

CSCE 2610: Assembly Language and Computer Organization
Fall 2018

Programming Assignment 1
Due: October 12, 2018

Write (and test using DS5) an assembly language program in ARMv8 to find the *sum*, the *largest* and the *smallest* of n non-zero positive integers. Declare data sections to store the n positive values as an array v and a variable to store n . Create a loop to go through the array for finding the *sum* of the elements of the array, the *largest* and the *smallest* numbers. Store sum in register X10, largest and smallest values in X11, X12 respectively.

Test input: $n = 5$; the eight positive integers are: 31, 32, 33, 34, 35

- Submit (Required):
- a) A file containing your assembly code (.S file)
 - b). A read me file on how to execute. Indicate your use of registers.
 - c). At least two screen shots, showing register values before executing the first instruction in your code and a screen shot showing the register contents after the last instruction is executed (to show results)
- (Optional):
- You can submit additional screen shots to show register contents at various points of execution.
- You can also test your program with different inputs and submit those results also (screen shots to show the final values in registers X10, X11, X12)