CHEAT SHEET

FOR BASIC WINDOWS CLASS

**RAM**

RAM stands for Random Access Memory. It is where all of your programs get loaded when your computer boots up. Any application that is running is loaded into RAM. When you are working on a file, that file is also loaded into RAM. RAM is temporary however. When your computer is on, RAM is loaded and filled, but when your computer gets turned off, all of the information in RAM is lost. It is like a big bucket. When the PC turns off, the bucket spills over and the data in the bucket is lost. It is erased! RAM comes on chips that normally go on the motherboard. You can add more RAM by purchasing more RAM chips (as long as the board can handle more)

**ROM**

Read Only Memory. It is nonvolatile. In other words, ROM information is permanent. It is recorded on the circuits of the chips during manufacturing and cannot be erased (normally). Your computer uses ROM to store instructions and programming. ROM consists of memory chips that are acid-etched into the chips at the factory. The programs on a ROM chip (sometimes called FIRMWARE) are permanent; they cannot be changed.

**EEPROM** (or Flash ROM) do enable their programs to be changed. On EEPROM chips, a higher voltage is applied to one of the pins to erase its previous memory before a new instruction set or data is electronically written. **EPROM** (erasable programmable ROM) chips can also have their programs changed. They have a special window where the current memory contents can be erased with a special ultraviolet light, so that the chip can be reprogrammed. Many BIOS chips are EPROM.

**GETTING TO A DOS PROMPT**

When you talk about DOS, you must talk about a DOS prompt. In Windows 9x, there are 2 main ways to get to a prompt. They are:

1. Click on START / PROGRAMS / MS DOS PROMPT. When you do this method, you will see that Windows is still running. You will have on the taskbar the DOS prompt button. Most DOS commands will run in this mode
2. Click on START / SHUTDOWN / RESTART IN MS DOS MODE.. This method is where you cannot even tell that Windows is running. For the most part, it isn’t. If you truly want to SCANDISK and DEFRAG (you will learn these terms later) then this is the best place to do them. To get back into Windows from here, you must type EXIT.

Here are some examples of prompts:

C:\>

C:\WINDOWS>

Notice that a prompt is made up of a drive letter, possibly a directory or subdirectory name and then a greater than sign (>)

**BOOTING THE COMPUTER IN DOS/WIN 95/98**

The BOOT PROCESS is partly performed by the startup BIOS and then completed by the OS. The BIOS Startup program checks the hardware to make sure it’s ready to be used; the user provides specific instructions to the software on what to do; and the software interacts directly with the CPU, which controls the various underlying mechanisms that make the computer work as intended.

COLD BOOT: The process of getting the computer up and running. Booting the system by turning it on is called a COLD BOOT.

1. The computer will first go through a start-up routine (Power On Self Test- POST) that is recorded on the ROM chip. It first loads instructions into RAM for the CPU to follow. These instructions tell the computer to perform a quick self-diagnostic check of the hardware.
2. Next, the POST checks to see that the system setup is still valid. It does this by using the CMOS.
3. It next loads the operating system. These files are loaded in this **ORDER**:

IO.SYS

MSDOS.SYS

CONFIG.SYS (never required to boot)

COMMAND.COM

AUTOEXEC.BAT (never required to boot)

A successful POST test will have 1 beep. If you hear more than 1 beep, then there is a problem somewhere in the system. (Compaq’s have 2 beeps)

WARM BOOT: The process of getting the computer up and running by pressing the RESET button or by pressing the ALT-CTRL-DEL keys all at the same time (3 finger salute). The only thing that the Warm boot does not do is the POST test. (Oh and yea, sometimes the Physical RAM may not get cleared out)

If you click on START / SHUTDOWN / RESTART and hold down the SHIFT key, it will not re-load the AUTOEXEC.BAT and CONFIG.SYS files. The system will simply say WINDOWS IS RESTARTING.

**DRIVES**

A drive is a location where files and data are stored. DOS refers to a drive with a letter of the alphabet and a Colon (:).

FLOPPY DRIVE: A floppy drive is used to store data for backups and easy portability of data. In the olden days, the drives were 5 ¼” in size. They are now normally 1.44m in size (the old ones were 720k and the new LS120 is 120M) Floppy drives are referred to as DRIVE A: and DRIVE B: (if there is a second one)

Examples are: A: Or B:

|  |  |  |
| --- | --- | --- |
| **DRIVES** | **CAPACITY** | **CAPACITY** |
| 5 ¼” (old technology) | 360k | 1.2M |
| 3 ½” | 720K | 1.44M |
| LS120 3 ½” | 120M can also read 1.44M |  |

HARD DRIVES: A hard drive is where you can store all of your programs, along with the operating system and your data. A hard drive is normally anywhere between 2GIG - 10GIG+ in size. Hard drives normally take on the next consecutive letters of the alphabet.

Examples are: C:

D:

Z:

OTHER DRIVES

CD-R, CD-RW, DVD, ZIP, JAZZ, TAPE. These drives normally take on the next consecutive letter after the hard drive. Keep in mind that you can however use any letter to associate with these drives, except for A and B.

**DIRECTORY STRUCTURE**

You as a user have the ability to separate the drive into sections or parts. This process of naming different parts of a drive is called creating a directory structure. DOS called these Adivisions@ DIRECTORIES and SUB-DIRECTORIES and Windows calls them FOLDERS and SUB-FOLDERS.

The ROOT DIRECTORY is the initial directory on a drive. It is not given a name, but it is referred to as the Root directory and it is referenced by a single back slash (\). For example: C:\

DIRECTORY

A directory is a name given to a section of the hard drive that is not the root. Examples of directory names are C:\WINDOWS, C:\DOS, C:\DATA. Notice that a directory when referenced has a letter of a drive, a backward slash, and then the name of the directory or folder.

The SUB-DIRECTORY: A sub-directory is a directory within another directory.