Session 0: Installing Python

In the first session we'll be studying the basics of **Python**, so it would be great if you could get it installed before the session starts. Learn to Code sessions are all interactive, so please bring your laptop!

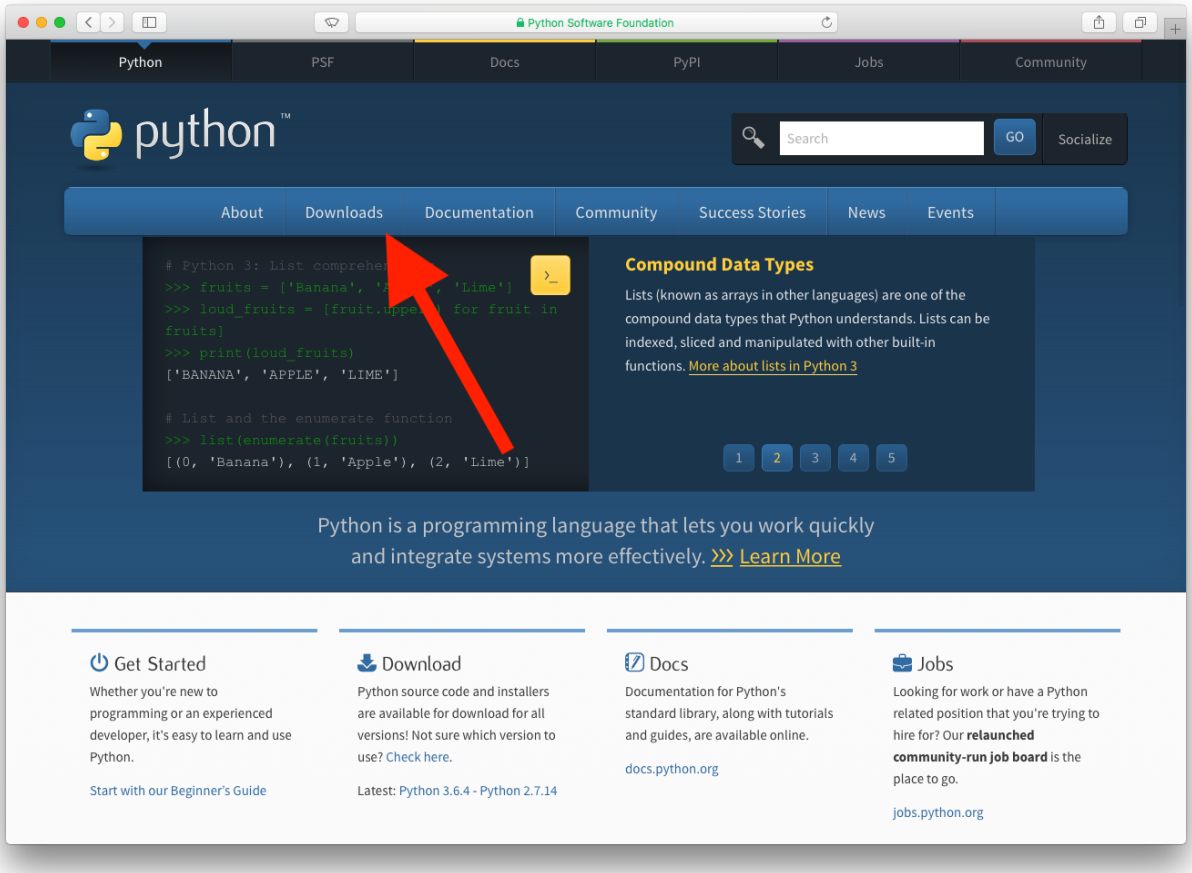
What is Python?

Python is a programming language, i.e. a text format for describing computer programs. In order to run a program written in Python on your computer you need to install the Python *interpreter*, which is a piece of software that takes the code that you've written, interprets its meaning, and then runs it in your computer. We'll use "Python" to refer to both the language and the interpreter.

