1. What are the four pillars of Object-Oriented Programming? Explain each pillar.
    a. Encapsulation
        i. Basically the idea is that you are not allowed to access specific fields or attributes unless you actually are interacting with a corresponding function. This prevents you from interacting with it incorrectly.
    b. Abstraction
        i. Basically you do not need to know how the ignition works on a car for your car to run. The idea is to separate out the code so one function does not do everything
    c. Inheritance
        i. The idea of inheritance is that an object might be a type of that object but that object is not an type of the original.
            1. Example a dog is an animal and has all the same things a animal has, but has differences from say a cat that is also an animal.
    d. Polymorphism
        i. The idea of this is that you can have functions of a parent class that is being inherited by a child the child has the same method but uses the method different than the parent.
    e. https://www.codingninjas.com/codestudio/library/four-pillars-of-oops#:~:text=The%20definition%20of%20data%20structures,make%20up%20these%20four%20pillars.
2. What is the relationship between a Class and an Object?
    a. The class is the structure for which an object is created. The object is an instance of the object. So timmy is a cat, cat is the class and timmy is the object.
    b. https://www.javatpoint.com/difference-between-object-and-class#:~:text=Object%20is%20an%20instance%20of,from%20which%20objects%20are%20created.&text=Object%20is%20a%20real%20world,a%20group%20of%20similar%20objects.
3. What is an exception and what are best practices for handling them?
    a. Exceptions are situations where you cannot actively prevent errors in your code because they come from outside your code. For example, you are trying to find a file on a computer, the file is not at the location. You need to have a way to exit your code gracefully without it bombing out or to be able to select something else.
    b. You do this by doing try catch blocks.

c. https://docs.oracle.com/javase/tutorial/essential/exceptions/definition.html#:~:text=Definition%3A%20An%20exception%20is%20an,off%20to%20the%20runtime%20system.