**Load and Store**

.data

# int Source = 0x89ABCDEF

Source: .word 0x89ABCDEF

# int Destination

Destination: .word 0

.text

.globl main

# void main( )

main:

# {

# Destination = Source

lw $t0, Source

sw $t0, Destination

# }

li $v0, 10

syscall

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Data Segment

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DATA

[0x10000000]...[0x1000fffc] 0x00000000

[0x1000fffc] 0x00000000

[0x10010000] 0x89abcdef 0x89abcdef 0x00000000 0x00000000

[0x10010010]...[0x10040000] 0x00000000

Registers

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PC = 00000000 EPC = 00000000 Cause = 00000000 BadVAddr= 00000000

Status = 00000000 HI = 00000000 LO = 00000000

General Registers

R0 (r0) = 00000000 R8 (t0) = 89abcdef R16 (s0) = 00000000 R24 (t8) = 00000000

R1 (at) = 10010000 R9 (t1) = 00000000 R17 (s1) = 00000000 R25 (t9) = 00000000

R2 (v0) = 0000000a R10 (t2) = 00000000 R18 (s2) = 00000000 R26 (k0) = 00000000

R3 (v1) = 00000000 R11 (t3) = 00000000 R19 (s3) = 00000000 R27 (k1) = 00000000

R4 (a0) = 00000000 R12 (t4) = 00000000 R20 (s4) = 00000000 R28 (gp) = 10008000

R5 (a1) = 7fffe804 R13 (t5) = 00000000 R21 (s5) = 00000000 R29 (sp) = 7fffe800

R6 (a2) = 7fffe808 R14 (t6) = 00000000 R22 (s6) = 00000000 R30 (s8) = 00000000

R7 (a3) = 00000000 R15 (t7) = 00000000 R23 (s7) = 00000000 R31 (ra) = 00400018

Text Segment

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[0x00400000] 0x8fa40000 lw $4, 0($29) ; 102: lw $a0, 0($sp)

[0x00400004] 0x27a50004 addiu $5, $29, 4 ; 103: addiu $a1, $sp, 4 # argv

[0x00400008] 0x24a60004 addiu $6, $5, 4 ; 104: addiu $a2, $a1, 4 # envp

[0x0040000c] 0x00041080 sll $2, $4, 2 ; 105: sll $v0, $a0, 2

[0x00400010] 0x00c23021 addu $6, $6, $2 ; 106: addu $a2, $a2, $v0

[0x00400014] 0x0c100008 jal 0x00400020 [main] ; 107: jal main

[0x00400018] 0x3402000a ori $2, $0, 10 ; 108: li $v0 10

[0x0040001c] 0x0000000c syscall ; 109: syscall

[0x00400020] 0x3c011001 lui $1, 4097 ; 14: lw $t0, Source

[0x00400024] 0x8c280000 lw $8, 0($1)

[0x00400028] 0x3c011001 lui $1, 4097 ; 15: sw $t0, Destination

[0x0040002c] 0xac280004 sw $8, 4($1)

[0x00400030] 0x3402000a ori $2, $0, 10 ; 18: li $v0, 10

[0x00400034] 0x0000000c syscall ; 19: syscall

$1 4097

0x3c 01 1001 lui $1, 4097 [Source]

0011 1100 0000 0001 0001 0000 0000 0001

00111100000 00001 0001 0000 0000 0001

1e0 1 1001

0x8c280004 lw $8, 4($1) [Source]

1000 1100 0010 1000 0000 0000 0000 0100

100011 00001 01000 0000 0000 0000 0100

23 1 8 4

0x3c011001 lui $1, 4097 [Destination]

0011 1100 0000 0001 0001 0000 0000 0001

00111100000 00001 0001 0000 0000 0001

1e0 1 1001

0xac280008 sw $8, 8($1) [Destination]

1010 1100 0010 1000 0000 0000 0000 1000

101011 00001 01000 0000 0000 0000 1000

2b 1 8 8

0x3c011001 lui $1, 4097 [Source]

0x34290004 ori $9, $1, 4 [Source]

0011 0100 0010 1001 0000 0000 0000 0100

001101 00001 01001 0000 0000 0000 0100

0d 1 9 4

0x3402000a ori $2, $0, 10

0011 0100 0000 0010 0000 0000 0000 1010

001101 00000 00010 0000 0000 0000 1010

0d 0 2 a