**Project-03: Calculator**

**Objective:**

Create a basic calculator that can perform addition, subtraction, multiplication, and division operations based on user input.

**Recommended Programming Language:**

* Python

**Recommended by:**

* [SaladStik](https://github.com/SaladStik)

**Requirements:**

1. **Input:**
   * The program should prompt the user to input two numbers.
   * Then, ask the user which operation they would like to perform: addition, subtraction, multiplication, or division.
2. **Output:**
   * The result of the operation should be displayed to the user.
   * If the user tries to divide by zero, the program should display a friendly message like “Error: Cannot divide by zero.”
3. **Features:**
   * **Operations:** The program should be able to handle four basic mathematical operations:

Addition (+)

Subtraction (-)

Multiplication (\*)

Division (/)

1. **Error Handling:**
   * Gracefully handle invalid input formats or unexpected user actions.

**Program/Menu Example:**

* **Input:** Prompts the user for the numbers and the operator needed for the calculation.
* **Output:** Show the appropriate result.
* **Menu UI:**

Enter the first number: 10

Enter the second number: 5

Choose operation (+, -, \*, /): \*

The result is: 50

Would you like to perform another operation? (yes/no): no

**Concepts Covered:**

* **Input/output Handling**
* **Error Handling** (Handling incorrect inputs or failed detections)
* **Loops and Conditionals** (Sorting logic using if-else and loops)

**Hints to Get Started:**

* Think about how to structure the loop to get a valid input
* Think about how to structure the loops and conditionals statements to convert the amount

**Bonus Challenges (Optional):**

* Allow the user to perform multiple operations in a loop. After showing the result, ask the user if they would like to perform another calculation or quit.
* If the user inputs an invalid operation or number, the program should give an error message and ask them to try again.

**Expected Outcome:**

By the end of this assignment, participants should be able to:

* Handle basic user input/output.
* Looping and Conditionals