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=1024,tick = 256;
3      public static void main (String[] args) throws InterruptedExce
ption {
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 + t
ick) / 2;
12     }
13
14     private static void sleep (long sleepTime) throws Interrupted
Exception
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.currentTimeMillis();
24        for(;;){
25           Math.sin(1);
26           if(System.currentTimeMillis() - start >= period)
27              break;
28        }
29     }
30  }
```

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