```
##
##  Program Name:   loop1.s
##
##      - will calculate the sum of the elements in "array".
##      - "count" holds the number of elements in "array".
##
##
##      - Output format must be
##        "sum = 15"
##
##      t0 - point to array elements in turn
##      t1 - contains count of elements
##          t2 - contains sum
##
##      t3 - each word from array in turn
##

################################################
#                                              #
#               text segment                   #
#                                              #
################################################

        .text
        .globl __start
__start:                # execution starts here

#   Put your answer between dashed lines.
#
#------------------Your code starts next line---------------

    la $t0,array        # point to array elements
    lw $t1,count        # exit loop when $t1 == 0
    lw $t2,($t0)        # initialize sum $t2 = a[0]
    addi $t0,$t0,4      # pointer to start at a[1]
    addi $t1,$t1,-1     # and go round count-1 times

loop:
    lw $t3,($t0)        # load next element from array
    add $t2,$t2,$t3     # add one element to array
    addi $t1,$t1,-1     # decrement counter
    addi $t0,$t0,4      # increment pointer by word
    bnez $t1,loop       # continue if counter > 0

    la $a0,ans1         # print prompt on terminal
    li $v0,4            # system call to print
    syscall             # out "sum = "

    move $a0,$t2        # print result sum
    li $v0,1
    syscall

#-----------------Your code ends above this line------------


    la $a0,endl         # syscall to print out
    li $v0,4            # a new line
    syscall

    li $v0,10           # Exit
    syscall             # Bye!


################################################
#                                              #
#               data segment                   #
#                                              #
################################################

```

```
70          .data
71      array:  .word 3,4,2,6
72      count:  .word 4
73      ans1:   .asciiz "sum = "
74      endl:   .asciiz "\n"
75
76  ##
77  ##  end of file loop1.s
78
```