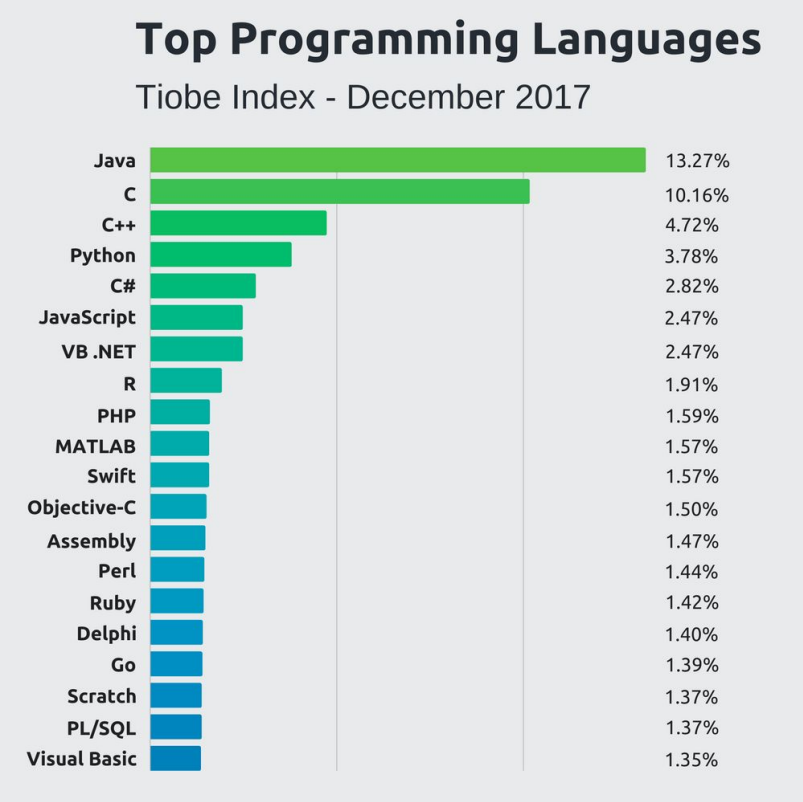
Who Uses Programming?

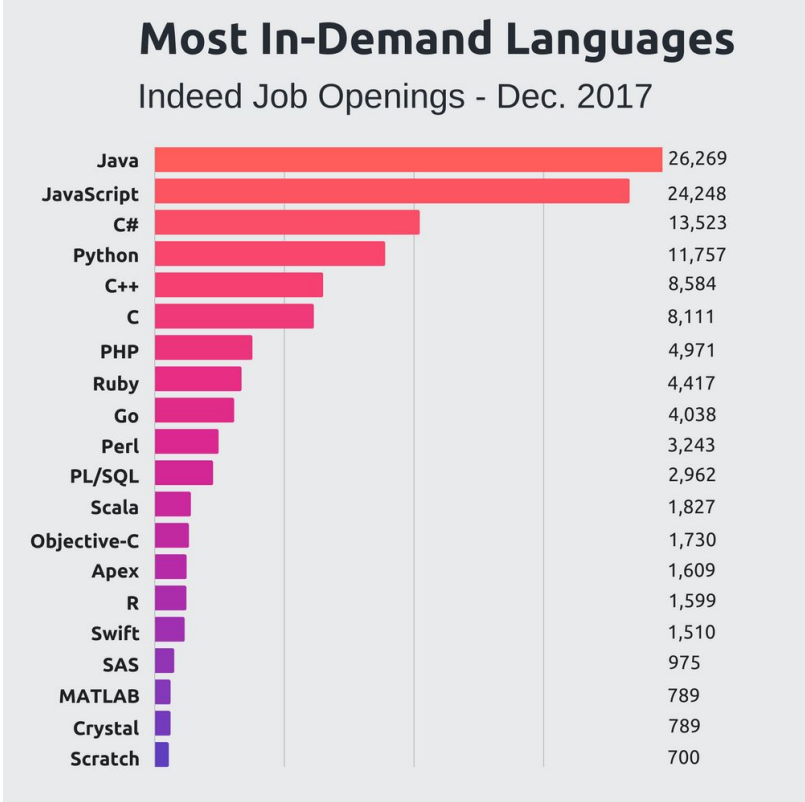
How Can Programming Help *Your* Career?

