Relazione laboratorio Algoritmi Avanzati

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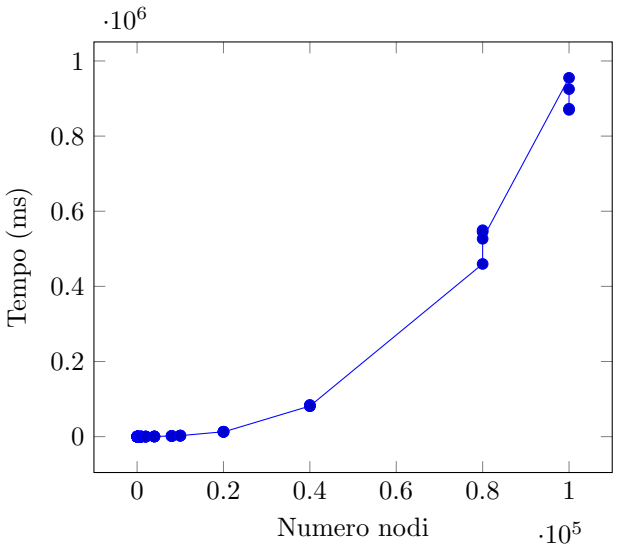
Piva Giulio

27 aprile 2020

1 Kruskal

#	Numero nodi	Tempo (ms)	MST
1	*10*	*0*	*29316*
2	**10**	**0**	**2126**
3	*10*	*0*	*-44765*
4	**10**	**0**	**20360**
5	*20*	*0*	*-32021*
6	**20**	**0**	**18596**
7	*20*	*0*	*-42560*
8	**20**	**0**	**-37205**
9	*40*	*0*	*-122078*
10	**40**	**0**	**-37021**
11	*40*	*0*	*-79570*
12	**40**	**0**	**-79741**
13	*80*	*0*	*-139926*
14	**80**	**0**	**-211345**
15	*80*	*0*	*-110571*
16	**80**	**0**	**-233320**
17	*100*	*0*	*-141960*
18	**100**	**0**	**-271743**
19	*100*	*0*	*-288906*
20	**100**	**0**	**-232178**
21	*200*	*16*	*-510185*
22	**200**	**0**	**-515136**
23	*200*	*0*	*-444357*
24	**200**	**0**	**-393278**
25	*400*	*0*	*-1122919*
26	**400**	**31**	**-788168**
27	*400*	*0*	*-895704*
28	**400**	**0**	**-733645**
29	*800*	*31*	*-1541291*
30	**800**	**32**	**-1578294**
31	*800*	*31*	*-1675534*
32	**800**	**15**	**-1652119**
33	*1000*	*32*	*-2091110*
34	**1000**	**32**	**-1934208**
35	*1000*	*31*	*-2229428*
36	**1000**	**31**	**-2359192**
37	*2000*	*109*	*-4811598*
38	**2000**	**93**	**-4739387**
39	*2000*	*109*	*-4717250*
40	**2000**	**125**	**-4537267**
41	*4000*	*423*	*-8722212*
42	**4000**	**437**	**-9314968**
43	*4000*	*412*	*-9845767*
44	**4000**	**439**	**-8681447**

#	Numero nodi	Tempo (ms)	MST
45	*8000*	*1722*	*-17844628*
46	**8000**	**1713**	**-18800966**
47	*8000*	*1731*	*-18741474*
48	**8000**	**1753**	**-18190442**
49	*10000*	*2637*	*-22086729*
50	**10000**	**2601**	**-22338561**
51	*10000*	*2563*	*-22581384*
52	**10000**	**2638**	**-22606313**
53	*20000*	*12976*	*-45978687*
54	**20000**	**13002**	**-45195405**
55	*20000*	*13009*	*-47854708*
56	**20000**	**12427**	**-46420311**
57	*40000*	*81522*	*-92003321*
58	**40000**	**81525**	**-94397064**
59	*40000*	*84400*	*-88783643*
60	**40000**	**81242**	**-93017025**
61	*80000*	*459713*	*-186834082*
62	**80000**	**549392**	**-185997521**
63	*80000*	*545050*	*-182065015*
64	**80000**	**526711**	**-180803872**
65	*100000*	*955113*	*-230698391*
66	**100000**	**925063**	**-230168572**
67	*100000*	*872704*	*-231393935*
68	**100000**	**869876**	**-231011693**



