# 테스트 환경 설치 및 설정

# 파이썬 배포판 설치 (Anaconda)

- 다운로드 경로 → https://www.anaconda.com/products/individual


- 다운로드 완료 후 관리자 권한으로 실행 → 설치

# 파이썬 배포판 설치 (Miniconda)

- 다운로드 경로 → https://docs.conda.io/en/latest/miniconda.html

| Python version | Name | Size | SHA256 hash |
|---|---|---|---|
| Python 3.8 | Miniconda3 Windows 64-bit | 57.0 MiB | 4fa22bba0497babb5b6608cb8843545372a99f5331c8120099ae1d803f627c61 |
| | Miniconda3 Windows 32-bit | 54.2 MiB | 9c2ef76bae97246c85c206733ca30fd1feb8a4b3f90a2a511fea681ce7ebc661 |
| Python 2.7 | Miniconda2 Windows 64-bit | 54.1 MiB | 6973025404832944e074bf02bda8c4594980eeed4707bb51baa8fbdba4bf326c |
| | Miniconda2 Windows 32-bit | 47.7 MiB | c8049d26f8b6b954b57bcd4e99ad72d1ffa13f4a6b218e64e641504437b2617b |

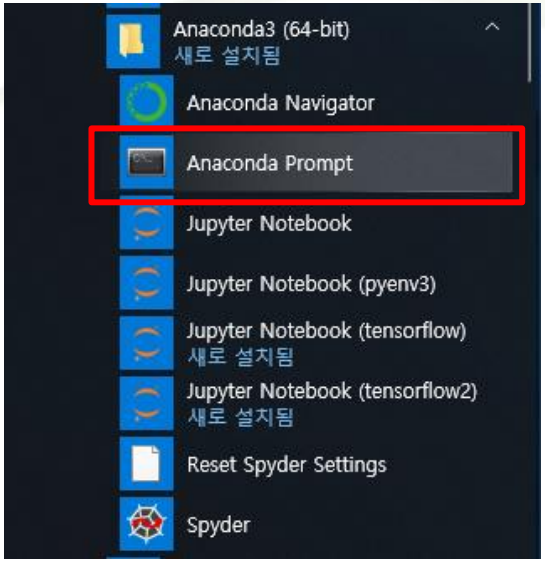
| Python version | Name | Size | SHA256 hash |
|---|---|---|---|
| Python 3.8 | Miniconda3 MacOSX 64-bit bash | 54.5 MiB | a9ea0afba55b5d872e01323d495b649eac8ff4ce2ea098fb4c357b6139fe6478 |
| | Miniconda3 MacOSX 64-bit pkg | 62.0 MiB | b06f3bf3cffa9b53695c9c3b8da05bf583bc7047d45b0d74492f154d85e317fa |
| Python 2.7 | Miniconda2 MacOSX 64-bit bash | 40.3 MiB | 0e2961e20a2239c140766456388beba6630f0c869020d2bd1870c3d040980b45 |
| | Miniconda2 MacOSX 64-bit pkg | 48.4 MiB | 9ca4313e8162a939c7a5a4f48d657722594f8db9a98472803d63c3a7f66fa1da |

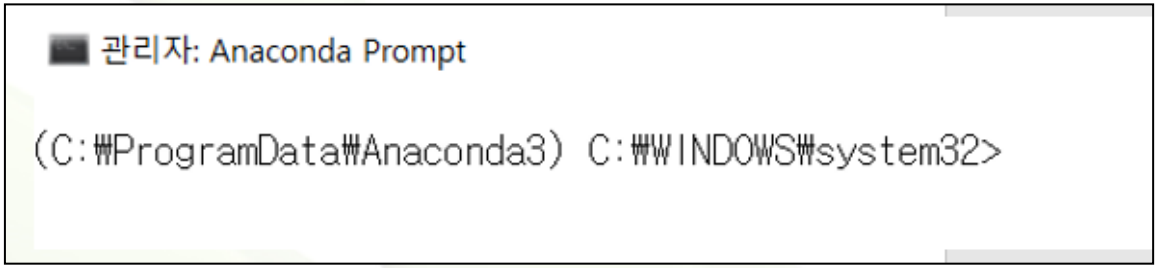
| Python version | Name | Size | SHA256 hash |
|---|---|---|---|
| Python 3.8 | Miniconda3 Linux 64-bit | 89.9 MiB | 1314b90489f154602fd794accfc90446111514a5a72fe1f71ab83e07de9504a7 |
| Python 3.7 | Miniconda3 Linux 32-bit | 62.7 MiB | f387eded3fa4ddc3104b7775e62d59065b30205c2758a8b86b4c27144adafcc4 |
| Python 2.7 | Miniconda2 Linux 64-bit | 48.7 MiB | b820dde1a0ba868c4c948fe6ace7300a252b33b5befd078a15d4a017476b8979 |
| | Miniconda2 Linux 32-bit | 39.0 MiB | 2e20ac4379ca5262e7612f84ad26b1a2f2782d0994facdecb28e0baf51749979 |