Some Examples Include:

- **Business:** Marketing Data Analysis, Prototyping Tools
- **Banking / Commerce:** Online Banking, Automated accounting tools, A.I. Stock Trading
- **Science:** Data Analysis & Data Visualization, Macro & Micro Biology Simulations, Mapping
- **Engineering:** Physics Simulations, Stress Testing, Robotics
- **TV & Film Editing:** Writing code for video encoding or image processing
- **Politics:** Polling Systems, Processing Survey Data

Examples of Programming Languages





https://stackify.com/popular-programming-languages-2018/

Programming Languages in Action

Unity Game Engine

Languages Used:

- C#
- Javascript

Programming Languages in Action

Game: The Vanishing of Ethan Carter

UNREAL ENGINE

Languages Used:

- C++

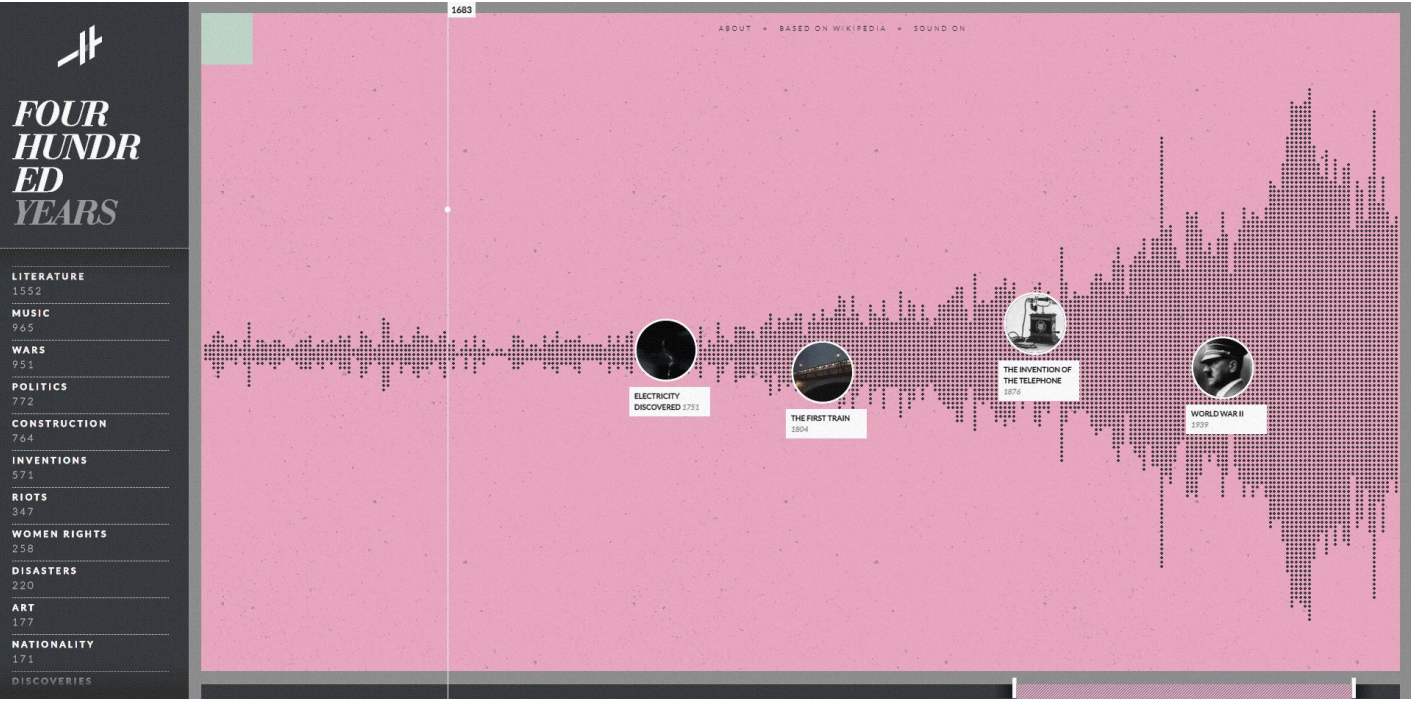
Programming Languages in Action

ANDROID

Languages Used:

