Algorithmics	Student information	Date	Number of session
	UO: 293615		
	Surname: Lavelle Martinez		
	Name: Gersan		

Escuela de Ingeniería Informática
Universidad de Oviedo

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Universidá d'Uviéu
University of Oviedo

Activity 1. Problem size

n	Execution time (ms)
10000	2534
20000	10157
40000	40419
80000	OoT
160000	OoT
3200000	OoT
640000	OoT

Activity 2. Computer performance

Computer 1	
n	Execution time (ms)
10000	2641
20000	10411
40000	40531
80000	OoT
160000	OoT
3200000	OoT
640000	OoT
CPU:	AMD Ryzen 7 7730U
RAM mem. :	7.5 / 13.9 GB

Computer 2	
n	Execution time (ms)
10000	2075
20000	7814
40000	30417
80000	
160000	
3200000	
640000	
CPU:	11th Gen Intel(R) Core(TM) i5-12400
RAM mem. :	6,1 / 15.8 GB

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Activity 3. Implementation environment

Java	
n	**Execution time (ms)**
10000	95
20000	353
40000	1403
80000	5649
160000	22615
3200000	OoT
640000	Oot

Python laptop	
n	**Execution time (ms)**
10000	1584
20000	6577
40000	25207
80000	OoT
160000	OoT
3200000	OoT
640000	OoT

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Activity 4. Algorithm that is used

n	Time (ms) A1	Time (ms) A2	Time (ms) A3
10000	1969	242	116
20000	8032	910	451
40000	32565	3393	1737
80000	OoT	12934	6361
160000	OoT	48451	24117
3200000	OoT	OoT	OoT
640000	OoT	OoT	OoT

WITHOUT OPTIMIZATION:

n	Time (ms) A1	Time (ms) A2	Time (ms) A3
10000	583	61	37
20000	2095	214	133
40000	7707	767	471
80000	32521	3120	1869
160000	OoT	10612	6362
3200000	OoT	40498	22610
640000	OoT	OoT	OoT

WITH OPTIMIZATION:

n	Time (ms) A1	Time (ms) A2	Time (ms) A3
10000	87	12	8
20000	310	34	17
40000	1220	129	64
80000	4843	451	230
160000	19999	1740	862
3200000	OoT	6401	3189
640000	OoT	24195	11529

After comparing we can see than in all, A3 is the fastest and A1 is the slowest. In all cases A1 was about 8 or 9 times slower that A2. Python was much slower that Java.