

Write a program to keep CPU usage as sin funcion

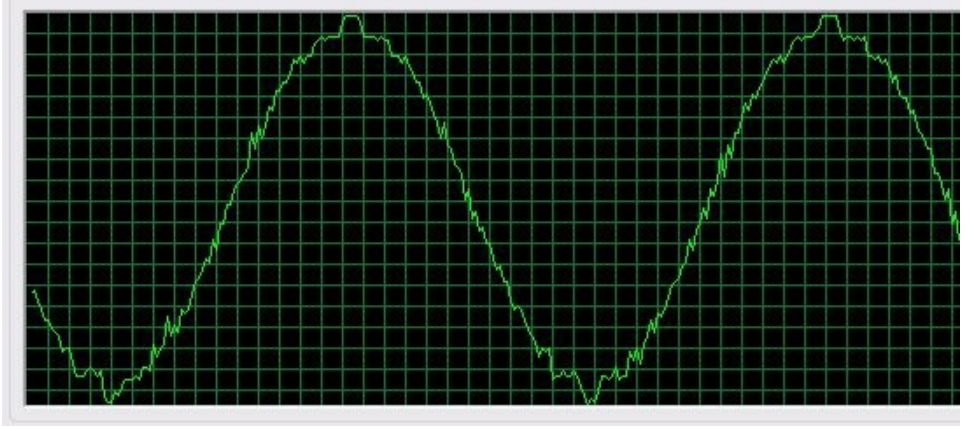


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It is said that this is a problem from interview of Microsoft. Write a program, which makes the CPU usage curve in Windows Task Manager shows a Sin function.



CPU 使用记录



The program below is written in java:

```

1 public class sincpu {
2     private static final int cycle=1024,tick = 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.

