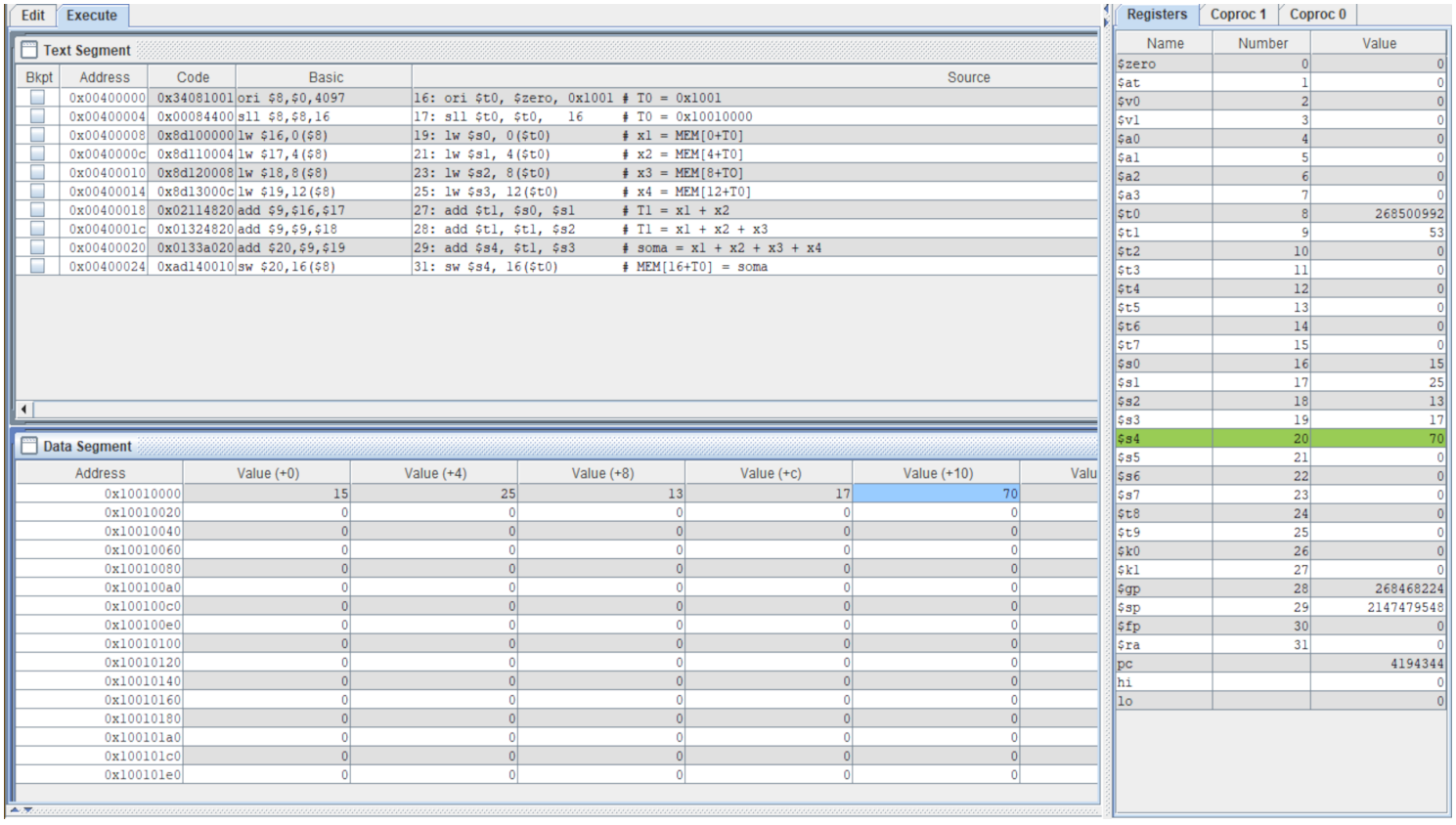
Relatório 7

Rafael Amauri Diniz Augusto - 651047

Programa 9



Edit | Execute

Text Segment

Bkpt	Address	Code	Basic	Source
	0x00400000	0x34081001	ori $8,$0,4097	16: ori $t0, $zero, 0x1001 # T0 = 0x1001
	0x00400004	0x00084400	sll $8,$8,16	17: sll $t0, $t0, 16 # T0 = 0x10010000
	0x00400008	0x8d100000	lw $16,0($8)	19: lw $s0, 0($t0) # x1 = MEM[0+T0]
	0x0040000c	0x8d110004	lw $17,4($8)	21: lw $s1, 4($t0) # x2 = MEM[4+T0]
	0x00400010	0x8d120008	lw $18,8($8)	23: lw $s2, 8($t0) # x3 = MEM[8+T0]
	0x00400014	0x8d13000c	lw $19,12($8)	25: lw $s3, 12($t0) # x4 = MEM[12+T0]
	0x00400018	0x02114820	add $9,$16,$17	27: add $t1, $s0, $s1 # T1 = x1 + x2
	0x0040001c	0x01324820	add $9,$9,$18	28: add $t1, $t1, $s2 # T1 = x1 + x2 + x3
	0x00400020	0x0133a020	add $20,$9,$19	29: add $s4, $t1, $s3 # soma = x1 + x2 + x3 + x4
	0x00400024	0xad140010	sw $20,16($8)	31: sw $s4, 16($t0) # MEM[16+T0] = soma

Data Segment

Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)	Valu
0x10010000	15	25	13	17	70	
0x10010020	0	0	0	0	0	
0x10010040	0	0	0	0	0	
0x10010060	0	0	0	0	0	
0x10010080	0	0	0	0	0	
0x100100a0	0	0	0	0	0	
0x100100c0	0	0	0	0	0	
0x100100e0	0	0	0	0	0	
0x10010100	0	0	0	0	0	
0x10010120	0	0	0	0	0	
0x10010140	0	0	0	0	0	
0x10010160	0	0	0	0	0	
0x10010180	0	0	0	0	0	
0x100101a0	0	0	0	0	0	
0x100101c0	0	0	0	0	0	
0x100101e0	0	0	0	0	0	

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	268500992
$t1	9	53
$t2	10	0
$t3	11	0
$t4	12	0
$t5	13	0
$t6	14	0
$t7	15	0
$s0	16	15
$s1	17	25
$s2	18	13
$s3	19	17
$s4	20	70
$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
pc		4194344
hi		0
lo		0

