Assignment 12 - Interfaces

Objective: This assignment will help you understand how to define and implement interfaces in Java. You will learn how to apply interfaces in real-world scenarios, practice polymorphism, and understand the importance of interfaces in ensuring consistency across classes.

Problem: Shape Interface

1. **Create an interface** called `Shape` that includes:
   - An abstract method `double getArea()` that returns the area of the shape.
   - An abstract method `double getPerimeter()` that returns the perimeter of the shape.
2. **Implement two classes**:
   - `Circle`: This class should have a field for `radius` and implement the `Shape` interface.
     - Implement `getArea()` and `getPerimeter()` to calculate the area and perimeter of a circle.
   - `Rectangle`: This class should have fields for `length` and `width` and implement the `Shape` interface.
     - Implement `getArea()` and `getPerimeter()` to calculate the area and perimeter of a rectangle.
3. **Test the classes**:
   - In your `Main` class, create instances of both `Circle` and `Rectangle`.
   - Print the area and perimeter of each shape to verify your implementations.