Al-Mustaqbal University
Department of Artificial Intelligence Techniques
Engineering
Class one - first semester
Lecture 2

OPERATING SYSTEMS AND BASIC COMPUTER OPERATIONS

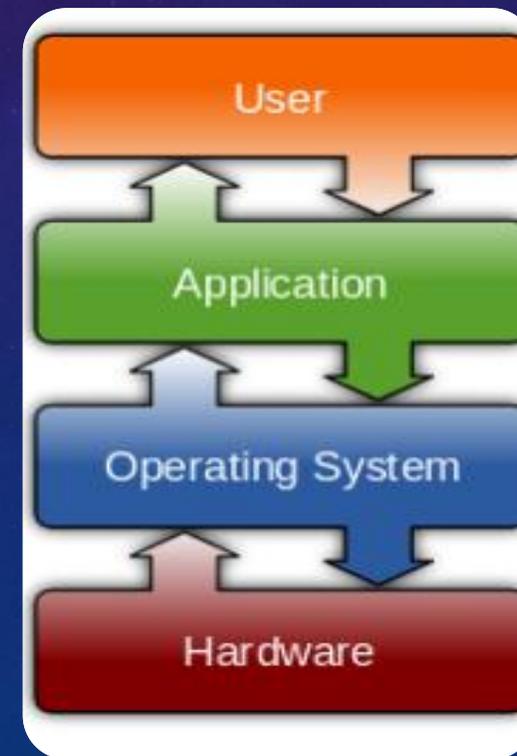م.م اسماء ضياء الماشطة

(ارشادات عامة قبل بدء المحاضرة)

1- المحمول مغلق او بوضع الصامت.

2-التفاعل مع الصف.

3-اشترك بأيجابية.

4-تنفيذ المهام والنشاطات.

5-الالتزام بالوقت.

6-احترام افكار الاستاذ والزملاء.

OPERATING SYSTEM:

An operating system is a collection of programs used to run a computer, manage its components, and control programs and applications.

Functions of the Operating System:
1- Controlling the data flow.
2- Loading programs into memory.
3- Managing the main memory unit.
4- Controlling input and output units.
5- Detecting system errors.

HOW THE OPERATING SYSTEM WORKS:

1- Reading and executing instructions and commands stored in memory.

2- Checking computer units to ensure they are functioning properly.

3- Loading the operating system from disks or optical media.

4- Receiving commands from the user.

5- Loading application programs and executing their instructions.

6- Returning control to the operating system and waiting for user commands.
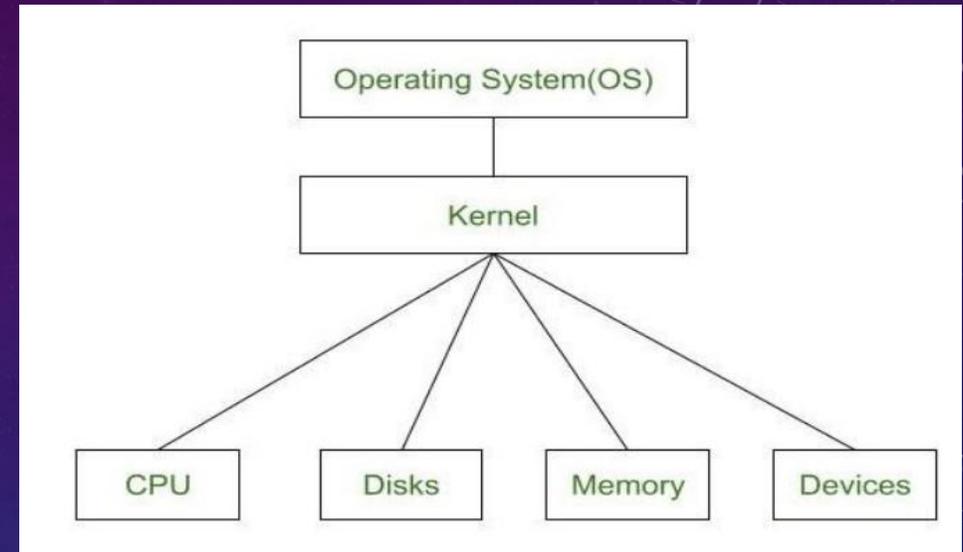
Operating System Components

The operating system consists of the following basic parts:

Kernel: The part responsible for directly controlling the processor and memory.
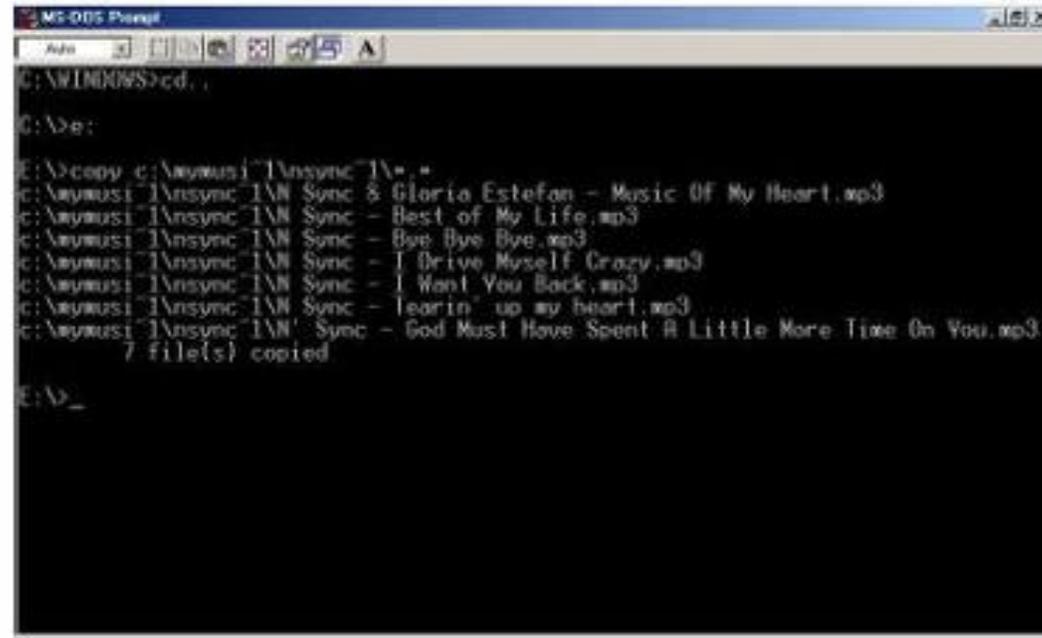
User Interface: controls how you enter data and instructions and how information is displayed on the screen