- Java

Programming Languages in Action



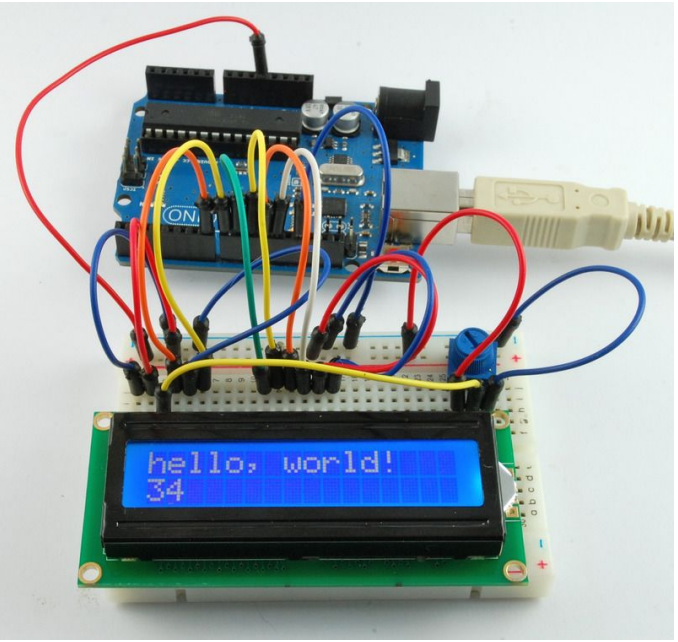
http://www.histography.io/

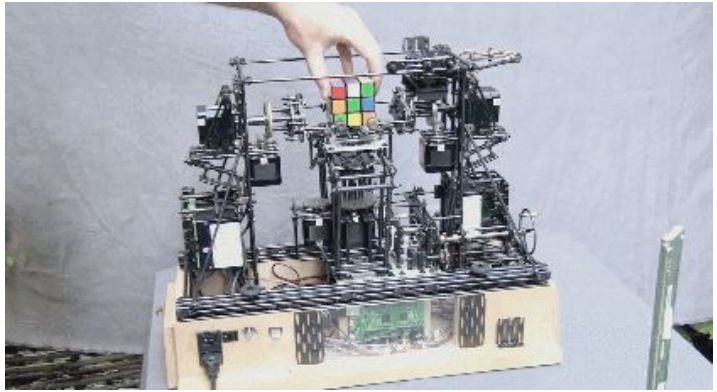
Most Websites

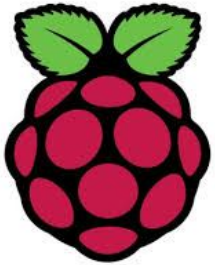
Languages Used:

- Javascript

Programming Languages in Action







Raspberry PI

portable computer devices and robotics

Languages Used:

- Python

https://www.raspberrypi.org/

Programming Languages in Action

NUKE®

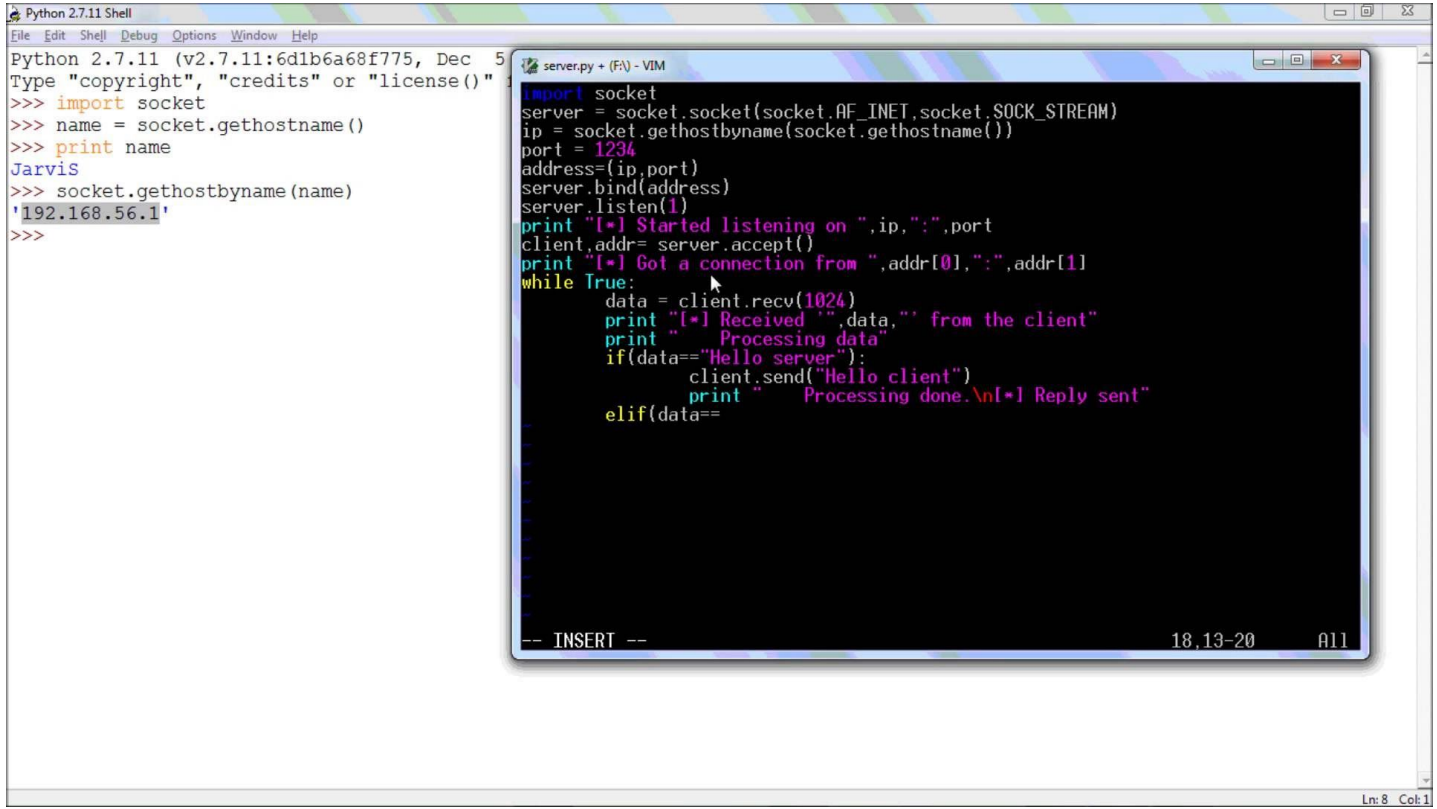
(video compositing / editing)

Languages Used:

- Python

http://www.cgtoday.com/vfx/nuke-powers-sony-pictures-imageworks-on-alice-in-wonderland

Programming Languages in Action



Web Servers

Languages Used:

- PHP
- ASP.NET (C# OR Visual Basic)
- C++
- Java and JSP.
- Ruby on Rails
- Python.

