

# 寫程序讓CPU佔用率保持正弦函數



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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=1
024,tick = 256;
3     public static void main (String[]
args) throws InterruptedException {
4         for(int i = 0;;i++){
5             work(calcNextSleep(i % c
ycle));
6             sleep(tick - calcNextSle
ep(i % cycle));
7         }
8     }
9
10    private static long calcNextSleep
(long i){
11        return (int)(Math.sin((double
)i * 2 * Math.PI / cycle) * tick + tick)
/ 2;
12    }
13
14    private static void sleep (long
sleepTime) throws InterruptedException
15    {
16        if(sleepTime < 2)
17            Thread.yield();
18        else
19            Thread.sleep(sleepTime);
20    }
21
22    private static void work (long p
```

```
period) {  
23         long start = System.currentT  
imeMillis();  
24         for(;;){  
25             Math.sin(1);  
26             if(System.currentTimeMillis()  
lis() - start >= period)  
27                 break;  
28         }  
29     }  
30 }
```

多核CPU上測試時要注意關掉一個CPU：

