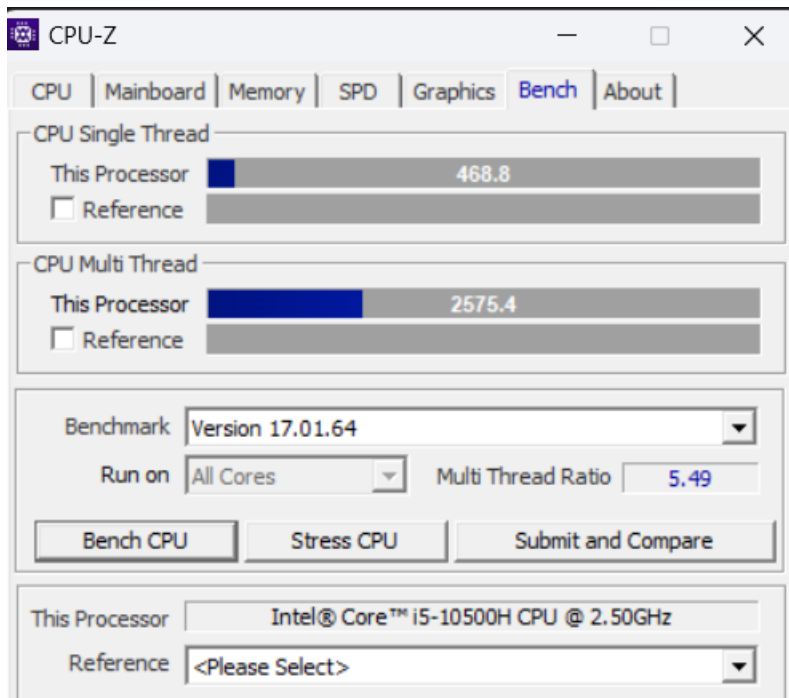CPU: Intel i5 10500H, base 2.5GHz freq. turbo to 4.5GHz

    6 cores, 12 logical

GPU: 3050 Ti Notebook version

CPU-Z Benchmark (pe baterie, in priza cam dublu)

SuperPi Benchmark

8M	1m 44.469s
4M	46.063 sec
2M	20.422 sec
1M	9.016 sec
512K	4.204 sec
256K	1.937 sec
128K	0.922 sec
64K	0.438 sec
16K	0.141 sec
32K	0.234 sec

NovaBench Benchmark

novabench score **2424**

10/5/2024 | Microsoft Windows 11 Pro | x64

CPU Score **1361**

Intel Core i5

Clock Speed	4.2 GHz
Peak workload	
SIMD	1869 GFLOPS
Varied workload	
Compression	605 MB/s
Cryptography	25478 MH/s

GPU Score **478**

NVIDIA GeForce RTX 3050 Ti Laptop GPU

Workload	
Direct3D 11	77 FPS
Compute	9551 GFLOPS
Memory transfer	
On-device	144998 MB/s
Host to device	56721 MB/s

Memory Score **267**

16GB DDR4

Transfer	
Peak speed	12773 MB/s
Access	
Latency	78 ns

Storage Score **318**

SAMSUNG MZVLB512HBJQ-000L2

Write	
Sequential	2651 MB/s
Random	93 MB/s
Read	
Sequential	3327 MB/s
Random	52 MB/s

Sandra Benchmarks

SiSoftware Official Ranker (UK)
#2271 : 6.04kPT

View @ SiSoftware...

Rank #2271 (Higher than 94.09% results)
Overall Processor Score
SiSoftware Sandra 31.137
Excellent Performance ;)

Laptop/Netbook
Windows x64 11.0.23.2
Intel(R) Core(TM) i5-10500H CPU @ 2.50GHz (6C 12T 4.3GHz, 4GHz/4.2GHz IMC, 6x 256kB L2, 12MB L3)
Normal State
Own Result
Anonymous
World
Lenovo 82NL Legion 5 15IMH6 (Lenovo LNVNB161216)

Local Rank
Not validated
Saturday, October 5, 2024 @ 10:01:58 AM
c2ffc8fed8b9d8e5d4e6d5e2d4e3c5b78aba9cf99ca191b7c4f9c9

TM

intel 6.04kPT

4.01-5.24kPT

2.16-7.09kPT

3.39-5.86kPT

2.77-6.47kPT

| 0.00 | 0.85 | 1.70 | 2.55 | 3.40 | 4.25 | 5.10 | 5.95 | 6.80 | 7.65 |

[y]

Overall Processor Score (kPT)

SiSoftware Official...

