

2.24

- file name : filecopy_ordinary.c
- output :

```
問題 輸出 偵測主控台 終端機 連接埠 SQL CONSOLE SEARCH ERROR 註解
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```
[madfater@madfater:~/os]-[01:07:07]-[G:main=]
->$ cd hw1/
[madfater@madfater:~/o/hw1]-[01:07:39]-[G:main=]
->$ gcc ./filecopy_ordinary.c -o filecopy
[madfater@madfater:~/o/hw1]-[01:07:53]-[G:main=]
->$ ls
WrittenExercises/ collatz.c filecopy* filecopy_ordinary.c filecopy_pipeline.c test.txt time.c time_pipe.c time_shm.c
[madfater@madfater:~/o/hw1]-[01:08:39]-[G:main=]
->$ cat test.txt
12341234
[madfater@madfater:~/o/hw1]-[01:09:08]-[G:main=]
->$ ./filecopy test.txt output.txt
[madfater@madfater:~/o/hw1]-[01:09:25]-[G:main=]
->$ ls
WrittenExercises/ collatz.c filecopy* filecopy_ordinary.c filecopy_pipeline.c output.txt test.txt time.c time_pipe.c time_shm.c
[madfater@madfater:~/o/hw1]-[01:09:27]-[G:main=]
->$ cat output.txt
12341234
```

- trace :

[illegible]

3.19

- file name : time_pipe.c, time_shm.c

- output :

```

問題 輸出 偵錯主控台 終端機 連接埠 SQL CONSOLE SEARCH ERROR 註解
[maɖfater@maɖfater:~/o/hw1]-[01:13:07]-[G:main=]
->$ gcc ./time_shm.c -o time
[maɖfater@maɖfater:~/o/hw1]-[01:13:38]-[G:main=]
->$ ./time ls
WrittenExercises collatz.c filecopy filecopy_ordinary.c filecopy_pipeline.c output.txt test.txt time time_pipe.c time_shm.c
Shared Memory Version
Elapsed time: 0.000807 seconds
[maɖfater@maɖfater:~/o/hw1]-[01:13:48]-[G:main=]
->$ gcc ./time_pipe.c -o time
[maɖfater@maɖfater:~/o/hw1]-[01:14:03]-[G:main=]
->$ ./time ls
WrittenExercises collatz.c filecopy filecopy_ordinary.c filecopy_pipeline.c output.txt test.txt time time_pipe.c time_shm.c
Pipe Version
Elapsed time: 0.000802 seconds
[maɖfater@maɖfater:~/o/hw1]-[01:14:06]-[G:main=]
->$

```

3.21

- file name : collatz.c
- output :

```

問題 輸出 偵錯主控台 終端機 連接埠 SQL CONSOLE SEARCH ERROR 註解
[maɖfater@maɖfater:~/o/hw1]-[01:18:18]-[G:main=]
->$ gcc ./collatz.c -o collatz
[maɖfater@maɖfater:~/o/hw1]-[01:18:22]-[G:main=]
->$ ./collatz 35
Child Process - Collatz Sequence: 35, 106, 53, 160, 80, 40, 20, 10, 5, 16, 8, 4, 2, 1,
[maɖfater@maɖfater:~/o/hw1]-[01:18:27]-[G:main=]
->$ ./collatz 67
Child Process - Collatz Sequence: 67, 202, 101, 304, 152, 76, 38, 19, 58, 29, 88, 44, 22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1,
[maɖfater@maɖfater:~/o/hw1]-[01:18:33]-[G:main=]
->$ ./collatz 42
Child Process - Collatz Sequence: 42, 21, 64, 32, 16, 8, 4, 2, 1,

```

3.27

- file name : filecopy.c
- output :

```

問題 輸出 偵錯主控台 終端機 連接埠 SQL CONSOLE SEARCH ERROR 註解
[maɖfater@maɖfater:~/o/hw1]-[01:20:24]-[G:main=]
->$ gcc ./filecopy_pipeline.c -o time
[maɖfater@maɖfater:~/o/hw1]-[01:20:41]-[G:main=]
->$ ls
WrittenExercises/ collatz* collatz.c filecopy* filecopy_ordinary.c filecopy_pipeline.c output.txt test.txt time* time_pipe.c time_shm.c
[maɖfater@maɖfater:~/o/hw1]-[01:21:08]-[G:main=]
->$ cat test.txt
4124123123
[maɖfater@maɖfater:~/o/hw1]-[01:21:13]-[G:main=]
->$ ./filecopy test.txt output.txt
[maɖfater@maɖfater:~/o/hw1]-[01:21:29]-[G:main=]
->$ cat output.txt
4124123123

```