系統程式 HW12

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原始執行

```
 ~/De/h/Sy/hw12 ❯ ./lovelyRon
 ~/De/h/SystemProgramming/hw12 ❯
```

`stderr.log`

```
hw12 > ≡ stderr.log
   1   ls: cannot open directory '/etc/audit/plugins.d': Permission denied
   2   ls: cannot open directory '/etc/credstore': Permission denied
   3   ls: cannot open directory '/etc/credstore.encrypted': Permission denied
   4   ls: cannot open directory '/etc/NetworkManager/system-connections': Permission
   5   ls: cannot open directory '/etc/pacman.d/gnupg/crls.d': Permission denied
   6   ls: cannot open directory '/etc/pacman.d/gnupg/openpgp-revocs.d': Permission de
   7   ls: cannot open directory '/etc/pacman.d/gnupg/private-keys-v1.d': Permission d
   8   ls: cannot open directory '/etc/polkit-1/rules.d': Permission denied
   9   ls: cannot open directory '/etc/sudoers.d': Permission denied
  10   ls: cannot open directory '/home/lost+found': Permission denied
  11   ls: cannot open directory '/lost+found': Permission denied
  12   ls: cannot open directory '/proc/1/fd': Permission denied
  13   ls: cannot open directory '/proc/1/fdinfo': Permission denied
```

`stdout.log`

```
hw12 > ☰ stdout.log
    1      /:
    2      bin
    3      boot
    4      core1_temp
    5      core2_temp
    6      dev
    7      die_temp
    8      efi
    9      etc
   10      home
   11      lib
   12      lib64
   13      lost+found
```

註解掉❶

對❺有影響，輸入變回 stdin，要自己輸入10個字元才會離開❺在的for迴圈

```
⚡ ⚡ ~/De/homework/SystemProgramming/hw12 ❯ ./lovelyRon
123
^C
⚡ ⚡ ~/De/h/Sy/hw12 ❯ ./lovelyRon
0123456789
⚡ ⚡ ~/De/h/SystemProgramming/hw12 ❯ ▯
```

輸出的 `stdout.log` `stderr.log` 相同

註解掉❷

不會產稱 `stdout.log` 改回 stdout，對❹造成影響

```
~/De/h/SystemProgramming/hw12 ❯ ./lovelyRon
0: hello
1: hello
2: hello
3: hello
4: hello
5: hello
6: hello
7: hello
8: hello
9: hello
試著在20秒內切斷連線
```

印出ls的訊息

```
2022-12-12_17-09-31_gui.log  2023-02-18_20-41-46_gui.log  2023-05-09_23-25-07_gui.lo
2022-12-12_18-16-28_gui.log  2023-02-18_20-43-34_gui.log

/var/opt:

/var/spool:
anacron  cron  mail

/var/spool/anacron:

/var/spool/cron:

/var/spool/mail:

/var/tmp:
systemd-private-e2511152d29b4a4ea232b7e40480c505-systemd-logind.service-EZCVWa
systemd-private-e2511152d29b4a4ea232b7e40480c505-systemd-timesyncd.service-gUSJWw
systemd-private-e2511152d29b4a4ea232b7e40480c505-upower.service-oJvESI
~/De/h/SystemProgramming/hw12 ❯
```

註解掉❸

不會產稱 `stderr.log` 改回輸出到 stderr，列印在終端機上

`fprintf(stderr, "*");` *會列印出來

```
~/De/h/SystemProgramming/hw12 ❯ ./lovelyRon
******
```

對於❼有影響

```
ls: cannot open directory '/var/lib/udisks2': Permission denied
ls: cannot open directory '/var/log/audit': Permission denied
ls: cannot open directory '/var/log/private': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-e2511152d29b4a
CVWa': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-e2511152d29b4a
-gUSJWw': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-e2511152d29b4a
ermission denied
  ~/De/h/SystemProgramming/hw12 ›
```

註解掉⑥

程式不會忽略 SIGHUP後，關閉終端機程式就會停止， `stdout.log` `stderr.log` 沒有內容

```
  ~/De/homework/SystemProgramming/hw12 › cat stderr.log
  ~/De/homework/SystemProgramming/hw12 › cat stdout.log
  ~/De/homework/SystemProgramming/hw12 ›
```