Installing Python

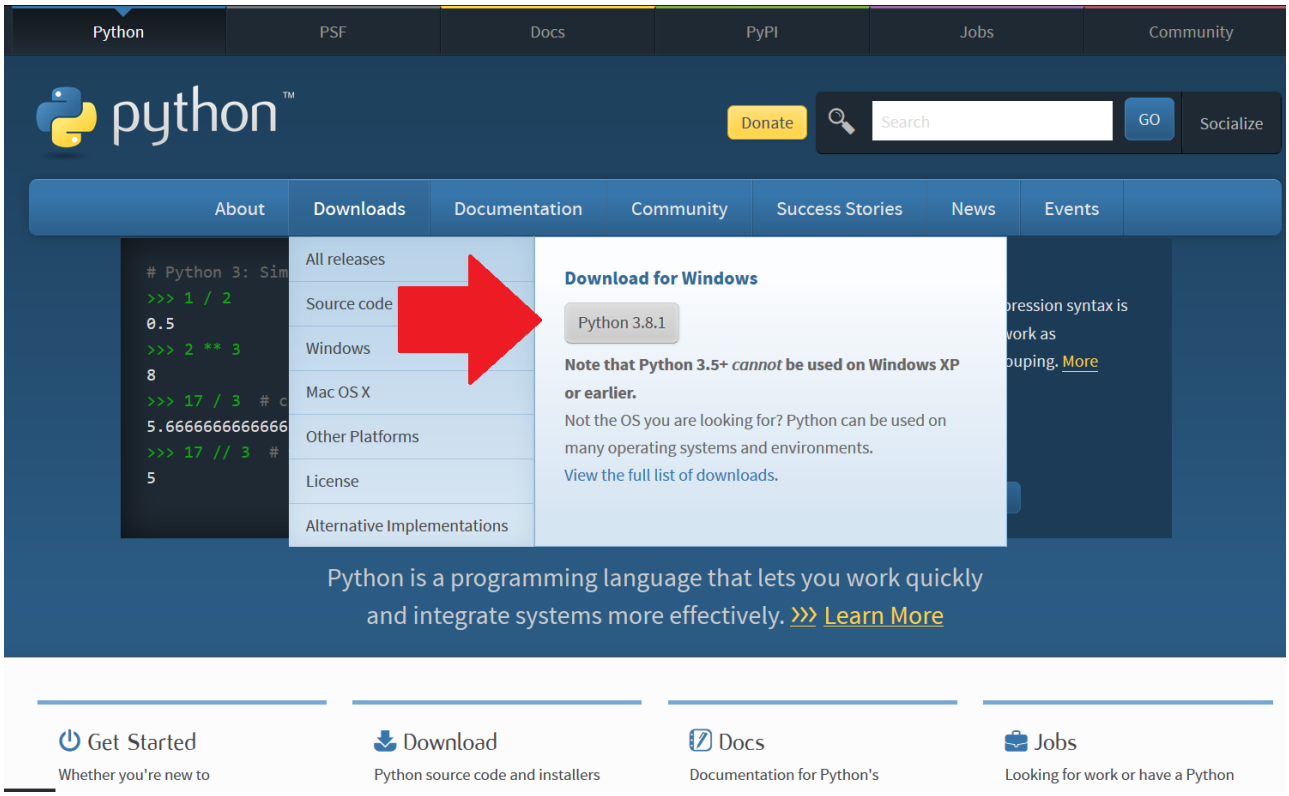
Important warning: there are lots of versions of Python available! We will be using **Python 3.10.7** in this course, but so long as you've got Python 3 or higher you should be OK.

