

Algorithmics	Student information	Date	Number of session
	UO: 283928	19/02/2022	Lab 1.0
	Surname: Suárez Losada		
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Escuela de  
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## Activity 1. Power of the CPUs

### Task 1

- CPU: Intel(R) Core(TM) i5-10400 CPU @ 2.90GHz, 2904 MHz, 6 physical cores, 12 logical cores
- RAM: 16,0 GB
- SC Mix Avg: 120
- Time taken to execute *Benchmarking1* program: 208ms
- Approximate index of integer and float operations:  $120 * 208 = 24960$

### Task 2

#	CPU	milliseconds	SC Mix Avg	Operations
1	i7-4500U	285	71,3	20320,5
2	i3-3220	267	82,6	22054,2
3	i5-4590	219	98,4	21549,6
4	i7-4790	207	105	21735
	Intel Pentium Gold			
5	G5400	215	104	22360
6	i5-10400	208	120	24960

### Conclusion:

It depends on the purpose of doing such a benchmark, in my opinion. For example, if we want to compare the performance of some different models of CPUs, it is important to keep the values isolated.

On the other hand, if we want to see how the algorithm behaves for CPUs with similar capabilities and generation, I believe it is necessary to cover as much different CPUs as possible, specially for entry models and different brands.

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## Activity 2. Influence of the operating system

### Question 1:

- The one which will be used in most of the cases if the application will be used in certain type of devices (balanced or economizer cases for laptop and high performance or balanced for desktop).

### Question 2:

- No, as it takes resources, and the experiment will take even longer to complete. Also, it will affect the results.

### Question 3:

- I think so as repeating measurements (sequentially) is important so as to get average values.