

The operating system

An operating system has a complex mixture of diversified functions. One of its major functions is process management. Users submit programs or program segments to the computer - such as a main-frame or a minicomputer - for processing, requesting processor time and peripheral equipment. The operating system properly schedules the operations of the hardware in an efficient manner. If a computer were to run each program one at a time until completion, the other programs would have to wait idly. In order to finish all programs in a reasonably short and equitable amount of time, the operating system runs portions of each program in turn, continually assigning new programs to the processors. This type of computer operation is called *time-sharing*, in contrast to *batch processing*, in which entire programs are run sequentially. If an anomaly - such as a hardware malfunction, an overflow in addition, or the completion of an operation of the I/O unit - occurs, the operating system interrupts processing. The operating system takes appropriate measures and then resumes processing.

1. Complete the following sentences using the lexicon given.

process management – operating system – batch processing – functions – time-sharing operation

- 1 An operating system has various
- 2 During the operating system schedules the operations of the hardware.
- 3 A is when the operating system runs portions of each program in turn.
- 4 is when entire programs are run sequentially.
- 5 If an anomaly occurs the interrupts processing.

2. Match each of the following verbs with its synonym.

- | | |
|---------------|----------------------------|
| 1 to submit | a to plan |
| 2 to schedule | b to give |
| 3 to run | c to offer for acceptance |
| 4 to assign | d to execute, to perform |
| 5 to occur | e to happen, to take place |

3. Describe in no more than four lines what process management is.

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