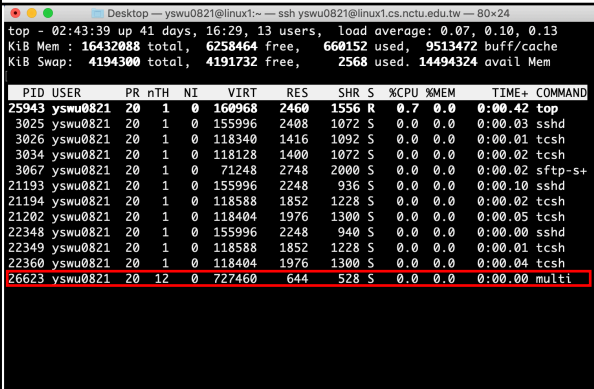


NCTU OS HW2 report 2018

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Question	Answer
<p>Q1. Briefly describe about your design for the problem "Sum Checker" and total num of threads you used in your code.</p>	<p>我一開始寫 single thread 的時候把 row_checker, column_checker 和 subgrid_checker 挪出來寫成三個 function, 所以在寫 multi thread 的時候就直接在 row_checker 和 column_checker 各加 1 個 thread, subgrid_checker 會因為不同 subgrid 執行九次, 所以這邊是加了 9 個 thread, 加上 main thread 一共有 12 個 thread, 也就是 Q2. 的圖上看到的 nTH</p>
<p>Q2. Show your thread info screenshots while "Sum Checker" code running.</p>	

Compare the time between Single-thread and Multi-thread.

```

Xuan's-MacBook:os_hw2 xuan$ time ./single
-----
11 SUM CHECKER 11
-----
18 115 112 117 113 116 114 119 111 1
-----
13 111 117 114 112 119 116 118 115 1
-----
19 114 116 115 118 111 112 117 113 1
-----
11 116 118 113 115 114 119 112 117 1
-----
15 112 114 118 119 117 111 113 116 1
-----
17 113 119 111 116 112 118 115 114 1
-----
12 118 113 116 114 115 117 111 119 1
-----
16 117 115 119 111 118 113 114 112 1
-----
14 119 111 112 117 113 115 116 118 1
-----

Successful :)

real    0m0.004s
user    0m0.001s
sys     0m0.002s

```

```

Xuan's-MacBook:os_hw2 xuan$ time ./multi
-----
11 SUM CHECKER 11
-----
18 115 112 117 113 116 114 119 111 1
-----
13 111 117 114 112 119 116 118 115 1
-----
19 114 116 115 118 111 112 117 113 1
-----
11 116 118 113 115 114 119 112 117 1
-----
15 112 114 118 119 117 111 113 116 1
-----
17 113 119 111 116 112 118 115 114 1
-----
12 118 113 116 114 115 117 111 119 1
-----
16 117 115 119 111 118 113 114 112 1
-----
14 119 111 112 117 113 115 116 118 1
-----

Successful :)

real    0m0.006s
user    0m0.002s
sys     0m0.003s

```

What you learned from doing OS hw2 or some improvements you want to say to TAs.

從 Q3. 可以發現，並不是每一種情況都適用 multi thread，有時候當題目已經夠快了的時候，使用 multi thread 時反而會因為集合 thread 的資料，導致程式沒有加速或者更慢的情形。

p.s You can reference to homework info pdf and show your answer as the format for Q2 and Q3.