

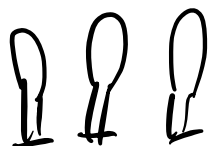
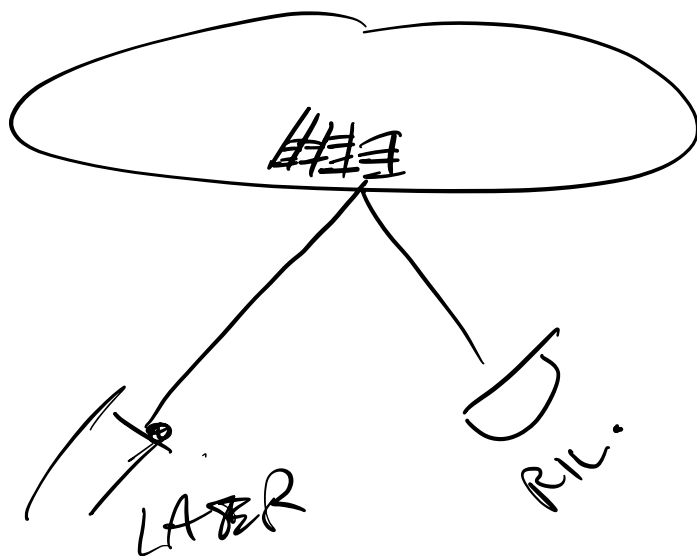
# MEMORIA (DIGITALE)

- BIT (b)



0

1

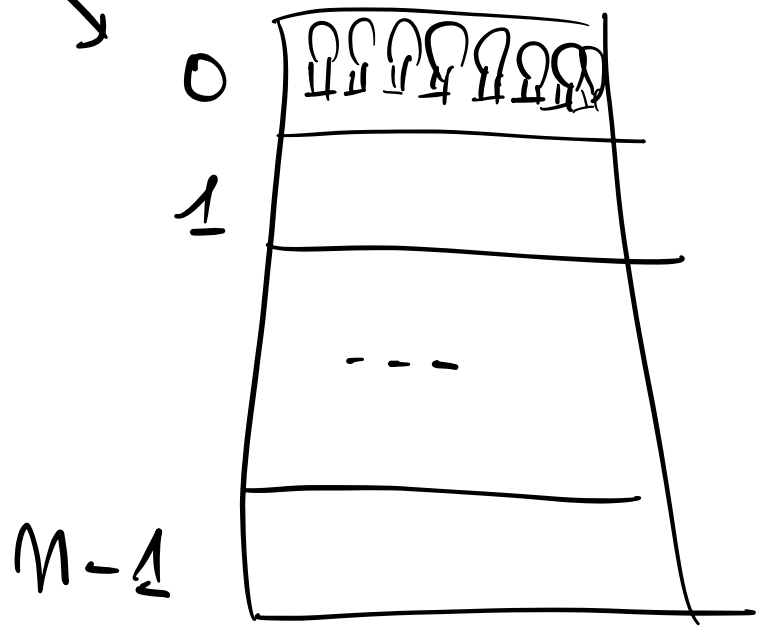


...



