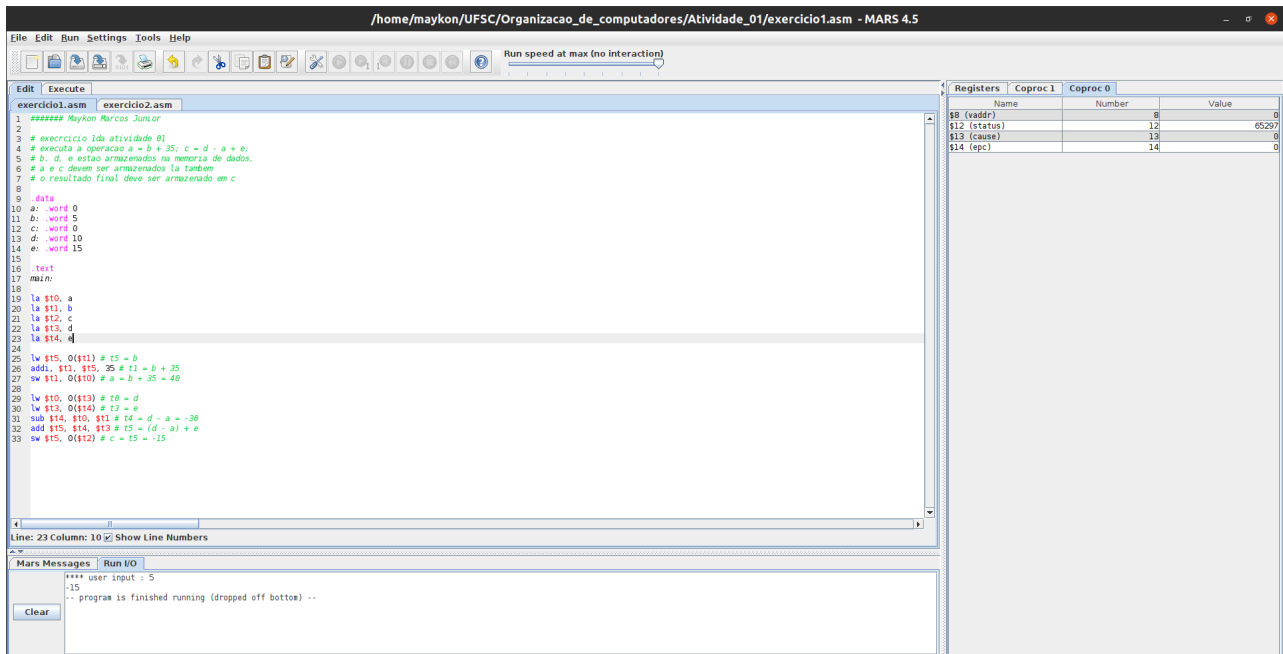


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## Exercício 1



The screenshot shows the MARS 4.5 IDE with the file `exercicio1.asm` open. The assembly code is as follows:

```
1 ##### Maykon Marcos Junior
2
3 # exercicio 1 da atividade 01
4 # executa a operacao a = b + 35; c = d - a + e;
5 # b, d, e estão armazenados na memoria de dados.
6 # a e c devem ser armazenados la tambem
7 # o resultado final deve ser armazenado em c
8
9 .data
10 a: word 0
11 b: word 5
12 c: word 0
13 d: word 10
14 e: word 15
15
16 .text
17 main:
18     la $t0, a
19     la $t1, b
20     la $t2, c
21     la $t3, d
22     la $t4, e
23
24
25     lw $t5, 0($t1) # t5 = b
26     addi $t1, $t5, 35 # t1 = b + 35
27     sw $t1, 0($t0) # a = b + 35 = 40
28
29     lw $t0, 0($t3) # t0 = d
30     lw $t3, 0($t4) # t3 = e
31     sub $t4, $t0, $t1 # t4 = d - a = -38
32     add $t5, $t4, $t3 # t5 = (d - a) + e
33     sw $t5, 0($t2) # c = t5 = -15
```

