

```
import java.awt.EventQueue;
```

```
import javax.swing.JFrame;
```

```
import javax.swing.JPanel;
```

```
import javax.swing.border.EmptyBorder;
```

```
import javax.swing.JButton;
```

```
import java.awt.Font;
```

```
import javax.swing.JTextField;
```

```
import java.awt.event.ActionListener;
```

```
import java.awt.event.ActionEvent;
```

```
public class calcc extends JFrame {
```

```
    private JPanel contentPane;
```

```
    private JTextField textField;
```

```
    double first;
```

```
    double second;
```

```
    double Result;
```

```
    String operation;
```

```
    String ans;
```

```
    /**
```

```
     * Launch the application.
```

```
    */
```

```

public static void main(String[] args) {

    EventQueue.invokeLater(new Runnable() {

        public void run() {

            try {

                calcc frame = new calcc();

                frame.setVisible(true);

            } catch (Exception e) {

                e.printStackTrace();

            }

        }

    });

}

```

```

/**

```

```

 * Create the frame.

```

```

 */

```

```

public calcc() {

    setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

    setBounds(100, 100, 450, 300);

    contentPane = new JPanel();

    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

    setContentPane(contentPane);

    contentPane.setLayout(null);

}

```

```

JButton btnNewButton_1 = new JButton("C");

btnNewButton_1.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        textField.setText(null);

    }

});

btnNewButton_1.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_1.setBounds(10, 50, 61, 23);

contentPane.add(btnNewButton_1);


JButton btnNewButton_2 = new JButton("%");

btnNewButton_2.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        first = Double.parseDouble(textField.getText());

        textField.setText("");

        operation = "%";

    }

});

btnNewButton_2.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_2.setBounds(102, 50, 61, 23);

contentPane.add(btnNewButton_2);


JButton btnNewButton_3 = new JButton("/");

btnNewButton_3.addActionListener(new ActionListener() {

```

```

        public void actionPerformed(ActionEvent e) {

            first = Double.parseDouble(textField.getText());

            textField.setText("");

            operation = "/";

        }

});

btnNewButton_3.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_3.setBounds(365, 50, 61, 23);

contentPane.add(btnNewButton_3);


JButton btnNewButton_4 = new JButton("B");

btnNewButton_4.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        String backspace = null;

        if(textField.getText().length()-0)

        {

            StringBuilder str = new StringBuilder(textField.getText());

            str.deleteCharAt(textField.getText().length()-1);

            backspace = str.toString();

            textField.setText(backspace);

        }

    }

});

btnNewButton_4.setFont(new Font("Tahoma", Font.BOLD, 15));

```

```
btnNewButton_4.setBounds(195, 50, 61, 23);
```

```
contentPane.add(btnNewButton_4);
```

```
JButton btnNewButton_5 = new JButton("` 7");
```

```
btnNewButton_5.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        String number = textField.getText()+btnNewButton_5.getText();
```

```
        textField.setText(number);
```

```
    }
```

```
});
```

```
btnNewButton_5.setFont(new Font("Tahoma", Font.BOLD, 15));
```

```
btnNewButton_5.setBounds(119, 96, 61, 23);
```

```
contentPane.add(btnNewButton_5);
```

```
JButton btnNewButton_6 = new JButton("`4");
```

```
btnNewButton_6.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        String number = textField.getText()+btnNewButton_6.getText();
```

```
        textField.setText(number);
```

```
    }
```

```
});
```

```
btnNewButton_6.setFont(new Font("Tahoma", Font.BOLD, 15));
```

```
btnNewButton_6.setBounds(119, 130, 61, 23);
```

```
contentPane.add(btnNewButton_6);
```

```

JButton btnNewButton_7 = new JButton("1");

btnNewButton_7.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        String number = textField.getText()+btnNewButton_7.getText();

        textField.setText(number);

    }

});

btnNewButton_7.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_7.setBounds(119, 164, 61, 23);

contentPane.add(btnNewButton_7);


JButton btnNewButton_8 = new JButton("+/-");

btnNewButton_8.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_8.setBounds(119, 198, 61, 23);

contentPane.add(btnNewButton_8);


JButton btnNewButton_9 = new JButton("8");

btnNewButton_9.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        String number = textField.getText()+btnNewButton_9.getText();

        textField.setText(number);

    }

});

btnNewButton_9.setFont(new Font("Tahoma", Font.BOLD, 15));
```

```
btnNewButton_9.setBounds(195, 96, 61, 23);
```

```
contentPane.add(btnNewButton_9);
```

```
JButton btnNewButton_10 = new JButton("5");
```

```
btnNewButton_10.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        String number = textField.getText()+btnNewButton_10.getText();
```

```
        textField.setText(number);
```

```
    }
```

```
});
```

```
btnNewButton_10.setFont(new Font("Tahoma", Font.BOLD, 15));
```

```
btnNewButton_10.setBounds(195, 130, 61, 23);
```

```
contentPane.add(btnNewButton_10);
```

```
JButton btnNewButton_11 = new JButton("2");
```

```
btnNewButton_11.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        String number = textField.getText()+btnNewButton_11.getText();
```

```
        textField.setText(number);
```

```
    }
```

```
});
```

```
btnNewButton_11.setFont(new Font("Tahoma", Font.BOLD, 15));
```

```
btnNewButton_11.setBounds(195, 164, 61, 23);
```

```
contentPane.add(btnNewButton_11);
```

```

JButton btnNewButton_12 = new JButton("0");

btnNewButton_12.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        String number = textField.getText()+btnNewButton_12.getText();

        textField.setText(number);

    }

});

btnNewButton_12.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_12.setBounds(195, 198, 61, 23);

contentPane.add(btnNewButton_12);

