Problem Statement

You need the following entities:

Entity 1: Shape
Attributes: area, color, perimeter, type
Methods: calculate the area, calculate the perimeter, draw the shape

Entity 2: Rectangle
Attributes: height, width, perimeter, type
Methods: calculate the area, calculate the perimeter, draw the shape, display details

Entity 3: Square
Attributes: side
Methods: calculate the area, calculate the perimeter, draw the shape, display details

Entity 4: Circle
Attributes: radius
Methods: calculate the area, calculate the perimeter, draw the shape, display details

- Triangle, rectangle, and circle are shapes.
- You have to implement all the oops principles.
- Implement all the relationships, access modifiers, abstraction, etc.
- Please create the UML diagram before starting coding.