Team8 Co

Calc.Co

User's Manual

Version <1.0>

Revision History

Date	Version	Description	Author
<dd/mmm/yy>	<x.x>	<details>	<name>

Table of Contents

Test Case

1.   Purpose

This manual serves as a comprehensive guide for utilizing Calc.Co, ensuring users can maximize the software's capabilities with ease and efficiency whether you are a casual user in need of a straightforward calculator or a professional handling complex equations, Calc.Co is designed to meet a wide range of computational needs. This document covers everything from installation and basic usage to advanced features and troubleshooting, ensuring a seamless experience for all users

2.   Introduction

Calc.Co is a practical and straightforward calculator application developed by EECS 348 Group 8. While it may not reinvent the wheel, it provides users with a reliable tool for performing mathematical operations ranging from basic arithmetic to more advanced calculations like exponentiation and modular arithmetic. Calc.Co was developed with simplicity and functionality in mind, offering an accessible solution for students, professionals, and anyone in need of quick, accurate computations.

The user-friendly design ensures that both novices and seasoned users can navigate the software effortlessly. By adhering to industry-standard PEMDAS rules, Calc.Co delivers precise results for equations of varying complexity. This manual outlines how to install, use, and troubleshoot the program, making it easy for users to integrate Calc.Co into their workflow.

3.   Getting started

Requirements

- ***Preferred clang++/g++ version 15.0.0 or greater***
- ***GNU Make*** *for building and compiling:*
    - ***Linux:*** `apt install make`
    - ***MacOS:*** `brew install make`
    - ***Windows:*** *To use ``make`` on windows follow this guide https://code.visualstudio.com/docs/cpp/config-mingw*

Steps to Set Up For User

First download and unzip the latest version of CalcCo from releases for your operating system (https://github.com/BigIronDestroyer/Calc.Co/releases)

After downloading CalcCo open a terminal in the folder it was extracted to, then run:

> ./CalcCo

Steps to Set Up For Developers
1. *Clone the repository:*

```
        a.  git clone https://github.com/BigIronDestroyer/Calc.Co.git
        b.  cd Calc.Co
    2.  Build the project:
        a.  make all
             i.   or
        b.  make CalcCo
    3.  Run the program:
        a.  ./bin/CalcCo
```

Running Calc.Co

Once the program is executed, you'll be prompted:

`Enter a Mathematical Equation (Q or q to quit):`

Enter your desired equation (e.g., `20/10`) and press Enter to see the result. To quit, type Q or q.

4.   Advanced features

Calc.Co currently supports:

- *Addition (+)*
- *Subtraction (-)*
- *Multiplication (*)*
- *Division (/)*
- *Exponents (**)*
- *Modulo (%)*
- *Following the rules of PEMDAS*

5.   Troubleshooting

Common Issues

- ***Issue:*** *Make command not recognized.*
  Solution: *Ensure GNU Make is installed and accessible from your terminal.*
- ***Issue:*** *Equation not solved correctly.*
  Solution: *Check for syntax errors in the entered equation.*

6.   Examples

Example Input:

```
Enter a Mathematical Equation (! to quit): 10 + 15 * 2
```

Output:

```
Result: 40
```

Example Quit Command:

```
Enter a Mathematical Equation (Q or q to quit): q
Goodbye!
```

7.   Glossary of terms

Modulo (%): Returns the remainder after division.

Exponent (**): Represents powers, e.g., 2**3 equals 8.

8.   FAQ

Q: Can Calc.Co handle complex equations?
A: Yes, it can evaluate expressions with multiple operations following PEMDAS rules.

Q: Is Calc.Co available for Windows users?
A: Yes, It can be found at https://github.com/BigIronDestroyer/Calc.Co/releases