

COMP 464 – Homework 1 – Part 1

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(1) Screen output:

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[11:24:51] bruno@Pavilion-dm4:~/Capacitacao/2014-2016_-_Mestrado_Stricto_Sensu_-_CS_-_LUC/LUC/2015_Fall/COMP464/homeworks/hw1$ ll
total 52
drwxr-xr-x 2 bruno bruno 4096 Sep 16 11:24 ./
drwxr-xr-x 3 bruno bruno 4096 Sep 16 11:21 ../
-rw-r----- 1 bruno bruno 1843 Sep 16 11:21 my_timer.cpp
-rw-r----- 1 bruno bruno 531 Sep 16 11:21 my_timer.h
-rw-r----- 1 bruno bruno 4960 Sep 16 11:21 stream2.cpp
-rwxr-xr-x 1 bruno bruno 13392 Sep 16 11:24 stream2.exe*
[11:26:27] bruno@Pavilion-dm4:~/Capacitacao/2014-2016_-_Mestrado_Stricto_Sensu_-_CS_-_LUC/LUC/2015_Fall/COMP464/homeworks/hw1$ ./stream2.exe
Smallest detectable time = 1.000000e-06 (ns)
getTicksPerSecond = 2.477748e+09
Size, Fill, Copy, AXPY, DOT, Uncertainty
30, 10576.604169, 21555.961994, 34036.725679, 16537.367409, 4.6%
44, 13294.679420, 26592.515693, 33070.420002, 16292.996349, 4.0%
64, 12398.276349, 25621.411458, 37885.080357, 17050.755616, 2.5%
94, 14820.181304, 28867.899296, 39159.859713, 16560.477876, 2.1%
138, 18386.442584, 32658.174748, 40940.385035, 16008.617912, 1.7%
201, 23053.131490, 36129.907375, 42608.856795, 15762.314116, 1.5%
294, 25503.547323, 38208.113834, 43077.400629, 15533.464357, 1.1%
431, 30055.166441, 40648.461635, 44046.195520, 15418.782446, 0.9%
631, 32106.959846, 41764.131527, 44503.829558, 15317.781325, 0.7%
923, 34231.250313, 42952.569074, 44653.502198, 15253.785019, 0.5%
1350, 34918.082616, 43592.567605, 44887.709750, 15230.279451, 0.3%
1975, 36156.109569, 44129.302241, 45054.986760, 15181.449657, 0.2%
2890, 37128.915606, 43068.279116, 44343.216205, 15139.395502, 0.2%
4230, 35782.554447, 42844.269319, 44083.864408, 15056.023539, 0.1%
6189, 27283.803597, 42699.978880, 44244.964777, 15115.176111, 0.1%
9056, 27281.371524, 42562.070678, 44155.566915, 15146.932625, 0.0%
13251, 26831.755865, 39244.936193, 41255.056570, 14989.979344, 0.0%
19390, 26814.927236, 32836.683510, 38012.209558, 15109.687225, 0.0%
28372, 26041.470018, 28907.087825, 34282.223489, 15079.424965, 0.0%
41516, 24183.275976, 26893.115527, 32465.209157, 15039.135445, 0.0%
60748, 21485.797982, 26704.710196, 31914.935141, 14965.024385, 0.0%
88890, 20473.435390, 26744.339146, 32292.751531, 15087.182488, 0.0%
130069, 20297.276764, 23729.265644, 29991.576407, 14547.988014, 0.0%
190325, 20068.179550, 18154.567016, 25284.398815, 13275.332823, 0.0%
278494, 19289.238812, 12082.402430, 17135.801355, 11847.889437, 0.0%
407508, 13297.960328, 10496.623235, 15205.358020, 11220.838439, 0.0%
596289, 8786.392510, 10305.130188, 15103.881124, 11400.405433, 0.0%
872524, 8387.009773, 10674.936949, 15583.134011, 11638.514690, 0.0%
1276727, 8670.973044, 10742.274320, 16042.022139, 11628.427206, 0.0%
1868180, 8705.191647, 10887.306272, 16252.650591, 11841.607033, 0.0%
2733628, 8845.886760, 10878.462471, 16050.010051, 11889.935655, 0.0%
4000000, 8685.218553, 11033.472937, 16183.293700, 11897.573461, 0.0%
[11:26:48] bruno@Pavilion-dm4:~/Capacitacao/2014-2016_-_Mestrado_Stricto_Sensu_-_CS_-_LUC/LUC/2015_Fall/COMP464/homeworks/hw1$
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(2) Machine properties:

CPU:

Intel(R) Core(TM) i5-2430M CPU @ 2.40GHz

Cache L1:

2 x 32 KB 8-way set associative instruction caches

2 x 32 KB 8-way set associative data caches

Cache L2:

2 x 256 KB 8-way set associative caches

Cache L3:

3072 KB 12-way set associative shared cache

Main Memory:

DDR3 – 1333 MHz – 2 x 4096 MB (8 GB Total)

OS:

Ubuntu 15.04 (vivid) x86_64 – kernel 3.19.0-28-generic

Compiler:

g++ (Ubuntu 4.9.2-10ubuntu13) 4.9.2