NAME AUTHENTICATOR AND DATA COLLECTOR

REPORT OF THE MINI PROJECT AS PART OF
CS8383 - OBJECT ORIENTED PROGRAMMING LABORATORY-December 2021

Submitted by

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INTRODUCTION:

Develop a Name Authenticator and data collector using Graphical User Interface and File Handling in java platform.

ABSTRACT:

Youth Red Cross Club is a worldwide dedicated service Organization majorly made to rescue the human life by providing the blood to the required person at the required time. To do this one of the major prior work to be done is the collection of data. This work is done to empower the youth to be aware of the YRC and to motivate blood donation service mindset and also involving them in the field.

OBJECTIVE OF THE PROJECT:

To learn and enhance the concepts of Graphical User Interface for collecting the User Name Information. To learn the concept of File Handling to store the User Data such as Blood Group, Roll Number, Name of the Department which He / she belongs to, Age and Phone Number.

MOTIVATION:

We are living in a world which drives us to act fast and be at the top of the hill. But due to this there comes riots, wars, guns, missiles that lead to a great loss and looping aggression that is poisonous to the mankind. Also as we humans are limited by various diseases and unfortunate accidents, the demand for blood is in higher scale always nowadays. To meet the demand proper preliminary actions should be done. One among them is this work, which is predominantly done for the data collection for the Youth Red Cross.

PROBLEM STATEMENT:

In data management, redundancy is a major issue, which starts at the period of

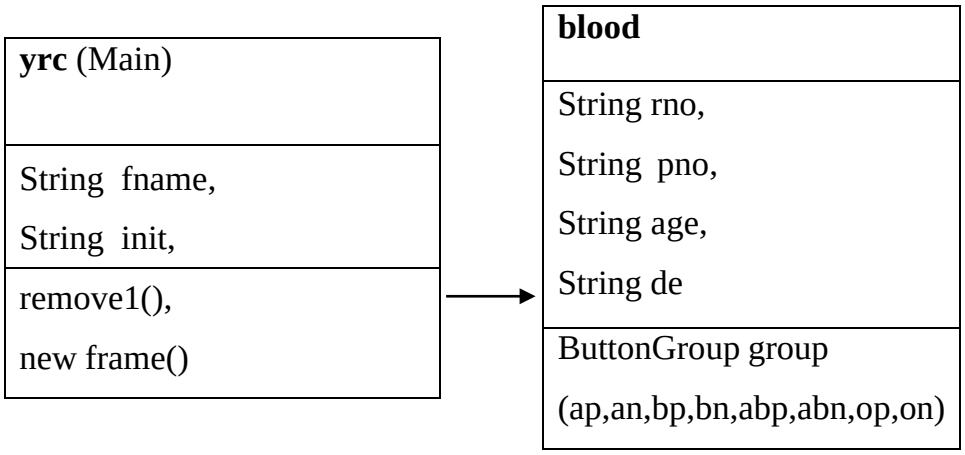
getting information itself. The data may be entered in different field boxes, there may be improper format, missing data in a field which leads to meaningless storage of data.

To avoid this problem we have designed an algorithm for detecting mistakes and explaining the nature to the people.

SYSTEM SPECIFICATION:

Processor with or above dual cores, 128 MB of RAM or above, 2 GB of Storage or above, Any 32-bit or 64-bit Operating System, Java 12 or above with JDK, JVM, JRE installed.

CLASS DIAGRAM:



MAJOR CONCEPTS IMPLEMENTED IN THE PROJECT:

Swing, awt, JOptionPane, Image icon, radio buttons are used for making graphical user interface. File, Filewriter and PrintWriter concepts are used for file handling.

