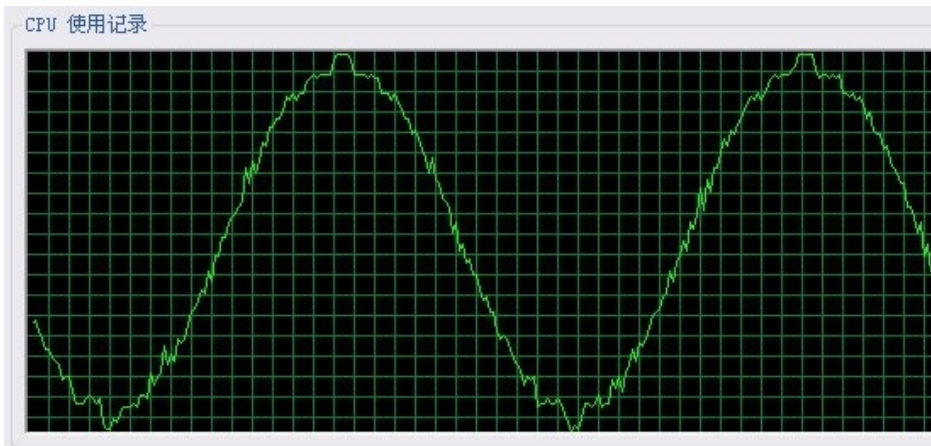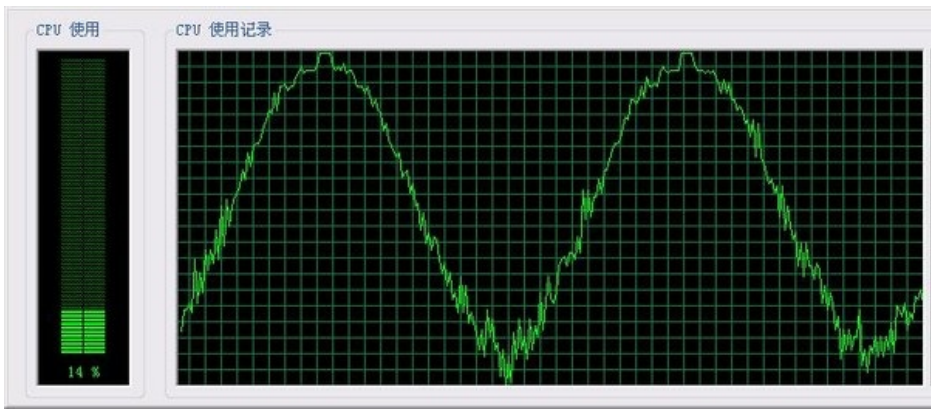# 写程序让CPU占用率保持正弦函数

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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=
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 − calcNextSl
eep(i % cycle));
```

```java
 7                }
 8          }
 9
10      private static long calcNextSle
ep(long i){
11              return (int)(Math.sin((doub
le)i * 2 * Math.PI / cycle) * tick + t
ick) / 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
period) {
23          long start = System.current
TimeMillis();
24          for(;;){
25              Math.sin(1);
26              if(System.currentTimeMi
llis() - start >= period)
27                  break;
28          }
29      }
30 }
```

多核CPU上测试时要注意关掉一个CPU：