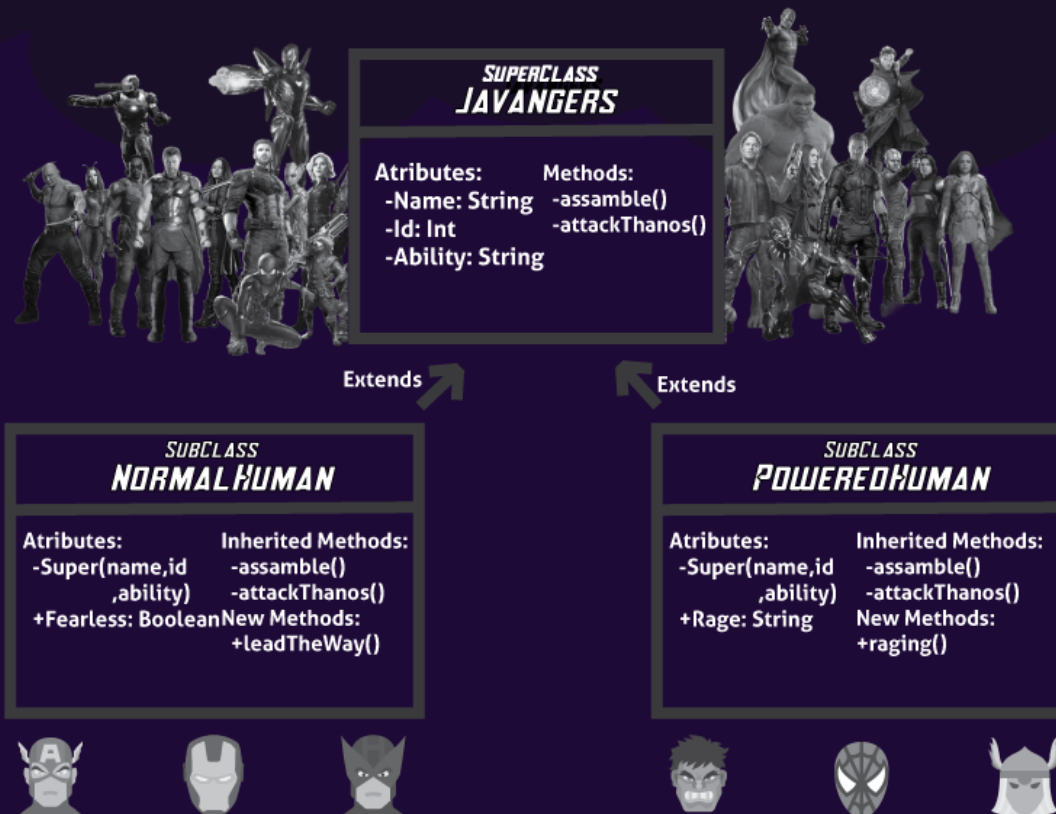




JAVANGERS



INHERITANCE

INHERITANCE is an important pillar of OOP(Object Oriented Programming). It is the mechanism in java by which one class is allow to inherit the features(fields and methods) of another class.

How to: `public class NormalHuman extends Javangers{`
 * It means that NormalHuman Class Inherit Javanger Class

```

public NormalHuman(String name, int id, String ability, boolean fearless){
    Super(String nama, int id, String ability); // Superclass Construtor
    this.fearless = fearless; // Self constructor
}
  
```

*NormalHuman Class as a Subclass can Inherit its Superclass atribut and constructor but it can make its own constructor and atribut too

```

@Override //SuperClass Method
public String attackThanos(){
    System.out.printf("I'm %s from The Javangers, will kill you Thanos!"
        , this.name); }
public String leadTheWay(){ // This Class Method
    System.out.printf("I'm %s will lead the way for you!", this.name); }
  
```

*as well as the method, but with Overriding if you want make same method with same return value and parameter

So: If you have several classes with same attribute and method and with a suitable hierarchy just like the example above you can use **Inheritance**, that will simplify your code and your work.

POLYMORPHISM

POLYMORPHISM is the ability of an object to take on many forms. The most common use of polymorphism in OOP occurs when a parent class reference is used to refer to a child class object.

How to: `// Down-Casting`
`Javangers ironMan = new NormalHuman();`
`Javangers thor = new PoweredHuman();`
`// Up-Casting`
`NormalHuman downCast = new Javangers();`
`PoweredHuman downCast1 = new Javangers();`

Down-casting: Converting a superclass type to a subclass type is known as downcasting.

Up-casting: Converting a subclass type to a superclass type is known as up casting.

```

public String attackThanos(Javangers javangers){}
  
```

*only accepts Javengers type parameters

So: When there is a method that accepts only certain types of objects like the method attackThanos above and you want to run methods but with different type of objects you can cast the object to match the parameters, as long as they have the same interface.