Challenge 1: Implement Rectangle Class Using the Encapsulation

In this challenge, you will implement a 'Rectangle Class Using the Concepts of Encapsulation'.

WE'LL COVER THE FOLLOWING

Problem Statement

You are given a partially completed code of a `Rectangle` class in the editor. Implement the class by completing the tasks below.

Task 1

Implement a constructor to initialize the values of two **private** properties: `length` and `width`.

Task 2

Implement a method, `area()`, in the `Rectangle` class that returns the product of `length` and `width`. See the formula below:

$$Area = length \times width$$

Sample Properties

```
length = 4
width = 5
```

Sample Method Output

```
20
```

Task 3

Implement a method, `Perimeter()`, in the `Rectangle` class that returns *two times* the sum of `length` and `width`. See the formula below:

$$Perimeter = 2 \times (length + width)$$

Sample Properties

```
length = 4
width = 5
```

Sample Method Output

```
18
```

Coding Exercise

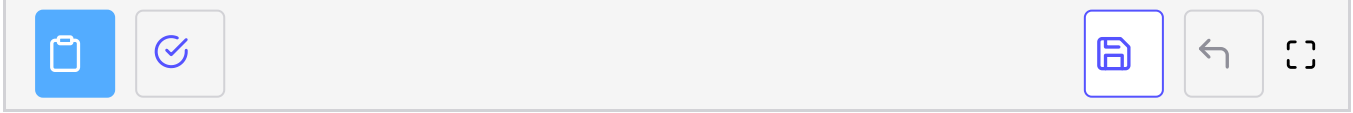
First, take a close look and design a step-by-step algorithm before trying the implementation. This problem is designed for your practice, so initially try to solve it on your own. If you get stuck, you can always refer to the solution provided in the solution review.

Good Luck!

```
class Rectangle:
    def __init__(self):
        pass

    def area(self):
        pass

    def perimeter(self):
        pass
```



The solution will be explained in the next lesson.