```
package calculator;

import java.awt.Color;
import java.awt.Dimension;
import java.awt.Font;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.BorderFactory;
import javax.swing.ImageIcon;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JTextArea;
import javax.swing.border.Border;

public class calculator implements ActionListener {
	JFrame frame = new JFrame();
	JPanel panel = new JPanel();
	JTextArea textarea = new JTextArea(2,10);

	JButton button1 = new JButton();
	JButton button2 = new JButton();
	JButton button3 = new JButton();
	JButton button4 = new JButton();
	JButton button5 = new JButton();
	JButton button6 = new JButton();
	JButton button7 = new JButton();
	JButton button8 = new JButton();
```

```
JButton button9 = new JButton();
JButton button0 = new JButton();
JButton buttonadd = new JButton();
JButton buttonsub = new JButton();
JButton buttonmul = new JButton();
JButton buttondiv = new JButton();
JButton buttonclear = new JButton();
JButton buttondot = new JButton();
JButton buttonequal = new JButton();
JButton buttonpow = new JButton();
JButton buttonsqrt = new JButton();
JButton buttonrev = new JButton();
double number1, number2, result;
int addc = 0, mulc = 0, divc = 0, subc = 0, powc = 0, sqrtc = 0, revc = 0;
public calculator(){
        frame.setSize(340,470);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
        frame.setTitle("calculator");

        frame.add(panel);
        panel.setBackground(Color.LIGHT_GRAY);
        Border border = BorderFactory.createLineBorder(Color.gray,1);
        panel.setBorder(border);

        panel.add(textarea);

        textarea.setBackground(Color.gray);
        Border tborder = BorderFactory.createLineBorder(Color.LIGHT_GRAY,1);
```

```
textarea.setBorder(tborder);
Font font = new Font("arial",Font.BOLD,33);
textarea.setFont(font);
textarea.setForeground(Color.black);
textarea.setPreferredSize(new Dimension(2,10)); //stop expending
textarea.setLineWrap(true);

button1.setPreferredSize(new Dimension(100,43));
button1.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\11.PNG"));

button2.setPreferredSize(new Dimension(100,43));
button2.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\22.PNG"));

button3.setPreferredSize(new Dimension(100,43));
button3.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\33.PNG"));

button4.setPreferredSize(new Dimension(100,43));
button4.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\44.PNG"));

button5.setPreferredSize(new Dimension(100,43));
button5.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\55.PNG"));

button6.setPreferredSize(new Dimension(100,43));
button6.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\66.PNG"));

button7.setPreferredSize(new Dimension(100,43));
button7.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\77.PNG"));

button8.setPreferredSize(new Dimension(100,43));
```

```
                button8.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\88.PNG"));


                button9.setPreferredSize(new Dimension(100,43));
                button9.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\99.PNG"));


                button0.setPreferredSize(new Dimension(100,43));
                button0.setIcon(new ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\00.PNG"));


                buttonadd.setPreferredSize(new Dimension(100,43));
                buttonadd.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\add.PNG"));


                buttonsub.setPreferredSize(new Dimension(100,43));
                buttonsub.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\min.PNG"));


                buttonmul.setPreferredSize(new Dimension(100,43));
                buttonmul.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\mul.PNG"));


                buttondiv.setPreferredSize(new Dimension(100,43));
                buttondiv.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\div.PNG"));


                buttonclear.setPreferredSize(new Dimension(100,35));
                buttonclear.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\clear.PNG"));


                buttondot.setPreferredSize(new Dimension(100,43));
                buttondot.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\dot.PNG"));
```

```
                buttonequal.setPreferredSize(new Dimension(200,35));

                buttonequal.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\equal.PNG"));


                buttonpow.setPreferredSize(new Dimension(100,43));

                buttonpow.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\pow.PNG"));


                buttonsqrt.setPreferredSize(new Dimension(100,43));

                buttonsqrt.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\sqrt.PNG"));


                buttonrev.setPreferredSize(new Dimension(100,43));

                buttonrev.setIcon(new
ImageIcon("C:\\Users\\Popa\\Desktop\\Calbut\\rev.PNG"));


                panel.add(button1);

                panel.add(button2);

                panel.add(button3);

                panel.add(button4);

                panel.add(button5);

                panel.add(button6);

                panel.add(button7);

                panel.add(button8);

                panel.add(button9);

                panel.add(button0);

                panel.add(buttondot);

                panel.add(buttonsub);

                panel.add(buttonmul);
```

```
panel.add(buttondiv);
panel.add(buttonadd);
panel.add(buttonpow);
panel.add(buttonsqrt);
panel.add(buttonrev);
panel.add(buttonequal);
panel.add(buttonclear);


button1.addActionListener(this);
button2.addActionListener(this);
button3.addActionListener(this);
button4.addActionListener(this);
button5.addActionListener(this);
button6.addActionListener(this);
button7.addActionListener(this);
button8.addActionListener(this);
button9.addActionListener(this);
button0.addActionListener(this);
buttondot.addActionListener(this);
buttonadd.addActionListener(this);
buttonsub.addActionListener(this);
buttonmul.addActionListener(this);
buttondiv.addActionListener(this);
buttonpow.addActionListener(this);
buttonsqrt.addActionListener(this);
buttonrev.addActionListener(this);
buttonclear.addActionListener(this);
buttonequal.addActionListener(this);
```

```
}


public void actionPerformed(ActionEvent e) {
        Object source = e.getSource();

        if(source == buttonclear){
                number1 = 0.0;
                number2 = 0.0;
                textarea.setText("");
        }

        if(source == button1){
                textarea.append("1");
        }
        if(source == button2){
                textarea.append("2");
        }
        if(source == button3){
                textarea.append("3");
        }
        if(source == button4){
                textarea.append("4");
        }
        if(source == button5){
                textarea.append("5");
        }
```

```
if(source == button6){
        textarea.append("6");
}
if(source == button7){
        textarea.append("7");
}
if(source == button8){
        textarea.append("8");
}
if(source == button9){
        textarea.append("9");
}
if(source == button0){
        textarea.append("0");
}
if(source == buttondot){
        textarea.append(".");
}
if(source == buttonadd){
        number1 = number_reader();
        textarea.setText("");
        addc = 1;
        divc = 0;
        mulc = 0;
        subc = 0;
        powc = 0;
        sqrtc = 0;
        revc = 0;
}
```

```
if(source == buttondiv){
        number1 = number_reader();
        textarea.setText("");
        addc = 0;
        divc = 1;
        mulc = 0;
        subc = 0;
        powc = 0;
        sqrtc = 0;
        revc = 0;
}
if(source == buttonsub){
        number1 = number_reader();
        textarea.setText("");
        addc = 0;
        divc = 0;
        mulc = 0;
        subc = 1;
        powc = 0;
        sqrtc = 0;
        revc = 0;
}
if(source == buttonmul){
        number1 = number_reader();
        textarea.setText("");
        addc = 0;
        divc = 0;
        mulc = 1;
        subc = 0;
```

```
            powc = 0;
            sqrtc = 0;
            revc = 0;
        }
        if(source == buttonpow){
            number1 = number_reader();
            textarea.setText("");
            addc = 0;
            divc = 0;
            mulc = 0;
            subc = 0;
            powc = 1;
            sqrtc = 0;
            revc = 0;
        }
        if(source == buttonsqrt){
            number1 = number_reader();
            textarea.setText("");
            addc = 0;
            divc = 0;
            mulc = 0;
            subc = 0;
            powc = 0;
            sqrtc = 1;
            revc = 0;
        }
        if(source == buttonrev){
            number1 = number_reader();
            textarea.setText("");
```

```
            addc = 0;
            divc = 0;
            mulc = 0;
            subc = 0;
            powc = 0;
            sqrtc = 0;
            revc = 1;
        }
        if(source == buttonequal){
            if (sqrtc == 0) {
                number2 = number_reader();
            }

            if(addc > 0){

                result = number1 + number2;
                textarea.setText(Double.toString(result));
            }
            if(subc > 0){
                result = number1 - number2;
                textarea.setText(Double.toString(result));
            }
            if(mulc > 0){
                result = number1 * number2;
                textarea.setText(Double.toString(result));
            }
            if(divc > 0){
                result = number1 / number2;
                textarea.setText(Double.toString(result));
```

```
                }
                if(powc > 0){
                        result = Math.pow(number1, number2);
                        textarea.setText(Double.toString(result));
                }
                if(sqrtc > 0){
                        result = Math.sqrt(number1 + number2);
                        textarea.setText(Double.toString(result));
                }
                if(revc > 0){
                        result = number1 % number2;
                        textarea.setText(Double.toString(result));
                }
        }

        }public double number_reader(){
                double num1;
                String s;
                s = textarea.getText();
                num1 = Double.valueOf(s);
                return num1;
    }
}
```