von Neumann architecture
stored program concept

$$0\ 0\ 0\ 0\ 0\ 1\ 0\ 1$$

$$1\ 1\ )\ 1\ 1\ 0\ 1\ 0$$

$$+1$$

$$1\ 1\ 1\ 1\ 1\ 0\ 1\ 1$$

FF · · · · FF FF F B

$0 \times A$

Little endian byte ordering

"Hello. \n"

$\underbrace{}_{\text{Newline}}$

- Instruction format
  - Mnemonic, operands

mov rax,10
mov rbx,0x2cd4 ;

$\underbrace{\text{mov}}_{\text{Mnemonic}}$ $\underbrace{\text{rbx,0x2cd4}}_{\text{Operands}}$

mov $\underbrace{rbx}_{\pi}$, $\underbrace{0x2cd4}_{}$

Destination   Source

qword
dword
word
byte

qword[var1]

ADD dest,src
SUB dest,src
INC dest
DEC dest
NEG dest