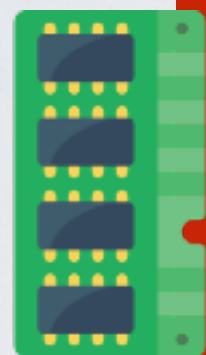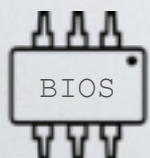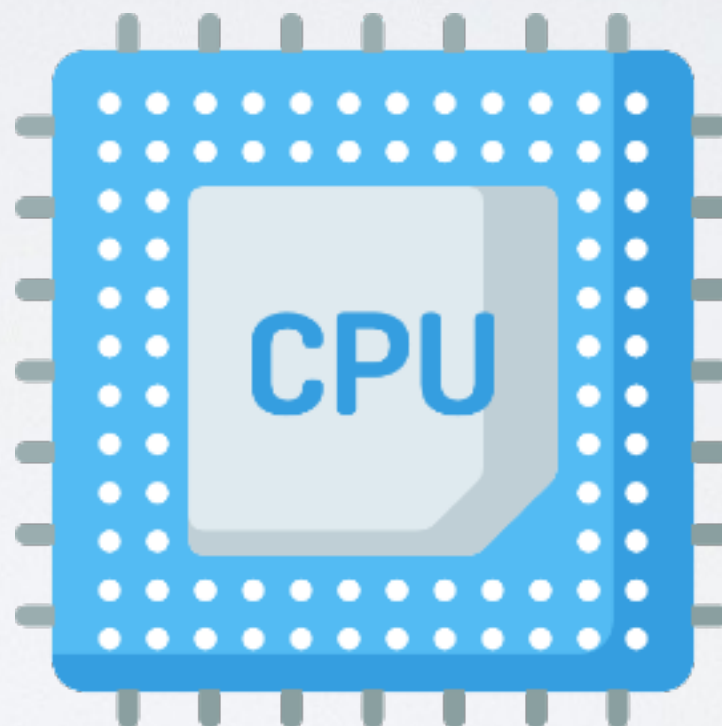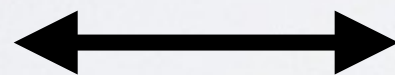0x FF FF FF FF

I/O

RAM

Boot

0x 00 00 00 00

Simple Computer Architecture
Memory + CPU

CPU

for a more accurate and detailed map of the x86 memory
look at https://wiki.osdev.org/Memory_Map_(x86)

Each processor has its Instruction Set Architecture (ISA)

Processor executes instructions stored in memory

➡ Each instruction is a bit string that the processor understands as an operation

- arithmetic
- read/write bit strings
- bit logic
- jumps

✔ ~2000 instructions on modern x86-64 processors