Programa 10

Edit | Execute

Text Segment

Bkpt	Address	Code	Basic	Source
	0x00400000	0x34081001	ori $8,$0,4097	18: ori $t0, $zero, 0x1001 # T0 = 0x1001
	0x00400004	0x00084400	sll $8,$8,16	19: sll $t0, $t0, 16 # T0 = 0x10010000
	0x00400008	0x8d100000	lw $16,0($8)	21: lw $s0, 0($t0) # x = MEM[0+T0], x = 5
	0x0040000c	0x8d120004	lw $18,4($8)	23: lw $s2, 4($t0) # z = MEM[4+T0], z = 7
	0x00400010	0x001049c0	sll $9,$16,7	25: sll $t1, $s0, 7 # T1 = 128x
	0x00400014	0x01304822	sub $9,$9,$16	26: sub $t1, $t1, $s0 # T1 = 127x
	0x00400018	0x00125180	sll $10,$18,6	28: sll $t2, $s2, 6 # T2 = 64z
	0x0040001c	0x01525020	add $10,$10,$18	29: add $t2, $t2, $s2 # T2 = 65z
	0x00400020	0x012a4822	sub $9,$9,$10	31: sub $t1, $t1, $t2 # T1 = 127x - 65y
	0x00400024	0x21310001	addi $17,$9,1	32: addi $s1, $t1, 1 # y = 127x - 65y + 1
	0x00400028	0xad110008	sw $17,8($8)	34: sw $s1, 8($t0) # MEM[8+T0] = y

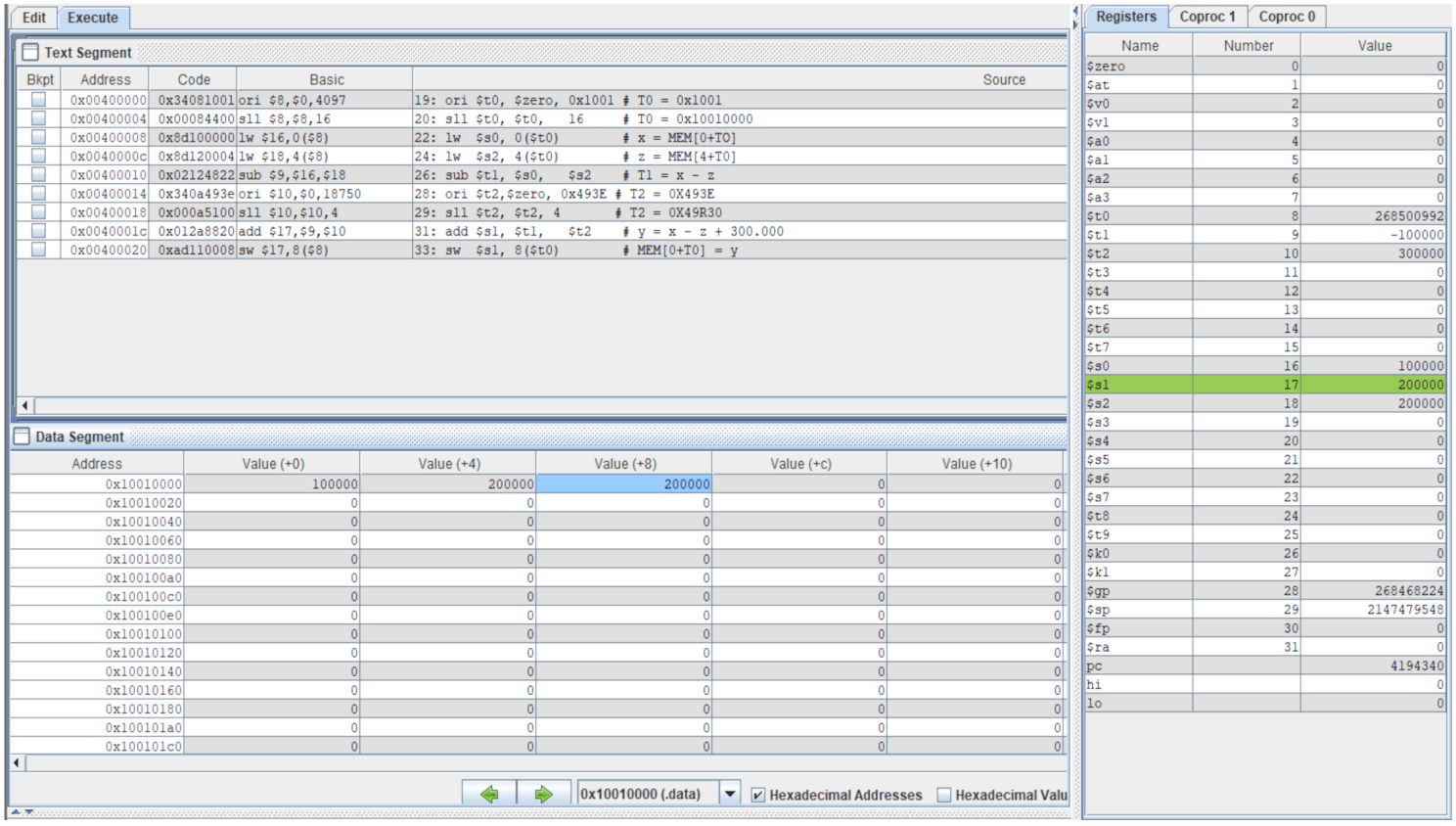
Data Segment

Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)
0x10010000	5	7	181	0	0
0x10010020	0	0	0	0	0
0x10010040	0	0	0	0	0
0x10010060	0	0	0	0	0
0x10010080	0	0	0	0	0
0x100100a0	0	0	0	0	0
0x100100c0	0	0	0	0	0
0x100100e0	0	0	0	0	0
0x10010100	0	0	0	0	0
0x10010120	0	0	0	0	0
0x10010140	0	0	0	0	0
0x10010160	0	0	0	0	0
0x10010180	0	0	0	0	0
0x100101a0	0	0	0	0	0
0x100101c0	0	0	0	0	0
0x100101e0	0	0	0	0	0

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	268500992
$t1	9	180
$t2	10	455
$t3	11	0
$t4	12	0
$t5	13	0
$t6	14	0
$t7	15	0
$s0	16	5
$s1	17	181
$s2	18	7
$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
pc		4194348
hi		0
lo		0

