

Line #7

addi \$s0, \$zero, -15

opcode: 8 rs: \$16 rt: \$0

imm: 1111 1111 1111 0001

0010|00 00|000 1|0000 1111 1111 1111 0001

2 0 1 0 F F F 1

= 0x2010FFF1

0010 0000 000|1 0000| 1111 1111 1111 0001|

8 0 16 -15
opcode 8 = addi \$16 = \$s0

= addi \$s0, \$0, -15

Line #14

R slt \$t0, \$s0, \$s1

slt = 2a = 42 \$t0 = 8 \$s0 = 16 \$s1 = 17

0000 0001 0001 0001 0100 0000 0010 1010

0 2 1 1 4 0 2 a

0x0211402a

0 2 1 1 4 0 2 a
0000 0001 0001 0001 | 0100 0|000 0010 1010
opcode rs rt rd shamt funct

opcode 0, funct 2a = slt, R format

slt \$8, \$16, \$17

slt \$t0, \$s0, \$s1

Line #17

beq \$t0, \$zero, LEEQ

opcode 4, format I \$t0 = 8

$$\$zero = 0$$

0x00400030

-0x00400014

$$= 0 \times 00000006 \text{ lines}$$

0001|00 01|000 0|0000| 0000|0000|0000|0110

1 1 0 0 0 0 0 6

$$16 \cdot 3 = 48$$
$$16 + 4 = 20$$

=28

$$\frac{28}{4} = 7$$
$$7-1=6$$

0x11000006

0001 0001 0000 0000 0000 0000 0000 0110

opcode 4, beg. of format I. 01000 = 8 00000 = 0 ... 0110 = 6

beg \$8, \$0, 6 = beg \$t0, \$zero, LEAQ

$$0x00400016 + (6+1) \cdot 4 = 0x00400030 \rightarrow \text{Label} = \text{LEEQ}$$

Line #20

j GRT GRT on line 24, 0x0040001c

j = opcode 2

0000/10

0 1 0 1 0 0 0 0 1

0x08010007

0000 1000 0000 0001 0000 0000 0000 0000 0111 00

opcode 2: j, format j

add 2 0s
to Lrd.

i) $0x0040001c$

label at 0x0040001c: GRT

j GRT