

Inheritance :

It is one of the pillars of Object Orientation.

It always speaks about reusability.

In java inheritance is achieved through the "extends" keyword.

Inheritance is the process of one class acquiring properties(Fields) and behaviour(methods) of another class.

It is also referred to as a writing project as a hierarchy of classes rather than a single class.

Important points to be noted:

- Private members of a class do not participate in Inheritance.
- Constructor will not get inherited but it will get executed because of super() call present in child class Constructor.
- Single Inheritance is allowed (One class extending another class)
- Multilevel Inheritance is Allowed
- Multiple Inheritance is not permitted. It will lead to ambiguity to compiler also to the Diamond shape problem.
- Cyclic Inheritance is not permitted.
- Hierarchical Inheritance is allowed. (One class can have multiple child classes).

Parent class== Existing class== Base class== Super class

Child class== Derived class== Subclass

This relationship also known as is - A relationship.

Inherited Methods vs Overridden methods vs Specialized method

Inherited Method : Such method which is inherited from parent class to child class and used as it is in child class without any modification.

Overridden method : Such method which is inherited from parent class to child class and modified in child class to meet child class requirement.

Specialized method : Such method which is present only in child class but not in parent class.

Upcasting vs Downcasting:

Upcasting : Creating Parent type reference for child type Object.

It will achieve loose coupling best suited for polymorphism.

Downcasting : Temporarily converting parent type reference to child type so that specialised method of child class can be accessed.

Note : This note will help to answer questions in an interview and also will act like a summary only if you attend live class or watch live class recording. Kindly watch live class recording and treat it as a summary.