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import java.awt.BorderLayout;
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class DemoCalculator extends JFrame implements ActionListener {

    JPanel jp1, jp2;
    JTextField jtf;
    JButton[] btns;
    String num1, num2, operator;
    int res;

    public DemoCalculator() {

        super("My Calculator");
        jp1 = new JPanel();
        jtf = new JTextField(20);
        jp1.add(jtf);
        add(jp1, BorderLayout.NORTH);
        jp2 = new JPanel();
        jp2.setLayout(new GridLayout(4, 4));
        btns = new JButton[16];

        for (int i = 0; i < 10; i++) {
            btns[i] = new JButton("" + i);
            jp2.add(btns[i]);
            btns[i].addActionListener(this);
        }

        btns[10] = new JButton("+");
        btns[11] = new JButton("-");
        btns[12] = new JButton("*");
        btns[13] = new JButton("/");
        btns[14] = new JButton("=");
        btns[15] = new JButton("C");

        for (int i = 10; i < 16; i++) {
            jp2.add(btns[i]);
            btns[i].addActionListener(this);
        }

        add(jp2);
        setLocation(100, 100);
        setSize(250, 300);
        setVisible(true);
        setDefaultCloseOperation(EXIT_ON_CLOSE);
    }
}

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public static void main(String[] args) {
    new DemoCalculator();
}

@Override
public void actionPerformed(ActionEvent e) {
    // TODO Auto-generated method stub
    String cap = e.getActionCommand();
    if (cap.equals("1"))
        jtf.setText(jtf.getText() + "1");

    else if (cap.equals("2"))
        jtf.setText(jtf.getText() + "2");

    else if (cap.equals("3"))
        jtf.setText(jtf.getText() + "3");

    else if (cap.equals("4"))
        jtf.setText(jtf.getText() + "4");

    else if (cap.equals("5"))
        jtf.setText(jtf.getText() + "5");

    else if (cap.equals("6"))
        jtf.setText(jtf.getText() + "6");

    else if (cap.equals("7"))
        jtf.setText(jtf.getText() + "7");

    else if (cap.equals("8"))
        jtf.setText(jtf.getText() + "8");

    else if (cap.equals("9"))
        jtf.setText(jtf.getText() + "9");

    else if (cap.equals("0"))
        jtf.setText(jtf.getText() + "0");

    else if (cap.equals("c"))
        jtf.setText("0");

    else if (cap.equals("+")) {
        num1 = jtf.getText();
        operator = "+";
        jtf.setText("");
    }
}

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        else if (cap.equals("-")) {
            num1 = jtf.getText();
            operator = "-";
            jtf.setText("");
        }

        else if (cap.equals("*")) {
            num1 = jtf.getText();
            operator = "*";
            jtf.setText("");
        }

        else if (cap.equals("/")) {
            num1 = jtf.getText();
            operator = "/";
            jtf.setText("");
        }

        else if (cap.equals("=")) {
            num2 = jtf.getText();
            // operator="=";

            if (operator.equals("+")) {
                // num2=get
                res = Integer.parseInt(num1) +
Integer.parseInt(num2);
            }

            if (operator.equals("-")) {
                // num2=get
                res = Integer.parseInt(num1) -
Integer.parseInt(num2);
            }

            if (operator.equals("*")) {
                // num2=get
                res = Integer.parseInt(num1) *
Integer.parseInt(num2);
            }

            if (operator.equals("/")) {
                // num2=get
                res = Integer.parseInt(num1) /
Integer.parseInt(num2);
            }
            jtf.setText("" + res);
        }
    }
}

// Calculator software in core java

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