

COSI 10A Recitation #1

...

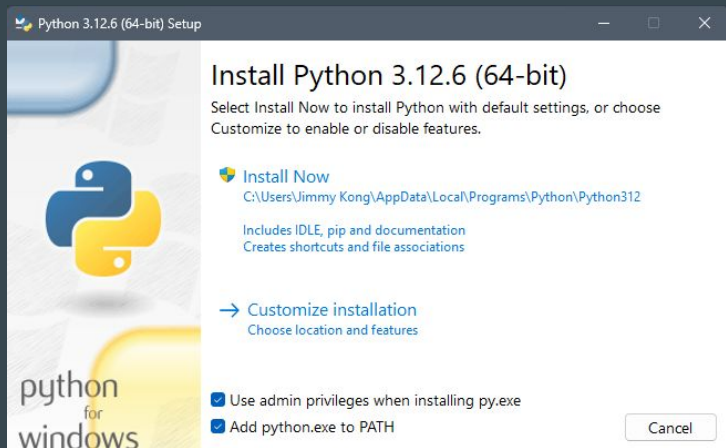
Agenda: Python & IDE Setup

Downloading Python for Windows

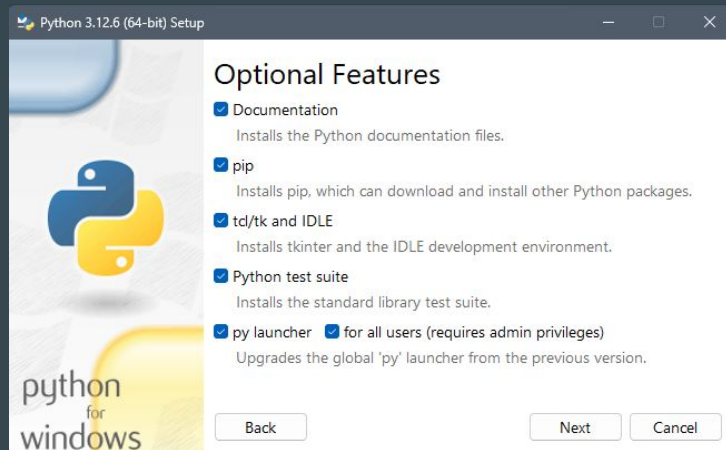
(MacOS process is more streamlined so just follow through installation prompt)

<https://www.python.org/downloads/>

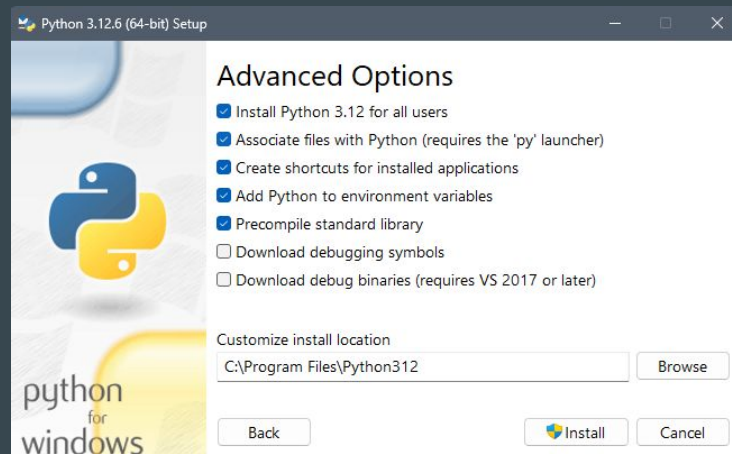
1.



2.



3.

