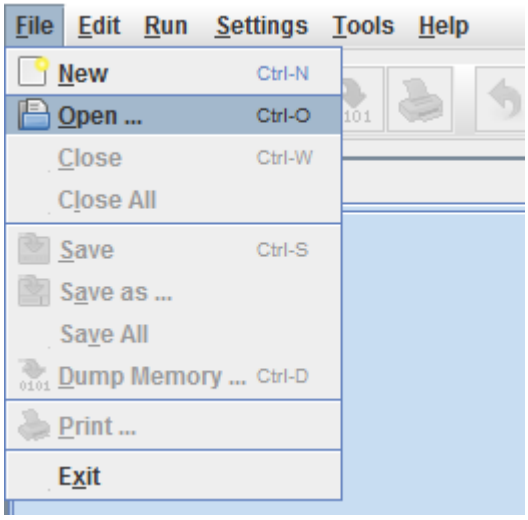
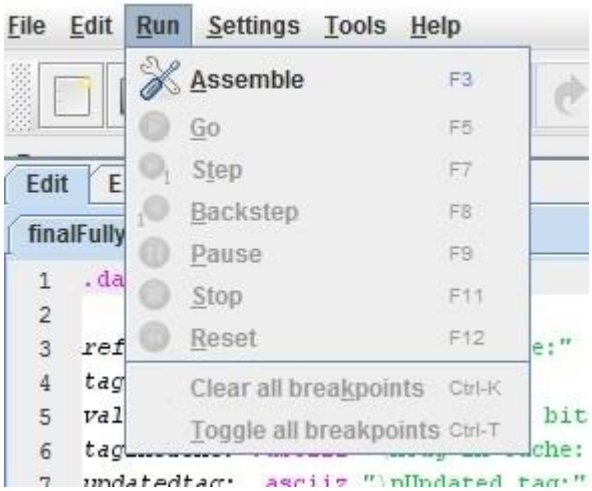
Instructions to compile and execute the program:

Please follow the below instructions to assemble and run the program.

- By using the top menu open the required file (**File > Open**).

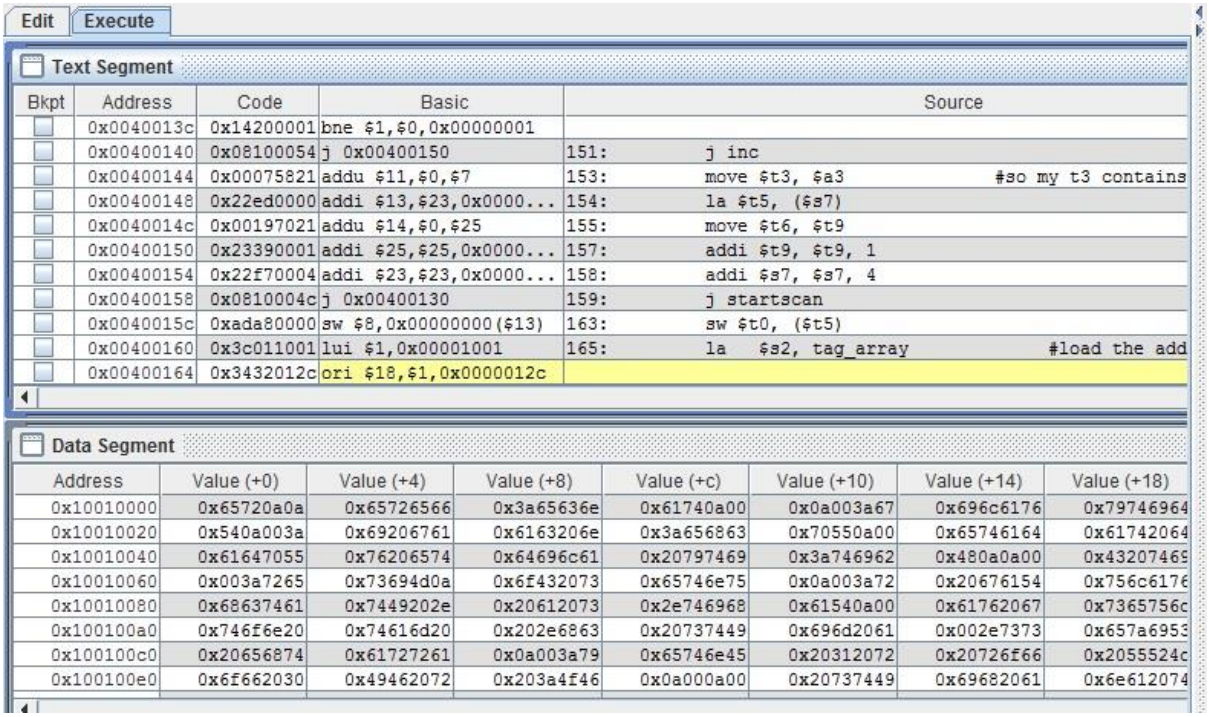


- When the required file is selected and opened, the MARS Edit pane will be loaded with the assembly program.
- Assemble the code by clicking **Run > Assemble** from the top menu or by directly clicking the  button on the menu bar.



- After successfully assembling the program a message will be printed to the Mars Messages Pane

and activates Execute Pane showing the text segment and data segment of the program.



