**Operating system (OS)**

An operating system (OS) is the program that, after being initially loaded into the computer by a [boot](http://searchwinit.techtarget.com/definition/boot) program, manages all the other programs in a computer. The other programs are called *applications* or application programs. The application programs make use of the operating system by making requests for services through a defined application program interface ([API](http://searchexchange.techtarget.com/definition/application-program-interface)). In addition, users can interact directly with the operating system through a user interface such as a command line or a graphical user interface ([GUI](http://searchwindevelopment.techtarget.com/definition/GUI)).

An operating system performs these services for applications:

In a [multitasking](http://searchcio-midmarket.techtarget.com/definition/multitasking) operating system where multiple programs can be running at the same time, the operating system 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 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 what are called *batch* jobs (for example, printing) so that the initiating application is freed from this work.
* On computers that can provide parallel processing, an operating system can manage how to divide the program so that it runs on more than one processor at a time.

All major computer platforms (hardware and software) require and sometimes include an operating system, and operating systems must be developed with different features to meet the specific needs of various [form factors](http://whatis.techtarget.com/definition/form-factor).

Common desktop operating systems:

[Windows](http://searchwindowsserver.techtarget.com/definition/Windows) is Microsoft’s flagship [operating system](http://searchcio-midmarket.techtarget.com/definition/operating-system), the [*de facto* standard](http://whatis.techtarget.com/definition/de-facto-standard) for home and business computers. Introduced in 1985, the [GUI](http://searchwindevelopment.techtarget.com/definition/GUI)-based OS has been released in many versions since then. The user-friendly [Windows 95](http://whatis.techtarget.com/definition/Windows-95) was largely responsible for the rapid development of personal computing.

[Mac OS](http://whatis.techtarget.com/definition/Mac-OS) is the operating system for Apple's [Macintosh](http://searchcio-midmarket.techtarget.com/definition/Macintosh) line of personal computers and workstations.

[Linux](http://searchenterpriselinux.techtarget.com/definition/Linux) is a [Unix](http://searchenterpriselinux.techtarget.com/definition/Unix)-like [operating system](http://searchcio-midmarket.techtarget.com/definition/operating-system) that was designed to provide personal computer users a free or very low-cost alternative. Linux has a reputation as a very efficient and fast-performing system.

Windows operating systems have long dominated the market and continue to do so. As of August 2016, Windows systems had a market share of over 85 percent. In contrast, Mac OS was at a little over 6 percent and Linux was just over 2 percent. Nevertheless, Windows is losing market share from a long-held 90 percent and higher.

A [mobile OS](http://searchmobilecomputing.techtarget.com/definition/mobile-operating-system) allows [smartphones](http://en.wikipedia.org/wiki/Smartphone), [tablet PCs](http://searchmobilecomputing.techtarget.com/definition/tablet-PC) and other mobile devices to run applications and programs. Mobile operating systems include Apple [iOS](http://searchmobilecomputing.techtarget.com/definition/iOS), Google [Android](http://searchenterpriselinux.techtarget.com/definition/Android), BlackBerry OS and [Windows 10 Mobile](http://whatis.techtarget.com/definition/Windows-10-Mobile).

An [embedded operating system](http://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](http://searchcio-midmarket.techtarget.com/definition/digital-television), ATMs, airplane controls, point of sale ([POS](http://whatis.techtarget.com/definition/point-of-sale-terminal-POS-terminal)) terminals, [digital cameras](http://searchmobilecomputing.techtarget.com/definition/digital-camera), [GPS navigation systems](http://whatis.techtarget.com/definition/GPS-navigation-system), elevators, digital media receivers and [smart meters](http://searchnetworking.techtarget.com/definition/smart-meter).

http://whatis.techtarget.com/definition/operating-system-OS

**Questions**

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

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

|  |  |  |  |
| --- | --- | --- | --- |
| Abstract noun | Countable noun | Verb | Adjective |
| X | **operator, operation** | **operate** | operating |
| **management** | **manager** | manage | **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** | design | X |
| X | device | **devise** | 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 OS allows applications to share system resources / (the) resources of the system efficiently/ in an efficient way.**

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

**An OS contains large amounts of software, as it is made up of many resource management programs.**

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

**The operating system allocates resources to the different processes that require 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**](http://searchcio-midmarket.techtarget.com/definition/multitasking) **operating system determines the order in which the applications should run and the time that should be allowed for each application before giving another application a turn.**

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

**A** [**multitasking**](http://searchcio-midmarket.techtarget.com/definition/multitasking) **operating system** **manages the sharing of internal memory among multiple applications.**

**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. Windows systems had a market share of over 85 percent. In contrast, Mac OS was at a little over 6 percent and Linux was just over 2 percent.

While **Windows systems had a market share of over 85 percent, Mac OS was at a little over 6 percent and Linux was just over 2 percent**.

4. 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 OS manages all the programs in a computer**.

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

Input and output **are handled by the OS** **to and from attached hardware devices.**

# 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?

**d. ten**

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

[**boot**](http://searchwinit.techtarget.com/definition/boot)

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

[**Vista**](http://searchenterprisedesktop.techtarget.com/definition/Vista)**,** formerly code named [Longhorn](http://searchwinit.techtarget.com/sDefinition/0,,sid1_gci903304,00.html), is a [Windows](http://searchwindowsserver.techtarget.com/definition/Windows) desktop [operating system](http://searchcio-midmarket.techtarget.com/definition/operating-system)s.

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.*)

[**Unix**](http://searchenterpriselinux.techtarget.com/definition/Unix)

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

**b. Disk Operating System**

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

**Panther was the code name for version 10.3 of the (** [**operating system**](http://searchcio-midmarket.techtarget.com/definition/operating-system) **ten).**

**The original** [**Apple**](http://whatis.techtarget.com/definition/Apple)[**Macintosh**](http://searchcio-midmarket.techtarget.com/definition/Macintosh)[**OS X**](http://whatis.techtarget.com/definition/OS-X) **release had the code name Cheetah. Mac OS X 10.1 was called Puma, Mac OS X 10.2 was called** [**Jaguar**](http://searchsoa.techtarget.com/definition/Jaguar) **, Panther was the code name for version 10.3, and Mac OS X 10.4 was called** [**Tiger**](http://whatis.techtarget.com/definition/Tiger)**.**

7. 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? (*Hint: Scroll to the end of the definition for the answer.*)

**a contraction of "Linus' Unix"**

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

**b. 1985**

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? [**platform**](http://searchservervirtualization.techtarget.com/definition/platform)**.**

**A platform is any hardware or software used to host an application or service.**

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?

**It is an evolved and newly renamed version of** [**MVS**](http://searchdatacenter.techtarget.com/definition/MVS) **(Multiple Virtual Storage), IBM's long-time,** [**robust**](http://whatis.techtarget.com/definition/robust) **mainframe operating system.**

**VIDEO**

https://youtu.be/MzVGL44eq9w