

```

1 package poo_unidade_11_ex06_randomcharacters;
2
3 import java.awt.Color;
4 import java.awt.GridLayout;
5 import java.awt.event.ActionEvent;
6 import java.awt.event.ActionListener;
7 import java.util.concurrent.ExecutorService;
8 import java.util.concurrent.Executors;
9 import java.util.concurrent.locks.Lock;
10 import java.util.concurrent.locks.ReentrantLock;
11 import javax.swing.JCheckBox;
12 import javax.swing.JFrame;
13 import javax.swing.JLabel;
14
15 /**
16  * @author Edwar Saliba Júnior
17  */
18 public class RandomCharacters extends JFrame implements ActionListener{
19
20     private final static int QUANTIDADE = 3; // Qtdade de threads.
21     private JCheckBox checkBoxes[]; // Array de JCheckBox's.
22     private Lock lockObject = new ReentrantLock(true); // Único bloqueio.
23
24     private RunnableObject[] randomCharacters = new RunnableObject[QUANTIDADE];
25
26     public RandomCharacters(){
27         checkBoxes = new JCheckBox[QUANTIDADE];
28         setLayout(new GridLayout (QUANTIDADE, 2, 5, 5));
29
30         // Cria um pool de threads.
31         ExecutorService runner = Executors.newFixedThreadPool(QUANTIDADE);
32
33         for(int i = 0; i < QUANTIDADE; i++){
34             JLabel outputLabel = new JLabel();
35             outputLabel.setBackground(Color.GREEN);
36             outputLabel.setOpaque(true);
37             add(outputLabel);
38
39             checkBoxes[i] = new JCheckBox("Interromper");
40             checkBoxes[i].addActionListener(this);
41             add(checkBoxes[i]);
42
43             randomCharacters[i] = new RunnableObject(lockObject, outputLabel);
44
45             runner.execute(randomCharacters[i]);
46         }
47
48         setSize(275, 90);
49         setVisible(true);
50
51         runner.shutdown();
52     }
53
54
55     public static void main(String[] args) {
56         RandomCharacters application = new RandomCharacters();
57         application.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

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59     }
60
61     @Override
62     public void actionPerformed(ActionEvent e) {
63         for(int i = 0; i < checkBoxes.length; i++){
64             if(e.getSource() == checkBoxes[i]){
65                 randomCharacters[i].toggle();
66             }
67         }
68     }
69 }
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