

Valutazione somma parallela

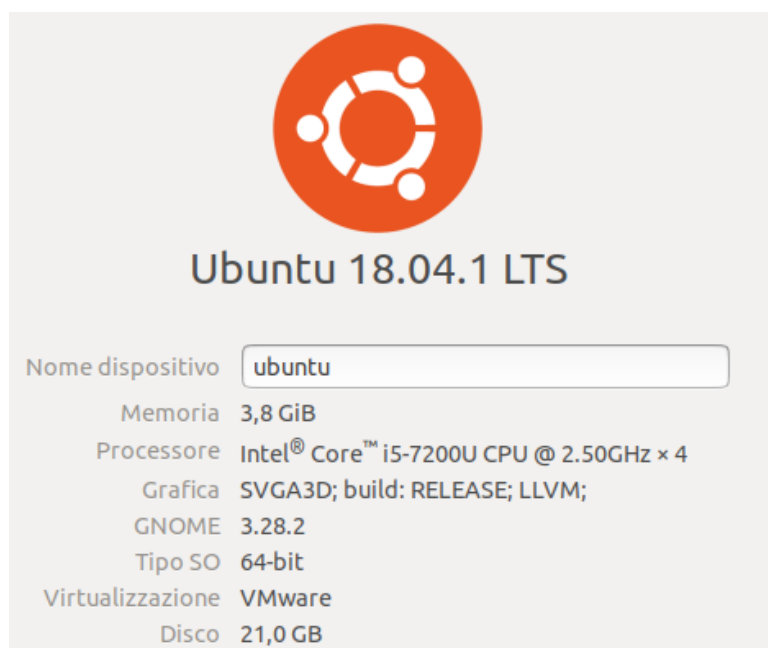
di Petraglia Mariangela

Per il corso di Metodi Numerici per l'Informatica

A.A. 2018/2019

Caratteristiche macchina di test

I test sono stati eseguiti su una macchina virtuale con le seguenti caratteristiche:



I 4 core indicati nelle specifiche sono virtuali: il processore della macchina sottostante è dual-core.

Risultati di esecuzione

Sequenziale

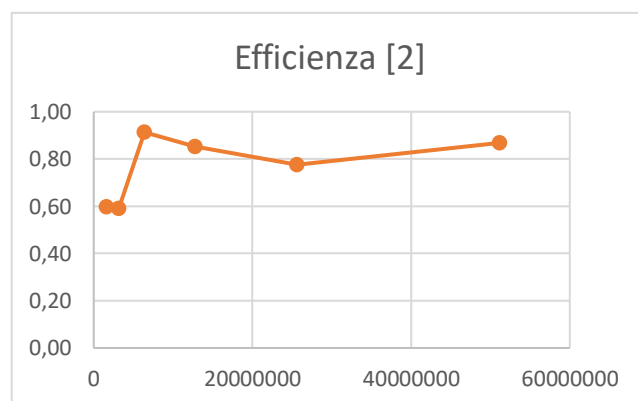
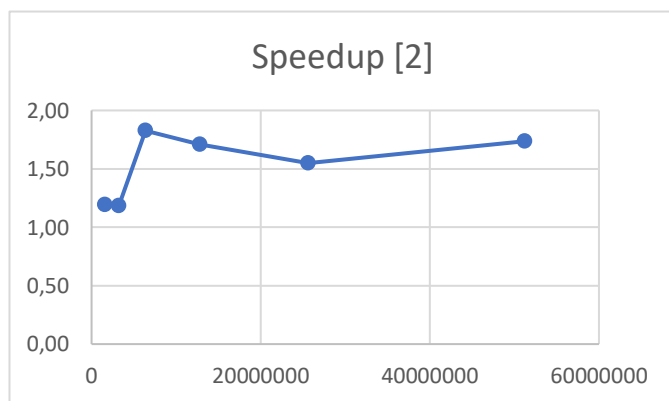
N	Tempo (ms)
1600000	4,884
3200000	11,920
6400000	26,895
12800000	50,857
25600000	104,621
51200000	210,026