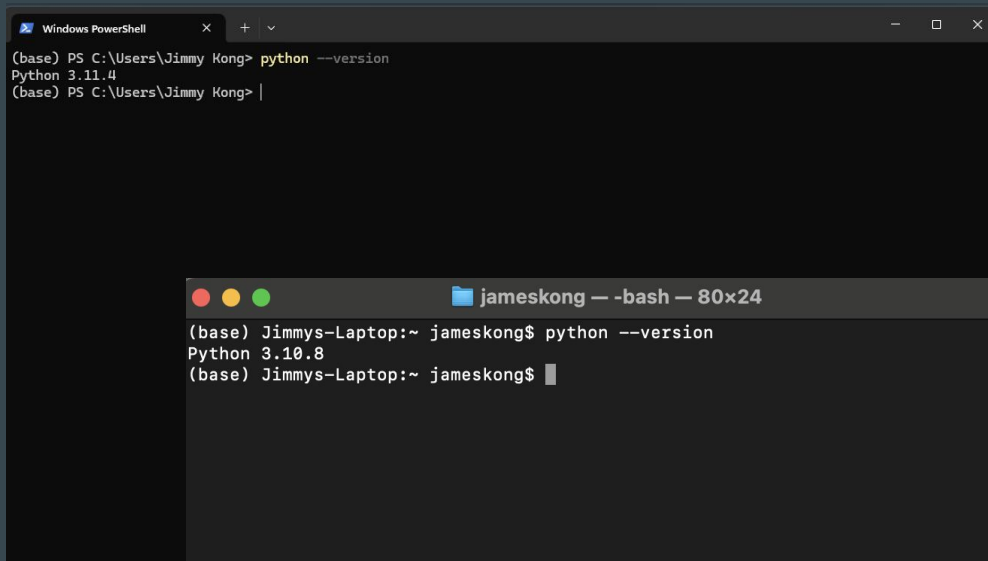


****for step 3, you may want to create a folder named “Python” and select it as the install location in case you download different versions of Python in the future!**

Test if Python is installed and working

Open Windows PowerShell or Terminal on MacOS and type “python --version” (two dashes)

The version of python that you installed should appear

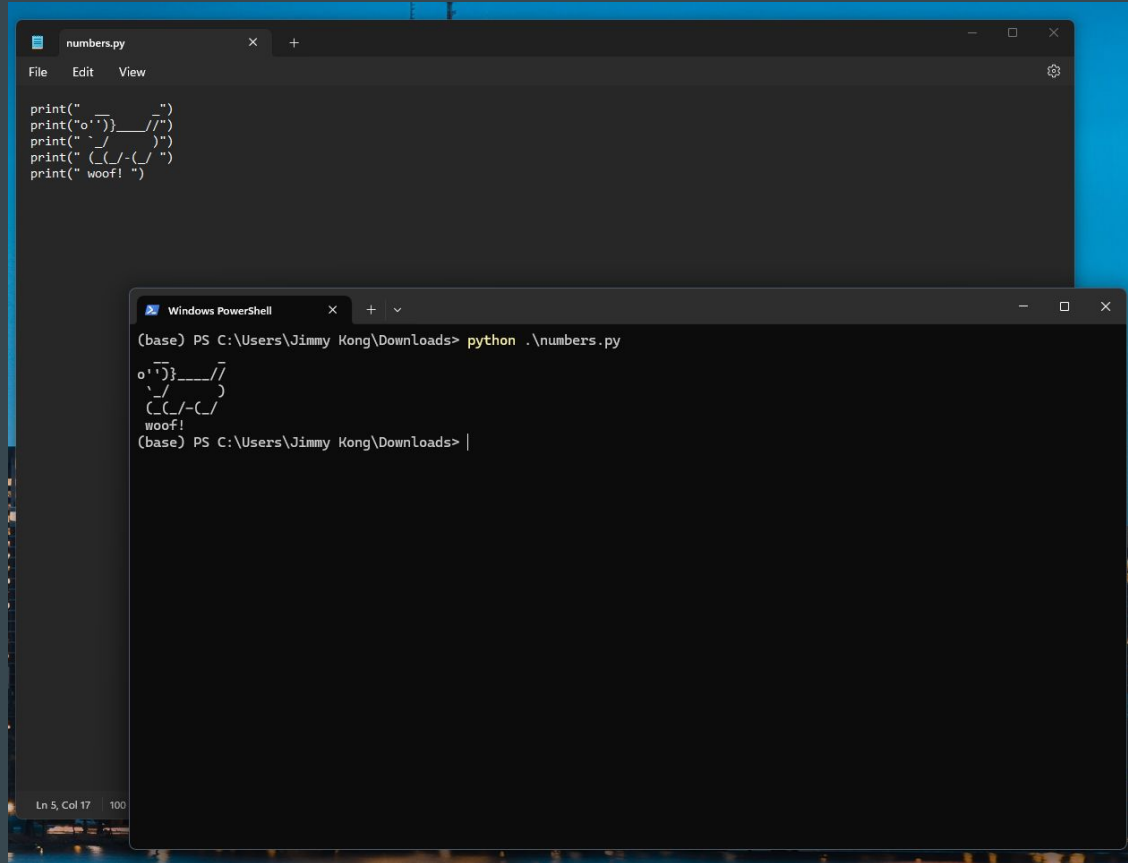


The image displays two terminal windows side-by-side. The top window is a Windows PowerShell terminal with a dark background. It shows the command 'python --version' being entered and executed, resulting in the output 'Python 3.11.4'. The bottom window is a MacOS Terminal window, also with a dark background, titled 'jameskong -- -bash -- 80x24'. It shows the command 'python --version' being entered and executed, resulting in the output 'Python 3.10.8'.

```
(base) PS C:\Users\Jimmy Kong> python --version
Python 3.11.4
(base) PS C:\Users\Jimmy Kong> |
```

```
(base) Jimmys-Laptop:~ jameskong$ python --version
Python 3.10.8
(base) Jimmys-Laptop:~ jameskong$ █
```

