一个漂亮的java计算器(实验报告)

分类专栏： java实验报告 文章标签： Java 计算器 多功能
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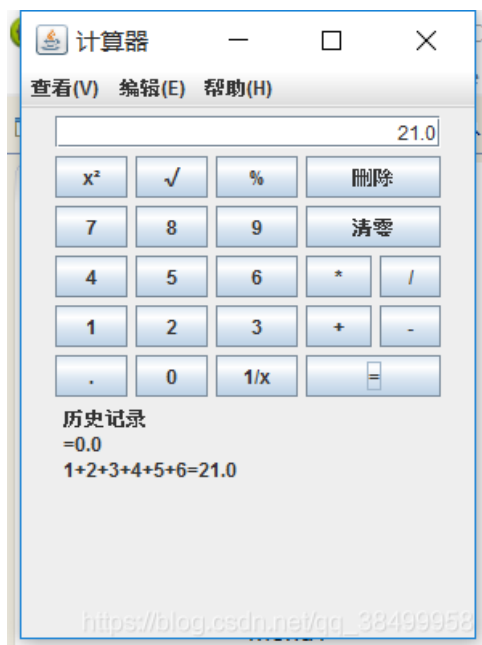本文链接：https://blog.csdn.net/qq_38499958/article/details/103624425
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java实验报告 专栏收录该内容

1 篇文章 0 订阅
订阅专栏

这是一个用java实现的计算器,本来没想发上来的,隔了数年,今天偶尔又看到了这个计算器的实验报告,所以就上传上来了,希望能对有这个需求的小伙伴提供帮助吧!这里就直接将实验报告的关键代码演示内容帖上来了,注释就不加了

界面如下

新建java项目复制下面内容就行了

1. 实验内容

程序：

package com.yunzhi.GUI;

import java.awt.Cursor;

import java.awt.FlowLayout;

import java.awt.GridBagConstraints;

import java.awt.GridBagLayout;

