Bài tập chương 7:



Blt $s0 $s1 IF

Addi $s5 $s0 0

Sll $s5 $s5 2

Add $s5 $s5 $s3

Lw $s4 0($s5)

Addi $s4 $s4 -1

Sw $s4 0($s5)

Addi $s4 $zero 5

sw $s4 4($s5)

j End

IF:

Addi $s5 $s0 0

Sll $s5 $s5 2

Add $s5 $s5 $s3

Lw $s4 0($s5)

Addi $s4 $s4 1

Sw $s4 0($s5)

Addi $s4 $zero 5

sw $s4 4($s5)

End:

addi $s0 $s0 1

b)

slt $s2 $s1 $s0

nor $s2 $s2 $s2

stl $s3 $s1 $zero

nor $s3 $s3 $s3

and $s2 $s2 $s3

sll $s0 $s0 2

sll $s1 $s1 2

add $s3 $s3 $s0

lw $s4 0($s3)

lw $s5 4($s3)

beq $s2 $zero start

add $s4 $s4 $s5

sub $s3 $s3 $s0

add $s3 $s3 $s1

lw $s4 0($s3)

j end

start:

sub $s4 $s4 $s5

sub $s3 $s3 $s0

add $s3 $s3 $s1

lw $s4 0($s3)

end:

c)

loop:

add $s2 $zero $s0

sll $s2 $s2 2

add $s2 $s2 $s3

lw $s4 0($s2)

sll $s4 $s4 3

sw $s4 4($s2)

subi $s0 $s0 1

beq $s0 $zero end

j loop

end:

addi $s5 $zero 5

sw $s5 0($s3)

d.

addi $s1 $s5 0

addi $s0 $zero 1 // i

loop:

addi $s7 $s2 0

sll $s7 $s7 2

add $t0 $s7 $s4

lw $s6 0($t0)

add $t0 $s7 $s3

sw $s6 0($t0)

addi $s2 $s2 1

beq $s0 $s1 end

j loop

end:

a = 2;

b = 6;

while(b > 0){

a = a \* 2;

b = b - 1;

}

c = a + 2;

b.

c = b + a[I + 10]

1. a)

0x00400000: slt $t2, $t0, $t1

000000 01000 01001 01010 00000 101010

0x00400004: beq $t2, $zero, ELSE

000100 01010 00000 0000000000000010

0x00400008 : add $t2, $t2, $t0

000000 01010 01000 01010 00000 100000

0x0040000c : j DONE

000010 | 0000 0100 0000 0000 0000 0001 01

0x00400010: ELSE: add $t2, $t2, $t1

000000 01010 01001 01010 00000 100000

0x00400014: DONE:

b)

addi $s0, $zero, 2048

001000 | 00000 | 10000 | 0000100000000000

lw $t0, 1024($s0)

100011 | 10000 | 01000 | 0000010000000000

4.

a)

0x02d7a020

000000 | 10110 | 10111 | 10100 | 00000 | 100000 -> type R

0 | 22 | 23 | 20 | 0 | 20(hex)

add $s4, $s6, $s7

b)

0x8d4907e0

100011 | 01010 | 01001 | 0000011111100000 -> type I

23(hex) | 10 | 9 | 2016

lw $t1, 2016($t2)