

Example 3, which is run using "java mips.array someFile.mips".

\$1 is the address of the beginning of an array of 32-bit integers.

1_ex3.pdf

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