

# Functions in C++

In this lesson, you will study the functions and their types.

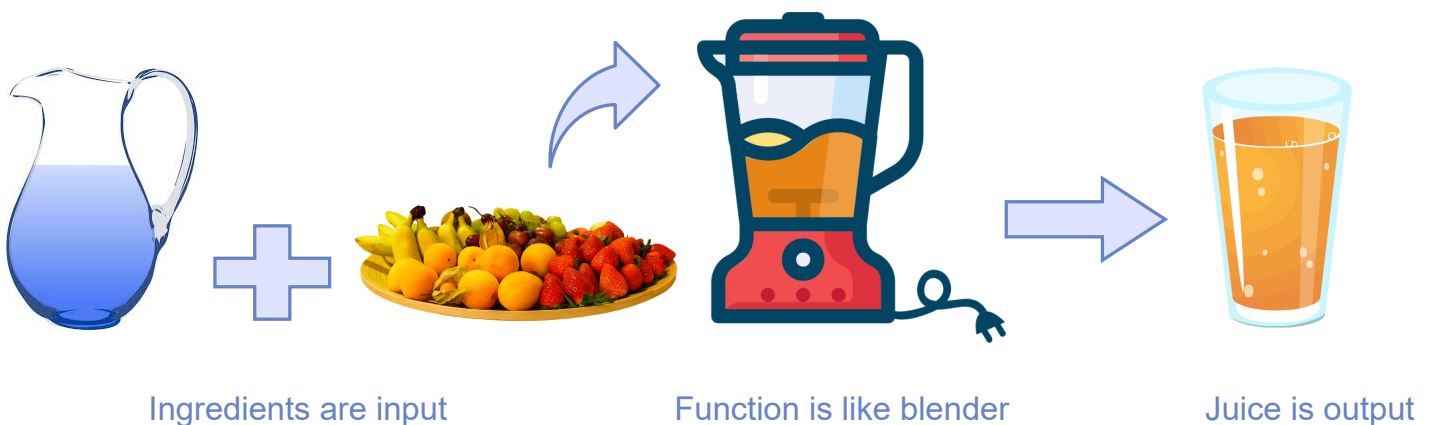
## We'll cover the following ^

- Introduction
  - Types of functions
    - Library functions
    - User-defined functions
  - Why use functions?

## Introduction #

Suppose you want to make juice for yourself. You will follow the following steps:

1. Put fruits and water in a blender.
2. Turn on the juicer.
3. Enjoy a mouth-watering juice after 1 minute.



A function is almost like a blender that performs a specific action on the ingredients and then returns a modified product. We can use the same blender for extracting the juice of different fruits. Similarly, functions are reusable, and we can use the same function anytime with different inputs.

*In computer language, a **function** is a block of code that*

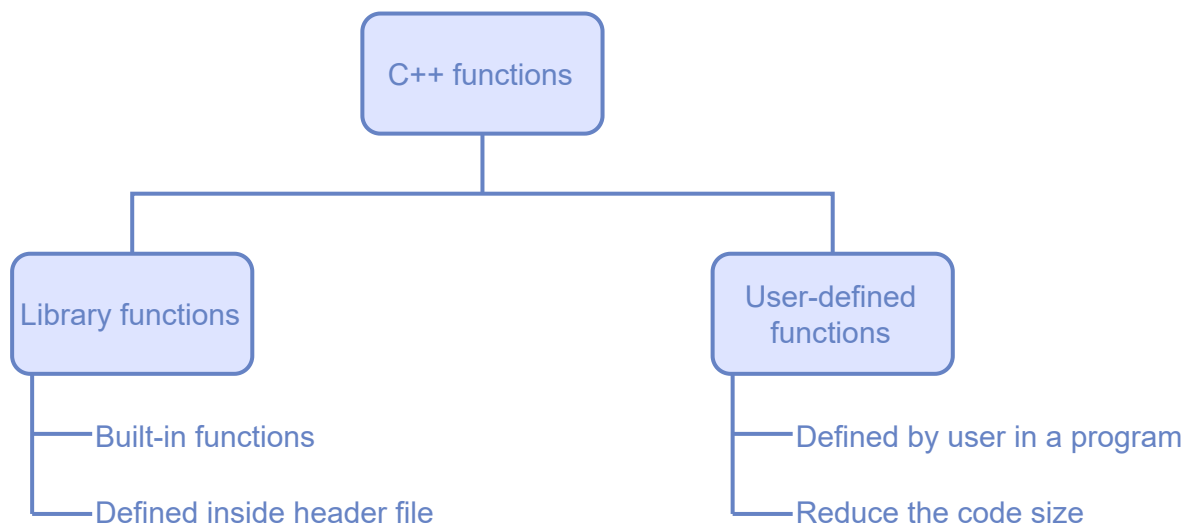
*performs a particular task, and it is given a name.*

Functions in programming are just like mathematical functions. They take something as input, perform some operation on it, and return the output.

## Types of functions #

In C++, we have two types of functions:

- Library functions
- User-defined functions



### Library functions #

These functions are also known as built-in functions. They are already defined in the C++ header files such as `<iostream>`, `<string>`, and `<cmath>` etc. We can use these functions by including the relevant header file and then call them later in a program.

### User-defined functions #


These functions are defined by the users according to their needs. We can call them anywhere in the current program. We will discuss them in detail in the upcoming lessons.

## Why use functions? #

We use functions in a program to:

- Make our code reusable
- Divide our code into small modules

- Make the debugging of the program easier
- Make our code neat
- Avoid code repetition

 The purpose of the function is to define the code block once and then use it many times.



Library functions are:

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Let's dig deeper into user-defined functions. Keep on reading to find out more!