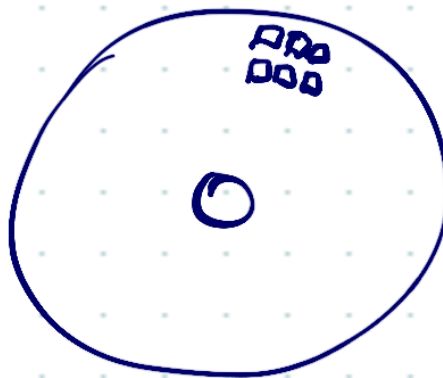
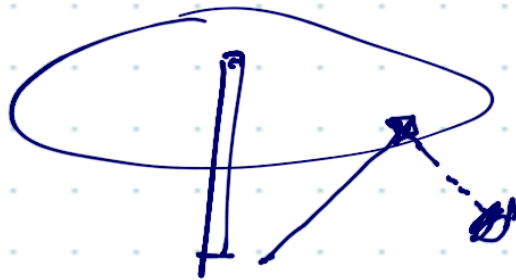


HW

MEMORIA (digitale)

□ BIT (Binary digit)





1° byte

2° byte ...

◦ LOCALITÀ
◦ INDIRIZZI

LOCALITÀ

MEMORIA

0

1

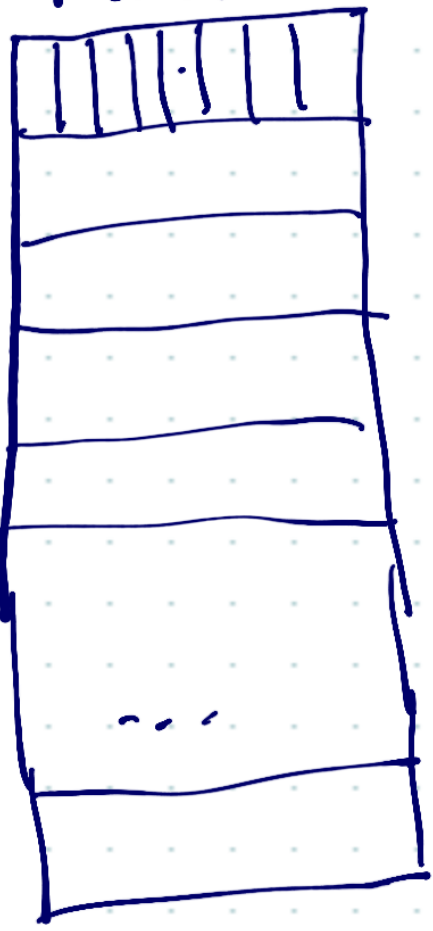
2

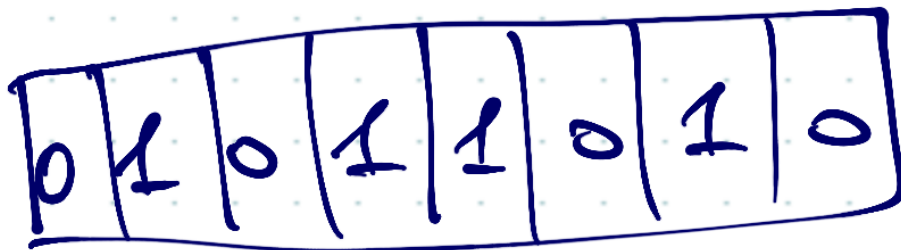
3

4

...

