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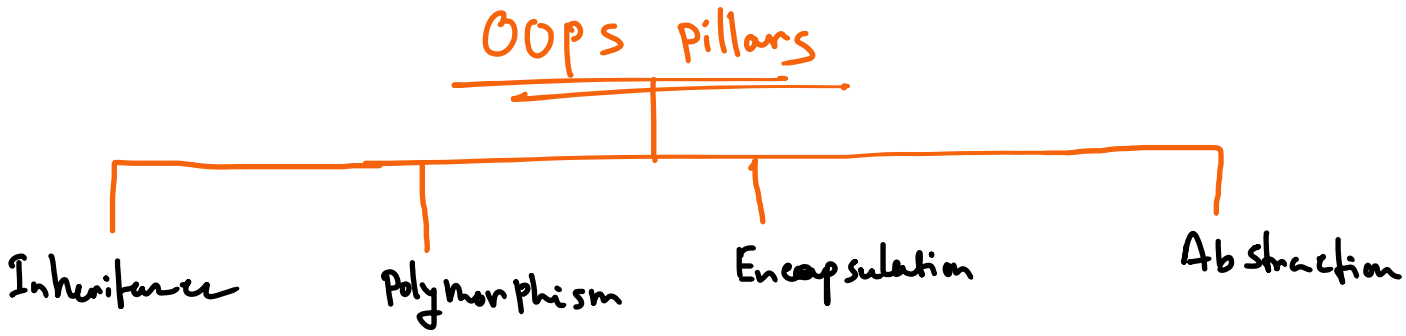


Inheritance:

Java, Inheritance is an important pillar of OOP(Object-Oriented Programming). It is the mechanism in Java by which one class is allowed to inherit the features(fields and methods) of another class. In Java, Inheritance means creating new classes based on existing ones. A class that inherits from another class can reuse the methods and fields of that class. In addition, you can add new fields and methods to your current class as well.

Polymorphism:

The word polymorphism means having many forms. In simple words, we can define Java Polymorphism as the ability of a message to be displayed in more than one form. In this article, we will learn what is polymorphism and it's type.

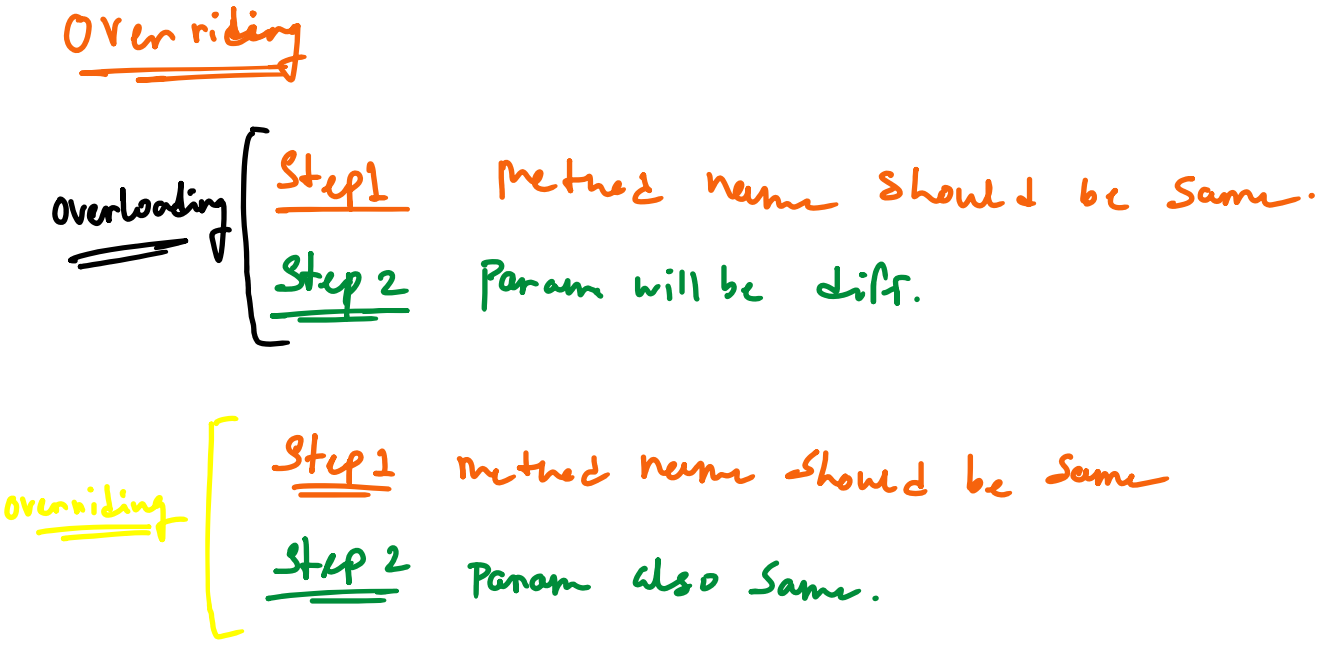
Real-life Illustration of Polymorphism in Java: A person at the same time can have different characteristics. Like a man at the same time is a father, a husband, and an employee. So the same person possesses different behaviors in different situations. This is called polymorphism.

Encapsulation:

Encapsulation in Java is a fundamental concept in object-oriented programming (OOP) that refers to the bundling of data and methods that operate on that data within a single unit, which is called a class in Java. Java Encapsulation is a way of hiding the implementation details of a class from outside access and only exposing a public interface that can be used to interact with the class.

Abstraction:

Abstraction is a process of hiding implementation details and exposing only the functionality to the user. In abstraction, we deal with ideas and not events. This means the user will only know "what it does" rather than "how it does".



Example

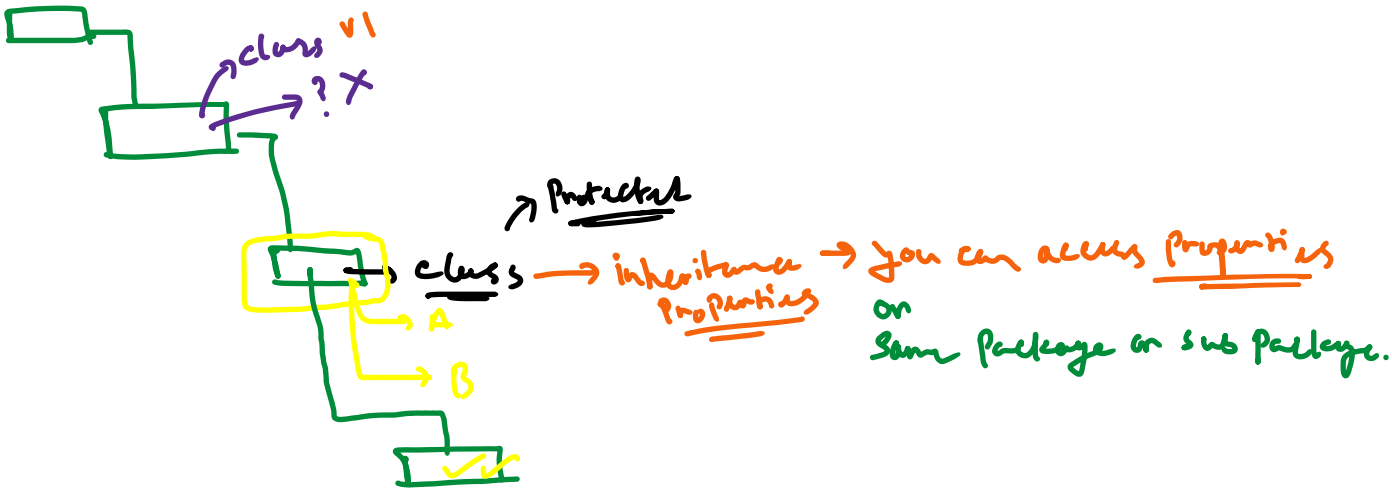
```
class Bird1 {

    void fly();

}
class Bird2 extends Bird1{

    void fly(){    }

}
```

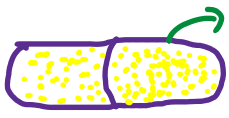
Encapsulation

Private, Public, protected, default.

- Private → in class
- Public → any one can Access

Package Structure

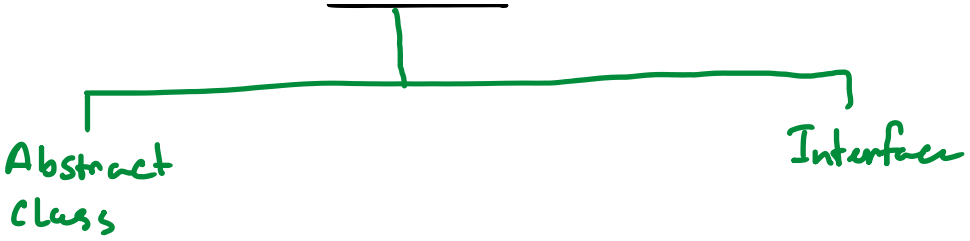




```
Class A {
    Private String name;
    Private String address;

    Public A (String name, String address){
        this.name = name;
        this.address = address;
    }

    Public String getName(){
        return this.name;
    }
    Public String getAddress(){
        return address;
    }

    Public void setName(String name){
        this.name = name;
    }
    Public void setAddress(String address){
        this.address = address;
    }
}
```

class Properties

Abstraction



Hide the Implementation of that method.