

Zach Healy

Question 1

Assembly Code:

```
# Program header
# lab13.s

.data
    called: .asciiz "You called a function."

# code section
.text
.globl main

main:

    # Set the values for $a0 and $s1
    li $s0, 4
    li $s1, 5

    jal func

    li $v0, 10
    syscall

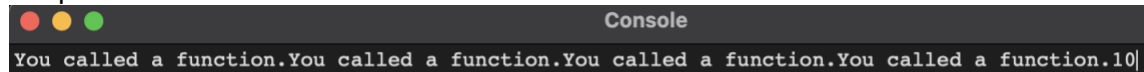
func:
    li $t0, 0
    lw $a2, called
loop:
    li $v0, 4
    la $a0, called
    syscall

    add $t0, $t0, 1
    blt $t0, $s0, loop

    add $s1, $s1, $s1
    li $v0, 1
    move $a0, $s1
    syscall

    jr $ra
```

Output:



```
Console
You called a function.You called a function.You called a function.You called a function.10|
```

Question 2:

Assembly Code:

```
# Program header
# lab13pt2.s

.data
    arr: .word 4, 5, 7, 1, 19, 2, 6

# code section
.text
.globl main

main:

    # Set the values for $t2 and $t3
    la $t2, arr
    li $t3, 7

    jal func

    #print out sum
    move $a0, $v0
    li $v0, 1
    syscall

    li $v0, 10
    syscall

func:
    li $t0, 0 #counter
    li $t1, 0 #max value
loop:
    lw $t4, 0($t2)
    blt $t1, $t4, loop2

    add $t0, $t0, 1 #counter
    add $t2, $t2, 4
    blt $t0, $t3, loop

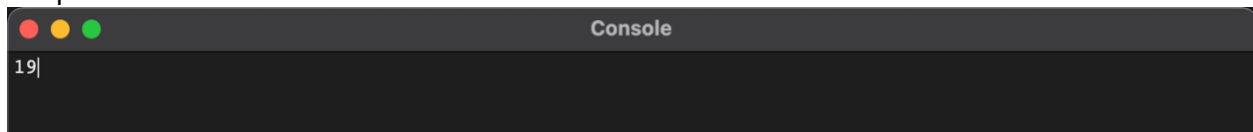
    move $v0, $t1

loop2:
    move $t1, $t4

    add $t0, $t0, 1 #counter
    add $t2, $t2, 4
    blt $t0, $t3, loop

    jr $ra
```

Output:



A screenshot of a terminal window with a dark background. The title bar at the top shows three colored window control buttons (red, yellow, green) on the left and the word "Console" in the center. The main area of the terminal displays the number "19" followed by a cursor, indicating the output of the program.