Term	Definition
Resources	Any physical or virtual component in a computer system that is of limited availability.
Interface	An interface is a boundary across which any two components of a computer system exchange information. These components can include software, hardware and the user.
Backing store	Backing store is secondary storage for data which tends to have larger capacity and to be slower than primary store.
Utility software	Utility software is a software that is designed to analyse, configure, optimise and maintain a computer system.
Modes of operation	Modes of operations refer to the way in which a computer program will handle data and produce output.

Managing resources

The operating system is the name given to the collection of systems software that manages the computer. The operating system manages the computer's resources including peripherals, processes, memory protection and backing store.

The operating system hides the functioning of the computer from the users and their programs.

Users		
Systems programs	Application programs	User programs
Library routines		
Operating system		
Computer hardware		

Peripherals

Each peripheral has its own machine code. Each will have its own rules for how it transmits/receives data from the computer. These rules create a protocol for the operating system to control the device. When a new peripheral is connected to a computer a piece of software called a driver is required by the operating system to control the peripheral.

Processes

The operating system controls processing via the central processing unit (CPU). Signals sent to and from the CPU control what is happening and in what order processes will take place.

CPU scheduling allows one process to be carried out while another is on hold (waiting), for actions such as input of data. Scheduling ensures that full use is made of the CPU. Whenever the CPU is idle the operating system must select one of the processes that is queuing (ready to be processed).

Memory protection

Memory protection is a way to control memory access rights on a computer and is part of the operating system. The main purpose of memory protection is to prevent a process from accessing memory that has not been allocated to it.

Backing store

Backing store is typically a part of the hard disk that is used as a paging system to store data that is not currently in the main memory.

Paging is a memory management system that allows a computer to store and retrieve data from secondary storage for use in main memory. The data is retrieved in blocks of the same size called pages.

Providing a user interface

The user interface allows a user to enter and receive information.

A text-based user interface (command line interface, CLI) requires the user to type commands into the screen at a prompt:

```
Enter your firstname please : Fred
Enter your surname please : Evans
Enter your address of where you live please : 10 High Street
Enter your title please : Mr
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A graphical user interface (GUI) the functions are carried out by clicking buttons, icons and menus using a pointing device, such as a mouse.

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