

Abstraction Example

Abstract Classes and Methods: In Python, you can create an abstract class using the 'abc' module. Abstract classes can have abstract methods, which are defined in the base class but must be implemented in derived classes.

In this example, the 'Shape' class is an abstract class with an abstract method 'area()'. Concrete classes like 'Circle' and 'Rectangle' must implement the 'area' method, enforcing abstraction.

```
from abc import ABC, abstractmethod

class Shape(ABC):
    @abstractmethod
    def area(self):
        pass

class Circle(Shape):
    def __init__(self, radius):
        self.radius = radius

    def area(self):
        return 3.14 * self.radius * self.radius

class Rectangle(Shape):
    def __init__(self, width, height):
        self.width = width
        self.height = height

    def area(self):
        return self.width * self.height

circle = Circle(5)
rectangle = Rectangle(4, 6)

print("Circle Area:", circle.area())
print("Rectangle Area:", rectangle.area())
```