**Operating system (OS)**



An *operating system* (OS) is the program that, after being initially loaded into the computer by a [*boot*](https://searchwindowsserver.techtarget.com/definition/boot)program, manages all of the other application programs in a computer. The application programs make use of the operating system by making requests for services through/using/by means of/ via a defined *application program interface* ([*API*](https://searchmicroservices.techtarget.com/definition/application-program-interface-API)). In addition/furthermore/ moreover/besides, users can interact directly with the operating system through a user interface such as/ like/ for example / for instance a command line or a *graphical user interface* ([*GUI*](https://searchwindevelopment.techtarget.com/definition/GUI)).

An operating system can perform /do/carry out/ the following services for applications:

* In a[*multitasking*](https://whatis.techtarget.com/definition/multitasking)*operating system*, where/in which multiple programs can be running at the same time, the OS determines which applications should run in what order and how much time should be allowed for each application before giving another application a turn.
* It manages the sharing of internal memory among multiple applications.
* It handles input and output to and from attached hardware devices, such as hard disks, printers and dial-up ports.
* It sends messages to each/every/any application or interactive user (or to a system operator) about the status of operation and any errors that may have occurred.
* It can offload the management of [*batch*](https://searchdatacenter.techtarget.com/definition/batch)jobs/tasks/labor/activities (for example, printing) so that the initiating application is freed/released from this work.
* On computers that can provide[*parallel processing*](https://searchdatacenter.techtarget.com/definition/parallel-processing), an operating system can manage how to divide the program so that it runs on more than one processor at a time.(cada vez/al mismo tiempo)

All major computer *platforms* (hardware and software) require/need and sometimes include/have an operating system, and operating systems must be developed with different features/charasteristics to meet the specific needs/requirements/ necessities (satisfacer las necesidades) of various [form factors](https://whatis.techtarget.com/definition/form-factor).

**Types of operating systems**

A [*mobile OS*](https://searchmobilecomputing.techtarget.com/definition/mobile-operating-system) allows/permits/enables smartphones, tablet PCs and other mobile devices to run applications and programs. Mobile operating systems include Apple[iOS](https://searchmobilecomputing.techtarget.com/definition/iOS), Google[Android](https://searchmobilecomputing.techtarget.com/definition/Android-OS), BlackBerry OS and Windows 10 Mobile.

An [*embedded/implant/build in/integrated operating system*](https://internetofthingsagenda.techtarget.com/definition/embedded-operating-system) is specialized for use in the computers built into larger systems, such as cars, traffic lights,[digital televisions](https://whatis.techtarget.com/definition/digital-television-DTV), ATMs, airplane controls, point of sale ([POS](https://whatis.techtarget.com/definition/point-of-sale-terminal-POS-terminal)) terminals,[digital cameras](https://searchmobilecomputing.techtarget.com/definition/digital-camera), GPS navigation systems, elevators, digital media receivers and[smart meters](https://internetofthingsagenda.techtarget.com/definition/smart-meter).

A *network operating system* ([*NOS*](https://searchnetworking.techtarget.com/definition/network-operating-system)) is a computer operating system that is designed primarily to support[workstation](https://searchmobilecomputing.techtarget.com/definition/workstation), personal computer, and, in some instances, older[terminals](https://searchnetworking.techtarget.com/definition/terminal)that are connected on a local area network ([LAN](https://searchnetworking.techtarget.com/definition/local-area-network-LAN)).

A *real-time operating system* ([*RTOS*](https://searchdatacenter.techtarget.com/definition/real-time-operating-system)) is an operating system that guarantees a certain capability within a specified time constraint. For example, an operating system might be designed to ensure that a certain object was available for a robot on an assembly line.

**Common desktop operating systems:**

* [Windows](https://searchwindowsserver.techtarget.com/definition/Windows) is Microsoft’s flagship operating system, the [*de facto standard*](https://whatis.techtarget.com/definition/de-facto-standard) for home and business computers. Introduced in 1985, the GUI-based OS has been released in many versions since then. The user-friendly[Windows 95](https://whatis.techtarget.com/definition/Windows-95)was largely responsible for the rapid development of personal computing.
* [Mac OS](https://whatis.techtarget.com/definition/Mac-OS) is the operating system for Apple's Macintosh line of personal computers and workstations.
* [Unix](https://searchdatacenter.techtarget.com/definition/Unix) is a *multi-user* operating system designed for flexibility and adaptability. Originally developed in the 1970s, Unix was one of the first operating systems to be written in [C language](https://searchwindowsserver.techtarget.com/definition/C).
* [Linux](https://searchdatacenter.techtarget.com/definition/Linux-operating-system) is a Unix-like operating system that was designed to provide/ give /offer personal computer users a free or very low-cost alternative. Linux has a reputation as a very efficient and fast-performing system.

