The *convert* 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*

In addition to ***main***, the ***f2c*** program **uses** the function ***convert*** which the ***main*** function **calls** (on line 18) to carry out its work. Before ***main*** can **call *convert***, though, the compiler must know what kind of arguments the function requires, and what kind of value it will return. This information is called the function's **interface**, and it is supplied by adding a **function declaration** or **prototype**, appearing **before** the ***main*** function, (on line 11).

```
double convert(double temperature);
```

The prototype provides the information needed to **call** the function: **its name along with the types of its inputs and outputs**. C++ **requires** prototype declarations so the compiler can check whether calls to functions are compatible with the definitions of those functions.

The ***convert*** function **definition**, starting on line 29, repeats the interface information from the prototype, but**does not** end in a semicolon. Instead, the definition **header** is followed by a **body** (just like ***main***) consisting of a list of statements surrounded (or **delimited**) by braces **{}**.

```
double convert(double temperature)
{
    return (temp - 32) * 5.0 / 9.0;
}
```

The body of **convert** is a single **return** statement which uses a formula or **expression** to convert the **input** Fahrenheit temperature into the **output** Celsius temperature, and return it to the caller.