The *main* Function

Below you'll find the code for the `f2c` program. Use the arrow on the left to show and hide the code as we discuss its various features.

▶ *The `f2c` Source Code*

A **function** is a **named section of code** that performs an operation. Every C++ program must contain **exactly one** function with the name `main`, which is **automatically** called when your program starts up.

- Each **statement** in the body of the `main` function is then run (or **executed**), one after another, **in order**. This concept is called **sequence**.
- When `main` has finished its work, execution of the program ends.

The `main` function contains six different statements.

1. Line 15 is an **output statement**. It prints a **prompt**, telling the user what to enter. `cout` is the standard **output stream** (similar to `System.out` in Java or `stdout` in Python). The characters in quotes (generically called a **string literal**) are sent to the screen using the **insertion operator** (`<<`).
2. Line 16 is a **variable definition** for `fahr`, a floating-point number, called `double` in C++, which is **uninitialized**.
3. Line 17 is an **input statement**. `cin` is similar to a `Scanner` object in Java, or a `file` object in Python. It reads a sequence of characters from the keyboard and stores the converted value in `fahr` using the `>>` (or **extraction**) operator.
4. Line 18 has both a **variable definition** and a function **call**. The line calls the function named `convert`, **passing** a copy of `fahr` as an **argument**. Then, it defines a variable, `celsius`, and **initializes** it with the **returned** value.
5. Lines 19 and 20 are a **single output statement**, spread over two lines. The statement combines text and variables to produce the desired result.
6. Line 21 is a `return` statement which ends the program and returns a value to the operating system. `0` indicates success, while anything else signals failure. You **may omit this `return` statement in `main`, but not in any other function.**

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