

Computer technology

Introduction:

A *computer* is an automatic device that performs calculations, making decisions, and has capacity for storing and processing vast amounts of information.

Computer technology continues to provide powerful new tools in all areas of science and engineering

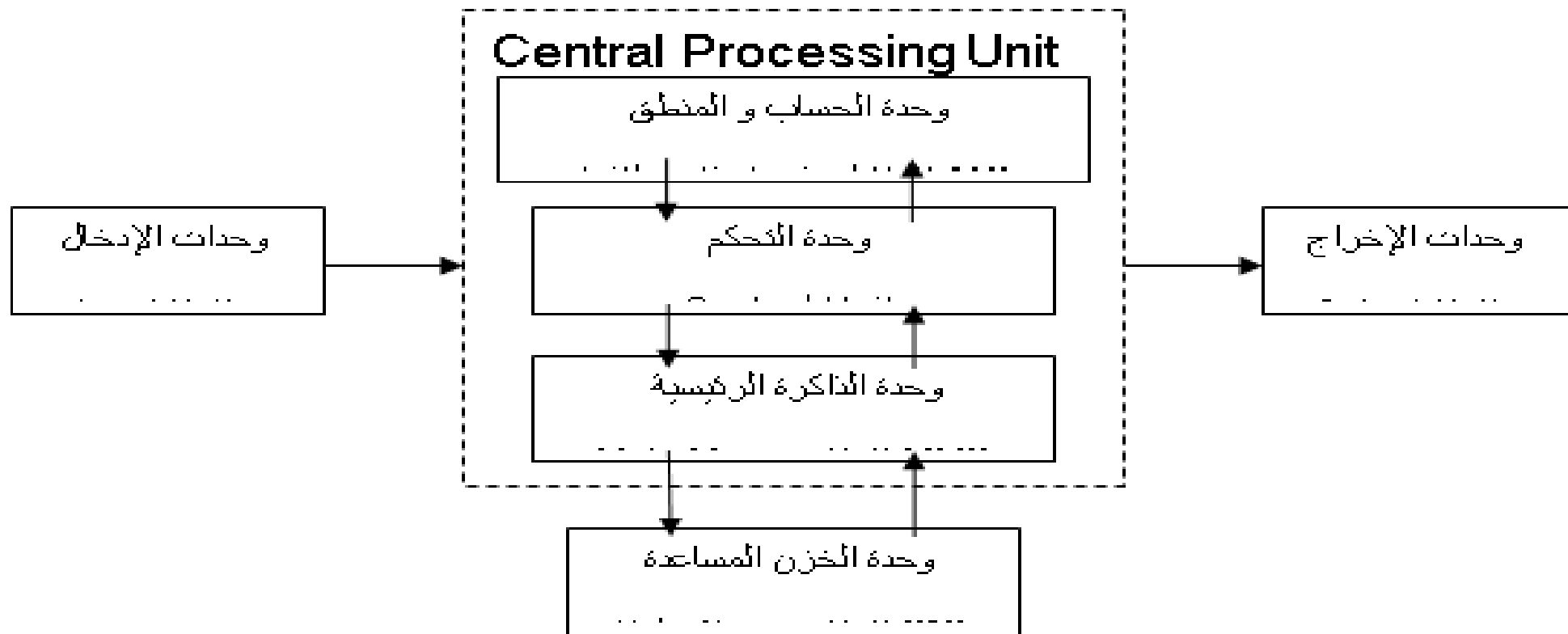
Computers perform three main operations:

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

- 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 tell 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.

The major components of a computer

- **1. System Unit:** it is the Box, which contains: The Center Processing Unit (CPU), Main Memory Drives, and the Power Supply.
- **2. Input devices:** Consists of devices that allow people to put data into the computer in a form that the computer can use. Examples are the keyboard and the mouse.
- **3. Output Devices:** Consists of devices that translate information processed by the computer into a form that humans can understand. Example is monitor, which displays the results of work that is done by the CPU
- **4. Peripherals:** Any piece of hardware that is connected to a computer. Examples are Printers, Scanners, and Modems. These are used to perform special input and output tasks.
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FACTORS THAT IMPACT ON COMPUTER PERFORMANCE

- 1. Clock speed: The faster the clock speed, the more efficient the computer. Measured by MHZ
- 2. Memory: amount of RAM, largest amount of RAM high performance of computer
- 3. Hard Disk: speed and storage capacity of hard disk effect the performance of the computer e.g. 9 GB hard disk has faster access speed than 4 GB in cup box to another.
- 4. Bus Speed: The speed at which data is sent from one part of the system.

Understanding Information Systems

- An information system is a complete interconnected environment in which raw data—quantifiable facts and figures—is turned into useful information. An information system includes the following parts: people, hardware, software, procedures, and data
- ☐ People: If you think about it, the only reason computers exist is to help people accomplish their goals. Therefore when planning an information system, it's critical to understand what the people hope to get out of it. Do they need certain information? Do they need for the computer to activate a device that performs a task? Are they looking to be entertained or educated? The first step in planning an information system is to analyze the requirements of the people.

- ☐ Hardware: When most people think of computers, they immediately think of hardware, the physical parts of the computer system. The hardware includes circuit boards with silicon chips and transistors mounted on them, input devices like the keyboard and mouse, and output devices like printers and monitors.
- ☐ Software: Computer hardware just sits there idle unless it has software, which is a program that tells the hardware what to do. There are many different levels of software, including the operating system (like Windows or Mac OS) and applications (like a word processing or accounting program).

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- ☐ Procedures: The software doesn't run itself (usually). People must interact with the computer to tell it what software to run. For example, before you can write checks with your accounting software, you must start up the software, open the file that stores the data for the business, and issue the command that opens the checking account register. You can learn procedures from the online Help system in the application, from a printed user manual, from a training class, or by trial and error.
- ☐ Data: Computer programs operate upon the data they receive. For example, in your accounting software, you enter data about the checks you are writing—the date, the amount, the recipient—and the program stores that data so you can recall it later.