MONTGOMERY YU COMPUTER ORGANIZATION ASSIGNMENT 5

RAT:

$t0 = array [1, -3, 5, -7, 9, -11, 13, -15, 17, -19]

$t2 = i

$t3 = sum

MIPS CODE:

.data

array: .word 1, -3, 5, -7, 9, -11, 13, -15, 17, -19

output: .asciiz "Final Sum = "

new\_line: .asciiz "\n"

.text # text section

.globl main # call main by SPIM

main:

# out of loop when we got 10 numbers

la $t0, array

li $t2, 0 # int i

li $t3, 0 # int sum

#sum all numbers in array

looparray:

#condition to terminal loop

bge $t2, 10, endloop

# load array indexes to $t4

lw $t4, 0($t0)

add $t3, $t3, $t4

#multiply by 4

mul $t3, $t3, 4

#move on to the next indexed object in the array

addi $t0, $t0, 4

# i++

addiu $t2, $t2, 1

j looparray

endloop:

# print string "sum"

li $v0, 4

la $a0, output

syscall

#print Final Sum

li $v0, 1

la $a0, 0($t3)

syscall

OUTPUT: Graphical user interface, text, application

Description automatically generated

Table

Description automatically generatedGraphical user interface, application, table

Description automatically generated