Installing Python and learning how to use it

Many of you have learned Python “in the browser” through tutorials such as Grok or Code Avengers. But if you want to write your own programs, you need to be able to save your files and run the code on your own computer. So this section gives you the instructions on how to do this, and how to use the Integrated Development Environment (IDE) that Python gives you. You may have heard of, or be familiar with other IDEs, but this document only explains the one that comes with Python, called IDLE. An IDE allows you to write and edit code, save it, run it.

If you are already used to IDLE or a different IDE at school, then all good. Otherwise, follow along…

Step 1: Download Python

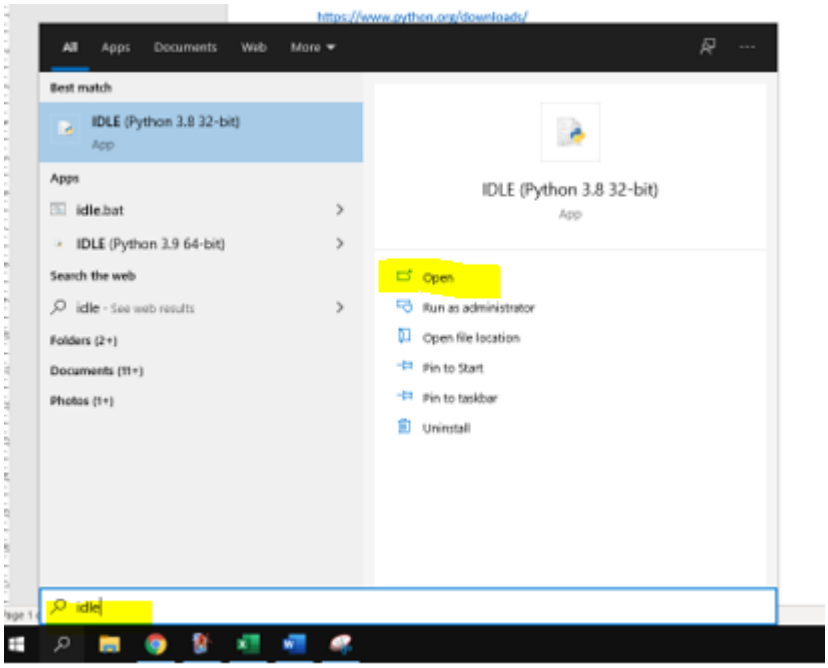
Go to: https://www.python.org/downloads/

Download the latest version of Python 3 which is compatible with your computer.

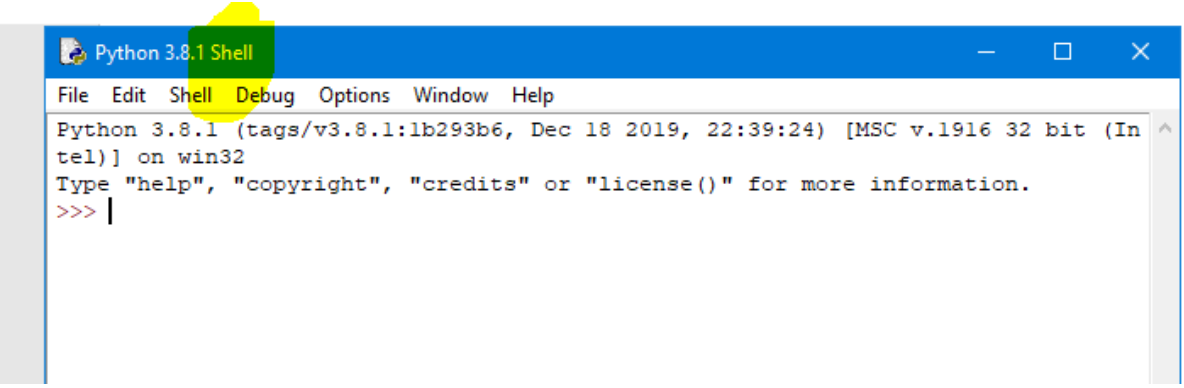
Select all the default options for the install.

I am going to assume a Windows 10 machine but if you use a Mac or Unix, the principles are the same.

