

# Real Calculator Application

Create “**RealCalculatorApp**” console application that initially asks user to input the type of the arithmetic operation (+, -, \*, /) and after that asks for two numbers in order to make the previously selected calculation. If the user enters invalid character for operation representation (for example, '&'), then print kind message and terminate the program. Also, if the user makes an input with invalid numbers (for example, “test” as input number), then print appropriate message and terminate the program. For the sake of simplicity work with numbers where selected arithmetic operation is possible (for example, for subtraction enter the bigger number first).

\* **Mathematical limitation:** take in consideration the fact that the division with zero is not possible. If the user tries to divide with zero print validation message and terminate the program.

## Test Data:

Enter the operation: +

Enter the First number: 10

Enter the Second number: 15

## Expected Output:

The result is: 25

## Test Data:

Enter the operation: -

Enter the First number: 10

Enter the Second number: 5

## Expected Output:

The result is: 5

**Test Data:**

Enter the operation: M

**Expected Output:**

Invalid operation selected. The application will automatically close.

**Test Data:**

Enter the operation: \*

Enter the First number: 10

Enter the Second number: test

**Expected Output:**

Invalid input numbers. The application will automatically close.

**Test Data:**

Enter the operation: /

Enter the First number: 10

Enter the Second number: 0

**Expected Output:**

Division with zero is not possible. The application will automatically close.

**\* Upgrade(s):**

- The user is very happy with the calculator implementation and validation messages, but not very happy about the fact that in case of validation error the application is terminating. Implement logic for keeping the calculations live even in case of error. After the appropriate error message, the user should have the possibility to continue with another operation and calculation.
- There is no sense of not terminating the program at all, so the user would be super happy if there is a possibility of entering "S" as input (before starting with new calculation) in order to safely close the program. Before closing the program, he should get appropriate message and thanks for using the application.
- We are dealing with a very specific user, so it would be beneficial if the messages are colored according the result of the operation, red color for invalid and green color for valid calculations.

**Test Data:**

Enter the operation: /

Enter the First number: 250

Enter the Second number: 0

**Expected Output:**

Division with zero is not possible, please try again.

Enter the operation: /

Enter the First number: 250

Enter the Second number: 10

**Expected Output:**

25

Enter the operation: S

**Expected Output:**

Thank you for using the calculator. The application will automatically close.

**Test Data:**

Enter the operation: S

**Expected Output:**

You have not used the calculator. Thank you for the interest, try the calculation another time.  
The application will automatically close.

