**Hello#######**

.data

str: .asciiz "Hello asm !"

.text

.globl main

main:

addi $v0, $0, 4

la $a0, str

syscall

**### Doc 4 bit cuoi**

#Doc day bit

.data

tb1: .asciiz "Nhap 1 so nguyen: "

tb2: .asciiz "Day bit la: "

a: .word 0

.text

#xuat tb1

li $v0,4

la $a0,tb1

syscall

#nhap so nguyen

li $v0,5

syscall

#luu gia tri vao a

sw $v0,a

#Load gia tri a vao s0

lw $s0,a

#xuat tb2

li $v0,4

la $a0,tb2

syscall

#Doc bit 28

srl $s1,$s0,3

andi $t0,$s1,1

#xuat bit

li $v0,1

move $a0,$t0

syscall

#Doc bit 29

srl $s1,$s0,2

andi $t0,$s1,1

#xuat bit

li $v0,1

move $a0,$t0

syscall

#Doc bit 30

srl $s1,$s0,1

andi $t0,$s1,1

#xuat bit

li $v0,1

move $a0,$t0

syscall

#Doc bit 31

andi $t0,$s0,1

#xuat bit

li $v0,1

move $a0,$t0

syscall

**##### Chuoi Dao Nguoc**

#Bai 1: Nhap vao 1 chuoi, xuat chuoi dao nguoc ra man hinh

.data

tb1: .asciiz "Nhap chuoi: "

tb2: .asciiz "Chuoi dao nguoc: "

str: .space 30

dn: .space 30

.text

#xuat tb1

li $v0,4

la $a0,tb1

syscall

#Nhap chuoi

li $v0,8

la $a0,str

li $a1,30

syscall

#Khoi tao vong lap

li $t0,0 # bien dem vong lap

la $s0,str

Loop:

lb $t1,($s0) # doc 1 ki tu

bne $t1,0,TangDem

j End\_loop

TangDem:

addi $t0,$t0,1 # Tang dem

addi $s0,$s0,1 # tang dia chi

j Loop

End\_loop:

#Chep du lieu vao chuoi dn

#Khoi tao vong lap

addi $s0,$s0,-1

la $s1,dn

Loop2:

lb $t1,($s0)

#Luu ky tu vao s1

sb $t1,($s1)

#Giam s0

addi $s0,$s0,-1

#Tang s1

addi $s1,$s1,1

#Giam dem

addi $t0,$t0,-1

#t0 != 0 thi goto Loop2

bne $t0,0,Loop2

#Xuat tb2

li $v0,4

la $a0,tb2

syscall

#xuat dn

li $v0,4

la $a0,dn

syscall

**#TinhToan\_LuuBien**

.data

tb1: .asciiz "Nhap a: "

tb2: .asciiz "Nhap b: "

tb3: .asciiz "Tong la: "

tb4: .asciiz "\nHieu la: "

tb5: .asciiz "\nTich la: "

tb6: .asciiz "\nThuong la: "

tb7: .asciiz " Du la: "

a: .word 0

b: .word 0

kq: .word 0

.text

#Xuat tb1

li $v0,4

la $a0,tb1

syscall

#Nhap so nguyen a

li $v0,5

syscall

#Luu $v0 vao a

sw $v0,a

#Xuat tb2

li $v0,4

la $a0,tb2

syscall

#Nhap so nguyen b

li $v0,5

syscall

sw $v0,b

#Load a vao $s0, b vao $s1

lw $s0,a

lw $s1,b

#Tinh tong

add $s2,$s0,$s1 # s2 = s0 + s1

#Luu ket qua vao kq

sw $s2,kq

#Xuat ket qua

li $v0,4

la $a0,tb3

syscall

#xuat kq

li $v0,1

lw $a0,kq

syscall

#Tinh hieu

sub $s3,$s0,$s1 #s3 = s0 - s1

#xuat tb4

li $v0,4

la $a0,tb4

syscall

#Xuat s3

li $v0,1

move $a0,$s3

syscall

#Phep nhan

mult $s0,$s1 # ket qua duoc chua trong(lo,hi)

