

# Write a program to keep CPU usage as sin function



Imported from: renren.

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.



CPU 使用记录



The program below is written in java:

```

1 public class sincpu {
2     private static final int cycle=1024,tick = 2
56;
3     public static void main (String[] args) thro
ws 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 * M
ath.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 period) {
23        long start = System.currentTimeMillis()
;
24        for(;;){
25            Math.sin(1);
26            if(System.currentTimeMillis() - sta
rt >= period)
27                break;
28        }
29    }
30 }

```

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

# CPU.

