

## Java Inheritance Notes

### Inheritance

super.  
super(...)  
extends  
implements  
interface  
abstract class  
subclass  
UML class diagram  
protected  
decomposition

### Composition

Is-a  
Has-a  
instanceof  
override  
method signature  
@Override  
overload  
polymorphism

### Questions to answer:

What is the first line of a sub class constructor?

How many classes can you inherit from in Java

What is the root class of all Java classes?

When can the constructor call and the Type be different? Give an example

What method is called if a subclass does not override the parent classes method

What method is called if a subclass does override the parent class method

Do you need to call super.XXXXXX(...) in an overridden method?

Is there a rule about when to call super.XXXX() in a subclass' method(s)?

When should you define a class as abstract?

Can an abstract class have a constructor?

Can you refer to an abstract classes constructor?

Does a subclass need to be in the same package?

Do you need to import the parent class?

What is the difference between an interface and an abstract class?

Can you instantiate an interface?

When does it make sense to define an interface?

What visibility is required for interface methods (before Java 10)

Can a parent class refer to its subclass?

What is inherited by a subclass

What are the two Java built-in classes that we use that cannot be inherited from?

How can you call the parent class method and the subclass method in the same file?

How can you store similar Types?

What is the biology analogy for inheritance?