A lot of companies are using Python!

Who uses Python

Dropbox

Instagram

Quora

YouTube

Google

DISQUS

reddit

Pinterest

Programming In Python

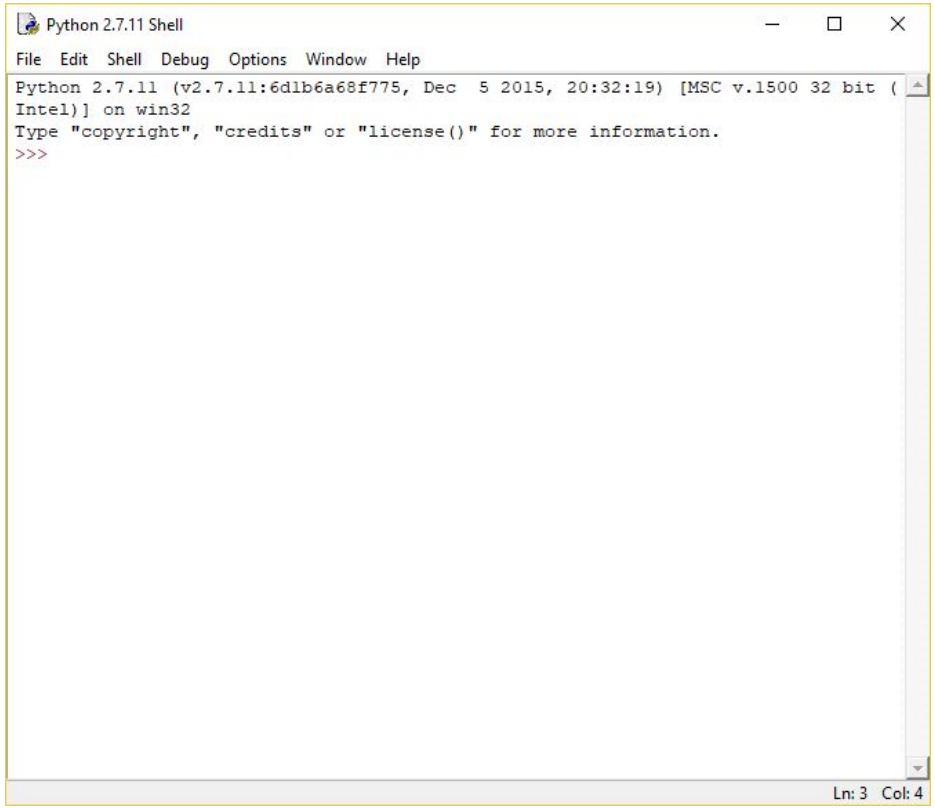
Today’s Learning Goals

- ❏ I can create and run script files in the Python script editor (IDLE)
- ❏ I can write a program that generates output

The Python Editor (IDLE)

1. Python Shell

Similar to the command line or terminal on your computer. Type a single command and hit ENTER to execute it.



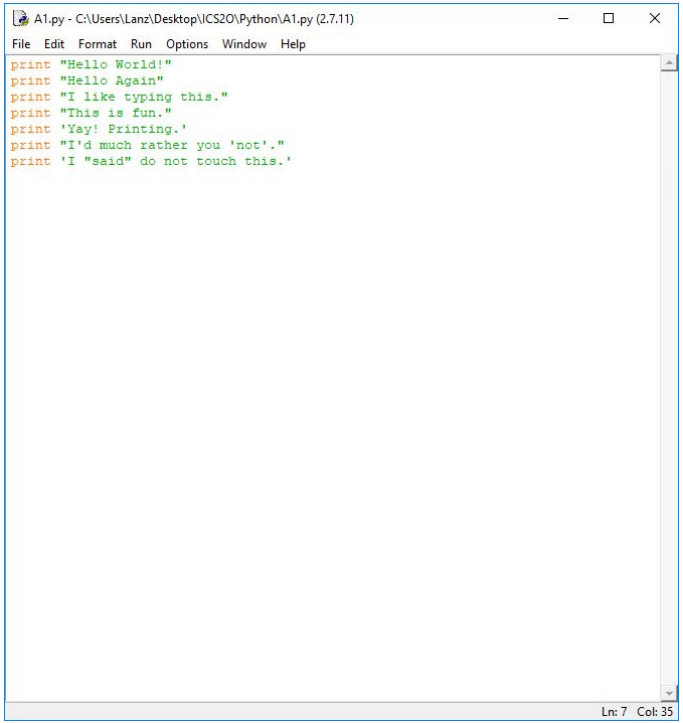
Python “Scripts”

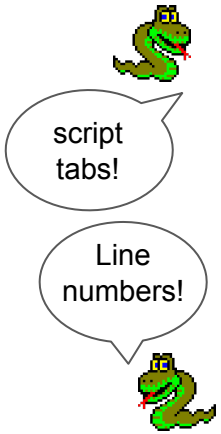
The document that holds the code for your program is called a script.

