Week 5 Research

What are the four pillars of Object-Oriented Programming? Explain each pillar.

- The four pillars are Inheritance, Encapsulation, Polymorphism, and Abstraction. Abstraction is the essential features that we know about while hiding the other details like what a square or rectangle is, but not knowing the length and height of it. Encapsulation hides the inner work of our code and only shows the public work of our code. Helps maintain your code and protects the code from others. Inheritance is like how the word is commonly used, which is like gaining the traits from your parents, but more. It allows objects or classes to inherit from parent classes. Polymorphism is something that can take different forms, so different methods can take different forms.

What is the relationship between a Class and an Object?

- An Object is an instance of a Class, where class is the blueprint or recipe and the object is the product that was made from the blueprint.

What are the differences between checked and unchecked exceptions?

- A checked exception is something we want to clearly check for in our code, something we don't have control over. An unchecked exception is something we have control over and don't check for in our code and can be avoided by properly coding.

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

- An interface does not define any method and only define the method signature, while in an abstract class you can have methods and limitations defined in that method. Use an interface when you know what the class implementing the interface will do.

What is unit testing and why is it important?

- Unit testing is a way of testing code and see if it is ready to use in production. It is an important step to go through in software developing.

What is your favorite thing you learned this week?

- My favorite thing I learned this week were interfaces. It was confusing at first, but once I started working on the coding assignment of this week it made a bit more sense and I was able to figure it out.

Citing

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