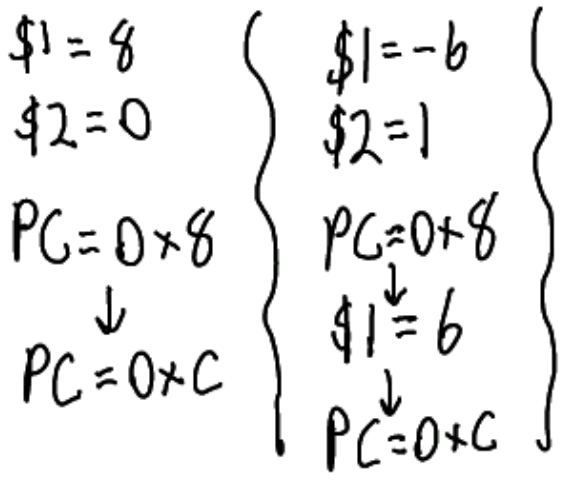
Example 2.

Find absolute value of value in reg. 1, store it in reg. 1, and return.

MIPS Machine code:

binary	hex	location meaning
		; compare $1 < 0
00000000 00100000 00010000 00101010	0020102a	00000000 slt $2, $1, $0
		; if false, skip next instr.
00010000 01000000 00000000 00000001	10400001	00000004 beq $2, $0, 1
		; $1 = 0 - $1
00000000 00000001 00001000 00100010	00010822	00000008 sub $1, $0, $1
		; return to OS
00000011 11100000 00000000 00001000	03e00008	0000000c jr $31



$$|x| = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$