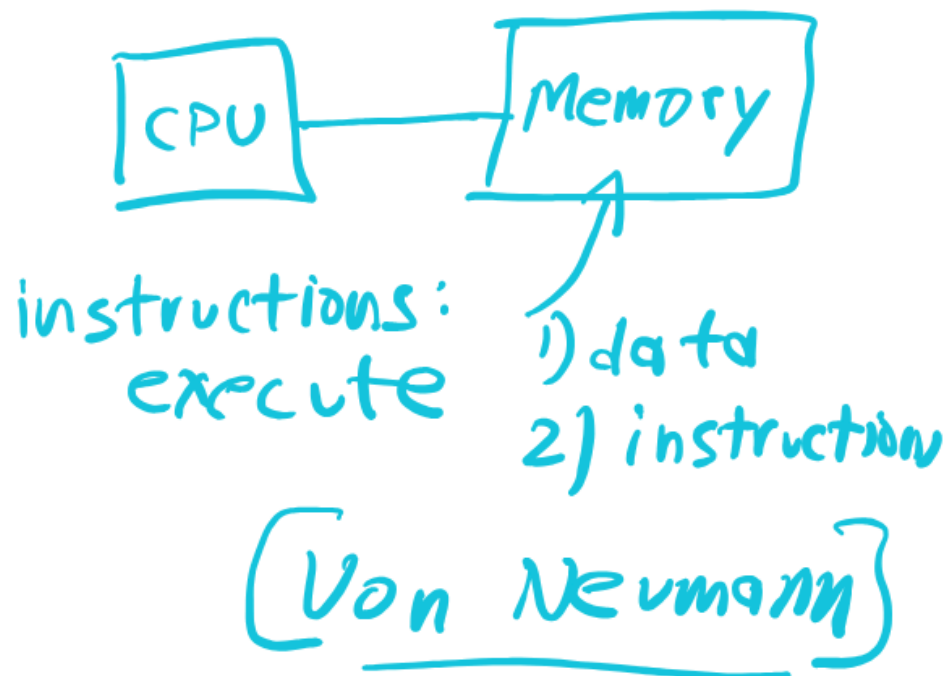How do computers work?
What is an OS?
How does this class work?
Final words

How do computers work?
How do programs run?
CPU => Central Processing Unit, that's where all interesting stuff happens, instructions are executed.
Inside the memory there is Data that we are gonna operate on and Instruction.
the cpu takes instructions out of the memory and it figures out what to do and they operate on data, update the data etc…..
Some instructions on data like Read and write, Loading and storing, branching etc….

modern processors execute like billions of instructions in just seconds

let's think now from program prospective

program have a structured view of memory

when the program runs, it has data and memory that you can access and we call that it,s address space.

but what is an address space ?

it's just a bunch of bites and we address it by number just like for example when you're referring to a byte you just refer it by it`s address which is just a number.

modern address spaces are very big, we have 32 mid address spaces more modern systems 64 bit address spaces