写程序让CPU占用率保持正弦函数

[↗]

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）

```java
1  public class sincpu {
2      private static final int cycle=1024,tick = 256;
3      public static void main (String[] args) throws InterruptedException {
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 + 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
eriod) {
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：