Simple Mathematical Calculator — Documentation

Overview

This Python program acts as a simple calculator that takes two numbers as input and performs four basic arithmetic operations:

- Addition
- Subtraction
- Multiplication
- Division

The program also handles division by zero gracefully by showing a proper message.

Code Explanation

```
# Simple Mathematical Calculator

def calculator():
    print("Simple Calculator")

    # Take input of two numbers
    num1 = float(input("Enter the first number: "))
    num2 = float(input("Enter the second number: "))

    # Calculate results of operations
    addition = num1 + num2
    subtraction = num1 - num2
    multiplication = num1 * num2

    # Handle division when second number is zero
    if num2 != 0:
        division = num1 / num2
    else:
        division = "Division by zero is not possible"

    # Print the results
    print(f"\nResults:")
    print(f"Addition: {addition}")
    print(f"Subtraction: {subtraction}")
    print(f"Multiplication: {multiplication}")
    print(f"Division: {division}")

# Call the calculator function
calculator()
```

Step-by-step Description

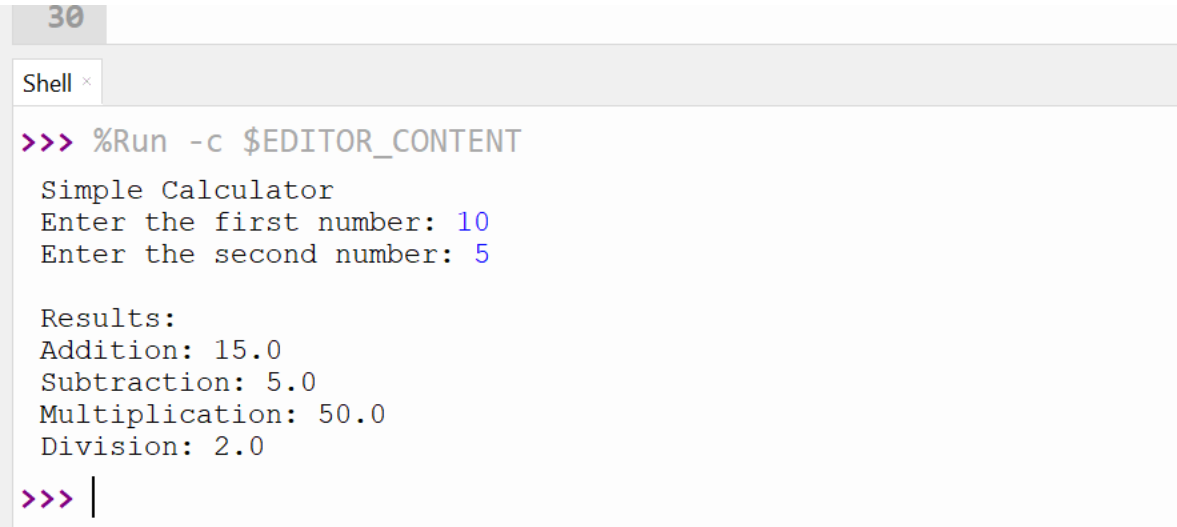
1. **Function Definition**
   The entire calculator logic is wrapped inside the `calculator()` function. This helps organize the code and makes it reusable.
2. **Display Title**
   The program starts by printing "Simple Calculator" to indicate its purpose.
3. **Input Numbers**
   - The program asks the user to input two numbers.
   - `input()` function is used to take input as a string.
   - `float()` converts the string input into floating point numbers to allow decimal inputs.
4. **Perform Calculations**
   - The program calculates addition, subtraction, and multiplication by using the standard operators `+`, `-`, and `*`.
   - For division, it first checks if the second number is zero to avoid a runtime error.
5. **Handle Division by Zero**
   - If the second number is zero, the program does not perform division.
   - Instead, it sets a message: `"Division by zero is not possible"`.
6. **Output Results**
   - The results of all operations are printed neatly.
   - Each result is labeled properly for clarity.
7. **Function Call**
   - The `calculator()` function is called at the end to execute the program.

How to Run

```
Simple Calculator
Enter the first number: 10
Enter the second number: 5

Results:
Addition: 15.0
Subtraction: 5.0
Multiplication: 50.0
Division: 2.0
```

Result Screenshot



THE END