
Algorithms and Data Structures - 16th Sept 2020

Note: write your solution straight in Python using the programming environment reachable by clicking on the Programmazione (programming) option on the exam.net left toolbar. Remember to choose Python as your development environment to be able to test your code.

Ex 1. Write a Python function to be named **get2MinMax()** taking, as input, a list of integers **L** and returning a tuple containing: the minimum element, the second minimum element, the maximum element. The function must browse all the elements of the list and return the desired result. Standard functions like **min**, **max** or **sort**, as well as utility functions available in external libraries like Pandas or Numpy, **cannot be used**.

If **L** is empty, then the function must return three **None** values.

If **L** contains just one element, the function must return, as second minimum, **None**.

Provide also a minimal working example where two different non-empty lists are provided, as input, to **get2MinMax()** and the corresponding results are printed on screen.

Answer here

Ex 2. Describe the computational complexity of **get2MinMax()** in the best case and in the worst case.