

When You Turn On Your Computer-

1. Power Supply-

The power supply converts AC current into DC current. It also reduces (steps down) the 110-120 volts to either 3.5, 5, or 12 volts.

There are many wires running from the power supply to the various computer components.



2. BIOS-

The CPU or *Central Processing Unit*, starts the BIOS or *Basic Input Output System*, which is firmware (software embedded in hardware) located on the CMOS chip.

The CMOS chip is powered by a CMOS battery when the computer is turned off so that the settings stored in the CMOS Ram (which is volatile) are not lost.

These settings include the date and time, which hard drives are present, and how the parallel port is configured.

The Rom (Read Only Memory) BIOS holds the basic software to start a PC and begin the process of loading the Operating System.



Phoenix and *Award* are two manufacturers of BIOS chips.



The BIOS runs POST and then boots the OS.

3. POST-

The first thing that the BIOS does when the PC boots is to perform the Post or *Power On Self Test* . When the PC goes into POST, it checks your hardware to ensure that everything is present and functioning properly, before the BIOS begins the actual boot process of the Operating System.

4. Operating System-

The Operating System is software and is normally located on the hard drive, but can also be on a CD or Flash Drive.

Operating Systems include Microsoft Windows 98, XP, and Windows 7, as well as Apple's Mac OS and Linux's Ubuntu.

Operating Systems have a Shell and a Kernel.

The *kernel* is a program that constitutes the central core of a computer [operating system](#). It has complete control over everything that occurs in the system.

A kernel can be contrasted with a [shell](#) (such as *bash*, *csh* or *ksh* in [Unix-like](#) operating systems), which is the outermost part of an operating system and a program that interacts with user [commands](#). The kernel itself does not interact directly with the user, but rather interacts with the shell and other programs as well as with the hardware devices on the system, including the processor (also called the central processing unit or CPU), [memory](#) and disk drives.

-<http://www.linfo.org/kernel.html>

Computer OS Running-

What is outputted to your Monitor or Printer, etc... goes first from the Operating System to the RAM memory or *Random Access Memory*.



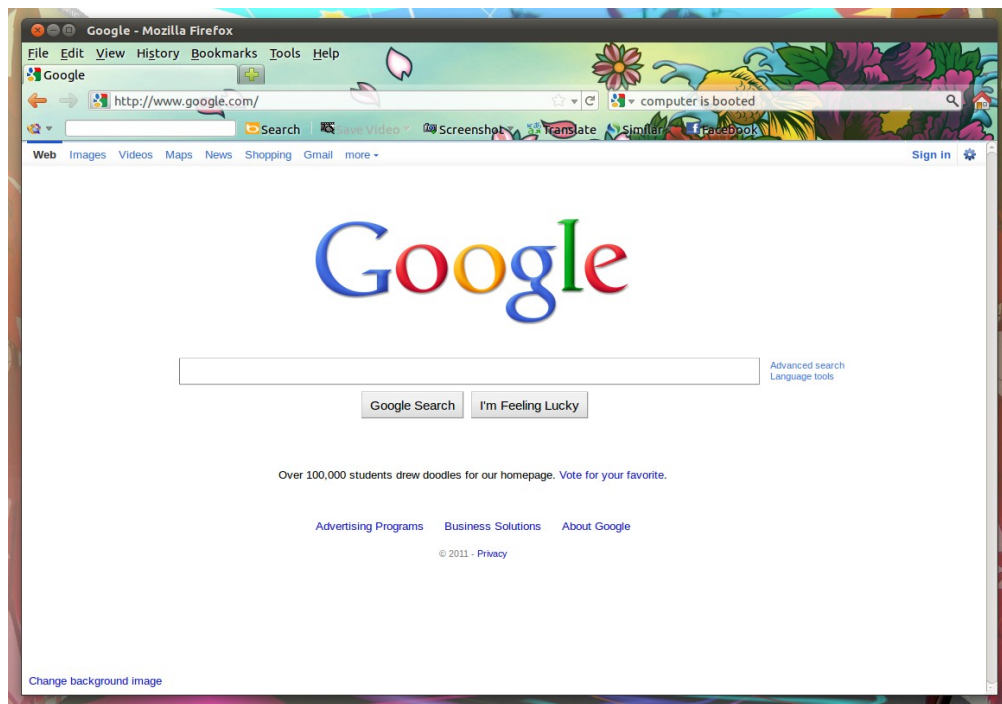
512 MB RAM memory

From there it is sent to the CPU or *Central Processing Unit* to be processed. The RAM memory is actually the primary storage used when processing as it is much faster to access. The storage is volatile though so when your computer gets turned off it is then lost.



AMD and Intel make CPUs.

The CPU is the most important piece of hardware on the motherboard because, as its name implies, it is the central processing unit for all processing done on your computer.



“Output” on the Computer Monitor

-Dennis L. Weaver May 5, 2011