OCR Computer Science GCSE
1.5 - Systems software

Flashcards

What is an operating system?

What is an operating system?

A type of software that manages and controls the computer.

Name five functions of operating systems.

Name five functions of operating systems.

Providing a user interface, memory management and multitasking, peripheral management and drivers, user management, file management.

What does a user interface allow?

What does a user interface allow?

It allows users to interact with the computer.

What are the two main types of user interfaces?

What are the two main types of user interfaces?

Graphical user interfaces (GUIs) and command line interfaces.

What is a graphical user interface?

What is a graphical user interface?

A visual way for users to interact with devices using graphical elements such as icons and menus.

What is a command line interface?

What is a command line interface?

An interface where users type text-based commands to interact with the computer.

What does memory management involve?

What does memory management involve?

Allocating memory to applications and tracking which parts are in use.

Why must programs be moved into RAM?

Why must programs be moved into RAM?

Because all programs must be in RAM to be processed.

What happens to a program when it is closed?

What happens to a program when it is closed?

It is removed from RAM so other tasks can take place.

What is multitasking in an operating system?

What is multitasking in an operating system?

The ability to run more than one program at the same time.

How does the OS achieve multitasking?

How does the OS achieve multitasking?

By rapidly switching between tasks and sharing processor time.

Why does multitasking seem seamless to the user?

Why does multitasking seem seamless to the user?

Because switching happens so quickly that all programs seem to run at once.

What does the OS ensure during multitasking?

What does the OS ensure during multitasking?

Each program gets the memory and processing time it needs without interference.

What is peripheral management?

What is peripheral management?

Managing devices connected to the computer like keyboards and printers.

What is a driver?

What is a driver?

A small program that acts as a translator between the operating system and a peripheral device.

Why does each peripheral need its own driver?

Why does each peripheral need its own driver?

Because drivers are specific to the hardware they support.

Name three user management functions that an operating system performs.

Name three user management functions that an operating system performs.

Allocation of user accounts, managing user access rights, and ensuring security.

What are the key features the operating system provides in terms of file management?

What are the key features the operating system provides in terms of file management?

Naming files, allocating files to folders, moving files and saving files.

What is utility software?

What is utility software?

Software that performs additional housekeeping tasks not handled by the operating system.

Name three types of utility software.

Name three types of utility software.

Encryption software, defragmentation software, data compression software.

What does encryption software do?

What does encryption software do?

Converts data into a coded format so that only authorised users with the correct decryption key can understand it.

What does defragmentation software do?

What does defragmentation software do?

It reorganises files on a hard disk to reduce fragmentation.

What is fragmentation?

What is fragmentation?

When files are scattered in non-continuous blocks on a hard disk.

Why is fragmentation a problem?

Why is fragmentation a problem?

The computer has to look in several places on the disk to read the whole file, which slows down performance.

What does data compression software do?

What does data compression software do?

It reduces the size of files.

Why is data compression useful?

Why is data compression useful?

It saves storage space and speeds up transmission.