

CMPE140 Lab 3 Task 2 Test Log

Algorithm 2

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Checked by: _____, **Date:** 02/27/19

Adr	MIPS Instruction	Machine Code	Registers				Memory Content	
			\$a0	\$s0	\$t0	\$	Word @ 0x00	Word @ 0x10
00	# addi \$a0, \$zero, 5 (\$a0 = 5)	0x20040005	0x5	0	0	-	0	0
04	# addi \$s0, \$zero, 1 (\$s0 = 1)	0x20100001	0x5	0x1	0	-	0	0
08	# sw \$a0, 0(\$zero) (mem[\$zero + 0] = \$a0)	0xAC040000	0x5	0x1	0	-	0x5	0
0C	# slti #RD, \$a0, 1 (if (\$a0 < 1) #RD = 1 else #RD = 0)	0x28880001	0x5	0x1	0	-	0x5	0
10	# bne \$t0, \$zero, 4 (if (\$t0 != \$zero) goto 4)	0x14080004	0	0x78	0x1	-	0x5	0
14	# mult \$s0, \$a0 (\$hi = High(\$s0 * \$a0); \$lo = Low(\$s0 * \$a0))	0x02040018	0	0x78	0x1	-	0x5	0
18	# mflo \$s0 (\$s0 = \$lo)	0x00008012	0	0x78	0x1	-	0x5	0
1C	# addi \$a0, \$a0, -1 (\$a0 = \$a0 + -1)	0x2084FFFF	0	0x78	0x1	-	0x5	0
20	# j 0x0003 (jump to addr 0x000C)	0x08000003	0	0x78	0x1	-	0x5	0
24	# sw \$s0, 16(\$zero) (mem[\$zero + 16] = \$s0)	0xAC100010	0	0x78	0x1	-	0x5	0x78
28	# j 0x0000 (jump to addr 0x0000)	0x08000000	0	0x78	0x1	-	0x5	0x78