1. Go to **https://python.org**
2. On the menu at the top, click **Downloads**



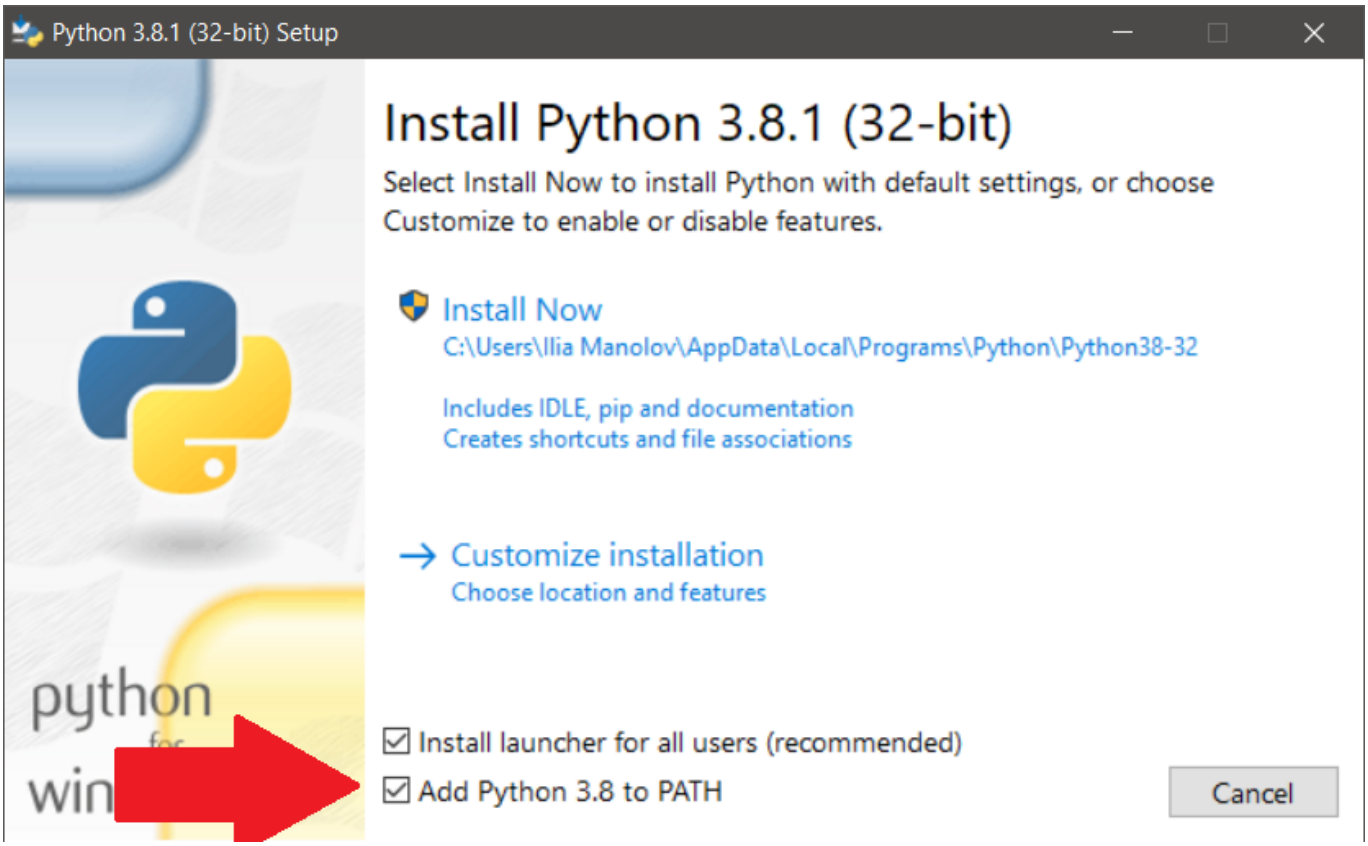
3. Download **Python 3.11.5** for the operating system you're using (Windows shown below)
    - Windows users might need to have administrative rights

- Linux users should already have Python installed, but please ensure that you have Python 3 installed
- If you get stuck please Google "how to install Python on X" (where X is your operating system)



!!! IMPORTANT FOR WINDOWS USERS !!!

During the installation there is an option that we'll need that isn't enabled by default - **Add Python 3.10 to PATH** (as shown below). Make sure to leave this **CHECKED** otherwise you won't be able to install the modules we'll use in the following lectures.



