


Algorithmics	Student information	Date	Number of session
	UO:269546	03-02-21	0
	Surname: Fernández Arias	 Escuela de Ingeniería Informática Universidad de Oviedo	
	Name:Sara		



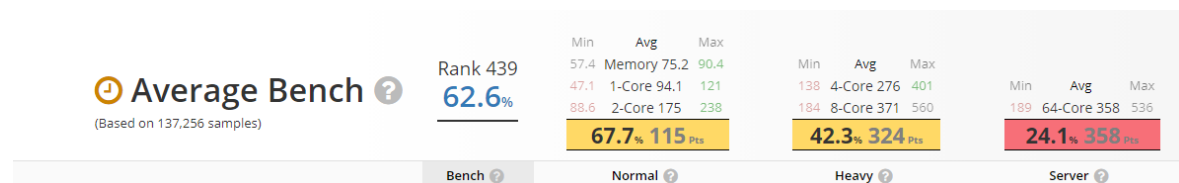
Activity 1. Power of the CPUS.

Task1

1-Processor

Intel®Core™i7-8550U CPU @1.80GHz 2.00GHz

2-Average index of integer and float operations per unit of time



SC Mix Avg value is $(114+150)/2=132s$

3-Time the benchmark "Benchmarking1" took to execute

```
Microsoft Windows [Versión 10.0.19041.746]
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C:\Users\Sara\Desktop\Universidad\2-Segundo Curso\Segundo Cuatrimestre\Algoritmia\ArchivosLabCampus\Practica0 2021.eng\b
enchmarking\activity1>run.cmd

C:\Users\Sara\Desktop\Universidad\2-Segundo Curso\Segundo Cuatrimestre\Algoritmia\ArchivosLabCampus\Practica0 2021.eng\b
enchmarking\activity1>Echo off
Actividad 1. Tarea 1: Ejecutar este script en el ordenador de practicas"
"Compile Benchmarking1"
"Ejecutar Benchmarking1"
Time=1048576**TIME=217

C:\Users\Sara\Desktop\Universidad\2-Segundo Curso\Segundo Cuatrimestre\Algoritmia\ArchivosLabCampus\Practica0 2021.eng\b
enchmarking\activity1>
```

4-Approximate index of integer and float operations performed by the program.

Execution time obtained: 217s

SC Mix Avg value :132s

Then , the approximate index of int and float operations performed is $217*132=28644$

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Task2

1&2 CPUs comparison table.

#	CPU	milliseconds	SC Mix (avg)	Operations (aprox.)
1.	i7-4500U	285	55,2	15732
2.	i3-3220	267	72,65	19397,55
3.	i5-4590	219	95.2	208048
4.	i7-4790	207	104	21528
5.	Intel Pentium Gold G5400	215	94	20210
6.	i7-8550U	217	132	28644
7.	Core i5-8600K	215	133	28595

2.Looking at the results in milliseconds, do you think you could mix values from different CPUs in the same analytical study of the execution times of an algorithm?

I think it can be done, since the execution time doesn't vary much in between different models.

That way, the differences that may be produced will be generated by the algorithm itself and not the CPU, since response times don't vary in a significant way.

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Activity 2. Influence of the operating system.

1.Which energy plan do you think is the most appropriate for making measurements?

I Think the most appropriate plan it's the balanced one If the tester is looking for the most generic measurement. The high performance plan would be more interesting for users that have specific needs or desires : for example , pro gamers that need the best cpu performance for their game. I don't think the economizer plan it's as useful as the two previously mentioned, since I think its only used in specific situations, for example, when the computer has a low battery.

2. If you had to perform a very long experiment, could you use the computer to, for example, watch a YouTube video in the meantime?

I don't think so , since I feel like it would give misleading results of the cpu burn execution, by wasting resources that the cpu needs.

3.Do you think it is convenient to make several measurements simultaneously on the same computer?

I feel it's not convenient for the same reason : the results might not be realistic since the resources can be shared for two different processes and that will affect the results obtained.

Also, the tester won't know where the problems might come from, since several measurements are being made at once.