

# 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

0x FF FF FF FF

I/O

stack

stack pointer (esp)

heap

heap

code (text)

instruction pointer (eip)

Boot

0x 00 00 00 00

Running one program

