

**Lecture 1**  
**Jargon**  
**Hardware**

<b>ASCII</b>	American Standard Code for Information Interchange. An encoding scheme by which characters are represented by numbers. For example, 'A' is represented in decimal as 65. 7-bit ASCII supports 128 different characters; extended ASCII supports 256.
<b>bank</b>	A slot into which RAM is inserted.
<b>base-10</b>	A system for representing numbers with sequences of digits, each of which can take on one of ten possible values (0 through 9).
<b>base-2</b>	A system for representing numbers with sequences of digits, each of which can take on one of two possible values (0 or 1).
<b>binary</b>	See base-2.
<b>BIOS</b>	Basic Input Output System. Software burned into ROM that enables a computer to bootstrap itself. Passes control of computer to an operating system after checking RAM, etc. Handles low-level communication with drives, keyboard, printer, etc.
<b>bit</b>	A 0 or 1.
<b>bus</b>	A pathway for data.
<b>byte</b>	Eight bits.
<b>chassis</b>	The case (sides, top, and bottom) and structural support of a computer.
<b>CMOS</b>	Refers to hardware that stores BIOS settings ( <i>e.g.</i> , date, time, boot sequence, etc.).
<b>computation</b>	Calculation ( <i>i.e.</i> , determination by mathematical means).
<b>computer</b>	Something that calculates (produces output from input via mathematical means).
<b>connector</b>	Something that attaches to something else.
<b>cookie</b>	Floppy, circular material inside of a floppy disk.

<b>CPU</b>	Central Processing Unit. The brains of a computer. Speed measured in megahertz or gigahertz.
<b>daughterboard</b>	A logic board that plugs into a motherboard.
<b>decimal</b>	See base-10.
<b>DIMM</b>	Dual Inline Memory Module. Type of RAM found in newer computers. Has 168 pins.
<b>flash</b>	To flash a computer's BIOS is to upgrade it with manufacture-provided software.
<b>game port</b>	Serial port on the back of a PC into which a joystick or the like can be plugged.
<b>giga-</b>	A prefix denoting billion.
<b>hardware</b>	Computer equipment.
<b>heat sink</b>	A metallic construct designed to absorb and dissipate excess heat, most commonly from a processor.
<b>kilo-</b>	A prefix denoting thousand.
<b>L1 cache</b>	Very fast memory usually found "on die" (inside of a CPU). Found in such quantities as 16 KB, 32 KB, etc. Enables CPU to retrieve instructions quickly, avoiding relatively slower RAM.
<b>L2 cache</b>	Pretty fast memory sometimes found "on die" (inside of a CPU), else in the CPU's packaging or on the motherboard.
<b>level-1 cache</b>	See L1 cache.
<b>level-2 cache</b>	See L2 cache.
<b>logic board</b>	A plastic (and often green) board with circuits, chips, and other hardware.
<b>mega-</b>	A prefix denoting million.
<b>motherboard</b>	Main logic board of a computer. "Central artery system" through which almost all hardware communicates.
<b>non-volatile memory</b>	Electronic storage that doesn't require power for preservation.

<b>overclocking</b>	Process by which a computer's CPU is made to run at a higher speed (clock frequency) than intended by the manufacturer.
<b>parallel port</b>	Port on the back of a PC through which bits travel in parallel (8 at a time). Often used to connect printers. (Before USB, scanners, Zip drives, and more were often connected via the parallel port.)
<b>port</b>	A connector on the back of a computer.
<b>POST</b>	Power-On Self-Test. Sequence of steps performed by a BIOS upon startup (memory check, keyboard check, etc.).
<b>processor</b>	See CPU.
<b>RAM</b>	Random Access Memory.
<b>RIMM</b>	Rambus Inline Memory Module. Type of RAM found in newer computers. Smaller than DIMMs. Can be installed singly.
<b>ROM</b>	Read Only Memory. Type of memory found on a computer's motherboard that stores the BIOS. Can be "flashed" with updates.
<b>SDRAM</b>	Synchronous dynamic random access memory. Called synchronous because it is synchronized with the CPU's bus speed.
<b>secondary storage</b>	Non-volatile, writable storage like hard disks, floppy disks, CD-Rs, etc.
<b>serial port</b>	Port on the back of a PC through which bits travel serially (one at a time). Used to connect mice and modems on older computers.
<b>SIMM</b>	Single Inline Memory Module. Type of RAM found in older computers. Oldest version had 30 pins; newer (but now old) version had 72. Has to be installed in pairs.
<b>slot</b>	Fairly long, narrow connector found on some motherboards for CPUs.
<b>socket</b>	Connector found on some motherboards for CPUs. Usually a square containing many, tiny holes for CPU's pins.
<b>system bus</b>	Main pathway on a motherboard along which data travels.
<b>tera-</b>	A prefix denoting trillion.

- USB** Universal Serial Bus. Relatively new, fast bus to which peripherals (digital cameras, printers, keyboards, mice, etc.) can be connected.
- virtual memory** Hard disk space used as though it were RAM.
- volatile memory** Electronic storage that requires power for preservation