Using Python

After installing Python all the tools you need to run Python programs will be on your computer. There are multiple things installed for you by Python. But we are only going to use **IDLE** for writing and running Python programs. To launch IDLE

- On Windows: Start → All programs → Python 3.10 → IDLE *or* Start → type `IDLE`
- On Mac: open Finder → Applications → Python 3.10 → IDLE *or* ⌘ + space and type `IDLE`

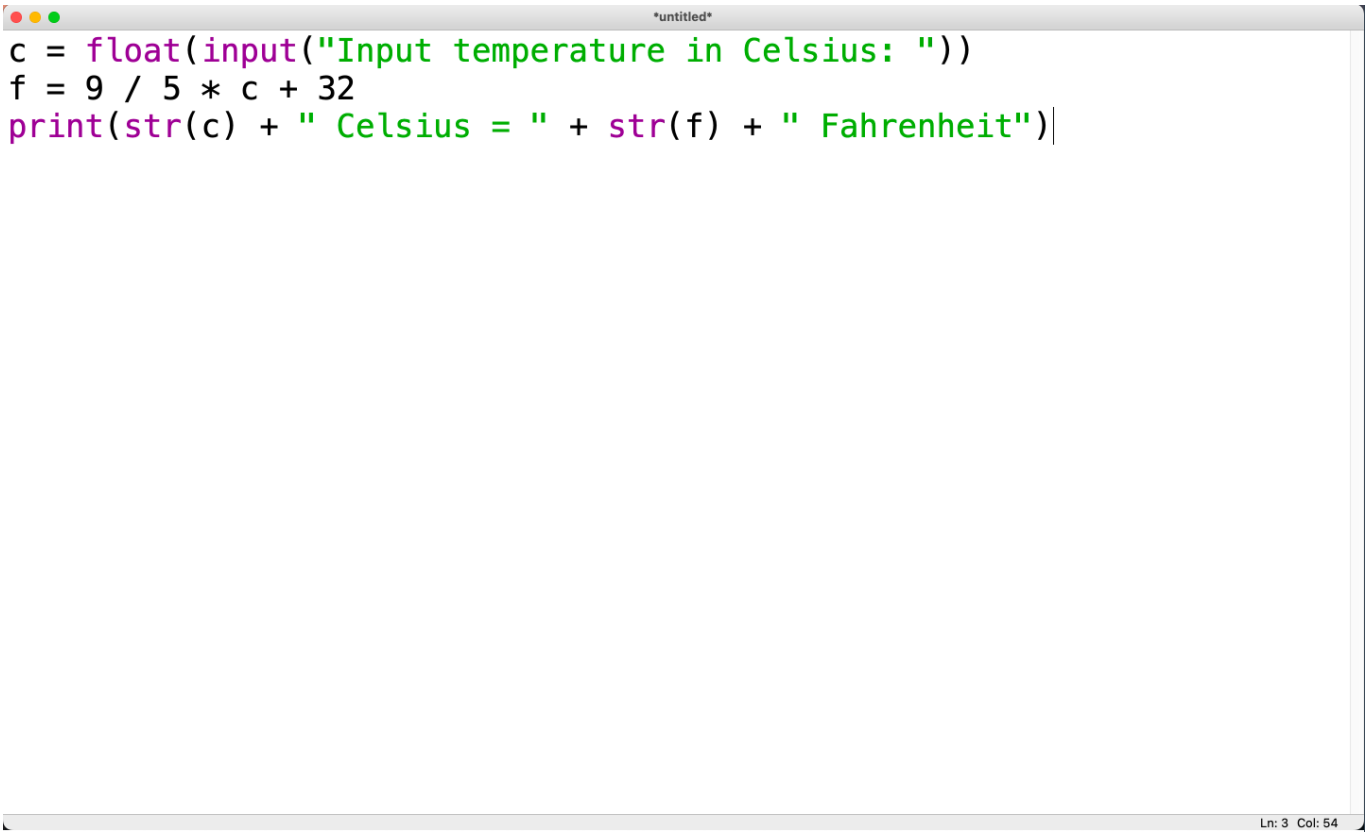
Interactive Version

Once you opened the IDLE, you will be greeted with the interactive version of Python. This is where Python will execute your code and give you the results line by line. It can be used for experimenting tiny bits of code but not generally useful for writing large programs.

