

Rectangle Class

Design and Implement the **Rectangle** class with the following properties, behaviors, and constructors:

- **Properties:**
 - The **private double** property **length**, which represents the length of the Rectangle. The default value of the length should be 1.
 - The **private double** property **width**, which represents the width of the Rectangle. The default value of the width should be 1.
 - The **private String** property **color**, representing the color of the rectangle. The color should have a default value of "red".
 - The **private** boolean value **fill**, indicating whether the rectangle is filled or not. The **fill** should have a default value of false.
- **Constructors:**
 - A no-arg constructor that does not alter the initialization of the Rectangle object
 - A constructor that takes length, width, color, and fill values as arguments and initializes the Rectangle object's properties with them.
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- **Behaviors:**
 - The Rectangle class should have the necessary public setters and getters to set and get all its properties
 - `setLength(double value), getLength()`
 - `setWidth(double value), getWidth()`
 - `setColor(String value), getColor()`
 - `setFill(boolean value), getFill()`
 - A public double method **getArea()**, that returns the area of rectangle
 - A public double method **getPerimeter()**, that returns the perimeter of the rectangle
 - A public String **toString() method**, that returns a String showing information about the Rectangle object. It should include the length of the legs the color, the area, and the perimeter
 - A public double **getDiagonal() method** that returns the length of the diagonal of the Rectangle.

Write a main method (in the same class or a separate class) that does the following:

- Creates a Rectangle with length = 3, width = 4, color = "blue", and fill = true
- Prints the info about the Rectangle returned from `toString()`
- Calls `getDiagonal()` on the Rectangle object and print the length of the diagonal