



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
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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:

Example

Inside `main`, call `myFunction()`:

```
// Create a function
void myFunction() {
    cout << "I just got executed!";
}

int main() {
    myFunction(); // call the function
    return 0;
}

// Outputs "I just got executed!"
```

A function can be called multiple times:

Example

```
void myFunction() {
    cout << "I just got executed!\n";
}

int main() {
    myFunction();
    myFunction();
    myFunction();
    return 0;
}

// I just got executed!
// I just got executed!
// I just got executed
```