Programming in C++ (Part-3)

ABOUT ME : NAVNEET GUPTA

- 8 years teaching experience.
- AIR 92 in GATE 2008
- Qualified UGC-NET 2012, Raj.-SET 2012, CSIR-Recruitment-Exam in 2011
- Achieved 3rd Rank in NPTEL-DBMS Course
- Achieved Silver Medal in CSIR on ERP Project in 2013
- Area of Expertise : DBMS, Programming, Algorithms, Discrete Math, Computer Networks, Operating system

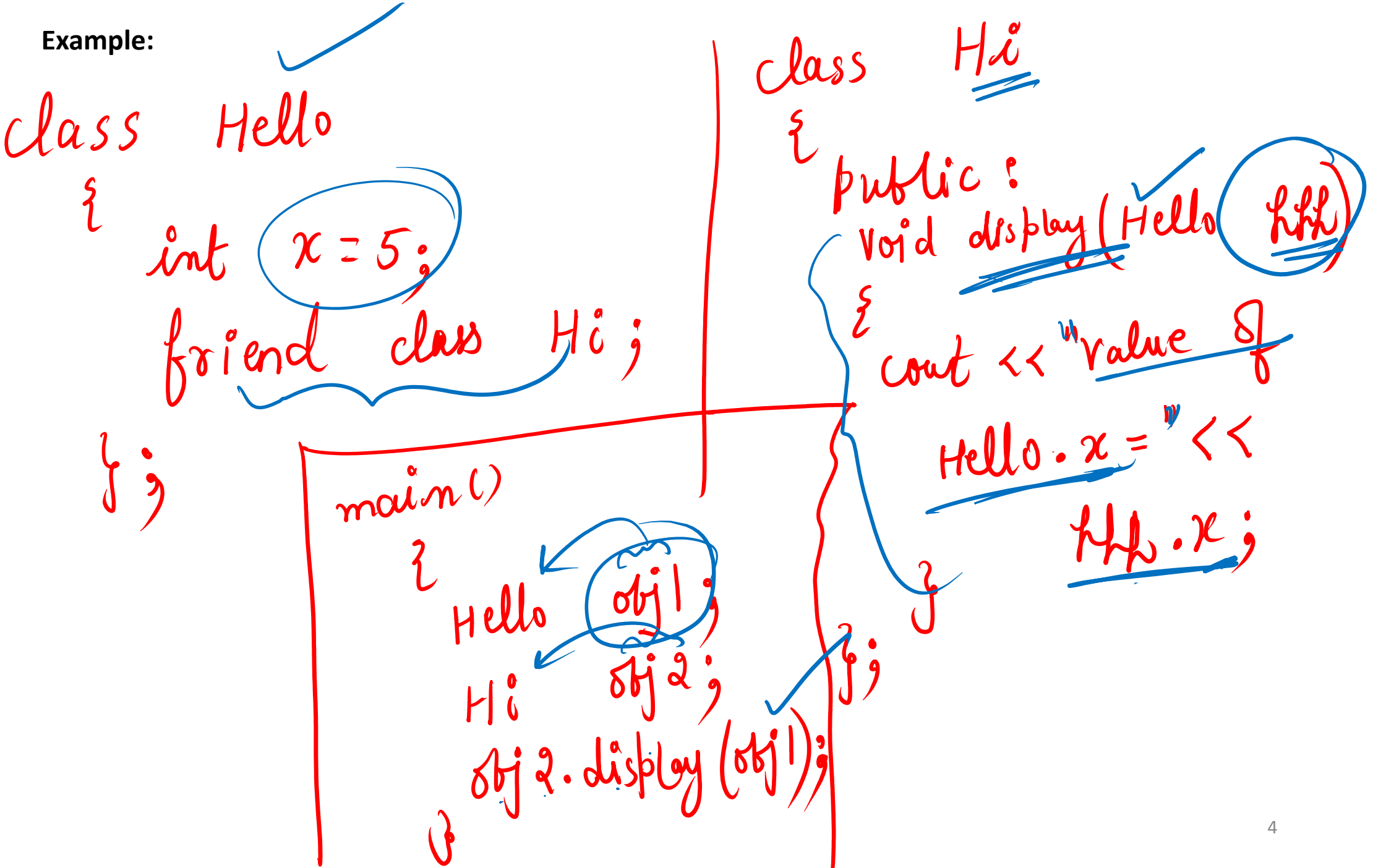
gradeup
Prep Smart. Score Better.

