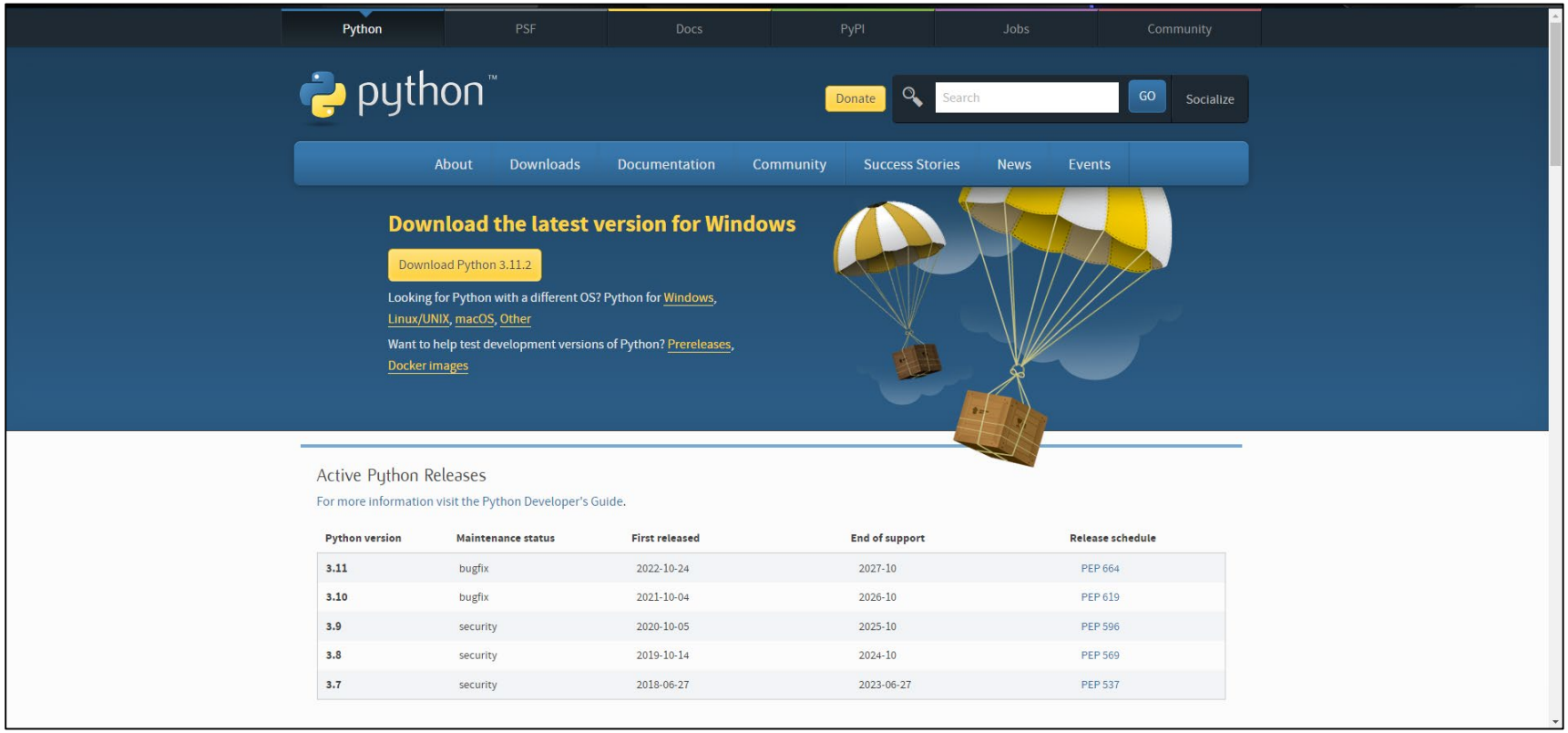
Python_intro

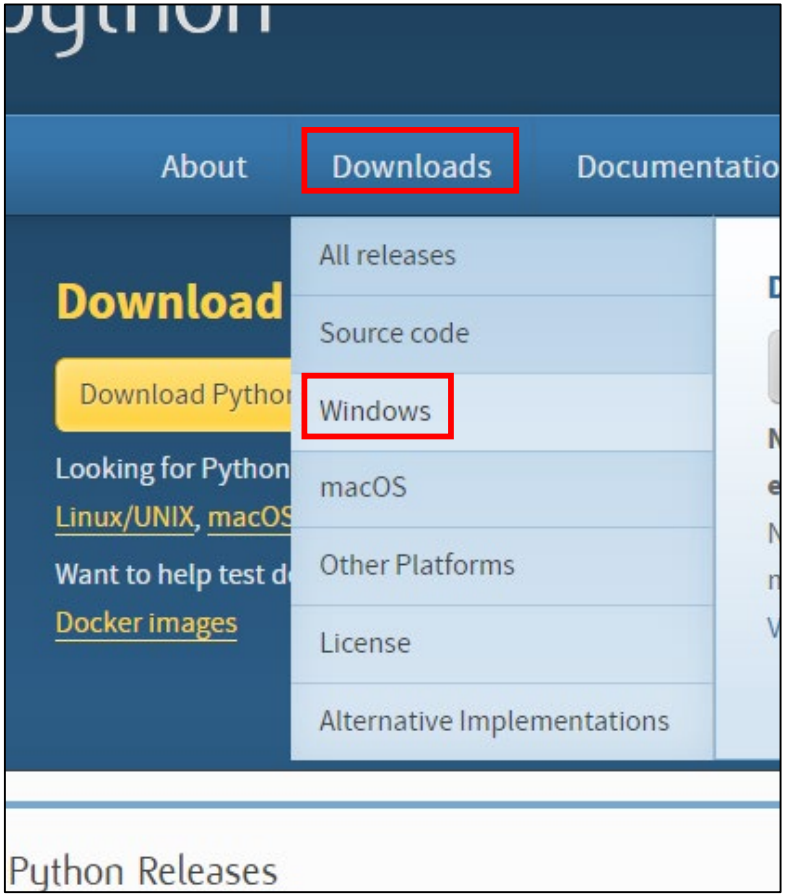
Python 설치

- Google에서 python 검색
- 공식 사이트 접속: https://www.python.org/



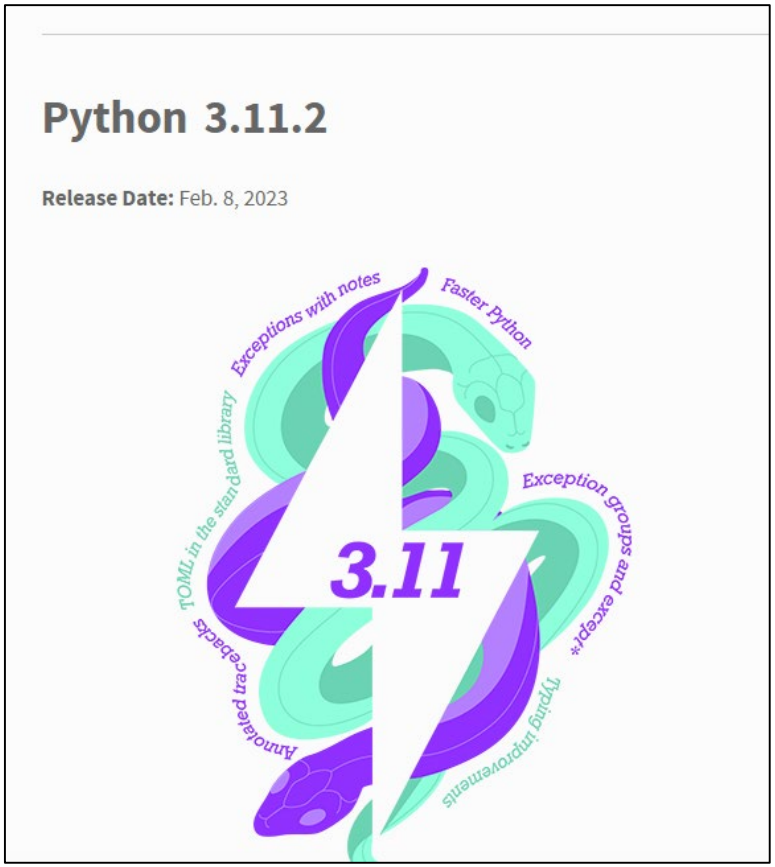
Python 설치

