

Rel 10

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Q01

The screenshot shows the MARS 4.3 assembly simulator. The main window displays the assembly code for the file `C:\Users\510348\Desktop\heyhey.asm`. The code is organized into a table with columns for Bkpt, Address, Code, Basic, and Source. The code includes instructions for printing a string, reading integers, and performing arithmetic operations. The Data Segment is also visible, showing memory addresses and their corresponding values. The Registers window on the right shows the state of the registers, including `$zero`, `$at`, `$v0`, `$v1`, `$a0`, `$a1`, `$a2`, `$a3`, `$t0`, `$t1`, `$t2`, `$t3`, `$t4`, `$t5`, `$t6`, `$t7`, `$s0`, `$s1`, `$s2`, `$s3`, `$s4`, `$s5`, `$s6`, `$s7`, `$s8`, `$s9`, `$k0`, `$k1`, `$gp`, `$sp`, `$fp`, `$ra`, `$pc`, `$hi`, and `$lo`. The console window at the bottom shows the output of the program, which is a single line of text: "Digite um numero".

Q02

The screenshot shows the MARS 4.4 assembly simulator. The main window displays the assembly code for the file `C:\Users\User\Desktop\mips1.asm`. The code is organized into a table with columns for Bkpt, Address, Code, Basic, and Source. The code includes instructions for performing arithmetic operations, branching, and calling subroutines. The Data Segment is also visible, showing memory addresses and their corresponding values. The Registers window on the right shows the state of the registers, including `$zero`, `$at`, `$v0`, `$v1`, `$a0`, `$a1`, `$a2`, `$a3`, `$t0`, `$t1`, `$t2`, `$t3`, `$t4`, `$t5`, `$t6`, `$t7`, `$s0`, `$s1`, `$s2`, `$s3`, `$s4`, `$s5`, `$s6`, `$s7`, `$s8`, `$s9`, `$k0`, `$k1`, `$gp`, `$sp`, `$fp`, `$ra`, `$pc`, `$hi`, and `$lo`. The console window at the bottom shows the output of the program, which is a single line of text: "A soma dos elementos = 3".

Q03

C:\Users\User\Desktop\mpis1.asm - MARS 4.4

File Edit Run Settings Tools Help

Run speed at max (no interaction)

Text Segment

Byte	Address	Code	Basic	Source
0x04000000	0x40200000	addiu \$2,\$0,0x00000004	6: li \$v0,4 # obdigio 4 == print_string	
0x04000004	0x40200004	li \$a0,0x00000001	7: la \$a0,string1 # \$a0 == endereco da string	
0x04000008	0x40200008	ori \$4,\$1,0x00000000		
0x0400000c	0x0000000c	syscall	8: syscall # Solicita o servico ao SO	
0x04000010	0x4020000c	addiu \$2,\$0,0x00000000	10: li \$v0,0	
0x04000014	0x0000000c	syscall	11: syscall	
0x04000018	0x00200000	addiu \$16,\$0,42	13: move \$a0, \$v0	
0x0400001c	0x203ffffc	addiu \$9,\$16,0xfffffff0	14: addi \$v0, \$v0, -32	
0x04000020	0x00000000	addiu \$9,\$9,0x00000002	15: sll \$t1, \$v0, 2	
0x04000024	0x01840000	addi \$9,\$9,48	16: add \$v0, \$t1, \$a0	
0x04000028	0x00000000	addiu \$9,\$9,0x00000009	17: addi \$t1, \$v0, 9	
0x0400002c	0x01800000	div \$9,\$9	18: div \$v0, \$t1	
0x04000030	0x00000000	mfhi \$v1	19: mfhi \$a0	
0x04000034	0x00000000	mfhi \$t0	20: mfhi \$t2	
0x04000038	0x00000000	addiu \$11,\$0,0x0000000a	21: addi \$t3, \$v0, 10	
0x0400003c	0x71840000	addi \$11,\$10,41	22: mul \$t3, \$t2, \$t3	
0x04000040	0x01800000	div \$11,\$11	23: div \$t3, \$t1	
0x04000044	0x00000000	mfhi \$t0	24: mfhi \$a0	
0x04000048	0x40200000	addiu \$2,\$0,0x00000004	25: li \$v0,4 # obdigio 4 == print_string	
0x0400004c	0x3c010000	li \$1,0x00000001	27: la \$a0,string2 # \$a0 == endereco da string	
0x04000050	0x40200000	ori \$4,\$1,0x00000000		
0x04000054	0x0000000c	syscall	28: syscall # Solicita o servico ao SO	
0x04000058	0x40200000	addiu \$2,\$0,0x00000000	30: li \$v0,1 # obdigio 4 == print_string	
0x0400005c	0x00110000	addiu \$4,\$0,47	31: move \$a0, \$t1 # \$a0 == endereco da string	
0x04000060	0x0000000c	syscall	32: syscall # Solicita o servico ao SO	
0x04000064	0x40200000	addiu \$2,\$0,0x00000004	34: li \$v0,4 # obdigio 4 == print_string	
0x04000068	0x3c010000	li \$1,0x00000001	35: la \$a0,ponto # \$a0 == endereco da string	
0x0400006c	0x40200000	ori \$4,\$1,0x00000000		
0x04000070	0x0000000c	syscall	36: syscall # Solicita o servico ao SO	
0x04000074	0x40200000	addiu \$2,\$0,0x00000001	38: li \$v0,1 # obdigio 4 == print_string	
0x04000078	0x00120000	addiu \$4,\$0,518	39: move \$a0, \$a2 # \$a0 == endereco da string	
0x0400007c	0x0000000c	syscall	40: syscall # Solicita o servico ao SO	
0x04000080	0x40200000	addiu \$2,\$0,0x0000000a	42: li \$v0,10 # obdigio 10 == exit	
0x04000084	0x0000000c	syscall	43: syscall # Retorna controle ao SO	

Data Segment

Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)	Value (+14)	Value (+18)	Value (+1c)
0x10010000	0x766e17851	0x766e17852	0x766e17855	0x766e178520	0x766e17856	0x666e17856e5	0x63f7669	0x74204100
0x10010020	0x766e17855	0x766e178520	0x766e178543	0x766e178569	0x666e17856e5	0x60000000e	0x600000000	0x600000000
0x10010040	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000
0x10010060	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000	0x600000000

Mars Messages Run IO

0 soma dos elementos = 9
-- program is finished running (dropped off bottom) --

Clear

Qual a temp. em Fahrenheit?