

Introduction to OOP

Object Oriented Programming
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Using Objects

- You have been using objects
 - `computer.beep(220)`
 - `list.append(item)`
 - `random.random()`
- General format is:
 - `noun.verb(adverbs)`
 - `object.method(arguments)`
- How could you make your own objects?

Instances

- When you create an item from a class, you make an “instance” of it
- `person1 = Person(“Doug”)`
`person2 = Person(“Sara”)`
- Class names usually start with an upper-case letter
- Instance names usually start with a lower-case letter, and sometimes end with a number

Constructor

- The code that runs when an object is created is put in a special method called the “constructor”
- In Python, the constructor method is named “__init__” (underscore, underscore, i, n, i, t, underscore, underscore)
- Methods are just functions, but are associated with a particular instance of a class
- The particular instance is typically referred to as “self” and always appears as the 1st argument

Object Oriented Programming

```
class Person:  
    def __init__(self, name):  
        self.name = name
```

```
p1 = Person("Dinah")  
p2 = Person("George")  
p1.name == p2.name
```

=> False

Object Oriented Programming

```
class Person:  
    def __init__(self, name):  
        self.name = name  
  
    def greet(self):  
        print("Hello")  
        print(self.name)
```

```
p1.greet()  
"Hello"  
"Dinah"
```

Assignment for Monday

- Create a class to keep track of your friends.
- Write a function to search through a set of your friends, and find the people that are male.
- Can you sort your objects based on height?
- Which people have names that start with vowels?