- 다운로드 완료 후 관리자 권한으로 실행 → 설치

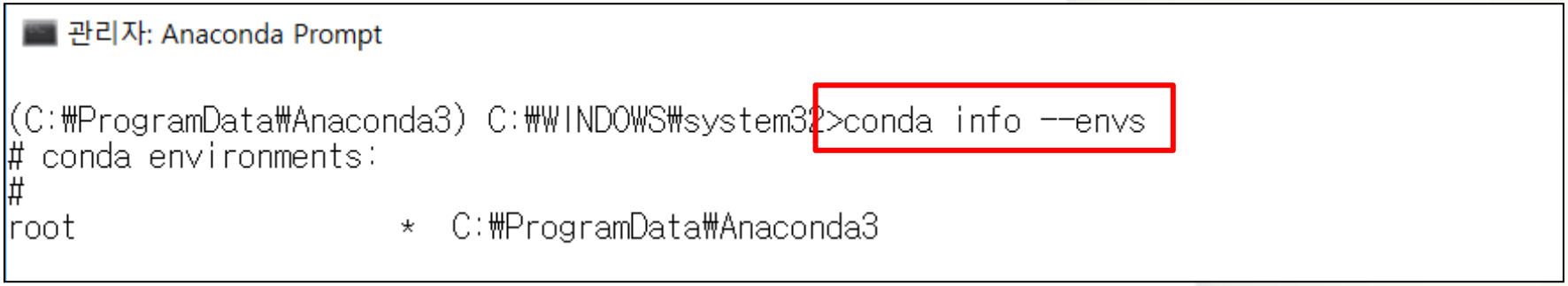
# 가상 파이썬 환경 생성

- 관리자 권한으로 아나콘다 프롬프트 (Anaconda Prompt) 실행




- 가상 환경 목록 보기
  - » 처음 실행한 경우 root 항목만 표시됨



# 가상 파이썬 환경 생성

- 가상 환경 만들기

원하는 이름으로 입력

```
C:\WINDOWS\system32>conda create --name pyenv3 python=3.6
Fetching package metadata ..........
Solving package specifications: .

Package plan for installation in environment
C:\ProgramData\Anaconda3\envs\pyenv3:

The following NEW packages will be INSTALLED:

    certifi:        2016.2.28-py36_0
    pip:            9.0.1-py36_1
    python:         3.6.2-0
    setuptools:     36.4.0-py36_1
    vc:             14-0
    vs2015_runtime: 14.0.25420-0
    wheel:          0.29.0-py36_0
    wincertstore:   0.2-py36_0

Proceed ([y]/n)? y
```

# 가상 파이썬 환경 생성

- 가상 환경 만들기 (계속)