Programa 11


Edit
Execute
Text Segment
Bkpt | Address | Code | Basic | Source
0x00400000 | 0x34081001 | ori $8,$0,4097 | 19: ori $t0, $zero, 0x1001 # T0 = 0x1001
0x00400004 | 0x00084400 | sll $8,$8,16 | 20: sll $t0, $t0, 16 # T0 = 0x10010000
0x00400008 | 0x8d100000 | lw $16,0($8) | 22: lw $s0, 0($t0) # x = MEM[0+T0]
0x0040000c | 0x8d120004 | lw $18,4($8) | 24: lw $s2, 4($t0) # z = MEM[4+T0]
0x00400010 | 0x02124822 | sub $9,$16,$18 | 26: sub $t1, $s0, $s2 # T1 = x - z
0x00400014 | 0x340a493e | ori $10,$0,18750 | 28: ori $t2,$zero, 0x493E # T2 = 0X493E
0x00400018 | 0x000a5100 | sll $10,$10,4 | 29: sll $t2, $t2, 4 # T2 = 0X49R30
0x0040001c | 0x012a8820 | add $17,$9,$10 | 31: add $s1, $t1, $t2 # y = x - z + 300.000
0x00400020 | 0xad110008 | sw $17,8($8) | 33: sw $s1, 8($t0) # MEM[0+T0] = y
Data Segment
Address | Value (+0) | Value (+4) | Value (+8) | Value (+c) | Value (+10)
0x10010000 | 100000 | 200000 | 200000 | 0 | 0
0x10010020 | 0 | 0 | 0 | 0 | 0
0x10010040 | 0 | 0 | 0 | 0 | 0
0x10010060 | 0 | 0 | 0 | 0 | 0
0x10010080 | 0 | 0 | 0 | 0 | 0
0x100100a0 | 0 | 0 | 0 | 0 | 0
0x100100c0 | 0 | 0 | 0 | 0 | 0
0x100100e0 | 0 | 0 | 0 | 0 | 0
0x10010100 | 0 | 0 | 0 | 0 | 0
0x10010120 | 0 | 0 | 0 | 0 | 0
0x10010140 | 0 | 0 | 0 | 0 | 0
0x10010160 | 0 | 0 | 0 | 0 | 0
0x10010180 | 0 | 0 | 0 | 0 | 0
0x100101a0 | 0 | 0 | 0 | 0 | 0
0x100101c0 | 0 | 0 | 0 | 0 | 0
0x10010000 (.data)
Hexadecimal Addresses
Hexadecimal Valu
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 | 268500992
$t1 | 9 | -100000
$t2 | 10 | 300000
$t3 | 11 | 0
$t4 | 12 | 0
$t5 | 13 | 0
$t6 | 14 | 0
$t7 | 15 | 0
$s0 | 16 | 100000
$s1 | 17 | 200000
$s2 | 18 | 200000
$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
pc | | 4194340
hi | | 0
lo | | 0

Programa 12

Edit | Execute

Text Segment

Bkpt	Address	Code	Basic	Source
	0x00400000	0x34081001	ori $8,$0,0x00001001	16: ori $t0, $zero, 0x1001 # T0 = 0x1001
	0x00400004	0x00084400	sll $8,$8,0x00000010	17: sll $t0, $t0, 16 # T0 = 0x10010000
	0x00400008	0xad080000	sw $8,0x00000000($8)	19: sw $t0, 0($t0) # T1 = 0x10010000
	0x0040000c	0x34091001	ori $9,$0,0x00001001	21: ori $t1, $zero, 0x1001 # T1 = 0x1001
	0x00400010	0x00094c00	sll $9,$9,0x00000010	22: sll $t1, $t1, 16 # T1 = 0x10010000
	0x00400014	0x35290004	ori $9,$9,0x00000004	23: ori $t1, $t1, 0x0004 # T1 = 0x10010004
	0x00400018	0xad290000	sw $9,0x00000000($9)	25: sw $t1, 0($t1) # T2 = 0X10010004
	0x0040001c	0x340a1001	ori $10,$0,0x00001001	27: ori $t2, $zero, 0x1001 # T2 = 0x1001
	0x00400020	0x000a5400	sll $10,$10,0x00000010	28: sll $t2, $t2, 16 # T2 = 0x10010000
	0x00400024	0x354a0008	ori $10,$10,0x00000008	29: ori $t2, $t2, 0x0008 # T2 = 0x10010008
	0x00400028	0xad4a0000	sw $10,0x00000000($10)	31: sw $t2, 0($t2) # T2 = 0X10010008
	0x0040002c	0x000a8025	or $16,$0,$10	33: or $s0, $zero, $t2 # K = T2

