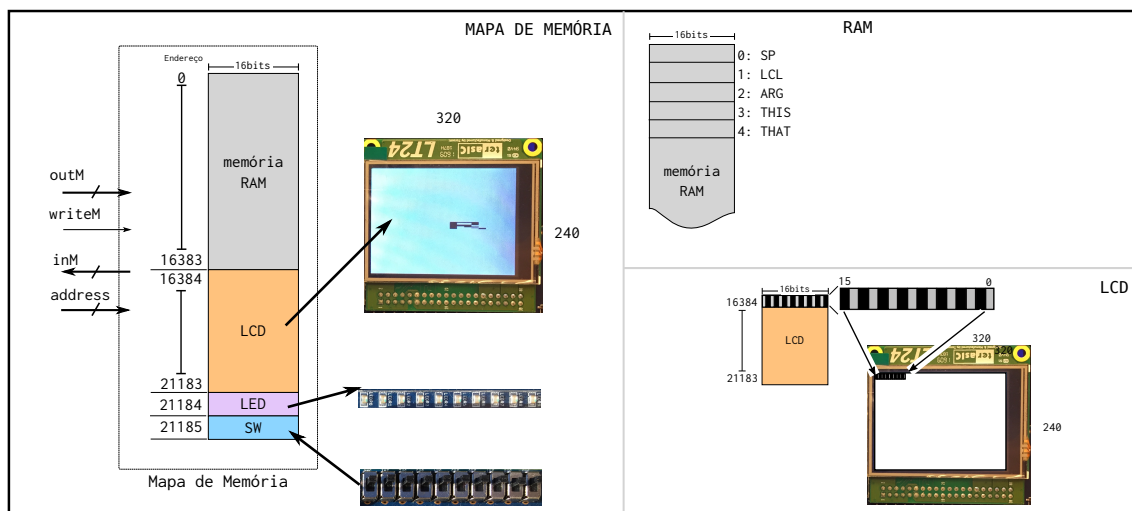
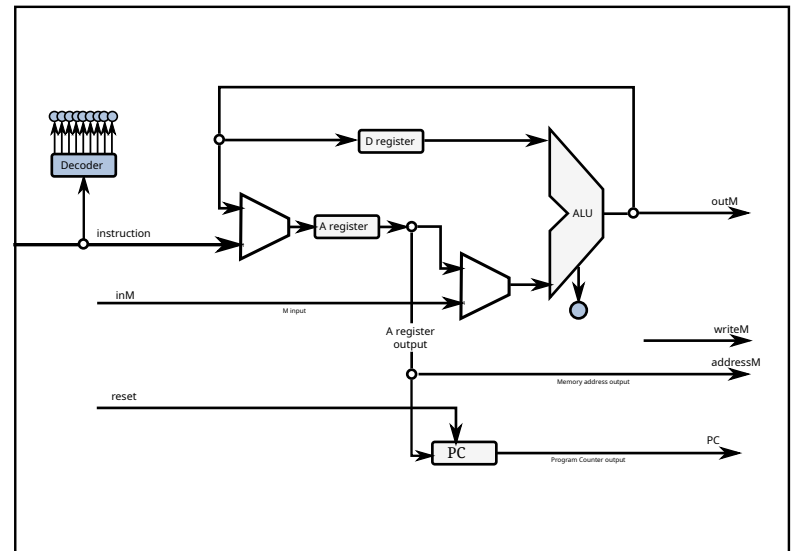
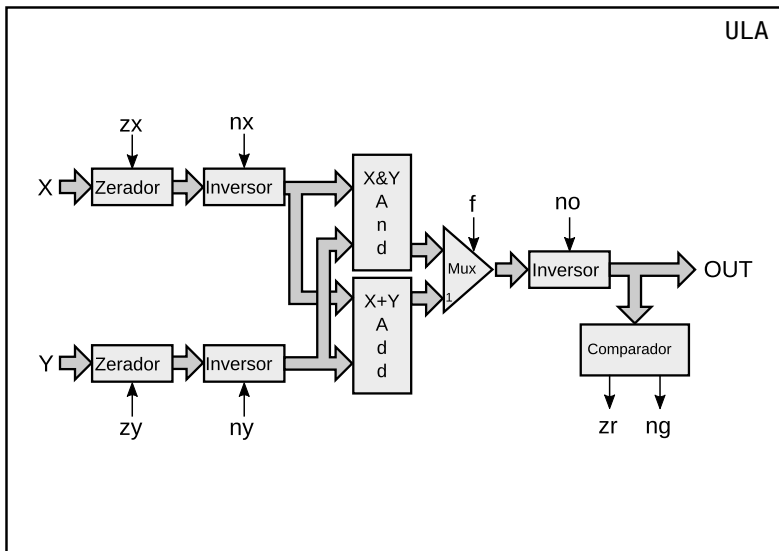
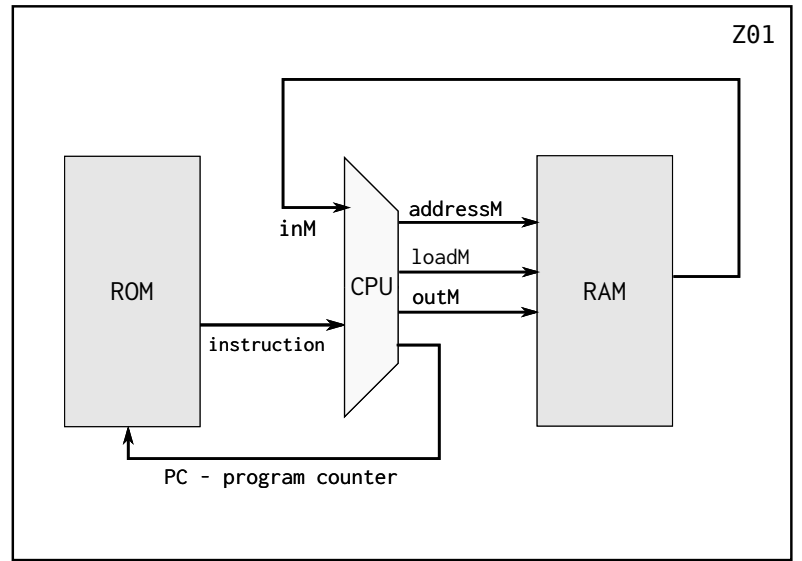
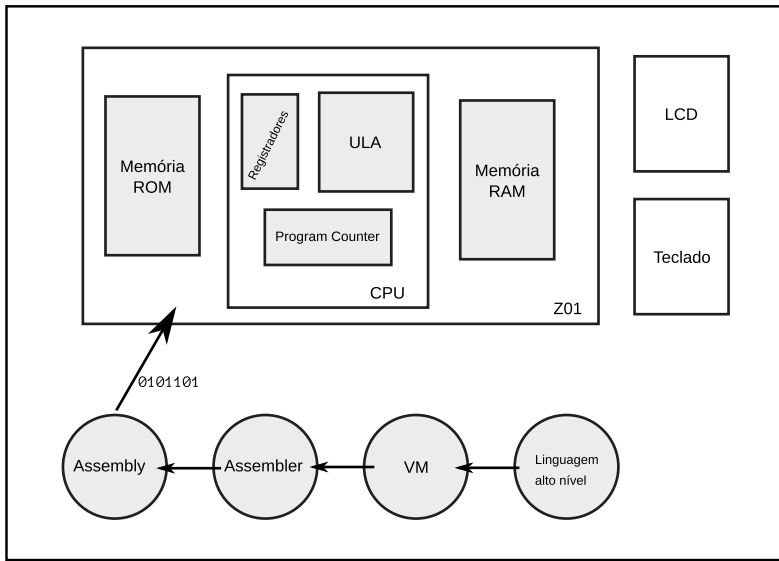