```

```

JButton btnNewButton_13 = new JButton("9");

btnNewButton_13.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        String number = textField.getText()+btnNewButton_13.getText();

        textField.setText(number);

    }

});

btnNewButton_13.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_13.setBounds(266, 96, 61, 23);

contentPane.add(btnNewButton_13);

```

```

JButton btnNewButton_14 = new JButton("6");

btnNewButton_14.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

```



```

        String number = textField.getText()+btnNewButton_14.getText();

        textField.setText(number);

    }

});

btnNewButton_14.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_14.setBounds(266, 130, 61, 23);

contentPane.add(btnNewButton_14);


JButton btnNewButton_15 = new JButton("3");

btnNewButton_15.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        String number = textField.getText()+btnNewButton_15.getText();

        textField.setText(number);

    }

});

btnNewButton_15.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_15.setBounds(266, 164, 61, 23);

contentPane.add(btnNewButton_15);


JButton btnNewButton_16 = new JButton(".");

btnNewButton_16.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        String number = textField.getText()+btnNewButton_16.getText();

        textField.setText(number);

    }

});

```

```
});  
  
btnNewButton_16.setFont(new Font("Tahoma", Font.BOLD, 15));  
  
btnNewButton_16.setBounds(266, 198, 61, 23);  
  
contentPane.add(btnNewButton_16);
```

```
JButton btnNewButton_17 = new JButton("*");  
  
btnNewButton_17.addActionListener(new ActionListener() {  
  
    public void actionPerformed(ActionEvent e) {  
  
        first = Double.parseDouble(textField.getText());  
  
        textField.setText("");  
  
        operation = "*";  
  
    }  
  
});
```

```
btnNewButton_17.setFont(new Font("Tahoma", Font.BOLD, 15));  
  
btnNewButton_17.setBounds(365, 96, 61, 23);  
  
contentPane.add(btnNewButton_17);
```

```
JButton btnNewButton_18 = new JButton("-");  
  
btnNewButton_18.addActionListener(new ActionListener() {  
  
    public void actionPerformed(ActionEvent e) {  
  
        first = Double.parseDouble(textField.getText());  
  
        textField.setText("");  
  
        operation = "-";  
  
    }  
  
});
```

```
btnNewButton_18.setFont(new Font("Tahoma", Font.BOLD, 15));  
  
btnNewButton_18.setBounds(365, 147, 61, 23);  
  
contentPane.add(btnNewButton_18);
```

```
 JButton btnNewButton_19 = new JButton("+");  
  
btnNewButton_19.addActionListener(new ActionListener() {  
  
    public void actionPerformed(ActionEvent e) {  
  
        first = Double.parseDouble(textField.getText());  
  
        textField.setText("");  
  
        operation = "+";  
  
    }  
  
});
```

```
btnNewButton_19.setFont(new Font("Tahoma", Font.BOLD, 15));  
  
btnNewButton_19.setBounds(365, 195, 61, 23);  
  
contentPane.add(btnNewButton_19);
```

```
 JButton btnNewButton_20 = new JButton("=");  
  
btnNewButton_20.addActionListener(new ActionListener() {  
  
    public void actionPerformed(ActionEvent e) {  
  
        second= Double.parseDouble(textField.getText());  
  
        if(operation=="+")  
  
        {  
  
            Result = first+second;  
  
            ans = String.format("%.2f", Result);  
  
            textField.setText(ans);
```

```
}  
  
else if(operation=="-")  
{  
  
    Result = first-second;  
  
    ans = String.format("%.2f", Result);  
  
    textField.setText(ans);  
  
}  
  
else if (operation=="*")  
{  
  
    Result = first*second;  
  
    ans = String.format("%.2f", Result);  
  
    textField.setText(ans);  
  
}  
  
else if (operation=="/")  
{  
  
    Result = first/second;  
  
    ans = String.format("%.2f", Result);  
  
    textField.setText(ans);  
  
}  
  
else if (operation=="%")  
{  
  
    Result = first%second;  
  
    ans = String.format("%.2f", Result);  
  
    textField.setText(ans);  
  
}
```

```

        }

    }

});

btnNewButton_20.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_20.setBounds(280, 50, 61, 23);

contentPane.add(btnNewButton_20);


textField = new JTextField();

textField.setBounds(10, 11, 416, 28);

contentPane.add(textField);

textField.setColumns(10);


JButton btnNewButton = new JButton("Sin");

btnNewButton.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        double a = Math.sin(Double.parseDouble(textField.getText()));

        textField.setText("");

        textField.setText(textField.getText()+a);

    }

});

btnNewButton.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton.setBounds(10, 242, 61, 23);

contentPane.add(btnNewButton);