C++ Friend class

A friend class can access both Private & protected members of class in which it has been declared as friend.

gradeup
Prep Smart. Score Better.

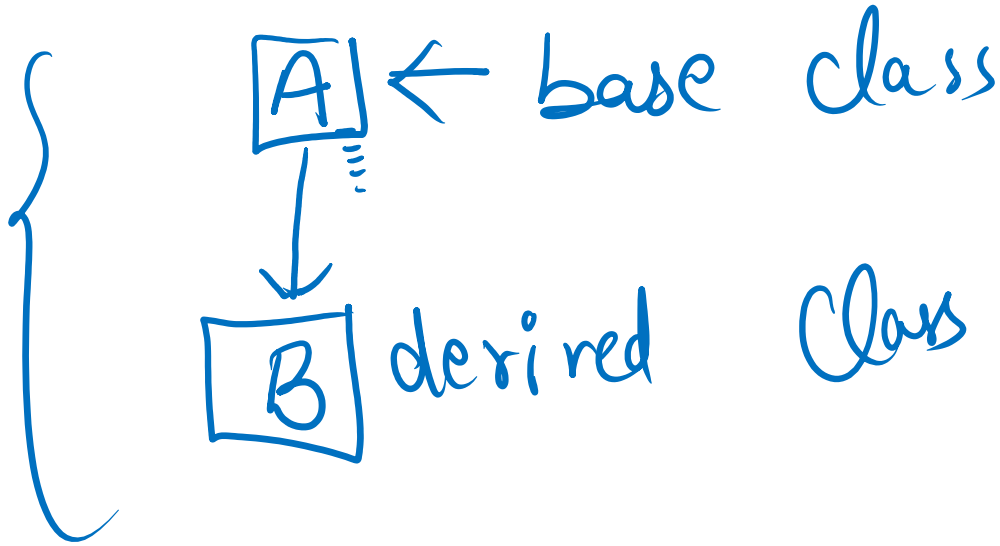
Example:



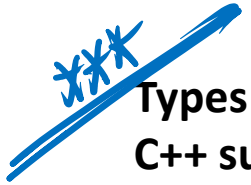
gradeup
Prep Smart. Score Better.

C++ Inheritance

In c++, the class which inherits the members of another class is called derived class and the class whose members are inherited is called base class.



