C++ Calculator

Version <1.1>

Revision History

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 02/Dec/23 | <1.0> | Completed Test Case Document | Jordan Mcdaniels |
| 03/Dec/23 | <1.1> | Fixed some formatting | Carson Abbott |
|  |  |  |  |
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Table of Contents

1. Purpose 4

2. Test Case Table 4

3. Environmental needs 5

3.1.1 Hardware 5

3.1.2 Software 5

# Purpose

The purpose of this document is to show all the test cases that were used to ensure the completeness of our Calculator. While also covering the hardware and software specs that are needed to ensure no problems across machines. By using multiple testing methods like black and white box testing to generate test cases we hope to find all or most of the bugs in our program with documentation.

# Test Case Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name/ID | Testing Features | Input | Expected Output | Actual Output |
| Exit | First if statement to exit program | 0 | Program ends | Program ends |
| Multiplication | Checks multiply function | 2 \* 3 | 6 | 6 |
| Division | Checks divide function | 6 / 2 | 3 | 3 |
| Zero Division Error | Checks divide function dividing by Zero | 5 / 0 | Runtime\_error | Runtime\_error |
| Add | Checks add function | 2 + 4 | 6 | 6 |
| Subtract | Checks subtract function | 7 – 5 | 2 | 2 |
| Subtract Negative | Checks subtract() when the return value is negative | 5 – 7 | -2 | -2 |
| Exponent | Checks exponent function | 2^3 | 8 | 8 |
| Modulus | Checks Modulus function | 6%4 | 2 | 2 |
| Precedence\_1 | Checks precedence and stack functions | 2 + 3 \* 5 | 17 | 17 |
| Precedence\_2 | Checks precedence and stack functions | (2^3) + 5 | 13 | 13 |
| Precedence\_3 | Checks precedence and stack functions | (2+3) \* 5 | 25 | 25 |
| Precedence\_4 | Checks precedence and stack functions | 2 / 3 + 5 \* 6 | 30 | 30 |

# Environmental Needs

### Hardware

There are no hardware specifications required for our C++ calculator other than a basic computer machine that can compile and run the files.

### Software

The software specifications for our C++ Calculator is running the current version of C++20 to ensure all

functions and keywords work as they should.