Python scripts are saved with a **.py** file extension.

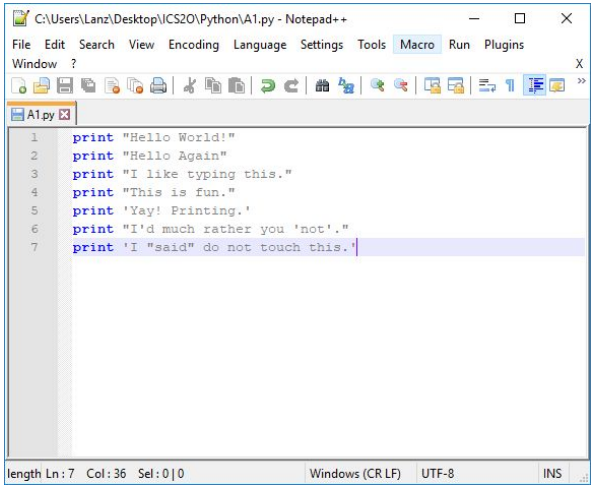
2 Ways to Make Python Scripts

1. Use the Python Script Editor





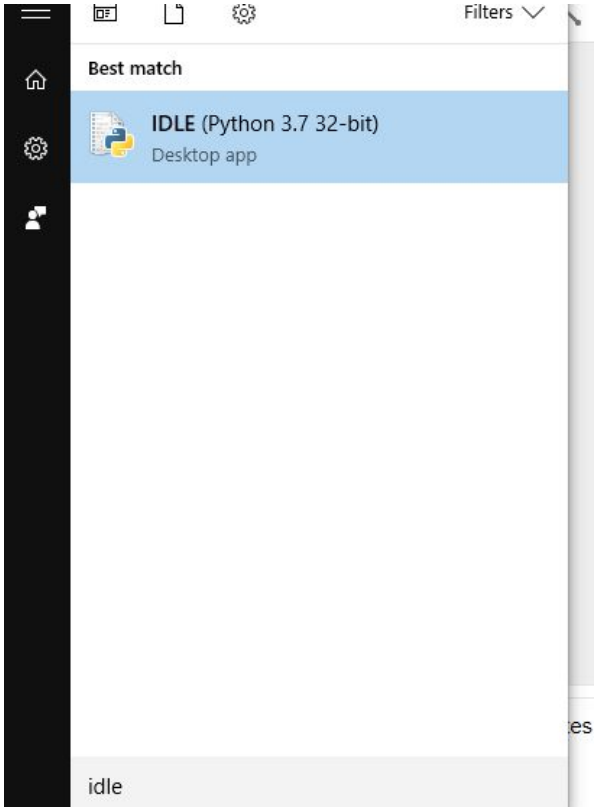
Use Notepad++ or TextWrangler



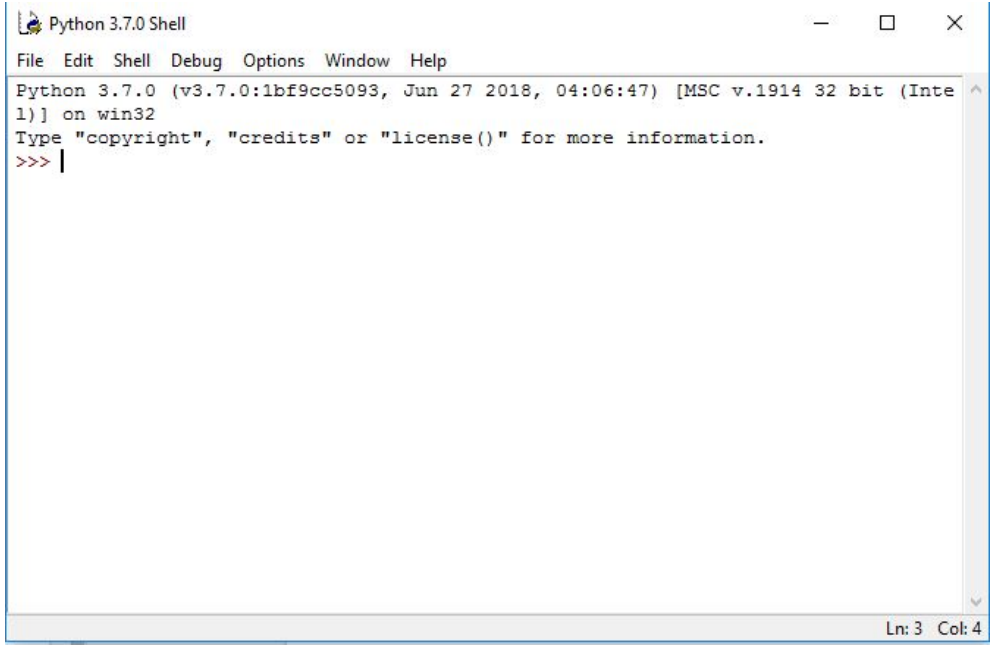
For TextWrangler you will want to turn on “show line numbers”