#lay ket qua luu $s4

mflo $s4

#xuat tb5

li $v0,4

la $a0,tb5

syscall

#Xuat s4

li $v0,1

move $a0,$s4

syscall

#Phep chia

div $s0,$s1 # ket qua lo = thuong, hi = du

#lay ket qua thuong luu $s5

mflo $s5

#lay ket qua du luu $s6

mfhi $s6

#xuat tb6

li $v0,4

la $a0,tb6

syscall

#Xuat s5

li $v0,1

move $a0,$s5

syscall

#xuat tb7

li $v0,4

la $a0,tb7

syscall

#Xuat s7

li $v0,1

move $a0,$s6

syscall

#Tong 1 den n

#yeu cau: Viet ham tinh tong tu 1 den N

.data

tb1: .asciiz "Nhap n: "

tb2: .asciiz "Tong 1 den n la: "

n: .word 0

kq: .word 0

.text

#xuat tb1

li $v0,4

la $a0,tb1

syscall

#Nhap n

li $v0,5

syscall

#Luu $v0 vao n

sw $v0,n

#truyen tham so

lw $a0,n

#goi ham

jal \_TinhTong

#Lay ket qua tra ve

sw $v0,kq

#xuat tb2

li $v0,4

la $a0,tb2

syscall

#xuat kq

li $v0,1

lw $a0,kq

syscall

#ket thuc

li $v0,10

syscall

# ====== Ham Tinh Tong ===========

#dau thu tuc

\_TinhTong:

addi $sp,$sp,-32 #khai bao kich thuoc stack

sw $ra,($sp)

sw $s0,4($sp)

sw $t0,8($sp)

sw $t1,12($sp)

#Than thu tuc

#khoi tao

li $s0,0 # s = 0

li $t0,1 # i = 1

\_TinhTong.Lap:

add $s0,$s0,$t0 # s = s + i

addi $t0,$t0,1 # i = i + 1

#Kiem tra n >= i thi Lap

slt $t1,$a0,$t0

beq $t1,0,\_TinhTong.Lap

#Luu tong vao $v0

move $v0,$s0

#Cuoi thu tuc:

#restore thanh ghi

lw $ra,($sp)

lw $s0,4($sp)

lw $t0,8($sp)

lw $t1,12($sp)

#Xoa stack

addi $sp,$sp,32

#quay ve

jr $ra

**#Xuat dao chuoi**

.data

input: .space 256

output: .space 256

.text

.globl main

main:

#Nháº­p chuá»—i

li $v0,8

la $a0,input

li $a1,256

syscall

#TÃ¬m chiá»�u dÃ i cá»§a chuá»—i

li $t0,0 #Khá»Ÿi táº¡o biáº¿n lÆ°u chiá»�u dai chuá»—i

strlen\_loop:

add $t2,$a0,$t0 #Láº¥y Ä‘á»‹a chá»‰ cá»§a kÃ­ tá»± thá»© i

lb $t1,0($t2)

beq $t1,'\n',get\_len

addi $t0,$t0,1

j strlen\_loop

get\_len:

sub $t0,$t0,1

li $t1,0 #pháº§n tá»« Ä‘áº§u tiÃªn cá»§a chuá»—i káº¿t quáº£

la $s0,output #Ä�á»‹a chá»‰ cá»§a chuá»—i output

reverse\_loop:

#láº¥y kÃ­ tá»± cá»§a chuá»—i input

add $t2,$a0,$t0

lb $t3,0($t2)

#láº¥y Ä‘á»‹a chuá»—i cá»§a kÃ­ tá»± chuá»—i output

add $t4,$s0,$t1

sb $t3,0($t4)

beq $t0,0,exit\_reverse

addi $t1,$t1,1

subi $t0,$t0,1

j reverse\_loop

exit\_reverse:

li $v0,4

la $a0,output

syscall

**## Nhap xuat mang ham**

#Yeu cau: Su dung ky thuat ham. Viet chuong trinh nhap xuat mang 1 chieu so nguyen

.data

tb1: .asciiz "Nhap n: "

tb2: .asciiz "a["

tb3: .asciiz "]: "

tb4: .asciiz "Mang vua nhap la: "

n: .word 0

arr: .space 100 # 25 phan tu

.text

#truyen tham so

la $a0,n

la $a1,arr

# Goi ham nhapmang

jal \_NhapMang

#xuat tb4

li $v0,4

la $a0,tb4

syscall

#truyen tham so

lw $a0,n

la $a1,arr

# Goi ham xuatmang

jal \_XuatMang

#ket thuc

li $v0,10

syscall

#========== Ham Nhap Mang =============

#dau thu tuc

\_NhapMang:

addi $sp,$sp,-32

sw $ra,($sp)

sw $s0,4($sp)

sw $s1,8($sp)

sw $t0,12($sp)

sw $t1,16($sp)

#Lay tham so luu vao thanh ghi

move $s0,$a0

move $s1,$a1

#than thu tuc

#xuat tb1

li $v0,4

la $a0,tb1

syscall

#nhap so nguyen

li $v0,5

syscall

#Luu vao n tai $s0

sw $v0,($s0)

#load gia tri n

lw $s0,($s0)

