Welcome to Python

No Sneks Allowed

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Hello, Python

```python
def main():
    print("Hello World!")

if __name__ == "__main__":
    main()
```

What You Need

- A Text Editor
- A Python Interpreter

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Why were your frigging instructions so damn complicated then?

Why my frigging instructions were so damn complicated

- Builds Character

[1] Anybody want an event on Docker?

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Why my frigging instructions were so damn complicated

- Builds Character
- Docker is Great [1]
- I wanted to remove ALL variables from the process for beginners
- You could've skipped them anyways

[1] Anybody want an event on Docker?

Setup Steps: Get Resources

- All resources at: `https://github.com/fordham-css/Python_Workshop`
- Either use `git clone` or download it as a zip file
- Hint: You can download things from terminal on most *NIX systems and in Powershell with `$ wget URL`
- Navigate to the `resources` directory
- You'll be opening VsCode (After Python / Docker is set up) in this directory, by navigating here in Terminal and typing `$ code .` or through the GUI on Windows (Ask me)[2]

[2] If you open VsCode in the main folder of the repo it will attempt to install a ton of stuff you don't need.

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Setup Steps: Python

- Install Text Editor (VsCode Preferred): `https://code.visualstudio.com/download`
- Install Docker[3], find correct link in setup Doc

[3] Optional
[4] That's "resources"

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Setup Steps: Python

- Install Text Editor (VsCode Preferred): `https://code.visualstudio.com/download`
- Install Docker[3], find correct link in setup Doc
- If using Docker:
  - VsCode Required
  - Make sure you open it in the right directory[4]
  - Install Extension "Remote - Containers"
  - Click Orangey Thingy at Bottom Left
  - Select "Reopen in Container"
  - Wait...
  - You're ready

[3] Optional
[4] That's "resources"

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Setup Steps: Python

- If not using Docker:
  - Install Miniconda:
    `https://docs.conda.io/en/latest/miniconda.html`
  - Open up:
    - Mac: Terminal
    - Windows: Start Menu → Miniconda / Anaconda Prompt [5]

[5] I can't remember exactly what it's called, bug me if it won't work.

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    `https://docs.conda.io/en/latest/miniconda.html`
  - Open up:
    - Mac: Terminal
    - Windows: Start Menu → Miniconda / Anaconda Prompt [5]
  - Navigate to "resources" folder inside wherever you downloaded the repo
  - Open your text editor and wait

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Setup Steps: VsCode

- If you're using Docker this will already be configured for you
- F1
- `> Python: Select Interpreter`
- Click the one that that has conda/miniconda somewhere in it [6]
- F1
- `> Python: Select Linter`
- Click "pylint"
- It will prompt you to install PyLint, let it[7]

[6] Ask for help if you don't see it

[7] If it asks whether you want to use conda or pip say conda

You did it!

You now should all have a working Python setup. We'll continue once everybody has gotten it working.

Python Has all the Basics

- It's got functions

[8] Not covered today

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Python Has all the Basics

- It's got functions
- It's got variables
- It's got operators
- It's got classes and OOP[8]

[8] Not covered today

Variables

- For those that haven't programmed before:
  - Not "unknowns" like in math
  - A place to store pieces of information
- Open `basics/variables.py`

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Variables

```
1   # This file demonstrates variables in Python
2   # You don't need to use a 'var' keyword
3   # or declare a type
4   a = 1
5   b = "A string"
6   c = {
7     "This is": "A dictionary",
8     "It's pretty much": "the same thing as a JS object"
9   }
10  # This is a list
11  d = [a, b, c]
12  # This is fine, you can change type on the fly
13  a = b
```

Printing

- It's nice to see the results of our program.
- We do this (in basic programs) by printing to the terminal.
- Anybody know why it's called that?

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```
1 print("A string")
2 print(1)
3 print([1, 4, 5, 6])
```

- You can print nearly anything, with varying degrees of success
- Try printing some things, see what works well and what doesn't

Control Flow

- In its simplest form, a Python script is just a list of instructions the interpreter does sequentially.

[9] Who wants to tell me what each of these is?

Control Flow

- In its simplest form, a Python script is just a list of instructions the interpreter does sequentially.
- You control the order in which it executes statements using:[9]
  - Conditionals
  - Loops
  - Functions

[9] Who wants to tell me what each of these is?