Challenge 4: Implement a Calculator Class

In this exercise, you have to implement a calculator which can perform addition, subtraction, multiplication, and division.

WE'LL COVER THE FOLLOWING

Problem Statement

Write a C# **class** called `Calculator` with:

- `private` *fields*:
  - `_num1` and `_num2` (**double** type)
- *Methods*:
  - `Add()`, a *method* which returns the sum of two numbers.
  - `Subtract()`, a *method* which returns the difference of `_num1` and `_num2` (num2 - num1).
  - `Multiply()`, a *method* which returns the result of multiplication of numbers.
  - `Divide()`, a *method* which returns the result of division of `_num2` by `_num1`.
- Define a parameterized constructor which takes two parameters `num1`

and `num2` and assigns these parameters to the respective fields in the

class.

Input

Passing numbers in the parameterized constructor

Output

Addition, Subtraction, Division, and Multiplication

Sample Input

```
Calculator calc = new Calculator(10, 94);
calc.Add()
calc.Subtract()
calc.Multiply()
calc.Divide()
```

Sample Output

```
104
84
940
9.4
```

Coding Exercise

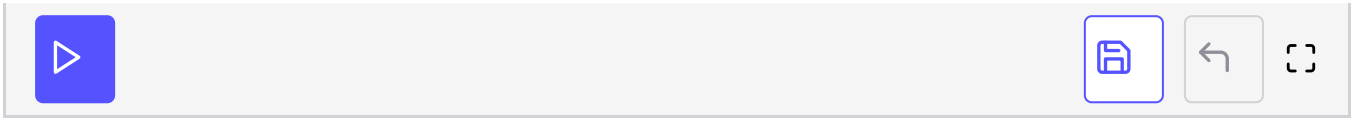
First, take a close look and design a step-by-step algorithm before jumping to the implementation. This problem is designed for your practice, so initially try to solve it on your own. If you get stuck, you can always refer to the solution provided in the solution review.

Good luck!

Exercise | Solution

```
class Calculator {
  // write class fields here

  //implement parameterized constructor
  public Calculator() {
    //write definition here
  }
```

```
  public double Add(double n1, double n2) {
    //write definition here


    return 0;
  }

  public double Subtract(double n1, double n2) {
    //write definition here

    return 0;
  }

  public double Multiply(double n1, double n2) {
    //write definition here

    return 0;
  }

  public double Divide(double n1, double n2) {
    //write definition here

    return 0;
  }

}

class Demo {

  public static void Main(string[] args) {
    Calculator calc = new Calculator();

    Console.WriteLine(calc.Add(10, 94));
    Console.WriteLine(calc.Subtract(10, 94));
    Console.WriteLine(calc.Multiply(10, 94));
    Console.WriteLine(calc.Divide(10, 94));
  }

}
```



The solution will be explained in the next lesson.