7.11 Lab Assignment 5

Start Assignment

Due Apr 9 by 11:59pm **Points** 95 **Submitting** a file upload **File Types** asm and s
Available after Mar 15 at 10am

Purpose: Search for an integer value in an array of integers using a loop.

Program

Using this array:

```
tenints:  .word 18, 777, -65536, 10, 41, 2, 81, 5000, -1, 9
```

Write a program which uses an assembly language loop to access **all** the array element values, and check to see if at least one of the element values is the value 81. Do this by using the loop to load each array element value into a register, and then check to see if the register that was loaded contains the value 81.

Include programming logic that implements the following conditional logic: I*f an array element value is found to contain 81 assign the register $t0 to the value 1. If no array element value contains 81 assign the register $t0 to the value 0.*

The program should complete when all the array element values have been checked using the loop AND $t0 has been assigned its value.

Use The MIPS Technical Document To See The MIPS Assembly Language instructions (https://ccsf.instructure.com/courses/47907/files/7405493/download?download_frd=1) . You may wish to download the document and refer to it as you are writing the program.

Write comments in your program that state your name, the programming logic, and any details you feel you'd like to explain that state about how you are using the assembly language instructions.

This program is to be saved in its own file, with a .asm or a .s file extension. You may only use a .asm or .s file extension (MIPS assembly language programs are named using these files extensions). Once your program is working correctly, submit the program file to this assignment to receive a grade for your program.

Example Programs

Below is the source code and pseudocode of some example MIPS assembly language programs that can be used to help you write your programs.

integersum.asm (https://ccsf.instructure.com/courses/47907/files/7562214/download?download_frd=1)

arrayadd1.asm (https://ccsf.instructure.com/courses/47907/files/7562211/download?download_frd=1)

arraysumpseudocode-1.txt (https://ccsf.instructure.com/courses/47907/files/7561775/download?download_frd=1)

arraysumpseudocode-2.txt (https://ccsf.instructure.com/courses/47907/files/7562217/download?download_frd=1)