

## Operating System HW2

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### Prob1 (#4.16)

本題 create 3 個 child thread，分別計算 average, minimum, maximum。實作上跟講義類似。

Usage:

gcc -o prob1 first.c

./prob1 [a sequence of integers]

Ex. ./prob1 90 81 78 95 79 72 85

輸出結果如下

```
[ ✓ ./prob1 90 81 78 95 79 72 85
The average value is 82
The minimum value is 72
The maximum value is 95
```

### Prob2 (#4.17)

本題實作 monte carlo 來估測 pi。同樣是 create child thread 來作 random 撒點的動作，parent process 最後拿 child process 完成的結果計算 pi。這裡我開 10 個 thread 去完成作平行運算，以便計算大量的點。

Usage:

gcc -o prob2 second.c

./prob2.c [amount of points]

Ex. ./prob2 1000000

輸出結果如下

```
(base)hw2 ♡master*
[ ✓ ./prob2 1000000
The approximate value of pi for 1000000 points is: 3.1394
```