

C:\Users\bassa\OneDrive\المستندات\MyMips\Lab7_Practice.asm - MARS 4.5

File Edit Run Settings Tools Help

Run speed at max (no interaction)

Lab7.asm Lab7_Practice.asm

```

1  .data
2  array: .space 40 # allocate space for 10 integers
3  prompt1: .asciiz "Enter an integer: "
4  prompt2: .asciiz "The values in the array are: "
5  prompt3: .asciiz ", "
6
7  .text
8  .globl main
9  main:
10     li $s0, 0 # initialize the array index to 0
11
12 input_loop:
13     # prompt the user to enter an integer
14     la $a0, prompt1
15     li $v0, 4
16     syscall
17
18     # read the integer entered by the user
19     li $v0, 5
20     syscall
21     sw $v0, array($s0)
22
23

```

Line: 1 Column: 1 ☒ Show Line Numbers

Mars Messages Run I/O

Go: execution completed successfully.

Registers	Coproc 1	Coproc 0
Name	Number	Value
\$zero	0	0
\$at	1	0
\$v0	2	0
\$v1	3	0
\$a0	4	0
\$a1	5	0
\$a2	6	0
\$a3	7	0
\$t0	8	0
\$t1	9	0
\$t2	10	0
\$t3	11	0
\$t4	12	0
\$t5	13	0
\$t6	14	0
\$t7	15	0
\$s0	16	0
\$s1	17	0
\$s2	18	0
\$s3	19	0
\$s4	20	0
\$s5	21	0
\$s6	22	0
\$s7	23	0
\$t8	24	0
\$t9	25	0
\$k0	26	0
\$k1	27	0
\$gp	28	268468224
\$sp	29	2147479548
\$fp	30	0
\$ra	31	0

22°C Mostly clear

10:40 PM 2/8/2023

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Lab7.asm Lab7_Practice.asm

```

23     addi $s0, $s0, 4 # increment the array index
24
25     # check if the array is full
26     li $t0, 10
27     slt $t1, $s0, $t0
28     bne $t1, $zero, input_loop
29
30 print_loop:
31     la $a0, prompt2
32     li $v0, 4
33     syscall
34
35     li $s0, 0 # initialize the array index to 0
36
37 print_values:
38     lw $a0, array($s0)
39     li $v0, 1
40     syscall
41
42     li $v0, 4
43     la $a0, prompt3
44     syscall
45

```

Line: 1 Column: 1 ☒ Show Line Numbers

Mars Messages Run I/O

Go: execution completed successfully.

Registers	Coproc 1	Coproc 0
Name	Number	Value
\$zero	0	0
\$at	1	0
\$v0	2	0
\$v1	3	0
\$a0	4	0
\$a1	5	0
\$a2	6	0
\$a3	7	0
\$t0	8	0
\$t1	9	0
\$t2	10	0
\$t3	11	0
\$t4	12	0
\$t5	13	0
\$t6	14	0
\$t7	15	0
\$s0	16	0
\$s1	17	0
\$s2	18	0
\$s3	19	0
\$s4	20	0
\$s5	21	0
\$s6	22	0
\$s7	23	0
\$t8	24	0
\$t9	25	0
\$k0	26	0
\$k1	27	0
\$gp	28	268468224
\$sp	29	2147479548
\$fp	30	0
\$ra	31	0

21°C Clear

10:41 PM 2/8/2023

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Lab7.asm Lab7_Practice.asm

```

34
35      li $s0, 0 # initialize the array index to 0
36
37 print_values:
38      lw $a0, array($s0)
39      li $v0, 1
40      syscall
41
42      li $v0, 4
43      la $a0, prompt3
44      syscall
45
46      addi $s0, $s0, 4 # increment the array index
47
48      li $t0, 10
49      slt $t1, $s0, $t0
50      bne $t1, $zero, print_values
51
52      li $v0, 10
53
54

```

Line: 1 Column: 1 ☒ Show Line Numbers

Mars Messages Run I/O

Clear Go: execution completed successfully.

Registers	Coproc 1	Coproc 0
Name	Number	Value
\$zero	0	0
\$at	1	0
\$v0	2	0
\$v1	3	0
\$a0	4	0
\$a1	5	0
\$a2	6	0
\$a3	7	0
\$t0	8	0
\$t1	9	0
\$t2	10	0
\$t3	11	0
\$t4	12	0
\$t5	13	0
\$t6	14	0
\$t7	15	0
\$s0	16	0
\$s1	17	0
\$s2	18	0
\$s3	19	0
\$s4	20	0
\$s5	21	0
\$s6	22	0
\$s7	23	0
\$s8	24	0
\$s9	25	0
\$k0	26	0
\$k1	27	0
\$gp	28	268468224
\$sp	29	2147479548
\$fp	30	0
\$ra	31	0

21°C Clear

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Mars Messages Run I/O

Clear

```

Enter an integer: 3
Enter an integer: 6
Enter an integer: 9
The values in the array are: 3, 6, 9,
-- program is finished running (dropped off bottom) --

```

Registers	Coproc 1	Coproc 0
Name	Number	Value
\$zero	0	0
\$at	1	268500992
\$v0	2	10
\$v1	3	0
\$a0	4	268501081
\$a1	5	0
\$a2	6	0
\$a3	7	0
\$t0	8	10
\$t1	9	0
\$t2	10	0
\$t3	11	0
\$t4	12	0
\$t5	13	0
\$t6	14	0
\$t7	15	0
\$s0	16	12
\$s1	17	0
\$s2	18	0
\$s3	19	0
\$s4	20	0
\$s5	21	0
\$s6	22	0
\$s7	23	0
\$s8	24	0
\$s9	25	0
\$k0	26	0
\$k1	27	0
\$gp	28	268468224
\$sp	29	2147479548
\$fp	30	0
\$ra	31	0

21°C Clear