

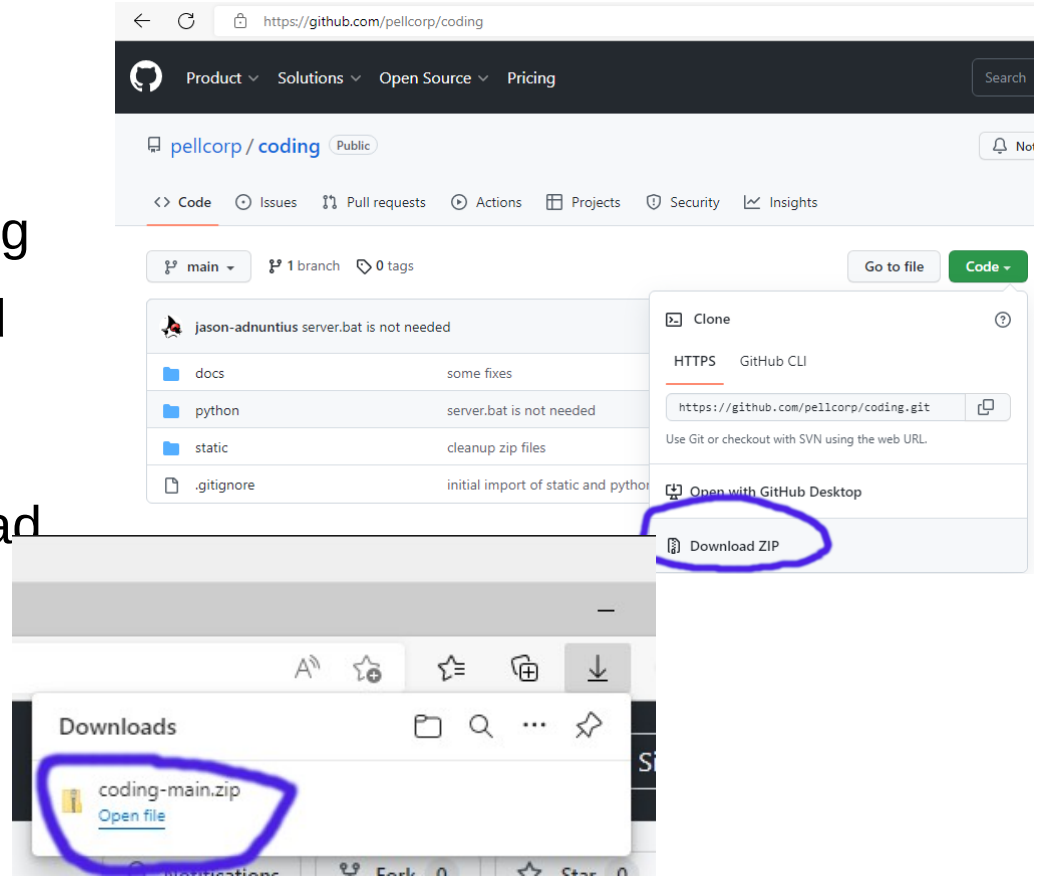
Python Coding



Getting the Sample Code



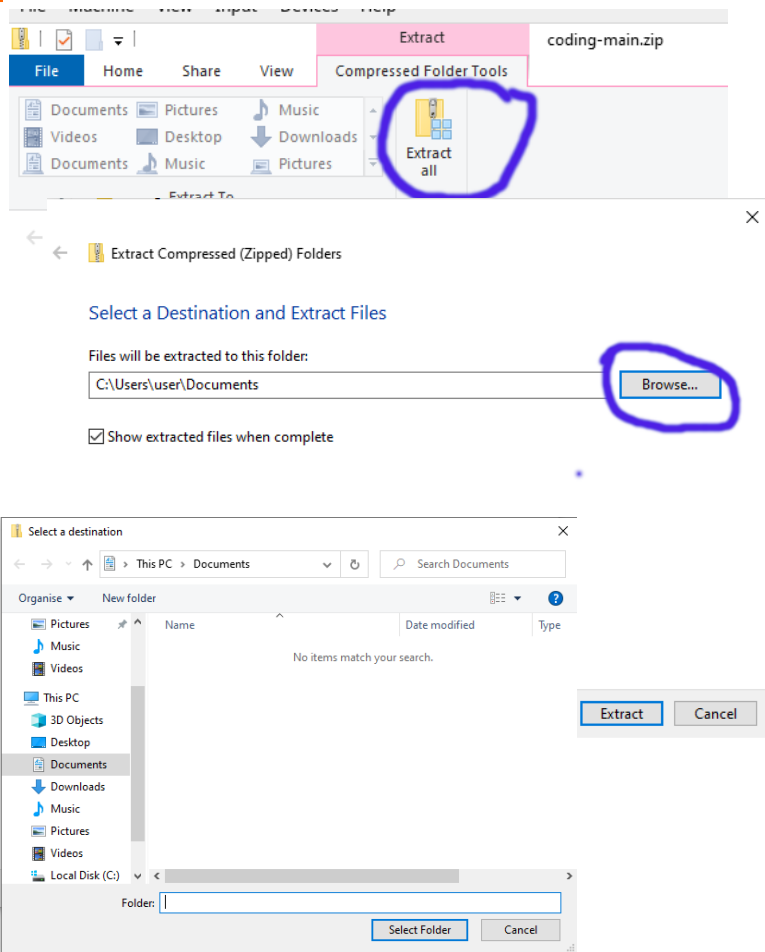
- Open Chrome or Edge and navigate to:
<https://github.com/pellcorp/coding>
- Click the *green* **Code** button and then the **Download ZIP** button
- Click **open file** for **coding-main.zip** in the browser download window.



