

ECE 242 Programming Assignment #9

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Part-1

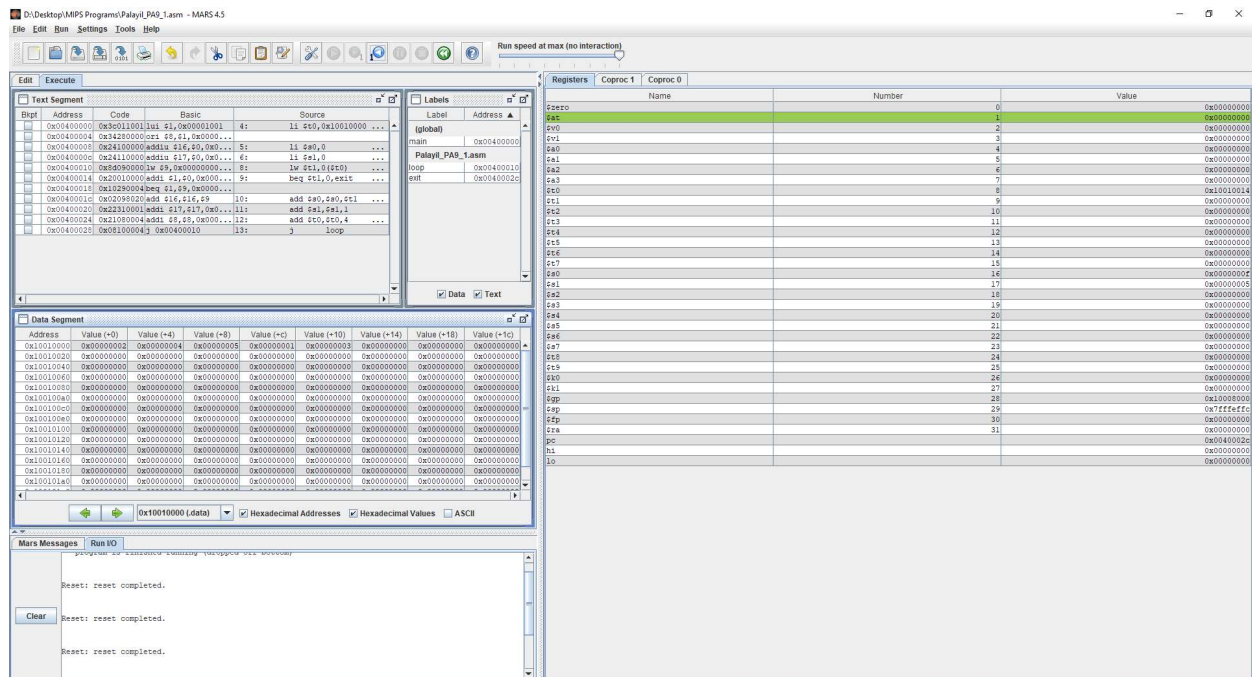
Code:

```
.text
.globl main

main:
    li $t0,0x10010000          #start of the array
    li $s0,0                   #italize the sum as 0;
    li $s1,0                   #$s1 is the counter

loop:
    lw $t1,0($t0)              #loop will keep adding as long as the number in array is not 0
    beq $t1,0,exit             #load first number to t1
    add $s0,$s0,$t1            #check if t1 is 0. if t1=0 exit
    add $s1,$s1,1              #if its not, 0 add the number to sum and increment counter by 1
    add $t0,$t0,4              #increment my memory pointer by 4
    j    loop

exit:
```



Part-2

Code:

```
.text
.globl main

main:
    li $s1,0x10010000    #load first word from memory location speciefied by $s2 and store the
                           value
    li $s2, 0x10010020    #assign memory value to s2
    lw $t1, 0($s2)
    div $t1,$t0            #divide the two numbrs
    mfhi  $s0              #move high
    mflo  $t1              #move low
    bnez $s0, round        #check if high (remainder) is not zero
    sw $t1,0($s1)          #rounds the number if the remainder is ot 0

round:
    addi $t1,$t1,1        #round the quotient
    sw $t1,0($s1)         #store the quotient
```

