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?
   In OOP the code is organized around objects rather than functions. Objects are instances of classes and classes include attributes and methods. OOP helps keep the code efficient and non-repetitive.

2. What are objects and classes in Python? Come up with a real-world example to illustrate how objects and classes work.
   In Python Objects are instances of classes, and classes are templates for objects. They define the data and behavior of the objects.
   An Example of a class can be “Book” class, in which the name of the book, the name of the author, Genre, year published, price are the attributes. And the methods of Book class can be: get_info(), get_price(), book_search() to search a books by author and objects are book1, book2, book3, etc

3. In your own words, write brief explanations of the following OOP concepts; 100 to 200 words per method is fine.

Method	Description
Inheritance	Properties and methods of a class can be inherited by subclasses to avoid copying the same code in all classes.
Polymorphism	When a data attribute or method has the same name in different classes but executes different operations.
Operator Overloading	The process of defining methods to use operators on a custom class is called operator overloading.