7399





$$2^8 = 256$$

0	0000	0000	}	256
1	1111	1111		
2	1000	1001		
⋮	⋮			
255				

THRASHING

b B

KiB

$$1024 \text{ B} = 2^{10} \text{ B}$$

MiB

$$1\,048\,576 \text{ B} = 2^{20} \text{ B}$$

GiB

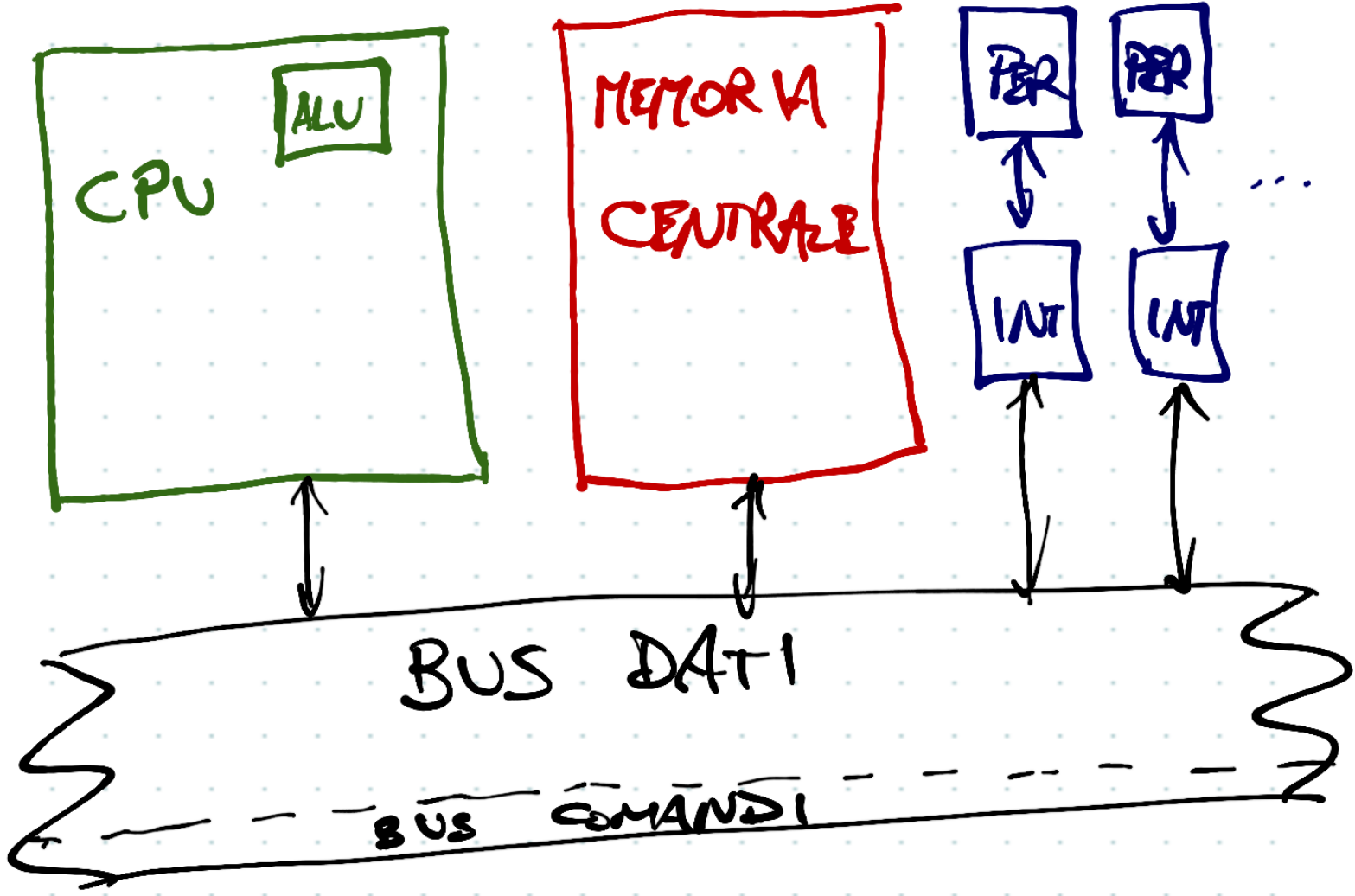
$$1\,073\,741\,824 \text{ B} = 2^{30} \text{ B}$$

