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#############################################################################
# Dylan Messerly, CS 2318-002, Assignment 2 Part 1 Program C
#############################################################################
# First displays the initial array from elements 1 to 4
# Swaps array elements 1 and 4 then swaps array elements 2 and 3
# Displays the new swapped array in reverse order from 4 to 1
############################## data segment ###################################
                .data

intArray:       .word 8, 1, 3, 2
initialArrLab:  .asciiz "Initial array: "
finalArrLab:    .asciiz "Final array: "


############################## code segment ###################################
                .text
                .globl main
main:

                li $v0, 4                   # Labled output for the initial
                la $a0, initialArrLab       # array from elements 1 to 4
                syscall

                la $t0, intArray
                lw $a0, 0($t0)
                li $v0, 1
                syscall
                li $v0, 11
                li $a0, ' '
                syscall
                lw $a0, 4($t0)
                li $v0, 1
                syscall
                li $v0, 11
                li $a0, ' '
                syscall
                lw $a0, 8($t0)
                li $v0, 1
                syscall
                li $v0, 11
                li $a0, ' '
                syscall
                lw $a0, 12($t0)
                li $v0, 1
                syscall
                li $v0, 11
                li $a0, '\n'
                syscall

                lw $t1, 0($t0)              # Reloading words from memory
                lw $t2, 4($t0)
                lw $t3, 8($t0)
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lw $t4, 12($t0)

sw $t1, 12($t0)             # Swapping elements 1 and 4
sw $t4, 0($t0)

sw $t2, 8($t0)              # Swapping elemnts 2 and 3
sw $t3, 4($t0)

li $v0, 4
la $a0, finalArrLab
syscall

lw $a0, 12($t0)             # Labeled output for the swapped
li $v0, 1                   # array from element 4 to 1
syscall
li $v0, 11
li $a0, ' '
syscall
lw $a0, 8($t0)
li $v0, 1
syscall
li $v0, 11
li $a0, ' '
syscall
lw $a0, 4($t0)
li $v0, 1
syscall
li $v0, 11
li $a0, ' '
syscall
lw $a0, 0($t0)
li $v0, 1
syscall
li $v0, 11
li $a0, '\n'
syscall

li $v0, 10                  # exit
syscall
```