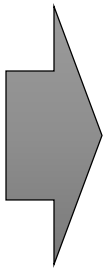
- 다운로드

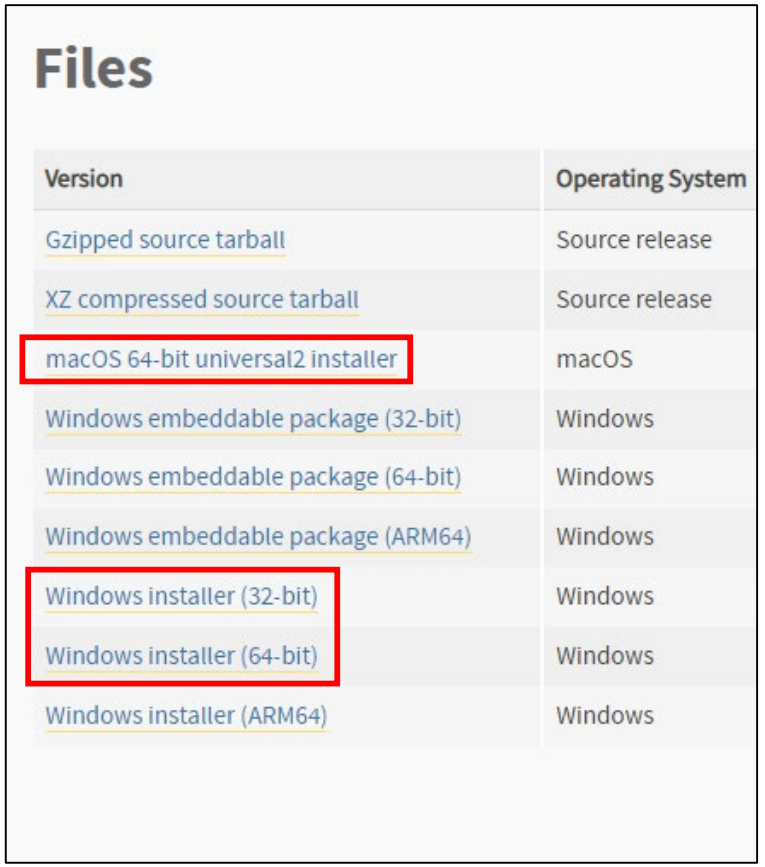


Python 설치

- 본인의 운영체제에 맞게 설치

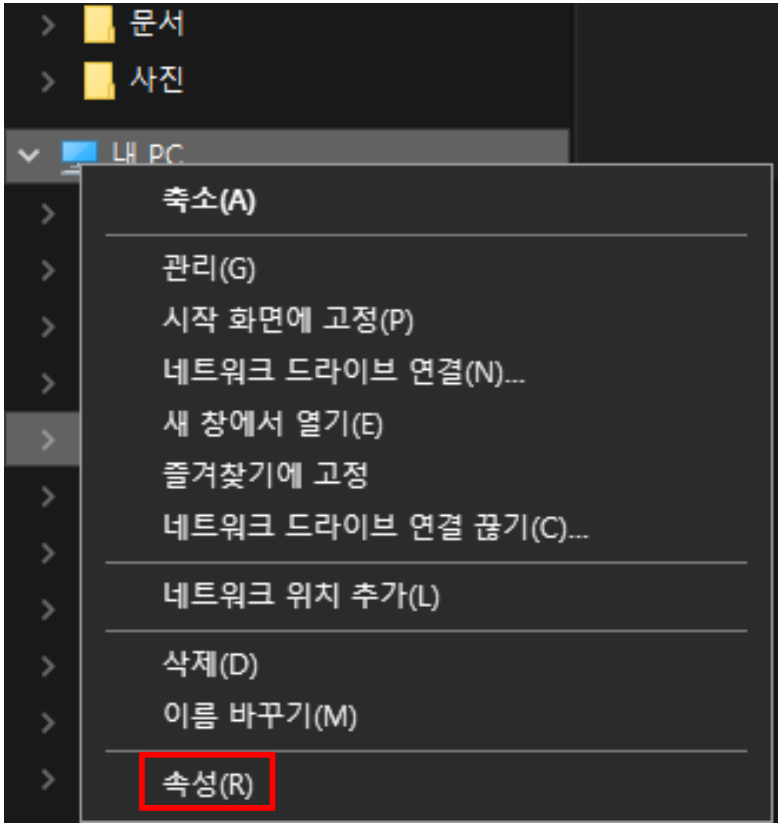


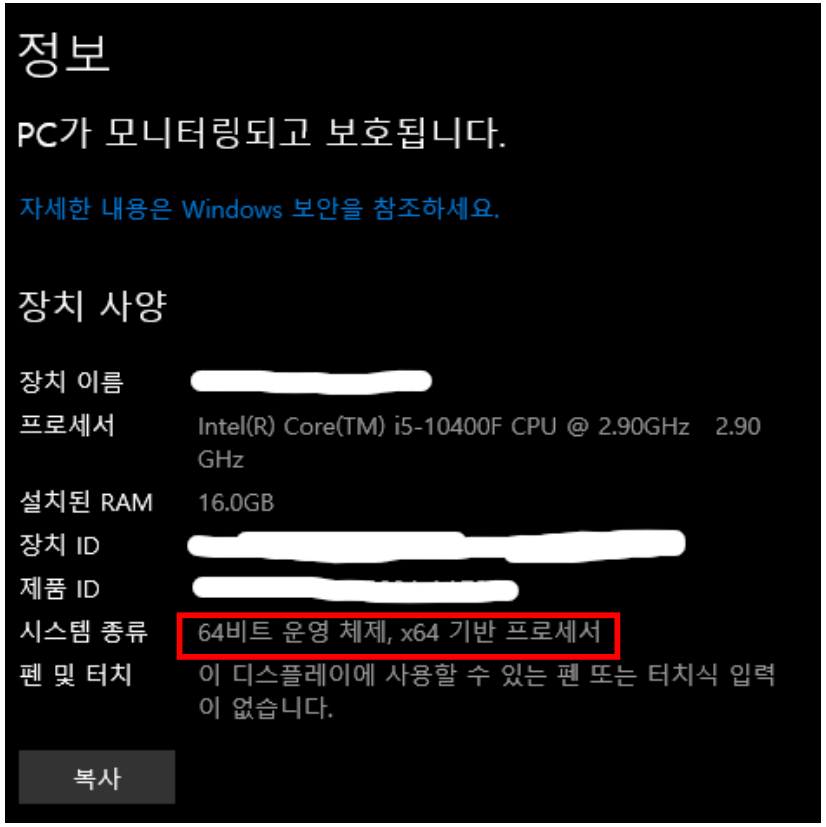




Python 설치

- 자신의 PC의 운영체제 bit 확인
