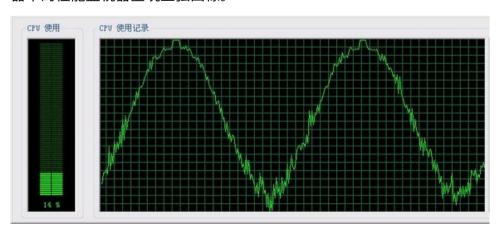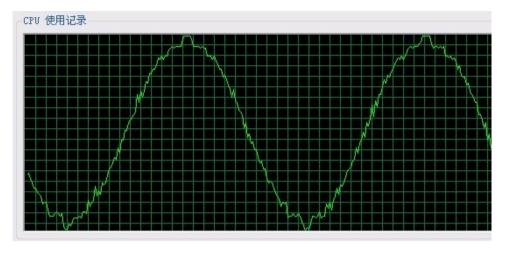# 寫程序讓CPU佔用率保持正弦函數 ↗

導入自 <u>renren</u>

據說是一道微軟的面試題。如題，寫程序，讓Windows的任務管理器中的性能監視器呈現正弦曲線。

CPU 使用记录

潜心鑽研良久，得代碼： (java)

```
1   public class sincpu {
2       private static final int cycle=1024,tick = 256;
3       public static void main (String[] args) throws InterruptedExce
ption {
4           for(int i = 0;;i++){
5               work(calcNextSleep(i % cycle));
6               sleep(tick - calcNextSleep(i % cycle));
7           }
8       }
9
10      private static long calcNextSleep(long i){
11          return (int)(Math.sin((double)i * 2 * Math.PI / cycle) * tick + t
ick) / 2;
12      }
13
14      private static void sleep (long sleepTime) throws Interrupted
Exception
15      {
16          if(sleepTime < 2)
17              Thread.yield();
18          else
19              Thread.sleep(sleepTime);
20      }
21
22      private static void work (long period) {
23          long start = System.currentTimeMillis();
24          for(;;){
25              Math.sin(1);
26              if(System.currentTimeMillis() - start >= period)
27                  break;
28          }
29      }
30  }
```

多核CPU上測試時要注意關掉一個CPU：