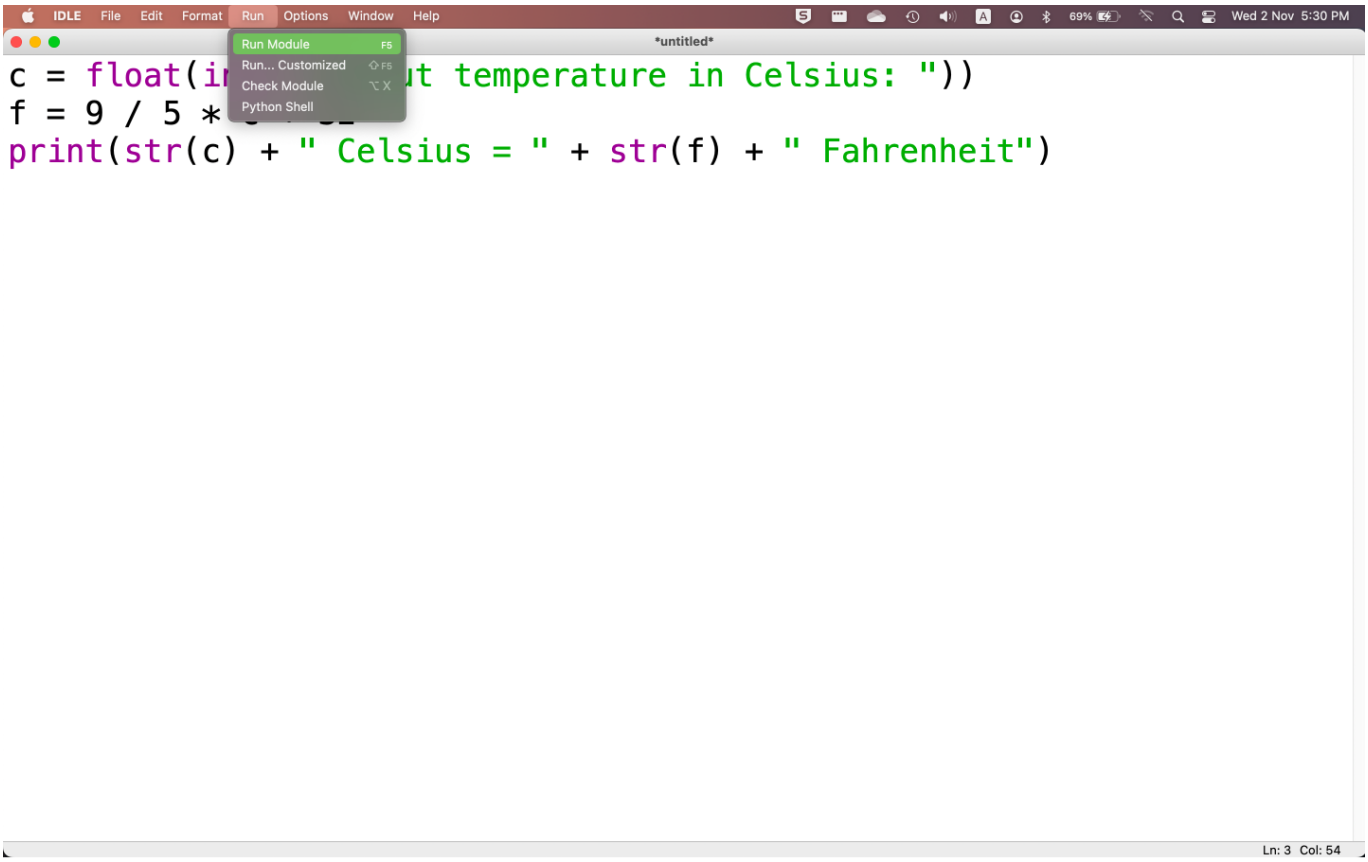
Text editor version

Instead, what we would usually do is to open a new file by clicking on `File` on the top-left corner, then click `New File`.

