

## **Problem Statement**

Create an interface IShape

Attributes: area, colour, perimeter, type

Methods: calculate the area, calculate the perimeter, draw the shape

- Implement the following inheritance
  - Rectangle->IShape
  - Square->Rectangle
- Implement two draw methods which will take IShape and message as parameter resp. (Compile-time Polymorphism).
- Implement composition: Shape has a Renderer. Renderer is a class that contains draw methods.
- Implement runtime polymorphism in Square class by implementing the calculate area method.
- Please fill up Triangle and circle classes based on it
- Goal to be able to print the area and perimeter of Triangle and Circle
- Also, please complete the UML diagram of the whole project and revise the concepts, discuss with your friends their design