Write a program to keep CPU usage as sin funcion 🗗

It is said that this is a problem from interview of Microsoft. Write a program, which makes the CPU usage curve in Windows Task Manager shows a Sin function.

The program below is written in 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
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 }
```

Be careful you need to turn off other cores if you have multi-core CPU.