SuperCoding

Boogle Project

User's Manual

Version 1.1

Revision History

Date	Version	Description	Author
28/04/24	1.0	Initial Draft	Brandon Dodge
02/05/24	1.1	Final Draft	Brandon Dodge

Table of Contents

1. Purpose 4
2. Introduction 4
3. Getting started 4
4. Advanced features 4
5. Troubleshooting 4
6. Example of uses 4
7. Glossary 5
8. FAQ 5

Test Case

1. Purpose

The purpose of this document is to ensure that all features of the boolean calculator software are functioning as expected and can handle the operations specified in the user manual, delivering precise outputs for both basic boolean operations and truth tables.

2. Introduction

Welcome to the Boolean Calculator software, designed to simplify the evaluation of boolean expressions for students, developers, and professionals alike. This software offers robust features allowing users to input, analyze, and calculate boolean algebra expressions using a variety of logical operators. Installation is straightforward: download the software from our Github page and run the executable file.

3. Getting started

1. For Windows and IOS: Launch the application by downloading the Bool_Calc.exe file in the Github repository and then run the .exe file.
   For Linux: Download the source code Boogle_Project.cpp from the source code file in the Github repository and then compile and run that code in your Linux terminal.
2. Enter your boolean expression in the input field. You can use operators such as AND (&), OR (|), NOT (!), XOR ($), and NAND(@). Parentheses can be used for grouping expressions to define evaluation order.
3. Press enter to see the result.
4. Enter the next expression or enter "q" to quit the application.

4. Advanced features

- Colored answers (Green for True and Red for False) - may not work for some IOS devices
- Bool Calc header in ASCII
- Description to inform the user about the program and how to use it
- Dotted line that fits the window size of the user's terminal to separate the output
- Quit feature by entering "q"

5. Troubleshooting

- Expression Not Evaluating: Ensure that all operators and variables are correctly spelled and that all parentheses are properly closed.
- Software Not Responding: Restart the software. Persistent issues may be resolved by reinstalling the software.
- Installation Issues: Verify that your operating system meets the software requirements and that you have sufficient permissions to run applications.

6. Examples

- Simple Expression: To evaluate A AND B, where A = 1 and B = 0, enter (1 & 0) and press 'Evaluate'. The result will be 0.
- Complex Expression: To evaluate (A AND B) OR (C AND NOT D), where A = 1, B = 1, C = 0, D = 1, enter ((1 & 1) | (0 & !1)) and press 'Evaluate'. The result will be 1.

7. Glossary of terms

- Boolean Algebra: A subdivision of algebra focused on values and operations that work on logical values true and false.
- Operators: Symbols that represent operations between variables or values, such as AND (&), OR (|), and NOT (!).

8. FAQ

- Can I use this software for educational purposes?
  - Yes, the Boolean Calculator is suited for educational environments.
- Does the software support logical implication?
  - Currently, the software does not support implication directly, but you can construct this using other logical operators.
- Does it matter what device I use to run this application?
  - The application can work for Windows, IOS, and Linux but additional steps are required to run for Linux and some features do not show up for some IOS devices.