Inheritance: It is a java mechanism in which one object acquires the properties and behavior of a parent object.

-Parent-child relationship. Is -A

Why used:-

- We can create new classes based / built upon existing classes.(code reusability)
- Method overriding

Terms used :- Class, sub class, super class, extends

Ex: Class A- test(), Class B - test(){….}

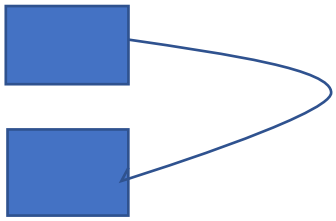
Terminologies:- Parent Class /Base class/Super Class - Child class /Derived class/Sub class acquiring properties: it will be able to access variables and methods

- Keyword extends works for inheritance

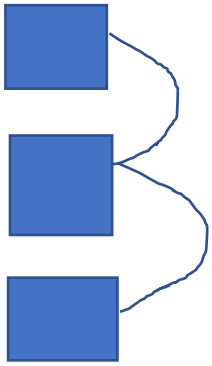
- Class A, Class B extends Class A

Types of Inheritance:

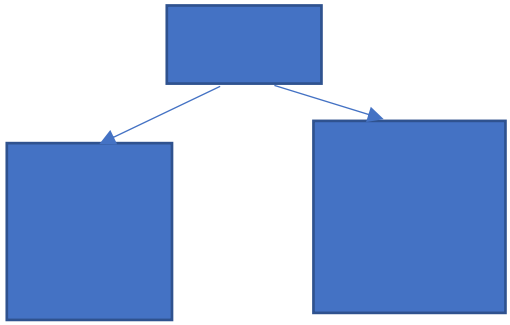
1. **Single Inheritance:**- one sub class acquires the property of super class. 2 classes are mandatory.



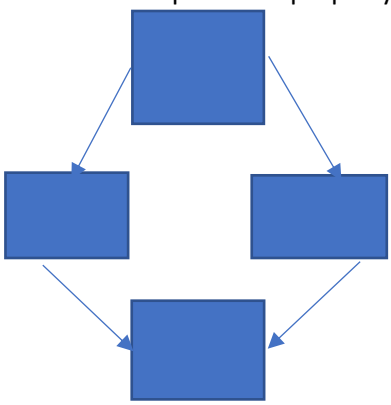
2. **Multi-level Inheritance:**- one sub class can acquire the property of super class which also acquires the property of another super class. Atleast 3 classes are mandatory.



3. **Hierarchical Inheritance:-** when multiple sub classes extends one super class.



4. **Multiple Inheritance:-** one subclass acquires the property of multiple super classes.



'Object' is the supermost class in Java.

5. **Hybrid Inheritance: -** single + multiple inheritance