Data Segment

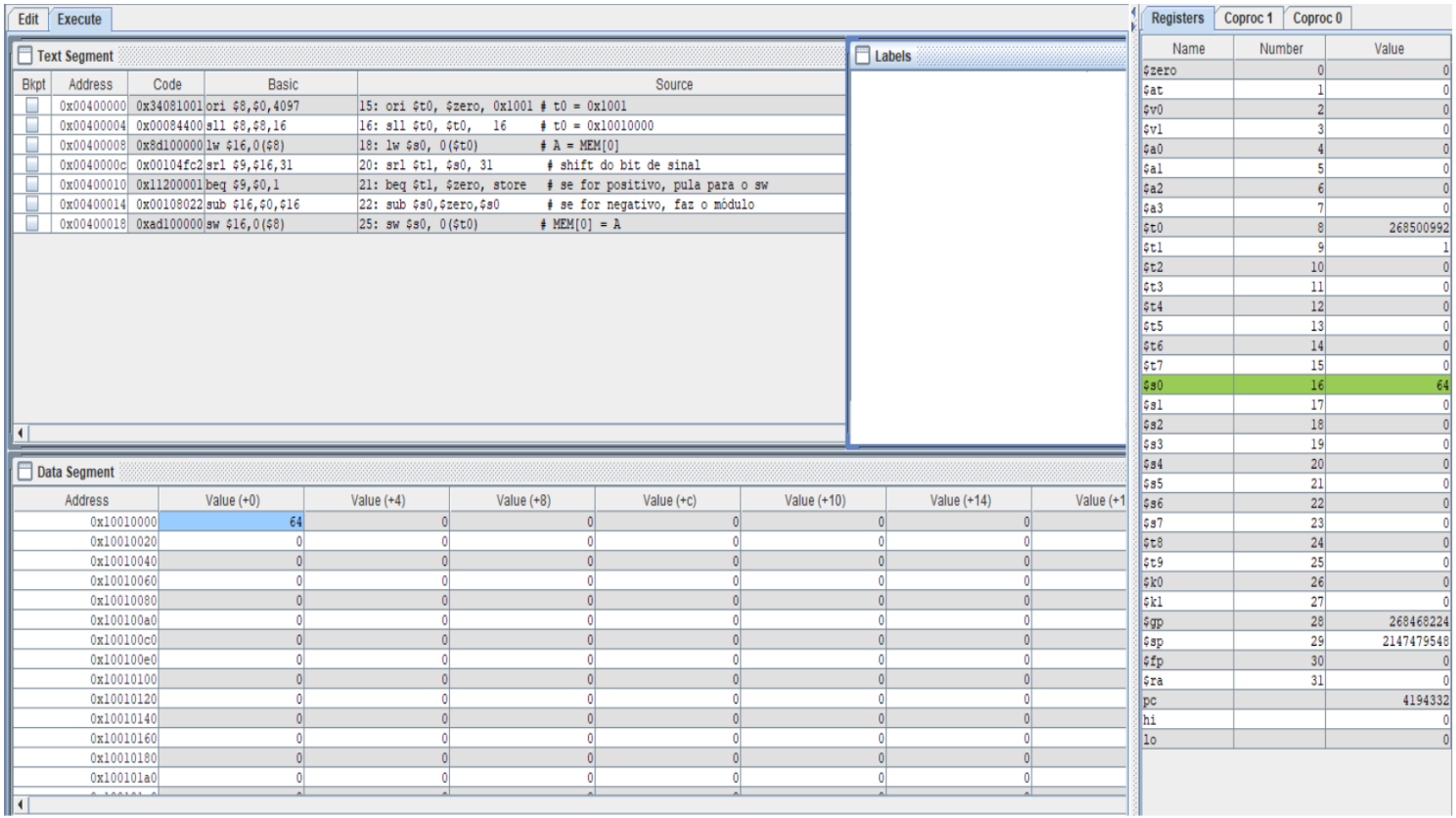
Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)
0x10010000	0x10010000	0x10010004	0x10010008	0x00000000	0x000000
0x10010020	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010040	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010060	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010080	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x100100a0	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x100100c0	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x100100e0	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010100	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010120	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010140	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010160	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x10010180	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x100101a0	0x00000000	0x00000000	0x00000000	0x00000000	0x000000
0x100101c0	0x00000000	0x00000000	0x00000000	0x00000000	0x000000

0x10010000 (.data) ☑ Hexadecimal Addresses ☑ Hexadecimal

Registers | Coproc 1 | Coproc 0

Name	Number	Value
$zero	0	0x00000000
$at	1	0x00000000
$v0	2	0x00000000
$v1	3	0x00000000
$a0	4	0x00000000
$a1	5	0x00000000
$a2	6	0x00000000
$a3	7	0x00000000
$t0	8	0x10010000
$t1	9	0x10010004
$t2	10	0x10010008
$t3	11	0x00000000
$t4	12	0x00000000
$t5	13	0x00000000
$t6	14	0x00000000
$t7	15	0x00000000
$s0	16	0x10010008
$s1	17	0x00000000
$s2	18	0x00000000
$s3	19	0x00000000
$s4	20	0x00000000
$s5	21	0x00000000
$s6	22	0x00000000
$s7	23	0x00000000
$t8	24	0x00000000
$t9	25	0x00000000
$k0	26	0x00000000
$k1	27	0x00000000
$gp	28	0x10008000
$sp	29	0x7fffeffc
$fp	30	0x00000000
$ra	31	0x00000000
pc		0x00400030
hi		0x00000000
lo		0x00000000

Programa 13



Edit | Execute

Text Segment

Bkpt	Address	Code	Basic	Source
	0x00400000	0x34081001	ori $8,$0,4097	15: ori $t0, $zero, 0x1001 # t0 = 0x1001
	0x00400004	0x00084400	sll $8,$8,16	16: sll $t0, $t0, 16 # t0 = 0x10010000
	0x00400008	0x8d100000	lw $16,0($8)	18: lw $s0, 0($t0) # A = MEM[0]
	0x0040000c	0x00104fc2	srl $9,$16,31	20: srl $t1, $s0, 31 # shift do bit de sinal
	0x00400010	0x11200001	beq $9,$0,1	21: beq $t1, $zero, store # se for positivo, pula para o sw
	0x00400014	0x00108022	sub $16,$0,$16	22: sub $s0,$zero,$s0 # se for negativo, faz o módulo
	0x00400018	0xad100000	sw $16,0($8)	25: sw $s0, 0($t0) # MEM[0] = A

