**Buoi 2:**

1. **Tim max cua 3 so**

.data

so1: .asciiz "Nhap so thu nhat: "

so2: .asciiz "Nhap so thu 2: "

so3: .asciiz "Nhap so thu 3: "

max: .asciiz "Max = "

line\_brk: .asciiz "\n"

.text

main:

#nhap so thu nhat

la $a0, so1

li $v0, 4

syscall

li $v0, 5

syscall

move $t0, $v0

la $a0, line\_brk

li $v0, 4

syscall

#nhap so thu hai

la $a0, so2

li $v0, 4

syscall

li $v0, 5

syscall

move $t1, $v0

la $a0, line\_brk

li $v0, 4

syscall

#nhap so thu ba

la $a0, so3

li $v0, 4

syscall

li $v0, 5

syscall

move $t2, $v0

la $a0, line\_brk

li $v0, 4

syscall

#tim max

move $t3, $t0

bgt $t3, $t1, sosanht2

move $t3, $t1

sosanht2:

bgt $t3, $t2, exit

move $t3, $t2

exit:

la $a0, max

li $v0, 4

syscall

move $a0, $t3

li $v0, 1

syscall

li $v0, 10

syscall

1. **Tinh bieu thuc**

.data

so1: .asciiz "Nhap N: "

so2: .asciiz "Nhap M: "

max: .asciiz "2\*N + 5\*M = = "

line\_brk: .asciiz "\n"

.text

main:

#nhap N

la $a0, so1

li $v0, 4

syscall

li $v0, 5

syscall

move $t0, $v0

la $a0, line\_brk

li $v0, 4

syscall

#nhap M

la $a0, so2

li $v0, 4

syscall

li $v0, 5

syscall

move $t1, $v0

la $a0, line\_brk

li $v0, 4

syscall

#tinh

li $t2, 2

mult $t2, $t0

mflo $t3

li $t2, 5

mult $t2, $t1

mflo $t4

add $t5, $t3, $t4

#xuat kqua

li $v0, 1

move $a0, $t5

syscall

li $v0, 10

syscall

1. **Tinh chu vi hcn**

.data

so1: .asciiz "Nhap chieu dai: "

so2: .asciiz "Nhap chieu rong: "

max: .asciiz "Chu vi = "

line\_brk: .asciiz "\n"

.text

main:

#nhap dai

la $a0, so1

li $v0, 4

syscall

li $v0, 5

syscall

move $t0, $v0

la $a0, line\_brk

li $v0, 4

syscall

#nhap rong

la $a0, so2

li $v0, 4

syscall

li $v0, 5

syscall

move $t1, $v0

la $a0, line\_brk

li $v0, 4

syscall

#tinh cv

add $t2, $t1, $t0

li $t3, 2

mult $t2, $t3

mflo $t2

#xuat kqua

la $a0, max

li $v0, 4

syscall

move $a0, $t2

li $v0, 1

syscall

li $v0, 10

syscall

1. **Tinh tog**

.data

so1: .asciiz "Nhap N: "

max: .asciiz "Tong = "

line\_brk: .asciiz "\n"

.text

main:

#nhap N

la $a0, so1

li $v0, 4

syscall

li $v0, 5

syscall

move $t0, $v0 #t0 = N

la $a0, line\_brk

li $v0, 4

syscall

mult $t0, $t0

mflo $t3 #t3 = N\*N

li $t2, 0 #t2 = tong

move $t1, $t0 #t1 = N->Next

loop:

add $t2, $t2, $t1

addi $t1, $t1, 1

bgt $t1, $t3, exit\_loop

j loop

exit\_loop:

#xuat kqua

la $a0, max

li $v0, 4

syscall

li $v0, 1

move $a0, $t2

syscall

li $v0, 10

syscall

1. **TongN**

.data

so1: .asciiz "Nhap N: "

max: .asciiz "Tong = "

.globl main

.text

main:

#nhap N

la $a0, so1

li $v0, 4

syscall

li $v0, 5

syscall

bnez $v0, end

li $t0, 0 #t2 = tong

loop:

add $t0, $t0, $v0

addi $v0, $v0, -1

bnez $v0, loop

li $v0, 4

la $a0, max

syscall

li $v0, 1

move $a0, $t0

syscall

end:

li $v0, 1

move $a0, $t0

syscall

li $v0, 10

syscall

**Buoi 3:**

1. **Chuyen ky tu hoa**

.data

input: .asciiz "input: "

output1: .asciiz " chuyen sang ky tu hoa la "

output2: .asciiz " khong phai ky tu chu "

line\_break: .asciiz "\n "

.text

main:

#nhap

la $a0, input

li $v0, 4

syscall

li $v0, 12

syscall

move $t0, $v0

blt $t0, 'A', kytuhoa

bgt $t0, 'Z', kytuhoa

la $a0, line\_break

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

la $a0, output1

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

j exit

kytuhoa:

blt $t0, 'a', notkytu

bgt $t0, 'z', notkytu

la $a0, line\_break

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

la $a0, output1

li $v0, 4

syscall

move $t1, $t0

addi $t1, $t1, -32

move $a0, $t1

li $v0, 11

syscall

j exit

notkytu:

la $a0, line\_break

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

la $a0, output2

li $v0, 4

syscall

exit:

li $v0, 10

syscall

1. **Kiem tra ky tu so**

.data

input: .asciiz "input: "

output1: .asciiz " la ky tu, khong phai so "

output2: .asciiz " la so, khong phai ky tu "

line\_break: .asciiz "\n "

.text

main:

