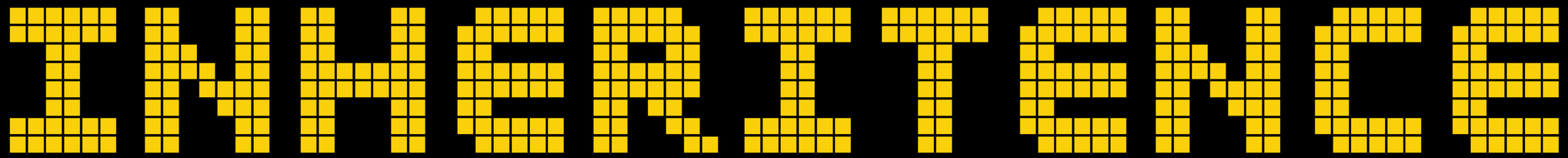
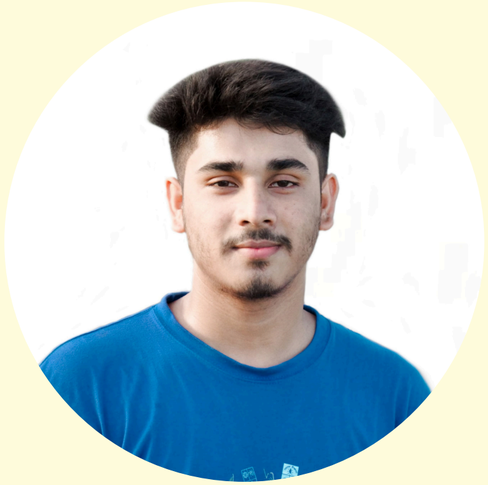

INHERITENCE



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Topics to be Covered

- What is Inheritance?
- Why is inheritance important?
- Types of Inheritance
- Method Overloading and Overriding
- Examples

WHAT IS INHERITANCE ?

Inheritance is an OOP feature where one class (child/subclass) inherits properties and behaviors (methods) from another class (parent/superclass).

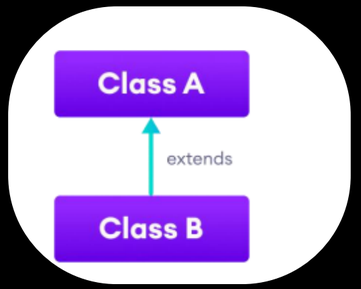
WHY INHERITANCE IS IMPORTANT?

- Reduces code duplication.
- Easier maintenance.
- Promotes code reusability.
- Supports polymorphism and method overriding.

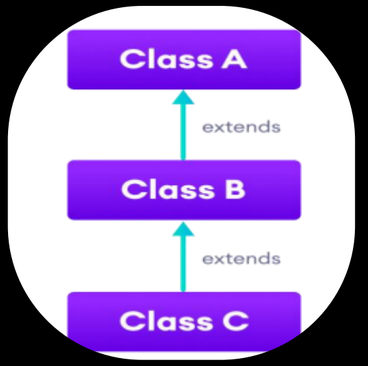
TYPES OF INHERITANCE

There are five types of inheritance.

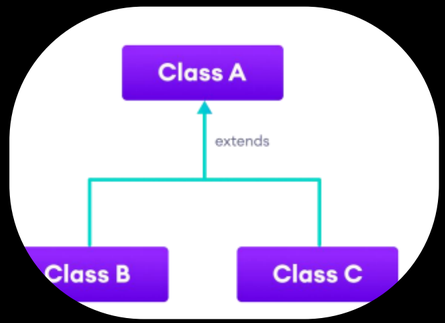
1. Single Inheritance: A subclass inherits from a single parent class.