♣File handling ♣ Exception Handling ♣ Event Handling

♣ Graphical User Interface ♣ Abstraction ♣ Method Overriding

SOURCE CODE:

yrc.java:

```
import java.awt.*;
```

```
import javax.swing.*;
import javax.swing.JOptionPane;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.io.File;
import java.io.FileWriter;
import java.io.IOException;
import java.io.PrintWriter;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JTextField;
public class yrc implements ActionListener {
        private static JLabel flabel;
        private static JLabel f1label;
```

```
    private static JLabel mlabel;
    private static JLabel m1label;
    private static JLabel m2label;
    private static JTextField firstText;
    private static JLabel llabel;
    private static JTextField lasttext;
    private static JButton button;
    private static JLabel success;
    private static ImageIcon image;
    private static JLabel label1;
    private static JFrame frame;
  private static JLabel asuccess;
  static void remove1() {
   frame.getContentPane().removeAll();
   frame.repaint();
   frame.setVisible(false);
}
 static void newframe() {
   System.out.println("Entered building");
   blood gui = new blood();
   gui.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
    gui.setVisible(true);
    gui.setTitle("LOVE All SERVE ALL");
    gui.setSize(1500,700);
    }
  public static void main(String args[]) {
   frame = new JFrame("YOUTH RED CROSS");
     JPanel panel = new JPanel();
        frame.setSize(1500, 700);
       frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            frame.add(panel);
 panel.setLayout(null);
  flabel = new JLabel("FIRST NAME:");
  flabel.setBounds(10, 20, 80, 25);
  panel.add(flabel);

  mlabel = new JLabel("USE DOT AS THE SEPERATOR INBETWEEN INITIALS");
  mlabel.setBounds(275, 50, 1000, 25);
  panel.add(mlabel);

  m1label = new JLabel("MOTTO : TO ENABLE THE GROWTH AND DEVELOPMENT OF SPRIT OF SERVICE AND SENSE OF DUTY WITH
```

DEDICATION AND DEVOTION IN THE MINDS OF YOUTH BY RENDERING HELP AND ASSISTANCE TO THE NEEDY");

m1label.setBounds(45, 75, 2000, 200);

panel.add(m1label);

m1label = new JLabel(" Cultivate Friendship and Humanity with everyone.Don't be aggressive or perform action as acquiring by force,Renounce war.practice Restraint.Be Kind to one and all.");

m1label.setBounds(45, 95, 2000, 200);

panel.add(m1label);

firstText = new JTextField(20);

firstText.setBounds(100, 20, 165, 25);

panel.add(firstText);

llabel = new JLabel("LASTNAME:");

llabel.setBounds(10, 50, 80, 25);

panel.add(llabel);

lasttext = new JTextField(20);

lasttext.setBounds(100, 50, 165, 25);

panel.add(lasttext);

button = new JButton("Login");

button.setBounds(30, 120, 80, 25);

button.addActionListener(new yrc());

panel.add(button);

```
success = new JLabel("");
success.setBounds(10, 220, 300, 25);
panel.add(success);
asuccess = new JLabel("");
asuccess.setBounds(10, 260, 300, 25);
panel.add(asuccess);
frame.setVisible(true);
}
public void actionPerformed(ActionEvent e) {
  File file = new File("YRC.txt");
   try (FileWriter fw = new FileWriter(file, true)) {
   PrintWriter pw = new PrintWriter(fw);
   String fname = firstText.getText();
  String init = lasttext.getText();
  int flen,inlen;
  int dotlen = 0,fdotlen=0;
char someChar = '.';
 inlen = init.length();
flen = fname.length();
for (int j = 0; j < flen; j++) {
if (fname.charAt(j) == someChar) {
```

```
  fdotlen++;
  }
  }
  if((flen<=2) ||(fdotlen>=1)||(fname.indexOf(' ')==1)){
     success.setText("ERROR IN YOUR FIRST NAME,PLEASE REENTER");
   JOptionPane.showMessageDialog(null, "Your First name entered wrongly please
verify", "FIRST NAME ERROR", JOptionPane.WARNING_MESSAGE);
  }
  else{
       success.setText("");
  }

  for (int i = 0; i < init.length(); i++) {
      if (init.charAt(i) == someChar) {
         dotlen++;
 }
}
 int xx=inlen-dotlen;
 int ff= xx-1;
 char cd=init.charAt(0);
 char dd=init.charAt(init.length() - 1);
   if(cd=='.' || dd=='.' || dotlen != ff){
```

```
            asuccess.setText("ERROR IN YOUR LAST NAME,PLEASE REENTER");
            JOptionPane.showMessageDialog(null, "Your Last name entered wrongly please verify", "LAST NAME ERROR", JOptionPane.WARNING_MESSAGE);
 }
  else{
       asuccess.setText("");
 }

  String op1= success.getText();
  int so1 = op1.length();
  System.out.println("1st name error"+so1);

 String op= asuccess.getText();
 int so2 = op.length();
 System.out.println("2nd name error"+so2);

if((so1==0)&&(so2==0)){

      pw.println("New student:");
     pw.println("First Name: " + fname);
     pw.println("Last Name:" + init);
     pw.close();
```

```
        remove1();//to remove all
        newframe();//to add image

  }
     } catch (HeadlessException | IOException e1) {
        e1.printStackTrace();
     }
   }
}
```

