

## 快速計算方法 HW1

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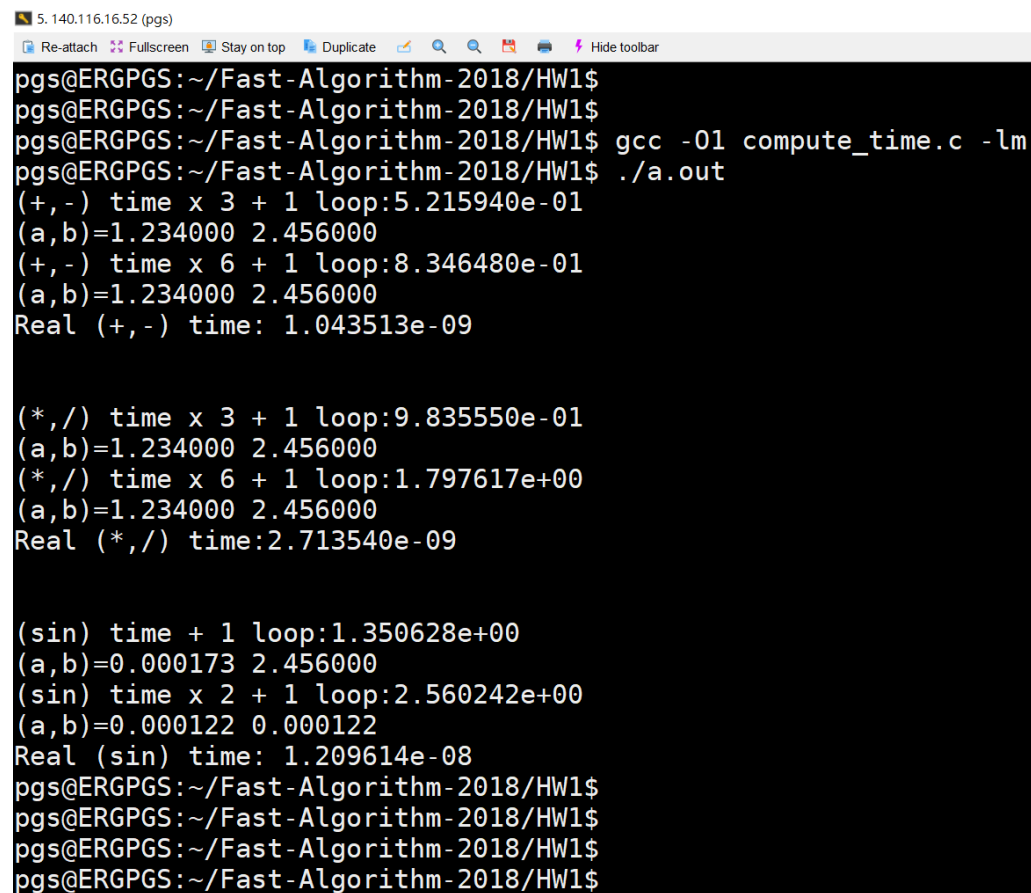
Computer specification: Intel(R) Core(TM) i7-7700 CPU @ 3.60GHz

(1) gcc -O1

The time for (+, -) operation: 1.043513e-09

The time for (\*, /) operation: 2.713540e-09

The time for (\*, /) operation: 1.209614e-08



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5. 140.116.16.52 (pgs)
Re-attach Fullscreen Stay on top Duplicate
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$ gcc -O1 compute_time.c -lm
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$ ./a.out
(+, -) time x 3 + 1 loop:5.215940e-01
(a,b)=1.234000 2.456000
(+, -) time x 6 + 1 loop:8.346480e-01
(a,b)=1.234000 2.456000
Real (+, -) time: 1.043513e-09

(*, /) time x 3 + 1 loop:9.835550e-01
(a,b)=1.234000 2.456000
(*, /) time x 6 + 1 loop:1.797617e+00
(a,b)=1.234000 2.456000
Real (*, /) time:2.713540e-09

(sin) time + 1 loop:1.350628e+00
(a,b)=0.000173 2.456000
(sin) time x 2 + 1 loop:2.560242e+00
(a,b)=0.000122 0.000122
Real (sin) time: 1.209614e-08
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
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(2) gcc -O2

The time for (+, -) operation: 9.937400e-10

The time for (\*, /) operation: 2.595367e-09

The time for (\*, /) operation: 1.197277e-08

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5. 140.116.16.52 (pgs)
Re-attach Fullscreen Stay on top Duplicate Hide toolbar
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$ gcc -O2 compute_time.c -lm
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$ ./a.out
(+,-) time x 3 + 1 loop:3.672230e-01
(a,b)=1.234000 2.456000
(+,-) time x 6 + 1 loop:6.653450e-01
(a,b)=1.234000 2.456000
Real (+,-) time: 9.937400e-10

(*,/) time x 3 + 1 loop:8.392360e-01
(a,b)=1.234000 2.456000
(*,/) time x 6 + 1 loop:1.617846e+00
(a,b)=1.234000 2.456000
Real (*,/) time:2.595367e-09