import java.awt.GridLayout;

```java
import java.awt.Insets;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.event.WindowEvent;

import java.awt.event.WindowListener;


import javax.swing.JButton;

import javax.swing.JDialog;

import javax.swing.JFrame;

import javax.swing.JLabel;

import javax.swing.JMenu;

import javax.swing.JMenuBar;

import javax.swing.JMenuItem;

import javax.swing.JPanel;

import javax.swing.JTextField;


public class Calculatordemo extends JFrame implements WindowListener,ActionListener {


String str;

String valuas;

String s;

double result;

String labe;

JMenuBar menubar;

JMenu menu1;

JMenu menu2;

JMenu menu3;

JMenuItem menuitem1;

JMenuItem menuitem2;

JMenuItem menuitem3;

JMenuItem menuitem4;
```

```java
JMenuItem menuitem5;

JPanel panel;

JButton button;

JTextField text;

JLabel label;

GridBagConstraints contains;

public Calculatordemo()

{

labe="";

result=0;

str="";

valuas="0";

s="+";

this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

this.setSize(300,400);

this.setTitle("计算器");

this.setLayout(new FlowLayout());

menubar=new JMenuBar();

this.setJMenuBar(menubar);

menu1=new JMenu("查看(V)");

menu2=new JMenu("编辑(E)");

menu3=new JMenu("帮助(H)");

menuitem1=new JMenuItem("历史记录");

menuitem2=new JMenuItem("科学计算器");

menuitem3=new JMenuItem("标准计算器");

menuitem4=new JMenuItem("作者信息");

menuitem5=new JMenuItem("说明");

menuitem1.addActionListener(this);

menuitem2.addActionListener(this);

menuitem3.addActionListener(this);

menuitem4.addActionListener(this);
```

```java
menuitem5.addActionListener(this);

menu1.add(menuitem1);

menu2.add(menuitem2);

menu2.add(menuitem3);

menu3.add(menuitem5);

menu3.add(menuitem4);

menubar.add(menu1);

menubar.add(menu2);

menubar.add(menu3);

panel=new JPanel();

panel.setLayout(new GridBagLayout());

contains=new GridBagConstraints();

text=new JTextField();

//text.setText("0");

text.setHorizontalAlignment(JTextField.RIGHT);

contains.gridx=0;

contains.gridy=0;

contains.gridwidth=5;

contains.gridheight=2;

contains.fill=GridBagConstraints.HORIZONTAL;

panel.add(text,contains);

createButton("x²", 0, 2, 1, 1,GridBagConstraints.HORIZONTAL, 5, 0);

createButton("√", 1, 2, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("%", 2, 2, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("删除", 3, 2, 2, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("7", 0, 3, 1, 1,GridBagConstraints.HORIZONTAL, 5, 0);

createButton("8", 1, 3, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("9", 2, 3, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("清零", 3, 3, 2, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("4", 0, 4, 1, 1,GridBagConstraints.HORIZONTAL, 5, 0);

createButton("5", 1, 4, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);
```

```java
createButton("6", 2, 4, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("*", 3, 4, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("/", 4, 4, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("1", 0, 5, 1, 1,GridBagConstraints.HORIZONTAL, 5, 0);

createButton("2", 1, 5, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("3", 2, 5, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("+", 3, 5, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("-", 4, 5, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton(".", 0, 6, 1, 1,GridBagConstraints.HORIZONTAL, 5, 0);

createButton("0", 1, 6, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("1/x", 2, 6, 1, 1,GridBagConstraints.HORIZONTAL, 5, 5);

createButton("=", 3, 6, 2, 1,GridBagConstraints.HORIZONTAL, 5, 5);

label=new JLabel("历史记录");

label.setAutoscrolls(true);

contains.gridx=0;

contains.gridy=7;

contains.gridwidth=5;

contains.gridheight=2;

contains.fill=GridBagConstraints.HORIZONTAL;

panel.add(label,contains);

this.add(panel);

this.setVisible(true);

}

protected void createButton(String name,int x,int y,int w,int h,int hv,int iu,int il)

{

button=new JButton(name);

contains.gridx=x;

contains.gridy=y;

contains.gridwidth=w;

contains.gridheight=h;

contains.insets=new Insets(iu,il,0,0);
```

```java
contains.fill=hv;

button.addActionListener(this);

panel.add(button,contains);

}

public void calculator()

{

if(s=="+")result=result+Double.parseDouble(valuas);

else if(s=="-")result=result-Double.parseDouble(valuas);

else if(s=="*")result=result*Double.parseDouble(valuas);

else if(s=="/")result=result/Double.parseDouble(valuas);

else if(s=="1/x")result=(1/Double.parseDouble(valuas));

