Base Class Constructor and Destructor

lIn this lesson, we'll learn how constructors and destructors are called in derived and base classes during inheritance.

WE'LL COVER THE FOLLOWING

Base Class Constructor

When we make an instance of the `Derived` class without parameters it will first call the default constructor of the `Base` class and then the `Derived` class. In the same way, when we call the parameterized constructor of the derived class, it will first call the parameterized constructor of the `Base` class and then `Derived` class.

The following code explains how this is done:

```
#include <iostream>
using namespace std;

// Base class
class Base {

    public:
    Base(){
      cout << "Base class default constructor!" << endl;
    }
    // Base class's parameterised constructor
    Base(float i) {
        cout << "Base class parameterized constructor" << endl;
    }
};


// Derived class
class Derived : public Base {
    public:
    Derived(){
      cout << "Derived class default constructor!" << endl;
```

```
    }

    // Derived class's parameterised constructor
    Derived(float num): Base(num){
        cout << "Derived class parameterized constructor" << endl;
    }
};

// main function
int main() {
    // creating object of Derived Class
    Derived obj;
    cout << endl;
    Derived obj1(10.2);
}
```

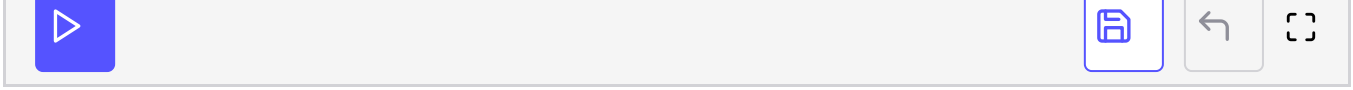



Base Class Destructor

When we make an instance of the `Derived` class it will first call the destructor of the `Derived` class and then the `Base` class.

The following code explains how this is done:

```
#include <iostream>
using namespace std;

// Base class
class Base {

    public:
    ~Base(){
      cout << endl << "Base class Destructor!" ;
    }
};


// Derived class
class Derived : public Base {
    public:

    ~Derived(){
      cout << endl << "Derived class Destructor!" ;
    }
};

// main function
int main() {
    // creating object of Derived Class
    Derived obj;

}
```



In the next lesson, we'll be learning about the `public`, `protected` and `private` inheritance.