

# Constructor and Destructor in C ++

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## Class Constructor in C ++

A constructor class is a special member function of a class that is executed whenever we create new objects of that class.

A constructor will have the same name as the class and it does not have any return type, including void type. **Constructors** can be very useful for setting initialization values ??for specific member variables.

The following example explains the concept of constructor in C ++:

```
#include <string>
using namespace std;
class Line {
public:
    void setChieuDai ( double d ) {
        chieudai = d;
    }
};
```

Compiling and running the above C ++ program will produce the following results:

```
Doi tuong da duoc tao!
Chieu dai cua duong la: 6
-----
```

## The constructor is parameterized in C ++

A default constructor in C ++ does not have any parameters, but if you need it, a constructor can have parameters. This helps you assign the initial value to an object at the time of creating it, as in the following example:

```
#include <string>
using namespace std;
class Line {
public:
    void setChieuDai ( double d ) {
        chieudai = d;
    }
};
```

Compiling and running the above C ++ program will produce the following results:

```
Doi tuong dang duoc tao, chieudai = 10
Chieu dai cua line la: 10
Chieu dai cua line la: 6
-----
```

## Use the initialization list for initialization fields

In case the constructor is parameterized, you can use the following syntax to initialize fields.

```
Line :: Line ( double dai ): chieudai ( dai ) { cout << "Doi tuong dang duoc tao" << endl; }
```

The above syntax is equivalent to the following syntax:

```
Line :: Line ( double dai ) { cout << "Doi tuong dang duoc tao, chieudai = " << dai << endl; }
```

If with a class in C, you have multiple X, Y, Z, . fields to be initialized, then you can use the same syntax and distinguish the fields by commas, as follows:

```
C :: C ( double a , double b , double c ): X ( a ), Y ( b ), Z ( c ) { }
```

## Destructor class in C ++

A **destructor** is a special member function of a class that is executed whenever an object of that class is out of scope or whenever the delete expression is applied to a pointer to the object of the class. there.

A destructor will have the same name as the class and be preceded by the ~ symbol and it can: not return a value and not receive any parameters. Destructor can be very useful to free resources before exiting the program, for example: closing files, freeing memory .

The following example explains the concept of destructor in C ++:

```
#include <string> using namespace std ; class Line { public : void setChieuDai ( double dai ) { chieudai = dai; } ~Line () { cout << "Doi tuong dang bi xoa!" << endl; } }
```

Compiling and running the above C ++ program will produce the following results:

```
Doi tuong dang duoc tao
Chieu dai cua line la: 6
Doi tuong dang bi xoa!
```

### According to Tutorialspoint

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