

Software

Key Words

Operating Systems

Utility Software

Software

Programs and data that tell a computer what to do.

Hardware

Physical components of a computer.

Interface

How the user makes use of the computer or software components. (voice, gestures, mouse etc.)

Simultaneously

Happening at the same time.

Driver

Software that allows hardware to communicate with the OS.

Credentials

Information needed for authentication (username, password).

Troubleshoot

Identify and solve problems.

Fragmented

. Data scattered across a storage device.

Algorithm

Set of rules or steps to solve a problem.

Ciphertext

Encrypted message.

Plaintext

Original, unencrypted message.

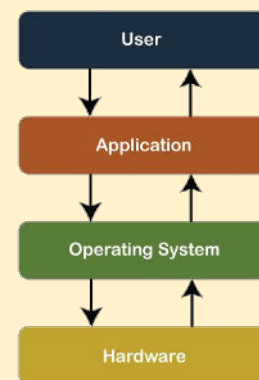
Purpose:

- An operating system (OS) is the software that manages a computer's hardware and software resources.
- It acts as an intermediary between the user and the computer, making it easier to use.
- Key functions include managing memory, controlling input/output devices, running applications, and ensuring system security.

Features:

- User Interface: Provides a way for users to interact with the computer (e.g., graphical user interface, command-line interface).
- File Management: Organizes and stores data on storage devices.
- Memory Management: Allocates computer's memory efficiently to running programs.
- Process Management: Manages the execution of multiple programs simultaneously.
- Device Management: Controls input and output devices (e.g., keyboard, mouse, printer). Usually controlled by a driver.
- User Management: Allows multiple accounts with private credentials and protects the system from unauthorized access and data loss.

In essence, an operating system is like a traffic controller for a computer, ensuring everything runs smoothly and efficiently.



Purpose:

- Utility software is designed to maintain, enhance, and troubleshoot a computer system.
- It performs specific tasks to support the operating system and other applications.

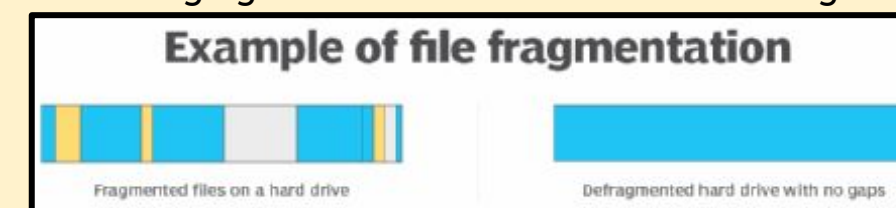
Features:

- System Maintenance: Helps keep the computer running efficiently, including tasks like disk defragmentation, disk cleaning, and partitioning.
- System Management: Organizes and protects data through file management, backup and recovery, and security software.
- System Information: Provides details about the computer's performance, memory, hardware, and operating system.

Defragmentation

Defragmentation reorganizes data on a hard drive. Over time, files can become fragmented, meaning parts are scattered across the disk. This slows down access. Defragmentation moves these pieces together, improving read/write speeds.

It's like rearranging books on a shelf for easier finding.



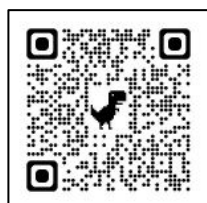
Encryption

Encryption is like scrambling a message into a secret code. It uses complex mathematical formulas (algorithms) and a special key to convert plain text into unreadable ciphertext.

Only someone with the correct key can unscramble the message back to its original form.

This protects data from being intercepted and understood by unauthorized people.

Quizizz



Extended Reading



Exam Questions



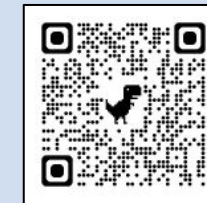
Video



Revision Techniques



Quizlet



Specification

