# Introduction to Inheritance:

\* Inheritance is a part of object-oriented programming and reusability is a very important feature of OOPS.

\* The concept of Reusability in C++ is supported using Inheritance.

\* Inheritance helps you reuse any code which you have written in classes.

\* Repetition of code is bad practice while coding, whenever you're writing any code that you have already written then you're violating DRY (Don't Repeat Yourself) principle of coding.

\* Reusing classes saves time and money.

\* Reusing already tested and debugged class will save a lot of effort of developing and debugging the same thing again.

\* We can reuse the properties of an existing class by inheriting from it.

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# Some Common Terminologies in Inheritance:

\* The existing class is called as the "Base Class" or "Parent Class".

\* The new class which is inheriting the "Parent Class" is called as the "Derived Class" or "Child Class".

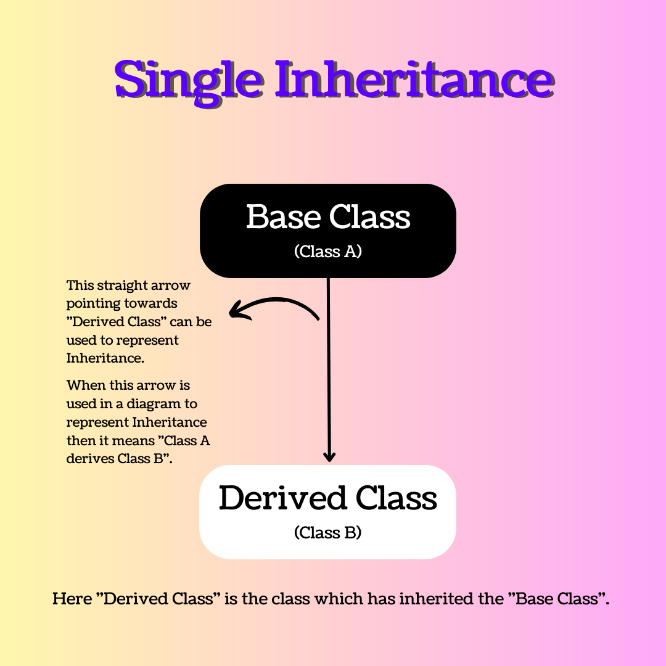
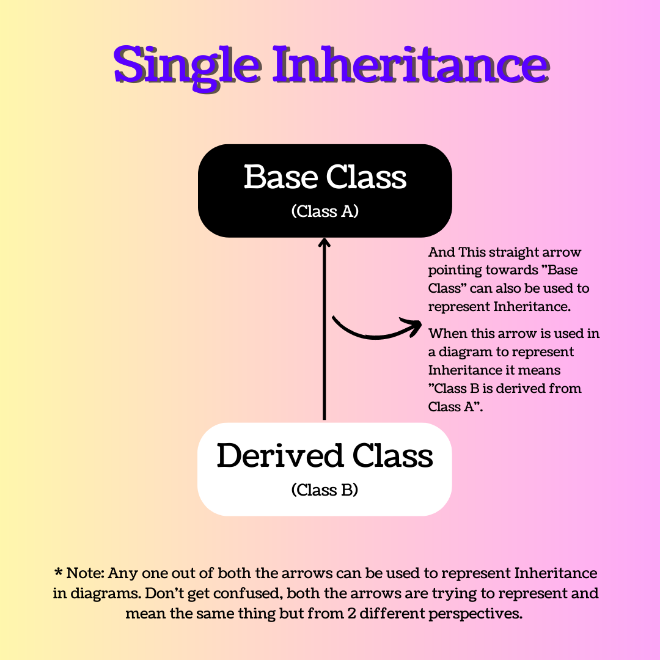
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* TYPES OF INHERITANCE --->

# Types of Inheritance:

(i) Single Inheritance:

