Algorithmics	Student information	Date	Number of session
	UO: 289930	08/02/23	0
	Surname: Truébano Robles		
	Name: Sergio		

Escuela de Ingeniería Informática
Universidad de Oviedo

Universidad de Oviedo
Universidá d'Uviéu
University of Oviedo

Activity 1 Power of the CPUs

Question 1: AMD Ryzen 7 5800X 8-Core Processor 3.80 GHz with x64 processor (64 bits). System memory (RAM): 16GB

Question 2: SC Mix Average = 189 pts.

Question 3: 4151ms = 4.151s

Question 4: 4151ms * 189 pts = 784539 operations (index of operations)

Question 5 & 6:

#	CPU	Milliseconds	SC Mix (average)	Operations (aprox.)
1	i7-4500U	285	82	23370
2	i3-3220	267	90.5	24163.5
3	i5-4590	219	115	25185
4	i7-4790	207	123	25461
5	Intel Pentium Gold G5400	215	118	25370
6	AMD Ryzen7 5800X	4151	189	784539
7	i5-6500	13807	117	1615419

Question 7: Comparing the results after running a single algorithm over different processor does not make sense. The execution time after running the same program (algorithm) will be different at each processor according to the specific features of each of them. However, running different versions of an algorithm over the same processor will allow us to compare the performance of each of the algorithms and specify which algorithm is more powerful in terms of computational time.

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Moreover, the differences among different measurements when different algorithms are run on different CPUs could be compared since the results should be proportional to the computational power of each of the processors used for the experiment. So, different processors could be used to compare the results obtained from running different algorithms and to check which of them is using more resources of the computer, so that the execution time at "worse" computers will be increase compared to the execution time of better algorithms.

Activity 2. Influence of the operating system

Question 1: I think that the best option for making measurements is using the maximum computational power possible, so that the operating system does not restrict the CPU from using as many resources as possible for completing the task to be measured. Therefore, *High performance* plan is the most appropriate plan in order not to limit the capabilities of the system and get the maximum computational power out of the system in used.

Question 2: It would not be optimal to watch a video while running a long experiment. As watching the video on Youtube, many resources would be wasted on computations that would affect the overall performance of the experiment since the operating system would have to share the resources of the computer. The final measurements would have 'noise' and they would not be accurate enough as if no other task is runned while the experiment is runned.

Question 3: In general, I do not think that it is a good idea to run several experiments over the same computer at the same time, since one experiment may interfere on the others. Resources are limited and at specific points during the experimental time, same resources would be needed for different process at the very same time. Therefore, resulting measurements would be far from optimal.

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Usually, experiments over the same computer may interfere one with each other since the resources' capabilities are limited. But if it is possible to ensure that the experiments are not so resource-demanding and that they do not interfere because they burn different components, results may not be too far away from optimal.