Getting the Sample Code Cont.



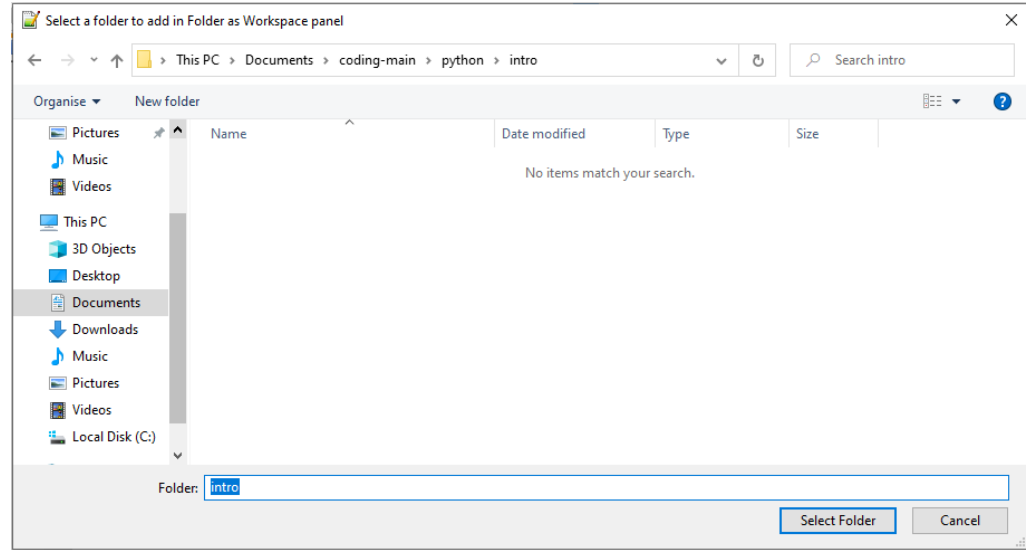
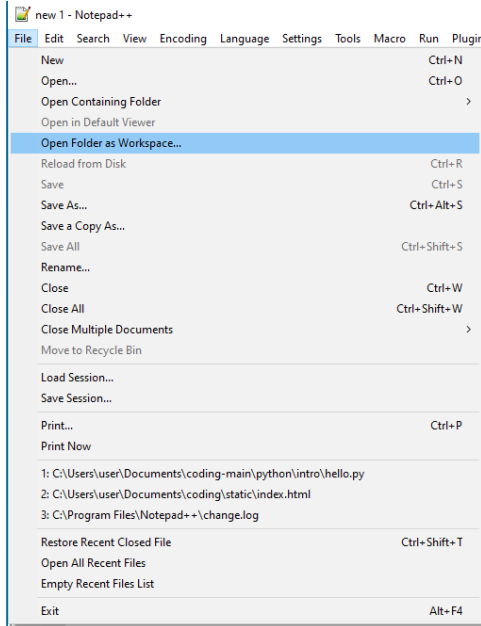
- Click the Extract all button
- When Prompted to **Select a Destination and Extract Files**, click the **Browse...** button
- And choose your *School Drive* Folder
- Click Extract



