import javax.swing.\*;

import java.awt.\*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

public class Calculator extends JFrame implements ActionListener {

private JTextField display;

private double num1, num2, result;

private char operator;

public Calculator() {

setTitle("Simple Calculator");

setSize(300, 400);

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

setLayout(new BorderLayout());

display = new JTextField();

display.setFont(new Font("Arial", Font.BOLD, 24));

display.setHorizontalAlignment(JTextField.RIGHT);

display.setEditable(false);

add(display, BorderLayout.NORTH);

JPanel panel = new JPanel();

panel.setLayout(new GridLayout(4, 4, 10, 10));

String[] buttons = {

"7", "8", "9", "/",

"4", "5", "6", "\*",

"1", "2", "3", "-",

"0", "C", "=", "+"

};

for (String text : buttons) {

JButton button = new JButton(text);

button.setFont(new Font("Arial", Font.BOLD, 20));

button.addActionListener(this);

panel.add(button);

}

add(panel, BorderLayout.CENTER);

setVisible(true);

}

@Override

public void actionPerformed(ActionEvent e) {

String command = e.getActionCommand();

try {

if (command.charAt(0) >= '0' && command.charAt(0) <= '9') {

display.setText(display.getText() + command);

} else if (command.equals("C")) {

display.setText("");

num1 = num2 = result = 0;

} else if (command.equals("=")) {

num2 = Double.parseDouble(display.getText());

switch (operator) {

case '+': result = num1 + num2; break;

case '-': result = num1 - num2; break;

case '\*': result = num1 \* num2; break;

case '/':

if (num2 != 0) result = num1 / num2;

else {

display.setText("Error");

return;

}

break;

}

display.setText(String.valueOf(result));

} else {

num1 = Double.parseDouble(display.getText());

operator = command.charAt(0);

display.setText("");

}

} catch (Exception ex) {

display.setText("Error");

}

}

public static void main(String[] args) {

SwingUtilities.invokeLater(Calculator::new);

}

}