S-9 Console project

8BIT

COLORS REPRESENTED BY 1 HEX DIGIT
(16 DIFF COLORS)

1028 bytes RAM (reserved for ROM)

- 1 REG U16
- 16 USABLE S-Registers (8BIT)
- 1 PC 16BIT

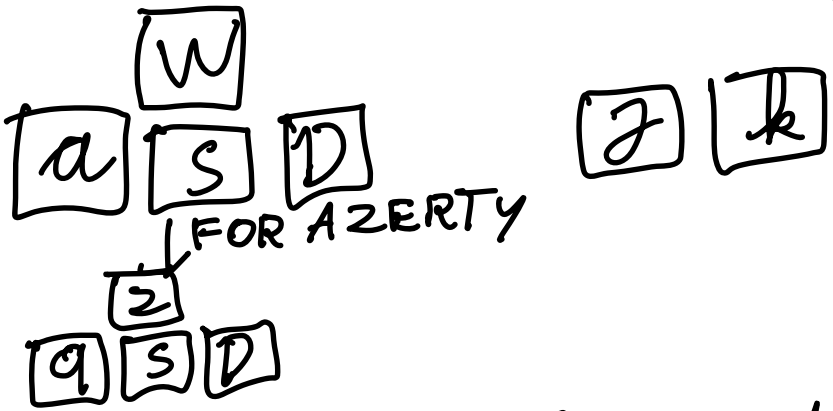
NO SOUND FOR NOW

SCREEN 64x64

DT = COUNTED ONES PER FRAME

KEY LAYOUT

6 keys in total



instructions would be 2 bytes like chip-8

0x 0000

EX: 7XY7 → 7S77 → S(6)+= S(7)

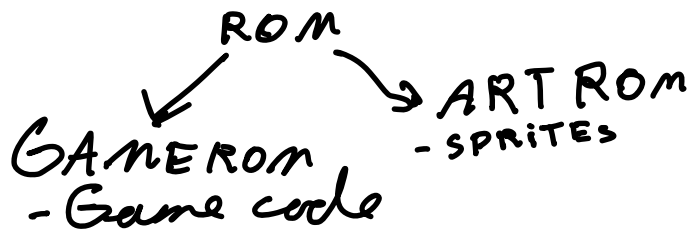
y

sx+=sy

EMU SPECIFICS

Front end: SDL2

Back end: custom rust crate



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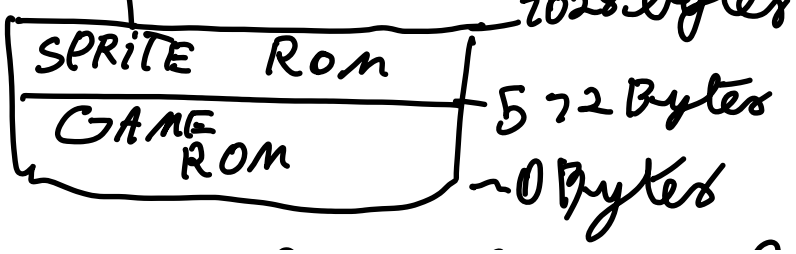
memory map

NOTE REGISTERS should be used to store game data like positions

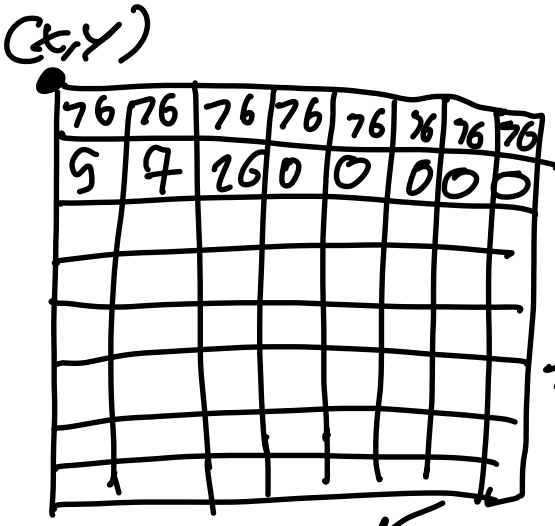


the S-8 console needs 2 ROM files, the sprite file and the game rom file

these would be loaded into memory on start

Sprite structure

sprites are a fixed size 8x8



1 Byte

0x FFFFFFFF

0x57F00000

1 HEX = color of pixel

num = color

8.4 Bytes = 32 Bytes per sprite

that means that we have space for 32 sprites

Color representation

```
0x0 => {
    Color::RGB(0, 0, 0)
},
0x1 => {
    Color::RGB(244, 67, 54)
},
0x2 => {
    Color::RGB(156, 39, 176)
},
0x3 => {
    Color::RGB(103, 58, 183)
},
0x4 => {
    Color::RGB(63, 81, 181)
},
0x5 => {
    Color::RGB(33, 150, 243)
},
0x6=> {
    Color::RGB(3, 169, 244)
},
0x7 => {
    Color::RGB(0, 188, 212)
},
0x8 => {
    Color::RGB(0, 150, 136)
},
0x9 => {
    Color::RGB(76, 175, 80)
},
0xA => {
    Color::RGB(139, 195, 74)
},
0xB => {
    Color::RGB(205, 220, 57)
},
0xC => {
    Color::RGB(255, 235, 59)
},
0xD => {
    Color::RGB(255, 193, 7)
},
0xE => {
    Color::RGB(255, 87, 34)
},
0xF => {
    Color::RGB(255, 255, 255)
```

```
},
_ => {
    Color::RGB(0, 0, 0)
}
```