- BYTE (B) = 8 BIT

LOCATIONS  
INDIRECT → MEMORIA



0	00000000
1	00000001
2	00000010
3	00000011
	⋮
255	11111111

}  $2^8 = 256$

$$K_i B = 2^{10} B = 1024 B$$

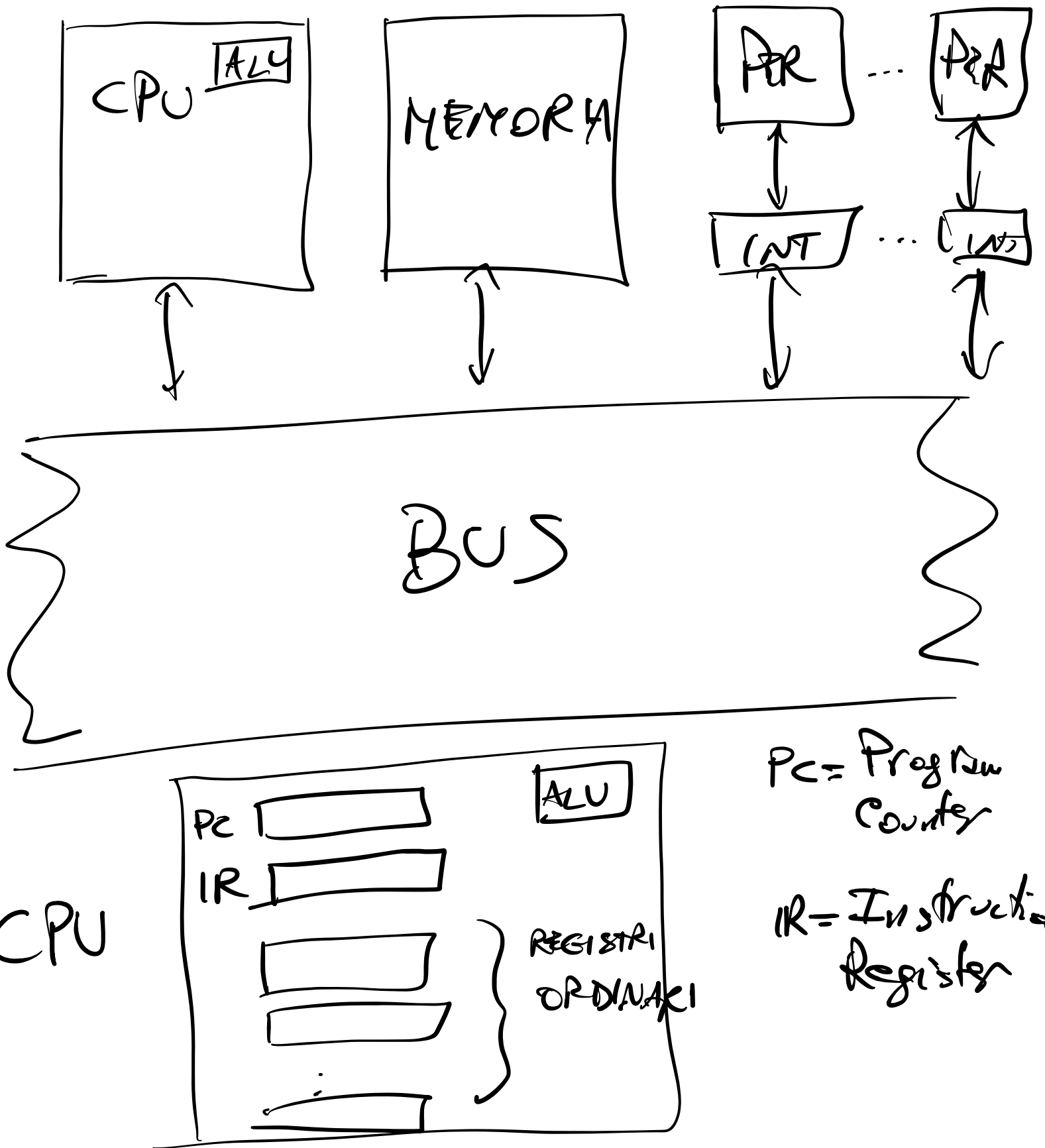
$$M_i B = 2^{20} B = 1,048,576 B$$

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

$$T_i B = 2^{40} B =$$

$$= 1,099,511,627,776$$

# MACCHINA DI VON NEUMANN



# PROGRAMMA

# ASSEMBLY MIPS 32

```

1000: lw $2, 2000($0)
1004: and $3, $0, $0
1008: and $4, $3, $0
1012: mult* $4, $4, $4
1016: [ slt $5, $4, $2
1020: (*) [ beq $5, $0, +8
1024: and $3, $3, +1
1028: j 1008
1032: sw $3, 3000($0)
1036: endp
    
```