  - [내 PC] 오른쪽 클릭 -> 속성



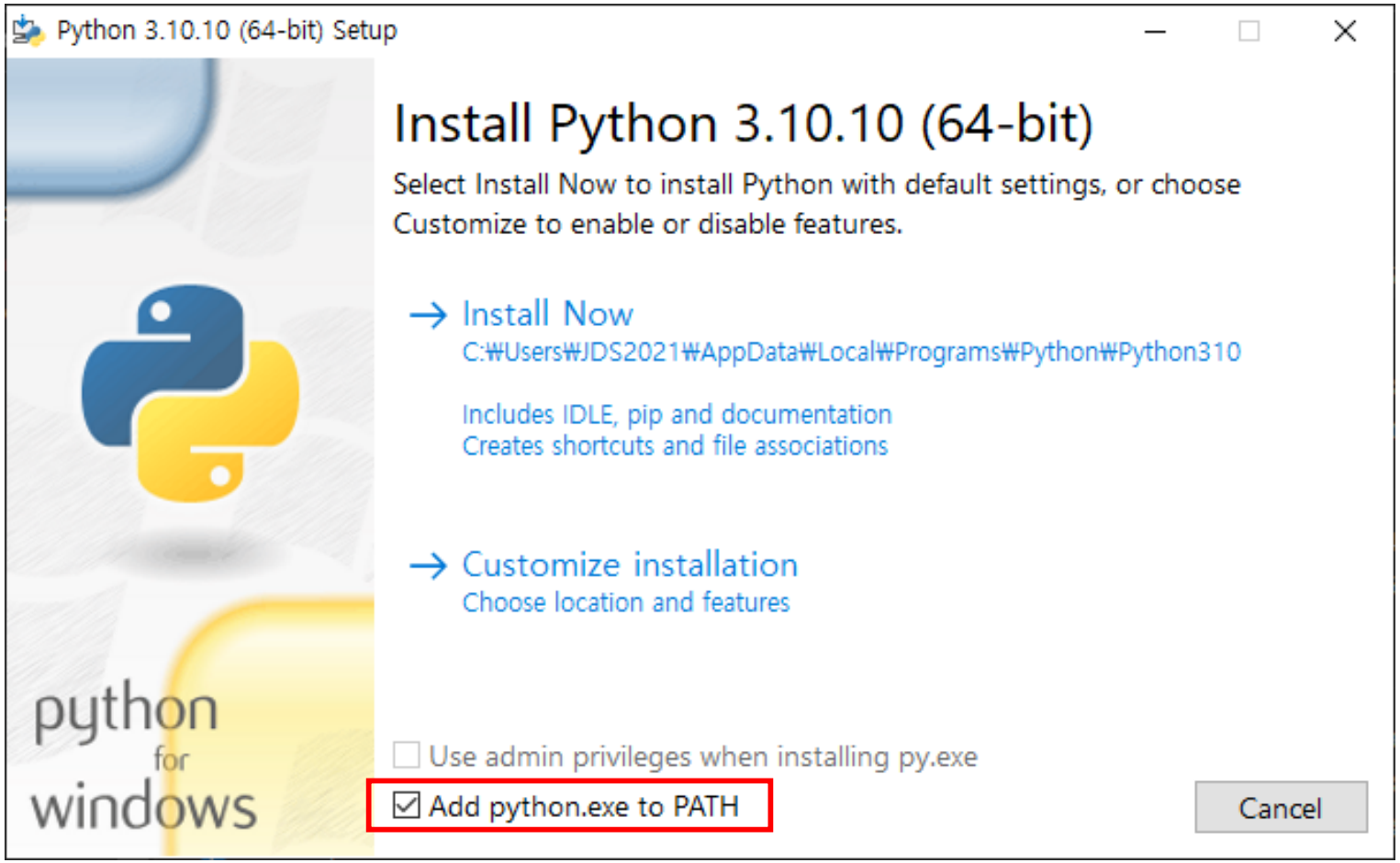


Python 설치

- 현재 Python은 크게 2.x버전과 3.x버전으로 나뉘어짐
- 크게 다르기 때문에 구분해서 사용
- 3.x 버전으로 실습

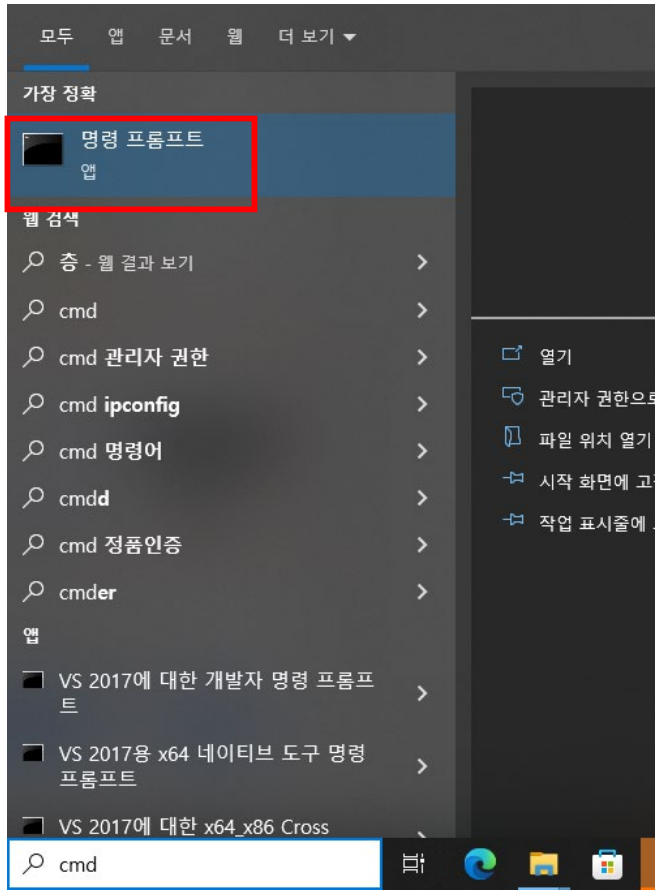
Python 설치

- 환경변수 설정: Add python.exe to PATH

