Running Python on Your Computer

Lesson Objectives

After this lesson, you will be able to…

- Write Python 3 scripts locally.
- Run Python 3 scripts via the command prompt.

Defining Assumptions

We can’t use repl.it forever! We can run Python right on our computers.

- GA uses Macs for its default curriculum.
- We are happy to help you program Python on Windows or Linux as well.
- Sometimes you may need to ask questions about subtle differences!

Let’s Get Installing!

This will take us 10 to 15 minutes, then we’ll regroup.

First, install Atom from https://atom.io/. This is where you’ll write your code.

Then, follow the Python 3 installation directions.

Regroup

- You have Python 3 installed!
- You may have seen the in-line REPL (we'll revisit!).
- You have a text editor — Atom — installed.
- You are ready to create a local `.py` file and run it.

In-Line REPL

Let's check out a REPL.

- `Read-Evaluate-Print-Loop`.
- An interactive way to code.

Let's do it!

- Open your terminal.
- Then, open your in-line REPL:

Mac/Linux:

```
python
```

Windows:

```
py
```

We Do: Interactive Development

You can type any Python code you want here. Let's declare a variable and do some math:

```
x = 4

y = 5

print(x + y)
```

> ***Pro tip:*** `exit()` *is the command for when you want to get out of this environment!*

We Do: Local Files

We can create a file with a `.py` extension — we can execute properly written Python code in a `.py` file.

1. Create a new file with a `.py` extension. Let's call it `my_file.py`.
2. Open `my_file.py` in `Atom`.
3. In this file, declare some variables. Let's mix integers and strings!

```
favorite_tv_show = "Ninja Warrior"
obstacles_cleared = 5
time = "3 min, 20 sec"
print("I cleared", obstacles_cleared, "on", favorite_tv_show, "in", time)
```

Save and close your file.

> ***Pro tip:*** *Make sure you have a `print` statement.*

We Do: Running Local Files

Now we have code in a file, but we need to run it.

- Back on your terminal, we'll navigate to where that file is located:
    - `cd` stands for "change directory" ("directory" is another word for "folder").
    - `cd my_folder` changes to the directory `my_directory`.
    - `cd ..` goes up to the parent folder of the one you're in.
- Running the file varies slightly between Windows and Mac/Linux:
    - Mac/Linux: `python my_file.py`
    - Windows: `py my_file.py`

Raise your hand if you need help!

Summary

- We now have Python 3 — the latest and greatest — installed.
- We can use our in-line REPL in the terminal.
- We can execute a local `.py` file with Python code in it.
- We know how to do this regardless of whether we use Mac, Linux, or Windows.

Any questions?

Additional Resources

- Linux Command Line Cheat Sheet
- Mac Command Line Cheat Sheet
- Windows Command Line Cheat Sheet