

assignment 1

AQSA USMAN



**CODE:**

.data

label1:

.asciiz "\nEnter the number of disks: "

Move: .asciiz "\nMove disk from "

To: .ascii " to "

.text

main:

li $v0, 4

la $a0, label1

syscall

li $v0, 5

syscall

add $a0, $v0, $zero

addi $a1, $zero, 1

addi $a2, $zero, 3

addi $a3, $zero, 2

jal hanoi\_towers

li $v0, 10

syscall

hanoi\_towers:

addi $t0, $a0, 0

addi $t1, $zero, 1

bne $a0, $t1, else

li $v0, 4 # print

la $a0, Move

syscall

li $v0, 1 # print

move $a0, $a1

syscall

li $v0, 4 # print

la $a0, To

syscall

li $v0, 1 # print

move $a0, $a2

syscall

addi $a0, $t0, 0

jr $ra

else: addi $sp, $sp, -20

sw $ra, 16($sp)

sw $a3, 12($sp)

sw $a2, 8($sp)

sw $a1, 4($sp)

sw $a0, 0($sp)

addi $t3, $a3, 0

addi $a3, $a2, 0

addi $a2, $t3, 0

addi $a0, $a0, -1

jal hanoi\_towers

lw $ra, 16($sp)

lw $a3, 12($sp)

lw $a2, 8($sp)

lw $a1, 4($sp)

lw $a0, 0($sp)

addi $t0, $a0, 0

addi $t1, $zero, 1

li $v0, 4 # print

la $a0, Move

syscall

li $v0, 1 # print

move $a0, $a1

syscall

li $v0, 4 # print

la $a0, To

syscall

li $v0, 1 # print

move $a0, $a2

syscall

addi $a0, $t0, 0

addi $t3, $a3, 0

addi $a3, $a1, 0

addi $a1, $t3, 0

addi $a0, $a0, -1

jal hanoi\_towers

lw $ra, 16($sp)

addi $sp, $sp, 20

add $v0, $zero, $t5

jr $ra

OUTPUT:

