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\* Q) Write a Java Program for Calculator Operations Using AWT Controls

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import java.awt.\*;

import java.awt.event.\*;

public class calculator implements ActionListener

{

int cal,no;

String s1,s2,s3,s4,s5;

Frame f;

Button b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11,b12,b13,b14,b15,b16,b17;

Panel p;

TextField pre,tf;

GridLayout g;

calculator()

{

f = new Frame("Calculator");

p = new Panel();

f.setLayout(new FlowLayout());

b1 = new Button("0");

b1.addActionListener(this);

b2 = new Button("1");

b2.addActionListener(this);

b3 = new Button("2");

b3.addActionListener(this);

b4 = new Button("3");

b4.addActionListener(this);

b5 = new Button("4");

b5.addActionListener(this);

b6 = new Button("5");

b6.addActionListener(this);

b7 = new Button("6");

b7.addActionListener(this);

b8 = new Button("7");

b8.addActionListener(this);

b9 = new Button("8");

b9.addActionListener(this);

b10 = new Button("9");

b10.addActionListener(this);

b11 = new Button("+");

b11.addActionListener(this);

b12 = new Button("-");

b12.addActionListener(this);

b13 = new Button("\*");

b13.addActionListener(this);

b14 = new Button("/");

b14.addActionListener(this);

b15 = new Button("%");

b15.addActionListener(this);

b16 = new Button("=");

b16.addActionListener(this);

b17 = new Button("cal");

b17.addActionListener(this);

tf = new TextField(20);

pre=new TextField(20);

f.add(pre);

pre.setEnabled(false);

f.add(tf);

g = new GridLayout(4,4,10,20);

p.setLayout(g);

p.add(b1);p.add(b2);p.add(b3);p.add(b4);p.add(b5);p.add(b6);p.add(b7);p.add(b8);p.add(b9);

p.add(b10);p.add(b11);p.add(b12);p.add(b13);p.add(b14);p.add(b15);p.add(b16);p.add(b17);

f.add(p);

f.setSize(300,300);

f.setVisible(true);

}

public void actionPerformed(ActionEvent e)

{

if(e.getSource()==b1)

{

s3 = tf.getText();

s4 = "0";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b2)

{

s3 = tf.getText();

s4 = "1";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b3)

{

s3 = tf.getText();

s4 = "2";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}if(e.getSource()==b4)

{

s3 = tf.getText();

s4 = "3";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b5)

{

s3 = tf.getText();

s4 = "4";

s5 = s3+s4;

tf.setText(s5);

}

if(e.getSource()==b6)

{

s3 = tf.getText();

s4 = "5";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b7)

{

s3 = tf.getText();

s4 = "6";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b8)

{

s3 = tf.getText();

s4 = "7";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b9)

{

s3 = tf.getText();

s4 = "8";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b10)

{

s3 = tf.getText();

s4 = "9";

s5 = s3+s4;

tf.setText(s5);

pre.setText(s5);

}

if(e.getSource()==b11)

{

s1 = tf.getText();

tf.setText("");

pre.setText(pre.getText()+"+");

cal=1;

}

if(e.getSource()==b12)

{

s1 = tf.getText();

tf.setText("");

pre.setText(pre.getText()+"-");

cal=2;

}

if(e.getSource()==b13)

{

s1 = tf.getText();

tf.setText("");

pre.setText(pre.getText()+"\*");

cal=3;

}

if(e.getSource()==b14)

{

s1 = tf.getText();

tf.setText("");

pre.setText(pre.getText()+"/");

cal=4;

}

if(e.getSource()==b15)

{

s1 = tf.getText();

tf.setText("");

cal=5;

}

if(e.getSource()==b16)

{

s2 = tf.getText();

if(cal==1)

{

no = Integer.parseInt(s1)+Integer.parseInt(s2);

pre.setText(pre.getText()+Integer.parseInt(s2));

tf.setText(String.valueOf(no));

}

else

if(cal==2)

{

no = Integer.parseInt(s1)-Integer.parseInt(s2);

pre.setText(pre.getText()+Integer.parseInt(s2));

tf.setText(String.valueOf(no));

}

else

if(cal==3)

{

no = Integer.parseInt(s1)\*Integer.parseInt(s2);

pre.setText(pre.getText()+Integer.parseInt(s2));

tf.setText(String.valueOf(no));

}

if(cal==4)

{

try

{

int p=Integer.parseInt(s2);

if(p!=0)

{

no = Integer.parseInt(s1)/Integer.parseInt(s2);

pre.setText(pre.getText()+Integer.parseInt(s2));

tf.setText(String.valueOf(no));

}

else

tf.setText("infinite");

}

catch(Exception i){}

}

if(cal==5)

{

no = Integer.parseInt(s1)%Integer.parseInt(s2);

tf.setText(String.valueOf(no));

}

}

if(e.getSource()==b17)

{

tf.setText("");

}

}

public static void main(String[] abc)

{

calculator v = new calculator();

}

}

Output