File System: Responsible for organizing files on the disks.

Examples of Operating Systems:
1- Disk Operating System (DOS): A command-based system that does not allow running more than one program or command at the same time.

نظام تشغيل القرص Dos (غير رسومي)

2- Windows Operating System: A graphical user interface (GUI) operating system User interact the system through WIMP environment Windows, Icon, Menus, and Pointers (WIMP). GUIs are small pictures that represent actions, and they can be selected by 'clicking' on them with the mouse. Example of GUI interface Windows & Mac OS

نظام تشغيل النوافذ Windows (رسومي)

3- Apple Mac Operating System.

نظام تشغيل أبل ماكنتوش Apple Mac (رسومي)

4- Unix Operating System.

نظام تشغيل يونيكس Unix (رسومي)

Operating System Operation Stages When a Computer is Turned On!

When a computer is turned on, the following stages occur:

The device starts up and components are checked.

The operating system is loaded into memory.

The hardware is initialized.

The user interface appears, and the system is ready to receive commands.

The Difference Between Operating System and Application Software

Operating System

The operating system is the main program of the computer.
The computer cannot work without it.
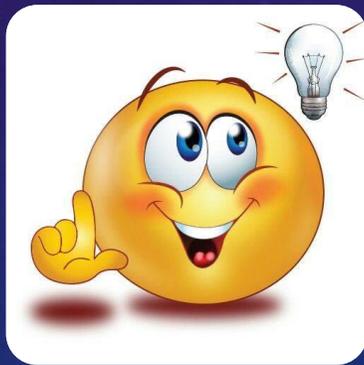
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Application Software

Application software are programs that run on top of the operating system, such as Microsoft Word and web browsers.

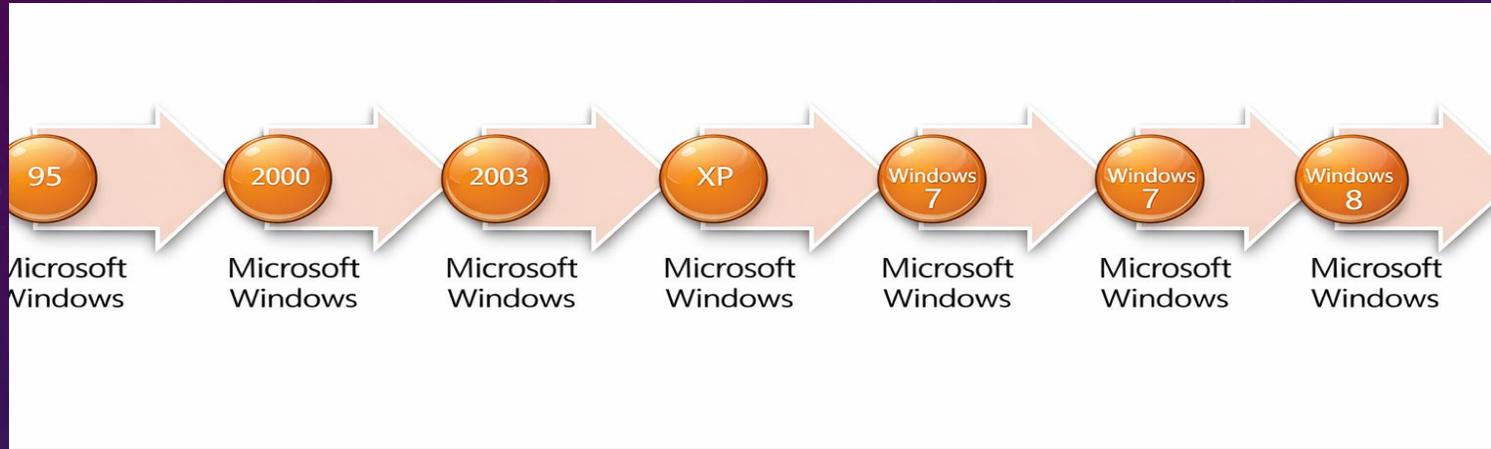**Without an operating system, no application software can be run**

Basic Computer Operations:
1- Data Input through input devices.
2- Data Processing to produce information.
3- Data Output.
4- Data Storage.

homework: List the types of operating systems؟

Microsoft Windows Versions:

\- 16-bit working environment.

\- 32-bit working environment.

\- 64-bit working environment.

\- Windows 8.

Thanks!

Do you have any questions?
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