AE C++ Intepreter

User’s Manual

Version <1.0>

Revision History

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| **Date** | **Version** | **Description** | **Author** |
| 12/3/2023 | 1.0 | User Manual | Zach Willingham |
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User Manual

# Purpose

This is the user manual for the calculator program to guide users to effectively manage the software.

# Introduction

This calculator is an arithmetic expression evaluator coded in C++. It can parse and evaluate arithmetic expressions containing operators +, -, \*, /, %, and ^ as well as numeric constants. It can also handle parentheses including extraneous ones. Instructions on how to install and run can be found under the “Getting started” header.

# Getting started

A step-by-step guide on how to use the software to evaluate arithmetic expressions.

1. Download the source code and extract the contents to a directory of your choice.
2. Open a terminal or command prompt
3. Navigate to the program directory
4. Compile the program
5. Run the program using the following command: /calculator
6. Enter arithmetic expressions and press Enter to see the result

# Advanced features

Expressions can handle multiple operators. Operators are carried out in order of left to right, following an order of precedence:

1. Parentheses ()
2. Exponent ^
3. Multiplication \*, Division /, Modulo %
4. Addition +, Subtraction –

The calculator will report errors for division and modulo by zero, invalid parentheses, and invalid syntax.

All expressions work with integers as well as decimal values.

# Troubleshooting

If there are compilation errors, ensure you have installed a C++ compiler and the necessary dependencies are available.

If there are permission issues (Linux/macOS only), use this command to grant execute permission: chmod +x calculator

# Examples

Basic Arithmetic

1. ‘2 + 4 \* 6’ will return ‘26’
2. ‘(9 – 5) / (1\*2)’ will return ‘2’

Error Handling:

1. ’10 / 0’ will return ‘Error: Division by zero.’

# Glossary of terms

# Command: specific instruction given to a computer to perform a particular operation.

# Compilation: the process of translating human-readable source code (such as C++) into computer-readable executable code.

# Directory: folder used to organize files on a computer in a hierarchical structure.

# Terminal: interface that allows the user to interact with the computer.

# FAQ

What if I enter an expression with invalid syntax?

The program will inform you of your error and let you try again.

Can it handle complex functions like logarithms?

No, the program only works for the specified operators. We are working on more diverse functionality for an updated program in the future.

How do I use parentheses?

Enclose the expression(s) you wish to be evaluated first within the parentheses.