



University Mohamed Kheider, Biskra

Faculty of Letters and Languages

Department of English

Class L3

Semester 1

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ICT COURSE

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1 COMPUTER SCIENCE DEFINITION

The science that deals with the theory and methods of processing information in digital computers, the design, and the applications of computers.

2 COMPUTER

A computer is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data. But for that it is necessary to provide the computer with the data to be processed and to tell it what to do with it. Data acquisition is done by input units and results retrieval is done by output units.



2.1 THE INPUT UNITS

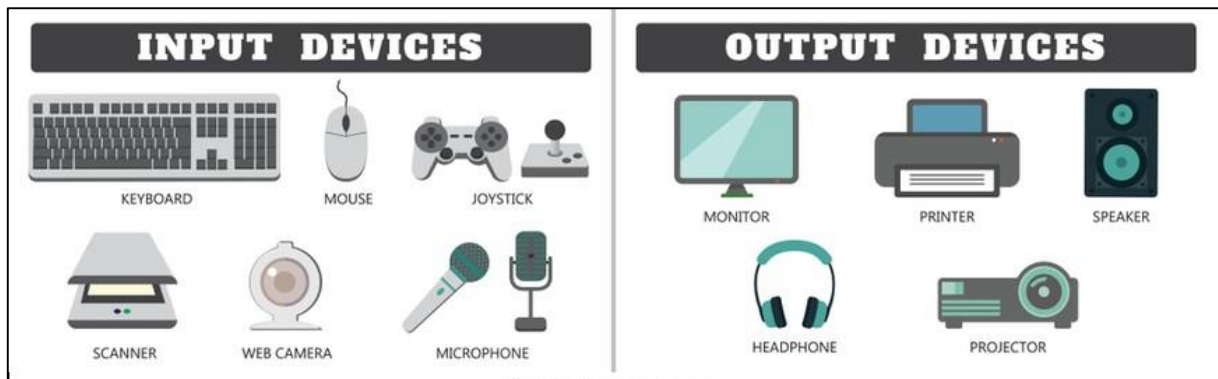
Which effectively provide the computer with the data to be processed:

- The keyboard for entering texts,
- The microphone for capturing sounds,
- The scanner for capturing images,
- Mouse for pointing.
- CD-ROM/ DVD drives or USB sticks, etc.

2.2 OUTPUT UNITS

Used to output information from the computer:

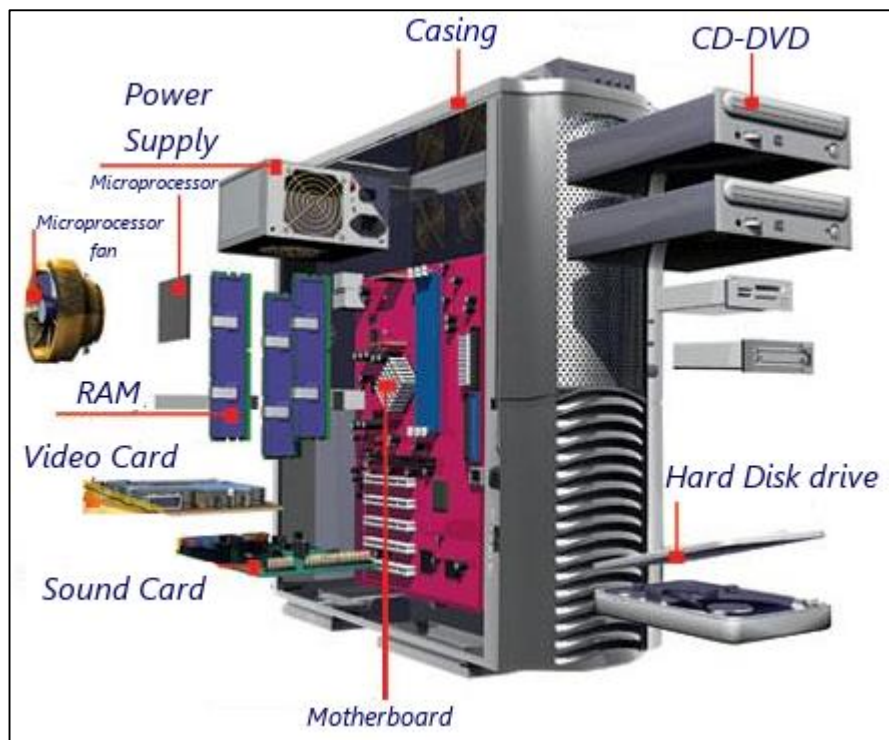
- The monitor,
- The printer,
- The speaker,
- CD-ROM drive or USB stick etc.