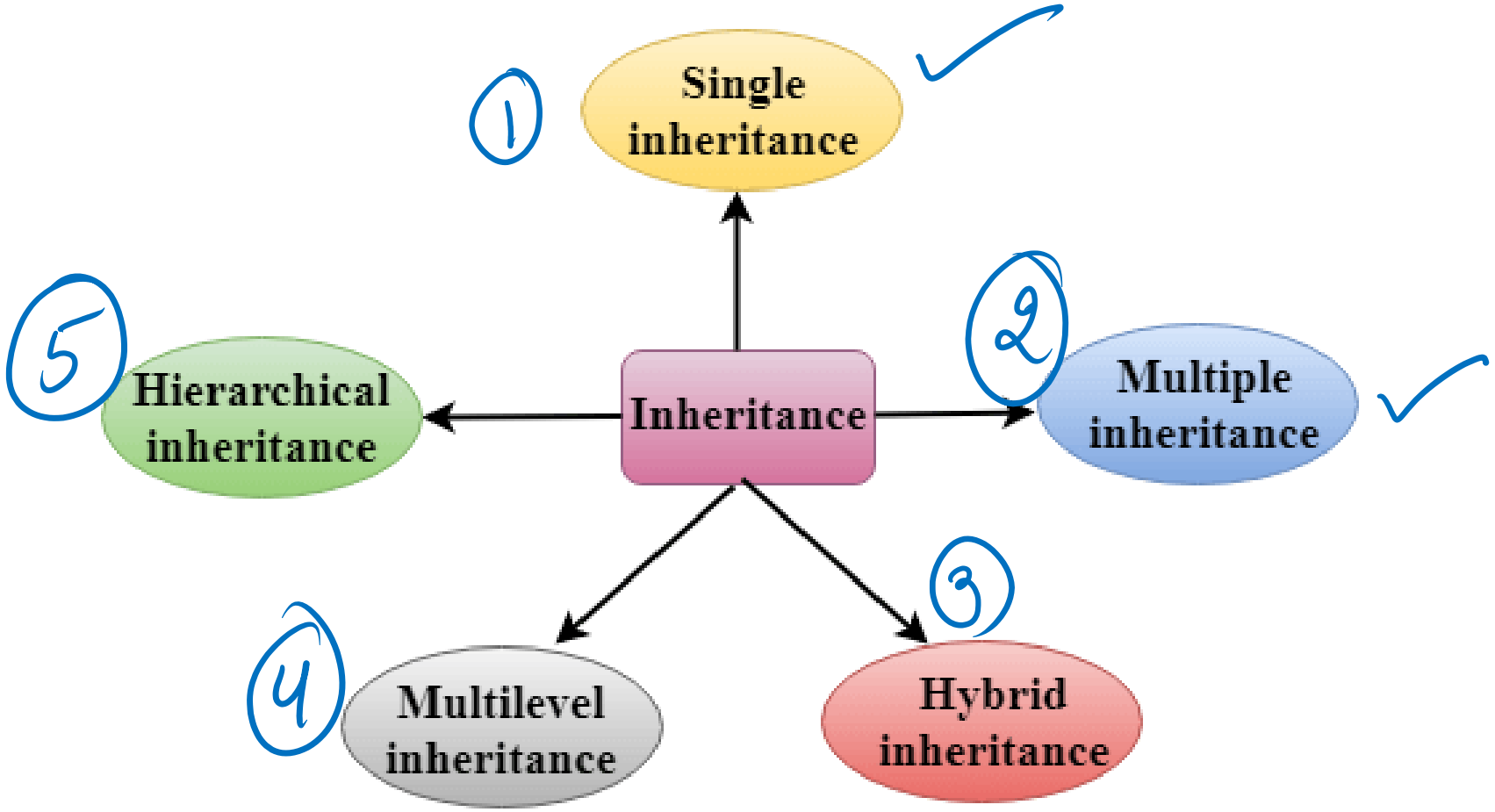
gradeup
Prep Smart. Score Better.



Types Of Inheritance

C++ supports five types of inheritance:

- Single inheritance
- Multiple inheritance
- Hierarchical inheritance
- Multilevel inheritance
- Hybrid inheritance

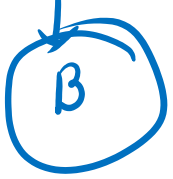


gradeup
Prep Smart. Score Better.

Derived Classes

syntax :

class derivedclass name : visibility-mode baseclass name
{
// body of derived class
};



class B :: public A
{
}

gradeup
Prep Smart. Score Better.

Note:

•When the base class is privately inherited by the derived class, public members of the base class becomes the private members of the derived class. Therefore, the public members of the base class are not accessible by the objects of the derived class only by the member functions of the derived class.

•When the base class is publicly inherited by the derived class, public members of the base class also become the public members of the derived class. Therefore, the public members of the base class are accessible by the objects of the derived class as well as by the member functions of the base class.

•In C++, the default mode of visibility is private.

•The private members of the base class are never inherited.

gradeup
Prep Smart. Score Better.

Single-Level Inheritance Example:

gradeup
Prep Smart. Score Better.

```
main()
{
    programmer p1(2000);
    cout << p1.bonus;
}
```