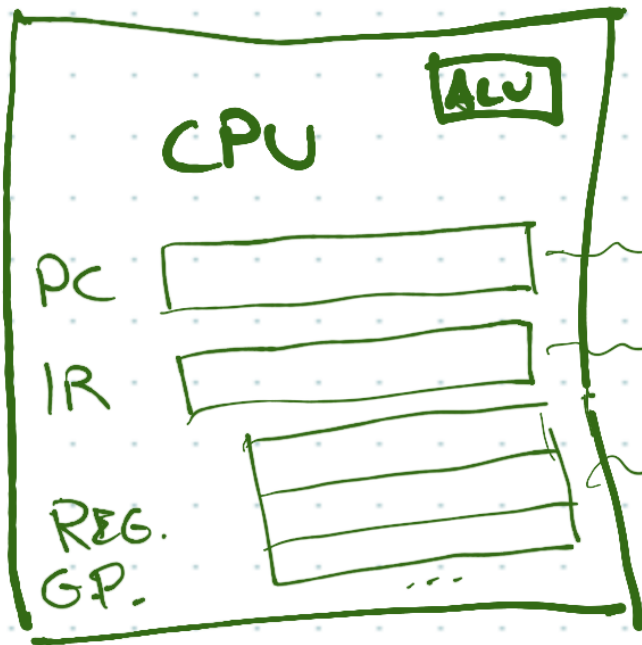
TiB

⋮

PiB

MACCHINA DI VON NEUMANN

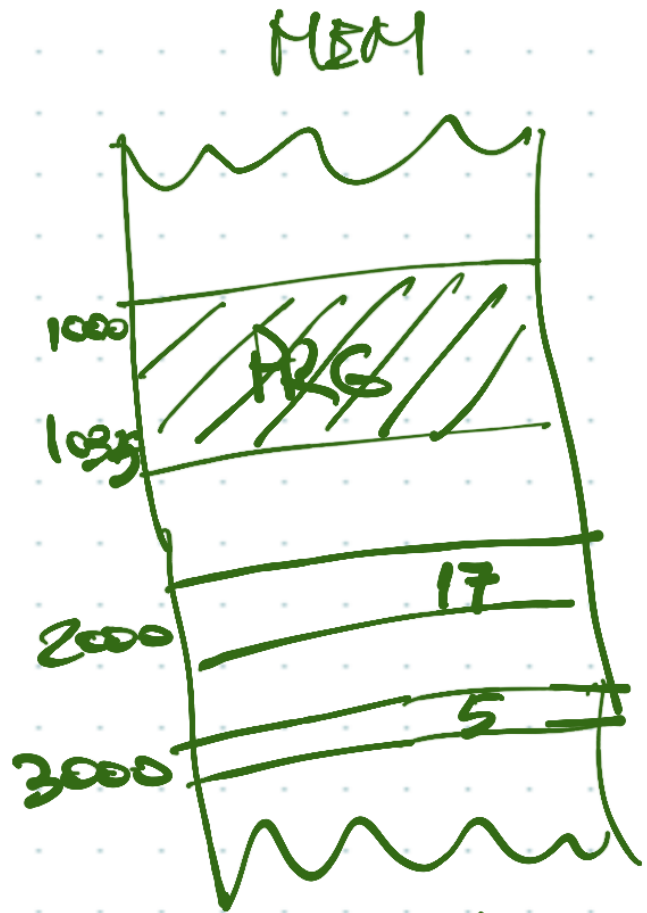
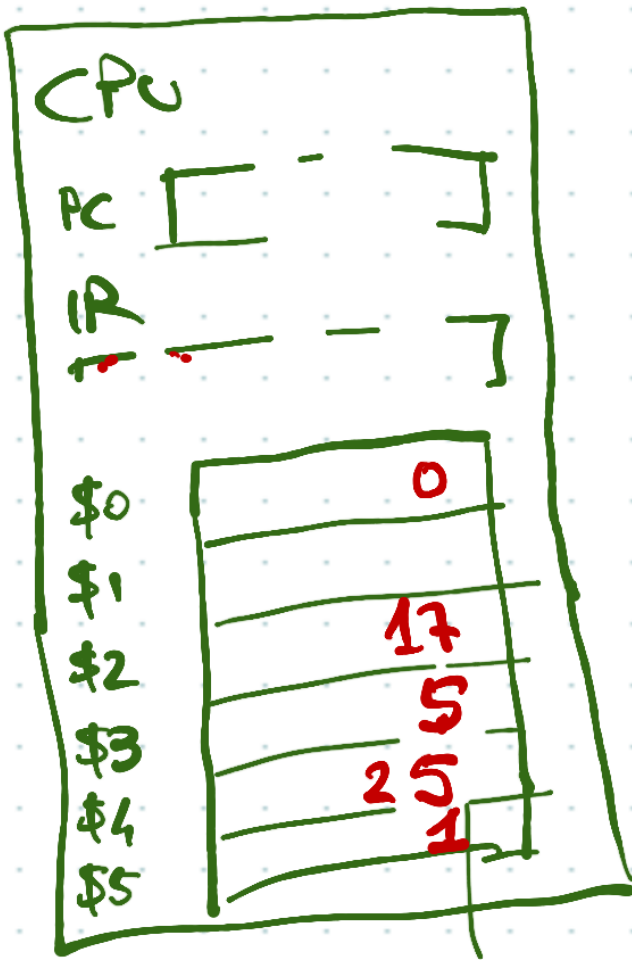




Program Counter
Instruction Register
Registers: General Purpose

CICLO DI
ESECUZIONE

- 1) FETCH
- 2) DECODE
- 3) EXECUTE



1000: lw \$2, 2000(\$0)
 1004: add \$3, \$0, \$0
 1008: add \$4, \$3, \$0
 1012: mult \$4, \$4, \$4
 1016: slt \$5, \$4, \$2
 1020: beq \$5, \$0, +8
 1024: addi \$3, \$3, +1
 1028: j 1008
 1032: sw \$3, 3000(\$0)

\$2 ← 2000
 \$3 ← 0
 \$4 ← \$3
 \$4 ← \$4²
 } if \$4 > \$2
 } -78 + 8 -1 PC
 \$3 ← \$3 + 1