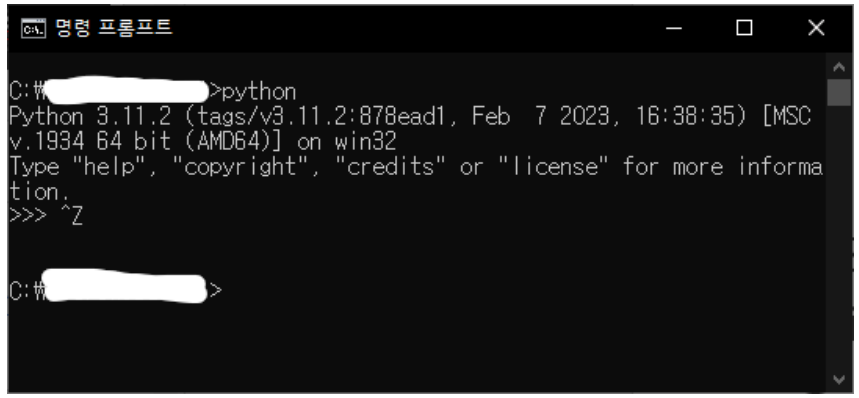


Python 설치

- TEST(python 인터프리터)
  - 시작 메뉴의 검색창에 cmd를 입력 -> cmd.exe실행

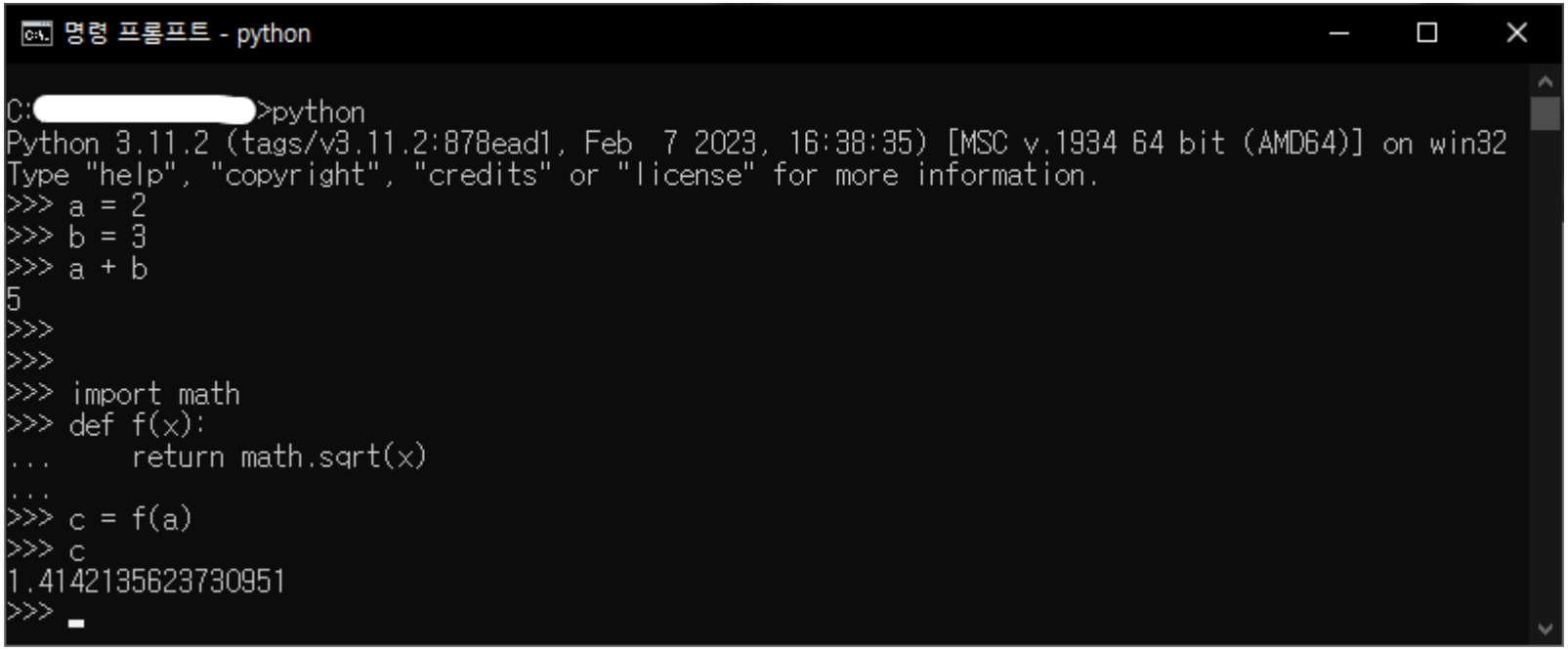


Python을 입력시 위의 메뉴가 뜨면 설치 성공
(Python 인터프리터 환경)
종료는 [Ctrl]+[z]키를 누른후 [Enter]



