

Instructions and Op codes:

Instruction	Op Code
add	0000
sub	0001
mul	0010
div	0011
ori	0100
nor	0101
nand	0110
sw	0111
lw	1000
blt	1001

Control Unit Truth Table:

	add	ori	sw	lw	blt
RegDst	1	0	X	0	X
Alusrc	0	1	1	1	0
MemToReg	0	0	X	1	X
RegWrite	1	1	0	1	0
MemWrite	0	0	1	0	0
Branch	0	0	0	0	1
ExtOp	X	0	1	1	0
Aluctr	Op[2:0]	Op[2:0]	000	Op[2:0]	Op[2:0]

sub, mul, div, nor and nand are the same as “add” but with different Opcode.