

## Multiple Inheritance (Diamond Problem)

Note:

```
class A {  
    A() { cout << "A"; }  
};  
  
class B: public A {  
    B() { cout << "A"; }  
}
```

// will call firstly parent constructor  
by making an obj in main function.

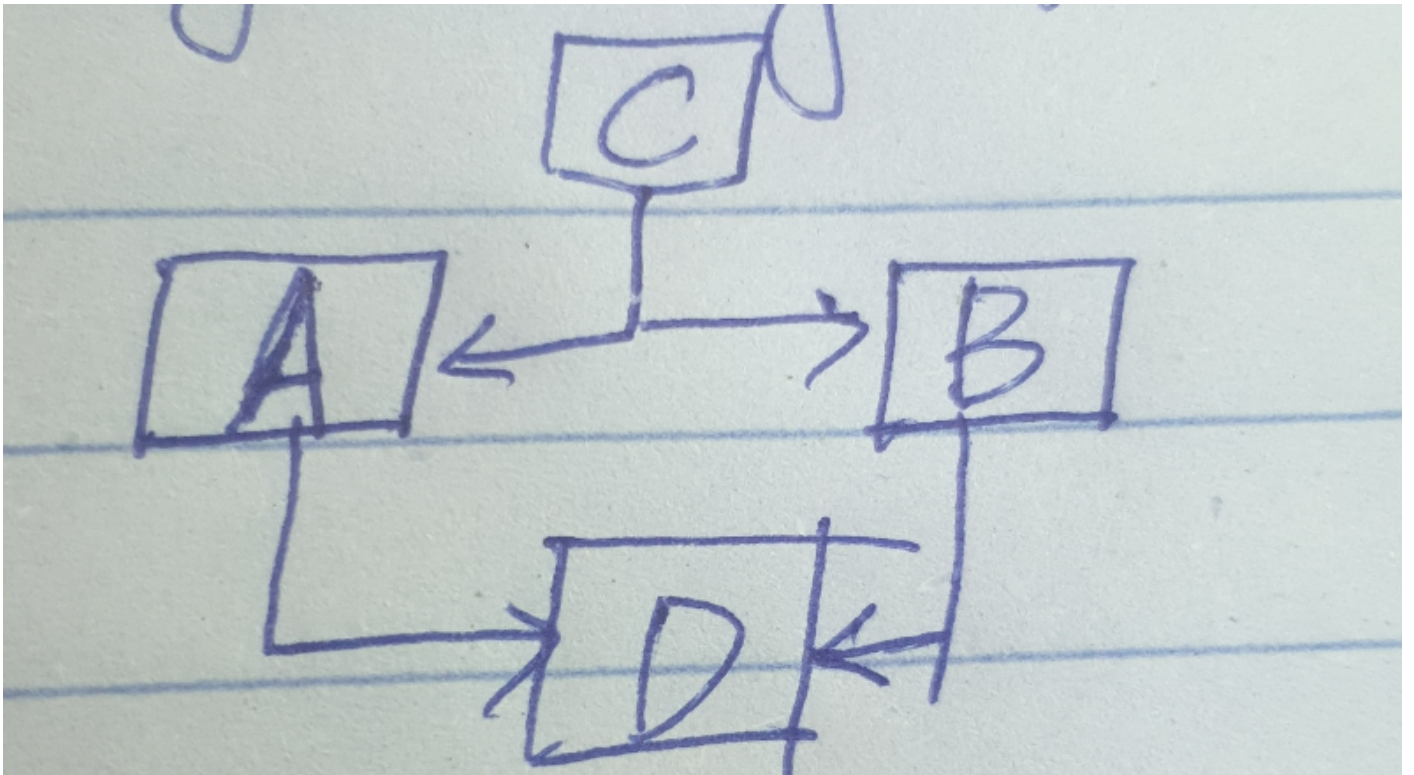
Multiple Inheritance(Virtual Base Class):

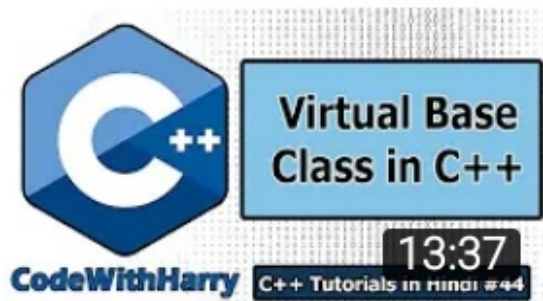
## Diamond Problem

```
class A { }; A() { cout << "A"; }
class B { }; B() { cout << "B"; }
class C { public A, public B;
    C() { cout << "C"; }
};
```

```
int main()
{
    C obj; // call all Constructors of A, B, C.
}
```

- If there are more than two classes, in which the following flow will:





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Code Example

- ^- Here, The Functions of class C will be inherited in class A and B, then again class D is inherited from two classes A and B. If we make constructors of every class, then the constructor of class C will be called two times. To avoid this, we use the virtual keyword. Known as Virtual Base class.

Diamond Problem: