Calculator Application

This is a simple GUI-based calculator application implemented in Java using Swing. It allows users to perform basic arithmetic operations like addition, subtraction, multiplication, and division. The application consists of three main files:

1. **cal.java** - The main entry point for launching the application.
2. **calimp.java** - Implements the graphical user interface (GUI) and user interactions.
3. **callogic.java** - Contains the logic for parsing and evaluating arithmetic expressions.

Features

- Supports basic arithmetic operations: addition (+), subtraction (-), multiplication (x), and division (/).
- User-friendly graphical interface.
- Clear button to reset the input and output fields.

File Overview

calimp.java

This file handles the GUI creation using JFrame, JTextArea, and JButton. It also defines button actions for handling user input and invoking the calculation logic.

Key components:

- **Input Display**: Shows the entered arithmetic expression.
- **Answer Display**: Displays the result of the calculation.
- **Buttons**: Includes digit buttons (0-9), operation buttons (+, -, x, /), a decimal point button (.), and the clear button (C).

callogic.java

This file contains the convert method that parses the input expression and performs the appropriate arithmetic operation. It supports:

- Parsing two operands and an operator.
- Handling division by zero gracefully.

How to Run the Application

1. **Clone the Repository**:

   git clone https://github.com/<your-username>/calculator-app.git

   cd calculator-app

2. **Compile the Files**:
   javac cal.java calimp.java callogic.java

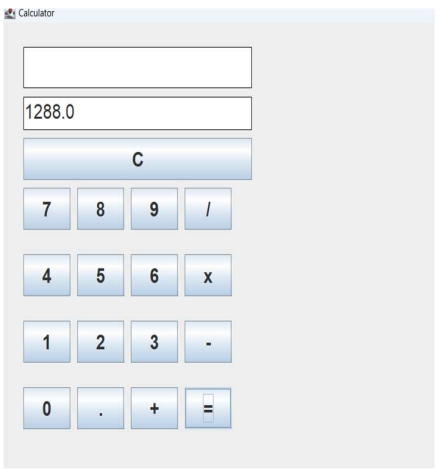
3. **Run the Application**:

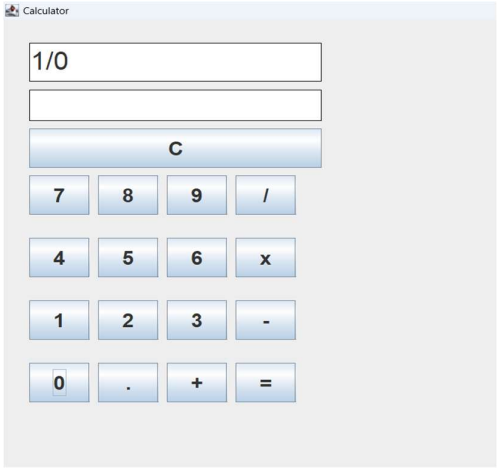
   Java cal.java

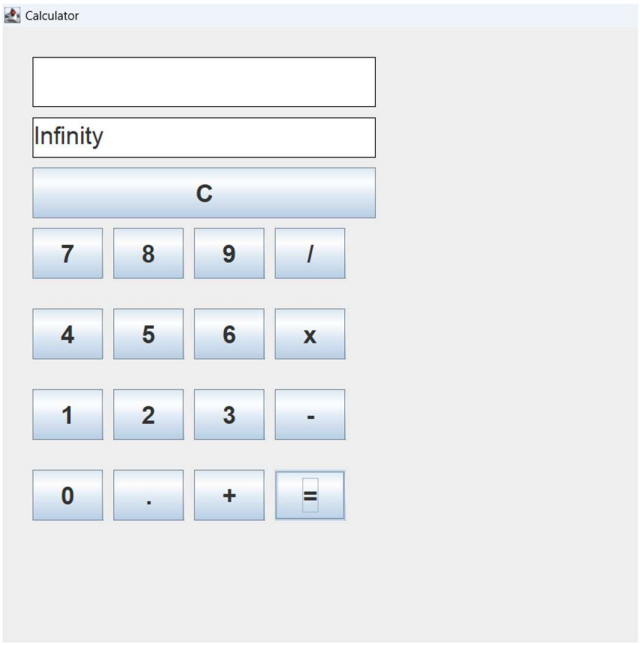
Future Improvements

- Add support for parentheses and more complex expressions.
- Enhance error handling for invalid inputs.
- Improve the UI design for better usability.
- Add scientific calculator features (e.g., trigonometric functions, square roots).

ScreenShots:-


Calculator
1288.0
C
7 8 9 /
4 5 6 x
1 2 3 -
0 . + =


Calculator
1/0
C
7 8 9 /
4 5 6 x
1 2 3 -
0 . + =


Calculator
Infinity
C
7 8 9 /
4 5 6 x
1 2 3 -
0 . + =