

Assignment -

Q1 What is Inheritance

Ans Inheritance is a mechanism of acquiring the features & behaviors of a class by another class. The class whose member are inherited is called the base class, and the class that inherits those member is called the derived class.

Q2 What are the visibility modes? Explain

Ans There are 3 types of Visibility Modes in C++

- 1 Public
- 2 Private
- 3 Protected

1. Public :- The member declared as Public are accessible from outside the class through an object of the class

2. Protected :- The member declared as Protected are accessible from outside the class but only in a class derived from it.

3 Private :- The members are only accessible from within the class. No outside Access is allowed

Syntax:-
{

private : // private member goes here

public :- // public member goes here

protected : // protected member goes here

Example

```
class abc  
{
```

```
    public:
```

```
        int a;
```

```
    protected:
```

```
        int b;
```

```
    private:
```

```
        int c
```

```
};
```

```
void main()
```

```
{
```

```
    abc obj @
```

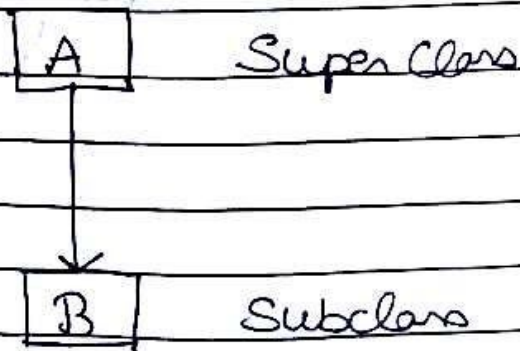

Obj. a = 10; // Allowed
obj. b = 20; // Not Allowed, gives error
obj. c = 30; // Not Allowed, gives error

Q3 Explain the types of Inheritance with a suitable diagram.

Ans The various type of Inheritance these are provided by C++

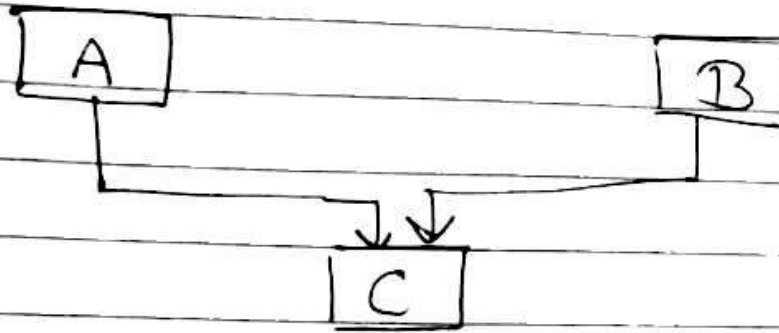
- 1 Single Inheritance
- 2 Multilevel Inheritance
- 3 Multiple Inheritance
- 4 Hierarchical Inheritance
- 5 Hybrid Inheritance

1 Single Inheritance:- It is the inheritance hierarchy wherein one derived class inherits from one base class

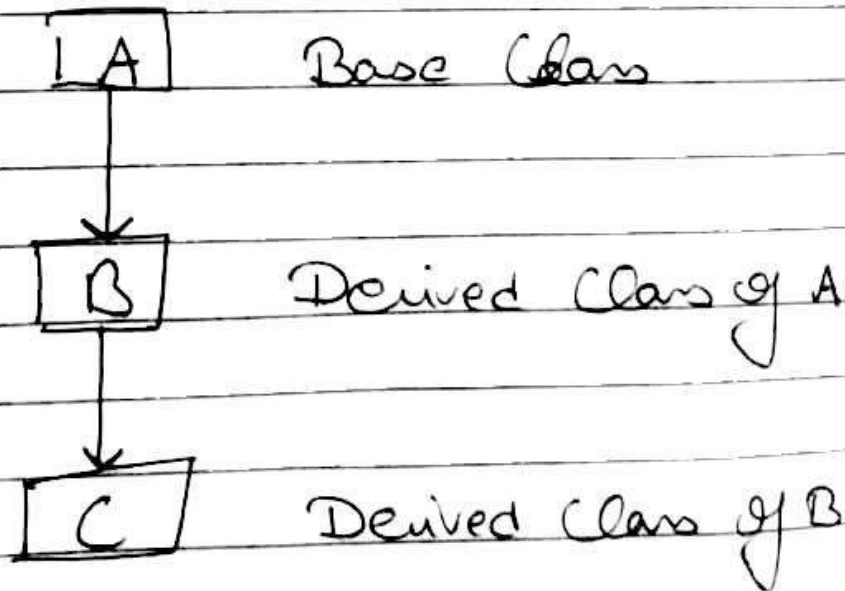


2 Multilevel

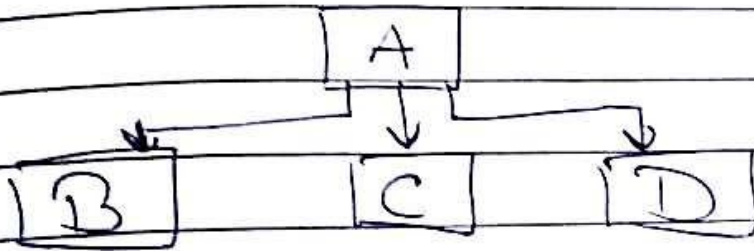
2 Multiple Inheritance - It is the inheritance hierarchy wherein one derived class inherits from multiple base classes



3 Multilevel Inheritance: It is the inheritance wherein act as a base class for other classes



4 Hierarchical Inheritance :- It is the inheritance between hierarchy wherein multiple subclasses inherit one base class



5 Hybrid Inheritance :- Hybrid Inheritance is combination of two or more inheritance such as single, multiple, multilevel or Hierarchical inheritances