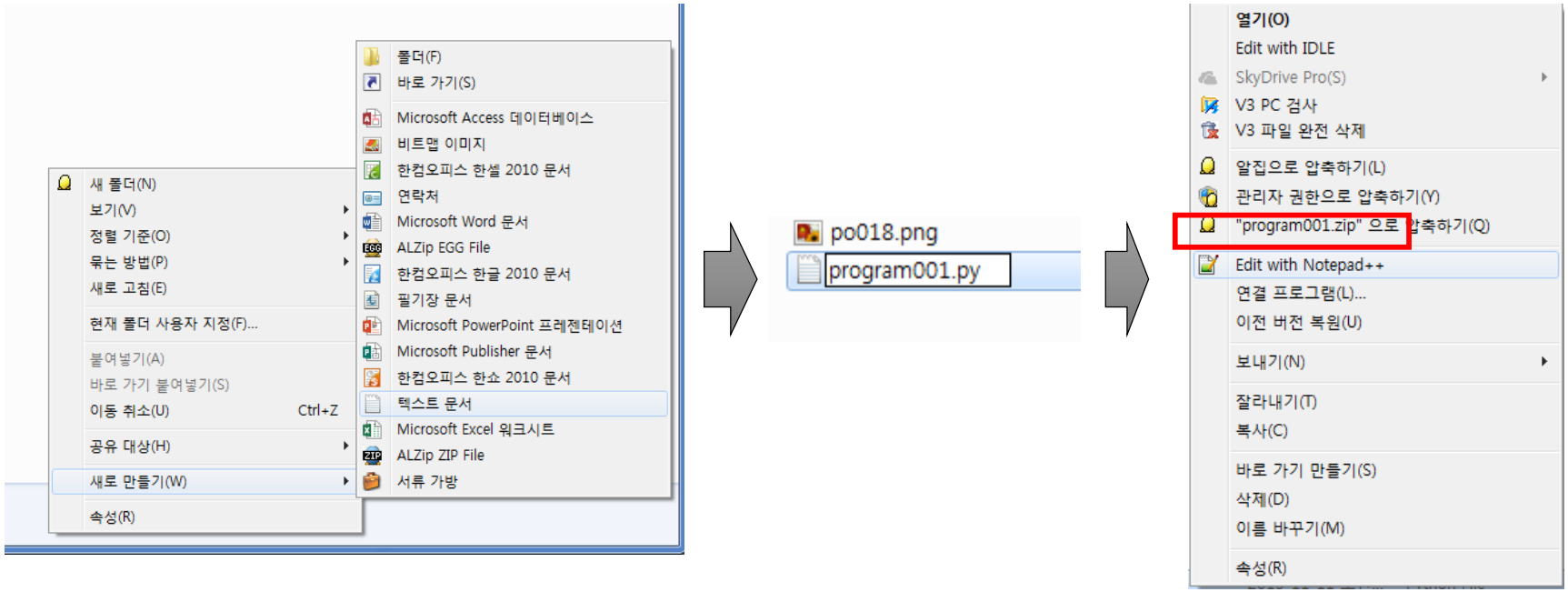
Python

- Python 인터프리터



Python_Natepad

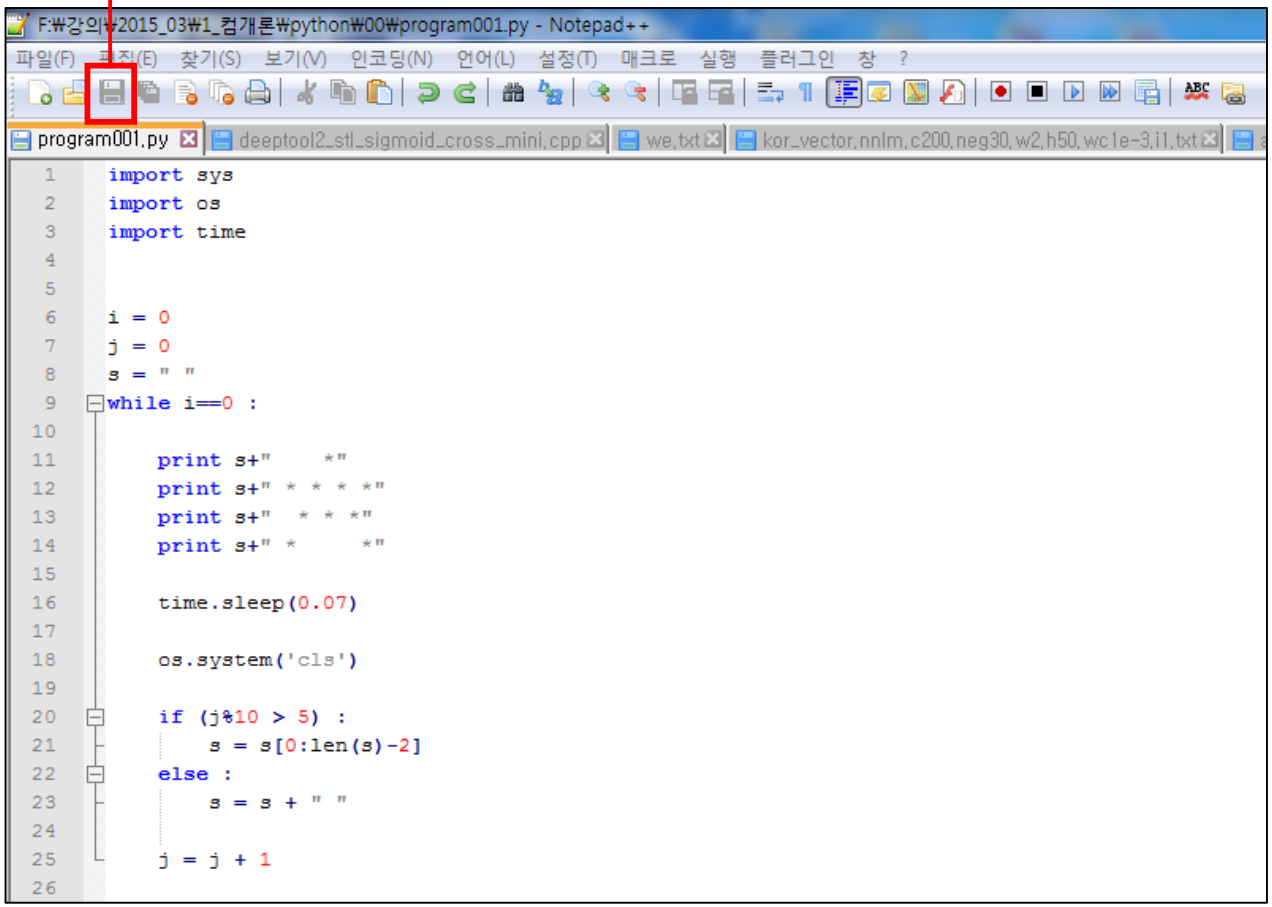
- 작업폴더 생성
- 소스코드(text파일) 생성
- 파일명 변경(이때 확장자는 .py)
- 해당 파일 오른쪽 클릭후 Notepad++(메모장)로 실행



