

Compiled from "SynchronizedCollector.java"

```
public class src.SynchronizedCollector extends src.Collector
implements java.lang Runnable {
    static java.lang.Thread[] threads;

    java.lang.Object lock;

    public src.SynchronizedCollector(int);
    Code:
        0: aload_0
        1: iload_1
        2: invokespecial #1                // Method src/
Collector."<init>":(I)V
        5: aload_0
        6: new                #7                // class java/lang/Object
        9: dup
       10: invokespecial #9                // Method java/lang/
Object."<init>":()V
       13: putfield        #12                // Field lock:Ljava/lang/
Object;
       16: return

    public static void main(java.lang.String[]);
    Code:
        0: aload_0
        1: iconst_0
        2: aaload
        3: invokestatic  #18                // Method java/lang/
Integer.valueOf:(Ljava/lang/String;)Ljava/lang/Integer;
        6: invokevirtual #24                // Method java/lang/
Integer.intValue:()I
        9: istore_1
       10: ldc                #28                // int 10000000
       12: iload_1
       13: idiv
       14: istore_2
       15: iload_1
       16: anewarray        #29                // class java/lang/Thread
       19: putstatic        #31                // Field threads:[Ljava/
lang/Thread;
       22: getstatic        #35                // Field java/lang/
System.out:Ljava/io/PrintStream;
       25: ldc                #41                // String Starting
Synchronized Collector
       27: invokevirtual #43                // Method java/io/
PrintStream.println:(Ljava/lang/String;)V
       30: invokestatic  #49                // Method java/lang/
System.currentTimeMillis:()J
       33: lstore_3
       34: iconst_0
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    35: istore      5
    37: iload       5
    39: iload_1
    40: if_icmpge   79
    43: getstatic    #31          // Field threads:[Ljava/
lang/Thread;
    46: iload       5
    48: new          #29          // class java/lang/Thread
    51: dup
    52: new          #13          // class src/
SynchronizedCollector
    55: dup
    56: iload_2
    57: invokespecial #53          // Method "<init>":(I)V
    60: invokespecial #54          // Method java/lang/
Thread."<init>":(Ljava/lang/Runnable;)V
    63: astore
    64: getstatic    #31          // Field threads:[Ljava/
lang/Thread;
    67: iload       5
    69: aaload
    70: invokevirtual #57          // Method java/lang/
Thread.start:()V
    73: iinc         5, 1
    76: goto         37
    79: iconst_0
    80: istore      5
    82: iload       5
    84: iload_1
    85: if_icmpge   116
    88: getstatic    #31          // Field threads:[Ljava/
lang/Thread;
    91: iload       5
    93: aaload
    94: invokevirtual #60          // Method java/lang/
Thread.join:()V
    97: goto         110
   100: astore      6
   102: getstatic    #35          // Field java/lang/
System.out:Ljava/io/PrintStream;
   105: ldc          #65          // String Interrupted
Exception Error
   107: invokevirtual #43          // Method java/io/
PrintStream.println:(Ljava/lang/String;)V
   110: iinc         5, 1
   113: goto         82
   116: invokestatic #49          // Method java/lang/
System.currentTimeMillis:()J
   119: lload_3
   120: lsub

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    121: lstore      5
    123: getstatic    #67          // Field freq:[I
    126: invokestatic #71          // Method printHist:([I)V
    129: getstatic    #35          // Field java/lang/
System.out:Ljava/io/PrintStream;
    132: getstatic    #67          // Field freq:[I
    135: invokestatic #75          // Method sumFreq:([I)I
    138: invokedynamic #79, 0       // InvokeDynamic
#0:makeConcatWithConstants:(I)Ljava/lang/String;
    143: invokevirtual #43          // Method java/io/
PrintStream.println:(Ljava/lang/String;)V
    146: getstatic    #35          // Field java/lang/
System.out:Ljava/io/PrintStream;
    149: iload_1
    150: invokedynamic #83, 0       // InvokeDynamic
#1:makeConcatWithConstants:(I)Ljava/lang/String;
    155: invokevirtual #43          // Method java/io/
PrintStream.println:(Ljava/lang/String;)V
    158: getstatic    #35          // Field java/lang/
System.out:Ljava/io/PrintStream;
    161: lload        5
    163: invokedynamic #84, 0       // InvokeDynamic
#2:makeConcatWithConstants:(J)Ljava/lang/String;
    168: invokevirtual #43          // Method java/io/
PrintStream.println:(Ljava/lang/String;)V
    171: return
Exception table:
    from   to   target type
      88   97   100   Class java/lang/InterruptedException

```

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public void run();
Code:
    0: iconst_0
    1: istore_1
    2: iconst_0
    3: istore_2
    4: iload_2
    5: getstatic    #87          // Field trials:I
    8: if_icmpge    78
   11: aload_0
   12: getfield      #91          // Field
seenCoupons:Ljava/util/HashMap;
   15: invokevirtual #95          // Method java/util/
HashMap.clear:()V
   18: aload_0
   19: aload_0
   20: invokevirtual #100         // Method drawCoupon:()I
   23: invokevirtual #103         // Method addcoupon:(I)Z
   26: ifne          35
   29: iinc          1, 1

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    32: goto          18
    35: aload_0
    36: getfield        #12          // Field lock:Ljava/lang/
Object;
    39: dup
    40: astore_3
    41: monitorenter
    42: getstatic       #67          // Field freq:[I
    45: iload_1
    46: dup2
    47: iaload
    48: iconst_1
    49: iadd
    50: iastore
    51: aload_3
    52: monitorexit
    53: goto          63
    56: astore         4
    58: aload_3
    59: monitorexit
    60: aload          4
    62: athrow
    63: aload_0
    64: getfield        #91          // Field
seenCoupons:Ljava/util/HashMap;
    67: invokevirtual   #95          // Method java/util/
HashMap.clear:()V
    70: iconst_0
    71: istore_1
    72: iinc            2, 1
    75: goto          4
    78: return
Exception table:
   from    to  target type
    42     53    56    any
    56     60    56    any
}

```