Inheritance : Deriving features of one class to other class

The class from which we derive features is k.a parent class / super class /base class

The class into which features are derived is k.a child class / sub class / derived class

Advantage :Code Reusability , reduces efforts, cost

Syntax for Inheritance :

class base {}

class child class : base class

Types of Inheritance

1. Single Inheritance

A

4. Multiple Inheritance / Hybrid Inheritance : More than 1 class into other class

This is not supported in C# through classes because of Ambiguity problem

Diamond problem

The "**diamond problem**" (sometimes referred to as the "Deadly **Diamond** of Death") is an ambiguity that arises when two classes B and C **inherit** from A, and class D **inherits** from both B and C. ... It is called the "**diamond problem**" because of the shape of the class **inheritance** diagram in this situation.

This problem is solved through Interface

B

1. Multilevel Inheritance

A

B

C

A

3. Hierarchial Inheritance

B

C

3.