---> A derived class with only one Base Class

(ii) Multiple Inheritance

---> A derived class with more than one Base Class

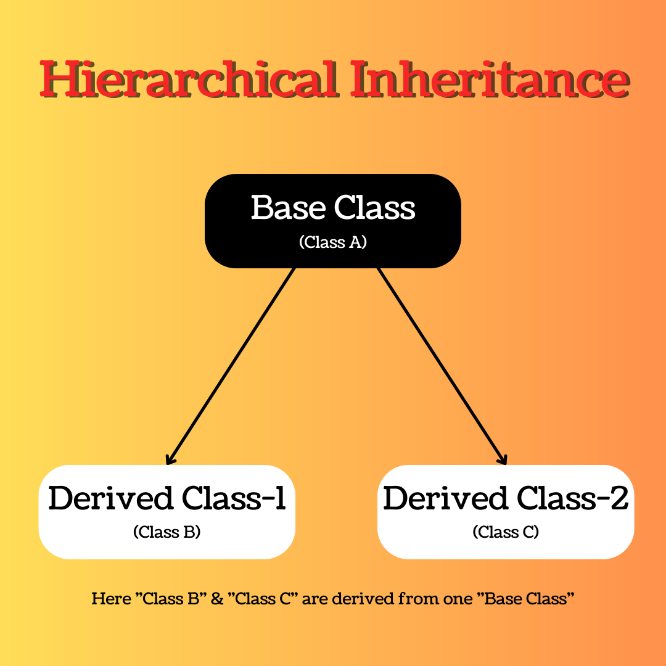
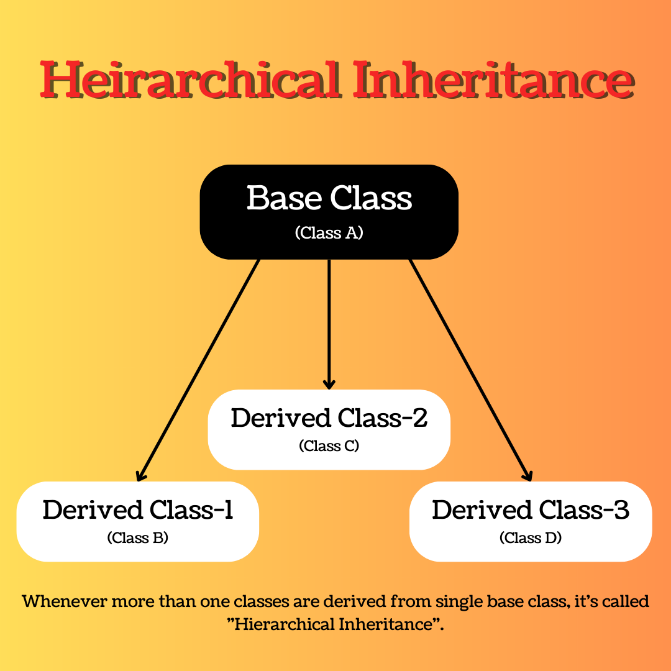
A diagram of a class

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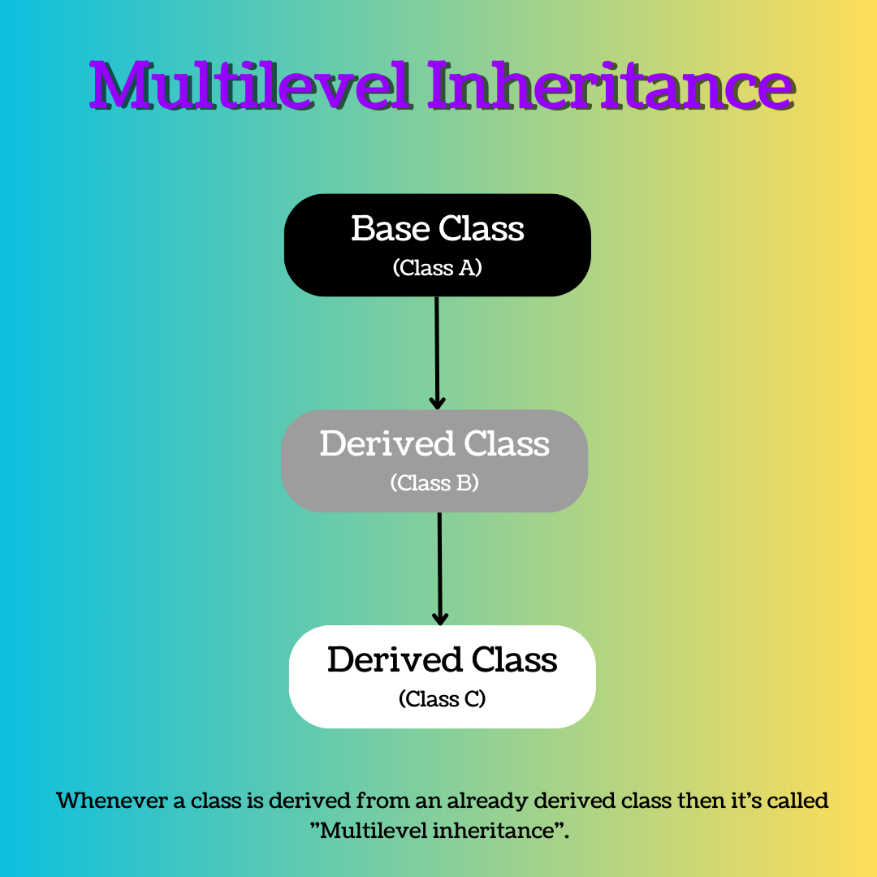
(iii) Hierarchical Inheritance

---> Several Derived classes from a single Base Class

(iv) Multilevel Inheritance

---> Deriving a class from an already Derived Class



(v) Hybrid Inheritance

---> The process of combining more than one type of Inheritance together while deriving subclasses in a program is called a Hybrid Inheritance.

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