```
1: // $Id: hellothread.java,v 1.14 2012-05-24 15:36:26-07 - - $
3: //
 4: // Hello World example using two threads.
 5: // class greeter extends Thread.
6: //
7:
8: import static java.lang.System.*;
 9: import static java.lang.String.*;
10:
11: class hellothread {
12:
       static long nanostart = nanoTime();
13:
14:
       static void print (String fmt, Object... args) {
15:
          Thread self = Thread.currentThread();
16:
          double millisec = (nanoTime() - nanostart) / 1e6;
17:
          String ident = format ("%10.3f: %s(%d): ",
                                  millisec, self.getName(), self.getId());
18:
19:
          String message = format (fmt, args);
          out.println (ident + message);
20:
21:
          out.flush();
22:
       }
23:
24:
       static class greeter extends Thread {
25:
          long delay_msec;
26:
          greeter (String threadname, int delay) {
27:
             super (threadname);
28:
             delay_msec = delay;
29:
30:
          public void run() {
31:
             print ("starting");
32:
             for (int count = 0; count < 10; ++count) {</pre>
33:
                try {
34:
                   sleep (delay_msec);
35:
                }catch (InterruptedException exn) {
36:
                   print ("interrupted: %s", exn.getMessage());
37:
38:
                print ("slept %d msec, %dth time", delay_msec, count);
39:
40:
             print ("finished");
41:
          }
42:
       }
43:
       public static void main (String[] args) {
44:
45:
          print ("starting");
46:
          greeter hello = new greeter ("Hello", 500);
47:
          greeter world = new greeter ("World", 800);
48:
          hello.start();
49:
          world.start();
50:
          print ("finished");
51:
       }
52:
53: }
54:
55: //TEST// runprog -x hellothread.lis hellothread
56: //TEST// mkpspdf hellothread.ps hellothread.java* hellothread.lis
57:
```

08/12/13 19:32:07

\$cmps109-wm/Examples/wk08a-java-threads/hellothread.java.log

F

- 1: * @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting hellothread.java
- 2: * hellothread.java: \$Id: hellothread.java,v 1.14 2012-05-24 15:36:26-07
- 3: - \$
- 4: * javac -Xlint hellothread.java
- 5: * jar cfm hellothread Manifest hellothread\$greeter.class
- 6: hellothread.class
- 7: * chmod +x hellothread
- 8: * rm -f hellothread\$greeter.class hellothread.class
- 9: * @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished hellothread.java

```
1:
3: log: hellothread.log
6:
       1 Script : /afs/cats.ucsc.edu/courses/cmps012b-wm/bin/runprog
7:
                   0 max core file size (KB)
       3 limit f: 4194303 max output file size (KB)
8:
9:
       4 limit t : 4294967295 max CPU time (sec)
      5 stdin
               : /dev/null
10:
      6 stdout : hellothread.out
11:
12:
      7 stderr : hellothread.err
13:
      8 log
               : hellothread.log
14:
      9 listing : hellothread.lis
      10 Command : hellothread
15:
      11 starting: pid 9120: 19:32:08.00
16:
17:
      12 finished: pid 9120: 19:32:16.00, real 8.00, user 0.08, sys 0.03
18:
      13 pstatus: 0x0000 EXIT STATUS = 0
19:
21: stdin: /dev/null
23:
24:
26: stdout: hellothread.out
28:
29:
             0.048: main(1): starting
30:
       2
             6.818: main(1): finished
31:
       3
             7.039: World(9): starting
32:
       4
             7.039: Hello(8): starting
33:
      5
           508.741: Hello(8): slept 500 msec, 0th time
34:
      6
           807.663: World(9): slept 800 msec, 0th time
35:
      7
          1009.266: Hello(8): slept 500 msec, 1th time
36:
      8
          1509.772: Hello(8): slept 500 msec, 2th time
37:
      9
          1608.162: World(9): slept 800 msec, 1th time
          2010.288: Hello(8): slept 500 msec, 3th time
38:
      10
          2408.657: World(9): slept 800 msec, 2th time
39:
      11
          2510.798: Hello(8): slept 500 msec, 4th time
40:
      12
41:
      13
          3011.309: Hello(8): slept 500 msec, 5th time
          3209.154: World(9): slept 800 msec, 3th time
42:
      14
          3511.801: Hello(8): slept 500 msec, 6th time
43:
      15
44:
      16
           4009.653: World(9): slept 800 msec, 4th time
45:
      17
           4012.320: Hello(8): slept 500 msec, 7th time
      18
46:
           4512.807: Hello(8): slept 500 msec, 8th time
47:
      19
           4810.222: World(9): slept 800 msec, 5th time
48:
      20
           5013.329: Hello(8): slept 500 msec, 9th time
      21
           5013.829: Hello(8): finished
49:
      22
          5610.943: World(9): slept 800 msec, 6th time
50:
      23
           6415.443: World(9): slept 800 msec, 7th time
51:
      24
          7216.185: World(9): slept 800 msec, 8th time
52:
          8016.969: World(9): slept 800 msec, 9th time
53:
      25
          8020.779: World(9): finished
54:
      26
55:
57: stderr: hellothread.err
59:
```