

COE 301/ ICS 233, Term 161

Computer Architecture & Assembly Language

Programming Assignment#4

Due date: Saturday, Dec. 3, 2016

- 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 in groups of two. 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 (i.e. 200157690). Your solution should be submitted in a word 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.*