

# HW6

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甲. 說明你怎樣使用 **strace** 得知你的 CPU 的溫度在哪個檔案中?(附上截圖)

```
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$ sensors
nouveau-pci-0200
Adapter: PCI adapter
temp1:          N/A    (high = +95.0°C, hyst = +3.0°C)
                        (crit = +105.0°C, hyst = +5.0°C)
                        (emerg = +135.0°C, hyst = +5.0°C)

coretemp-isa-0000
Adapter: ISA adapter
Package id 0:   +41.0°C (high = +100.0°C, crit = +100.0°C)
Core 0:         +40.0°C (high = +100.0°C, crit = +100.0°C)
Core 1:         +39.0°C (high = +100.0°C, crit = +100.0°C)
Core 2:         +41.0°C (high = +100.0°C, crit = +100.0°C)
Core 3:         +41.0°C (high = +100.0°C, crit = +100.0°C)

asus-isa-0000
Adapter: ISA adapter
cpu_fan:        2200 RPM

BAT0-acpi-0
Adapter: ACPI interface
in0:           7.85 V

iwlwifi_1-virtual-0
Adapter: Virtual device
temp1:         +32.0°C

pch_cannonlake-virtual-0
Adapter: Virtual device
temp1:         +38.0°C

nvme-pci-0300
Adapter: PCI adapter
Composite:     +31.9°C (low = -40.1°C, high = +83.8°C)
                        (crit = +87.8°C)
Sensor 2:      +31.9°C (low = -40.1°C, high = +83.8°C)

acpitz-acpi-0
Adapter: ACPI interface
temp1:         +41.0°C (crit = +103.0°C)

eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$
```

首先先看到 **sensors** 給的資訊，其中 **coretemp-isa-0000** 提供各個 **cpu** 的溫度 (package id 0 為總體平均溫度)

```
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$ cat /sys/class/hwmon/hwmon6/temp2_label
Core 0
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$ cat /sys/class/hwmon/hwmon6/temp3_label
Core 1
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$ cat /sys/class/hwmon/hwmon6/temp4_label
Core 2
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$ cat /sys/class/hwmon/hwmon6/temp5_label
Core 3
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$ ls /sys/class/hwmon/hwmon6/
device      temp1_crit_alarm  temp2_crit_alarm  temp3_crit_alarm  temp4_crit_alarm  temp5_crit_alarm
name        temp1_input       temp2_input       temp3_input       temp4_input       temp5_input
power       temp1_label       temp2_label       temp3_label       temp4_label       temp5_label
subsystem   temp1_max         temp2_max         temp3_max         temp4_max         temp5_max
temp1_crit  temp2_crit       temp3_crit       temp4_crit       temp5_crit       uevent
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$
```

然後利用 **strace** 追蹤 **sensor** 指令，找到這幾個 **core** 名稱的 **label**，便可以知道包含 **CPU** 溫度的檔案是在 **/sys/class/hwmon/hwmon6** 這個路徑的資料夾裡

乙、附上截圖說明你完成的部分（例如：印出各核心的溫度，或者是印出 CPU 的總體溫度）

```
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$ ./waitTemp 39
target = 39
#=#01 sec 🔥🔥🔥🔥 39.50 °C
#=#02 sec 🔥🔥🔥🔥 39.50 °C
#=#03 sec 🔥🔥🔥🔥 39.50 °C
#=#04 sec 🔥🔥🔥🔥 39.50 °C
#=#05 sec 🔥🔥🔥🔥 40.00 °C
#=#06 sec 🔥🔥🔥🔥 40.00 °C
#=#07 sec 🔥🔥🔥🔥 39.75 °C
#=#08 sec 🔥🔥🔥🔥 39.50 °C
#=#09 sec 🔥🔥🔥🔥 39.50 °C
#=#10 sec 🔥🔥🔥🔥 39.50 °C
temp 38.75°C
eric@eric-VivoBook-ASUSLaptop-X512FL-S512FL:~/Desktop/OS/HW6$
```

我將 cpu 目標溫度設定為 39 度，可以看到圖中顯示當溫度變成 38.75 度時，程式即結束。