Bits e Processadores

CPU



Linguagem de máquina

Versão Insuper 2020a da arquitetura do livro : Elements of Computer System
nessa versão temos 3 bits a mais no Instruction Set

Instruções do tipo A

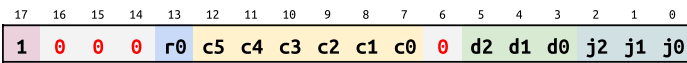
se bit 17 == 0:
transfere 16 bits para o registrador A



[15:0] : Palavra de 16 bits

Instruções do tipo C

se bit 17 == 1:
executa ação



[13:0] : Indica ação a ser executada pela CPU

Cálculo

mux		zx nx zy ny f no					
r0 = 0	r0 = 1	c5	c4	c3	c2	c1	c0
0	-	1	0	1	0	1	0
1	-	1	1	1	1	1	1
-1	-	1	1	1	0	1	0
D	-	0	0	1	1	0	0
A	(A)	1	1	0	0	0	0
!D	-	0	0	1	1	0	1
!A	!(A)	1	1	0	0	0	1
-D	-	0	0	1	1	1	1
-A	-(A)	1	1	0	0	1	1
D+1	-	0	1	1	1	1	1
A+1	(A)+1	1	1	0	1	1	1
D-1	-	0	0	1	1	1	0
A-1	(A)-1	1	1	0	0	1	0
D+A	D+(A)	0	0	0	0	1	0
D-A	D-(A)	0	1	0	0	1	1
A-D	(A)-D	0	0	0	1	1	1
D&A	D&(A)	0	0	0	0	0	0
D A	D (A)	0	1	0	1	0	1

Destino

Dest	(A) D A		
	d2	d1	d0
NULL	0	0	0
A	0	0	1
D	0	1	0
(A)	1	0	0
DA	0	1	1
(A)A	1	0	1
(A)D	1	1	0
(A)AD	1	1	1

Jump

Caso	<0 =0 >0		
	j2	j1	j0
não	0	0	0
JG	0	0	1
JE	0	1	0
JGE	0	1	1
JL	1	0	0
JNE	1	0	1
JLE	1	1	0
JMP	1	1	1