1

2

3

Certified Valid

SAMSUNG MZVLB512HBJQ-000L2...
Overall Disk Score

3.55kPT ±0.96kPT (1.14kPT-4.86kPT)
Low Variation: Under-dispersed Scores

1.71kPT
Valid Result: Medium Deviation (within...

SAMSUNG
MZVLB512HBJQ-
000L2 (ES 4kP)

TM

Primary (68%, ±σ)
Confidence
Interval

Secondary (95.5%,
±2σ) Confidence
Interval

| 0.00 | 0.88 | 1.76 | 2.64 | 3.52 | 4.40 | 5.28 | 6.16 | 7.04 | 7.92 |

[y]

Overall Disk Score (kPT)

1.45-1.45kPT : Tertiary (99.7%, +3σ) C...Interval

1.45-1.45kPT : Secondary (95.5%, +2σ) C...Interval

1.24kPT : Intel Core10H (Cometl... 60_25_9)

1.45-1.45kPT : Primary (68%, ±σ) Confide...Interval

| 00 | 0.17 | 0.34 | 0.51 | 0.68 | 0.85 | 1.02 | 1.19 | 1.36 | 1.53 |

SiSoftware Official Ranker (UK) #3601 : 1.24kPT

View @ SiSoftware...

Rank #3601 (Higher than 89.90% results)
Overall Memory Score
SiSoftware Sandra 31.137
Good Performance :)

Laptop/Netbook
Windows x64 11.0.23.2
Intel Core10H (Cometlake-H 6C) Mobile Host Bridge/DRAM Registers; 2x 8GB Kingston/Micron KF3200C20S48G SO-DIMM DDR4 (3GHz 128-bit) PC4-25600 (19-21-21-39 7-60-25-9)
Own Result
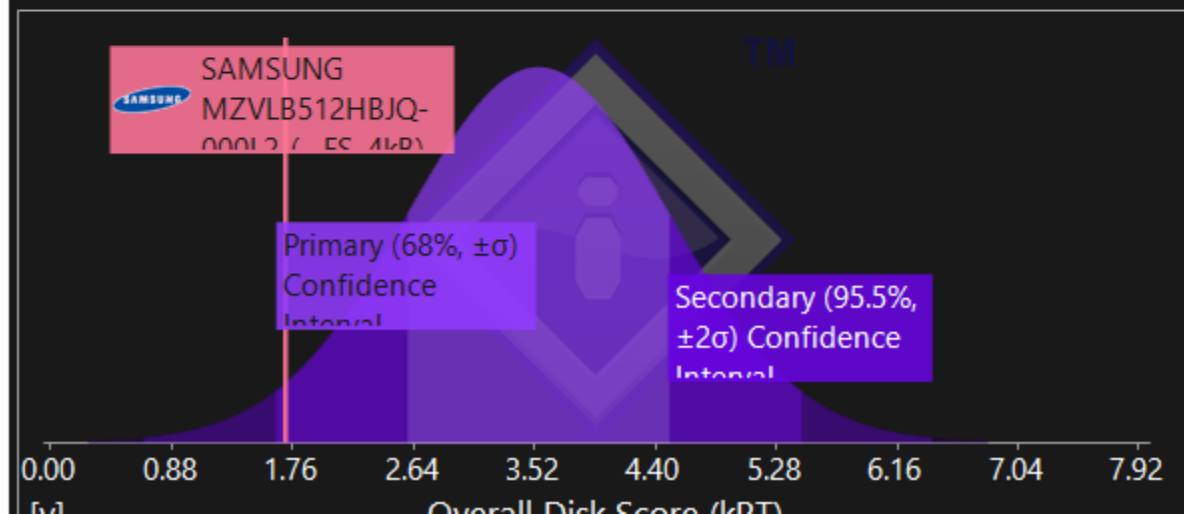Anonymous
World
Lenovo 82NL Legion 5 15IMH6 (Lenovo LNVNB161216)

