

14 Lecture - CS304

Important Mcqs

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

- a) A way of creating complex objects by combining simpler objects or data types
- b) A way of inheriting properties and behaviors from a parent class
- c) A way of creating objects from a template or blueprint

Answer: a

In composition, which class contains an instance of another class as a member variable?

- a) The parent class
- b) The child class
- c) Both classes

Answer: b

Which symbol is used to denote composition in a UML class diagram?

- a) A solid line with an arrow pointing to the contained class
- b) A dashed line with an arrow pointing to the contained class
- c) A solid line connecting the two classes

Answer: b

What is the purpose of using composition in object-oriented programming?

- a) To create objects with complex behavior
- b) To simplify the implementation of inheritance
- c) To create objects with a strong is-a relationship

Answer: a

How does composition differ from inheritance?

- a) Composition is a type of association between classes, while inheritance is a way of inheriting properties and behaviors from a parent class
- b) Composition is used to create a strong is-a relationship between classes, while inheritance is used to combine behaviors from multiple classes
- c) Composition and inheritance are identical concepts

Answer: a

Which keyword is used to define a composition relationship in C++?

- a) extends
- b) implements
- c) none

Answer: c

What happens to the contained object when the containing object is destroyed in composition?

- a) The contained object is destroyed automatically
- b) The contained object remains alive
- c) It depends on how the composition is implemented

Answer: a

Can a class have multiple instances of another class as member variables in

composition?

- a) Yes
- b) No
- c) It depends on the programming language being used

Answer: a

Which of the following is an example of composition in real-world objects?

- a) A car's engine and transmission
- b) A car and a truck
- c) A car's tires and brakes

Answer: a

Which of the following is not a benefit of using composition in object-oriented programming?

- a) Encapsulation of behavior and data
- b) Code reuse
- c) Simplified implementation of inheritance

Answer: c