Parallela II strategia

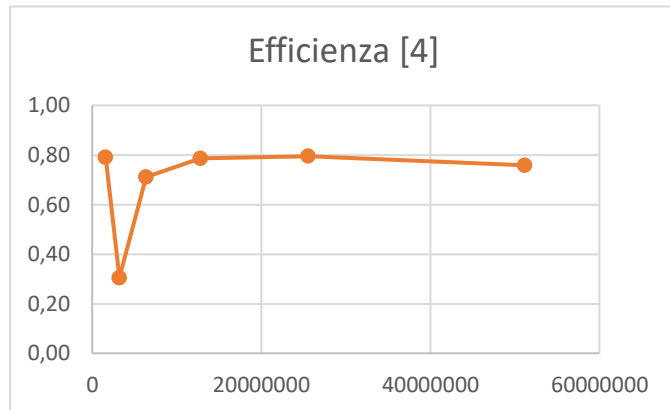
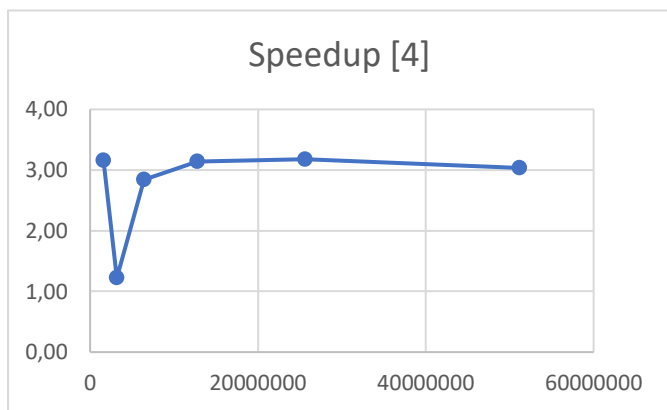
2 processori

N	Tempo (ms)	S_p	E_p
1600000	4,094	1,19	0,60
3200000	10,073	1,18	0,59
6400000	14,726	1,83	0,91
12800000	29,793	1,71	0,85
25600000	67,472	1,55	0,78
51200000	120,873	1,74	0,87



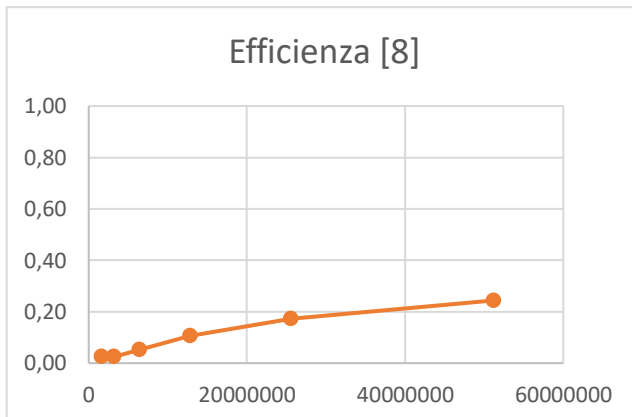
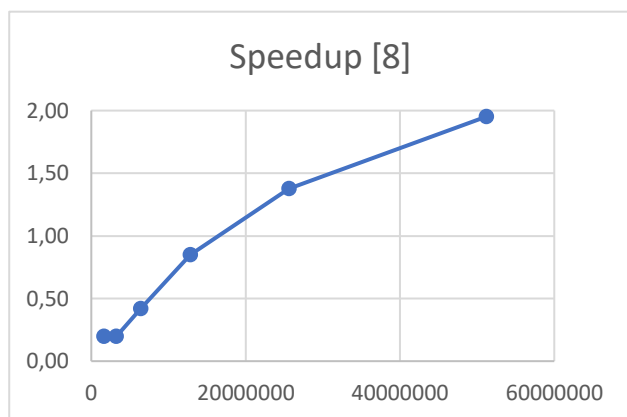
4 processori

N	Tempo (ms)	S_p	E_p
1600000	1,546	3,16	0,79
3200000	9,755	1,22	0,31
6400000	9,453	2,85	0,71
12800000	16,184	3,14	0,79
25600000	32,911	3,18	0,79
51200000	69,268	3,03	0,76



8 processori

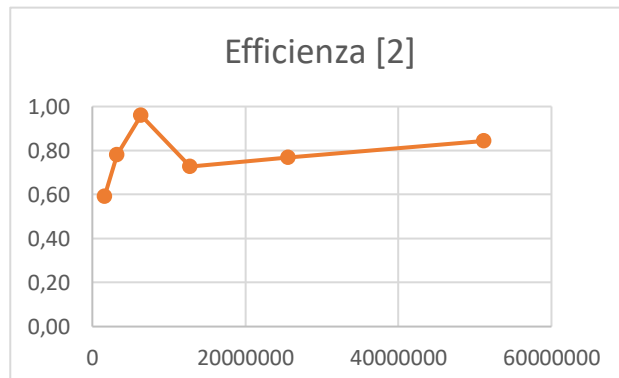
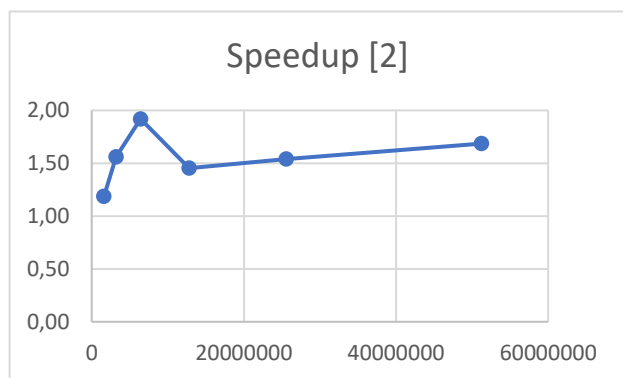
N	Tempo (ms)	S_p	E_p
1600000	24,765	0,20	0,02
3200000	60,843	0,20	0,02
6400000	64,116	0,42	0,05
12800000	59,934	0,85	0,11
25600000	75,893	1,38	0,17
51200000	107,610	1,95	0,24



