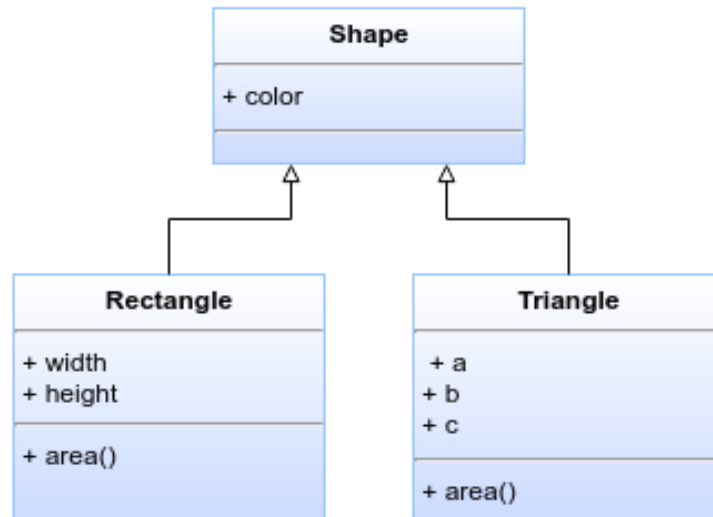


Homework

Create a class called Shape that will be the parent class for all the geometric shapes and which will define their common properties. All shapes have a color, using a string, that will be set through the constructor.

Create Triangle and Rectangle classes inherited from this class. Those classes should be able to calculate their own area. The class hierarchy is shown in the following UML diagram:



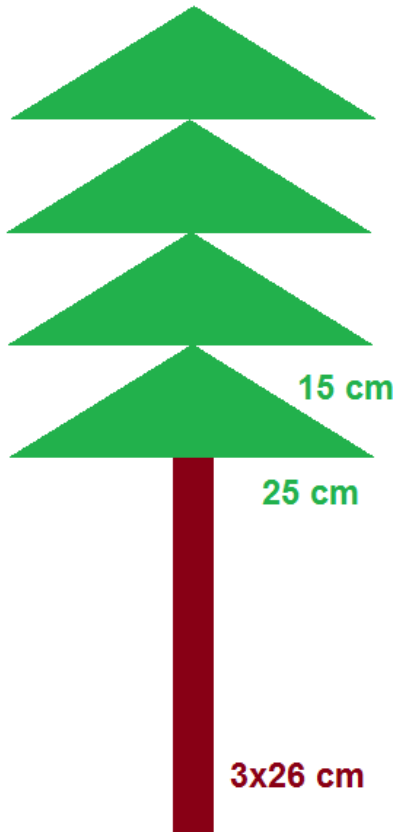
Use **Heron's formula** to calculate the area of the triangle:

Heron's formula enables us to compute the area of any triangle using based on the lengths of its sides. The first thing you will have to do is calculate the s (the small s). Once you have, the area of the triangle can be then calculated using the " s " value, like this:

$$s = \frac{a + b + c}{2}$$

$$S = \sqrt{s(s - a)(s - b)(s - c)}$$

Calculate the area of the image below using those classes:



Print on the terminal the color of the objects, their area and the total tree area.