Example 1.

Add 42 to 52, store sum in reg. 3, then return

MIPS Machine code:

binary	hex	location meaning
		; load 42 into $5 ←
00000000 00000000 00101000 00010100	00002814	00000000 lis $5
00000000 00000000 00000000 00101010	0000002a	00000004 .word 42
		; load 52 into $7
00000000 00000000 00111000 00010100	00003814	00000008 lis $7 ←
00000000 00000000 00000000 00110100	00000034	0000000c .word 52
		; add $5+$7 into $3
00000000 10100111 00011000 00100000	00a71820	00000010 add $3, $5, $7
		; return to OS
00000011 11100000 00000000 00001000	03e00008	00000014 jr $31

PC = 0x4 → 0x8

$5 = 42

PC holds the address of the next instruction to execute.