

```
1 package com.test;
2 import java.util.*;
3 import java.lang.*;
4 import javax.swing.*;
5 import java.awt.*;
6 import java.awt.event.MouseAdapter;
7 import java.awt.event.MouseEvent;
8
9 /**
10  * 异常
11  */
12 class myException extends Exception {
13     myException(String s){
14         super(s);
15     }
16 }
17
18 class testException{
19     private static final int x = 5;
20
21     public void show() throws myException{
22         int i = 0;
23         try {
24             Scanner scan = new Scanner(System.in);
25             i = scan.nextInt();
26         }catch (Exception e){
27             System.out.println(e.toString());
28         }finally {
29             System.out.println("***");
30         }
31
32         if (i < 0){
33             throw new IllegalStateException("XXXX");
34         }
35         if (i == 1){
36             throw new myException("sadasd");
37         }
38     }
39 }
40
41 /**
42  * 异常
43  */
44 class ThreadDemo extends Thread {
45     private Thread t;
46     private String threadName;
47
48     ThreadDemo( String name) {
49         threadName = name;
50         System.out.println("Creating " + threadName );
51     }
52
53     public void run() {
54         System.out.println("Running " + threadName );
55         try {
56             for(int i = 4; i > 0; i--) {
57                 System.out.println("Thread: " + threadName + ", " + i);
58                 // 让线程睡眠一会
```

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59         Thread.sleep(50);
60
61     }
62     }catch (InterruptedException e) {
63         System.out.println("Thread " + threadName + " interrupted.");
64     }
65     System.out.println("Thread " + threadName + " exiting.");
66 }
67
68 public void start () {
69     System.out.println("Starting " + threadName );
70     if (t == null) {
71         t = new Thread (this, threadName);
72         t.start ();
73     }
74 }
75 }
76
77 public class TestFrame extends JFrame implements Runnable {
78     int i = 0;
79
80     public TestFrame() {
81         this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
82         JButton b = new JButton();
83         JLabel l = new JLabel();
84         JTextField t = new JTextField();
85         JFrame f = new JFrame();
86         this.addMouseListener(new MouseAdapter() {
87             public void mouseClicked(MouseEvent e) {
88                 startThread();
89             }
90         });
91     }
92
93     private void startThread() {
94         Thread t1 = new Thread(this);
95         t1.start();
96     }
97
98     public void run() {
99         for (i = 1; ; i = (i + 1) % 10) {
100             try {
101                 repaint();
102                 Thread.sleep(500);
103             } catch (InterruptedException e) {
104                 JOptionPane.showMessageDialog(null, e.getMessage(), "Exceptions",
JOptionPane.WARNING_MESSAGE);
105             }
106         }
107     }
108
109     public void paint(Graphics g) {
110         super.paint(g);
111         int[] x1 = {80 + i * 10, 100 + i * 10, 50 + i * 10};
112         int[] y1 = {50 + i * 10, 100 + i * 10, 80 + i * 10};
113         int x = 80 + i * 10;
114         int y = 50 + i * 10;
115         if (i != 0) {
116             g.setColor(Color.red);
117             g.drawPolygon(x1, y1, 3);

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```
118         g.fillOval(x,y,60,60);
119         g.drawOval(x,y,60,60);
120         g.drawRect(x,y,60,60);
121         g.fillRect(x,y,60,80);
122         g.drawLine(x,y,2,5);
123 //         g.fillOval(50 + i * 10, 50 + i * 10, 100, 100);
124     }
125 }
126
127 public static void main(String[] args) {
128
129
130     TestFrame testFrame1 = new TestFrame();
131     testFrame1.setBounds(100, 200, 300, 300);
132     testFrame1.setTitle("Thread1");
133     testFrame1.setVisible(true);
134 //     testFrame1.setLayout(new FlowLayout());
135 //     testFrame1.setLayout(new GridLayout(3,2));
136 //     testFrame1.setLayout(new BorderLayout());
137 //     testFrame1.setLayout(new CardLayout());
138     /*
139     //设置窗体标题
140     frame.setTitle("Title");
141     //设置布局管理器为流布局
142     frame.setLayout(new FlowLayout());
143     //设置窗体在屏幕中的位置
144     frame.setLocation(x,y);
145     //设置窗体的大小
146     frame.setSize(w,h);
147     //设置窗体在屏幕中的位置、大小
148     frame.setBounds(x,y,w,h);
149     //添加组件
150     f.add(component);
151     //position是东西南北中:
152     //"South","East","North","West","Center"
153     f.add(position,component);
154     frame.setVisible(true);
155     frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
156
157     JButton btn = new JButton("btn1");
158     btn.addActionListener(new ActionListener(){
159         public void actionPerformed(ActionEvent e) {
160             repaint();
161         }
162     });
163     * */
164
165     TestFrame testFrame2 = new TestFrame();
166     testFrame2.setBounds(400, 200, 300, 300);
167     testFrame2.setTitle("Thread2");
168     testFrame2.setVisible(true);
169
170     TestFrame testFrame3 = new TestFrame();
171     testFrame3.setBounds(700, 200, 300, 300);
172     testFrame3.setTitle("Thread3");
173     testFrame3.setVisible(true);
174 }
175 }
176
177
```

```
178 /**
179  *
180  * */
181 class MyThreadPrinter2 implements Runnable {
182
183     private String name;
184     private Object prev;
185     private Object self;
186
187     private MyThreadPrinter2(String name, Object prev, Object self) {
188         this.name = name;
189         this.prev = prev;
190         this.self = self;
191     }
192
193     @Override
194     public void run() {
195         int count = 10;
196         while (count > 0) {
197             synchronized (prev) {
198                 synchronized (self) {
199                     System.out.print(name);
200                     count--;
201
202                     self.notify();
203                 }
204                 try {
205                     prev.wait();
206                 } catch (InterruptedException e) {
207                     e.printStackTrace();
208                 }
209             }
210
211         }
212     }
213
214     public static void main(String[] args) throws Exception {
215         Object a = new Object();
216         Object b = new Object();
217         Object c = new Object();
218         MyThreadPrinter2 pa = new MyThreadPrinter2("A", c, a);
219         MyThreadPrinter2 pb = new MyThreadPrinter2("B", a, b);
220         MyThreadPrinter2 pc = new MyThreadPrinter2("C", b, c);
221
222         new Thread(pa).start();
223         Thread.sleep(100); //确保按顺序A、B、C执行
224         new Thread(pb).start();
225         Thread.sleep(100);
226         new Thread(pc).start();
227         Thread.sleep(100);
228     }
229 }
230 }
231
```