VaultofCodes

CALCULATOR GUI PROJECT

Java-based GUI calculator for basic math with educational and expansion features.

PRESENTED TO
VAULT OF CODES

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Introduction

- Objective: Develop a graphical calculator with basic arithmetic operations.

- Technology: Java with Swing for the graphical user interface.

Working

User Interface
Functionality
Evaluation

USER INTERFACE:

- Input through button clicks or keyboard.
- Display for current expression and result.

FUNCTIONALITY:

- Handles addition, subtraction, multiplication, and division.
- Supports decimal numbers and basic error handling.

EVALUATION:

- Parses mathematical expressions following a defined grammar.
- Utilizes a simple recursive descent parser for expression evaluation.

Uses

Educational Tool:

- Helps users understand basic parsing and evaluation of mathematical expressions.
- Demonstrates Java Swing for GUI applications.

Everyday Calculation:

- a user-friendly interface for common calculations.

Advantages & Disadvantages

Advantages

 # User-Friendly:

- Intuitive GUI for easy interaction.
- Supports both mouse and keyboard input.

 # Educational Value:

- Demonstrates basic parsing techniques.
- A simple example for learning Java Swing.

Advantages & Disadvantages

Disadvantages

 # Limited Functionality:

- Basic arithmetic operations only.
- Lacks advanced features present in scientific calculators.

 # Error Handling:

- Basic error handling; improvements could be made for a more robust application.

Future Scope

SCIENTIFIC CALCULATOR FEATURES:

- Implement advanced functions like square root, trigonometric functions, etc.
- Enhance expression parsing for more complex scenarios.

INTEGRATION:

- Integrate with cloud services or databases for storing calculation history.
- Develop mobile versions for wider accessibility.

UI IMPROVEMENTS:

- Design enhancements for a more modern and appealing interface.
- Support for themes and customization.

THANK YOU