Python_Natepad

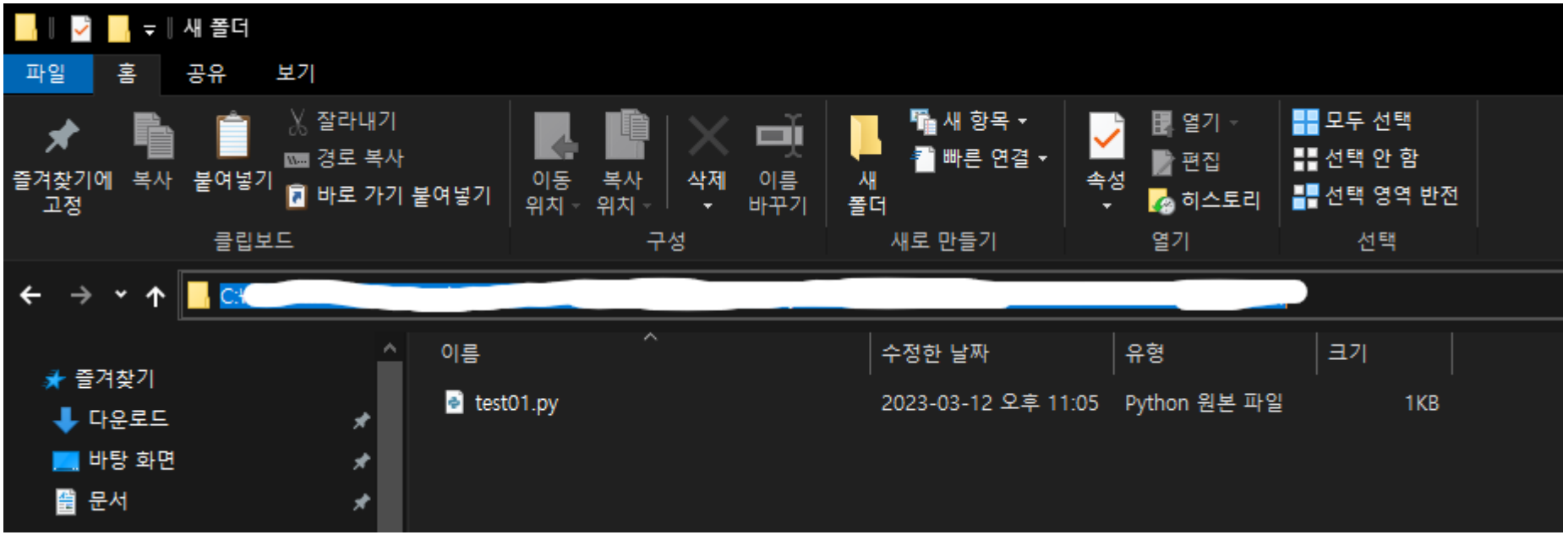
- 기본 작업 환경

저장 필수!



Python_Natepad

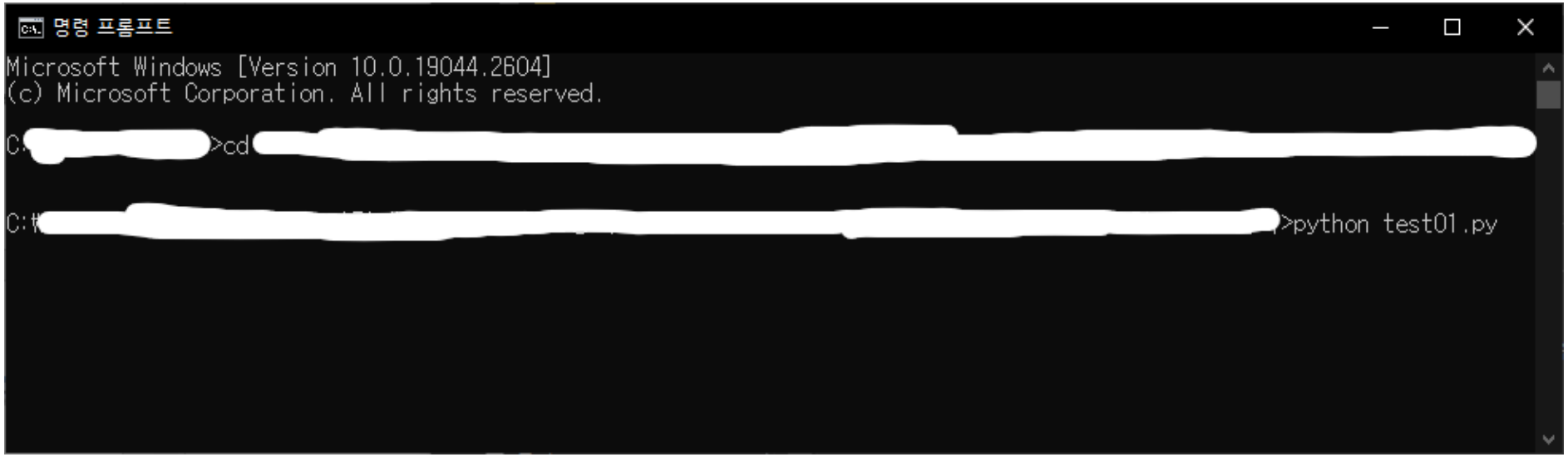
- 현재 작업폴더 경로 복사
- cmd창에 경로 적용
  - >> cd [경로]
  - 붙이기: 오른쪽 마우스 클릭



Python_Natepad

- Python 파일 실행
  - >>python [파일명]

- 종료는 [Ctrl]+[c]



Python_ANACONDA

- a **distribution** of the **Python** (or other language) programming languages for scientific computing