```

```

JButton btnNewButton_21 = new JButton("Cos");

btnNewButton_21.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        double a = Math.cos(Double.parseDouble(textField.getText()));

        textField.setText("");

        textField.setText(textField.getText()+a);

    }

});

btnNewButton_21.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_21.setBounds(81, 242, 61, 23);

contentPane.add(btnNewButton_21);


JButton btnNewButton_22 = new JButton("Tan");

btnNewButton_22.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {

        double a = Math.tan(Double.parseDouble(textField.getText()));

        textField.setText("");

        textField.setText(textField.getText()+a);

    }

});

btnNewButton_22.setFont(new Font("Tahoma", Font.BOLD, 15));

btnNewButton_22.setBounds(154, 242, 61, 23);

```

```
contentPane.add(btnNewButton_22);
```

```
JButton btnNewButton_23 = new JButton("Sinh");
```

```
btnNewButton_23.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        double a = Math.sinh(Double.parseDouble(textField.getText()));
```

```
        textField.setText("");
```

```
        textField.setText(textField.getText()+a);
```

```
    }
```

```
});
```

```
btnNewButton_23.setFont(new Font("Tahoma", Font.BOLD, 12));
```

```
btnNewButton_23.setBounds(225, 242, 61, 23);
```

```
contentPane.add(btnNewButton_23);
```

```
JButton btnNewButton_24 = new JButton("Cosh");
```

```
btnNewButton_24.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        double a = Math.cosh(Double.parseDouble(textField.getText()));
```

```
        textField.setText("");
```

```
        textField.setText(textField.getText()+a);
```

```
    }
```

```
});
```

```
btnNewButton_24.setFont(new Font("Tahoma", Font.BOLD, 12));
```

```
btnNewButton_24.setBounds(292, 242, 61, 23);
```

```
contentPane.add(btnNewButton_24);
```

```
JButton btnNewButton_25 = new JButton("Tanh");
```

```
btnNewButton_25.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        double a = Math.tanh(Double.parseDouble(textField.getText()));
```

```
        textField.setText("");
```

```
        textField.setText(textField.getText()+a);
```

```
    }
```

```
});
```

```
btnNewButton_25.setFont(new Font("Tahoma", Font.BOLD, 11));
```

```
btnNewButton_25.setBounds(365, 242, 61, 23);
```

```
contentPane.add(btnNewButton_25);
```

```
JButton btnNewButton_26 = new JButton("e^x");
```

```
btnNewButton_26.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        double a = Math.exp(Double.parseDouble(textField.getText()));
```

```
        textField.setText("");
```

```
        textField.setText(textField.getText()+a);
```

```
    }
```

```
});
```



```
btnNewButton_26.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
btnNewButton_26.setBounds(10, 98, 61, 23);
```

```
contentPane.add(btnNewButton_26);
```

```
JButton btnNewButton_27 = new JButton("Log");
```

```
btnNewButton_27.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        double a = Math.log(Double.parseDouble(textField.getText()));
```

```
        textField.setText("");
```

```
        textField.setText(textField.getText()+a);
```

```
    }
```

```
});
```

```
btnNewButton_27.setFont(new Font("Tahoma", Font.BOLD, 15));
```

```
btnNewButton_27.setBounds(10, 149, 61, 23);
```

```
contentPane.add(btnNewButton_27);
```

```
JButton btnNewButton_28 = new JButton("1/X");
```

```
btnNewButton_28.addActionListener(new ActionListener() {
```

```
    public void actionPerformed(ActionEvent e) {
```

```
        double a = 1/(Double.parseDouble(textField.getText()));
```

```
        textField.setText("");
```

```
        textField.setText(textField.getText()+a);
```

```
    }
```

```
});  
  
btnNewButton_28.setFont(new Font("Tahoma", Font.BOLD, 15));  
  
btnNewButton_28.setBounds(10, 200, 61, 23);  
  
contentPane.add(btnNewButton_28);  
  
}  
  
}
```