2. Multilevel Inheritance: A subclass inherits from a class, which itself inherits from another class.

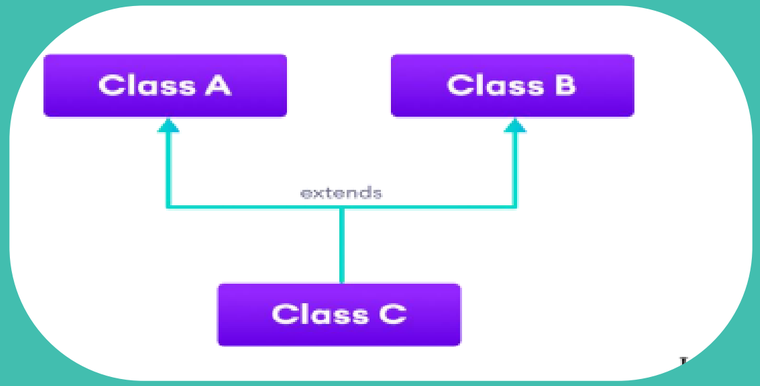


3. Hierarchical Inheritance: Multiple classes inherit from the same parent class.

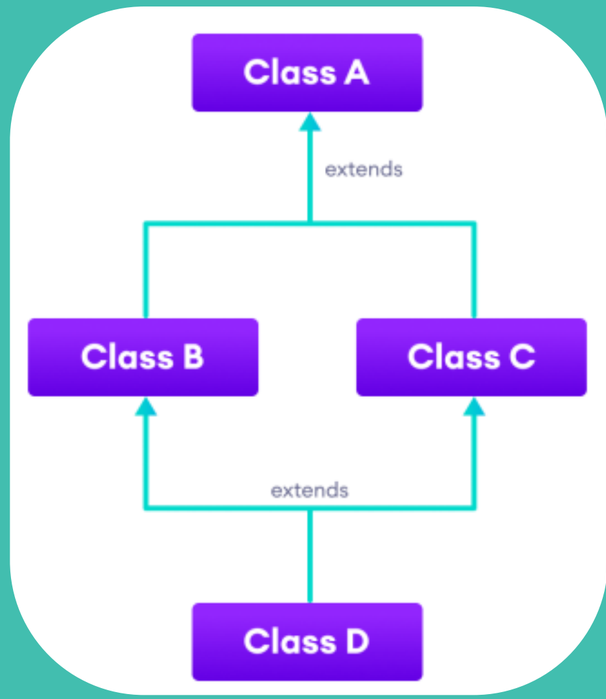


TYPES OF INHERITANCE

4. Multiple Inheritance: In Multiple inheritance, one class can have more than one superclass and inherit features from all parent classes. Please note that Java does not support multiple inheritance with classes. In Java, we can achieve Multiple inheritances only through Interfaces.



5. Hybrid Inheritance: Hybrid inheritance is a combination of two or more types of inheritance.



METHOD OVERRIDING VS OVERLOADING

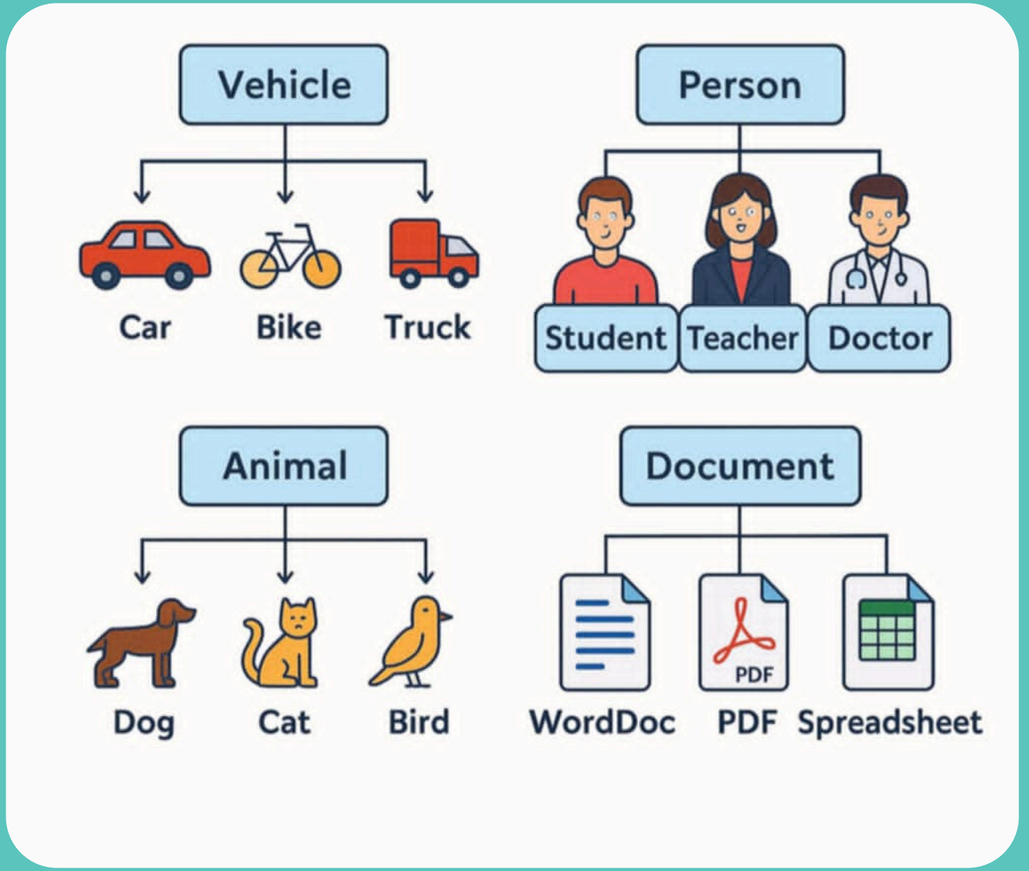
Overriding: Redefining a method from the parent class in the subclass.
Overloading: Defining multiple methods with the same name but different parameters.

REAL-LIFE EXAMPLES

Vehicle → Car, Bike, Bus

Employee → Manager, Developer, Intern

Shape → Circle, Square, Rectangle



THANK YOU