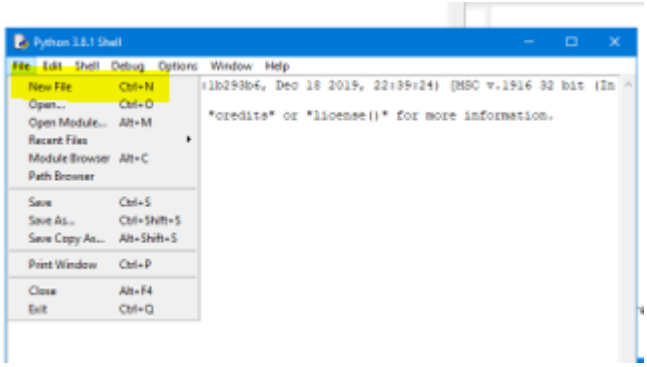
Once installed, use Windows search to find and run “IDLE” (Python’s Integrated Development Environment).



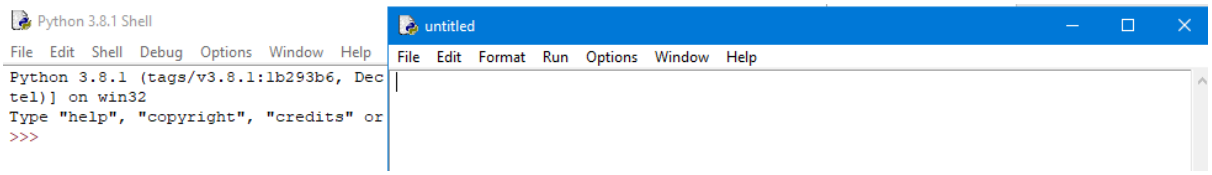
IDLE opens a window called the Shell. This is where your programs will run. But its not where you want to type your code.



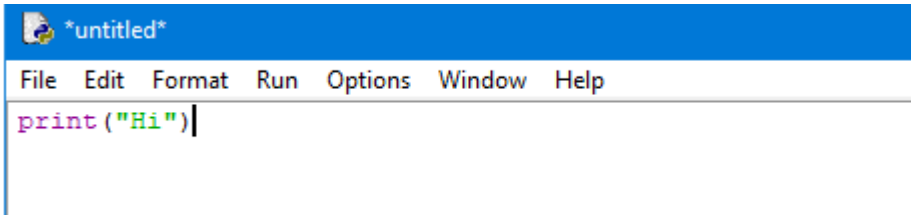
Use File/New File to create a file where you will write your code



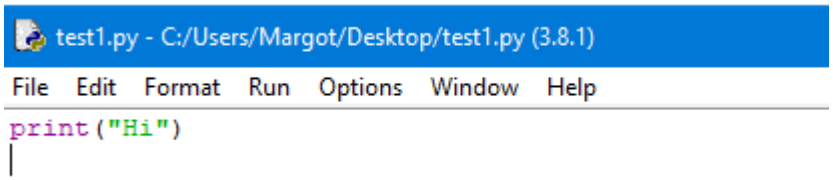
You will now have 2 windows, the shell and a file called “untitled”.



In the untitled file you can type your Python code.

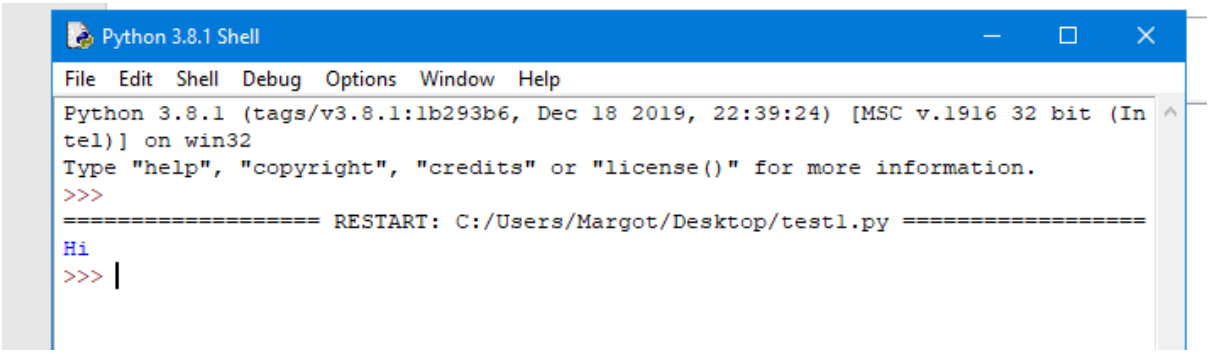


Before you can run your ‘untitled' code you will need to save it on your computer and probably give it a better name than ‘untitled'. It is also useful to save it somewhere you can find it again! Go to 'File/Save As'. In the image below, I have renamed my code file to “test1” and saved it on my Desktop. The extension “.py” is added automatically.



