



Al-Mustaqbal University

College of Engineering and Technology

Department of Medical Instrumentation Techniques Engineering

Class: First Class

Subject: Principal Computer

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Lecture Address: Principal Computer

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Comparison of the Main Types of Data Storage Units

Increased speed and storage capacity



Increased financial cost





المكونات المادية Hardware





قياس بيانات الحاسب الآلي

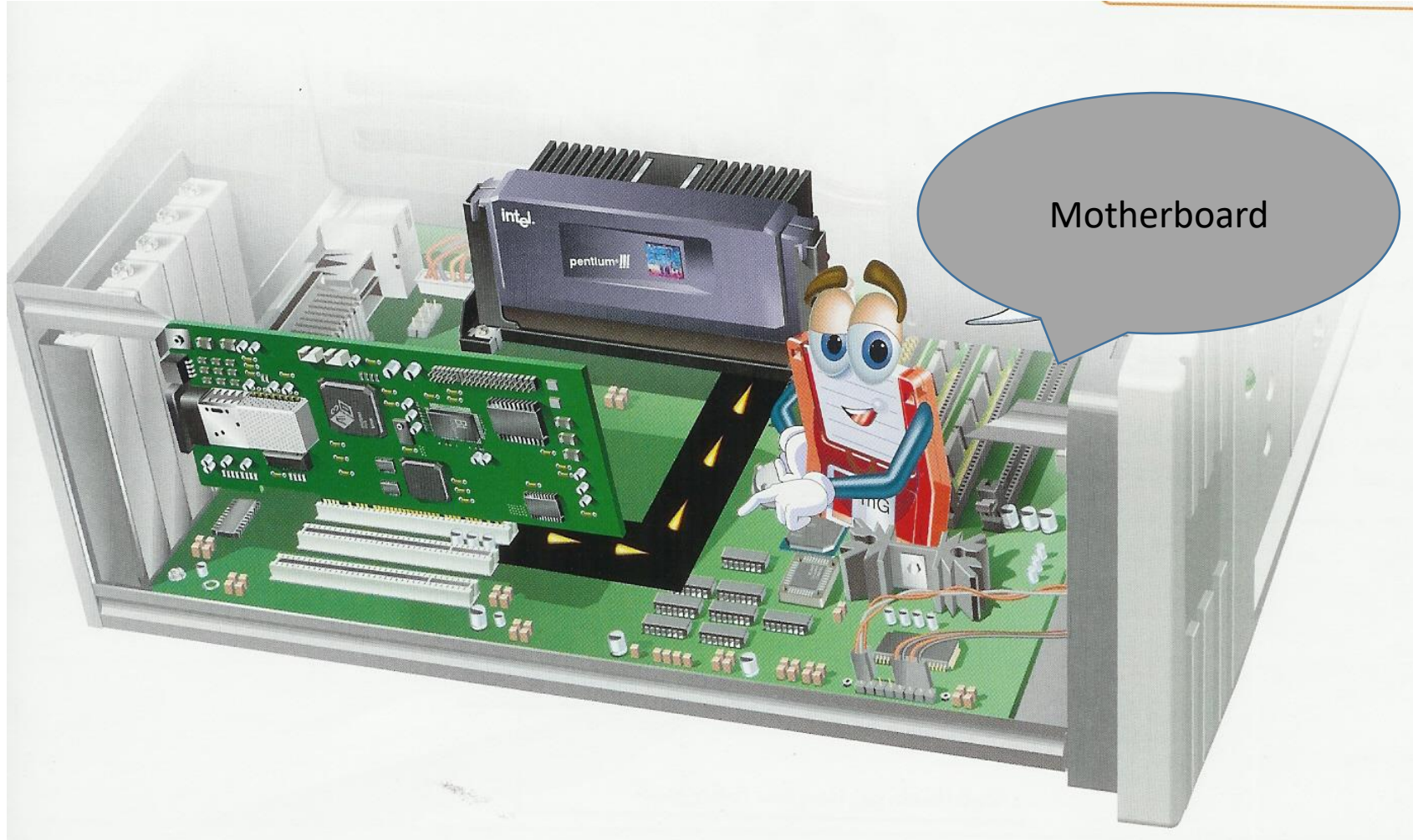
The basic unit is the Bit, which is binary-based, i.e., 0 and 1

- Byte = 8 Bits. •
- Kilo Byte (KB) = 1024 Byte. •
- Mega Byte (MB) = 1024 KB. •
- Giga Byte (GB) = 1024 MB. •

Units of Measurement for RAM Capacity ■

The unit of CPU speed measurement is Megahertz (MHz) ■

Computer Case





Computer Case

- **Functions of the Motherboard:**

- 1- Distributes electrical power.
- 2- Acts as a bridge for data transfer.

