

4 Lecture - CS304

Important Subjective

1. **What is inheritance in object-oriented programming?**

Answer: Inheritance is a mechanism that allows new classes to be based on existing classes, inheriting their properties and methods.

What is the difference between a superclass and a subclass?

Answer: A superclass is a class that is inherited by another class, while a subclass is a class that inherits from another class.

How does inheritance promote code reuse?

Answer: Inheritance promotes code reuse by allowing a subclass to inherit properties and methods from its parent class, reducing the need to write duplicate code.

What is method overriding in inheritance?

Answer: Method overriding is when a subclass provides its own implementation of a method that is already defined in its parent class.

What is the difference between method overriding and method overloading?

Answer: Method overriding is when a subclass provides its own implementation of a method that is already defined in its parent class, while method overloading is when a class has multiple methods with the same name but different parameters.

What is the purpose of access modifiers in inheritance?

Answer: Access modifiers in inheritance control the visibility of inherited members, allowing subclasses to access or modify inherited properties and methods according to their accessibility.

What is polymorphism in inheritance?

Answer: Polymorphism in inheritance is the ability of objects of different classes to be treated as if they are of the same type, allowing them to be used interchangeably.

What is the difference between single and multiple inheritance?

Answer: Single inheritance is when a subclass inherits from only one parent class, while multiple inheritance is when a subclass inherits from multiple parent classes.

What are the advantages of using inheritance in object-oriented programming?

Answer: Advantages of using inheritance include reduced code redundancy, easier maintenance, increased modularity, and the ability to achieve polymorphism.

What are some potential drawbacks of using multiple inheritance?

Answer: Potential drawbacks of using multiple inheritance include increased complexity and ambiguity, the possibility of naming conflicts, and difficulty in maintaining and understanding the code.