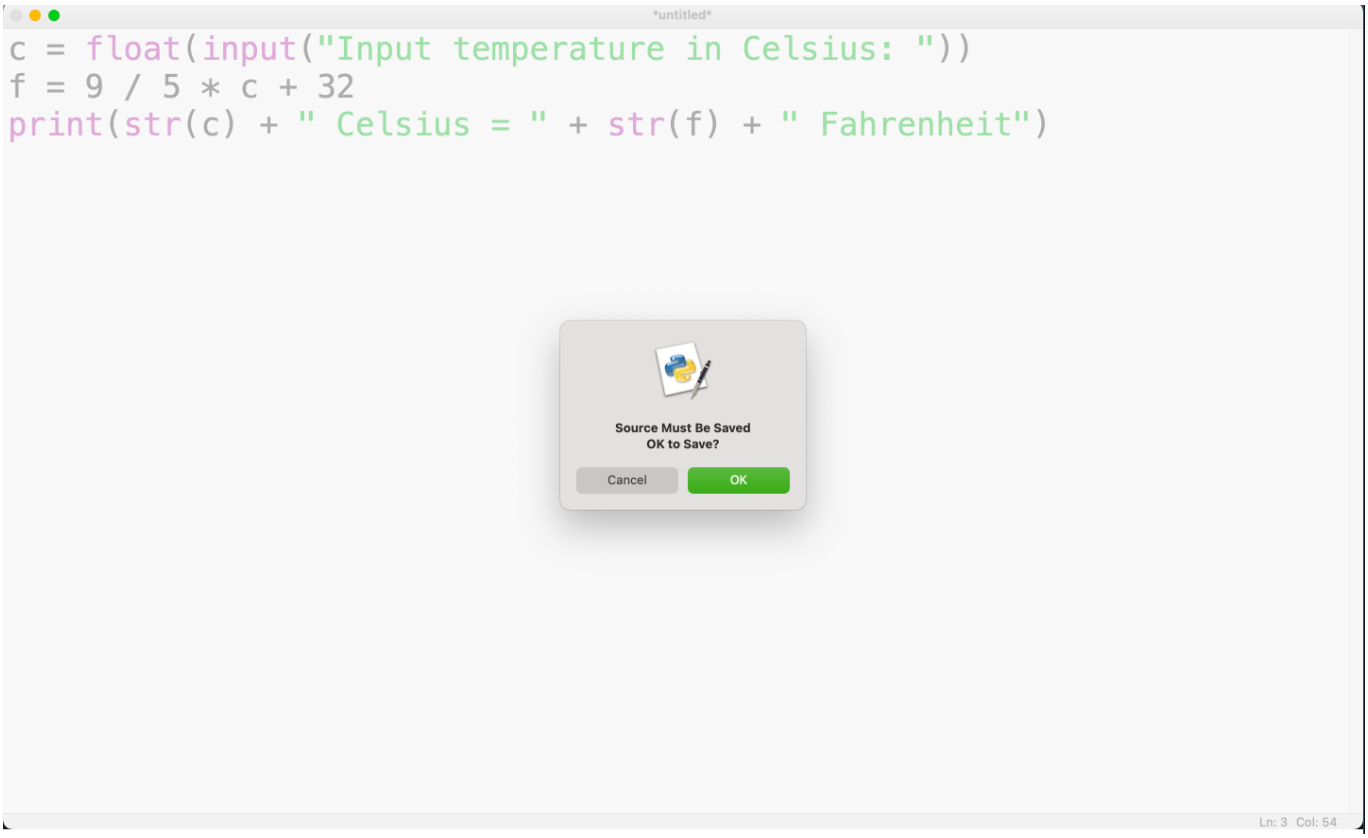
A new empty file is then created and now we can write our code in there.