Local Rank
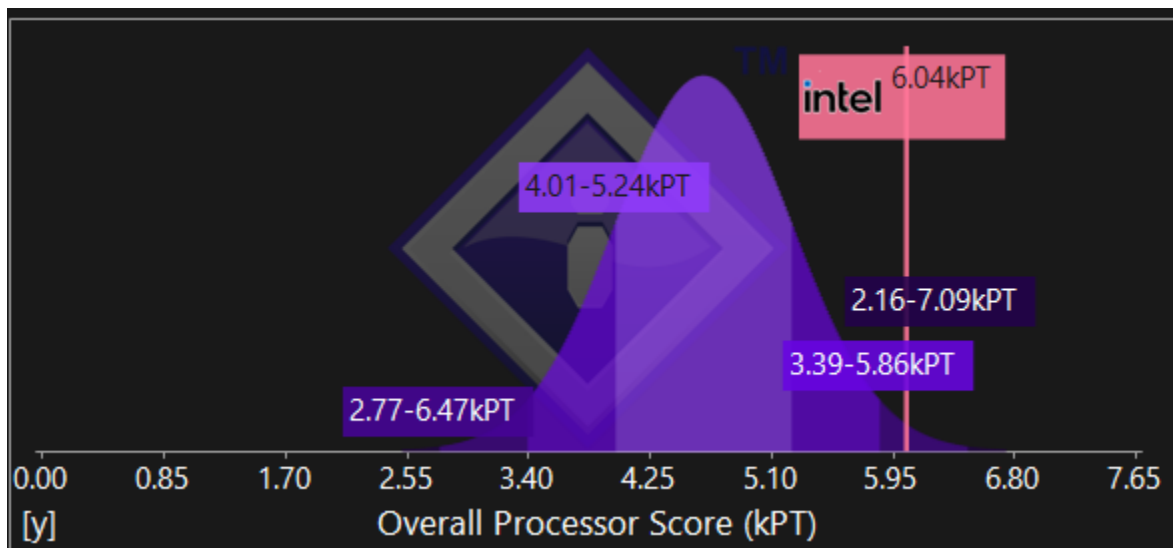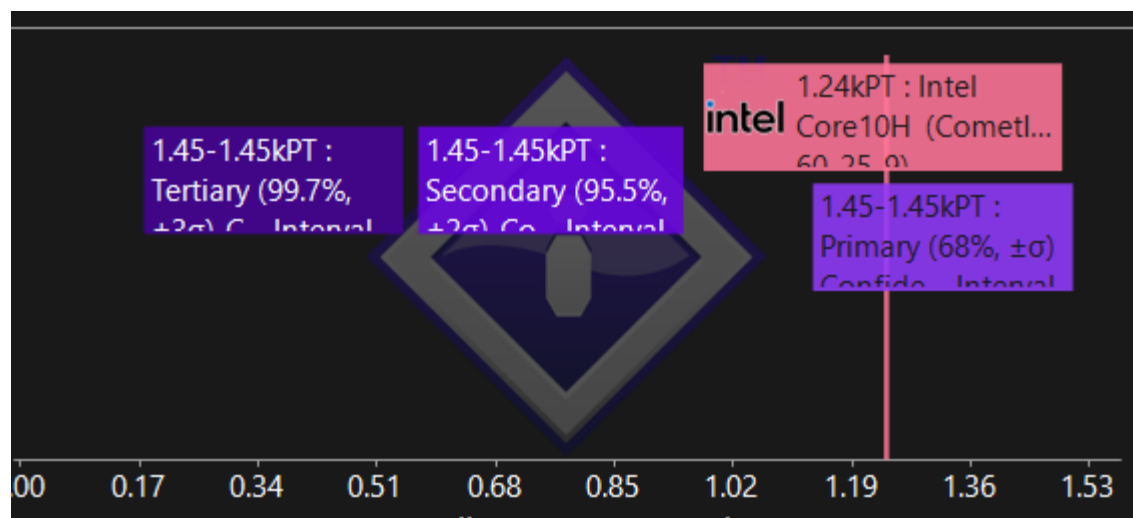Not validated
Saturday, October 5, 2024 @ 10:24:29 AM
c2ffc8ffd9b8d9e4d5e7dfe9d8ebcdbf82b294f194a999bfccf1c1

