كلية العلـوم

قسـم الادلة الجنائية

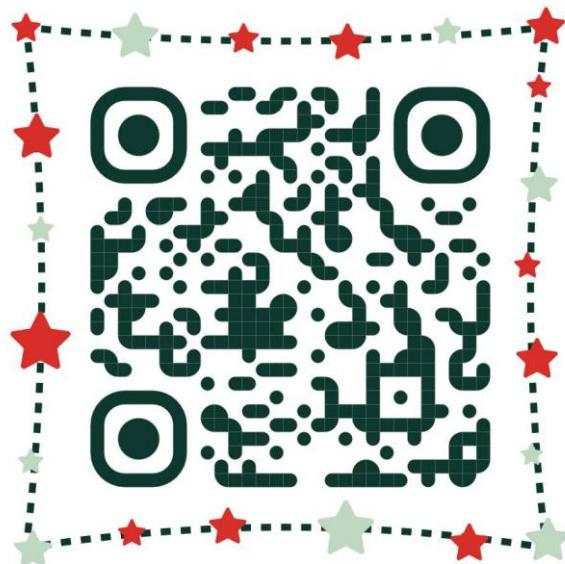# Lecture (3)

Windows Operating System & Application Software

المـادة : الحاسوب2

المرحلة : الثانية

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COMPUTER 2

الادلة الجنائية

تخصيص

SCAN ME!

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Content

- ➢ What is an Operating System (OS)

- ➢ Major Functions of Operating System

- ➢ Application Software

I. What is an Operating System (OS)

OS Is a program that manages the computer hardware .Therefore, it also acts as an intermediary between a user of a computer and the computer hardware.

Windows is one of the most popular operating systems used on personal computers.

An operating system is needed for the following reasons:

1. Execute user programs and make solving user problems easier.

2. Make the computer system convenient to use.

3. Use the computer hardware in an efficient manner.

Common Versions:

- Windows 10

- Windows 11

- Windows Server (for networks and servers)

II. Major Functions of Operating System

1. Device Manager - Communicate with hardware and the attached devices.

2. Memory Manager - Manage different types of memory

3. Interface Manager - Provide a user interface

4. Program Manager - Provide a structure for accessing an application

5. Task Manager - Enable users to manipulate programs and data

6. File Manager - Manage the files, folders, and directory systems on a computer

7. Network Manager - Provide basic networking structure for LAN and Internet

8. Security Manager - A smart OS also provides minimal security to the computer system through authorization (username) and authentications (password)

III. Application Software

Application software runs on the operating system. It uses the services of the operating system to interact with hardware.

A set of software to carry out specific tasks like creating documents (word processor), calculations and analysis (spreadsheet), presentations (PowerPoint), railway reservations, library management, etc.

It is of four types:

➢ Utility software

➢ General Purpose Software

➢ Customized software

➢ Developer tools

Utility software

Utility software for efficient computer operation and other tasks. Various utility software is available, such as:

Text Editor: for storing short notes, messages, and coding. Examples include: Notepad, Notepad++, and WordPad.

To-Do Task: to manage work.

Compression: to compress files, i.e., reduce file size, or transfer files from one computer to another. Examples include: WinZip and WinRAR.

Disk Defragmenter: Disk defragmentation utility software

speeds up the system by rearranging fragmented files stored on a disk in contiguous locations to optimize system performance.

Anti-Virus: to protect your computer from threats like viruses, worms, Trojan horses, banking fraud, etc.

General Purpose Software

1. **Word Processors:**

- Example: Microsoft Word

- Tasks: Writing, editing, formatting, and printing documents.

2. **Spreadsheets:**

- Example: Microsoft Excel

- Tasks: Calculations, charts, financial analysis.

3. **Presentation Software:**

- Example: Microsoft PowerPoint

- Tasks: Creating presentations for education or business.

4. **Database:**

- Examples: Oracle, MySQL

- Tasks: Store huge amount of data.

Customized software

This is tailored software, i.e., it is created according to the customer's specific requirements, such as maintaining school operations, restaurant management, banking, hotels, hospitals, etc.

Developer tools

When a programmer starts the process of writing a program to develop software for any type of application, they require a series of software development tools like a code editor, debugger, and compiler. A platform where all these software development tools are bundled into a package is known as an Integrated Development Environment (IDE).

Popular development tools are: NetBeans, Eclipse, IDLE, Visual Studio.

Each IDE provides features of: Editor, Compiler/Interpreter, Debugger, Automation tool, output window, etc.