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Polymorphism

Many Forms

Design Patterns for Web Programming
Web Design & Development Bachelor of Science Degree



Why?

Why do we need many forms?

- You will have two objects or two classes that will inherit from the same class. But if you need additional variation.
- A behavior in the sub class that overrides the super class's behavior.
- This overriding is called Polymorphism.



Why?

Why is Polymorphism useful?

- Inheritance is useful
 - Inheriting traits & behaviors
 - Reusability
- Flexibility is also useful
 - Lets you do the right thing at the right time.



When?

When will I need to use Polymorphism?

- Most of your functions wont override.
- Will be the exception
- Will probably occur naturally.





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Polymorphism

Practical Example

General

Player

Video Player

Audio Player

Streaming Video Player

Local Audio
Player

Cloud Audio
Player

Specific



Polymorphism in Python

Getters and Setters

```
class Player:  
    def __init__(self):  
        self.__playlist = []
```

```
    def play(self):  
        #code for playing audio and video
```

```
class AudioPlayer(Player):  
    def __init__(self):  
        super(AudioPlayer, self).__init__()
```

```
    def play(self):  
        #code for playing ONLY audio
```

This function
is overriding

