

Writing Functions

Programs are composed of **functions**, which are, in turn, made up of **statements**. Functions are **named blocks of code** which carry out an action, or calculate a value. In a previous lesson you **used** math functions in `<cmath>`, and I/O objects and functions from `<iostream>`. Now you're going to write some of your own.

Let's start with some vocabulary:

- **Declaring a function**: specifying the function name, type and parameter types. Also called a **prototype**.
- **Defining a function**: specifying the calculations (or actions) that take place when the function is used. The actions are C++ **statements** that appear inside the **body** of the function, which is surrounded by curly braces.
- **Calling a function**: executing, running or invoking the function. Write the name of the function, followed by a list of **arguments** enclosed in parentheses. This allows the **caller** to pass information to the function. When the function is done, it **returns to the caller**, possibly supplying a value.

Once a function has been defined, other parts of the program can run that code by using the function name; there is no need to repeat the code in different places.



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