

MIPS Programming – Homework
no submission needed
I will not grade this homework

Use ONLY instructions listed in the Integer Instruction Set

(especially when it comes to branches – use only beq, bne or comparisons against zero, **NO blt, bgt, subi, no multi...**) You can use li, la and move.

You can use mul with 3 registers (mul \$s1, \$s2, \$s3)

If you use lw or sw follow the correct syntax, the one in the Integer Instruction Set. It uses an offset value and not a label.

Note: for all programs that you will write be sure that you give a **detailed documentation**. Each program should be commented (documented) with the following information:

1. Your name
Last modified date:
Program name
2. Description (what the program does)
C (or java) -pseudo-code
3. Registers Use (name of registers and what they will store)

Program1

Write a MIPS assembly language program that will cover the following steps:

Prompts the user to enter a first integer (int1) in the range [100, 250]

Prompts the user to enter a second integer (int 2) > -30

Compute: $4 * \text{int1} + 7 * (\text{int2} - 9)$ // don't use *subi*; don't use *mul*

Print the value of the result together with a result message

Repeat

The program should enforce the rule that the two entered integers must be in the mentioned intervals. **If the entered integer is not in the specified range, the program prompts again the user to enter an integer in the specified range.**

Create a **sentinel** (sentinel value **999**) that will allow the user to exit the program.

Program 2

Write a MIPS assembly language program that accomplishes the following tasks:

prompts the user to enter 10 integer values that will represent the elements of an array.

Populate the array with the given values.

Compute and display the sum and min of these elements.

Name your program: **yourlastname_h2.s**