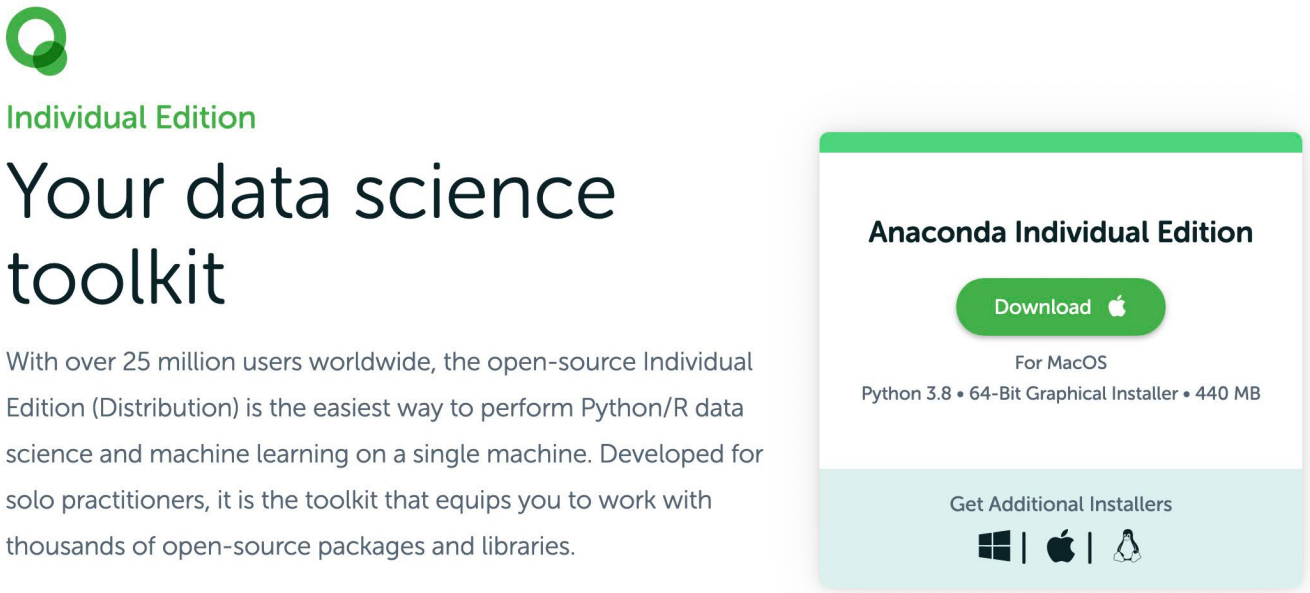
- Pros
  - **one-stop destination** for important data science and program ming tools such as Jupyter.
  - supports multiple **environments**
  - install multiple libraries in Python easily

```
>> conda install numpy
```