Blood.java

```
import java.awt.*;
import javax.swing.*;
import java.io.*;
import java.awt.event.*;
public class blood extends JFrame implements ActionListener {
   private ImageIcon image;
   private JLabel label1;
   private static JLabel f1label;
   private static JLabel j1label;
```

```
    private static JTextField firstText1;
    private static JLabel f2label;
    private static JTextField firstText2;
    private static JLabel f4label;
    private static JTextField firstText4;
    private static JLabel f5label;
    private static JTextField firstText5;
    private static JLabel f3label;
    JRadioButton ap;
    JRadioButton an;
    JRadioButton bp;
    JRadioButton bn;
    JRadioButton abp;
    JRadioButton abn;
    JRadioButton op;
    JRadioButton on;
blood(){
    setLayout(new FlowLayout());
    image = new ImageIcon(getClass().getResource("YRC.png"));
    label1 = new JLabel(image);
    add(label1);
```

```
f1label = new JLabel("      ROLL NO:");
add(f1label);
firstText1 = new JTextField(20);
add(firstText1);
f2label = new JLabel("      PHONE NO:");
add(f2label);
firstText2 = new JTextField(20);
add(firstText2);
f4label = new JLabel("      DEPARTMENT:");
add(f4label);
firstText4 = new JTextField(20);
add(firstText4);
f5label = new JLabel("      AGE:");
add(f5label);
firstText5 = new JTextField(20);
add(firstText5);
f3label  =  new  JLabel("  BLOOD  GROUP:");
add(f3label);
ap = new JRadioButton("A +ve");
an = new JRadioButton("A -ve");
bp = new JRadioButton("B +ve");
```

```
 bn = new JRadioButton("B -ve");
abp = new JRadioButton("AB +ve");
abn = new JRadioButton("AB -ve");
op = new JRadioButton("O +ve");
 on = new JRadioButton("O -ve               ");

ButtonGroup group = new ButtonGroup();
group.add(ap);
group.add(an);
group.add(bp);
group.add(bn);
group.add(abp);
group.add(abn);
group.add(op);
group.add(on);
ap.addActionListener(this);
an.addActionListener(this);
bp.addActionListener(this);
bn.addActionListener(this);
abp.addActionListener(this);
abn.addActionListener(this);
```

```
    op.addActionListener(this);
    on.addActionListener(this);
    this.add(ap);
    this.add(an);
    this.add(bp);
    this.add(bn);
    this.add(abp);
    this.add(abn);
    this.add(op);
    this.add(on);
j1label = new JLabel("                                    Note: After entering all values, select the blood group once again if SUBMITTED SUCCESSFULLY window is not displayed");
    add(j1label);
}
public void actionPerformed(ActionEvent e) {
    File file = new File("YRC.txt");
    try (FileWriter fw = new FileWriter(file, true)) {
        PrintWriter pw = new PrintWriter(fw);
        String Rno = firstText1.getText();
        String Pno = firstText2.getText();
        String De = firstText4.getText();
```

```
        String Age = firstText5.getText();
       System.out.println(Rno + "," + Pno + "," + De + "," + Age);

   if((Rno.length()!=0) && (Pno.length()!=0) && (De.length()!=0) &&
(Age.length()!=0)){

        pw.println("Roll no: " + Rno);
        pw.println("Phone no: " + Pno);
        pw.println("Department: " + De);
        pw.println("Age: " + Age);
   if(e.getSource()==ap){
        System.out.println("you have selected A positive");
        pw.println("Blood Group: A positive");

pw.println("..........
..........");
        JOptionPane.showMessageDialog(null, "you have selected A positive as your blood
group,you can now close the application", "SUBMITTED SUCCESSFULLY!",
JOptionPane.INFORMATION_MESSAGE);
    }
    else if(e.getSource()==an){
        System.out.println("you have selected A negative");
        pw.println("Blood Group: A negative");
```