http://osxdaily.com/2010/08/26/show-line-numbers-in-textwrangler/

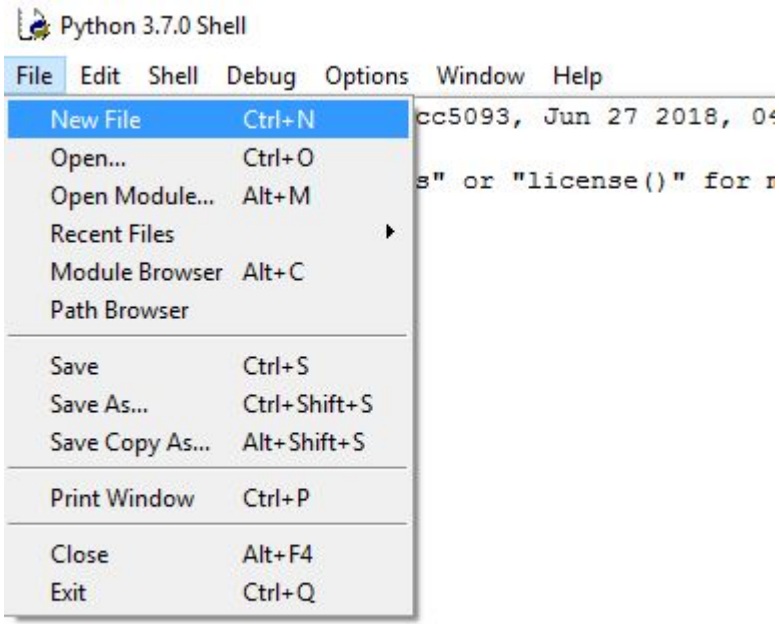
1. Open IDLE



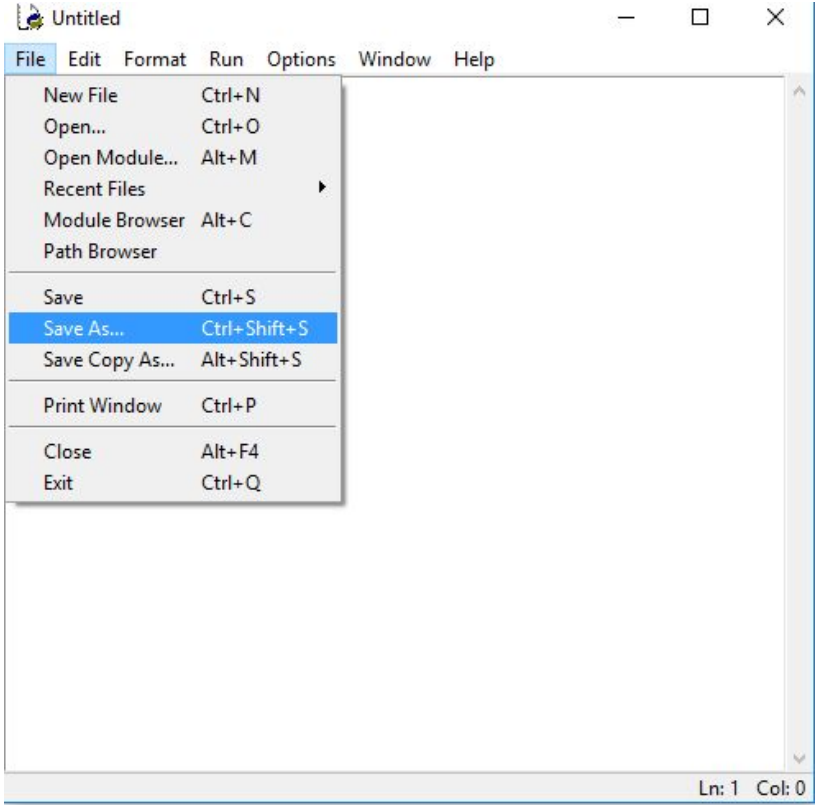
2. Python Shell will load



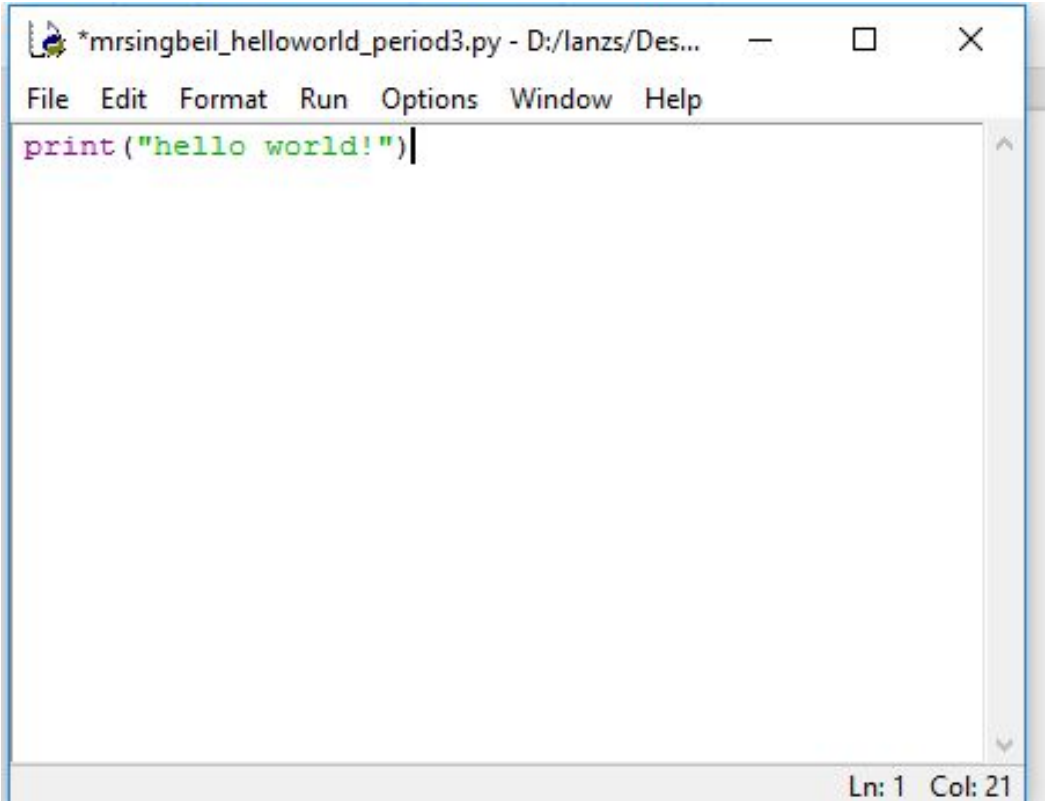
3. Open a new script window



