

OOP Concepts

- Class
- Objects
- Polymorphism
- Encapsulation
- Inheritance
- Data Abstraction

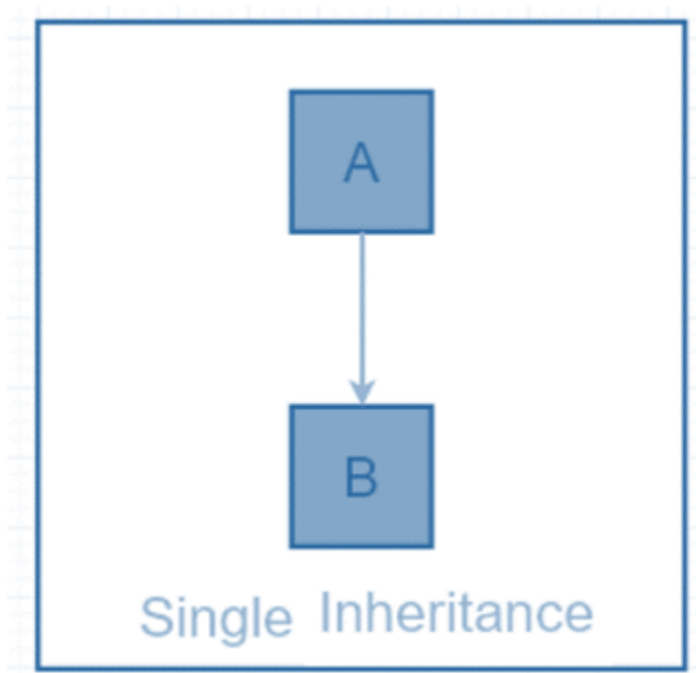
1 **Class:** A class is a collection of objects. A class contains the blueprints or prototype from which the objects are being created.

2 **Objects:** The object is an entity that has a particular behavior following a specific object.

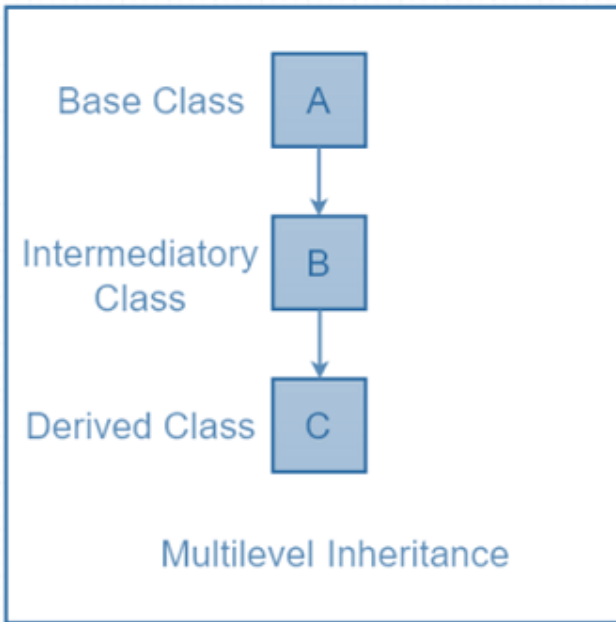
3 **Inheritance:** It is the ability of one class i.e. child class to inherit the properties of the another class

Types of Inheritance:

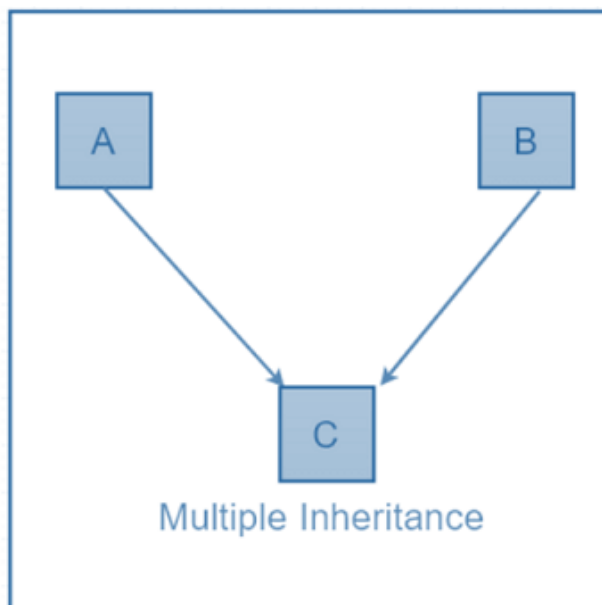
a)Single Inheritance: In single inheritance there is only one parent and child class



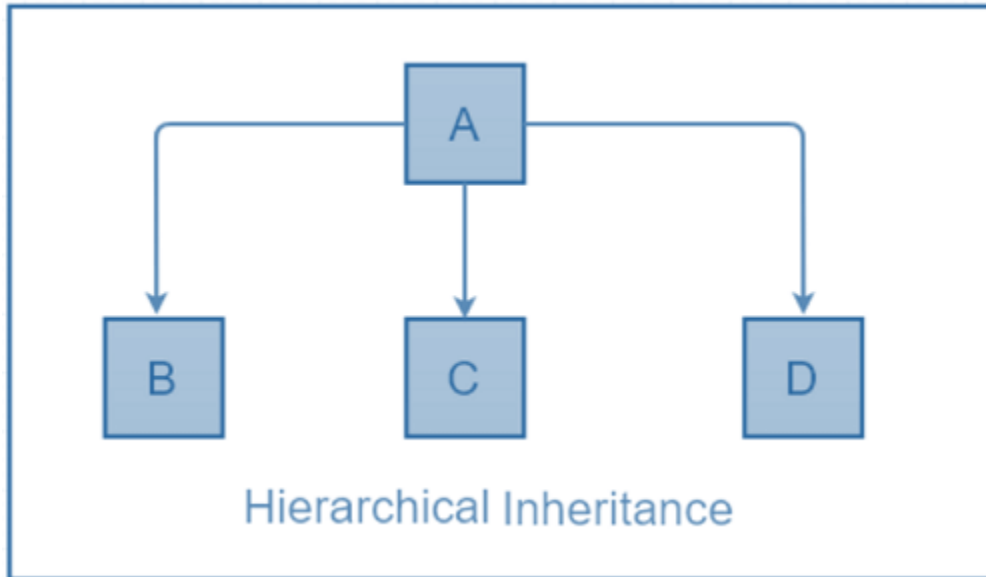
b) Multilevel Inheritance: In multilevel there are more than one sub class



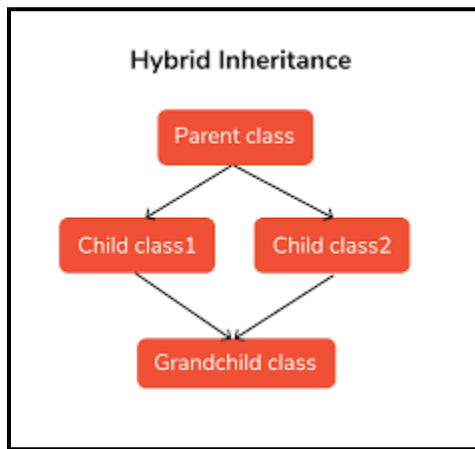
c) Multiple Inheritance: In multiple inheritance there are two parent class and one child class



d) Hierarchical Inheritance: It enables more than one child class to inherit the properties from a parent class.



e) Hybrid Inheritance: It is a combination of more than one inheritance.



Constructors

They are generally used for instantiating an object. It initialize members of class when an object is created.

Syntax: `__init__(self):`