Algorithmics	Student information	Date	Number of session
	UO: UO293079	14/2/22	1
	Surname: GAVALAS		
	Name: DIMITRIOS		

Universidad de Oviedo
Universidá d'Uviéu
University of Oviedo

Activity 1. Power of the CPUs

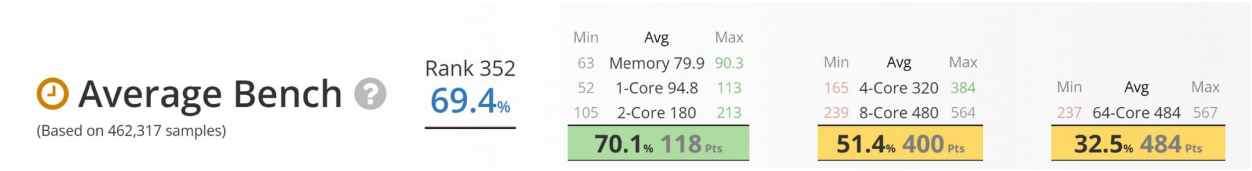
Task 1

1) Write down the processor model and the system memory.

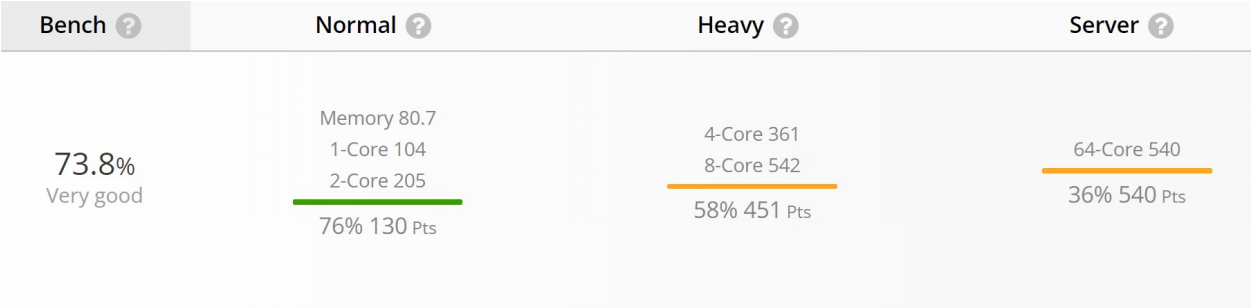
–Intel(R) Core(TM) i7-7700HQ CPU @ 2.80GHz 2.80 GHz

–16.0 GB (15.9 GB usable)

3)Find and take note of the average index of integer and float operations per unit of time



– 94,8



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4) Write down the time it took to execute.

– 251 msec

5) Calculate the approximate index of integer and float operations performed by the program.

– 251*94,8 == 23.794,8

Task 2

1)

#	CPU	milliseconds	SC Mix(avg)	Operations(aprox)
1.	i7-4500U	285	71,3	20.320,5
2.	2. i3-3220	267	83,3	22.241,1
3.	3. i5-4590	219	98,1	21.483,9
4.	4. i7-4790	207	107	22.149
5.	5.Intel Pentium Gold G5400	215	104	22.360
6.	6. i7-700HQ	251	94,8	23.794,8
7.	i5-6500	355	98.3	34.896,5

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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?

We cannot mix different CPUs in an analytical study. Computing power varies so it wont make sense.

****Due to my laptop constantly crashing when running and reinstalling windows 10 i decided to install Ubuntu. So I will be using the university's computers to continue my exercises.

Activity 2. Influence of the operating system

Complete this task with the program `Benchmarking1` from the previous activity.

• Sequential execution:

Power Option	Power Saver	Balanced	High Performance
MSeconds	320++ slower	250-320 fast	250-300 faster

• Parallel execution:

Power Option	Power Saver	Balanced	High Performance
MSeconds cmd		320++ Crashed	420+ Crashed

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

Balanced or High Performance. Power saver mode reduces CPU performance all the time to save power. computer doesn't operate any faster or slower depending on how many watts the power supply delivers; either it has enough to run, or not.

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?

Looking at the results of my experiment we can see that parallel execution we should not do parallel work when wanting to perform a very long experiment.

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

Yes it is. The same happens with task management.