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1  -----ReEntrantTask.java-----
2  package com.ameya.tasks;
3
4  import java.util.concurrent.locks.ReentrantLock;
5
6  public class ReEntrantTask implements Runnable {
7
8      private String threadName;
9      ReentrantLock r1;
10     public ReEntrantTask(String threadName,ReentrantLock r1) {
11         this.threadName=threadName;
12         this.r1=r1;
13     }
14     @Override
15     public void run() {
16         System.out.println("Within run trying to acquire lock thread ::
17         "+threadName);
18         boolean locked=r1.tryLock();
19         if(locked) {
20             try {
21                 System.out.println("Thread :: "+threadName+" has
22                 aquired lock");
23                 lockMethod();
24             }finally {
25                 r1.unlock();
26                 System.out.println("Count of locks held by thread ::
27                 "+threadName+" - "+r1.getHoldCount());
28             }
29         }else {
30             System.out.println("Thread :: "+threadName+" not able to
31             acquire lock");
32         }
33     }
34
35     public void lockMethod() {
36         System.out.println("Within lockMethod, thread ::
37         "+threadName+" -- Waiting to acquire lock");
38         r1.lock();
39         try {
40             System.out.println("Count of locks held by thread ::

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        "+threadName+" - "+r1.getHoldCount());
37     }finally {
38         r1.unlock();
39     }
40 }
41 }
42 -----TestReentrantLock.java-----
43 package com.ameya.test;
44
45 import java.util.concurrent.ExecutorService;
46 import java.util.concurrent.Executors;
47 import java.util.concurrent.locks.ReentrantLock;
48
49 import com.ameya.tasks.ReEntrantTask;
50
51 public class TestReentrantLock {
52
53     public static void main(String[] args) {
54         ReentrantLock r1=new ReentrantLock();
55         ExecutorService executor=Executors.newFixedThreadPool(2);
56         for(int i=0;i<4;i++) {
57             executor.execute(new ReEntrantTask("Thread -> "+i, r1));
58         }
59         executor.shutdown();
60     }
61
62 }
63

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