

lab2 实验报告

课程：高性能计算
学期：2024秋
姓名：冯锦坤
学号：2023311D04

实验环境

内核：Linux 5.15.153.1-microsoft-standard-WSL2
发行版：Ubuntu 22.04.3 LTS
CPU：
型号：13th Gen Intel(R) Core(TM) i9-13900H
频率：2995.198 MHz
物理核数：10
内存：7 GB

行主序

```
(base) bonlow@BonLow:~/Public/hpc_practice/lab2-naive-gemm$ ./test_cblas_open
-4.000000 11.000000 0.000000 11.000000 -9.000000 5.000000 8.000000 5.000000 6.000000
(base) bonlow@BonLow:~/Public/hpc_practice/lab2-naive-gemm$ gcc -o test_cblas_open test_cblas_dgemm.c -lopenblas
(base) bonlow@BonLow:~/Public/hpc_practice/lab2-naive-gemm$ ./test_cblas_open
** On entry to DGEMM parameter number 8 had an illegal value
0.500000 0.500000 0.500000 0.500000 0.500000 0.500000 0.500000 0.500000 0.500000
```

time_dgemm.c

	256	1024	4096	8192
cblas_dgemm duration	0.034546 s	0.123107 s	1.705603 s	15.423336 s
naive_dgemm duration	0.033691 s	3.291523 s	803.548225 s	19501.230393 s
cblas_dgemm gflops	1.942594 GFLOPS	34.888084 GFLOPS	161.161716 GFLOPS	142.577666 GFLOPS
naive_dgemm gflops	1.991893 GFLOPS	1.304857 GFLOPS	0.342080 GFLOPS	0.112763 GFLOPS