else if(s=="%")result=result/100;

else if(s=="√")result=Math.sqrt(Double.parseDouble(valuas));

else if (s=="x²")result=result*result;

valuas="0";

}

public void actionPerformed(ActionEvent e)

{

// TODO Auto-generated method stub

String type;

JMenuItem mnit = null;

JButton btn = null;

type=e.getSource().toString();

if(type.contains("JMenuItem"))

{

mnit=(JMenuItem)e.getSource();

    if(mnit.getText()=="历史记录")

{

System.out.println("历史记录");

JDialog dialog=new JDialog();

dialog.setTitle("历史记录");
```

```java
            dialog.setSize(100,200 );

            dialog.add(label);

            dialog.setVisible(true);


        }

            else

            if(mnit.getText()=="科学计算器")

        {

        System.out.println("你的电脑中毒了");


        }

            else

            if(mnit.getText()=="标准计算器")

        {

        System.out.println("建议立即重启");


        }

            else

            if(mnit.getText()=="作者信息")

        {

        System.out.println("懒得写了");


        }

            if(mnit.getText()=="说明")

        {

        System.out.println("这是一款简单易用的计算器");


        }
        }

        if(type.contains("JButton"))

        {
```

```java
btn= (JButton) e.getSource();

if (btn.getText() == "=")

{

calculator();

labe=labe+"<br>"+str+"="+result;

label.setText("<html>"+"历史记录" +labe+"</html>");

str = String.valueOf(result);

text.setText(str);

s="+";

}

else if (btn.getText() == "x²")

{

str=text.getText();

str=str+"²";

text.setText(str);

calculator();

s="x²";


}

else if (btn.getText() == "1/x")

{

str=text.getText();

str=str+"1/";

text.setText(str);

calculator();

s="1/x";

}

else if (btn.getText() == "删除")

{

str=text.getText();

if(str.length()!=0)
```

```java
{
if(valuas.length()>=1&&str.length()>=1&&str.charAt(str.length()-1)<='9'&&str.charAt(str.length()-1)>='0')valuas=valuas.substring(0,valuas.length()-1);
else s="+";
if(str.length()>1&&str.substring(str.length()-2,str.length()).equals("1/"))
{
str=str.substring(0,str.length()-2);
}
else str=str.substring(0,str.length()-1);


}
text.setText(str);
}
else if (btn.getText() == "清零")
{
text.setText("");
valuas="0";
result=0;
s="+";
labe="";
label.setText("<html>"+"历史记录" +labe+"</html>");
}
else if (btn.getText() == "+")
{
str=text.getText();
str=str+"+";
text.setText(str);
calculator();
s = "+";
}
else if (btn.getText() == "-")
```

```java
{
str=text.getText();

str=str+"-";

text.setText(str);

calculator();

s = "-";

}

else if (btn.getText() == "/")

{

str=text.getText();

str=str+"/";

text.setText(str);

calculator();

s = "/";

}

else if (btn.getText() == "*")

{

str=text.getText();

str=str+"*";

text.setText(str);

calculator();

s = "*";

}

else if (btn.getText() == "%")

{

str=text.getText();

str=str+"%";

text.setText(str);

calculator();

s = "%";

}
```

```java
else if (btn.getText() == "√")

{

str=text.getText();

str=str+"√";

text.setText(str);

calculator();

s = "√";

}

else

{

str=text.getText();

str=str+btn.getText();

valuas=valuas+btn.getText();

text.setText(str);

}

}


/*System.out.println(valuas);

System.out.println(result);

System.out.println(s);*/

 }
/**

 * @param args

 */

public void password()

{

JDialog dialog=new JDialog();

dialog.setTitle("请输入密码");

//dialog.setSize(100,200 );

dialog.setLayout(new GridLayout(3,1,10,10));

label.setText("<html>"+"计算器已上锁" +"<br>"+"请输入密码解锁"+"</html>");
```

```java
dialog.add(label);

dialog.add(text);

dialog.setBounds(600, 400, 200, 150);

dialog.setVisible(true);

}

public static void main(String[] args) {

// TODO Auto-generated method stub

Calculatordemo cal =new Calculatordemo();

cal.addWindowListener(cal);

}

public void windowClosing(WindowEvent e)

{

System.out.println("正关闭窗口");

System.exit(0);

}

public void windowActivated(WindowEvent e)

{

System.out.println("取得主控窗口");

}

public void windowDeactivated(WindowEvent e)

{

password();

}

public void windowDeiconified(WindowEvent e)

{

System.out.println("还原窗口");

}

public void windowIconified(WindowEvent e)

{

System.out.println("最小化窗口");

}
```

```java
public void windowOpened(WindowEvent e)

{

System.out.println("窗口已打开");

}

public void windowClosed(WindowEvent e)

{

System.out.println("窗口已关闭");

}


}
```
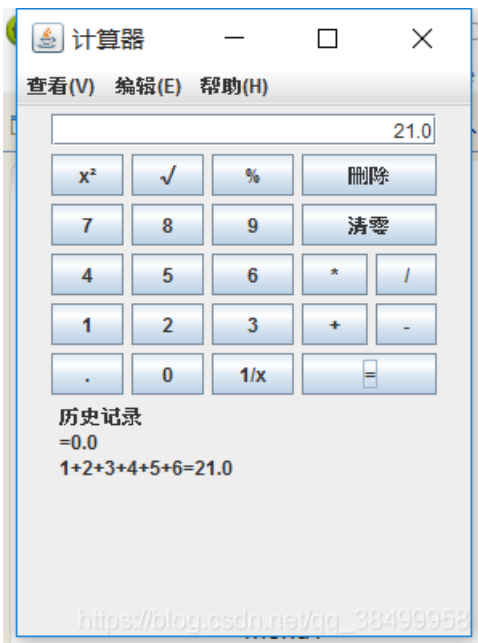
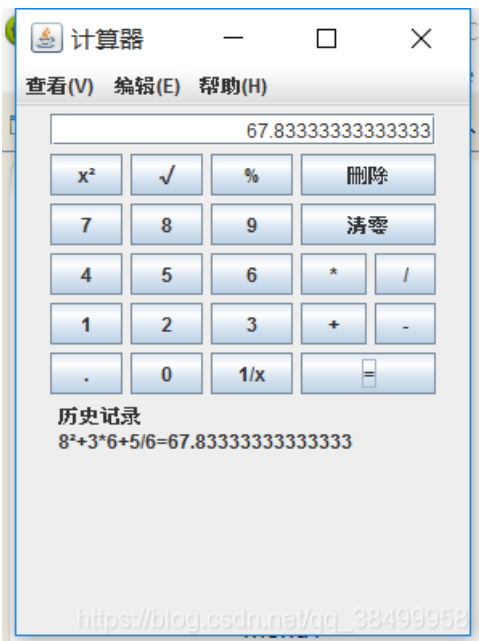1. 实验结果

计算器演示：

如1+2+3+4+5+6=

一次完成

分次完成

如8²+3*6+5/6=

如1/3+√5+%80*100=

有什么疑问可评论区提问.

资源地址https://download.csdn.net/download/qq_38499958/12041675