

# 22 Lecture - CS304

## Important Subjective

1. **How is inheritance implemented in C?**

Answer: Inheritance in C is implemented using structures and function pointers.

**What is the difference between a base class and a derived class?**

Answer: A base class is a class from which other classes are derived, while a derived class is a class that inherits properties and methods from the base class.

**How is a derived structure defined in C?**

Answer: A derived structure in C is defined using the syntax "struct Derived : public Base {}".

**What is the purpose of inheritance?**

Answer: The purpose of inheritance is to achieve code reusability and simplify the creation of new classes with similar functionality to existing classes.

**What is multiple inheritance?**

Answer: Multiple inheritance is a type of inheritance in which a derived class can inherit from multiple base classes.

**How do you call the constructor of the base class from the derived class constructor?**

Answer: The constructor of the base class can be called from the derived class constructor using the "base" keyword.

**What is hierarchical inheritance?**

Answer: Hierarchical inheritance is a type of inheritance in which a new class is created that inherits from a base class, and then another class is created that inherits from the new class.

**What are the benefits of inheritance?**

Answer: The benefits of inheritance include code reusability, improved maintainability, and reduced coupling.

**What is function overriding in inheritance?**

Answer: Function overriding in inheritance is when a derived class defines a method with the same name and signature as a method in the base class, effectively replacing the method in the base class.

**How does inheritance relate to polymorphism?**

Answer: Inheritance and polymorphism are related in that polymorphism is achieved through inheritance, specifically through the use of function overriding.