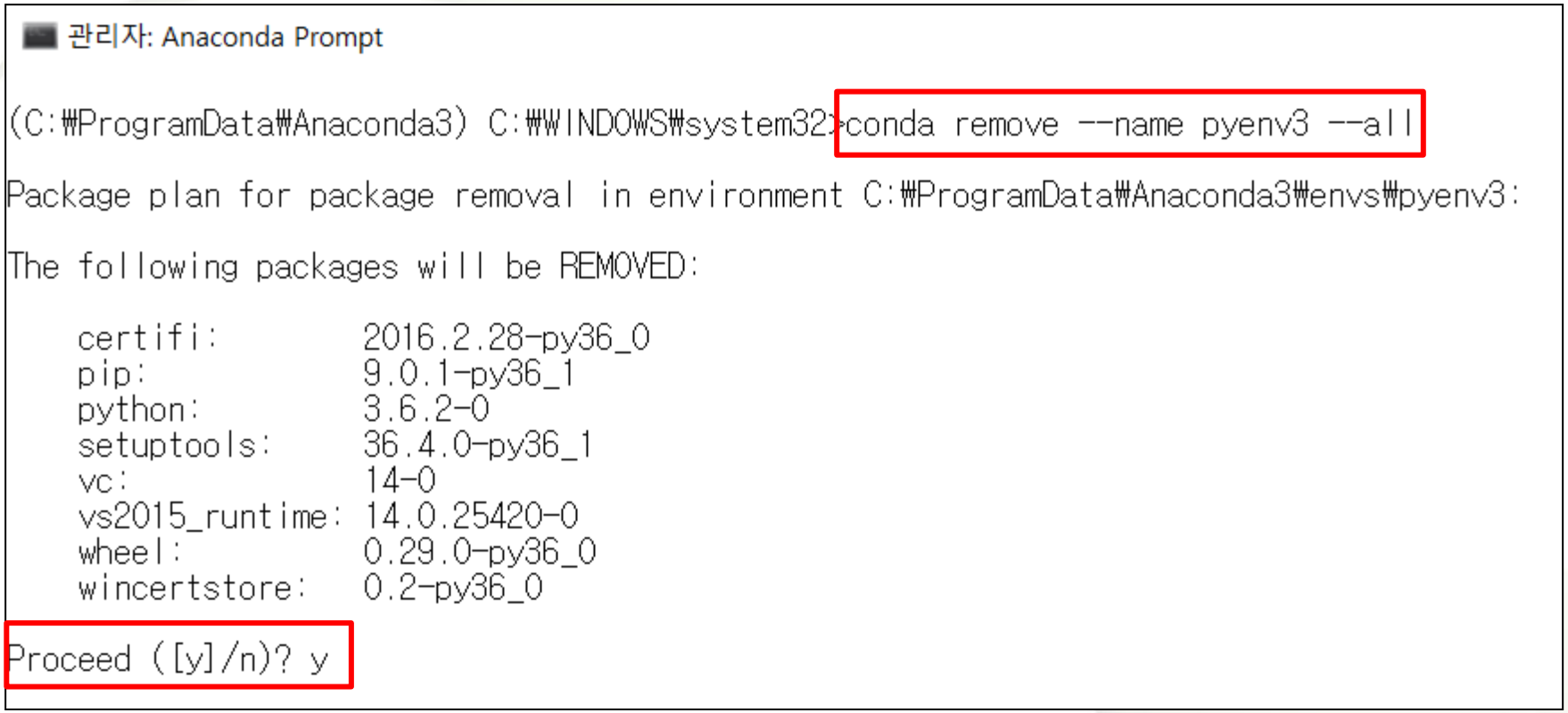
```
# To activate this environment, use:
# > activate pyenv3
#
# To deactivate an active environment, use:
# > deactivate
#
# * for power-users using bash, you must source
#□□□□
```

- 설치된 가상 환경 확인 (가상 환경 목록 보기)

```
관리자: Anaconda Prompt

(C:₩ProgramData₩Anaconda3) C:₩WINDOWS₩system32>conda info --envs
# conda environments:
#
pyenv3                   C:₩ProgramData₩Anaconda3₩envs₩pyenv3
root                  *  C:₩ProgramData₩Anaconda3
```

# 가상 파이썬 환경 제거

- 가상 파이썬 환경 제거




- 가상 환경 목록으로 확인
  - » conda info --envs 명령 실행 →실행 결과 표시 생략

# 가상 파이썬 환경 사용

- 가상 파이썬 환경 접속

```
관리자: Anaconda Prompt

(C:₩ProgramData₩Anaconda3) C:₩WINDOWS₩system32>activate pyenv3

(pyenv3) C:₩WINDOWS₩system32>
```

- 명령 프롬프트에서 대화형 프로그램 환경 실행

```
관리자: Anaconda Prompt - python
(pyenv3) C:₩WINDOWS₩system32>python
Python 3.6.2 |Continuum Analytics, Inc.| (default, Jul 20 2017, 12:30:02) [MSC v.1900 64 bit (AMD64)]
Type "help", "copyright", "credits" or "license" for more information.
>>> print ("Hello, python")
Hello, python
>>>
```

