

Assignment lab1 Report

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Q1. Done through in class check.

Q2.

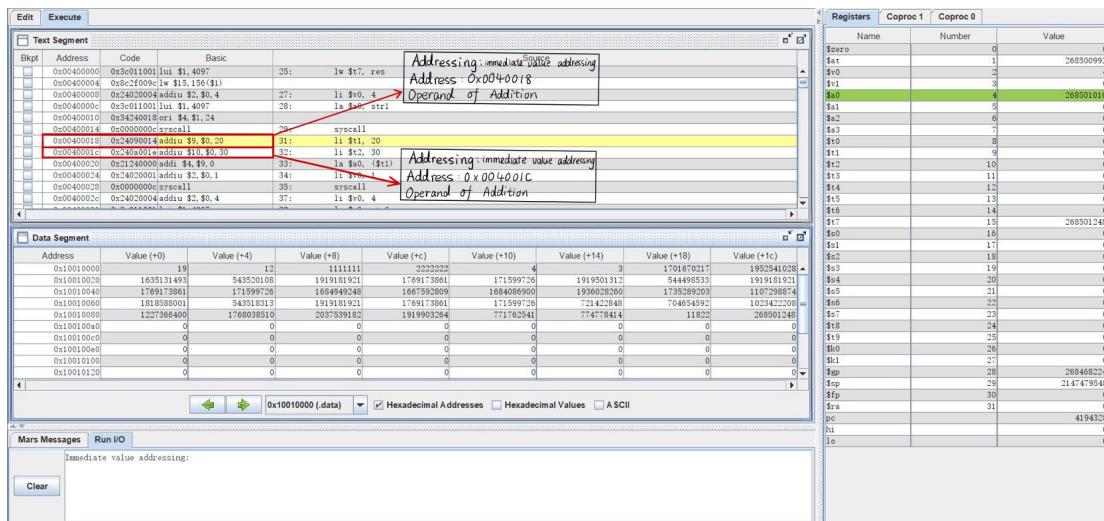


Fig1. screen shot of data segment before running addition

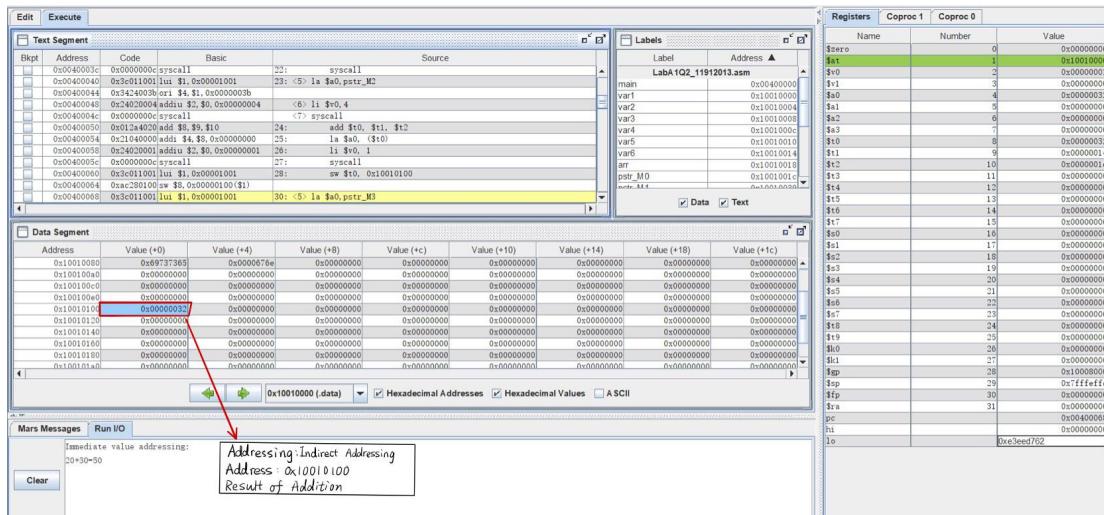


Fig2. screen shot of data segment after running addition

The screenshot shows the Mars simulator interface. The Text Segment window displays assembly code for a subtraction operation. The Data Segment window shows memory locations from 0x10010000 to 0x10010120, with specific values highlighted for addresses 0x10010000, 0x10010004, and 0x10010008. The Mars Messages window shows immediate value addressing and direct addressing for the subtraction operation.

