

LAB 2

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Exercício 1: O resultado esperado é uma matriz identidade C, que deve ser alocada logo após o fim da matriz B: de 268501064 até 268501096

Memória antes da execução:

The screenshot shows the MARS 4.5 simulator interface. The main window displays the assembly code for 'exercico1.asm'. The Text Segment shows instructions like 'la \$s0, A', 'la \$s1, B', and 'la \$s2, C'. The Data Segment shows memory addresses from 268500992 to 268501408, with values mostly being 0. The Registers window shows the state of registers: \$zero to \$t0 are 0, \$f0 to \$f31 contain various floating-point values.

Memória depois da execução:

The screenshot shows the MARS 4.5 simulator interface after execution. The Data Segment now contains non-zero values, indicating the execution of the program. The Registers window shows updated values, with \$f0 to \$f31 containing various floating-point values.

Exercício 2: A matriz C, já declarada como resultado, deve ser armazenada em caracteres ascii (valores = 49 e 48, espaços = 32 e quebras de linha = 10), além disso, é necessário gerar um txt com o resultado

File Edit Run Settings Tools Help
Run speed at max (no interaction)

Text Segment
Labels

Bkpt	Address	Code	Basic	Source	Label	Address
	4194304	0x3c011001	lui \$1, 4097			
	4194308	0x240020c0	ori \$16, \$1, 26	13: la \$%0, STRING	exercicio2.asm	4194304
	4194312	0x3c011001	lui \$1, 4097	14: la \$%2, C	LOOP	4194400
	4194316	0x34200000	ori \$18, \$1, 0		FIM	4194460
	4194320	0x24000000	addiu \$23, \$0, 3	15: li \$%6, 3	STRING	26850092
	4194324	0x24170003	addiu \$23, \$0, 3	16: li \$%7, 3	nome_arquivo	268501028
	4194328	0x24000000	addiu \$2, \$0, 13	18: la \$%0, \$13		
	4194332	0x3c011001	lui \$1, 4097	19: la \$%0, nome_arquivo		268501047
	4194336	0x34240037	ori \$4, \$1, 55			
	4194340	0x24000001	addiu \$5, \$0, 1	20: li \$%1, 1		
	4194344	0x24000000	addiu \$5, \$0, 0	21: li \$%2, 0		
	4194348	0x0000000c	syscall	22: syscall		
	4194352	0x00000002	addiu \$19, \$0, \$2	23: move \$%3, \$%0		
	4194356	0xc1000101	jal 4194400	25: jal LOOP		
	4194360	0x2402000f	addiu \$2, \$0, 15	27: li \$%0, 15		
	4194364	0xc012001	addu \$4, \$0, \$19	28: move \$%0, \$19		
	4194368	0x3c011001	lui \$1, 4097	29: la \$%1, STRING		

Registers	Coproc 1	Coproc 0
Name	Number	Value
\$zero	0	0
\$at	1	268500992
\$v0	2	16
\$v1	3	0
\$a0	4	0
\$a1	5	268501028
\$a2	6	72
\$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	268501100
\$s1	17	0
\$s2	18	268501068
\$s3	19	3
\$s4	20	0
\$s5	21	0
\$s6	22	3
\$s7	23	0
\$s8	24	0
\$t9	25	0
\$t10	26	0
\$t11	27	0
\$fp	28	268496224
\$sp	29	2147479488
\$tp	30	0
\$ra	31	4194400
\$pc		4194464
\$n1		0
\$n0		0

Data Segment
Labels

Address	Value (+0)	Value (+4)	Value (+8)	Value (+12)	Value (+16)	Value (+20)	Value (+24)	Value (+28)
268500992	1	0	0	0	1	0	0	0
268501024	1	49	32	48	32	48	10	48
268501056	32	49	32	48	10	48	32	48
268501088	32	49	10	0	0	0	0	26
268501120	0	0	0	0	0	0	0	0
268501152	0	0	0	0	0	0	0	0
268501184	0	0	0	0	0	0	0	0
268501216	0	0	0	0	0	0	0	0
268501248	0	0	0	0	0	0	0	0
268501280	0	0	0	0	0	0	0	0
268501312	0	0	0	0	0	0	0	0
268501344	0	0	0	0	0	0	0	0
268501376	0	0	0	0	0	0	0	0
268501408	0	0	0	0	0	0	0	0
268501440	0	0	0	0	0	0	0	0

0x10010000 [data]
Hexadecimal Addresses
Hexadecimal Values
ASCII

Mars Messages
Run I/O

Reset: reset completed.

-- program is finished running (dropped off bottom) --

Character Encoding: Current Locale (UTF-8) ▾

1	1	\00\00\00	\00\00\00	\00\00\00	\00\00\00	\00\00\00	\00\00\00	
2	\00\00\00	\00\00\00	\00\00\00	1	\00\00\00	\00\00\00	\00\00\00	\00\00\00
3	\00\00\00	\00\00\00	\00\00\00	\00\00\00	\00\00\00	\00\00\00	1	\00\00\00