

Calculator Program Requirement Specification

1. Introduction

1.1 Purpose

The purpose of this document is to outline the requirements for the development of a calculator program with the following four basic functionalities: addition, subtraction, multiplication, and division.

1.2 Scope

The calculator program will be a standalone application that allows users to perform basic arithmetic operations through a user-friendly interface.

2. Functional Requirements

2.1 User Inputs

The program should accept numerical input from the user.

The input should support integers and floating-point numbers.

2.2 Addition

The program should perform addition of two numbers.

The addition operation should be accurate for both integers and floating-point numbers.

2.3 Subtraction

The program should perform subtraction of two numbers.

The subtraction operation should be accurate for both integers and floating-point numbers.

2.4 Multiplication

The program should perform multiplication of two numbers.

The multiplication operation should be accurate for both integers and floating-point numbers.

2.5 Division

The program should perform division of two numbers.

Division by zero should be handled gracefully, providing appropriate feedback to the user.

The division operation should be accurate for both integers and floating-point numbers.

2.6 User Interface

The calculator should have a user-friendly interface displaying input fields, operation buttons, and result display.

The interface should be responsive and intuitive.

3. Non-functional Requirements

3.1 Performance

The calculator should provide quick and responsive results.

The program should handle a reasonable range of input values without performance degradation.

3.2 Reliability

The calculator should produce accurate results for all supported operations.

The program should be resilient to unexpected inputs and errors, providing informative error messages.

3.3 Compatibility

The calculator program should be compatible with common operating systems (Windows, macOS, Linux).

3.4 Security

The program should not store or transmit user input data.
The application should be free from security vulnerabilities.

4. Constraints

The calculator program is intended for basic arithmetic operations and will not include advanced scientific functions.

The program will not have the capability to store or recall previous calculations.

5. Approval

This requirement specification is to be reviewed and approved by the relevant stakeholders before the commencement of the development phase.