Parallela II strategia con numeri reali

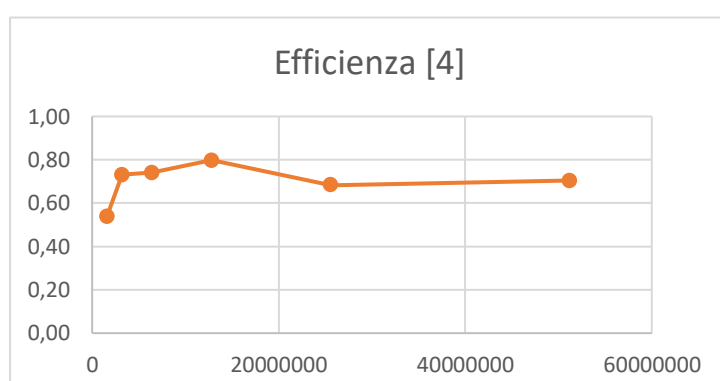
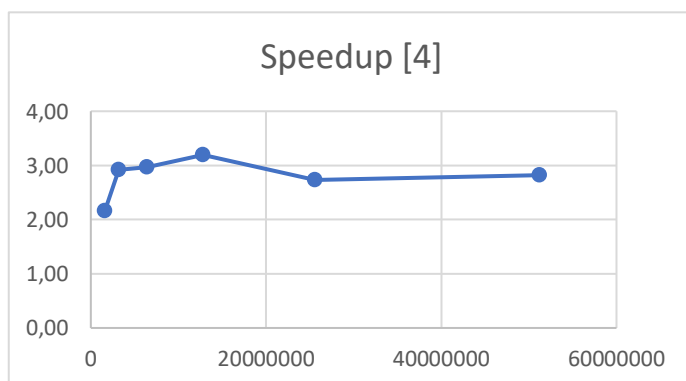
2 processori

N	Tempo (ms)	S_p	E_p
1600000	4,126	1,18	0,59
3200000	7,644	1,56	0,78
6400000	14,012	1,92	0,96
12800000	35,009	1,45	0,73
25600000	68,045	1,54	0,77
51200000	124,467	1,69	0,84



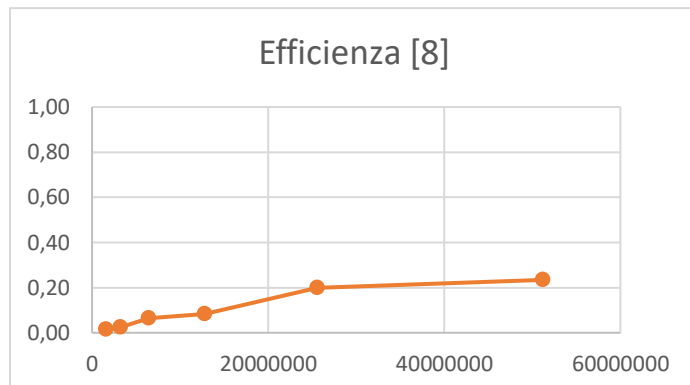
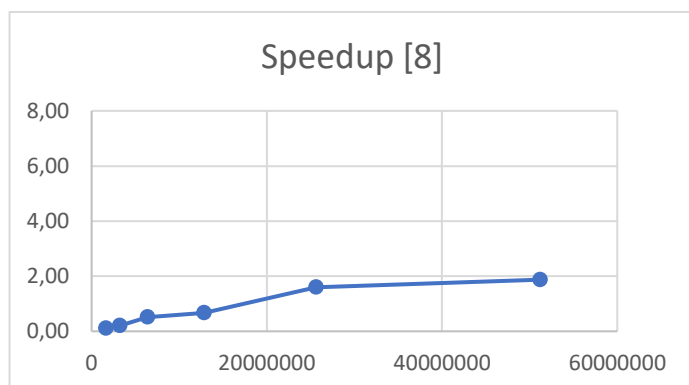
4 processori

N	Tempo (ms)	S_p	E_p
16000000	2,261	2,16	0,54
32000000	4,080	2,92	0,73
64000000	9,074	2,96	0,74
128000000	15,924	3,19	0,80
256000000	38,296	2,73	0,68
512000000	74,532	2,82	0,70