Notepad++



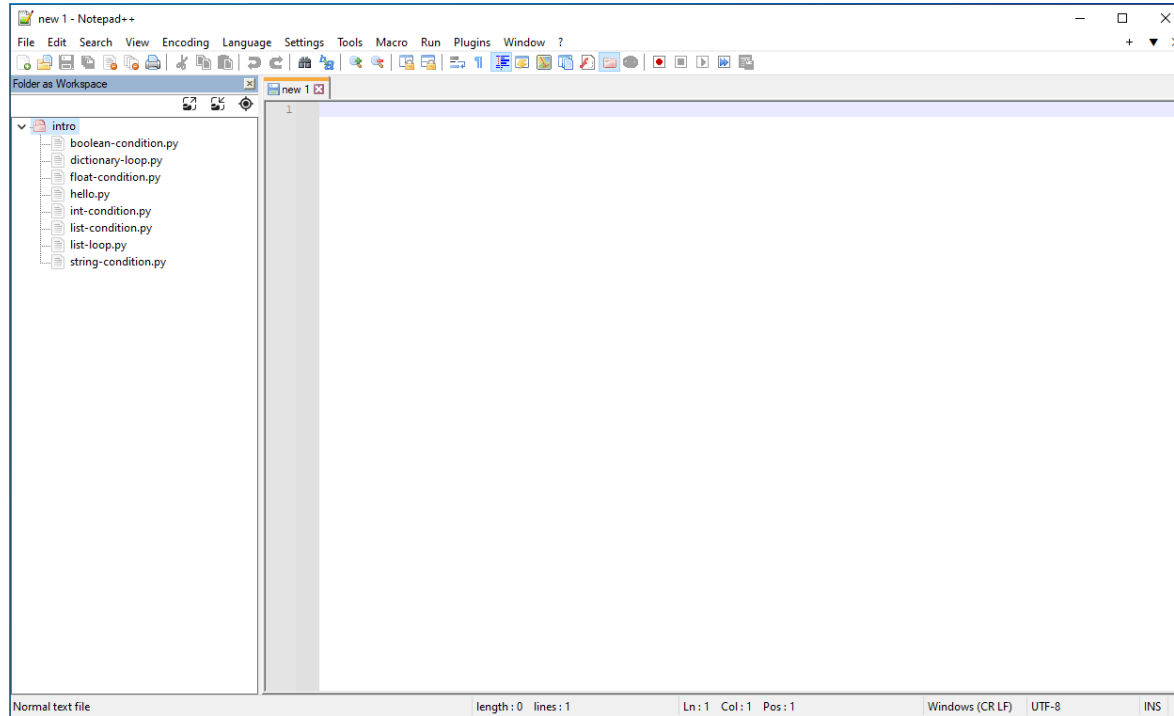
- **Open coding-main/python/intro Folder as Workspace**



Notepad++ Sample Code



- You should see this now:



What is Python



- A programming language which is very popular, especially for beginners.
- We are going to learn by doing, including playing with and changing sample code.
- What are we going to do:
 - Output – printing to the console
 - Variables
 - Conditional Statements
 - Loops

Python - Variables



- Strings
 - “Hello World”
- Integer Numbers
 - Are whole numbers, numbers without decimal points
- Floating Point Numbers
 - Are numbers with a decimal points.
- Booleans
 - True or False
 - Boolean arithmetic
- Lists
 - A way to group values into a structure, so that python can operate on them together, an example would be:
 - `states = ['VIC', 'NSW', 'TAS', 'SA', 'NT', 'QLD', 'WA']`

Python If Statements



- We are going to be playing with IF statements today, they look like this:

```
if <condition>:  
    statement
```

```
elif <condition>:  
    statement
```

```
else:  
    statement
```

- Don't worry too much about understanding it all, hopefully once we start hacking on the samples some of it will become a bit clearer.

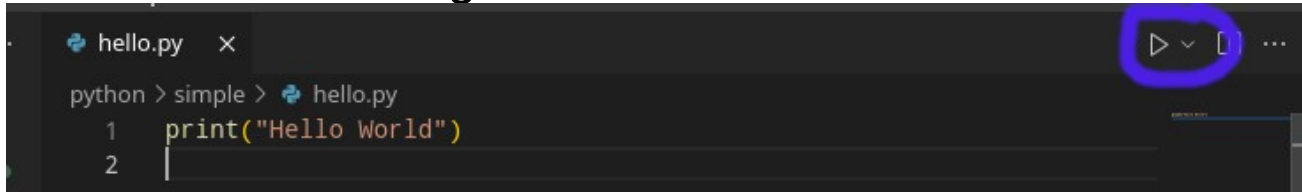
Python If Statement Conditions



- A condition is something that evaluates to true or false, and example would be.
- A condition is of the format:
 - value or variable **<operator>** value or variable
- Condition **operators** include:
 - **==** equals
 - **!=** not equals
 - **>** greater than
 - **>=** greater than or equal
 - **<** less than
 - **<=** less than or equal
 - **in** value in a list or string.
 - **not in** value not in a list or string

