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#####
# Kody Gentry, CS 2318-003, Assignment 2 Part 1 Program D
#####
# Program that prompts the user to enter the integer scores for Exam 1,
# Exam 2 and Final Exam, read the scores, compute the weighted avg score
# (using the following formula), and display a labeled output about
# the weighted avg score.
# Score =  $e1(128/637)+e2(307/1024)+fiinal/2$ 
#####

.data
ex1Prompt: .ascii "Enter exam 1 score: "
ex2Prompt: .ascii "Enter exam 2 score: "
finalPrompt: .ascii "Enter final score: "
avg: .ascii "The avg score is: "
##### data segment #####
.text
.globl main

main:

    li $v0, 4          # prompt for exam 1
    la $a0, ex1Prompt
    syscall

    li $v0, 5          # read in exam 1
    syscall

    sll $t0, $v0, 7     # t0 = exam 1 * 128 (sll 7 bits)
    li $t1, 637         # t1 has 637
    divu $t0, $t1        # divide by 637
    mflo $t0            # exam1 * 128 / 637

    li $v0, 4          # prompt for exam 2
    la $a0, ex2Prompt
    syscall

    li $v0, 5          # read in exam 2
    syscall

    move $t1, $v0       # t1 has exam 2
    li $t2, 307         # store 307 in t2
    mult $t1, $t2        # multiply by 307
    mflo $t1            # exam 2 * 307
    srl $t1, $t1, 10    # $t1 has exam2 * 307/1024 (sra 10 bits)

    li $v0, 4          # prompt final score
    la $a0, finalPrompt
    syscall

    li $v0, 5          # read int final score
    syscall

    move $t3, $v0       # t3 has final exam score
    srl $t3, $t3, 1     # final/2

    add $v0, $t3, $t0    # sum all three values
    add $t1, $v0, $t1

    li $v0, 4
    la $a0, avg         # output the avg weight
    syscall
    move $a0, $t1
    li $v0, 1
    syscall            # display avg

    li $v0, 10
    syscall            # exit gracefully

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