

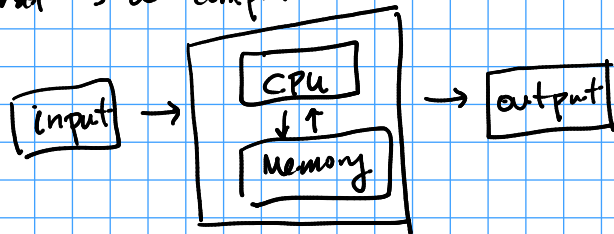
Lecture 2 - Intro to Excel and Python

I. Computing Tools

Outline

- I. Computing Tools
- II. Spreadsheets
- III. Structured Programming

* What is a computer?

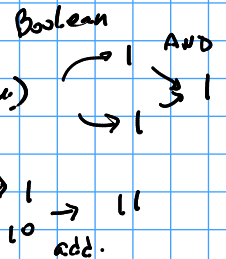


input - mouse, keyboard, touch screen, tablet } I/O

output - screen, printer,

CPU - Central processing unit (CPU)

- Arithmetic logic unit (ALU) - logic (True/False)
- Control unit - execution of ops, communicates w/ mem.



Memory - Information storage. (holding 1's & 0's)

- volatile mem (no power = no storage): RAM
- non-volatile (no power = yes storage): Hard disk, Flash memory

* All computers do the same thing!

Logic, arithmetic, store/retrieve info from memory, I/O
- phone, calculator, laptop, microwave

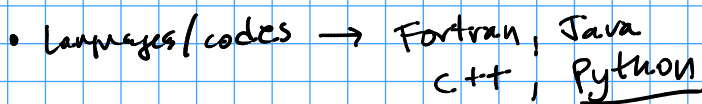
↓
in this class → solve math probs on computers

↓ ↓ ↓
phone laptop supercomputer

* CPU faster, more instructions →

* More memory →

* Numerical tools are pieces of software, built on top of computing machines that can solve math problems.



- Performed sequentially (top $\rightarrow$ bottom)
- Use Spyder.