### Challis Regan

### Exercise 1.5: Object-Oriented Programming in Python

#### Learning Goals

* Apply object-oriented programming concepts to your Recipe app

#### Reflection Questions

1. In your own words, what is object-oriented programming? What are the benefits of OOP?
   1. Object-oriented programming is a programming paradigm based on the concept of building objects, containing data and code, and organizing them with classes. OOP binds together the data and functions that operate on them, ensuring no other part of the code can access this data except that function. OOP makes code more efficient by keeping it non-repetitive and non-redundant.
2. What are objects and classes in Python? Come up with a real-world example to illustrate how objects and classes work.
   1. Almost everything in Python is an object,
   2. “Everything in Python is an object. can be broken down into the data they contain and into the methods you can use to interact with the data. Numbers, text, sequences, dictionaries”
   3. “build objects and organize them with classes.”
   4. “ Each object also has a corresponding type or **class**—that is, an overarching template describing an internal structure. One class may contain multiple corresponding objects.”
   5. “Almost everything in Python is an object, with its properties and methods. A Class is like an object constructor, or a "blueprint" for creating objects.”
3. In your own words, write brief explanations of the following OOP concepts; 100 to 200 words per method is fine.

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| --- | --- |
| **Method** | **Description** |
| Inheritance |  |
| Polymorphism |  |
| Operator Overloading |  |