

## Rectangle Calculator 4.0

Create a program that calculates the area of a rectangle.

Note: **Bold** words are output while non-bold words are input in the following console sample.

### Console Sample

```
Rectangle Calculator 4.0

Enter the height: .5
Enter the width: .2

Perimeter: 1.4
Area: 0.1
```

### Specifications

- You have to define a class *Rectangle* with two private data members corresponding to the height and the width of rectangles.
- Declare and define a non-default constructor which requires two parameters corresponding to the two private data members respectively for the class *Rectangle*.
- Declare and define all the necessary getters and setters for private members in the class *Rectangle*.
- Declare and define a public member function in the class *Rectangle* to calculate the perimeter and return it as the result. The formula to calculate the perimeter of a rectangle is:  
**perimeter = 2 \* (height + width)**
- Declare and define a public member function in the class *Rectangle* to calculate the area and return it as the result. The formula to calculate the area of a rectangle is:  
**area = height \* width**
- Declare and define a public member function *display\_results()* in the class *Rectangle* to display all the results in the console as shown in the sample above.
- In the *main()*, you must first create a *Rectangle* object based on user's input and then call the member function *display\_results()* on the object. This's all you are allowed to do in the *main()*.
- The program should accept decimal entries like 35.5 and 14.25.
- Assume the user will enter valid data.