



# CALCULATOR SOFTWARE: USER DOCUMENTATION

**Ridhiman Dhindsa, 210101088**

**CS346 Assignment-1C**

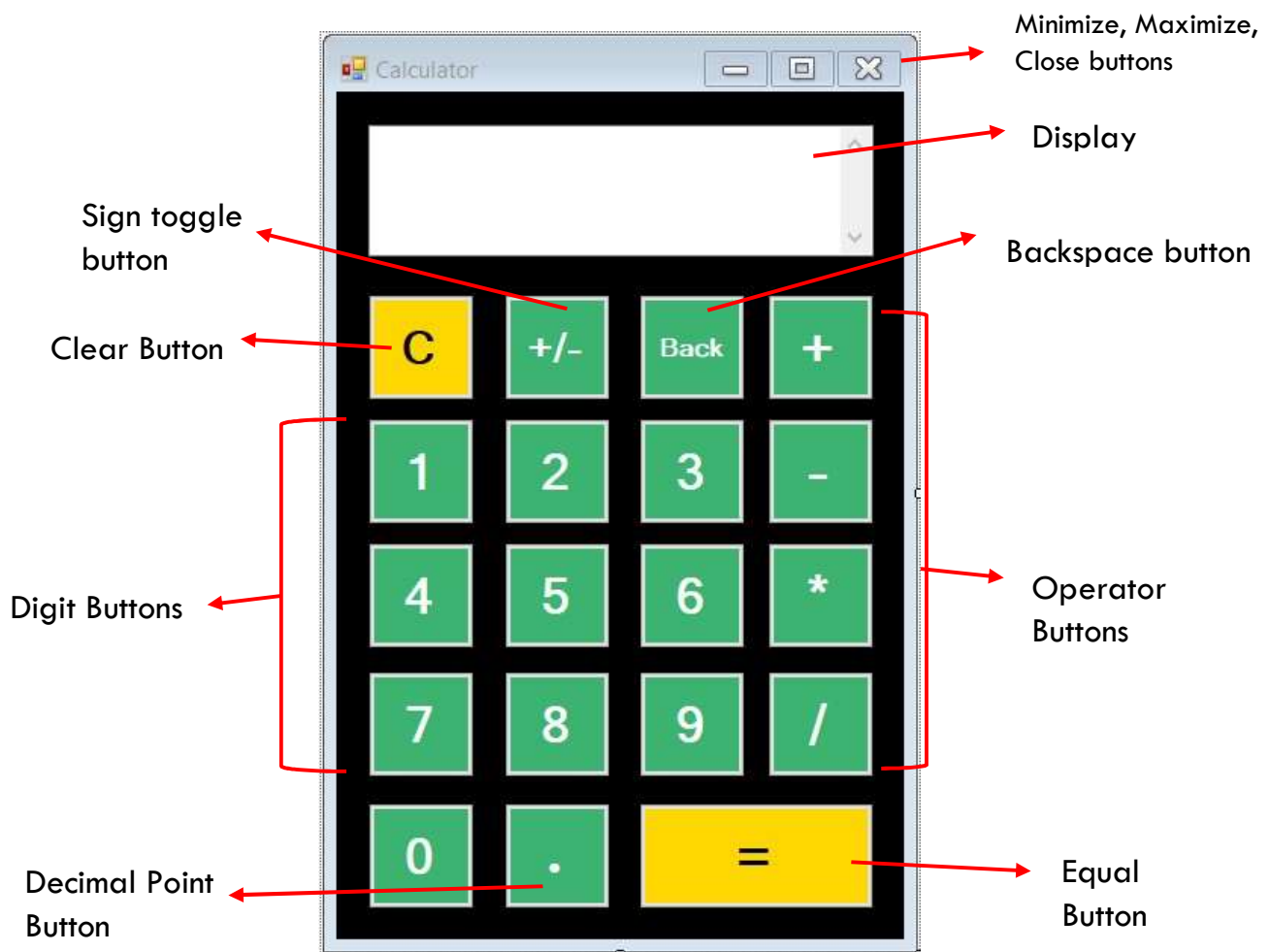
**Date: 29 January 2024**



## Introduction

The software is a simple graphic calculator that handles the operations (+, -, \*, /). Limits of calculation range from  $[-10^9, 10^9]$ . Inputs as well as outputs are also limited to this range, and rounded off to 7 decimal places.

## Interacting with the Interface



## Getting Started

Steps to run:

- 1) Open the Calculator directory in Visual Studio 2010.
- 2) Press the `Run` button in the toolbar at the top, or press F5.
- 3) The calculator software starts running. Enter the desired inputs.
- 4) Press the X button in the top bar if you wish to exit.

## How to Use

The GUI has several buttons including:

- 1) **Digit buttons (0,1....9):** Press the button to enter the appropriate digit on the calculator display. You can enter numbers from negative 1,000,000,000 up to 1,000,000,000.
- 2) **Clear button (C):** Press this button to clear all output on screen.
- 3) **Operator buttons (+,-,\*,/):** Press these buttons to add, subtract, multiply or divide respectively.
- 4) **Decimal point button (.):** Press this button to add a decimal point to the number.
- 5) **Equal button (=):** Press this button to view the result.
- 6) **Backspace button (Back):** Press this button to erase the previous digit entered.
- 7) **Sign button (+/-):** Press this button toggle the sign of the number you've entered.

## Error Handling

Error handling has also been included, which covers the following cases. List of error messages and their meanings:

- 1) **Beyond calculation scope:** If any 1 of the 2 numbers entered is outside the above-mentioned range, this error is displayed. Also, if after performing the calculation the result is beyond the range, this error is displayed.
- 2) **Invalid input:** If the entered input is not in numeric format or there is a syntax error, this error is displayed. E.g.  $12.3.53 + 23$ , etc.
- 3) **Division by 0 not allowed:** If the second number entered, i.e. the divisor is zero, then this error is displayed.
- 4) **Multiple operator buttons pressed:** If multiple operator buttons are pressed, the last operation and the number on the last line of display are considered.