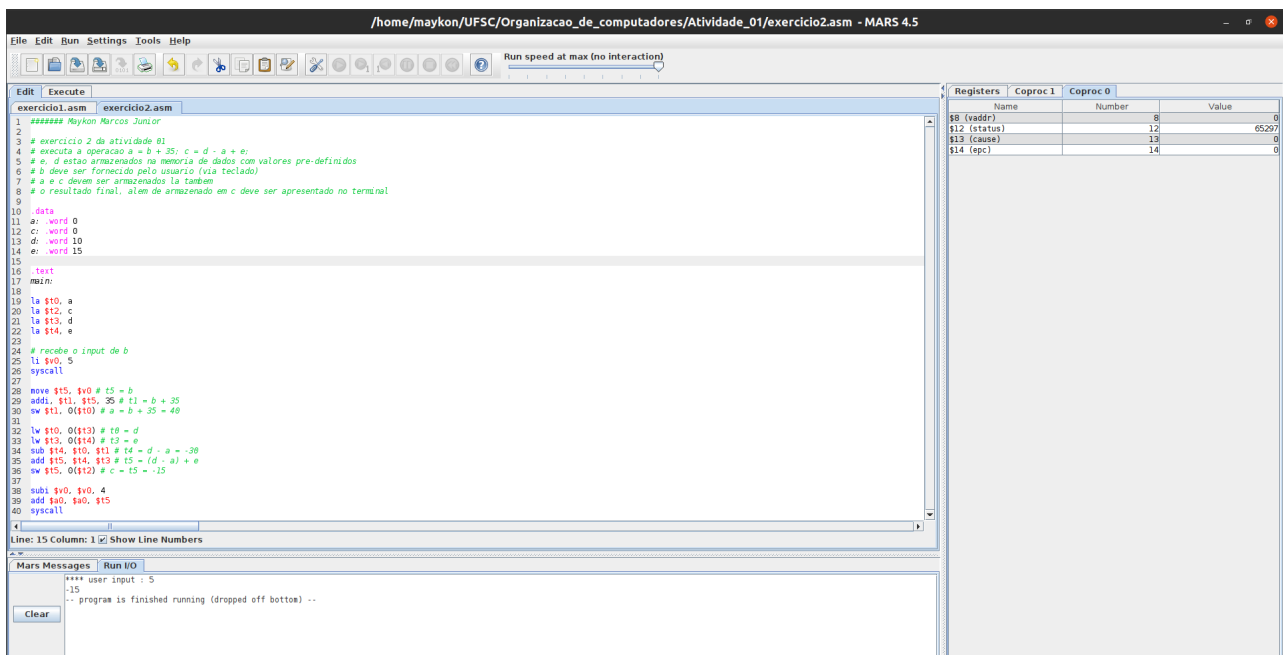
The registers window on the right shows the following state:

Registers	Coproc 1	Coproc 0
Name	Number	Value
\$8 (vaddr)	8	0
\$12 (status)	12	65297
\$13 (cause)	13	0
\$14 (epc)	14	0

The console window at the bottom shows the following output:

```
**** user input : 5
-15
-- program is finished running (dropped off bottom) --
```

## Exercício 2



The screenshot shows the MARS 4.5 IDE with the file `exercicio2.asm` open. The assembly code is as follows:

```
1 ##### Maykon Marcos Junior
2
3 # exercicio 2 da atividade 01
4 # executa a operacao a = b + 35; c = d - a + e;
5 # b, d, e estão armazenados na memoria de dados com valores pre-definidos
6 # b deve ser fornecido pelo usuario (via teclado)
7 # a e c devem ser armazenados la tambem
8 # o resultado final, alem de armazenado em c deve ser apresentado no terminal
9
10 .data
11 a: word 0
12 c: word 0
13 d: word 10
14 e: word 15
15
16 .text
17 main:
18     la $t0, a
19     la $t2, c
20     la $t3, d
21     la $t4, e
22
23
24     # recebe o input de b
25     li $v0, 5
26     syscall
27
28     move $t5, $v0 # t5 = b
29     addi $t1, $t5, 35 # t1 = b + 35
30     sw $t1, 0($t0) # a = b + 35 = 40
31
32     lw $t0, 0($t3) # t0 = d
33     lw $t3, 0($t4) # t3 = e
34     sub $t4, $t0, $t1 # t4 = d - a = -38
35     add $t5, $t4, $t3 # t5 = (d - a) + e
36     sw $t5, 0($t2) # c = t5 = -15
37
38     subi $v0, $v0, 4
39     add $a0, $a0, $t5
40     syscall
```

The registers window on the right shows the following state:

Registers	Coproc 1	Coproc 0
Name	Number	Value
\$8 (vaddr)	8	0
\$12 (status)	12	65297
\$13 (cause)	13	0
\$14 (epc)	14	0

The console window at the bottom shows the following output:

```
**** user input : 5
-15
-- program is finished running (dropped off bottom) --
```