

C++ Functions

A function is a block of code which only runs when it is called.

You can pass data, known as parameters, into a function.

Functions are used to perform certain actions, and they are important for reusing code: Define the code once, and use it many times.

Create a Function

C++ provides some pre-defined functions, such as `main()`, which is used to execute code. But you can also create your own functions to perform certain actions.

To create (often referred to as declare) a function, specify the name of the function, followed by parentheses `()`:

Syntax

```
void myFunction() {  
    // code to be executed  
}
```

Example Explained

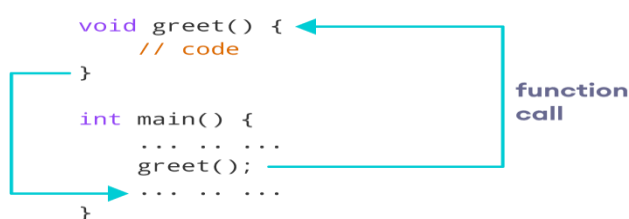
- `myFunction()` is the name of the function
- `void` means that the function does not have a return value. You will learn more about return values later in the next chapter
- inside the function (the body), add code that defines what the function should do

Call a Function

Declared functions are not executed immediately. They are "saved for later use", and will be executed later, when they are called.

To call a function, write the function's name followed by two parentheses `()` and a semicolon `;`. In the following example, `myFunction()` is used to print a text (the action), when it is called:

```
#include<iostream>  
  
void greet() {  
    // code  
}  
  
int main() {  
    ... ..  
    greet();  
    ... ..  
}
```



Function Declaration and Definition

A C++ function consist of two parts:

- **Declaration:** the return type, the name of the function, and parameters (if any)
- **Definition:** the body of the function (code to be executed)

```
void myFunction() { // declaration  
    // the body of the function (definition)  
}
```

Display a Text

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

// declaring a function
void abc() {
    cout << "Hello there!";
}

int main() {

    // calling the function
    abc();

    return 0;
}
```