Labels

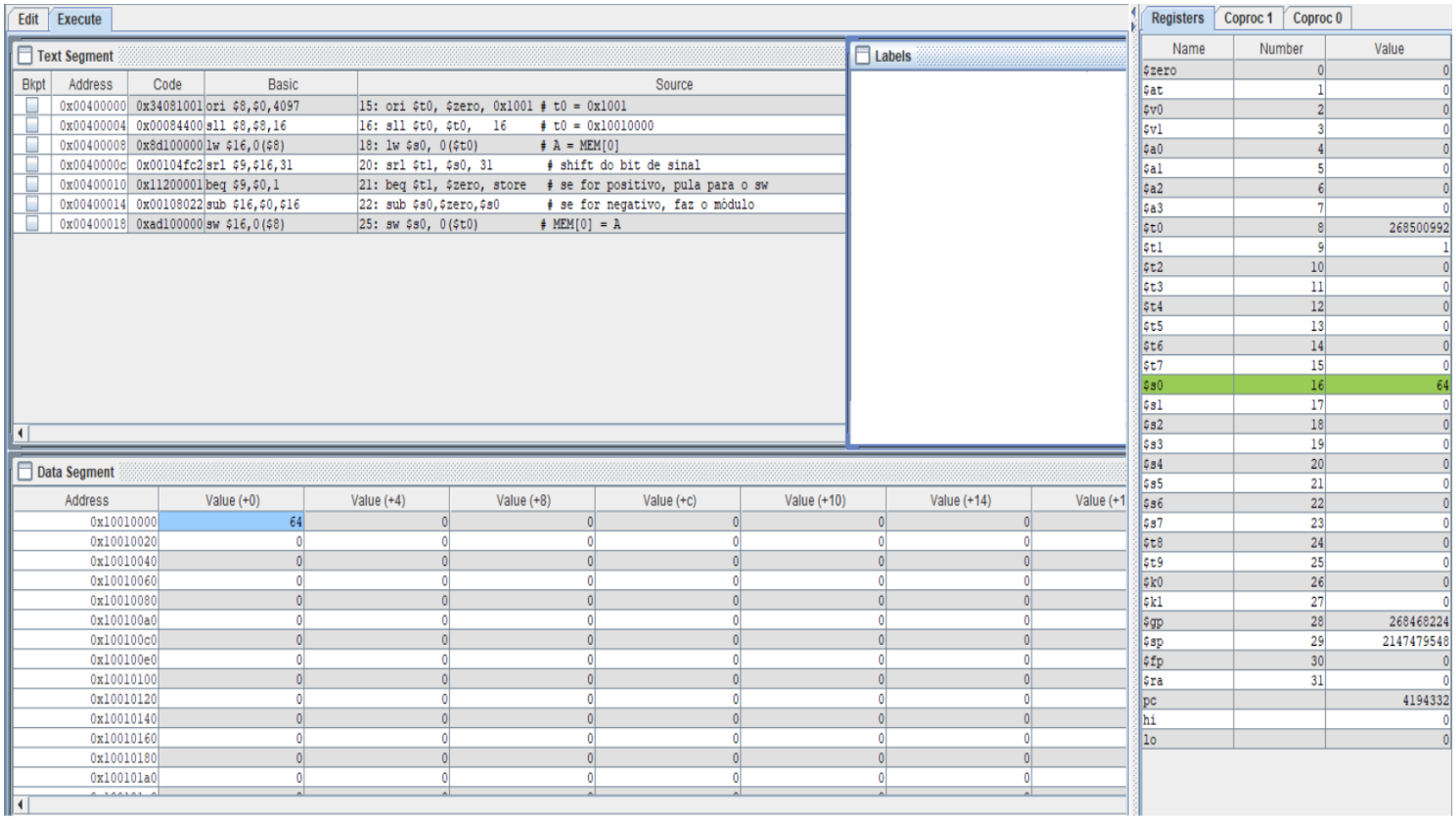
Data Segment

Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)	Value (+14)	Value (+1
0x10010000	64	0	0	0	0	0	
0x10010020	0	0	0	0	0	0	
0x10010040	0	0	0	0	0	0	
0x10010060	0	0	0	0	0	0	
0x10010080	0	0	0	0	0	0	
0x100100a0	0	0	0	0	0	0	
0x100100c0	0	0	0	0	0	0	
0x100100e0	0	0	0	0	0	0	
0x10010100	0	0	0	0	0	0	
0x10010120	0	0	0	0	0	0	
0x10010140	0	0	0	0	0	0	
0x10010160	0	0	0	0	0	0	
0x10010180	0	0	0	0	0	0	
0x100101a0	0	0	0	0	0	0	

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	268500992
$t1	9	1
$t2	10	0
$t3	11	0
$t4	12	0
$t5	13	0
$t6	14	0
$t7	15	0
$s0	16	64
$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
pc		4194332
hi		0
lo		0

Programa 14



Edit | Execute

Text Segment

Bkpt	Address	Code	Basic	Source
	0x00400000	0x34081001	ori $8,$0,4097	15: ori $t0, $zero, 0x1001 # t0 = 0x1001
	0x00400004	0x00084400	sll $8,$8,16	16: sll $t0, $t0, 16 # t0 = 0x10010000
	0x00400008	0x8d100000	lw $16,0($8)	18: lw $s0, 0($t0) # A = MEM[0]
	0x0040000c	0x00104fc2	srl $9,$16,31	20: srl $t1, $s0, 31 # shift do bit de sinal
	0x00400010	0x11200001	beq $9,$0,1	21: beq $t1, $zero, store # se for positivo, pula para o sw
	0x00400014	0x00108022	sub $16,$0,$16	22: sub $s0,$zero,$s0 # se for negativo, faz o módulo
	0x00400018	0xad100000	sw $16,0($8)	25: sw $s0, 0($t0) # MEM[0] = A

