General Assembly

STUDY GUIDE

OBJECTS AND CLASSES

Key Terms and Definitions

- **Objects:** In Python, everything (lists, strings, integers, dictionaries, and even functions) is an object. The definition of an object is fairly generic: Objects are essentially elements that can be assigned to a variable and passed to a function as an argument.
- **Classes:** The "blueprint" of an object, which defines the structure of that type of object.
- **Instantiation:** An object based on a class's blueprint.
- **Class Attributes and Class Variables:** Shared by all instances of the class. To define a class attribute, it must be declared outside of any methods in the class definition.
- **Instance Variables:** Variables that are unique to a particular instantiation of a class. These are more commonly used than class variables.
- **Self Argument:** A required argument when defining methods for classes. The self argument is a reference to a future instantiation of the class.
- **Inheritance:** Allows one class to "inherit" characteristics from another class.

Guiding Questions

1. In what situations would you want to define your own class variable?
2. How do you decide which attributes should be class versus instance variables?
3. Why is the self argument so incredibly useful?

Additional Resources

1. Codecademy: Learn Python
    - See Section 11, "Introduction to Classes."
2. GA Classes Demo Video Part 1 and Part 2