1번

.text

.globl main

main:

sw $t0, 0x10010000

sw $t1, 0x10010000

addi $t0 $0 20

addi $t1 $0 8

add $t3, $t0, $t1

sub $t4, $t0, $t1

div $t3, $t4

mfhi $t4

mflo $t5

sw $t4, 0x10010004

sw $t5, 0x10010008

li $v0, 10

syscall

2번

.text

.globl main

main:

sw $t0, 0x10010000 # x값

sw $t1, 0x10010000 # y값

addi $t0 $0 20

addi $t1 $0 8

jal same

add $t2, $0, $v0

sw $t2, 0x10010004 # rst

li $v0, 10

syscall

same:

bne $t0, $t1, target

la $v0, 'y'

jr $ra

target:

la $v0, 'n'

jr $ra

3번

.data

X: .word 5

.text

.globl main

main:

lw $s5, X

li $s0, 0x10010004

sw $s5, 0($s0)

addi $s4, $0, 'a' #$s4 == ch

addi $sp, $sp, -20

addi $t9, $0, 'a'

sw $t9, 16($sp) #stackPoint 16에 'a'를 넣어준다.

addi $t9, $0, 'b'

sw $t9, 12($sp)

addi $t9, $0, 'c'

sw $t9, 8($sp)

addi $t9, $0, 'd'

sw $t9, 4($sp)

addi $t9, $0, 'e'

sw $t9, 0($sp)

jal coint\_char

move $t1, $v0

beq $t1, $0, done #return값이 없으면 ($t1 == 0이면) done

sw $t1, 4($s0) # 값 저장

j done

coint\_char:

la $t0, 0($sp)

addi $s1, $s1, 0

addi $t1 $t1, 0

addi $t8, $t8, 4 # i \* 4

loop:

slt $t4, $t2, $t5 # i < size

beq $t4, $0, loopend

mult $t2, $t8

mult $t2, $t8

mflo $t7 # 4, 8, 12... 로 계산됨

add $t7, $t7, $t0 #기본 주소값 더하기 4, 8, 12...

lw $t9, 0($t7)

addi $t2, $t2, 1 # i값 1증가

div $t9, $s4 # str[i] % ch

mfhi $t5 #나머지는 하위값에 계산 저장됨

bne $t5, $s0, loop #str[i] % ch == 0

addi $s1, $s1, 1 #같지 않으면 그냥 i를 1증가하고 다시 루프 돌린다.

j loop

looped:

add $v0, $0, $s1

jr $ra

done:

addi $sp, $sp, 20

li $v0, 10

syscall