

MOS Technology 6502

- 1975. Much less expensive than competitors. — \$25. (in today's \$150).
6x cheaper than competitors.

→ home computing revolution.
(Atari 2600, Apple II, NES, Commodore 64, BBC Micro)

Registers

A (accumulator — like our π register) (8 bits)

X } index registers (8 bits)
Y }

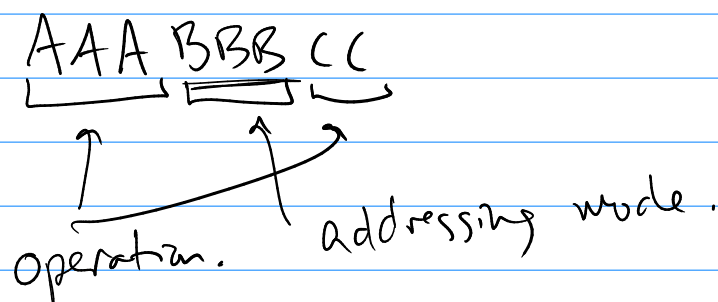
P — processor status bits. (8 bits)

S — stack pointer. (? bits)

PC — (16 bits). 65,536 bytes —
~ 32K instructions.

Instructions.

8-bit instruction codes (opcodes):



Operations:

- Logic
 - ADD, SUB (carry - could chain to add 16-bit values)
 - CMP - Compare 2 values. + set status bits.
 - JMP - unconditional jump.
 - Branch - Conditional relative jump.
 - Shift, rotate
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Addressing modes:

- Immediate - next byte (or 2?) is a constant.
- Absolute - specifies a memory address (2 bytes)
- Zero-page: 1 byte specifies address in first 256 bytes of RAM.
- Indirect: 2 bytes specify mem location + next which stores an address which we then look up.
- Indirect indexed: looks up address in memory, then adds Y register to resulting address + looks that up