- **Reasons for Naming the Hard and Floppy Disks:**

- 1- The hard disk is made of rigid material, while the floppy disk is flexible and bendable.
- 2- The floppy disk is protected by an external plastic cover.
- 3- They are referred to as "disks" due to their circular shape.



Software Components of the Computer and System Development



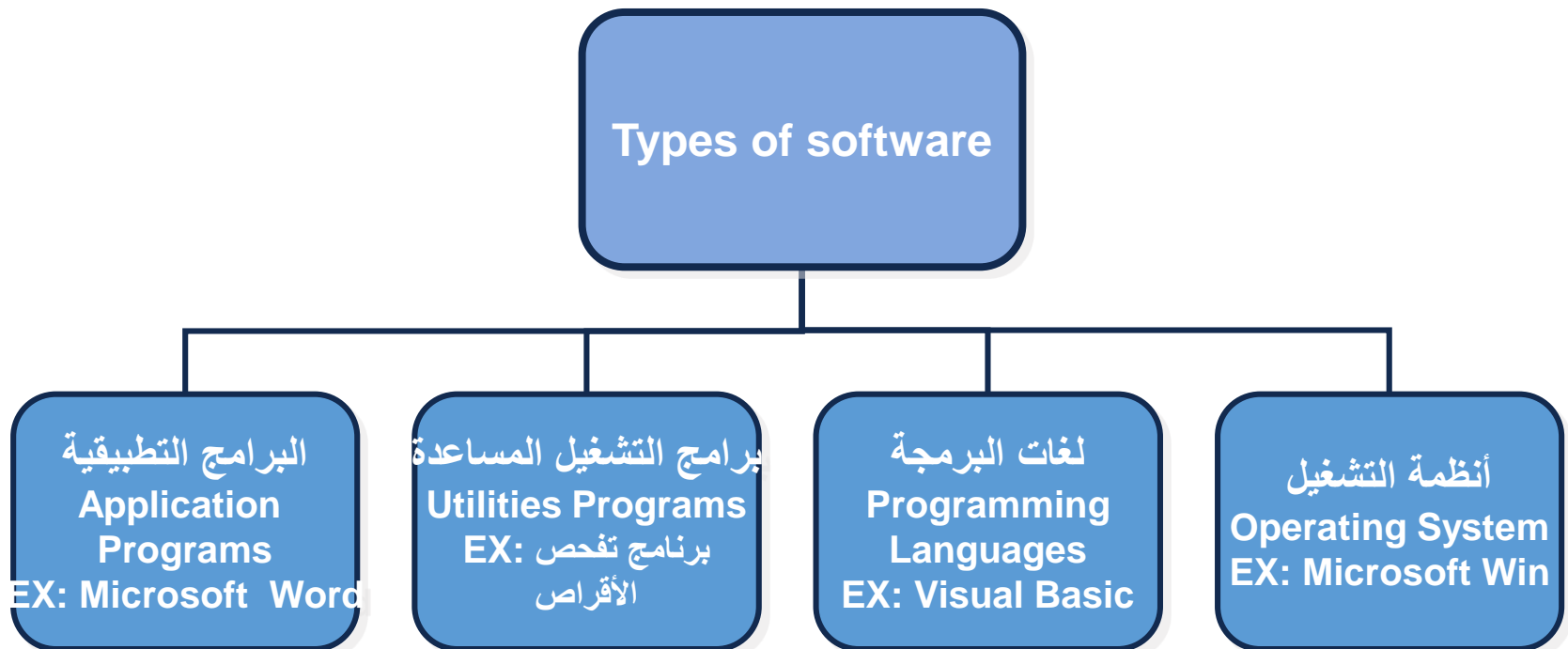
المكونات البرمجية Software

Software

or

Programs: •

A set of commands and instructions arranged in a specific sequence, executed by the device to achieve a particular purpose.





Operating System نظام التشغيل

- **Operating System:** It is a collection of programs used to run the computer, manage its components, and handle programs and applications.
- **Functions of the Operating System:**
 - 1- Control the data flow.
 - 2- Load programs into memory.
 - 3- Manage the main memory unit.
 - 4- Control input and output devices.
 - 5- Detect malfunctions.



نظام التشغيل Operating System

How the Operating System Works:

- 1- Reading and executing instructions and commands stored in ROM.
- 2- Checking the computer units to ensure their integrity.
- 3- Loading the operating system from floppy disks or optical discs.
- 4- Receiving commands from the user.
- 5- Loading and executing application program instructions.
- 6- Returning to the operating system and waiting for user commands.