# **Testing Document**

## **Purpose**

The goal of this testing document is to guide testers through various scenarios to help identify bugs and provide feedback. Your input will aid in improving the application and transitioning it to more advanced stages.

## **Version**

**Current Version:** v0.2.0

## **Testing Environment**

* Operating System: Windows 64-bit
* Test the application using the **ConsoleCalculatorB2A.exe** file included in the release package.

## 

## **Testing Scenarios**

### **1. Basic Arithmetic Operations**

**Objective:** Verify the correctness of basic calculations.

* Perform addition, subtraction, multiplication, and division using different input values.
* Use both positive and negative numbers.
* Ensure that the results match expected outcomes.

**Test Cases:**

| **Operation** | **Input** | **Expected Output** |
| --- | --- | --- |
| Addition | 2 + 3 | 5 |
| Subtraction | 10 - 4 | 6 |
| Multiplication | 6 \* 7 | 42 |
| Division | 20 / 4 | 5 |

### **2. Division by Zero**

**Objective:** Ensure the application gracefully handles division by zero.

* Input: 10 / 0
* Expected Output: *Division by zero is not allowed.*

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### **3. Menu Navigation**

**Objective:** Verify smooth navigation within the calculator menu.

* Select each menu option (e.g., 1, 2, 3, 4, 0).
* Ensure the correct functionality is executed.
* Validate that entering 0 exits the application.

### **4. Input Validation**

**Objective:** Test how the application handles invalid inputs.

* Enter non-numeric values (e.g., letters, symbols).
* Enter extremely large numbers or edge cases.

**Expected Behavior:**

* Display error message for invalid inputs.
* Prompt the user to try again.

### **5. Stress Testing**

**Objective:** Test the application's performance with rapid or unusual inputs.

* Enter inputs quickly in succession.
* Perform repeated calculations without restarting the application.
* Ensure no crashes or unexpected behavior.

## 

## **Bug Reporting**

### **How to Report**

Use the **Issues** section on GitHub to report bugs. Include the following details:

* Description of the issue.
* Steps to reproduce the bug.
* Expected and actual results.
* Screenshots (if applicable).

## **Feedback**

Your feedback is highly valued! Please share your thoughts on:

* Application usability.
* Suggestions for new features or improvements.
* Any bugs or inconsistencies.

## **Contributing**

* Fork the repository.
* Create a branch for your feature or bug fix.
* Submit a pull request for review.

## **Contact**

For any inquiries, feel free to open an issue on GitHub or contact the project owner.