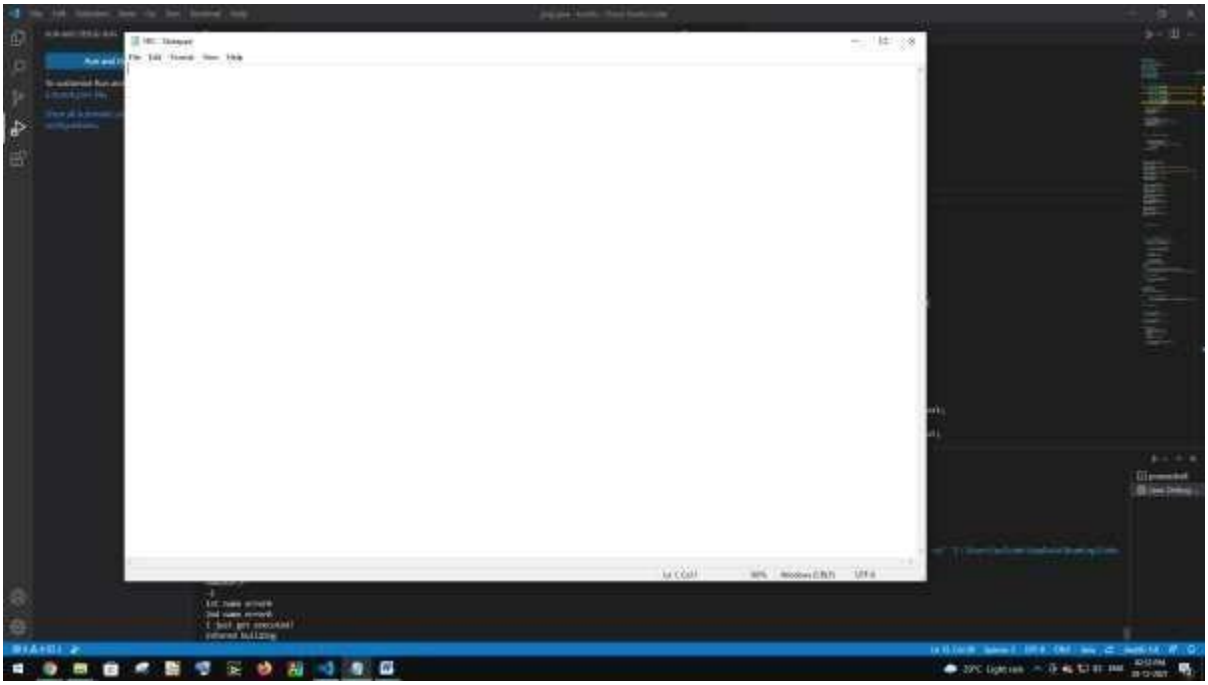
```
pw.println("..........
..........");
        JOptionPane.showMessageDialog(null, "you have selected A negative as your blood group,you can now close the application", "SUBMITTED SUCCESSFULLY!", JOptionPane.INFORMATION_MESSAGE);
    }
    else if(e.getSource()==bp){
        System.out.println("you have selected B positive");
        pw.println("Blood Group: B positive");

pw.println("..........
..........");
        JOptionPane.showMessageDialog(null, "you have selected B positive as your blood group,you can now close the application", "SUBMITTED SUCCESSFULLY!", JOptionPane.INFORMATION_MESSAGE);
    }
    else if(e.getSource()==bn){
        System.out.println("you have selected B negative");
        pw.println("Blood Group: B negative");

pw.println("..........
..........");
```

```
        JOptionPane.showMessageDialog(null, "you have selected B negative as your blood group,you can now close the application", "SUBMITTED SUCCESSFULLY!", JOptionPane.INFORMATION_MESSAGE);
    }
    else if(e.getSource()==abp){
        System.out.println("you have selected AB positive");
        pw.println("Blood Group: AB positive");

pw.println("..........................................................................................................................");
        JOptionPane.showMessageDialog(null, "you have selected AB positive as your blood group,you can now close the application", "SUBMITTED SUCCESSFULLY!", JOptionPane.INFORMATION_MESSAGE);
    }
    else if(e.getSource()==abn){
        System.out.println("you have selected AB negative");
        pw.println("Blood Group: AB negative");

pw.println("..........................................................................................................................");
        JOptionPane.showMessageDialog(null, "you have selected AB negative as your blood group,you can now close the application", "SUBMITTED SUCCESSFULLY!", JOptionPane.INFORMATION_MESSAGE);
    }
```

```
    else if(e.getSource()==op){
        System.out.println("you have selected O positive");
        pw.println("Blood Group: O positive");

pw.println("..............................................................................................................................................................");
        JOptionPane.showMessageDialog(null, "you have selected O positive as your blood group,you can now close the application", "SUBMITTED SUCCESSFULLY!", JOptionPane.INFORMATION_MESSAGE);
    }
    else if(e.getSource()==on){
        System.out.println("you have selected O negative");
        pw.println("Blood Group: O negative");

pw.println("..............................................................................................................................................................");
        JOptionPane.showMessageDialog(null, "you have selected O negative as your blood group,you can now close the application", "SUBMITTED SUCCESSFULLY!", JOptionPane.INFORMATION_MESSAGE);
    }
    //if entered details are correct close the tab,orelse change rollno or phone number and then click the blood group once again
}
 else{
```

