
INHERITANCE

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INTRODUCTION

- ❑ Inheritance allows us to define a class in terms of another class, which makes it easier to create and maintain an application.
- ❑ This existing class is called the **base class**, and the new class is referred to as the **derived class**.

INHERITANCE

Base and Derived Classes:

- ❑ A class can be derived from more than one classes, which means it can inherit data and functions from multiple base classes.

Syntax:

class derived-class: access-specifier base-class

Eg: class B : public A

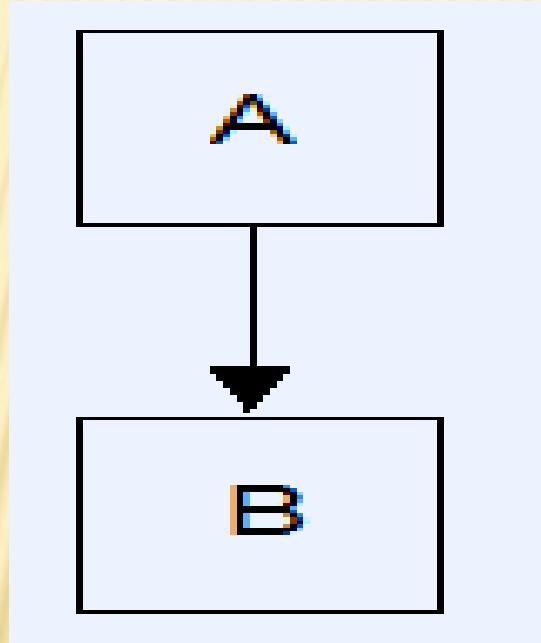
INHERITANCE TYPES

C++ supports five types of inheritance as follows:

- ✗ Single Inheritance
- ✗ Multilevel Inheritance
- ✗ Multiple Inheritance
- ✗ Hierarchical Inheritance
- ✗ Hybrid Inheritance

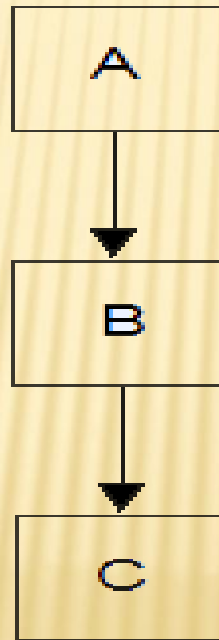
SINGLE INHERITANCE

- ✖ A derived class with only one base class is called **single inheritance**.



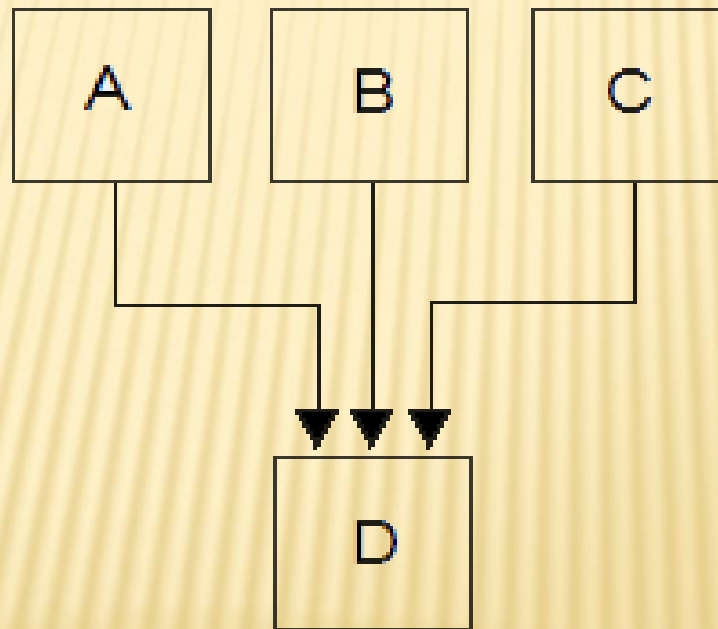
MULTILEVEL INHERITANCE

- ✘ A derived class with one base class and that base class is a derived class of another is called **multilevel inheritance**.



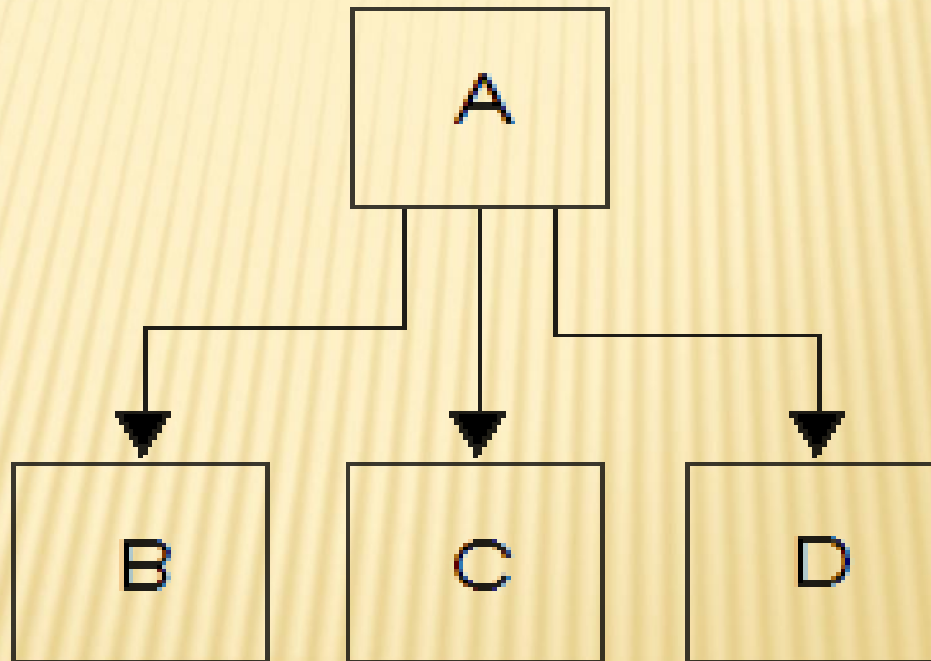
MULTIPLE INHERITANCE

- ✗ A derived class with multiple base class is called **multiple inheritance**.



HIERARCHICAL INHERITANCE

- ✖ Multiple derived classes with same base class is called **hierarchical inheritance**.



HYBRID INHERITANCE

- ✖ Combination of multiple and hierarchical inheritance is called **hybrid inheritance**.

