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主題甲：

1. 使用「sensors」可以觀察每顆 CPU 的溫度，且發現有兩顆 Core。

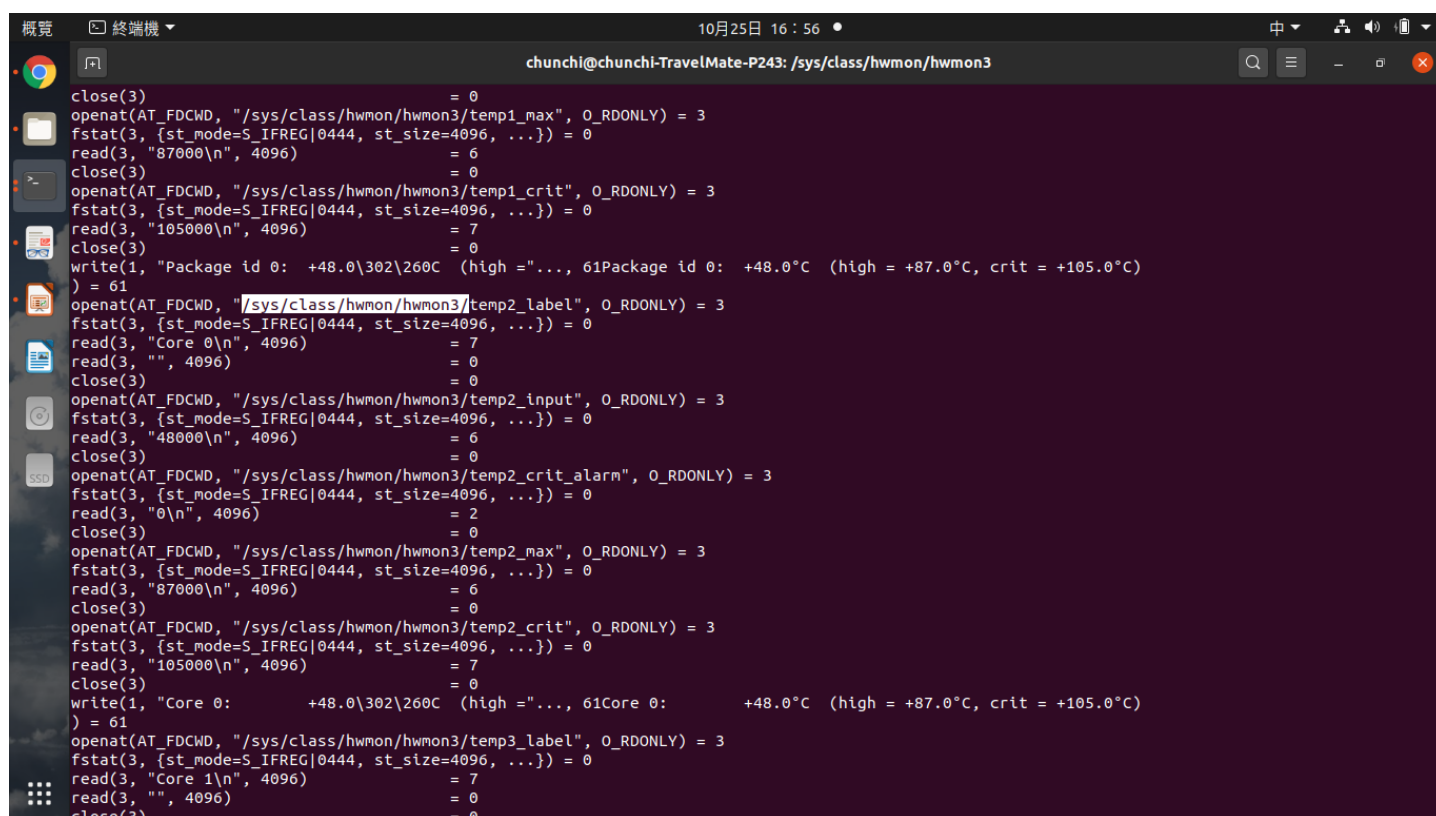
```
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ sensors
BAT1-acpi-0
Adapter: ACPI interface
in0:      12.17 V
curr1:    0.00 A

coretemp-isa-0000
Adapter: ISA adapter
Package id 0: +67.0°C (high = +87.0°C, crit = +105.0°C)
Core 0:      +62.0°C (high = +87.0°C, crit = +105.0°C)
Core 1:      +67.0°C (high = +87.0°C, crit = +105.0°C)

acpitz-acpi-0
Adapter: ACPI interface
temp1:     +67.0°C (crit = +103.0°C)

chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$
```