Now to test it out – you can either use the “Run” option on the menu, then “Run Module” or you can get used to the shortcut which is the F5 key.

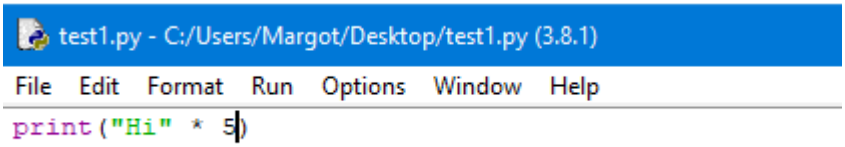
Notice that the output (Hi) shows in the Shell window.



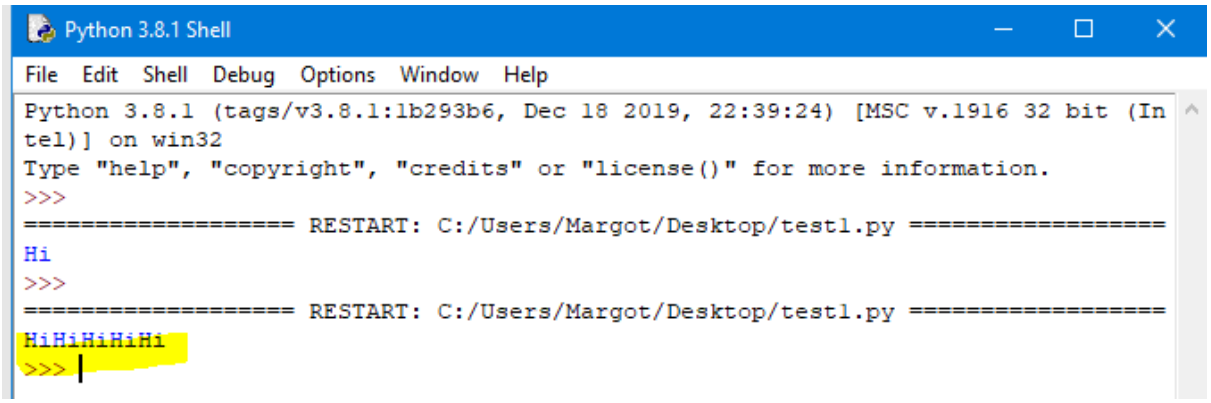
If you want to change the code, you have to click on the window for the file test1.py again. (Possibly the most annoying thing with using IDLE!)

Make changes if you need to, (I'm now going to print "Hi" 5 times) then save it again. (Hold down Control and hit "s" - the shortcut). You will get used to using Ctrl-S and F5 to save and then run.

Eg:



Ctrl-S to save, then F5 to run.



And you're away!

Examples using IDLE

1. Using input and output and some maths: Write a program to input someone's name and then their age. Tell them how old they will be on their next birthday.
   Your input and output will look like this

```
Hilda
13
Hilda, you will be 14 next birthday
```

   Notice, the input (what you will type in when you run the program) is black and what is output is blue.

2. Using if/elif/else: Write a program to input an age. If it's less than 12, output "You're probably not at high school". If its between 12 and 18 inclusive output "You're probably in high school" and if its greater than 18, output "You've probably left high school".

   Here are 4 runs of the code:

```
18
You're probably in high school
>>>
========== RESTART: C:/Users/Margot/Desktop/test1.py ==========
12
You're probably in high school
>>>
========== RESTART: C:/Users/Margot/Desktop/test1.py ==========
11
You're probably not at high school
>>>
========== RESTART: C:/Users/Margot/Desktop/test1.py ==========
19
You've probably left high school
```