Exercise 2

upper	0	1	2	4	8	16	32	64
1000	0	0	0	0	0	0	0	0
10000	0.011	0.012	0.009	0.005	0.004	0.002	0.003	0.004
100000	0.881	0.89	0.665	0.389	0.234	0.162	0.133	0.127
1000000	72.494	72.613	54.341	31.841	17.805	11.992	10.394	9.984

1000

10000

100000

1000000
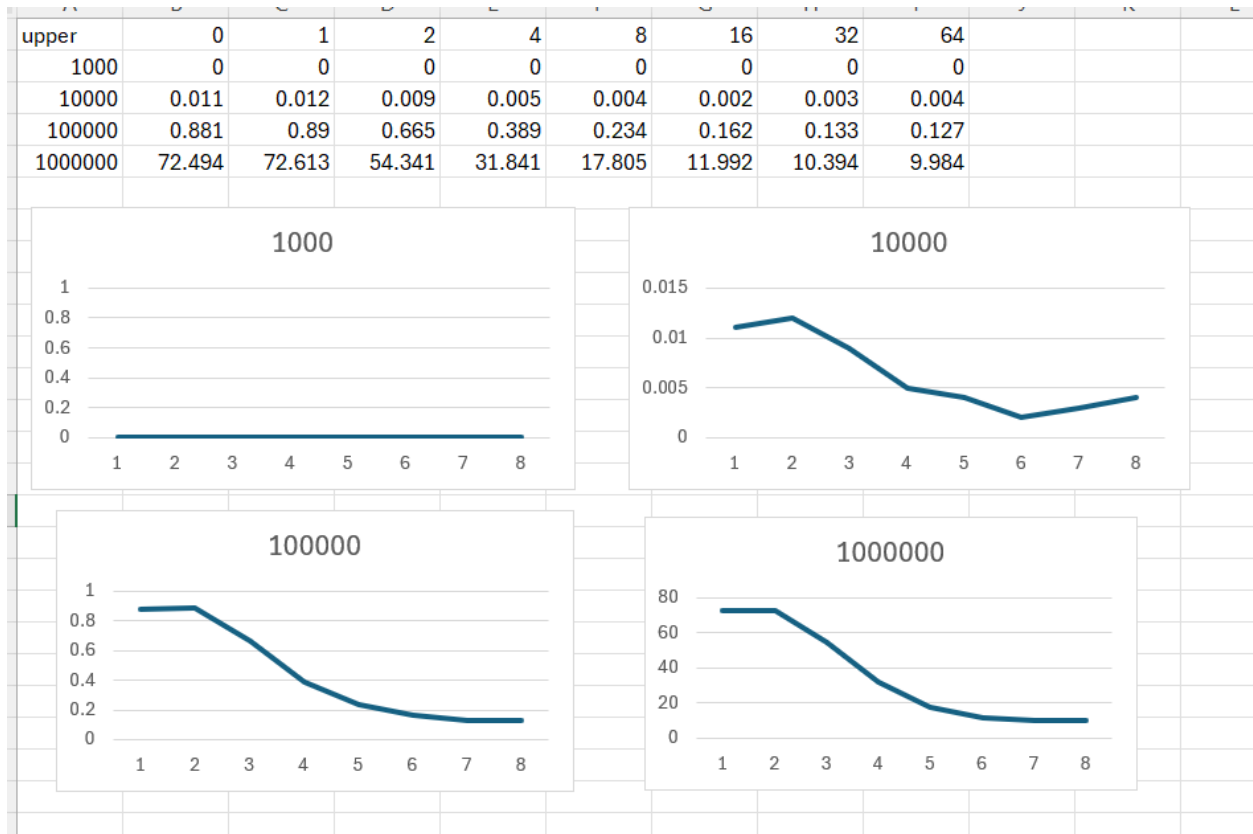
Lab 2

Exercise 1

Measurement number	CPUID Execution Time (clock cycles)
1	1010
2	1167
3	1364
4	964
5	888
6	874
7	648
8	834
9	1106
10	880
Average Time	973.5

Measurement number	ADD (reg)	ADD (var)	MUL	FDIV	FSUB
1	560	72	180	510	206
2	38	130	410	212	308
3	26	384	62	210	206
4	56	294	62	206	432
5	2	42	56	208	266
10	88	232	58	204	208
Average Time	128.333	192.333	138	258.333	271