Labels

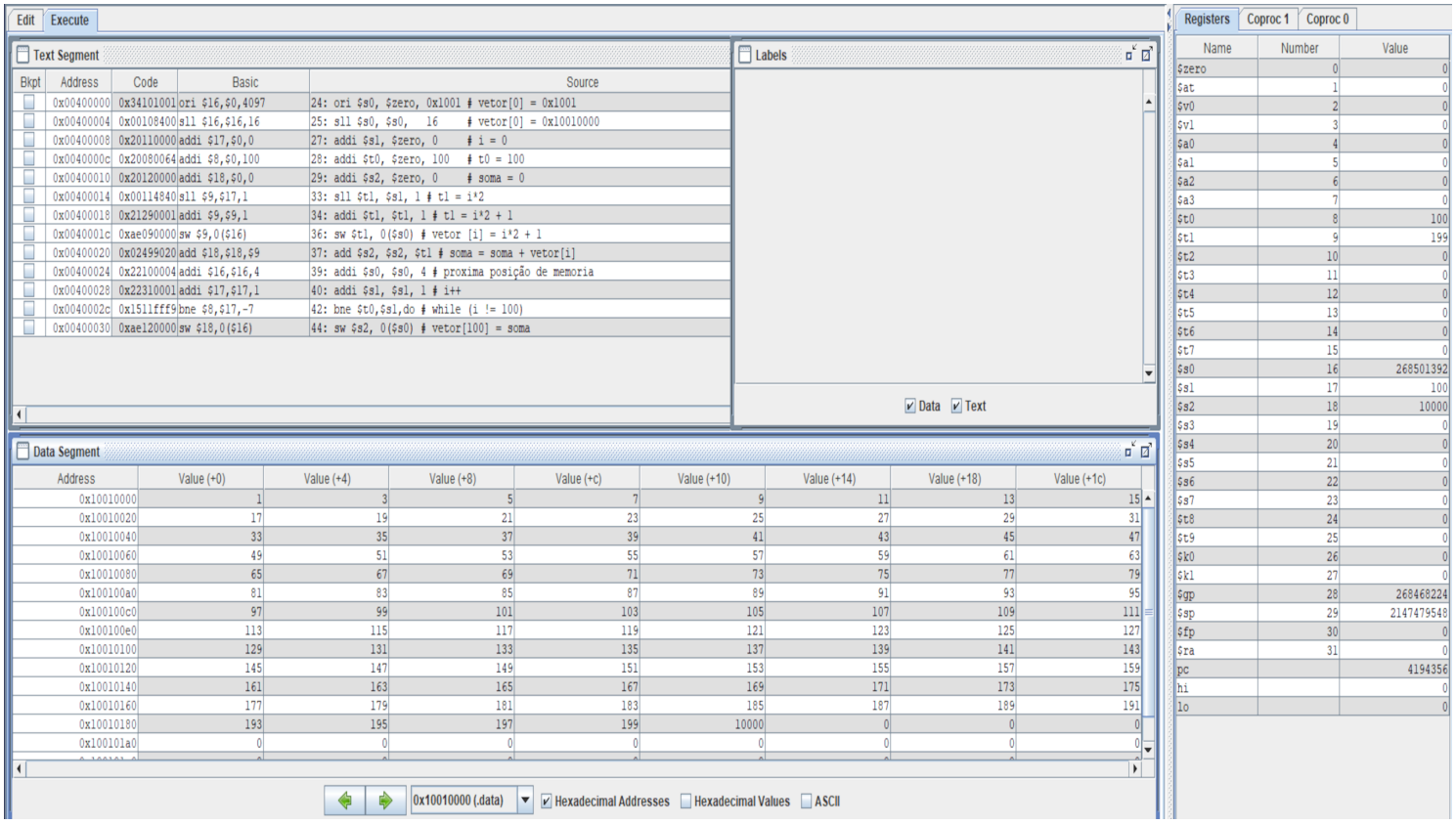
Data Segment

Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)	Value (+14)	Value (+1
0x10010000	64	0	0	0	0	0	
0x10010020	0	0	0	0	0	0	
0x10010040	0	0	0	0	0	0	
0x10010060	0	0	0	0	0	0	
0x10010080	0	0	0	0	0	0	
0x100100a0	0	0	0	0	0	0	
0x100100c0	0	0	0	0	0	0	
0x100100e0	0	0	0	0	0	0	
0x10010100	0	0	0	0	0	0	
0x10010120	0	0	0	0	0	0	
0x10010140	0	0	0	0	0	0	
0x10010160	0	0	0	0	0	0	
0x10010180	0	0	0	0	0	0	
0x100101a0	0	0	0	0	0	0	

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	268500992
$t1	9	1
$t2	10	0
$t3	11	0
$t4	12	0
$t5	13	0
$t6	14	0
$t7	15	0
$s0	16	64
$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
pc		4194332
hi		0
lo		0

Programa 15



Edit | Execute

Text Segment

Bkpt	Address	Code	Basic	Source
	0x00400000	0x34101001	ori $16,$0,4097	24: ori $s0, $zero, 0x1001 # vetor[0] = 0x1001
	0x00400004	0x00108400	sll $16,$16,16	25: sll $s0, $s0, 16 # vetor[0] = 0x10010000
	0x00400008	0x20110000	addi $17,$0,0	27: addi $s1, $zero, 0 # i = 0
	0x0040000c	0x20080064	addi $8,$0,100	28: addi $t0, $zero, 100 # t0 = 100
	0x00400010	0x20120000	addi $18,$0,0	29: addi $s2, $zero, 0 # soma = 0
	0x00400014	0x00114840	sll $9,$17,1	33: sll $t1, $s1, 1 # t1 = i*2
	0x00400018	0x21290001	addi $9,$9,1	34: addi $t1, $t1, 1 # t1 = i*2 + 1
	0x0040001c	0xae090000	sw $9,0($16)	36: sw $t1, 0($s0) # vetor [i] = i*2 + 1
	0x00400020	0x02499020	add $18,$18,$9	37: add $s2, $s2, $t1 # soma = soma + vetor[i]
	0x00400024	0x22100004	addi $16,$16,4	39: addi $s0, $s0, 4 # proxima posição de memoria
	0x00400028	0x22310001	addi $17,$17,1	40: addi $s1, $s1, 1 # i++
	0x0040002c	0x1511fff9	bne $8,$17,-7	42: bne $t0,$s1,do # while (i != 100)
	0x00400030	0xae120000	sw $18,0($16)	44: sw $s2, 0($s0) # vetor[100] = soma

