, which can be viewed directly using a Video projector or printed out onto slides for use with an overhead projector.

Software Versions – New versions of software are issued to improve the previous software or to remove problems from the previous versions. Nowadays most updates can be done directly from the Internet. (New is not always better – case of Office 2007 experience)

GUI – Graphical User Interface - GUI is simply an additional part of the operating system that displays windows, buttons, drop down menus, and also enables you to use your

computer with a mouse. In this way all programs look similar and automatically they will be easier to learn and manage. Ex: Windows, Linux and IBM's OS/2. Non-GUI operating systems: DOS, Unix (work processing through GhostScript programming – similar to HTML but stricter)

## ***Systems Development***

This is a general term used to describe the way new software is created.

### *Systems Development Life-Cycle:*

Analysis - First, the needs of the computer users must be analyzed. This task is often performed by a professional Systems Analysts who will ask the users exactly what they would like the system to do.

Design – The Analysts draw up plans on how this can be implemented on a real, computer based, system.

Programming – The programmer will take the specifications from the Systems Analyst and then convert the designs into actual computer programs. At this point the program is tested frequently.

Testing & Implementation – After all the Testing is done, the new system is implemented in the real working environment. All users are introduced to the new system, and sometimes this involves an element of training.