Fig3. screen shot of data segment before running subtraction

The screenshot shows the Mars simulator interface. The Data Segment window displays memory locations from 0x10010000 to 0x10010120. A red box highlights the value at address 0x10010004, which has changed from 0x00000004 to 0x00000000. The Mars Messages window shows the result of the subtraction operation.

Fig4. screen shot of data segment after running subtraction

The screenshot shows the Mars simulator interface. The Data Segment window displays memory locations from 0x10010000 to 0x10010120. A red box highlights the value at address 0x10010004, which is 0x00000004. The Mars Messages window shows the setup for a multiplication operation.

Fig5. screen shot of data segment before running multiplication

Registers

Name	Number	Value
\$zero	0	0x00000000
\$at	1	0x10000000
\$v0	2	0x00000000
\$v1	3	0x00000000
\$a0	4	0x1001010c
\$a1	5	0x00000000
\$a2	6	0x00000000
\$a3	7	0x00000000
\$t0	8	0x00000000
\$t1	9	0x10000000
\$t2	10	0x10000000
\$t3	11	0x0010f441
\$t4	12	0x0021e884
\$t5	13	0x0021e734
\$t6	14	0x00000000
\$t7	15	0x10001000
\$t8	16	0x00000000
\$t9	17	0x00000000
\$t10	18	0x00000000
\$t11	19	0x00000000
\$t12	20	0x00000000
\$t13	21	0x00000000
\$t14	22	0x00000000
\$t15	23	0x00000000
\$t16	24	0x00000000
\$t17	25	0x00000000
\$t18	26	0x00000000
\$t19	27	0x00000000
\$sp	28	0x10000000
\$fp	29	0xffffffff
\$ra	30	0x00000000
pc	31	0x0400101c
hi		0x00000234
lo		0xe3eed762

Fig6. screen shot of data segment after running multiplication

Registers

Name	Number	Value
\$zero	0	0x00000000
\$at	1	0x10000000
\$v0	2	0x00000000
\$a0	4	0x1001010c
\$a1	5	0x00000000
\$a2	6	0x00000000
\$a3	7	0x00000000
\$t0	8	0x00000000
\$t1	9	0x10000000
\$t2	10	0x10000000
\$t3	11	0x0010f441
\$t4	12	0x0021e884
\$t5	13	0x0021e734
\$t6	14	0x00000000
\$t7	15	0x10001000
\$t8	16	0x00000000
\$t9	17	0x00000000
\$t10	18	0x00000000
\$t11	19	0x00000000
\$t12	20	0x00000000
\$t13	21	0x00000000
\$t14	22	0x00000000
\$t15	23	0x00000000
\$t16	24	0x00000000
\$t17	25	0x00000000
\$t18	26	0x00000000
\$t19	27	0x00000000
\$sp	28	0xffffffff
\$fp	29	0x00000000
\$ra	30	0x00000000
pc	31	0x0400101c
hi		0x00000234
lo		0xe3eed762

Fig7. screen shot of data segment before running division

Registers

Name	Number	Value
\$zero	0	0x00000000
\$at	1	0x10000000
\$v0	2	0x00000000
\$a0	4	0x10010114
\$a1	5	0x00000000
\$a2	6	0x00000000
\$a3	7	0x00000000
\$t0	8	0x10000000
\$t1	9	0x10000000
\$t2	10	0x10000000
\$t3	11	0x00000001
\$t4	12	0x00000001
\$t5	13	0x00000001
\$t6	14	0x00000000
\$t7	15	0x10001000
\$t8	16	0x00000000
\$t9	17	0x00000000
\$t10	18	0x00000000
\$t11	19	0x00000000
\$t12	20	0x00000000
\$t13	21	0x00000000
\$t14	22	0x00000000
\$t15	23	0x00000000
\$t16	24	0x00000000
\$t17	25	0x00000000
\$t18	26	0x00000000
\$t19	27	0x00000000
\$sp	28	0xffffffff
\$fp	29	0x00000000
\$ra	30	0x00000000
pc	31	0x0400101c
hi		0x00000001
lo		0x00000001

Fig8. screen shot of data segment after running division