.data

val\_a: .asciiz "\n Enter a number between 0 and 255: "

val\_b: .asciiz "\n Enter another number between 0 and 255: "

msg: .asciiz "\n The product of the two numbers entered is "

.text

main:

li $s0, 1

addiu $sp, $sp, -16 #Allocate space

addi $t0, $0, 255

mloop:

li $v0, 4

la $a0, val\_a

syscall # a message

li $v0, 5

syscall #get a

move $t1, $v0

li $v0, 4

la $a0, val\_b

syscall #b message

li $v0, 5

syscall #get b

move $t2, $v0

bge $v0, $t0, mloop

ble $v0, $0, mloop

bge $v0, $t0, mloop

ble $v0, $0, mloop

sw $t1, 0($sp) #store av

sw $t2, 4($sp) #store b

jal rmult #Call rmult function

li $v0, 4

la $a0, msg

syscall #the product is- message

lw $a0, 8($sp)

li $v0, 1

syscall #answer

li $v0, 10

syscall

rmult:

lw $t0, 0($sp)

lw $t1, 4($sp)

addiu $sp, $sp, -16 #Allocate

sw $ra, 12($sp) #Save return address

sw $t0, 0($sp)

addi $t3, $t1, -1

sw $t3, 4($sp)

bne $t1, $s0, go #If 1 or 0, then return the value 1

b return

go:

jal rmult

lw $t1, 0($sp)

lw $ra, 12($sp)

lw $t0, 8($sp)

add $t0, $t1, $t0 # a + mult(a,b-1)

return:

addiu $sp, $sp, 16

sw $t0, 8($sp)

jr $ra