<https://whatis.techtarget.com/definition/operating-system-OS>last updated in[December 2019](https://whatis.techtarget.com/archive/2019/12)

**Questions**

**1. Find a synonym for the underlined words.**

**2. Word formation: Complete the table.**

|  |  |  |  |
| --- | --- | --- | --- |
| Abstract noun | Countable noun | Verb | Adjective |
| X | **operation** | **operate** | operating |
| **management** | **manager** | Manage(getionar) | **Manageable** |
| **freedom** | X | free | **free** |
| **requirement** | X | require | X |
| **performance** | **performer** | perform | **Fast performing** |
| **Efficiency** | X | X | efficient |
| reputation | X | X | **Reputable** |
| development | **developer** | **develop** | **Developed/developing** |
| **Design** | **designer** | design | X |
| X | device | **Devise/device** | X |
| **Computing** | computer, computation | **compute** | **Computing** |

**3. Translate into English**

1. El sistema operativo permite que las aplicaciones compartan los recursos del sistema de forma eficaz.

**The operating system allows applications to share system resources efficiently.**

1. Un sistema operativo contiene grandes cantidades de software, ya que está compuesto de muchos programas de gestión de recursos.

**An operating system contains large amounts of software, as it is made up of many resource managements programs.**

1. El sistema operativo asigna recursos a los distintos procesos que los solicitan.

**The operating system allocates resources to the various processes that request them.**

1. Un sistema operativo multitarea determina el orden en el que las aplicaciones deberían ejecutarse y el tiempo que se debería permitir para cada aplicación antes de darle la vez/cederle el turno a otra aplicación

**A multitasking operating system determines the order in which applications should run and the amount of time that should be allowed for each application before giving the turn to another application**

1. Un sistema operativo multitarea gestiona la compartición de la memoria interna entre múltiples aplicaciones.

**A multitasking operating system manages the sharing of internal memory among multiple applications.**

1. Un sistema operativo multitarea permite a dos o más usuarios ejecutar programas al mismo tiempo.

**A multitasking operating system allows two or more users to run programs at the same time.**

**4. Complete the second sentence so that it has a similar meaning to the first.**

1. The [GUI](http://searchwindevelopment.techtarget.com/definition/GUI)-based OS has been released in many versions since 1985.

The first version of the [GUI](http://searchwindevelopment.techtarget.com/definition/GUI)-based OS **was released in 1985**

2. Microsoft released its flagship operating system in 1985.

Microsoft's flagship operating system **was released in 1985**

3. The operating system (OS) is first loaded into the computer. Then, it manages all the programs in a computer.

After **being loaded into the computer, the operating system manages all programs**

4. The operating system (OS) handles input and output to and from attached hardware devices.

Input and output **are handled to and from ….**

# 5. Chances are, you rely on one of these on a daily basis, but how much do you know about them? Take the quiz to test your knowledge of operating systems and associated technologies.

# Quiz: Operating Systems http://media.techtarget.com/WhatIs/images/spacer.gifhttp://whatis.techtarget.com/quiz/Quiz-Operating-Systems

1. What does the "X" stand for in OS X?

2. This is the term for loading an operating system into memory. What is it?

3. Its new name is the Spanish word for "view." What was it called originally?

4. "There are two major products that came out of Berkeley: LSD and \_\_\_\_\_\_\_\_. We don't believe this to be a coincidence." What operating system was Jeremy Anderson talking about? (*Hint: It originated at Bell Labs in 1969 as an interactive time-sharing system.*)

5. DOS was the first widely-installed operating system for personal computers. What does DOS stand for?

6. What company's operating system code names have included "Cheetah," "Puma," and "Panther?"

1. Linux is a Unix-like operating system designed to offer PC users a free or very low-cost operating system comparable to Unix. Is "Linux" short for anything?

8. What year was the first version of Windows introduced?

9. The operating system, along with its coordinating program, and the hardware that performs logic operations and manages data movement all combine to make up the \_\_\_\_\_\_\_\_\_\_\_\_\_\_. What is it?

10. OS/390 is the IBM operating system most commonly installed on its S/390 line of mainframe server. What operating system did it evolve from?