

What is an operating system?

An **operating system** is the **most important software** that runs on a computer. It manages the computer's **memory** and **processes**, as well as all of its **software** and **hardware**. It also allows you to **communicate** with the computer without knowing how to speak the computer's language. **Without an operating system, a computer is useless.**

Watch the video below to learn more about operating systems.

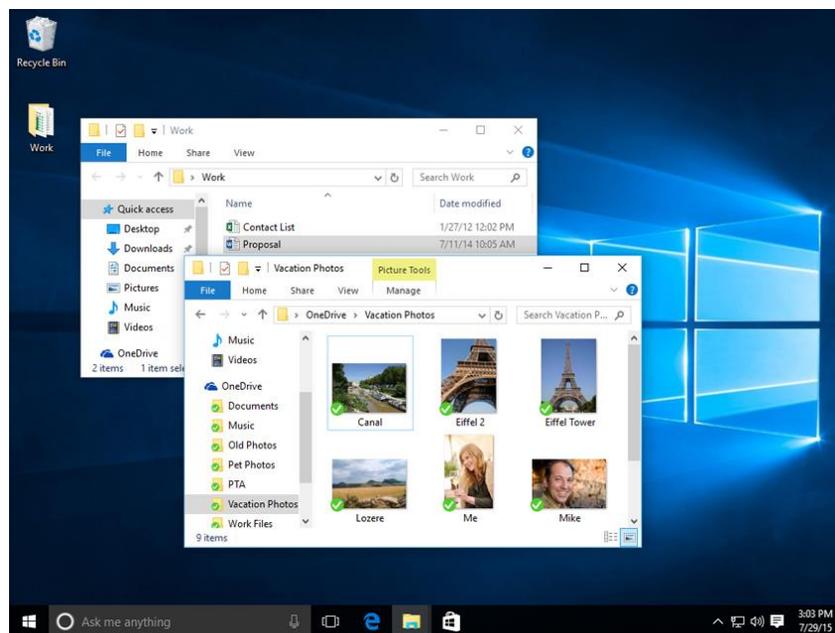
The operating system's job

Your computer's **operating system (OS)** manages all of the **software** and **hardware** on the computer. Most of the time, there are several different computer programs running at the same time, and they all need to access your computer's **central processing unit (CPU)**, **memory**, and **storage**. The operating system coordinates all of this to make sure each program gets what it needs.

Types of operating systems

Operating systems usually come **pre-loaded** on any computer you buy. Most people use the operating system that comes with their computer, but it's possible to upgrade or even change operating systems. The three most common operating systems for personal computers are **Microsoft Windows**, **Mac OS X**, and **Linux**.

Modern operating systems use a **graphical user interface**, or **GUI** (pronounced **gooey**). A GUI lets you use your mouse to click **icons**, **buttons**, and **menus**, and everything is clearly displayed on the screen using a combination of **graphics** and **text**.



Each operating system's GUI has a different look and feel, so if you switch to a different operating system it may seem unfamiliar at first. However, modern operating systems are designed to be **easy to use**, and most of the basic principles are the same.

Microsoft Windows

Microsoft created the **Windows** operating system in the mid-1980s. Over the years, there have been many different versions of Windows, but the most recent ones are **Windows 10** (released in 2015), **Windows 8** (2012), **Windows 7** (2009), and **Windows Vista** (2007). Windows comes **pre-loaded** on most new PCs, which helps to make it the **most popular operating system** in the world.



Mac OS X

Mac OS is a line of operating systems created by Apple. It comes preloaded on all new Macintosh computers, or Macs. All of the recent versions are known as **OS X** (pronounced O-S Ten), and the specific versions include **El Capitan** (released in 2015), **Yosemite** (2014), **Mavericks** (2013), **Mountain Lion** (2012), and **Lion** (2011).

According to StatCounter Global Stats, Mac OS X users account for less than 10% of global operating systems—much lower than the percentage of Windows users (more than **80%**). One reason for this is that Apple computers tend to be more expensive. However, many people do prefer the look and feel of Mac OS X over Windows.



Linux

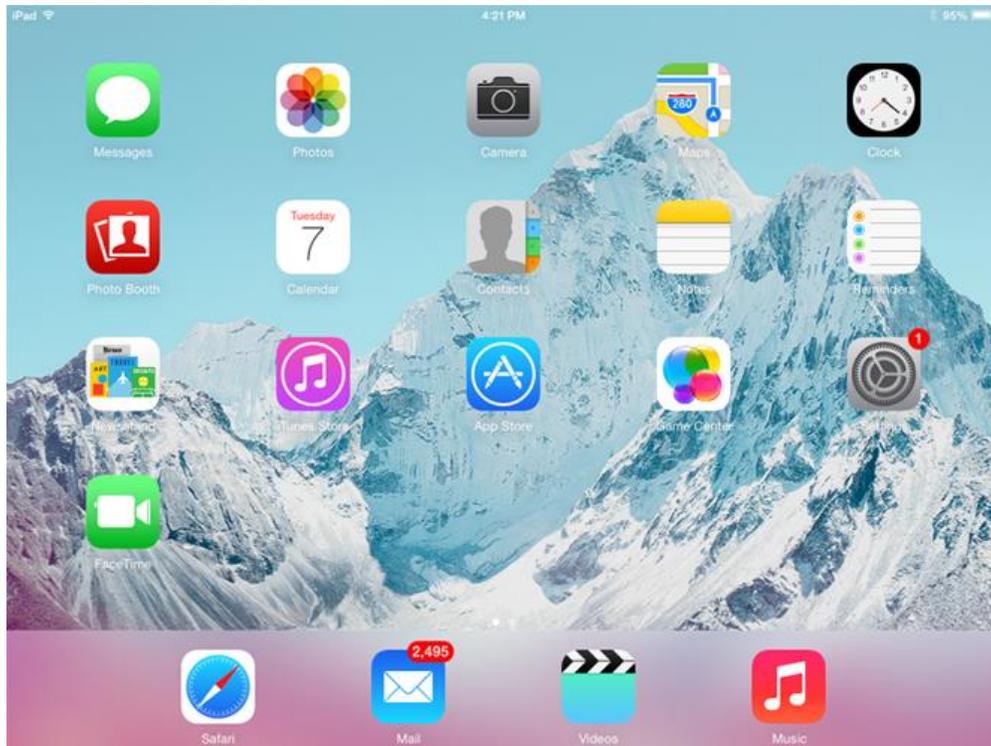
Linux (pronounced **LINN-ux**) is a family of **open-source** operating systems, which means they can be modified and distributed by anyone around the world. This is different from **proprietary software** like Windows, which can only be modified by the company that owns it. The advantages of Linux are that it is **free**, and there are many different **distributions**—or versions—you can choose from.

According to StatCounter Global Stats, Linux users account for less than **2%** of global operating systems. However, most **servers** run Linux because it's relatively easy to customize.



Operating systems for mobile devices

The operating systems we've been talking about so far were designed to run on **desktop** and **laptop** computers. **Mobile devices** such as **phones**, **tablet computers**, and **MP3 players** are different from desktop and laptop computers, so they run operating systems that are designed specifically for mobile devices. Examples of mobile operating systems include **Apple iOS** and **Google Android**. In the screenshot below, you can see iOS running on an iPad.



Operating systems for mobile devices generally aren't as fully featured as those made for desktop and laptop computers, and they aren't able to run all of the same software. However, you can still do a lot of things with them, like watch movies, browse the Web, manage your calendar, and play games.