

Computer Software

If hardware is all of the parts of the computer that can be touched, the software is everything else. Consider your mind. Your brain can be touched, but your thoughts can't. Software includes all of the instructions and data that run the computer and all of its programs.

Platforms...

The main platform of a computer is also known as its **operating system**. The operating system provides the structure under which other programs run.

Like the poles of a tent, the platform must be in place before anything really works. The two most common operating systems are Microsoft Windows and Mac (Macintosh). Current systems for Windows include *Windows 7* and *Windows Vista*. The current Mac system is *Mac OS X*. There are other systems, such as Linux, Unix, IBM, and *Google Chrome OS*.

Mobile devices also have platforms.. Some of these include Android, BlackBerry OS, iOS (as in iPad and iPod), and several others. The platforms allow applications, also called apps, to run.

Generally speaking, programs designed to work on one operating system will not work on another. Many programs will have different versions for different operating systems. Also, there may be competing programs – one that runs on PC or Windows computers, and one that runs on Macs.



Symbols and Simplicity...

The earliest computers used only text, but as they improved, pictures became more common. This led to the invention of the **icon** system for programs. An icon is a small picture that represents a program.



Menus...

Most software programs on a computer use menus. A menu in a restaurant gives you choices of what to eat. In a program, a menu gives you choices of various actions to perform. At the top of a web page, you may see a series of icons in a row. This is a menu of actions. Menus may also come in the form of words, such as "File", "Edit", "View", "Help", and others. Many times, each menu choice has additional choices buried within it. These will appear as sub-menus.

Types of Software...

Software comes in many forms and is written in many languages. One type of software is **system software**. This is the same thing as the platform or operating system. It houses the other software on the computer.

Another type of software is called **programming software**. These are support programs that help the system. They can be used to debug (fix) a main program, or can be used to help a programmer write a program. When I made my website, I used programming software to help me code and organize the pages.

The software you probably work with most is **application software**. This is the most common type of software. Applications are used to perform a task such as viewing a web page, writing a document, drawing a picture, or listening to music.

Specialized Tasks...

Some programs on the computer must be used for maintenance. These include virus software, defragmenters, backups, and similar programs. These are application programs meant to help the computer run better.

Multitasking...

When invented, computers were not meant to do more than one task at a time. The CPU, or central processing unit, can do one thing at a time only, but it does it so quickly, you wouldn't know. For example, if you have a computer playing a video while you're browsing the Internet and typing a paper, it looks like the computer is doing three things at one time, but it is merely switching very quickly between the three. If you've ever had a computer doing too many things at once, you've probably noticed some lag in audio or video functions, or delayed time in accessing the 'Net.

As demands have increased, designers have been adding more than one processing unit. The multiple CPU machines are called multiprocessors. These can handle many more events happening at the same time.

New Software...

When you install new software, always make sure it comes from a reliable source. For application software, they are meant to be played with. They are actually hard to damage, so feel free to experiment. You may occasionally mess up a document or two, but the odds of you causing permanent damage is very low. Good luck with new software!