Exercise 2

Measurement Number (bubblesort)	rdtsc time (clock cycles)		clock() time (clock cycles)	
	static array	dynamic array	static array	dynamic array
1	16161138	16628184	8	7
2	14732268	16578356	7	7
3	15788790	16872034	6	7
4	16651886	16734316	6	7
5	16662020	16672492	7	7
Average time	15999220.4	16697076.4	6.8	7

(aici e pe baterie)

Array size	(bubblesort)		(std::sort)	
	Initial time (clock cycles)		Optimized time (clock cycles)	
	static array	dynamic array	static array	dynamic array
100	157388	162272	183384	256574
500	4612834	3764478	1296464	1204262
1000	15680574	13953748	2114328	2011688
5000	394601005	367641385	11995260	12767382
10000	1787627062	1744031362	27900182	24289694

(aici e pe baterie)
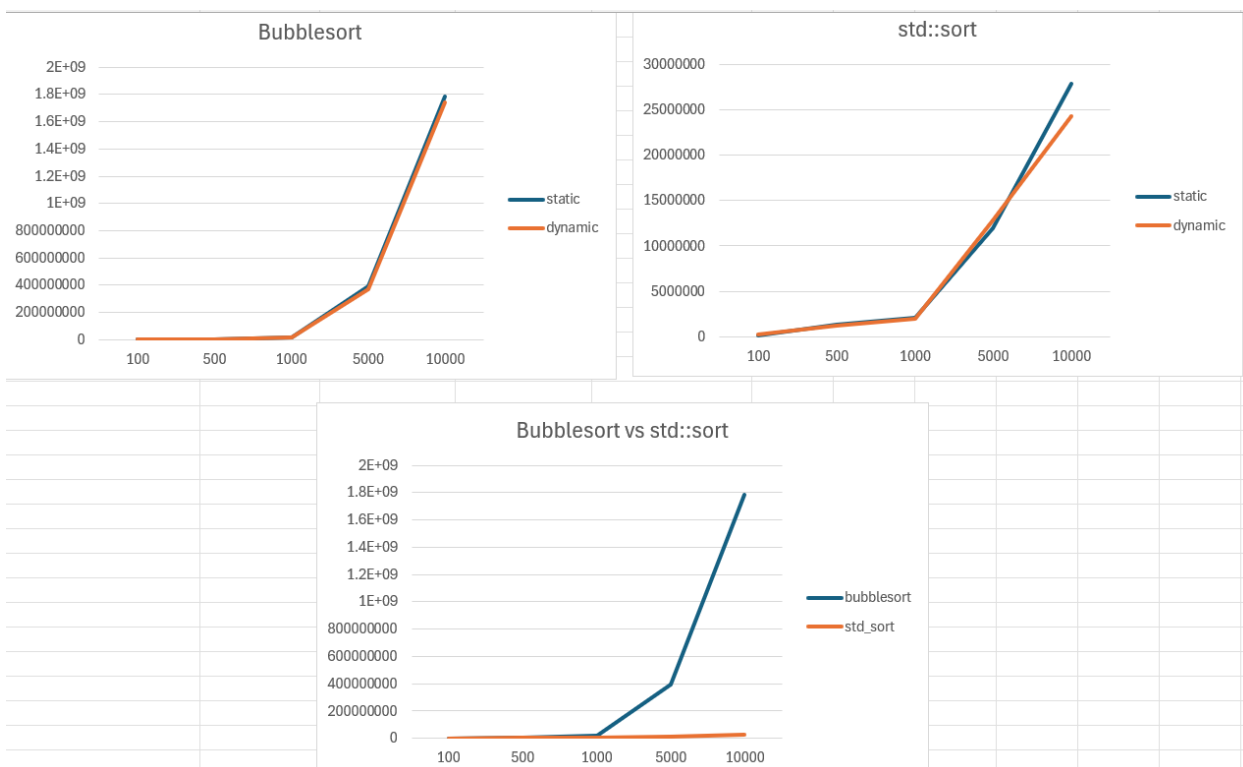
Se poate observa ca diferenta intre static si dynamic este una neglijabila. In schimb, complexitatea algoritmului (Bubblesort O(n^2) vs std::sort (quicksort hybrid + alte optimizari) O(n*logn)).