#Khoi tao vong lap

li $t0,0 # i = 0

\_NhapMang.Lap:

#xuat tb2

li $v0,4

la $a0,tb2

syscall

#xuat i

li $v0,1

move $a0,$t0

syscall

#xuat tb3

li $v0,4

la $a0,tb3

syscall

#nhap so nguyen

li $v0,5

syscall

#Luu vao a[i] tai $s1

sw $v0,($s1)

#Tang dia chi

addi $s1,$s1,4

#tang chi so i

addi $t0,$t0,1

#Kiem tra i < n thi Lap

blt $t0,$s0,\_NhapMang.Lap

#Cuoi thu tuc

#resotore

lw $ra,($sp)

lw $s0,4($sp)

lw $s1,8($sp)

lw $t0,12($sp)

lw $t1,16($sp)

#xoa stack

addi $sp,$sp,32

# tra ve

jr $ra

# ========== Xuat Mang ===========

\_XuatMang:

addi $sp,$sp,-32

sw $ra,($sp)

sw $s0,4($sp)

sw $s1,8($sp)

sw $t0,12($sp)

sw $t1,16($sp)

#Lay tham so luu vao thanh ghi

move $s0,$a0 #n

move $s1,$a1 #arr

#Than thu tuc

#khoi tao vong lap

li $t0,0 # i = 0

\_XuatMang.Lap:

#xuat a[i]

li $v0,1

lw $a0,($s1)

syscall

#xuat khoang trang

li $v0,11

li $a0,' '

syscall

#Tang dia chi mang

addi $s1,$s1,4

#Tang i

addi $t0,$t0,1

#Kiem tra i < n thi Lap

blt $t0,$s0,\_XuatMang.Lap

**# Nhap xuat chuoi**

.data

tb1: .asciiz "Nhap chuoi: "

tb2: .asciiz "Chuoi vua nhap la: "

str: .space 30

.text

main:

#xuat tb1

li $v0, 4 # gan $v0 = 4

la $a0,tb1

syscall

#Nhap chuoi

li $v0,8

la $a0,str

li $a1,30

syscall

#Xuat tb2

li $v0,4

la $a0,tb2

syscall

# xuat str

li $v0,4

la $a0,str

syscall

**#ReadFile**

#Doc du lieu tu file

.data

fin: .asciiz "input.txt"

str: .space 50

.text

#openfile

li $v0,13

la $a0,fin

li $a1,0

li $a2,0

syscall

#Luu dia chi file vao $s0

move $s0,$v0

#Doc file

li $v0,14

move $a0,$s0

la $a1,str

li $a2,50

syscall

#xuat str

li $v0,4

la $a0,str

syscall

**#TinhToan**

.data

tb1: .asciiz "Nhap a: "

tb2: .asciiz "Nhap b: "

tb3: .asciiz "Tong la: "

tb4: .asciiz "\nHieu la: "

tb5: .asciiz "\nTich la: "

tb6: .asciiz "\nThuong la: "

tb7: .asciiz " Du la: "

.text

#Xuat tb1

li $v0,4

la $a0,tb1

syscall

#Nhap so nguyen a

li $v0,5

syscall

move $s0,$v0 # $s0 = $v0 = a

#Xuat tb2

li $v0,4

la $a0,tb2

syscall

#Nhap so nguyen b

li $v0,5

syscall

move $s1,$v0 # $s0 = $v0 = a

#Tinh tong

add $s2,$s0,$s1 # s2 = s0 + s1

#Xuat ket qua

li $v0,4

la $a0,tb3

syscall

#xuat s2

li $v0,1

move $a0,$s2

syscall

#Tinh hieu

sub $s3,$s0,$s1 #s3 = s0 - s1

#xuat tb4

li $v0,4

la $a0,tb4

syscall

#Xuat s3

li $v0,1

move $a0,$s3

syscall

#Phep nhan

mult $s0,$s1 # ket qua duoc chua trong(lo,hi)

#lay ket qua luu $s4

mflo $s4

#xuat tb5

li $v0,4

la $a0,tb5

syscall

#Xuat s4

li $v0,1

move $a0,$s4

syscall

#Phep chia

div $s0,$s1 # ket qua lo = thuong, hi = du

#lay ket qua thuong luu $s5

mflo $s5

#lay ket qua du luu $s6

mfhi $s6

#xuat tb6

li $v0,4

la $a0,tb6

syscall

#Xuat s5

li $v0,1

move $a0,$s5

syscall

#xuat tb7

li $v0,4

la $a0,tb7

syscall

#Xuat s7

li $v0,1

move $a0,$s6

syscall









