

# 寫程序讓CPU佔用率保持 正弦函數

導入自 [renren](#)

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。



潛心鑽研良久，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：