3 COMPUTER SYSTEM

A computer system is made up of two parts: hardware and software

3.1 HARDWARE



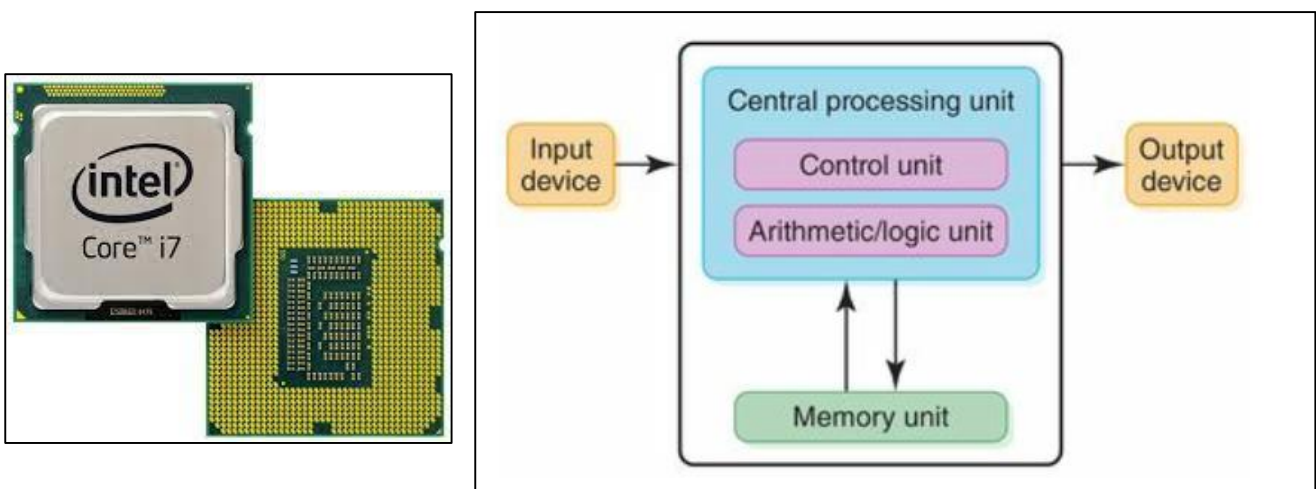
3.1.1 The central unit

Is the box containing all the electronic equipment allowing the computer to operate. The keyboard, the mouse, the screen are connected to it.

3.1.2 The motherboard

The motherboard is the large electronic board of the computer to which all the elements (microprocessor, RAM, hard disks, readers, peripherals, etc.) are connected to it. It manages all data exchanges between the processor, the memory and various peripherals.

3.1.3 Central Processing Unit (CPU)



The central processing unit or the microprocessor is the physical heart of the entire computer system. It is composed of:

- **Arithmetic and Logic Unit (ALU):** perform arithmetic operations (addition, multiplication, division, subtraction) and logical operations (comparing of data, and, or)
- **The control and command unit (CCU):** control, manage and organize the work of the CPU.

The microprocessor is characterized by:

- Its brand (Intel (Pentium, celeron, Core 2 duo), AMD (Athlon, Duron, etc))
- Its frequency (speed) in Hz (number of operations that the microprocessor can perform per second) it is today of the order of 3.2 GHz ie 3.2 billion cycles per second

3.1.4 Central memory (Main memory)

Memory is an organ which enables information to be recorded, stored and retrieved. There are two types:

- **RAM (Random Access Memory):** is a random access memory, accessible in reading and writing, used to temporarily store information, it is volatile because it loses its content when the computer is turned off, it is present in the form of small bars.
- **ROM (Read Only Memory):** is a read-only memory, permanent, accessible only in reading, It contains the manufacturer's programs (bios: Basic Input Output System) necessary to boot up the computer.



The memory is characterized by its capacity, it is measured in bytes (a byte represents a character)

The units of measurement of storage capacity are:

1 Kilobyte = 1024 bytes

1Megabyte = 1024KB

1Giga-byte = 1024MB

1Terabyte = 1024GB

3.1.5 Hard disk



The hard drive is the part of the computer that keeps and stores data permanently.

3.1.6 CD / DVD player

The CD-ROM drive (DVD drive) is used to read CD-ROMs (read DVD-ROMs and CD-ROMs)



3.1.7 The CD / DVD burner

A DVD burner can burn (write on CDs) CDs and DVDs but a CD burner will not necessarily burn DVDs.

3.1.8 Secondary memory

The secondary (or auxiliary) memories are peripherals that store and retrieve information in a durable way: the information is kept even when the computer is turned off, unlike what happens for the main memory (RAM).

Secondary memories generally have a larger storage capacity than main memories.



Among the most common secondary memories are hard disks, based on magnetic recording, CD/DVD-ROMs , using optical reading, and various types of magnetic tapes.

3.2 SOFTWARE

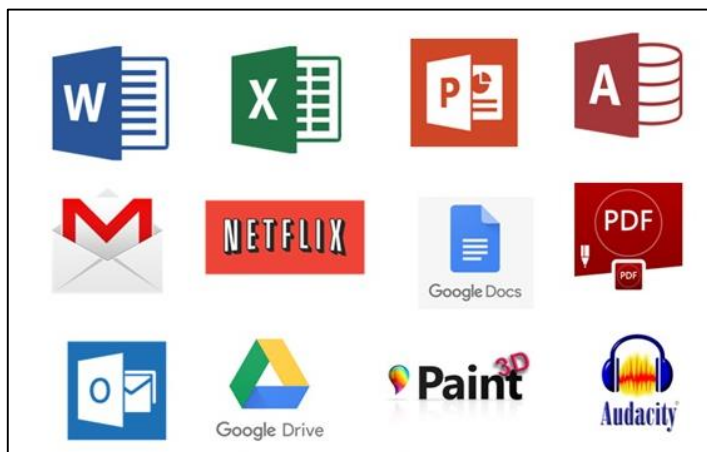
3.2.1 Operating systems

Provide the user with some services directed to control the computer's resources, such as Windows, Linux



3.2.2 Application programs

Carry out a task for the user, such as text processing and calculation programs.



3.2.3 Factory Software (FirmWare)

Allows the device to boot such as BIOS (Basic Input Output System)

