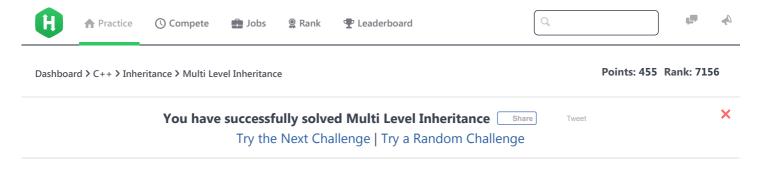
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## Multi Level Inheritance ■



Problem Submissions Leaderboard Discussions

## Solve the problem Inheritance-Introduction before solving this problem.

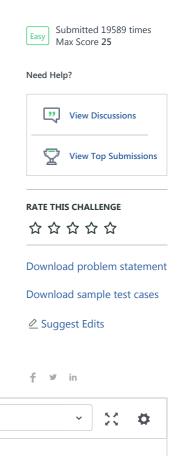
In the previous problem we learned about Inheritance and how can a derived class object use the member functions of the base class.

In this we will see what multi-level inheritance is. Suppose we have a class A which is the base class and we have a class B which is derived from class A and we have a class C which is derived from class B, we can access the functions of both class A and class B by creating an object for class C. This is called Multi-Level inheritance. (B inherits A and C inherits B.)

Now create a class called Equilateral which inherits from Isosceles and should have a function such that the output is as given below.

## **Sample Output**

I am an equilateral triangle I am an isosceles triangle I am a triangle



C++14

Current Buffer (saved locally, editable)  $\ \mathcal{V} \ \mathbf{O}$ 

23 ▼ #include <iostream>

#include <memory>

24

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```
26 class Shape
27 ▼ {
28 public:
        virtual const void triangle()const = 0;
29
30 ▼
       virtual ~Shape(){ }
31 };
32
33 class Triangle: public Shape
34 ▼ {
35 public:
36
       virtual const void triangle()const override
37 ▼
       { std::cout<<"I am a triangle\n";
       virtual ~Triangle(){
39 };
40
41 class Isosceles : public Triangle
42 ▼ {
43 public:
44
       virtual const void triangle()const override
45 ▼
        { std::cout<<"I am an isosceles triangle\n"; }</pre>
46 ▼
       virtual ~Isosceles(){ }
47 };
48 class Equilateral: public Isosceles
49 ₹ {
50 public:
51
        virtual const void triangle()const override
52 ▼
        { std::cout<<"I am an equilateral triangle\n"; }</pre>
53 ▼
        virtual ~Equilateral(){ }
54 };
55
56 int main()
57 ▼ {
58 ▼
        std::shared_ptr<Shape> obj[3];
59
60 ₹
        obj[0] = std::make_shared<Equilateral>();
61 ▼
        obj[1] = std::make_shared<Isosceles>();
        obj[2] = std::make_shared<Triangle>();
62 ₹
63
        for(auto it: obj)
64
65
          it->triangle();
66
        return 0;
67 }
68
                                                                                                         Line: 1 Col: 1
```

<u>**1**</u> <u>Upload Code as File</u> Test against custom input

Run Code

Submit Code

```
Congrats, you solved this challenge!

Challenge your friends: 

✓ Test Case #0

Next Challenge
```

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