

Green sheet ISA Pipeline CPU

System				
Id			Null	
Type	Op	Null		
31:30	29:28	27:26	25:0	
NOP	00	00	00	000000000000000000000000
COM	00	01	00	000000000000000000000000
END	00	10	00	000000000000000000000000

Data register-register							
Id			Registers			Null	
Type	Op	I	RD	RA	RB		
31:30	29:27	26	25:22	21:18	17:14	13:0	
ADD	01	000	0	xxxx	xxxx	xxxx	0000000000000000
SUB	01	001	0	xxxx	xxxx	xxxx	0000000000000000
AND	01	010	0	xxxx	xxxx	xxxx	0000000000000000
OR	01	011	0	xxxx	xxxx	xxxx	0000000000000000
MOV	01	100	0	xxxx	0000	xxxx	0000000000000000
MUL	01	101	0	xxxx	xxxx	xxxx	0000000000000000
CMP	01	110	0	0000	xxxx	xxxx	0000000000000000

Data register-immediate						
Id			Registers			
Tipo	Op	I	RD	RA	Immediate	
31:30	29:27	26	25:22	21:18	17:0	
ADDI	01	000	1	xxxx	xxxx	xxxxxxxxxxxxxxxxxxx
SUBI	01	001	1	xxxx	xxxx	xxxxxxxxxxxxxxxxxxx
ANDI	01	010	1	xxxx	xxxx	xxxxxxxxxxxxxxxxxxx
ORI	01	011	1	xxxx	xxxx	xxxxxxxxxxxxxxxxxxx
MOV	01	100	1	xxxx	0000	xxxxxxxxxxxxxxxxxxx
MUL	01	101	1	xxxx	xxxx	xxxxxxxxxxxxxxxxxxx
CMPI	01	110	1	0000	xxxx	xxxxxxxxxxxxxxxxxxx

Memoria						
Id			Addressing			
Type	Op	Null	RD	RA	Immediate	
31:30	29	28:26	25:22	21:18	17:0	
LDR	10	0	000	xxxx	xxxx	xxxxxxxxxxxxxxxxxxx
STR	10	1	000	xxxx	xxxx	xxxxxxxxxxxxxxxxxxx

Control					
Id			Null		Instruction number
Type	Op	Null			Immediate
31:30	29:28	27:26	25:18		17:0
JMP	11	00	00	00000000	xxxxxxxxxxxxxxxxxxx
JEQ	11	01	00	00000000	xxxxxxxxxxxxxxxxxxx
JLT	11	10	00	00000000	xxxxxxxxxxxxxxxxxxx