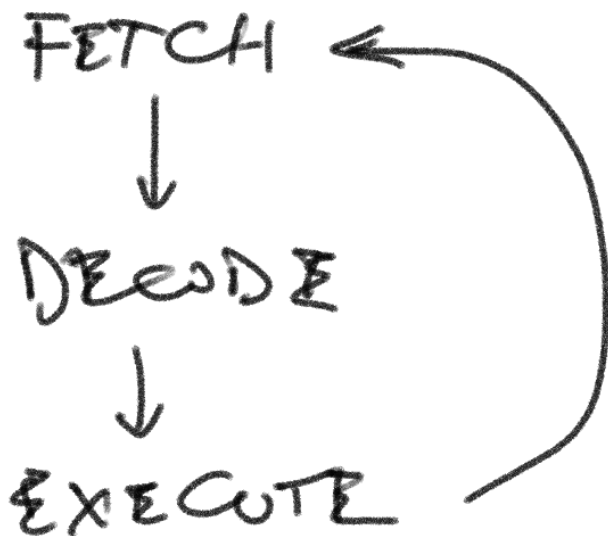
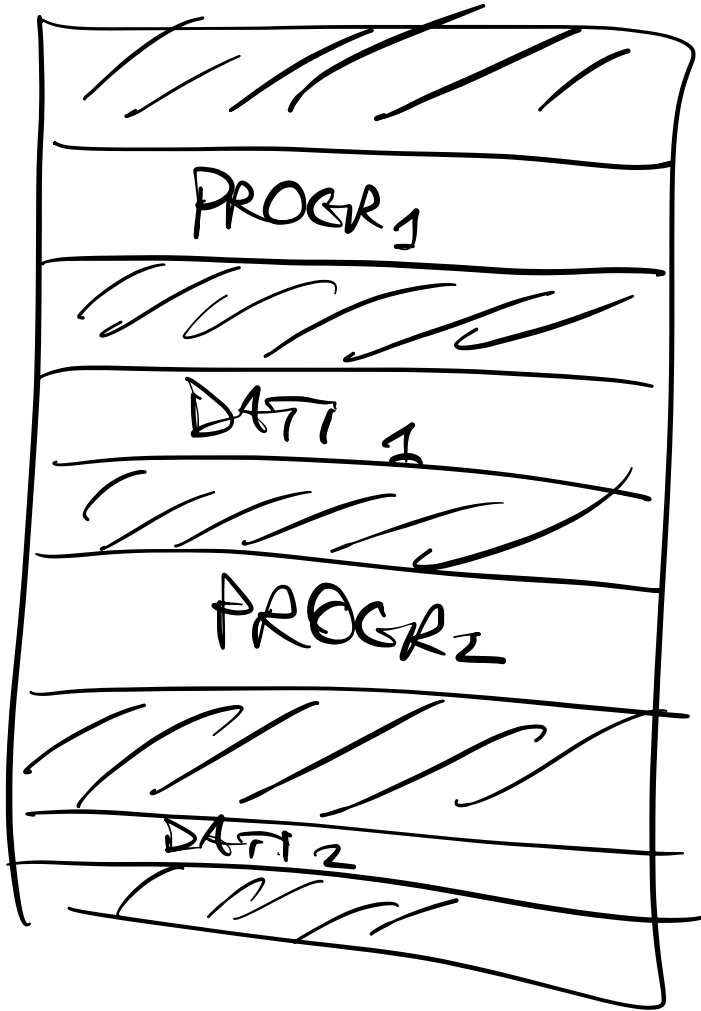


PC		\$3	4
LR		\$4	16
\$0	0	\$5	1
\$1		...	...
\$2	14		

MEMORIA  
CENTRALIZ

⊗ if

\$4 ≥ \$2  
salt a 1032



lw	$\$z, 2000(\$0)$	$\$z \leftarrow 2000 + 0$
add	$\$x, \$y, \$z$	$\$x \leftarrow \$y + \$z$
mult	$\$x, \$y, \$z$	$\$x \leftarrow \$y * \$z$
slt	$\$x, \$y, \$z$	if $\$y < \$z$ $\$x \leftarrow \underline{1}$ else $\$x \leftarrow 0$
beq	$\$x, \$y, \pm v$	if $\$x == \$y$ $PC \pm v$
addi	$\$x, \$y, \pm v$	$\$x \leftarrow \$y \pm v$
j	$v$	$PC \leftarrow v$
sw	$\$x, v(\$0)$	$v \leftarrow \$x$