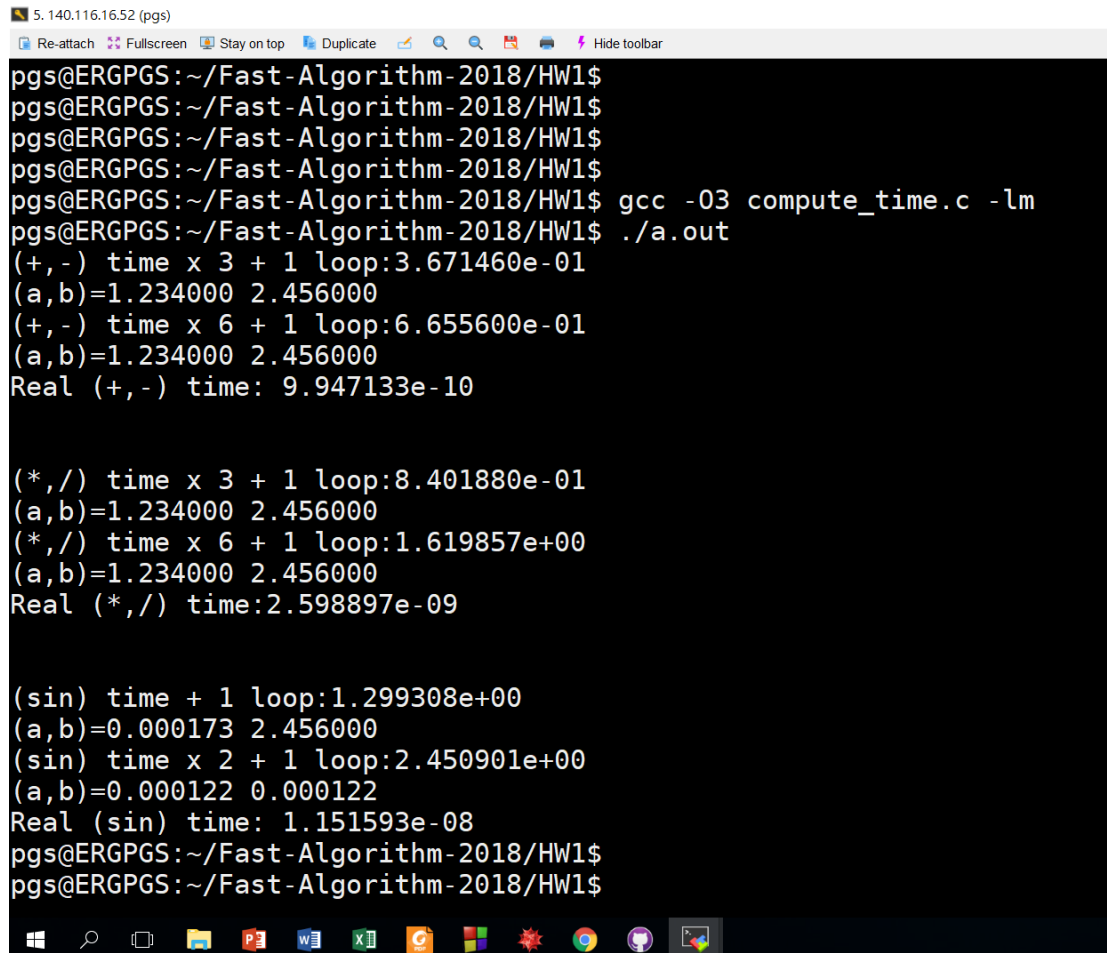
(sin) time + 1 loop:1.290088e+00
(a,b)=0.000173 2.456000
(sin) time x 2 + 1 loop:2.487365e+00
(a,b)=0.000122 0.000122
Real (sin) time: 1.197277e-08
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
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(3) gcc -O3

The time for (+, -) operation: 9.947133e-10

The time for (\*, /) operation: 2.598897e-09

The time for (\*, /) operation: 1.151593e-08



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5. 140.116.16.52 (pgs)
Re-attach Fullscreen Stay on top Duplicate
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$ gcc -O3 compute_time.c -lm
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$ ./a.out
(+, -) time x 3 + 1 loop:3.671460e-01
(a,b)=1.234000 2.456000
(+, -) time x 6 + 1 loop:6.655600e-01
(a,b)=1.234000 2.456000
Real (+, -) time: 9.947133e-10

(*, /) time x 3 + 1 loop:8.401880e-01
(a,b)=1.234000 2.456000
(*, /) time x 6 + 1 loop:1.619857e+00
(a,b)=1.234000 2.456000
Real (*, /) time:2.598897e-09

(sin) time + 1 loop:1.299308e+00
(a,b)=0.000173 2.456000
(sin) time x 2 + 1 loop:2.450901e+00
(a,b)=0.000122 0.000122
Real (sin) time: 1.151593e-08
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
pgs@ERGP GS:~/Fast-Algorithm-2018/HW1$
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