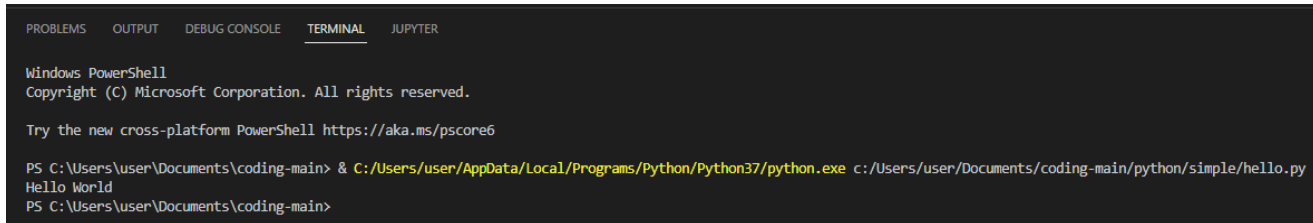
Running Python from VSC

- Right Click on a .py file (for example hello.py) and choose Run Python File in Terminal
- You can also click the Play button over on the right



```
python > simple > hello.py
1 print("Hello World")
2
```

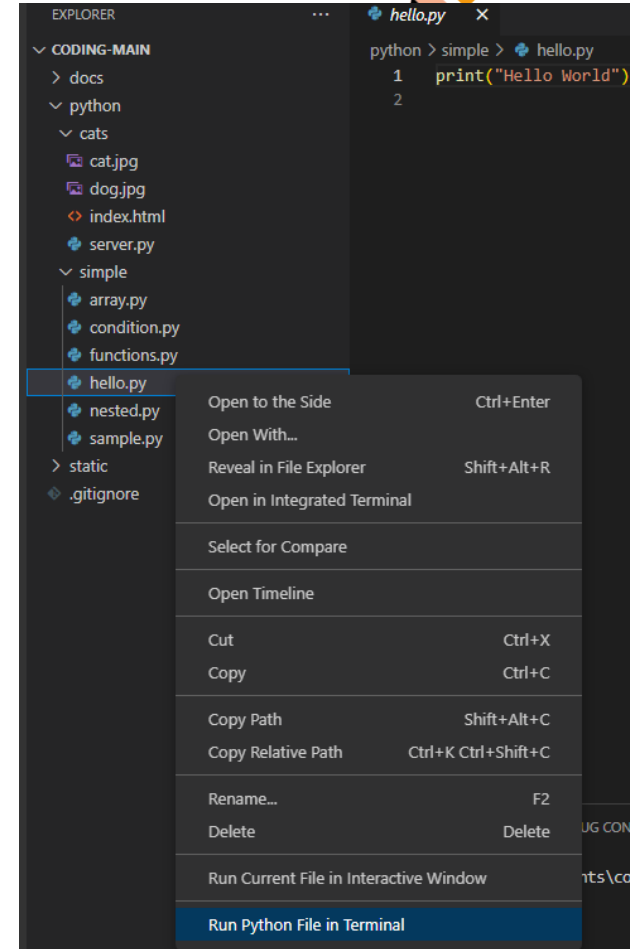
- The output is in the Terminal



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

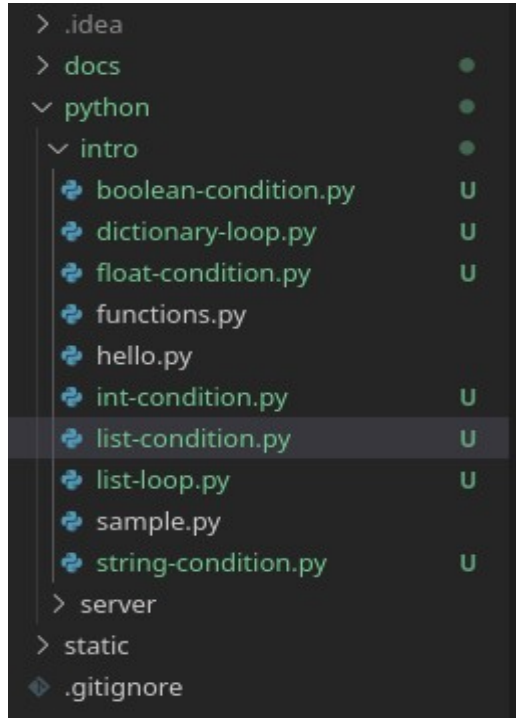
PS C:\Users\user\Documents\coding-main> & C:/Users/user/AppData/Local/Programs/Python/Python37/python.exe c:/Users/user/Documents/coding-main/python/simple/hello.py
Hello World
PS C:\Users\user\Documents\coding-main>
```



Samples



- The python intro folder



- The Basics:
 - Hello World
 - If Statements
 - Lists
 - Dictionaries
- Functions
- All together now!

Exercises



- Run the hello.py
 - Change the text that is printed to the VSC Terminal window
- Hack the following scripts:
 - string-condition.py
 - int-condition.py
 - float-condition.py
 - boolean-condition.py
 - list-condition.py
- Change the code so that it prints different message(s) in elif and else statements.