Problem Statements Using Polymorphism

Problem Statement 1: Payment Processing System

Scenario: You are developing a payment processing system for an e-commerce platform. The platform supports multiple payment methods, including credit cards, PayPal, and cryptocurrency. Each payment method has its own way of processing transactions.

Requirements:

1. Create a base class called `PaymentMethod` with an abstract method `process_payment(amount)`.
2. Implement subclasses for each payment method:
   - `CreditCardPayment`
   - `PayPalPayment`
   - `CryptoPayment`
3. Each subclass should implement the `process_payment` method to provide specific logic for processing payments.
4. Write a function that takes a list of payment methods and processes a payment using each method.

Problem Statement 2: Shape Area Calculation

Scenario: You are tasked with creating a graphics application that needs to calculate the area of different shapes. The application should support various shapes such as circles, rectangles, and triangles. Each shape has its own formula for calculating area.

Requirements:

1. Create a base class called `Shape` with an abstract method `area()`.
2. Implement subclasses for each shape:
   - `Circle`
   - `Rectangle`
   - `Triangle`
3. Each subclass should implement the `area` method to provide the specific area calculation.
4. Write a function that takes a list of shapes and calculates the total area.