

# 写程序让CPU占用率保持正弦函数



---

导入自 renren

据说是一道微软的面试题。如题，写程序，让Windows的任务管理器中的性能监视器呈现正弦曲线。



潜心钻研良久，得代码：（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.currentTimeMil  
lis() - start >= period)  
27                 break;  
28         }  
29     }  
30 }
```

多核CPU上测试时要注意关掉一个CPU：

