**Coding challenge**

A Rust program is needed which completes three **implementations** for the **Area Trait’s “calculate\_area” method.**

Each Shape-like structure contains mixed data members that store its particular colour, dimension(s) and area, e.g.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Blue square  side length | green triangle  base length  height | red circle  radius |

**Design notes:**

* Create the three required structures.
* Implement the required methods using the correct arithmetic calculations.
* Create instances of each structure using appropriate initialisation values.
* Call each method and print its result.

**Extension Tasks**

* Create a test module and assert the accuracy of your Area Trait’s “calculate\_area” method on its respective structure using expected results.
* Create a default implementation (returning 0) for the Area Trait for Rectangles.
* Add suitable Rustdoc for all structures and implementations.