4. Save the script file



5. Start writing some code

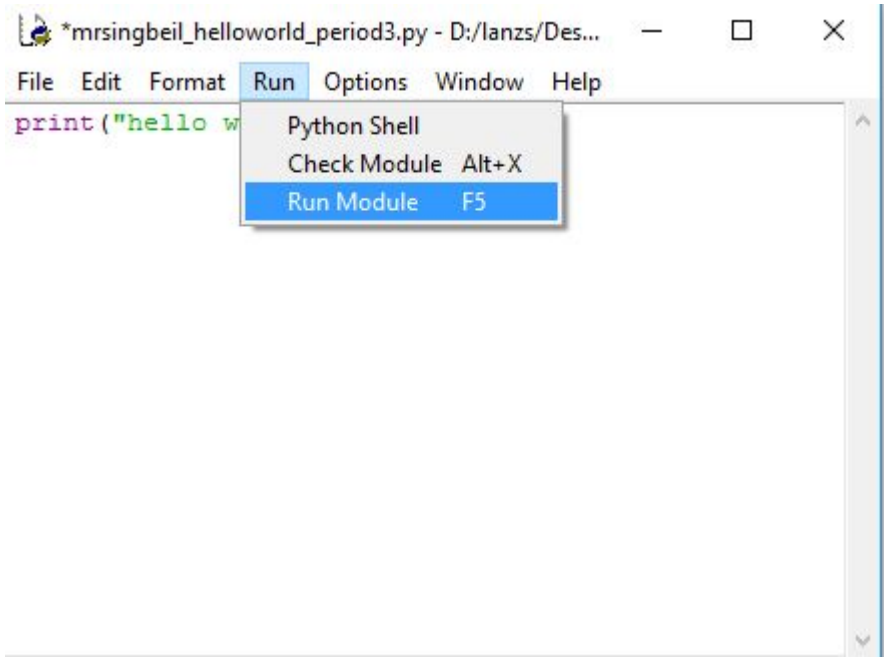


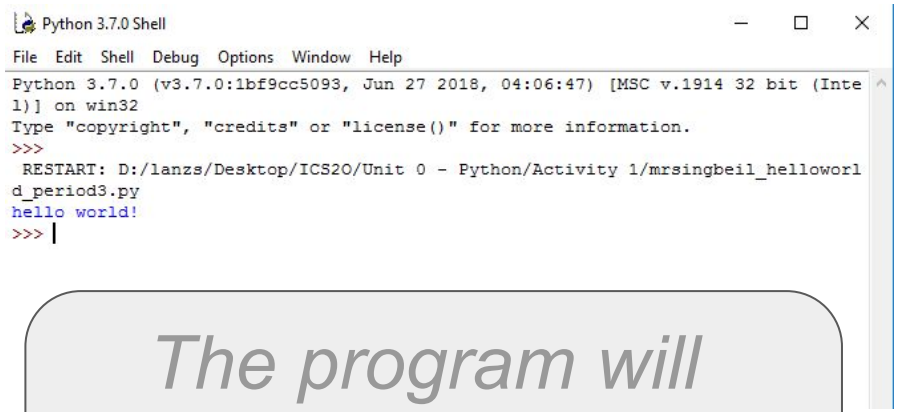
This code will output a message to the console when the program runs.

print() is a function that handles output.