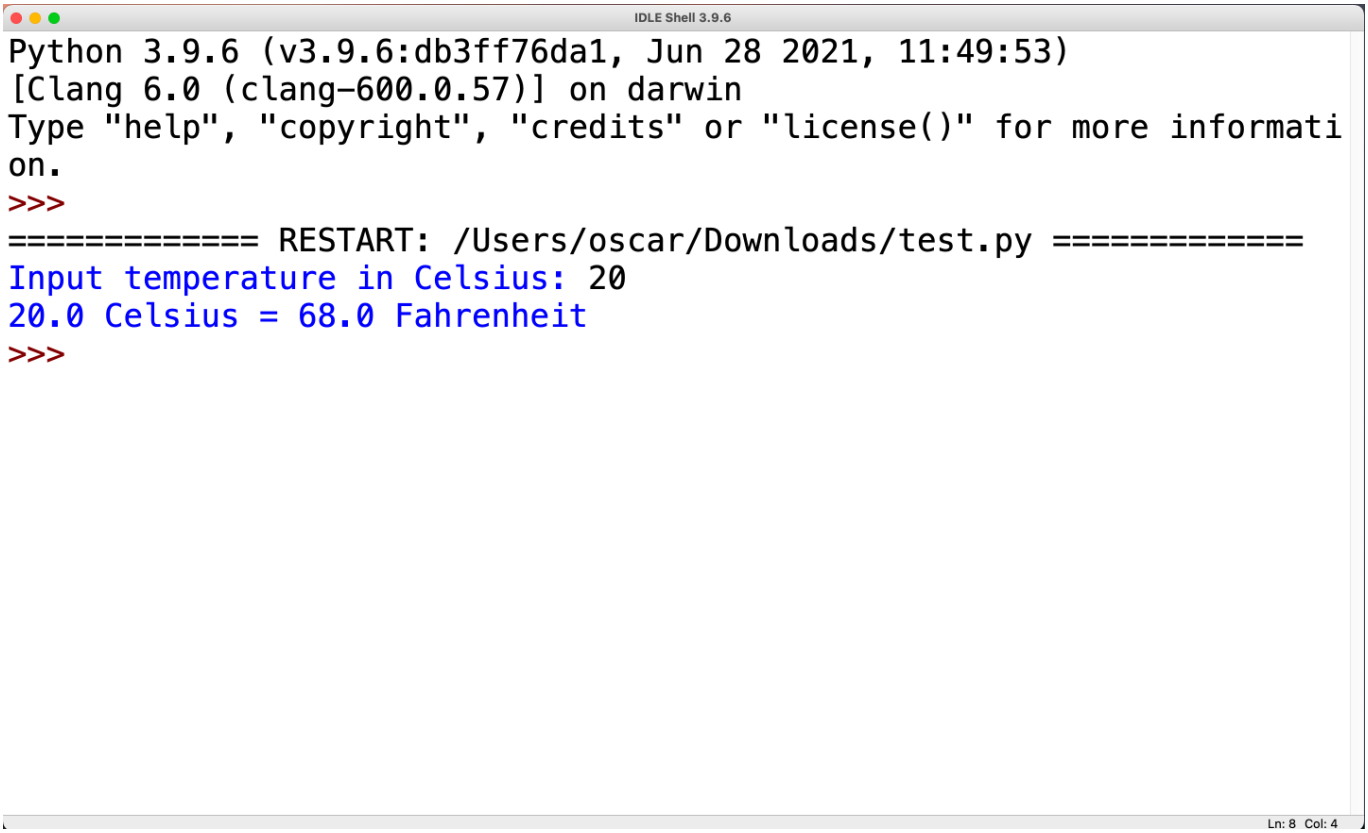
After you have written your code, you can run it by clicking on Run on the top-left corner, then click Run Module.



It might ask you to save your code, just click yes. You can save the Python code wherever you want on the computer.



Then, your code will be run in the IDLE window.



Note that you need to click `Run Module` everytime if you would like to run the program several more times.

That's all you need to do before the first session! If you're interested in looking ahead to what we'll be studying, feel free to look at notes for the first session.