高性能计算应用实践实验报告（lab2）

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实验环境

OS：Linux suh 5.15.153.1-microsoft-standard-WSL2 #1 SMP Fri Mar 29 23:14:13 UTC 2024 x86_64 x86_64 x86_64 GNU/Linux
Ubuntu 22.04.3 LTS
gcc：(Ubuntu 11.4.0-1ubuntu1~22.04) 11.4.0
CPU：型号 11th Gen Intel(R) Core(TM) i7-11370H 频率 3.30GHz 核数 4
内存：16GB

test_cblas_dgemm.c

列主序
-4.000000 11.000000 0.000000
11.000000 -9.000000 5.000000
8.000000 5.000000 6.000000
行主序
-4.000000 11.000000 0.000000
11.000000 -9.000000 5.000000
8.000000 5.000000 6.000000
输出结果相同

time_dgemm.c

	256	1024	4096	8192
cblas_degmm duration	0.004336 s	0.024672 s	0.654267 s	5.902972 s
naïve_dgemm duration	0.093005 s	6.429406 s	1708.095805 s	17853.105164 s
cblas-dgemm gflops	15.477137 GFLOPS	174.082656 GFLOPS	420.131089 GFLOPS	372.528153 GFLOPS
naïve_dgemm gflops	0.721562 GFLOPS	0.668019 GFLOPS	0.160927 GFLOPS	0.123173 GFLOPS