

Computers: Hardware

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Acknowledgments

Thanks to the following web site for the images used in this presentation:

- Wikipedia
- <http://microsoft.todtverbeek.com>
- <http://www.webopedia.com>
- <http://www.engin.umd.umich.edu/>
- <http://www.dell.com>
- <http://www.intel.com>
- <http://www.apple.com>
- <http://www.ibm.com>
- http://homepages.feis.herts.ac.uk/~msc_ice/unit2/
- <http://www.howstuffworks.com>

Computer Layers


Hardware

BIOS

Operating System

Software

Programming languages



Computer Layers


Hardware

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Software

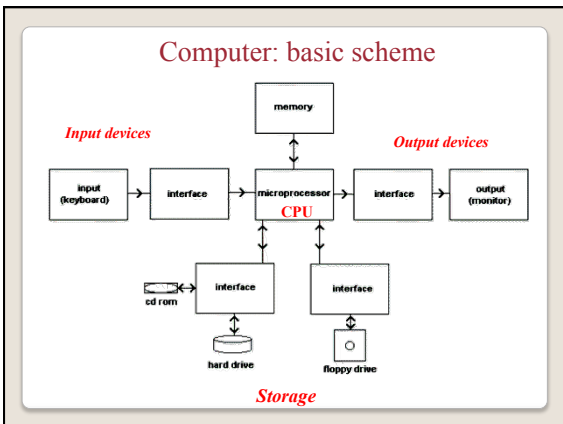
Programming languages



Looking inside a computer...



Computers come in different shapes and sizes, from small laptops (notebooks), desktops to mainframe computers. They all share however the same internal architecture!

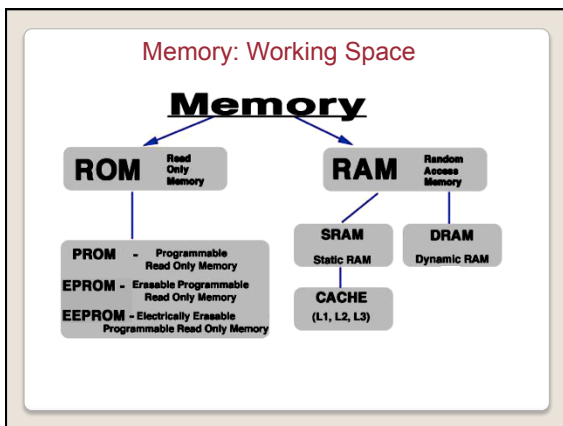








The motherboard:
backbone of the computer
Power supply connector

Slot for memory: RAM
Slot for CPU
Hard drive connectors
Input/Output: Keyboard, Mouse...
Extension cards: Video, sound, internet...

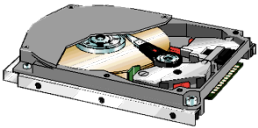



The Central Process Unit (CPU):
The "brain" of the computer

CPUs are getting smaller, and can include more than one "core" (or processors).
CPUs get hot, as their internal components dissipate heat: it is important to add a heat sink and fans to keep them cool.






DRAM PACKAGES	DRAM Types & Uses
	SO DIMM (72, 144 or 200)
	Micro DIMM (144, 172)
	30-pin SIMM — FPM or EDO (Fast Page Mode or EDO)
	72-pin SIMM — EDO (Extended Data Out)
	168-pin DIMM — SDRAM (Synchronous Dynamic RAM)
	184-pin DIMM — DDR-SDRAM (Double Data Rate SDRAM)

Storage

 <i>Hard drive</i>	 <i>Floppy disk</i>
 <i>CD or DVD</i>	 <i>USB key</i>

Communicating with a computer

 <i>Screen</i>	 <i>Keyboard</i>
 <i>Mouse</i>	