



## Constructors With Default Arguments In C++ | C++ Tutorials for Beginners #32



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In this tutorial, we will discuss constructors with default arguments in C++

### Constructors with Default Arguments in C++

Default arguments of the constructor are those which are provided in the constructor declaration. If the values are not provided when calling the constructor the constructor uses the default arguments automatically. An example program to demonstrate the concept default arguments in C++ is shown below.

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

```
class Simple{
    int data1;
    int data2;
    int data3;

public:
    Simple(int a, int b=9, int c=8){
        data1 = a;
        data2 = b;
        data3 = c;
    }

    void printData();

};

void Simple :: printData(){
    cout<<"The value of data1, data2 and data3 is "<<data1<<"<< " "<< data2<<" and "<< data3<<e
}
```

### Code Snippet 1: Constructor with Default Arguments Program Example

As shown in a code snippet 1,

- 1<sup>st</sup> we created a “simple” class which consists of private data members “data1”, “data2” and “data3”.
- 2<sup>nd</sup> parameterized constructor of the “simple” class is defined which takes three parameters and assigns values to the data members “a” and “b”. The main thing to note here is that the value “9” and “8” are the

default values for the variables “b” and “c”.

- 3<sup>rd</sup> function “printData” is defined which prints the values of the data members “data1”, “data2”, and “data3”.

The main program is shown in code snippet 2.

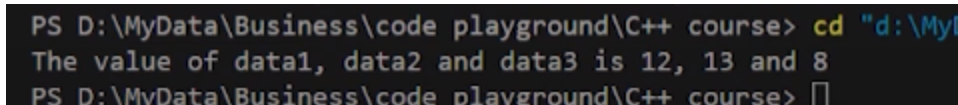
```
int main(){
    Simple s(12, 13);
    s.printData();
    return 0;
}
```

### Code Snippet 2: Main Program

As shown in code snippet 2,

- 1<sup>st</sup> parameterized constructor is called with the object “s” of the data type “simple” and the values “12” and “13” are passed. The main thing to note here is that the value of the parameter “c” will be automatically set by the default value.
- 2<sup>nd</sup> function “printData” is called which will print the values of data members.

The output for the following program is shown in figure 1.



```
PS D:\MyData\Business\code playground\C++ course> cd "d:\MyData\Business\code playground\C++ course"
The value of data1, data2 and data3 is 12, 13 and 8
PS D:\MyData\Business\code playground\C++ course>
```

**Figure 1:** Program Output

As shown in figure 1, the value “12”, “13”, and “8” are printed. The constructor assigned the values “12” and “13” to the variables “a” and “b” but the value for the variable “c” was not passed that’s why constructors set the value “8” which was the default value for the variable “c”.



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