Labels

Data Text

Data Segment

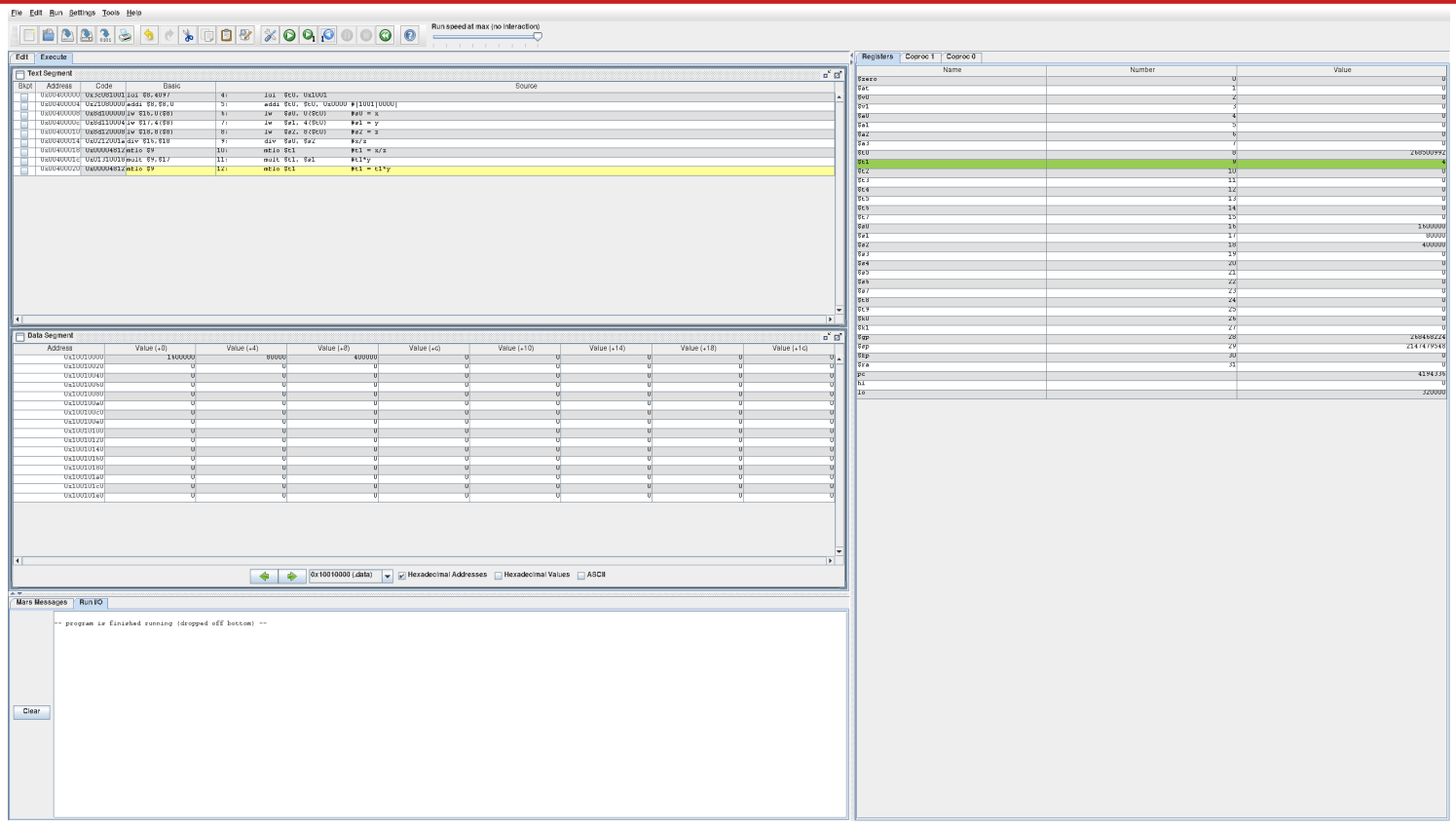
Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)	Value (+14)	Value (+18)	Value (+1c)
0x10010000	1	3	5	7	9	11	13	15
0x10010020	17	19	21	23	25	27	29	31
0x10010040	33	35	37	39	41	43	45	47
0x10010060	49	51	53	55	57	59	61	63
0x10010080	65	67	69	71	73	75	77	79
0x100100a0	81	83	85	87	89	91	93	95
0x100100c0	97	99	101	103	105	107	109	111
0x100100e0	113	115	117	119	121	123	125	127
0x10010100	129	131	133	135	137	139	141	143
0x10010120	145	147	149	151	153	155	157	159
0x10010140	161	163	165	167	169	171	173	175
0x10010160	177	179	181	183	185	187	189	191
0x10010180	193	195	197	199	10000	0	0	0
0x100101a0	0	0	0	0	0	0	0	0

