

1. What are the four pillars of Object-Oriented Programming? Explain each pillar.
 - a. Inheritance- allows the child properties to take on their parent properties
 - b. Polymorphism- condition of occurring in several different forms
 - c. Encapsulation- making specific code private makes things inaccessible if they aren't needed
 - d. Abstraction - hiding the implementation details inside of something

2. What is the relationship between a Class and an Object?

Class is like the parent of an object. An animal can be considered a class and a dog, cat, giraffe would be the objects of that class

3. What are the differences between checked and unchecked exceptions?

Checked Exceptions- checked exceptions are thrown at compile time. The method needs to handle the exception or specify using throws keyword

Unchecked Exceptions- don not get thrown during the compile. These the programmer needs to specify or catch the exceptions.

4. What are the differences between abstract classes and interfaces? When should you use one over the other?

Abstract class can contain both abstract and non abstract methods. Interfaces specifies methods that a class must implement. Use abstract classes for objects that are closely related. Interfaces when providing common functionality to unrelated classes

5. What is unit testing and why is it important?

Tests individual components in a program to make sure all individual parts are working as intended

<https://www.freecodecamp.org/news/four-pillars-of-object-oriented-programming/>

<https://pflb.us/blog/unit-testing-importance/>

#:~:text=Testing%20in%20PFLB-,Unit%20Testing%20Definition,software%20that%20can%20be%20tested.