» 종료는 exit() 또는 quit() 함수 호출

# 가상 파이썬 환경에 모듈 설치

- 가상 파이썬 환경 접속

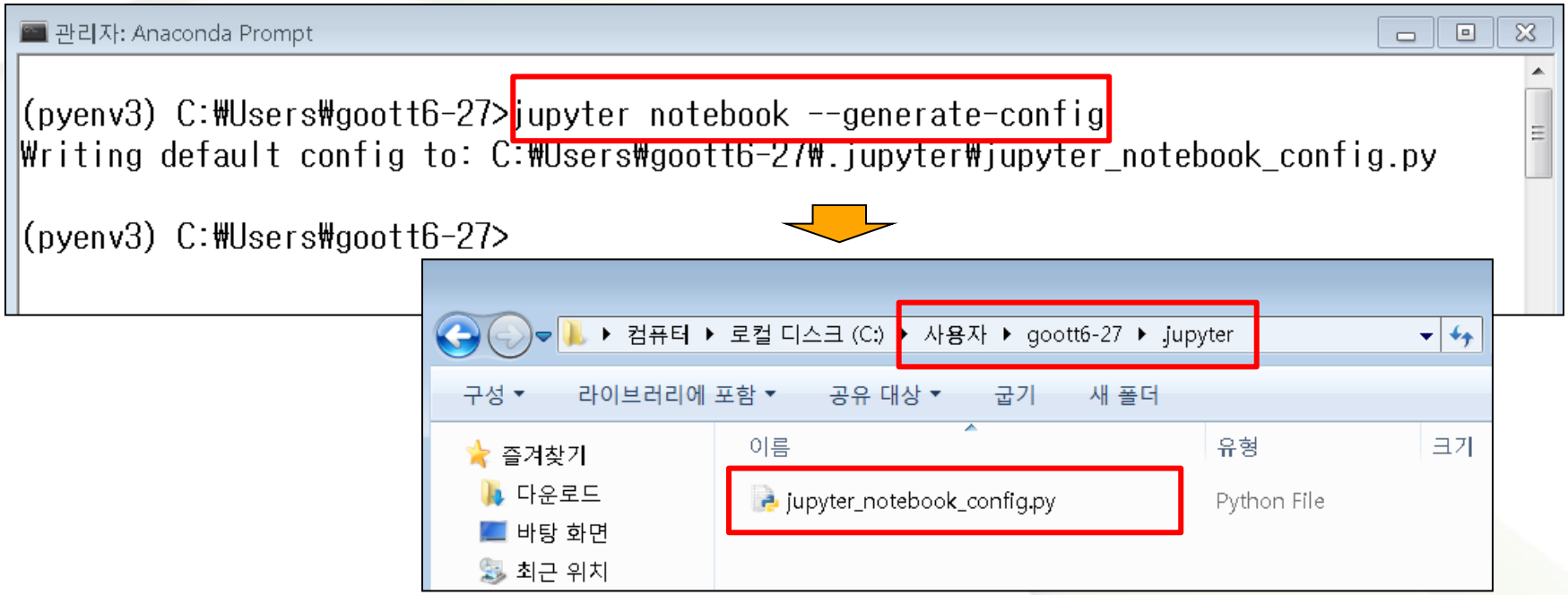
```
관리자: Anaconda Prompt

(C:₩ProgramData₩Anaconda3) C:₩WINDOWS₩system32>activate pyenv3

(pyenv3) C:₩WINDOWS₩system32>
```

- 대화형 프로그램 개발을 위한 Jupyter Notebook 모듈 설치

```
(pyenv3) C:₩WINDOWS₩system32>conda install jupyter
Fetching package metadata .........
Solving package specifications: .

Package plan for installation in environment C:₩ProgramData₩Anaconda3₩envs₩pyenv3:

The following NEW packages will be INSTALLED:

    jupyter: 1.0.0-py36_3

Proceed ([y]/n)? y
```

# 대화형 실행 환경

- notebook 설정 파일 만들기 (선택적 - 명령행에서 직접 이동할 수 있음)

