Introduction to

Object-Oriented Programming

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1. Explain the benefits of object-oriented programming.

Objects created in programs can be reused in other programs. Programmers can’t put false values on variables. For example, they can’t put the weight of a human as -100 pounds.

This style of programming lets programmers write large programs without big flaws. Object-oriented programming requires a lot of planning making it harder to make mistakes.

It is also easier to maintain an object-oriented program after it is built.

1. Discuss the difference between a class and an object.

Objects belong in classes and also referred to as an instance of a class. The class is kind of like an identifier of the object. For example, say I named a class Car Companies, then objects of this would be Toyota, Honda and Mercedes.

1. Discuss the difference between properties and methods of a class.

Methods are pieces of codes that can be used over and over again, and they reside in classes.

1. What is code reuse? How does it relate to inheritance?

Code reuse is the use of coding software to build new software. Inheritance lets new objects take the properties of older objects.

1. What is polymorphism? How does it relate to methods?

Polymorphism is the ability of a language to process objects of various types and classes. There are two types: compile (static binding) and run (dynamic binding) time. Polymorphism is also the capability of a method to do different tasks based on objects.

1. Explain how the concepts of encapsulation and delegation a), relate to each other and b), how they differ from each other.

Encapsulation is the building of data from methods based on objects and delegation is when you can create a different object to finish a task dynamically.