

Example 3.

\$1 is the address of the beginning of an array of 32-bit integers.
\$2 is the number of elements in the array.
Read element 5 of the array into \$3, and return.

MIPS Machine code:

binary	hex	location meaning
00000000 00000000 00101000 00010100	00002814	; load 5 into \$5
00000000 00000000 00000000 00000101	00000005	00000000 lis \$5
		00000004 .word 5
00000000 00000000 00100000 00010100	00002014	; load 4 into \$4
00000000 00000000 00000000 00000100	00000004	00000008 lis \$4
		0000000c .word 4
00000000 10100100 00000000 00011000	00a40018	; quadruple \$5
00000000 00000000 00101000 00010010	00002812	00000010 mult \$5, \$4
		00000014 mflo \$5
00000000 00100101 00101000 00100000	00252820	; \$5 = \$5 + \$1
		00000018 add \$5, \$5, \$1
10001100 10100011 00000000 00000000	8ca30000	; \$3 = MEM[0 + \$5]
		0000001c lw \$3, 0(\$5)
00000011 11100000 00000000 00001000	03e00008	; return to OS
		00000020 jr \$31