You can run python code in a simple .txt file in Windows notepad if you name the file with a “.py” ending but...



```
numbers.py
File Edit View
print("
print("o'')}_--//")
print("  _/ )")
print(" (_/_-(_/ ")
print(" woof! ")

(base) PS C:\Users\Jimmy Kong\Downloads> python .\numbers.py
o'')}_--//
  _/ )
(_/_-(_/ 
woof!
(base) PS C:\Users\Jimmy Kong\Downloads> |
```

Ln 5, Col 17 | 100

Which is easier to understand?

```
# Imports:
import random
from threading import Thread
from time import sleep, time
from os import startfile, system, path
from global_hotkeys import register_hotkeys, start_checking_hotkeys
from bot import click_if_exists, search_and_click, found, find, bclick
from input_boxes import message, buttons, double_input, loading_bar, loading_bar_done
from pyautogui import hotkey, moveTo
from pyperclip import copy
from subprocess import call
from win32gui import MoveWindow, FindWindow
from tendo.singleton import SingleInstance

# Startup Process:
'''Checks to make sure there is only one instance of the program. Then, resizes the window, and moves it to the bottom
only_one = SingleInstance()
try:
    hwnd = FindWindow(None, "MagicART-Hotkeys.py - Shortcut")
    MoveWindow(hwnd, -7, 748, 407, 300, True)
except Exception as e:
    pass

# Global Variables:
awake = True
keyboard_command = True
admin = False

# Login:
'''Asks the user to login. If the user does not have an account, it asks the user if they would like to create one.
If the user is an admin, it sets the admin variable to True. Runs in response to the check_user() function.'''
```

```
test.py requirements.txt test2.py x JS hangman.js generate_license.py DayTrade.py
test2.py
2 import os
3 import sys
4 from time import time
5 import bot_function as fun
6 import time
7 os.system("")
8 import colorama
9 from colorama import Back, Fore, Style
10
11
12
13 print(f'{fun.Colors.fg.pink}{fun.Colors.bold}TOMTOM SOFTWARE COOPERATION{fun.Colors.reset}')
14
15
16 colorama.init(autoreset = True)
17 import logging
18
19 # Get the top-level logger object
20 log = logging.getLogger()
21
22 # make it print to the console.
23 console = logging.StreamHandler()
24 log.addHandler(console)
25
26 # emit a warning to the puny Humans
27 print(Fore.RED + Style.BRIGHT + "\nNo Subreddits to scrape!")
28 print(Fore.RED + Style.BRIGHT + "\nExiting.\n")
```

Introducing IDEs!

- stands for **integrated development environment**
- software application that helps programmers develop software code efficiently
- features include software editing, building, testing, and packaging in an easy-to-use application

The Top IDEs used according to Google Trends

Worldwide, Sept 2024 :				
Rank	Change	IDE	Share	1-year trend
1		Visual Studio	27.57 %	-0.3 %
2		Visual Studio Code	14.16 %	+0.3 %
3		Eclipse	11.89 %	+0.6 %
4		pyCharm	10.67 %	+1.2 %
5		Android Studio	9.89 %	+0.7 %
6		IntelliJ	8.03 %	+0.4 %
7		NetBeans	3.81 %	-0.3 %
8		Xcode	2.98 %	-0.3 %
9	↑	RStudio	2.77 %	-0.2 %
10	↓	Sublime Text	2.52 %	-0.5 %
11		Atom	2.08 %	-0.8 %
12		Code::Blocks	1.4 %	-0.2 %
13		Vim	0.87 %	-0.0 %
14		PhpStorm	0.38 %	-0.0 %
15		Qt Creator	0.3 %	+0.0 %

So what to use for Python?



Visual Studio Code

- industry standard IDE
- more focus on multi-languages rather than a single language
- huge extension library and third-party support



PyCharm

- built specifically for python
- has many python specific autocomplete and hinting features
- overall catered to projects mostly in python

Live Demo