#nhap

la $a0, input

li $v0, 4

syscall

li $v0, 12

syscall

move $t0, $v0

blt $t0, '0', kytu

bgt $t0, '9', kytu

la $a0, line\_break

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

la $a0, output2

li $v0, 4

syscall

j exit

kytu:

la $a0, line\_break

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

la $a0, output1

li $v0, 4

syscall

exit:

li $v0, 10

syscall

1. **Nhap ky tu**

.data

input: .asciiz "Nhap 1 ky tu: "

output1: .asciiz "Ky tu truoc: "

output2: .asciiz "Ky tu sau: "

line\_brk: .asciiz "\n"

.text

main:

la $a0, input

li $v0, 4

syscall

li $v0, 12

syscall

move $t0, $v0 #input = st0

move $t1, $t0

addi $t1, $t1, -1

la $a0, line\_brk

li $v0, 4

syscall

la $a0, output1

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

#output 2

move $t1, $t0

addi $t1, $t1, 1

la $a0, line\_brk

li $v0, 4

syscall

la $a0, output2

li $v0, 4

syscall

move $a0, $t1

li $v0, 11

syscall

#end

li $v0, 10

syscall

1. **Nhap phep toan**

.data

input1: .asciiz "Nhap so nguyen 1: "

input2: .asciiz "Nhap so nguyen 2: "

input3: .asciiz "Nhap phep toan (+ hoac -): "

output: .asciiz "\nKQ: "

output2: .asciiz "\nPhep toan khong hop le: "

.text

main:

#nhap a

la $a0, input1

li $v0, 4

syscall

li $v0, 5

syscall

move $t0, $v0

#nhap b

la $a0, input2

li $v0, 4

syscall

li $v0, 5

syscall

move $t1, $v0

#nhap phap toan

la $a0, input3

li $v0, 4

syscall

li $v0, 12

syscall

move $t2, $v0

#ss

bne $v0, '-', cong

sub $t3, $t0, $t1

li, $v0, 4

la $a0, output

syscall

li $v0, 1

move $a0, $t3

syscall

j exit

cong:

bne $v0, '-', khonghople

sub $t3, $t0, $t1

li, $v0, 4

la $a0, output

syscall

li $v0, 1

move $a0, $t3

syscall

j exit

khonghople:

la $a0, output2

li $v0, 4

syscall

exit:

li $v0, 10 syscall

**Buoi 4:**

1. **Chuyen chuoi thuong**

.data

input: .asciiz "Nhap vao mot chuoi: "

output1: .asciiz " chuyen sang choi thuong la: "

str: .space 1024

line\_break: .asciiz "\n "

.text

main:

la $a0, input

li $v0, 4

syscall

la $a0, str

li $a1, 1024

li $v0, 8

syscall

#t1 chua ky tu hien hanh

#t2 chua dia chi cua ky tu do

la $t2, str

loop:

lb $t1, ($t2)

beqz $t1, exit

blt $t1, 'A', giuNguyen

bgt $t1, 'Z', giuNguyen

addi $t1, $t1, 0x20

sb $t1, ($t2)

giuNguyen:

addi $t2, $t2, 1

j loop

exit:

la $a0, output1

li $v0, 4

syscall

la $a0, line\_break

li $v0, 4

syscall

li $v0, 4

la $a0, str

syscall

li $v0, 10

syscall

1. **Dao chuoi**

.data

input: .asciiz "Nhap vao mot chuoi: "

output1: .asciiz " \nCHuoi nghich dao cua no la: "

str: .space 1024

line\_break: .asciiz "\n "

.text

main:

la $a0, input

li $v0, 4

syscall

la $a0, str

li $a1, 1024

li $v0, 8

syscall

#dua vao stack

li $t2, 0

la $t0, str

loop\_push:

lb $t1, ($t0)

beqz $t1, end

addi $sp, $sp, -1

sb $t1, ($sp)

addi $t0, $t0, 1

addi $t2, $t2, 1

j loop\_push

end:

li $v0, 4

la $a0, output1

syscall

#lay ra tu stack

loop\_pop:

lb $t1, ($sp)

addi $sp, $sp, 1

addi $t2, $t2, -1

li $v0, 11

move $a0, $t1

syscall

bgtz $t2, loop\_pop

li $v0, 10

syscall

1. **Kiem tra doi xung**

.data

input: .asciiz "Nhap vao mot chuoi: "

output1: .asciiz " \nCHuoi nay doi xung "

output2: .asciiz " \nCHuoi nay khong doi xung "

str: .space 1024

line\_break: .asciiz "\n

.text

main:

la $a0, input

li $v0, 4

syscall

la $a0, str

li $a1, 1024

li $v0, 8

syscall

#dua vao stack

li $t2, 0

la $t0, str

loop:

lb $t1, ($t0)

beq $t1, 10, next

addi $sp, $sp, -1

sb $t1, ($sp)

addi $t0, $t0, 1

addi $t2, $t2, 1

j loop

next:

li $t3, 2

div $t2, $t3

mflo $t3

li $t3, 1

la $t0, str

loop\_xuly:

lb $t1, ($t0)

lb $t5, ($sp)

addi $sp, $sp, 1

bne $t1, $t5, khongdoixung

addi $t0, $t0, 1

addi $t3, $t3, -1

bgtz $sp, loop\_xuly

j doixung

khongdoixung:

li $t4, 0

li $v0, 4

la $a0, output2

syscall

j exit

doixung:

li $t4, 0

li $v0, 4

la $a0, output1

syscall

j exit

exit:

li $v0, 10

syscall

#luu qua chuoi moi