0x10010000 (.data) Hexadecimal Addresses Hexadecimal Values ASCII

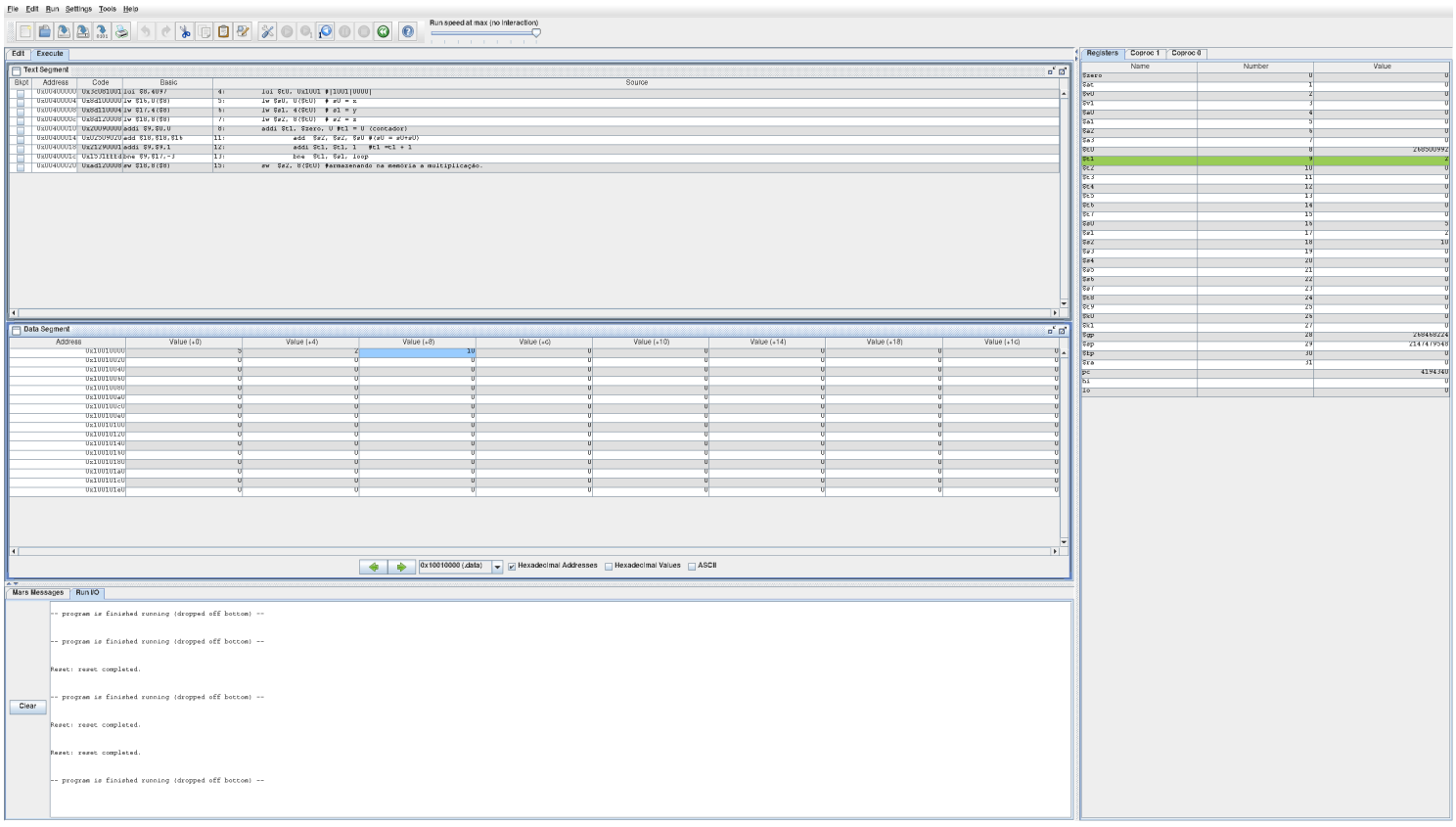
Registers | Coproc 1 | Coproc 0

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	100
$t1	9	199
$t2	10	0
$t3	11	0
$t4	12	0
$t5	13	0
$t6	14	0
$t7	15	0
$s0	16	268501392
$s1	17	100
$s2	18	10000
$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
pc		4194356
hi		0
lo		0

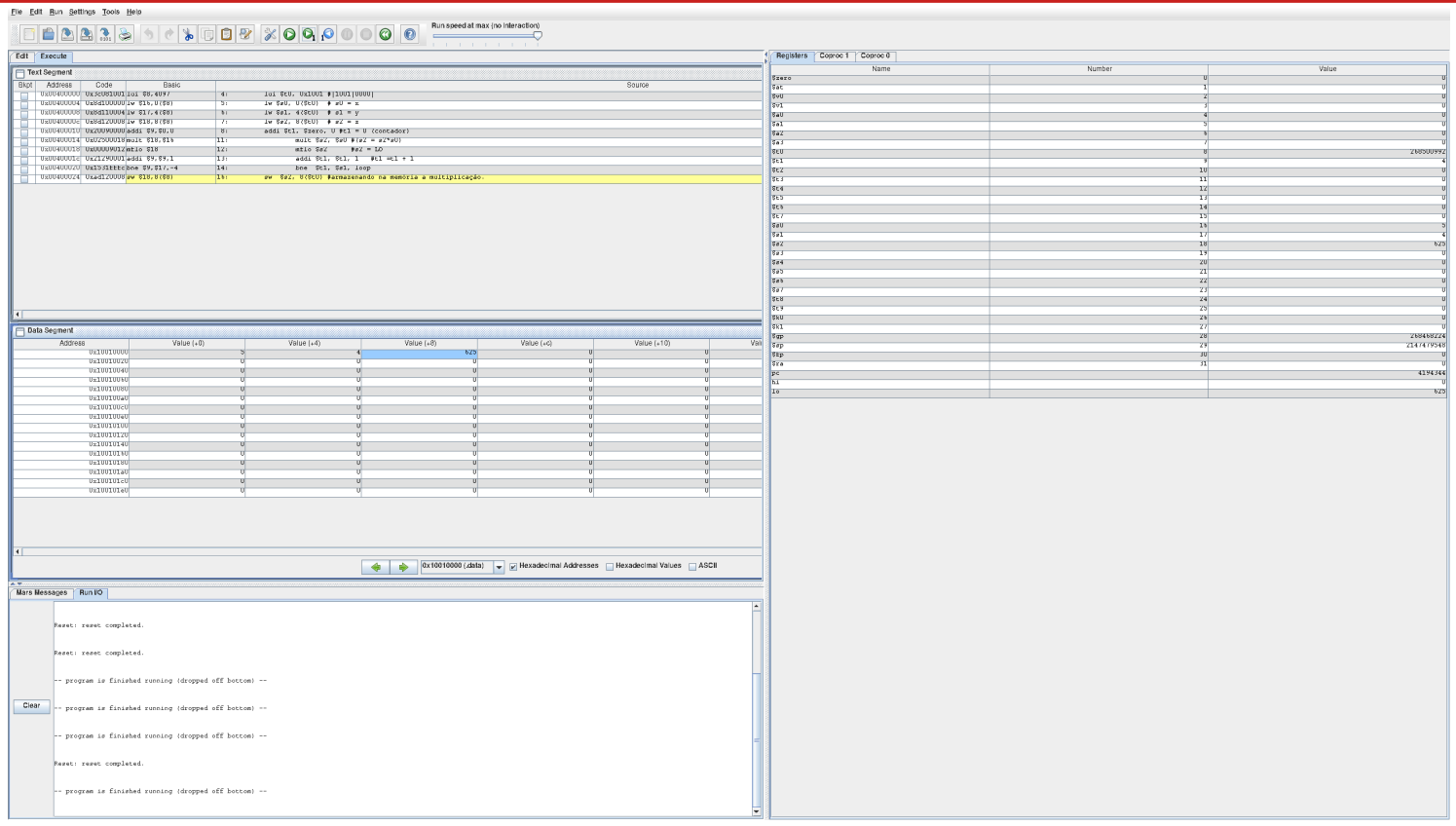
Programa 16


File Edit Run Settings Tools Help
Run speed at max (no interaction)
Edit Execute
Text Segment
Bkpt Address Code Basic Source
Data Segment
Address Value (+0) Value (+4) Value (+8) Value (+c) Value (+10) Value (+14) Value (+18) Value (+1c)
0x10010000 (.data)
Hexadecimal Addresses
Hexadecimal Values
ASCII
Registers Coproc 1 Coproc 0
Name Number Value
Mars Messages Run I/O
-- program is finished running (dropped off bottom) --
Clear

Programa 17


File Edit Run Settings Tools Help
Run speed at max (no interaction)
Edit Execute
Text Segment
Data Segment
Registers Coproc 1 Coproc 0
Mars Messages Run I/O
Clear
-- program is finished running (dropped off bottom) --
Reset: reset completed.

Programa 18


File Edit Run Settings Tools Help
Run speed at max (no interaction)
Edit Execute
Text Segment
Bkpt Address Code Basic Source
Data Segment
Address Value (+0) Value (+4) Value (+8) Value (+c) Value (+10)
Registers Coproc 1 Coproc 0
Name Number Value
Mars Messages Run I/O
Clear
Reset: reset completed.
Reset: reset completed.
-- program is finished running (dropped off bottom) --
-- program is finished running (dropped off bottom) --
-- program is finished running (dropped off bottom) --
Reset: reset completed.
-- program is finished running (dropped off bottom) --
Hexadecimal Addresses
Hexadecimal Values
ASCII