Freaky Inc.

Freaky Calculator

User's Manual

Version <1.0>

Revision History

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User Manual

1. Purpose

This manual describes how to use Freaky Calculator as a product produced by Freaky Inc. Please read this manual in its entirety before using the Freaky Calculator.

User Manual Overview :

- **Introduction**: Overview of the software's purpose, key features, and steps to install and run it.
- **Getting Started**: Guide on using the program, including inputting expressions, using operators, and understanding results.
- **Advanced Features**: Highlights additional functionalities of the software.
- **Troubleshooting**: Solutions for common problems users may face.
- **Examples**: Demonstrates valid inputs with their results and errors for invalid inputs.
- **Glossary**: Definitions of technical terms used throughout the manual.
- **FAQ**: Answers to commonly asked questions about the software.

2. Introduction

The product Freaky Calculator can be used to calculate results to arithmetic expressions including addition, subtraction, multiplication, division, exponentiation, and modular division. All copies of Freaky Calculator should be obtained directly from the Freaky Inc. GitHub repository, any copies of Freaky Calculator found elsewhere are not legitimate, Freaky Inc. is not responsible for any malicious data contained within illegitimate copies of Freaky Calculator.

The most preferable method to install and run the program:
Manual Installation:
      1. Download all program files and place them into a designated folder
      2. Install a C++ compiler onto your system
      Compilation:
      1. Open Terminal
      2. Navigate to the program folder using the 'cd' command
      3. Execute the command: 'g++ -o (or the corresponding command for your compiler) main.cpp'
        Then all the files will be compiled, after which the program is ready to be used.

3. Getting started

The software is immediately ready to use on first startup from your desktop, to exit the program type "exit", if this does not exit the program, please ensure that no extra characters were entered. To evaluate an expression simply type the expression using your keyboard, an input can contain any number as well as the operators ("+", "-", "*", "/", "%", "**") and open and close parentheses. The program does not accept any letter input (except when typing "exit" to exit the program) the program also does not allow groupings other than the default parentheses. Operators should not appear back-to-back apart from parentheses. All opening parentheses should be matched by a closing parenthesis and vice versa. The output should be displayed in the format "Result: #" where # is the number result.

4. Advanced features

The program is also built to handle decimal inputs if they are inputted correctly. Improper input can be as such: "4.4.4"

5. Troubleshooting

"Error: Invalid operator usage"

- This is caused by operators being entered in a way that is not valid, check to make sure that your input makes sense. If this does not fix the error, try adding extra parentheses.

"Error: Unmatched parenthesis"
- This error may be encountered when the number of opening and closing parentheses do not match, or if a closing parenthesis is encountered before a matching opening parenthesis.

"Error: Unknown operator"
- This error occurs when an operator that is not allowed is entered, make sure there are no invalid characters in your input (note: exponentiation is represented using "**" NOT "^")

"Error: Invalid number entered"
- Error indicates that a number was entered with more than one decimal point, please remove and extraneous decimals from your input.

"Error: Division by zero"
- Error indicates that your expression attempts to divide by zero and is therefore invalid.

6. Examples

Valid Inputs	Invalid Inputs
2+4	4+
2-4	4+-4
2*4-3	4***4
((((2*4))-3))	4*+*4
4.5+3.2	4/0
5/6	4**-4
4%3	4+(3+2+1
(-4)+4	4+2)
-(+(-4))+(-(-(-5)))	4.4.4+3
4**4	joe
4**5.5	(4+3)/(3+(-3)
4**(-4)	4^3

7. Glossary of terms

+: addition
-: subtraction
*: multiplication
/: division
%: modular division
**: exponentiation
Freaky Inc.: Our company
Freaky Calculator: This Product
GitHub Repository: Our company's page for code
Modular division: Returns the remainder after division
Operator: Mathematical symbol

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8. FAQ

Q: Will there be any future updates?
A: no

Q: Can it handle decimal numbers?
A: yes

Q: Can it handle negative numbers?
A: Provided, they are in parentheses

Q: Will there be any support for a mobile version?
A: we do not support any mobile version of the product

Q. What do I do if I get an error message?
A. Read the error message for insight into the potential issues with your expression. Adjust the input based on the guidance provided in the user manual.

Q. What are the supported operators and their symbols ?
A. a. Addition : +
    b. Subtraction: -
    c. Multiplication : *
    d. Division: /
    e. Modulus: %
    f. Exponential : **