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**# Lab-01 (Print hello world)**

.data

message : .asciiz "Hello World"

.text

main :

#print string

li $v0,4

la $a0,message

syscall

#exit

li $v0,10

syscall

**# Lab-02 (Positive\_negative)**

.data

msg0: .asciiz "Enter any number:"

msg: .asciiz "Positive"

msg1: .asciiz "negative"

.text

main:

li $v0,4

la $a0,msg0

syscall

#input

li $v0,5

syscall

move $s0,$v0

#check

bgez $s0,pos

blt $s0,0,nega

pos:

li $v0,4

la $a0,msg

syscall

j exit

nega:

li $v0,4

la $a0,msg1

syscall

exit:

li $v0,10

syscall

**#Lab-03 (Equal\_not Equal)**

.data

num1: .asciiz "Enter first number:"

num2: .asciiz "Enter second number:"

equal: .asciiz "Equal"

notequal: .asciiz "Not Equal"

.text

main:

#input 1st number

li $v0, 4

la $a0, num1

syscall

li $v0, 5

syscall

move $t1, $v0

#input 2nd number

li $v0, 4

la $a0, num2

syscall

li $v0, 5

syscall

move $t2, $v0

#compare

beq $t1,$t2,Equal

bne $t1,$t2,Not\_Equal

Equal:

li $v0, 4

la $a0, equal

syscall

j Exit

Not\_Equal:

li $v0, 4

la $a0, notequal

syscall

Exit:

li $v0, 10

syscall

**# Lab-04(For loop)**

.data

comma: .asciiz ", "

sum: .asciiz "\nSum is: "

.text

main:

#initialization

li $t0,1

j for\_loop

#condition

for\_loop:

bgt $t0,10,exit

#print number

li $v0,1

move $a0,$t0

syscall

#sum

add $t1,$t1,$t0

#no comma after last number

beq $t0,10,exit

#print comma

li $v0,4

la $a0,comma

syscall

#increment

addi $t0,$t0,1

j for\_loop

#exit

exit:

li $v0,4

la $a0,sum

syscall

li $v0,1

move $a0,$t1

syscall

li $v0,10

syscall

**# Lab-05 (Array)**

.data

array: .word 0:100 # array of 100 integers

comma: .asciiz " , "

print: .asciiz "The Array: "

.text

main:

li $v0, 4

la $a0, print

syscall

li $t0, 0

li $t5, 100

la $t1, array

li $t4, 1

for:

bge $t0, $t5, end

sw $t4, ($t1)

add $t1, $t1, 4

add $t0, $t0, 1

#print array element

li $v0, 1

move $a0, $t4

syscall

#Printing comma

li $v0, 4

la $a0, comma

syscall

addi $t4, $t4, 1

j for

end:

li $v0, 10

syscall

**#Lab -06(Prime\_notPrime)**

.data

msg: .asciiz "Enter any number:"

msg1: .asciiz "Prime"

msg2: .asciiz "Not Prime"

.text

main:

#print msg

li $v0,4

la $a0,msg

syscall

#take input

li $v0,5

syscall

move $t0,$v0

#ckeck

blez $t0,notprime

beq $t0,1,notprime

beq $t0,2,prime

li $t1,2

loop:

beq $t0,$t1,prime

div $t0,$t1

mfhi $t2

beqz $t2,notprime

addi $t1,$t1,1

j loop

#prime or not prime print

prime:

li $v0,4

la $a0,msg1

syscall

j exit

notprime:

li $v0,4

la $a0,msg2

syscall

exit:

li $v0,10

syscall