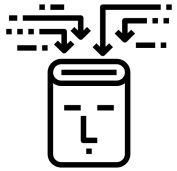
The message contents is written between two quotation marks “...” or two apostrophes ‘...’

6. Run your program: `Run > Run Module`





The program will compile and run in the Python Shell.



Programming Activity 1: Text Art

Create a “Hello World” Program.

Filename should be: YourName_helloworld.py

Line 1: should say “Hello World!”

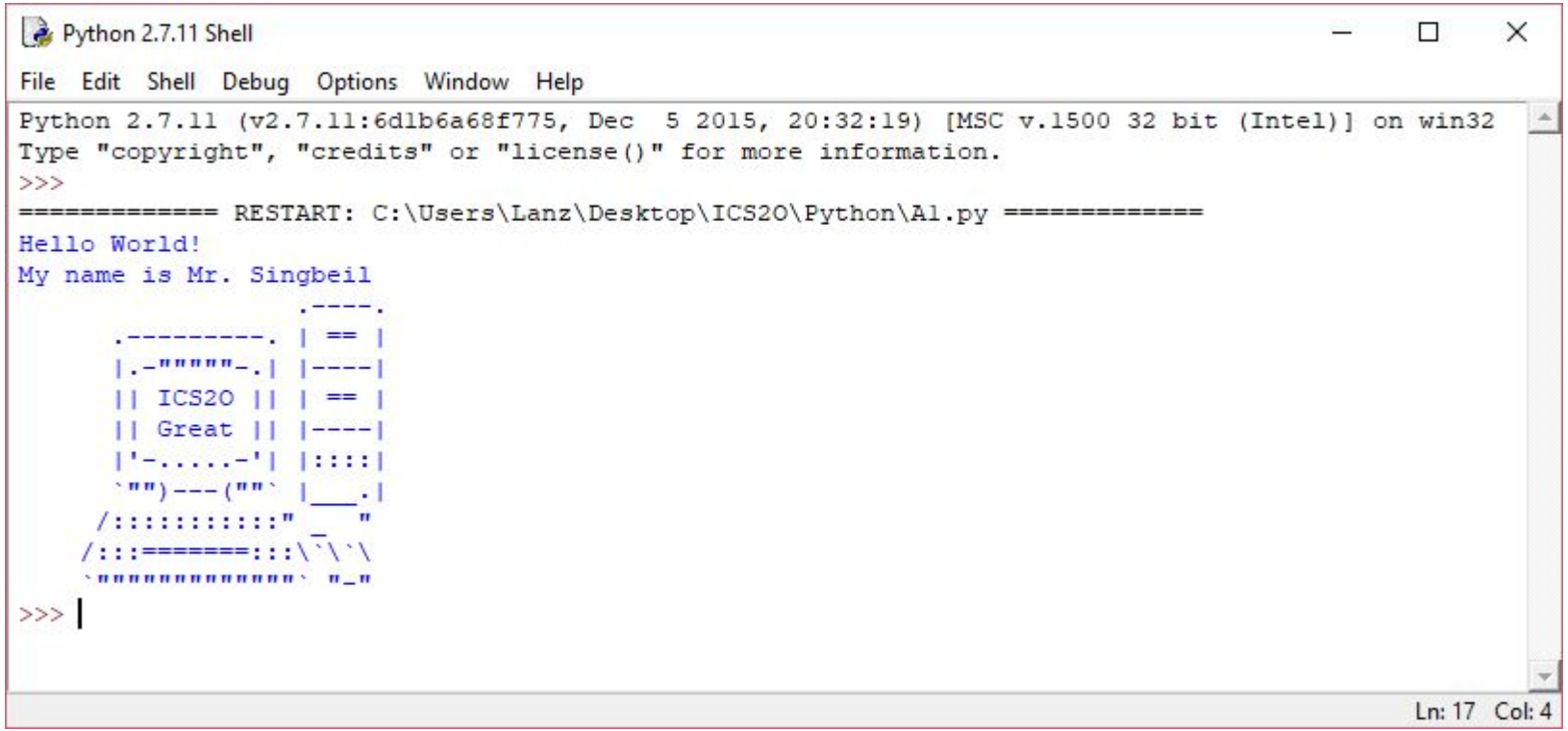
Line 2: should say “My name is <your name>”

Lines 3 → End: Print out an ASCII drawing by using multiple print() commands.

Must be an ORIGINAL design
(no copying from websites!)

Must be at least 10 lines high and 10 characters wide but bigger is better!

Text Art: Sample Output



The Python Basics Videos

There are so many resources out there to help us learn Python. Here's a good playlist you can use if you are finding things a bit tricky in class:

https://www.youtube.com/playlist?list=PL82YdDfxhWsDJTq5f0Ae7M7yGcA26wevJ