**广州大学学生实验报告**

**开课实验室：**电子楼416B **2019年10月15日**

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| **学院** | 计算机科学与网络工程学院 | | **年级、专业、班** | 软件171 | **姓名** | 谢金宏 | **学号** | 1706300001 |
| **实验课程名称** | | Java语言 | | | | | **成绩** |  |
| **实验项目名称** | | 课程设计 | | | | | **指导老师** | 王宇 |
| **一、实验目的**  **综合应用Java语言。**  **二、实验任务**  **编写一个Java抽签程序。从文本中读取抽签列表，点击开始按钮开始滚动抽签，点击结束按钮停止滚动并显示抽签结果。允许多次抽签。**  **三、实验内容**  **实现代码如下：**  import java.awt.\*;  import java.awt.event.\*;  import java.io.\*;  import java.util.\*;  import javax.swing.\*;  public class Draw extends JFrame implements ActionListener {      public static final long serialVersionUID = 0x1706300001L;      JButton startButton;      JButton stopButton;      JLabel nameLabel;      java.util.List<String> drawList;      boolean isDrawing;      public static void main(String... args) {          new Draw();      }      public Draw() {          startButton = new JButton("开始");          stopButton = new JButton("停止");          nameLabel = new JLabel("待开始");          drawList = new ArrayList<String>();          isDrawing = false;          setUI();          readDrawList();      }      private void setUI() {          this.setTitle("抽签");          this.setLayout(new BorderLayout());            this.setSize(400, 300);            JPanel buttonPanel = new JPanel(new GridLayout(1, 2));          startButton.addActionListener(this);          buttonPanel.add(startButton);          stopButton.addActionListener(this);          buttonPanel.add(stopButton);          this.add(buttonPanel, BorderLayout.NORTH);          nameLabel.setHorizontalAlignment(SwingConstants.CENTER);          nameLabel.setFont(new Font("SimSun", Font.BOLD, 72));          this.add(nameLabel, BorderLayout.CENTER);            startButton.setEnabled(true);          stopButton.setEnabled(false);          this.setVisible(true);          this.setLocationRelativeTo(null);          this.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);      }      private void readDrawList() {          try {              InputStreamReader streamReader = new InputStreamReader(new FileInputStream("DrawList.txt"), "UTF8");              BufferedReader reader = new BufferedReader(streamReader);              while (reader.ready()) {                  String nextLine = reader.readLine();                  if (!nextLine.isEmpty()) {                      drawList.add(nextLine);                  }              }              reader.close();                if (drawList.isEmpty()) {                  throw new Exception("抽签列表为空。");              }          } catch (Exception e) {              showDrawListHint();          }      }      private void showDrawListHint() {          StringBuilder hintBuilder = new StringBuilder();          hintBuilder.append("请在同级目录下创建UTF8编码的抽签列表DrawList.txt并输入抽签项。\n");          hintBuilder.append("每个抽签项目请使用换行符隔开。\n");          JOptionPane.showMessageDialog(null, hintBuilder.toString(), "抽签程序使用提示", JOptionPane.PLAIN\_MESSAGE);      }      @Override      public void actionPerformed(ActionEvent e) {          if (e.getSource() == startButton) {              onClickStartButton();          } else if (e.getSource() == stopButton) {              onClickStopButton();          }      }      private void onClickStartButton() {          if (!drawList.isEmpty()) {              isDrawing = true;              new Thread() {                  @Override                  public void run() {                      while (isDrawing) {                          int randIdx = new Random().nextInt(drawList.size());                          nameLabel.setText(drawList.get(randIdx));                          try {                              sleep(new Random().nextInt(50));                          } catch (InterruptedException e) {}                      }                  }              }.start();          }          startButton.setEnabled(false);          stopButton.setEnabled(true);      }      private void onClickStopButton() {          isDrawing = false;          startButton.setEnabled(true);          stopButton.setEnabled(false);      }  }  **四、实验内容结果记录（程序运行结果截图）**    Figure 抽签开始之前    Figure 抽签进行中    Figure 抽签结果 | | | | | | | | |
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