2 Kruskal con Union-Find

#	Numero nodi	Tempo (ms)	MST
1	*10*	*0*	*29316*
2	**10**	**0**	**2126**
3	*10*	*0*	*-44765*
4	**10**	**0**	**20360**
5	*20*	*0*	*-32021*
6	**20**	**0**	**18596**
7	*20*	*0*	*-42560*
8	**20**	**0**	**-37205**
9	*40*	*0*	*-122078*
10	**40**	**0**	**-37021**
11	*40*	*0*	*-79570*
12	**40**	**0**	**-79741**
13	*80*	*0*	*-139926*
14	**80**	**0**	**-211345**
15	*80*	*0*	*-110571*
16	**80**	**0**	**-233320**
17	*100*	*0*	*-141960*
18	**100**	**0**	**-271743**
19	*100*	*0*	*-288906*
20	**100**	**0**	**-232178**
21	*200*	*16*	*-510185*
22	**200**	**0**	**-515136**
23	*200*	*0*	*-444357*
24	**200**	**0**	**-393278**
25	*400*	*0*	*-1122919*
26	**400**	**31**	**-788168**
27	*400*	*0*	*-895704*
28	**400**	**0**	**-733645**
29	*800*	*31*	*-1541291*
30	**800**	**32**	**-1578294**
31	*800*	*31*	*-1675534*
32	**800**	**15**	**-1652119**
33	*1000*	*32*	*-2091110*
34	**1000**	**32**	**-1934208**
35	*1000*	*31*	*-2229428*
36	**1000**	**31**	**-2359192**
37	*2000*	*109*	*-4811598*
38	**2000**	**93**	**-4739387**
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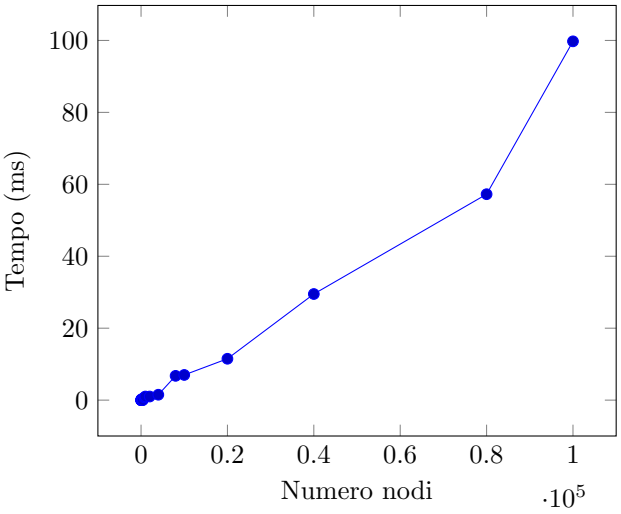
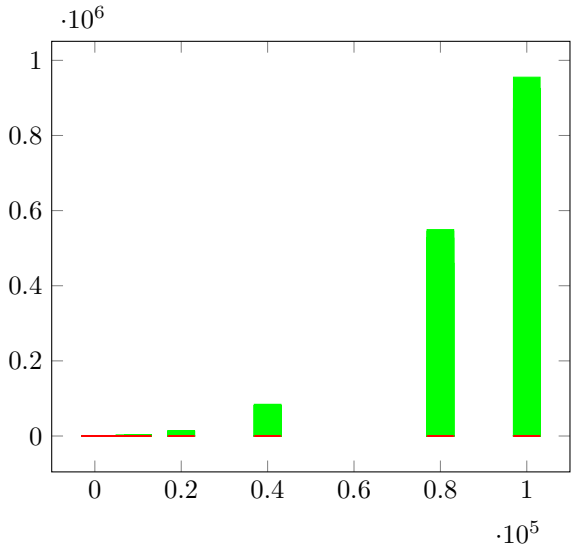
40	**2000**	**125**	**-4537267**
41	*4000*	*423*	*-8722212*
42	**4000**	**437**	**-9314968**
43	*4000*	*412*	*-9845767*
44	**4000**	**439**	**-8681447**

#	Numero nodi	Tempo (ms)	MST
45	*8000*	*6.75*	
46	**10000**	**7**	
47	*20000*	*11.5*	
48	**40000**	**29.5**	
49	*80000*	*57.25*	
50	**100000**	**99.75**	

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1
0.8
0.6
0.4
0.2
0
0
0.2
0.4
0.6
0.8
1
$\cdot 10^5$