

Computer Guts and Operating Systems



CSCI 101 Week Two
Dannelly's Lecture Sections

Numbers

- To computers, everything is a number.
- Binary Numbers
 - 00000001 = 1
 - 00000010 = 2
 - 00000011 = 3
 - ...
 - 10000001 = 65
 - ...
 - 11111111 = 255

Storage Amounts

- Bit = 0 or 1
- Byte = 8 bits
- Kilobyte (KB) = 2^{10} bytes = 1024 = about one thousand
- Megabyte (MB) = 2^{20} bytes = about one million bytes
- Gigabyte (GB) = 2^{30} bytes = about one billion bytes
- Terabyte (TB) = 2^{40} bytes = about one trillion bytes

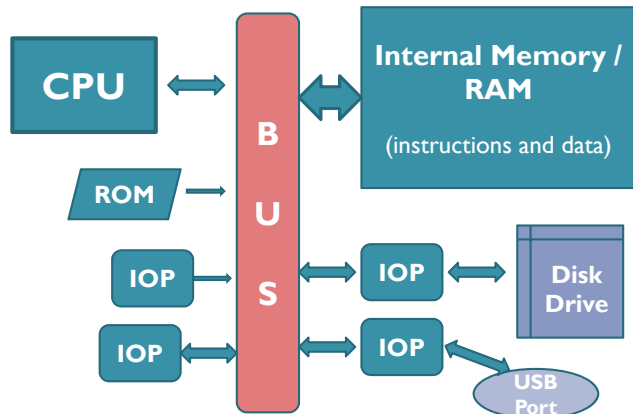


Key Components

- CPU - central processing unit
- Main Memory / RAM
- Input/Output Processors
- Bus
- Motherboard



Internal Diagram



Misc Hardware Terms

- Embedded Computer
- Machine Types:
 - PC
 - Workstation
 - Server
 - Supercomputer

Operating Systems

- Purpose = control all the hardware



- Microsoft Windows vs Mac and Linux