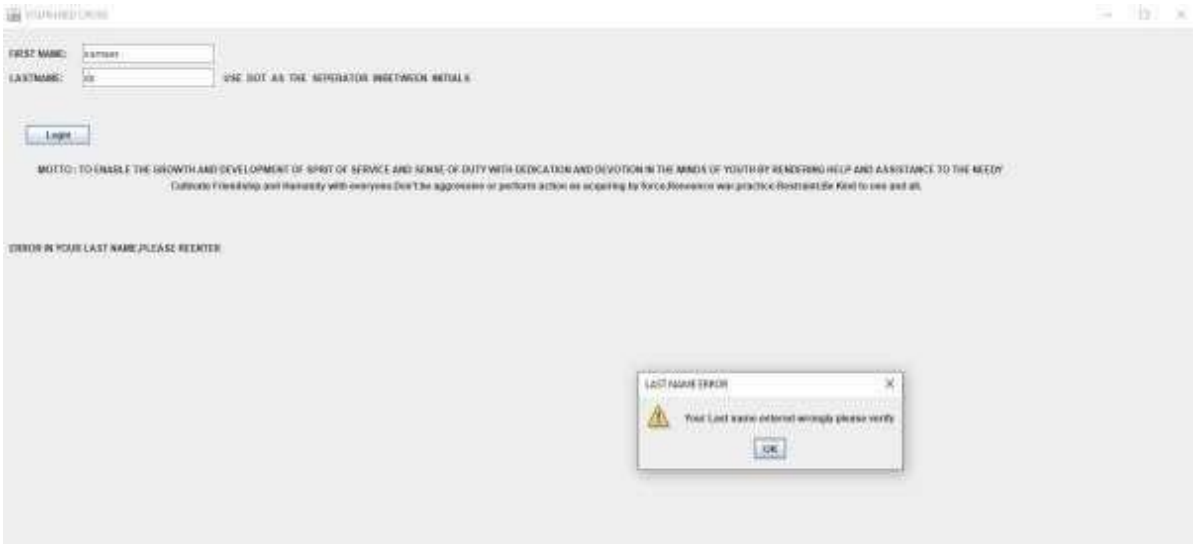
```
    System.out.println("your roll no or phone no is blank");

    JOptionPane.showMessageDialog(null, "Some Information is not Entered, please
verify", "DATA NOT ENTERED ERROR", JOptionPane.WARNING_MESSAGE);

 }

    } catch (IOException e1) {

        e1.printStackTrace();

    }

   }

}
```

SCREENSHOTS OF THE RESULTS:



First name error:

Last name error:



Information missing error:

Successful submission:

File Handling:

Image for YRC.png: