An annotated *input-compute-output* program

By convention, execution starts in ***main***. (See bottom of this file.)

Defining a function: The ***def*** keyword begins the definition of a function – a chunk of code that has a name. Note the parentheses and colon. The *body* of the function is indicated by indenting it. The function definition ends when the indentation ends.

Here, ***main*** calls the ***convert_to_celsius*** function, sending it nothing. Control goes to that function, which does its thing. Then control returns to the calling point, and continues likewise by calling the ***convert_to_fahrenheit*** function.

The three-quotes-in-a-row indicates a green ***doc-comment*** – documentation that is helpful to others who might use this function. If you are implementing a function, you must arrange for the function to accomplish whatever the doc-comment says to do.

The ***input*** function. This is a key statement that illustrates calling a function, sending it an argument, and capturing the returned value in a variable. It prints the argument on the Console as a prompt for the user, waits at the Console for the user to type a line, then returns the line that the user typed. Note that ***input*** always returns a ***string***.

The ***float*** function converts the string that ***input*** returns to a floating-point number. Necessary here because we want to do arithmetic on that number.

The ***print*** function prints its arguments, all on one line, separated by spaces. We'll learn fancier printing later.

The **#** sign makes the rest of the line a ***comment*** (ignored by the computer, important to humans). These "inline" comments are usually comments from the author of the code to other programmers who read the code.

If the program is being run via the *Run* button (or its equivalent), this statement calls the ***main*** function. I'll always put this at the bottom of our files, so our programs will always start in main, by convention.

```
def main():
    convert_to_celsius()
    convert_to_fahrenheit()


def convert_to_celsius():
    """
    Prompts for and inputs a Fahrenheit temperature
    and prints the equivalent Celsius temperature.
    """
    input_string = input('What is the Fahrenheit temperature? ')
    fahrenheit = float(input_string)
    celsius = (fahrenheit - 32) * (5 / 9)
    print('That temperature is', celsius, 'degrees Celsius.')

def convert_to_fahrenheit():
    """
    Prompts for and inputs a Celsius temperature
    and prints the equivalent Fahrenheit temperature.
    """
    celsius = float(input('What is the Celsius temperature? '))
    fahrenheit = ((9 / 5) * celsius) + 32
    print('That temperature is', fahrenheit, 'degrees Fahrenheit.')

#-----------------------------------------------------------------------
# If this module is running at the top level (as opposed to being
# imported by another module), then call the 'main' function.
#-----------------------------------------------------------------------
if __name__ == '__main__':
    main()
```