

\*\*\*\*\*SRC Assembler\*\*\*\*\* (SRCTools Version 2.01)

HexLoc	MachWord	Label	Source Code	Comments
00000000	00000000	first:	.equ -4	;The first element
00000000	00000000	last:	.equ 5	;The last element
00000000	00000000		.org 1000H	;Starting memory location for
00001000	00000000			;the results
00001000	00000000	SUM:	.dc 0	;This will contain the sum of
00001004	00000000			;all the elements
00001004	00000000	Array:	.dw 100	;Sets aside space for 100 elements
00001194	00000000		.org 2000H	;The code starts here
00002000	2841ffff		la r1, first	;r1 will contain the current element
00002004	28800005		la r2, last	;r2 contains the value at which to stop
00002008	28c00000		la r3, 0	;r3 contains the sum
0000200c	29000000		la r4, 0	;r4 holds the displacement
00002010	00000000			;from the start of the array
00002010	00000000			;to where the current element
00002010	00000000			;will be stored
00002010	29800000		la r6, 0	;r6 will hold 2 * I + 1
00002014	2a80201c		la r10, loop	;r10 holds the address of the
00002018	00000000			;start of the loop
00002018	2d002044		la r20, end	;r20 has the address to which to
0000201c	00000000			;branch when finished
0000201c	71441000	loop:	sub r5, r2, r1	;tests to see if finished
00002020	40285005		brmi r20, r5	;branches to end when finished
00002024	18481004		st r1, Array(r4)	;stores the current element in the array
00002028	61821000		add r6, r1, r1	;forms 2 * I
0000202c	618c1000		add r6, r6, r1	;forms 3 * I
00002030	698c0001		addi r6, r6, 1	;forms 3 * I + 1
00002034	60c66000		add r3, r3, r6	;adds the current element to the sum
00002038	68420001		addi r1, r1, 1	;forms the value of the next element
0000203c	69080004		addi r4, r4, 4	;forms the displacement for the next element
00002040	40140001		br r10	;branches to see if it is finished
00002044	18c01000	end:	st r3, SUM	;stores the sum in memory
00002048	f8000000		stop	;quit

PC = 8268

r0 = 0

r4 = 40

r8 = 0

r12 = 0

r16 = 0

r20 = 8260

r24 = 0

r28 = 0

r1 = 6

r5 = -1

r9 = 0

r13 = 0

r17 = 0

r21 = 0

r25 = 0

r29 = 0

r2 = 5

r6 = 16

r10 = 8220

r14 = 0

r18 = 0

r22 = 0

r26 = 0

r30 = 0

r3 = 25

r7 = 0

r11 = 0

r15 = 0

r19 = 0

r23 = 0

r27 = 0

r31 = 0

ExitPrintLoadReloadEditStepRunStop

Clear RegFileClear BreakPtsClear Memory

☐ Hex

☒ Dec

☒ Update Screen

☐ Allow Exceptions

Loc

BreakPt

MachWord

Source Code

[ 8260 ]

☐

18c01000

st r3, 4096(r0)

[ 8264 ]

☐

f8000000

stop

[ 8268 ]

☐

00000000

nop

[ 8272 ]

☐

00000000

nop

[ 8276 ]

☐

00000000

nop

[ 8280 ]

☐

00000000

nop

[ 8284 ]

☐

00000000

nop

[ 8288 ]

☐

00000000

nop

Prev. 8

Prev. 4

Prev. 1

Next 1

Next 4

Next 8

Loc

Offset 00

Offset 04

Offset 08

Offset 0c

[ 4096 ]

25

-4

-3

-2

[ 4112 ]

-1

0

1

2

[ 4128 ]

3

4

5

0

[ 4144 ]

0

0

0

0

Prev. 16

Prev. 8

Prev. 4

Next 4

Next 8

Next 16

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