2. 接著使用「strace sensors」找到他偵測溫度的路徑。發現對「/sys/class/hwmon/hwmon3」這個資料夾底下，一直重複進行開檔讀檔的動作。



```
close(3) = 0
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp1_max", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "87000\n", 4096) = 6
close(3) = 0
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp1_crit", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "105000\n", 4096) = 7
close(3) = 0
write(1, "Package id 0: +48.0\302\260C (high = \"...\", 61Package id 0: +48.0°C (high = +87.0°C, crit = +105.0°C)
) = 61
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp2_label", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "Core 0\n", 4096) = 7
read(3, "", 4096) = 0
close(3) = 0
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp2_input", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "48000\n", 4096) = 6
close(3) = 0
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp2_crit_alarm", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "0\n", 4096) = 2
close(3) = 0
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp2_max", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "87000\n", 4096) = 6
close(3) = 0
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp2_crit", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "105000\n", 4096) = 7
close(3) = 0
write(1, "Core 0: +48.0\302\260C (high = \"...\", 61Core 0: +48.0°C (high = +87.0°C, crit = +105.0°C)
) = 61
openat(AT_FDCWD, "/sys/class/hwmon/hwmon3/temp3_label", O_RDONLY) = 3
fstat(3, {st_mode=S_IFREG|0444, st_size=4096, ...}) = 0
read(3, "Core 1\n", 4096) = 7
read(3, "", 4096) = 0
close(3) = 0
```

3. 又發現開檔讀檔裡所存放的 label 以及 input 剛好與 sensors 印出來的溫度值相吻合。由此可知，在這資料夾的檔案中，input 即為各 CPU 的溫度。

```

chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ cd /sys/class/hwmon/hwmon3/
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ ls
device power temp1_crit temp1_input temp1_max temp2_crit_alarm temp2_label temp3_crit temp3_input temp3_max
name subsystem temp1_crit_alarm temp1_label temp2_crit temp2_input temp2_max temp3_crit_alarm temp3_label uevent
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ cat temp1_label
Package id 0
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ cat temp1_input
67000
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ cat temp2_label
Core 0
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ cat temp2_input
64000
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ cat temp3_label
Core 1
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ cat temp3_input
62000
chunchi@chunchi-TravelMate-P243:/sys/class/hwmon/hwmon3$ 

```

主題乙：

(功能一) waitTemp /\*印出開始執行時間及各核心溫度。所有的 core 的溫度必須降低到 35 度以下

waitTemp 印出時間及各核心的溫度\*/

```

chunchi@chunchi-TravelMate-P243:~$ ./a.out
開始時間 : Sun Oct 25 17:02:51 2020

Package id 0 的初始溫度 : 52
Core 0 的初始溫度 : 52
Core 1 的初始溫度 : 50

-----降到 55 度以下-----
結束時間 : Sun Oct 25 17:02:51 2020

Package id 0 的結束溫度 : 52
Core 0 的結束溫度 : 52
Core 1 的結束溫度 : 50
chunchi@chunchi-TravelMate-P243:~$ 

```

(功能二) waitTemp ## /\*印出開始執行時間及各核心溫度。所有的 core 的溫度降低到##度以下時

waitTemp 印出時間及各核心的溫度\*/

```

chunchi@chunchi-TravelMate-P243:~$ ./a.out 66
開始時間 : Sun Oct 25 17:18:50 2020

Package id 0 的初始溫度 : 66
Core 0 的初始溫度 : 62
Core 1 的初始溫度 : 66

-----降到 66 度以下-----
結束時間 : Sun Oct 25 17:19:26 2020

Package id 0 的結束溫度 : 65
Core 0 的結束溫度 : 63
Core 1 的結束溫度 : 65
chunchi@chunchi-TravelMate-P243:~$ 

```