

## FAQs

1) Is multiple inheritance supported in Java?  
How is it achieved?

→ Java does not support multiple inheritance using classes to avoid ambiguity. However, it is achieved using interfaces, where a class can implement multiple interfaces.

2) What is [Is-A] relationship in Java?

→ An Is-A relationship means that an object is a type of another object.

It represents inheritance

Eg - If class B extends class A then  
B is an A.

- InternEmployee is an employee
- Dog is an animal

3) Are constructor & instance initialization block inherited to subclasses?

→ No, constructors & instance initialization blocks are not inherited by subclasses. However a subclass can call the superclass constructor using the super() keyword.

3)

Types in inheritance? :- methods modified

→ Single inheritance → managing a single

Multilevel inheritance → hierarchical inheritance

Hierarchical inheritance → scale based

Multiple inheritance → overlapping class

Hybrid inheritance → scale based in

ext. multiple inheritance e.g. steelcase view

→ Algorithm follows  $\text{rectangle} \times \text{rectangle}$

1) Start

2) Create a base class employee with salary

variable & display method.

3) Create derived class fulltimeemployee extending

employee with extra job tasks at

4) Create derived class internemployee extending

employee

5) Implement calculateSalary() in derived

classes with respective tasks.

6) Create objects of derived classes

Display salary before & after tasks

7) Stop. Encapsulated classes with private

variables obviates

Conclusion

Thus we have successfully implemented  
using of inheritance in Java.

## Assignment - 2

→ Problem Statement :-

Write a program in Java showing hierarchical inheritance with base class as Employee & derived classes as full-time employee & Intern employee with displaySalary in base class & calculateSalary in derived classes. calculateSalary method will calculate as per increment given to fulltime & intern employees.

→ Objective

- 1) To study inheritance in Java & Hierarchy
- 2) To study why to use inheritance (advantages)
- 3) To study types of inheritance

→ Theory

- 1) What is inheritance in Java framework?
- Inheritance is a mechanism in Java where one class (class / subclass) acquires the properties & methods of another class (parent / superclass) using the extends keyword. It promotes code reusability.

2) Why to use inheritance?

- Avoids code duplication
- Improves code reusability
- Support method overriding
- Make code easy to maintain
- Represents real-world relationships.