1. In your own words, what is object-oriented programming? What are the benefits of OOP?
    - Object-oriented programming is a programming concept that treats everything as objects with properties and methods. The benefits of using OOP is that it allows for less repeated code and results in more efficient coding.
2. What are objects and classes in Python? Come up with a real-world example to illustrate how objects and classes work.
    - Everything in Python is an object. Different objects can hold specific kinds of data and each has different methods you can use to interact with them. A class in Python is an overarching template that describes the internal structure of an object (or multiple objects). An real-world example of objects would be different kinds of flowers, while their corresponding real-world example of a class would be different of the flowers like their color, life-span, etc. and methods for growing said flowers.
3. In your own words, write brief explanations of the following OOP concepts.

Method	Description
Inheritance	Inheritance is when an object or class can inherit methods and properties used in another class into their own. Methods and properties can only be inherited from a parent class. Inheritance promotes the use of repeatable methods/functions, which makes it so that less code needs to be repeated and results in code being easier to read.
Polymorphism	Polymorphism is when a given attribute or method has the same name across different classes or data types but performs different operations depending on where it was defined. Using the previous example of flowers as objects, if you had a method for each flower called color and each flower returned a different color, then this won't raise an error in Python because of polymorphism.
Operator Overloading	Operator overloading is a process in Python that allows for the use of operators such as + and – which aren't supported in Python. To use these operators, you need to define a method or function with a name that Python already reserves for your operator and surround it with double underscores.