8 processori

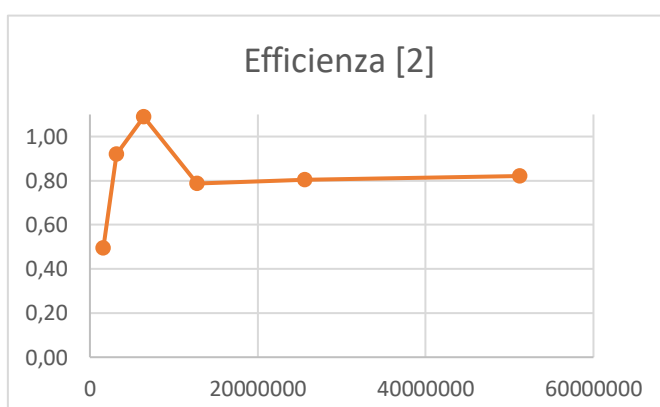
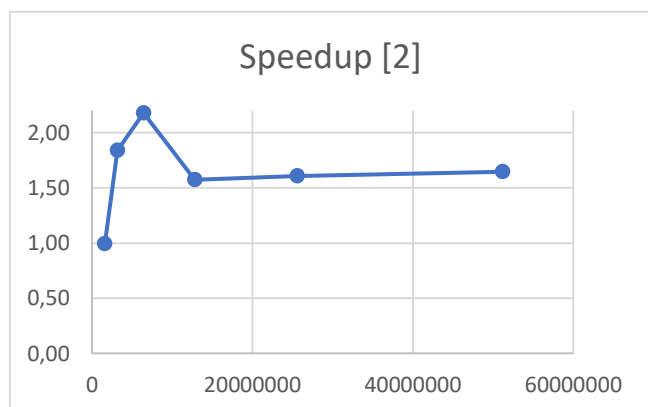
N	Tempo (ms)	S_p	E_p
16000000	44,304	0,11	0,01
32000000	60,858	0,20	0,02
64000000	51,977	0,52	0,06
128000000	76,591	0,66	0,08
256000000	65,413	1,60	0,20
512000000	112,061	1,87	0,23



Parallela III strategia

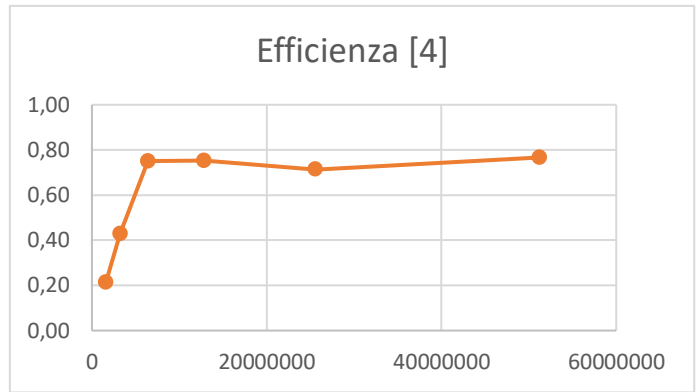
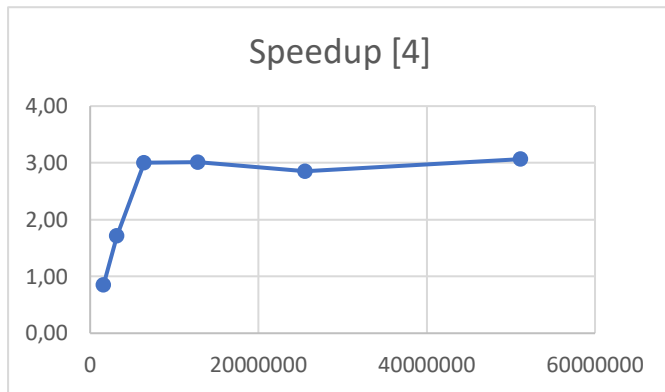
2 processori

N	Tempo (ms)	S_p	E_p
1600000	4,927	0,99	0,50
3200000	6,476	1,84	0,92
6400000	12,349	2,18	1,09
12800000	32,315	1,57	0,79
25600000	65,073	1,61	0,80
51200000	127,732	1,64	0,82



4 processori

N	Tempo (ms)	S_p	E_p
1600000	5,708	0,86	0,21
3200000	6,939	1,72	0,43
6400000	8,961	3,00	0,75
12800000	16,861	3,02	0,75
25600000	36,644	2,86	0,71
51200000	68,497	3,07	0,77



8 processori

N	Tempo (ms)	S _p	E _p
1600000	83,763	0,06	0,01
3200000	48,779	0,24	0,03
6400000	76,099	0,35	0,04
12800000	67,760	0,75	0,09
25600000	87,497	1,20	0,15
51200000	143,653	1,46	0,18