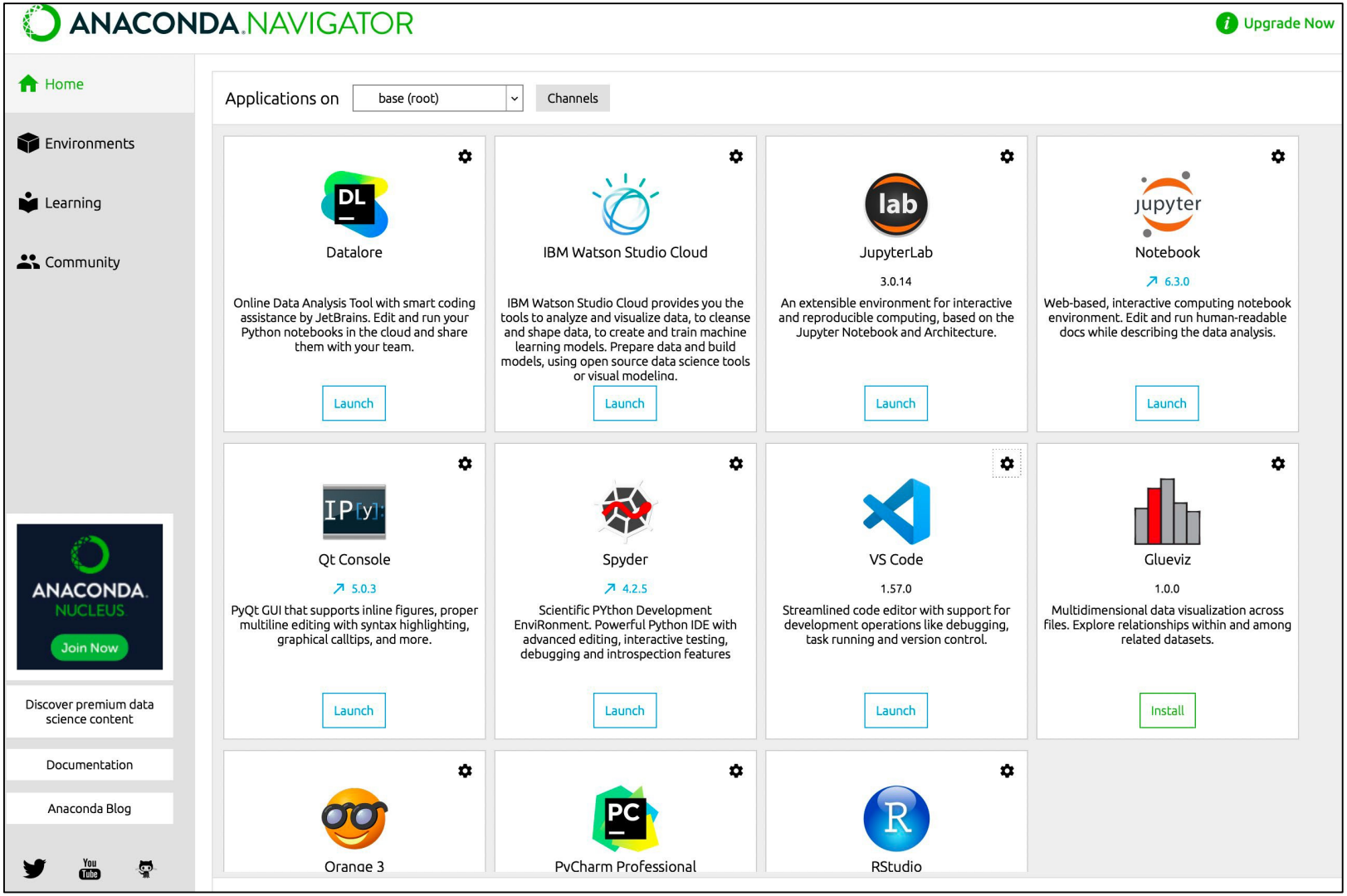
Python_ANACONDA

Anaconda Navigator

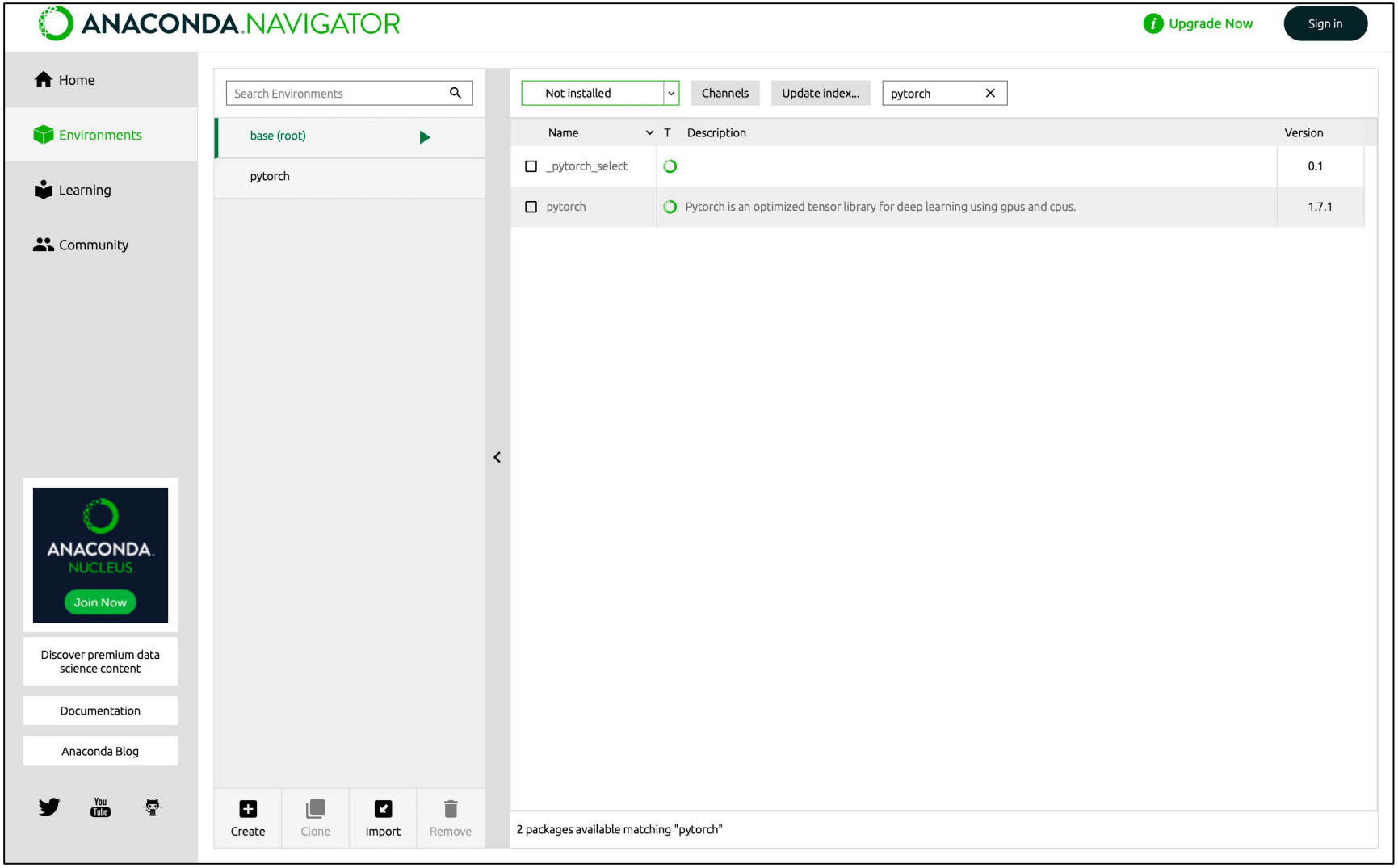
- Download [link]



Python_ANACONDA



Python_ANACONDA



Python_Jupyter

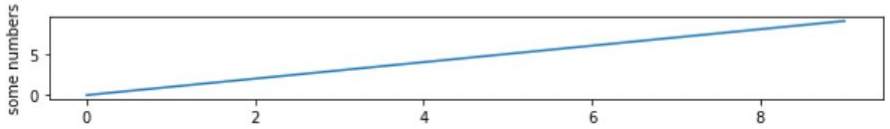
- a web-based **interactive** computing platform.
  - Provides in-line code execution using blocks

```
[2]: a = np.arange(10)

[3]: print(a)
     [0 1 2 3 4 5 6 7 8 9]
```

  - Provides in-line graphing support.

```
[5]: plt.figure(figsize=(10, 1))
     plt.plot(a)
     plt.ylabel('some numbers')
     plt.show()
```



Python_Jupyter

File Edit View Run Kernel Tabs Settings Help

Filter files by name

/ [Lecture] DAP /

Name	Last Modified
Lecture1.ip...	20 minutes ago

Lecture1.ipynb

Code

Python 3

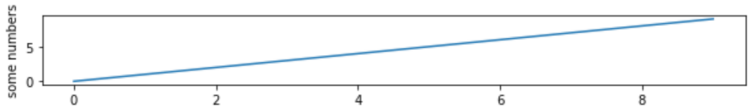
```
[1]: import numpy as np

[2]: a = np.arange(10)

[3]: print(a)
     [0 1 2 3 4 5 6 7 8 9]

[4]: import matplotlib.pyplot as plt

[5]: plt.figure(figsize=(10, 1))
     plt.plot(a)
     plt.ylabel('some numbers')
     plt.show()
```



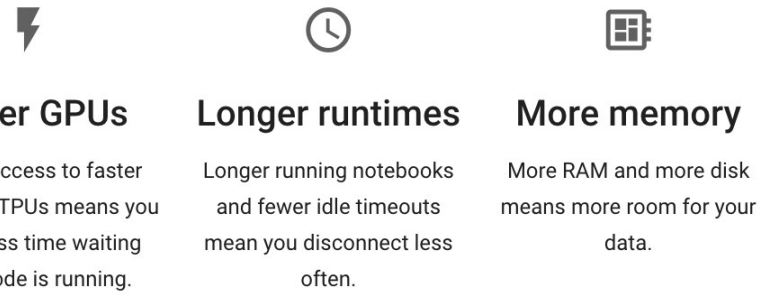
Simple 0 1 Python 3 | Idle Mode: Command Ln 1, Col 1 Lecture1.ipynb

Python_Colab

Colab

- allows you to write and execute Python in your browser
  - Zero configuration required
  - Free access to GPUs
    (include **Nvidia** K80s, T4s, P4s and P100s, but time limited)
  - Easy sharing

- pro version is also provided



Python 환경

Either one is fine!

Local

vs.

Colab

Cloud

실습 0101

파이썬으로 계산기로 사용하여 다음 연산을 한다.

1. $3 \times 2 - 8 \div 4$

2. $25 \times 6 \div 3 + 17$

3. $39021 - 276920 \div 12040$

4. $2^6 - 10 \,\%\, 6$

위 식에서 %는 나머지를 구하는 연산이다.

실습평가 제출

- 1. 구글 클래스룸 과제에 제출: 코드(ipynb)
  - 파일명: [학번]_[이름]_[실습 번호].ipynb
  - e.g. 10701_홍길동_0101.ipynb
- 2. 구글 클래스룸 과제에 제출: 코드(py) + 결과 이미지(jpg, etc)
  - 파일명: [학번]_[이름]_[실습 번호].py + [학번]_[이름]_[실습 번호].jpg
  - e.g. 10701_홍길동_0101.py + 10701_홍길동_0101.jpg
  - 결과 이미지는 확장자 무관
- 지정된 형식(1 또는 2), 기한 준수 (특히 기간엄수)
- 구글 클래스룸 참여 차후 공지