

COE 301/ ICS 233, Term 172

Computer Architecture & Assembly Language

Programming Assignment#4

Due date: Thursday, March 22, 2018

- Q.1.** It is required to write a MIPS assembly program that does the following:
- (i) Ask the user to enter the number of elements in array, N, and read it.
 - (ii) Read a set of N single float numbers and store it an array.
 - (iii) Sort the array in a descending number and display the sorted array.
 - (iv) Compute and print the average, the highest and the lowest.

A sample execution of the program is shown below:

Enter the number of elements in the array: 5

Enter array elements:

20.5

91.2

80.6

95.8

12.4

The sorted array is:

95.8

91.2

80.6

20.5

12.4

The average is 60.1

The highest is 95.8

The lowest is 12.4

This assignment can be done by a group of two students. Every group of two students submit only one solution. The solution should be well organized and your program should be well documented. Submit a soft copy of your solution in a zip file. The name of

the zip file should be your ID with the new format (i.e. 200157690). Your solution should be submitted in a word or pdf file that contains the following items:

- i) Your name and ID*
- ii) Assignment number*
- iii) Problem statement*
- iv) Your solution along with the code*
- v) Discussion of what worked and what did not work in your program. Include snapshots that demonstrate the working parts of your program. If things did not work and you attempted to solve them, mention that and write about the difficulty that you have faced.*
- vi) In addition to including your code as part of the solution document, include also the code as a separate file so that the grader can run it and test it for correctness.*