

Rules for Abstract Classes

An abstract class in Python must follow these rules:

It must inherit from the ABC class or another abstract class.
It can define abstract methods with the @abstractmethod decorator.
It cannot be instantiated directly.

Creating a Project with Abstract Classes and Methods

When creating a project with abstract classes and methods, it's important to identify the common functionality that can be shared between multiple classes. By defining an abstract class with abstract methods, we can ensure that all child classes implement this common functionality.

Defining Abstract Classes and Methods in Python

To define an abstract class and method in Python, we can use the ABC class and the @abstractmethod decorator. Here's an example:

```
from abc import ABC, abstractmethod

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

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