# Operating Systems

# What makes a computer work

| Operating Systems | |
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| **OS** | Simply explained it is a system of 1's and 0's(Binary Code) that tell the hardware(computer parts) what to do. There are many different Operating Systems. The one that is on the computer is Windows 2000. Some others are listed below. |
| **DOS** | Disk Operating System This was the first Operating system developed by IBM that started the personal computer. |
| **Windows** | WINDOWS - A rectangular shaped area on the screen of any GUI( graphical(pictures) user interface ) that contains a program. It also refers to a family of operating systems developed by Microsoft. The family includes Windows 3, 95, 98, Me, NT, 2000, XP, and 2003.<br><br>A graphical user interface (GUI ) developed by Microsoft for DOS (Disk Operating System), sometimes called MS-DOS, the standard operating system for IBM-PC's. The operating system is the software that controls the computer hardware, manages program operations, and handles the flow of data to and from storage devices and peripherals. |
| **Macintosh** | Macintosh: This is the name of the computers that are made by Apple Computer. The first Macintosh was introduced in 1984 and was seen as a major change in computing ease-of-use. The Macintosh was one of the first personal computers to use a graphical user interface (GUI), which allowed the user to interact with the operating system by using a mouse to click and drag objects. |
| **Linux** | Linux for example is a community driven Operating system allowing everyone to contribute.<br>Linux is a Operating System (OS -Similar to Windows or MAC) is a free open source software and build by the online community. Meaning that anyone with programming experience can work or change their own Linux Operations System functionality. This Operating system is still hard to control and is in the testing stages. |

| Understanding Storage | |
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| **Binary Number** | A binary number is a system like counting numbers 123456789 but this system used 0 and 1 only<br>0 = 00110000<br>1 = 00110001<br>2 = 00110010<br>3 = 00110011<br>100 = 00110001 00110000 00110000<br>The difference to counting numbers is Binary numbers can also mean letters like A B C<br>A = 01000001<br>B = 01100010<br>C = 01100011 |
| **What is Data** | it is the things you make on a computer. Like a list of your addresses, a picture, any kind of information that is entered into the computer. |
| **Bit** | The Smallest Unit. A series of 8 bits, which represent a single character. |
| **Byte** | A group of data bits that are processed together. Typically, a byte consists of 8 bits. There are kilobytes, Megabytes, Gigabytes, Terabytes, etc. |
| **Kilobyte (KB)** | 1000 Bytes |
| **Megabyte (MB)** | A kilobyte (or 1 KB) represents 1024 bytes. A megabyte (1 MB) represents 1024 KB. A gigabyte represents 1024 MB |
| **Gigabyte (GB)** | 1000 megabytes |
| **8 Bits = 1 Byte**<br>**1000 Bytes = 1 Megabyte**<br>**1000 Megabytes = 1 Gigabyte** | 1 Byte = 8 bits 1 kilobyte = about 1,000 bytes 1 Megabyte = about 1,000,000 bytes 1 Gigabyte = 1,000,000,000 bytes 1 Terabyte = 1,000,000,000,000 bytes |

BIT = 0 or 1 (short for binary digit) Nybble = 4 bits (This is half a byte, so it is a nybble! :-) Byte = 8 bits (1 character of ASCII text).

WHEW!! All this number stuff is boring.. Just know.. That the computer does very fast things because of these numbers. If it wasn't for these numbers we couldn't do the really cool stuff you see in the world today.