ME1 Computing- Session 4: Tuples and Sorting Algorithm

Learning outcomes:

- Being able to define tuples
- Being able to manage list of tuples
- Being able to sort a sequence of data

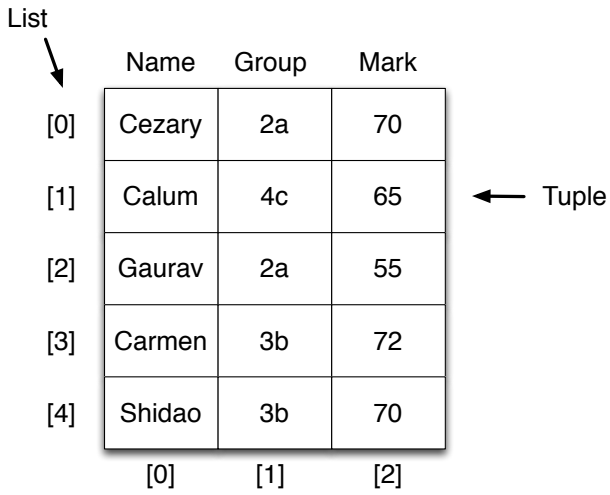
Please provide feedback at: www.menti.com with code 7394 6262

Before you start

In your H drive create a folder *H:\ME1MCP\Session4* and work within it.

Task 1: List of tuples

1. Download the files *Names.txt*, *Groups.txt* and *Marks.txt* from Blackboard. Write a script to form a list of tuples, associating every line content of the three files into a tuple.



Answer Question 1

Task B: Sorting algorithm

1. Sort, in descending order by marks, the list of tuples formed in Task A.

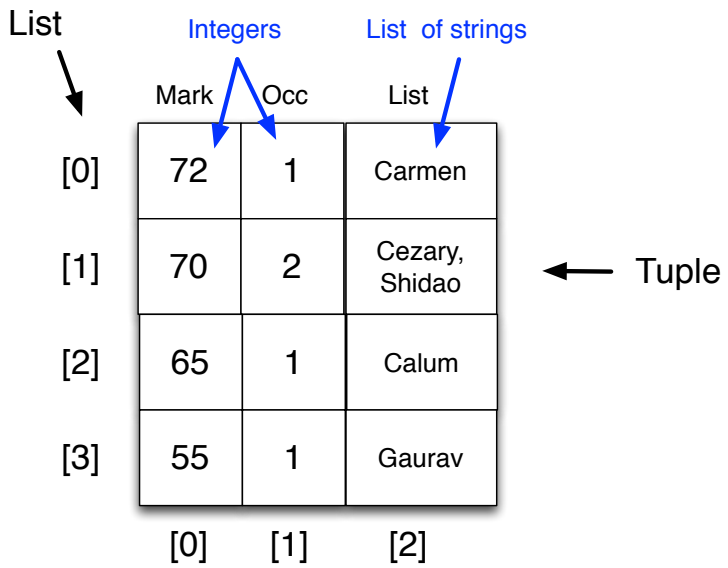
	Name	Group	Mark
[0]	Carmen	3b	72
[1]	Cezary	2a	70
[2]	Shidao	3b	70
[3]	Calum	4c	65
[4]	Gaurav	2a	55
	[0]	[1]	[2]

Answer Question 2

Task C: Count occurrences

1. Count the occurrences of every mark and form a list of tuples with (see figure below):
    a) the numerical mark,
    b) the number of occurrences of that mark,
    c) the list of students who achieved that mark.

    Plot graphically Occurrences vs Marks.



Answer Question 3

Answer Question 4