



Python Programming

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Download Python 2.78

- On windows 7 download the MSI x64 installer
- On OSX (its already installed 😊) [Python 2.78 Installers](#)
- On Unix/Linux distros ... we can cross this bridge later.
- Pick up a text editor:
 - Notepad++ for windows users
 - Sublime, Atom, Text Wrangler, etc.



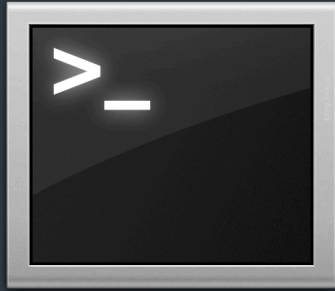
Programming Languages

- Purpose
- “Dynamic vs. Static” Typed
 - Compiled or Interpreted
- Environment



Java™





Open your Terminal/PowerShell

- Couldn't Install?
 - <http://labs.codecademy.com/#:workspace>
- Some Commands:
 - `cd [nameOfDirectory]` – change directory
 - `ls` – list contents of current directory
 - `python [nameOfFile]` – run python file (without a file you can start up the interpreter (Read. Evaluate. Process. Loop.)



Data and Variables

- Strings (ex. “hello”)
- Integers (ex. -900)
- Lists [1, 2, 3, “a b c”] (also known as arrays)
- Dictionaries { key: value, key2: value2 }

Control Flow

- If / elif / else statements
- For Loops / While loops
- Defining Functions





Import this & Writing a script

- Create a file:
 - On the command-line: `touch filename.py`
 - Or create a new file and save it to your directory (make sure file ends with `.py` extension)
- Try importing a library
 - `import this`
 - `import random`
 - `random.randrange(1,10)`

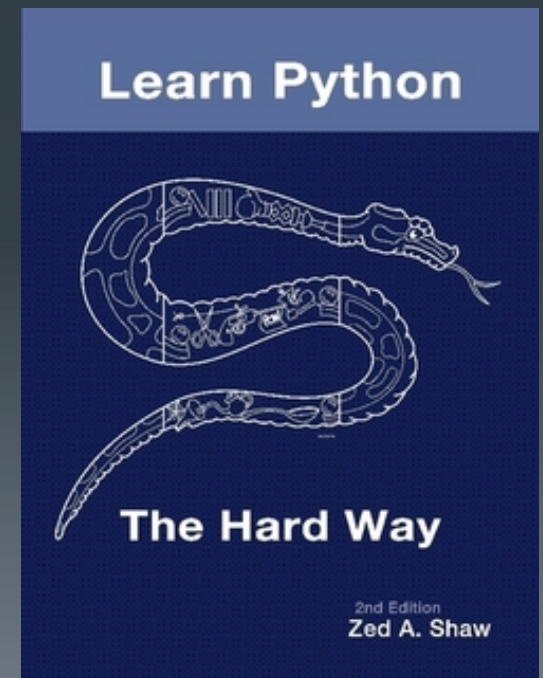
Style & Best Practices

- A program could be one script
- However we usually split these files + resources into multiple files + folders.
- PEP-8
- A final note on open source



Suggested Reading & Other Cool Sites

- [Learn Python the Hard Way \(Zed Shaw -- its free\)](#)
- For the more adventurous programmer:
 - [Python Standard Library By Example](#)
- Check out:
 - [Using Python](#)





Package Managers ****bonus****

- People write cool stuff – then then publish them as packages
- You can use Package managers to download their work
 - Quick and Easy
- [Python Install Package \(PIP\)](#)
 - Flask – the simpler way to develop web applications
 - Turtle – draw with python!
 - Pygame – create games.
 - SciPy – scientific utilities/functions in python
 - Beautiful Soup – web scraping library