# Lab 1

.data # Data declaration section

zing: .word 0, 1, 2, 3, 4, 5, 6, 7

str1: .asciiz "zing[4] now has " #changed .asciz to .asciiz

str2: .asciiz "\nzing[5] now has " #changed .asciz to .asciiz

.text

main:

la a0, zing #address of zing array

li a1, 4

jal swap

li a0, 4 #system call for printing a string

la a1, str1 #changed a0 to a1

ecall

li a0, 1 #system call for printing an integer in ASCII

lw a1, 0(t1) #changed a0 to a1

ecall

li a0, 4 #system call for printing a string

la a1, str2 #changed a0 to a1

ecall

li a0, 1 #system call for printing an integer in ASCII

lw a1, 4(t1) #changed a0 to a1

ecall

li a0, 11 #system call for printing a character in ASCII

li a1, 10 #changed a0 to a1

ecall

li a0, 10 #system call for an exit

ecall

swap:

slli t1, a1, 2 #reg t1=k\*4

add t1, a0, t1 #reg t1=address of zing[k]

lw t0, 0(t1) #reg t0=zing[k]

lw t2, 4(t1) #reg t2=zing[k+1]

sw t2, 0(t1)

sw t0, 4(t1)

addi t4, zero, 5

ret

# END OF PROGRAM