Edit | Execute

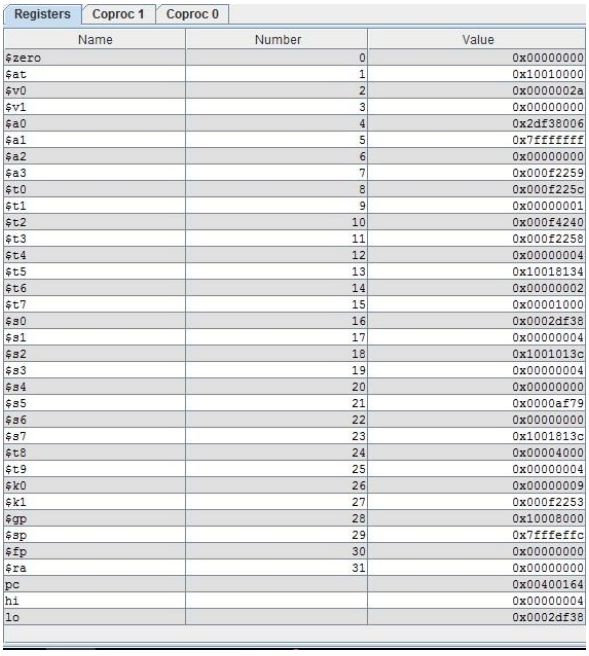
Text Segment

Bkpt	Address	Code	Basic	Source
	0x0040013c	0x14200001	bne $1,$0,0x00000001	
	0x00400140	0x08100054	j 0x00400150	151: j inc
	0x00400144	0x00075821	addu $11,$0,$7	153: move $t3, $a3 #so my t3 contains
	0x00400148	0x22ed0000	addi $13,$23,0x0000...	154: la $t5, ($s7)
	0x0040014c	0x00197021	addu $14,$0,$25	155: move $t6, $t9
	0x00400150	0x23390001	addi $25,$25,0x0000...	157: addi $t9, $t9, 1
	0x00400154	0x22f70004	addi $23,$23,0x0000...	158: addi $s7, $s7, 4
	0x00400158	0x0810004c	j 0x00400130	159: j startscan
	0x0040015c	0xada80000	sw $8,0x00000000($13)	163: sw $t0, ($t5)
	0x00400160	0x3c011001	lui $1,0x00001001	165: la $s2, tag_array #load the add
	0x00400164	0x3432012c	ori $18,$1,0x0000012c	

Data Segment

Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)	Value (+14)	Value (+18)
0x10010000	0x65720a0a	0x65726566	0x3a65636e	0x61740a00	0x0a003a67	0x696c6176	0x79746964
0x10010020	0x540a003a	0x69206761	0x6163206e	0x3a656863	0x70550a00	0x65746164	0x61742064
0x10010040	0x61647055	0x76206574	0x64696c61	0x20797469	0x3a746962	0x480a0a00	0x43207469
0x10010060	0x003a7265	0x73694d0a	0x6f432073	0x65746e75	0x0a003a72	0x20676154	0x756c617e
0x10010080	0x68637461	0x7449202e	0x20612073	0x2e746968	0x61540a00	0x61762067	0x7365756c
0x100100a0	0x746f6e20	0x74616d20	0x202e6863	0x20737449	0x696d2061	0x002e7373	0x657a6953
0x100100c0	0x20656874	0x61727261	0x0a003a79	0x65746e45	0x20312072	0x20726f66	0x2055524c
0x100100e0	0x6f662030	0x49462072	0x203a4f46	0x0a000a00	0x20737449	0x69682061	0x6e612074

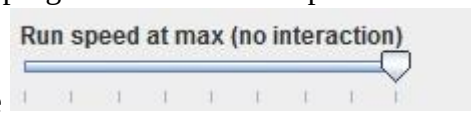
- While executing the program the values of the registers will be modified based on the program and the changes can be viewed in the register pane.



Registers | Coproc 1 | Coproc 0

Name	Number	Value
$zero	0	0x00000000
$at	1	0x10010000
$v0	2	0x0000002a
$v1	3	0x00000000
$a0	4	0x2df38006
$a1	5	0x7fffffff
$a2	6	0x00000000
$a3	7	0x000f2259
$t0	8	0x000f225c
$t1	9	0x00000001
$t2	10	0x000f4240
$t3	11	0x000f2258
$t4	12	0x00000004
$t5	13	0x10018134
$t6	14	0x00000002
$t7	15	0x00001000
$s0	16	0x0002df38
$s1	17	0x00000004
$s2	18	0x1001013c
$s3	19	0x00000004
$s4	20	0x00000000
$s5	21	0x0000af79
$s6	22	0x00000000
$s7	23	0x1001813c
$t8	24	0x00004000
$t9	25	0x00000004
$k0	26	0x00000009
$k1	27	0x000f2253
$gp	28	0x10008000
$sp	29	0x7fffeffc
$fp	30	0x00000000
$ra	31	0x00000000
pc		0x00400164
hi		0x00000004
lo		0x0002df38

- Before running the program clear the values of the register by clicking  button to avoid any interference of previous values in the current program.

- Click the  button to run the program. The program can be run by executing one instruction at a time by clicking  button.
- While running the program the transition speed between the instructions can be modified using the 

bar.
- After successful execution of the program the output will be printed to the Run I/O pane with a message -- program is finished running--