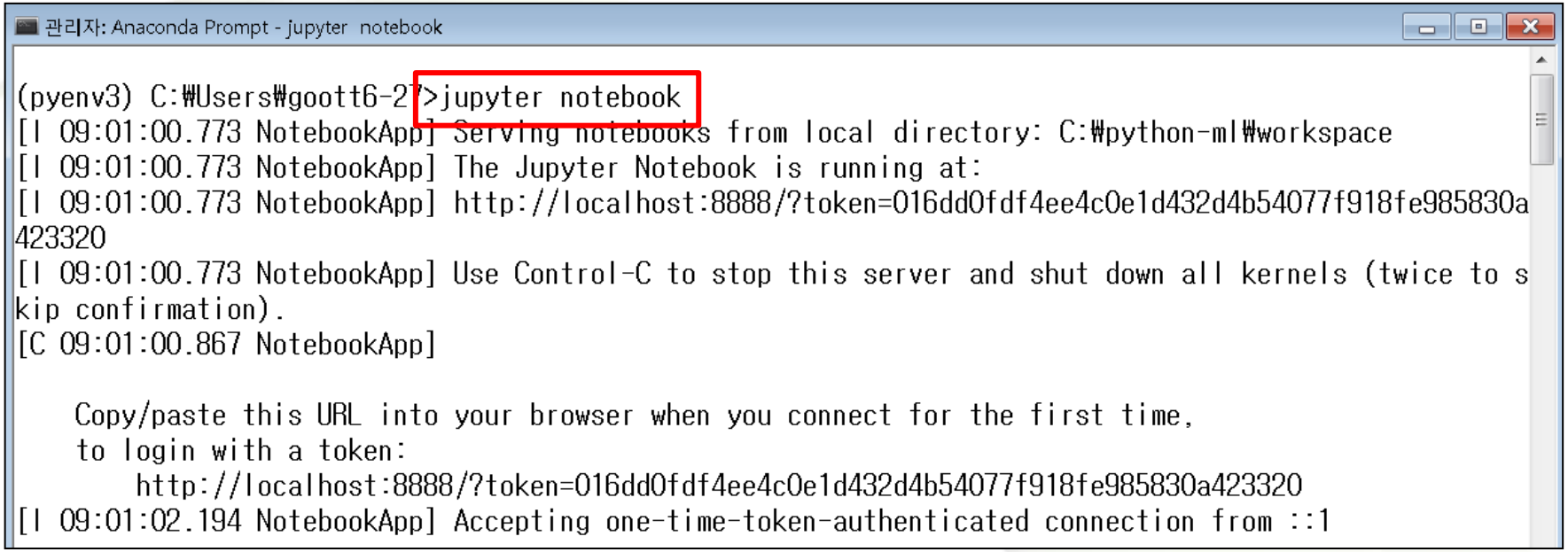


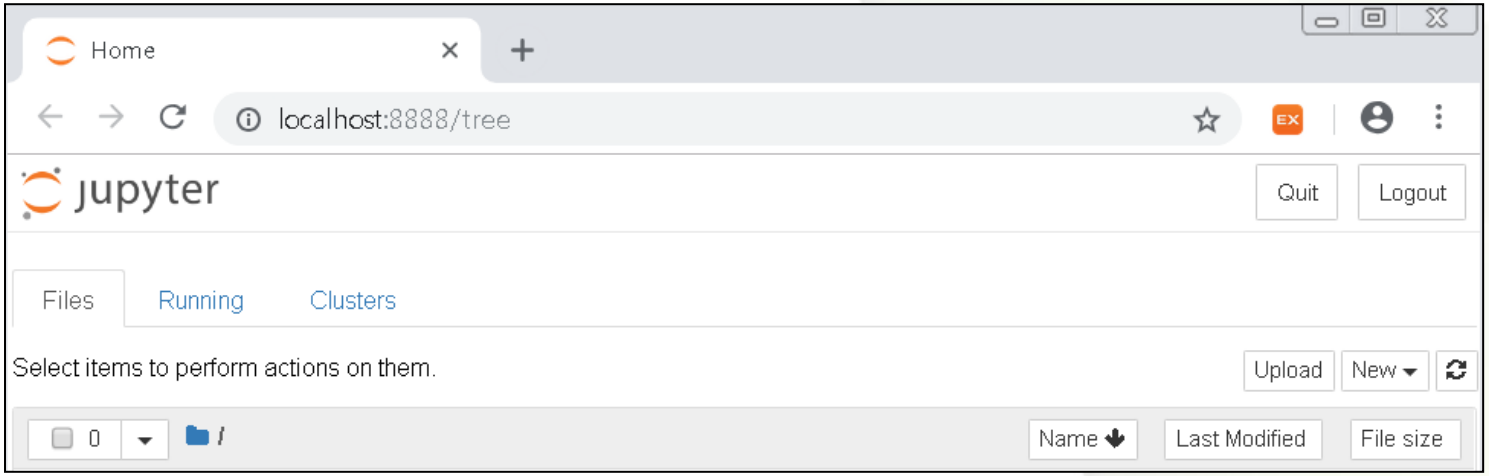

- notebook 설정 파일 수정 (선택적 - 명령행에서 직접 이동할 수 있음)

```
259
260  ## The directory to use for notebooks and kernels.
261  c.NotebookApp.notebook_dir = r'C:\python-ml\workspace'
```

# 대화형 실행 환경

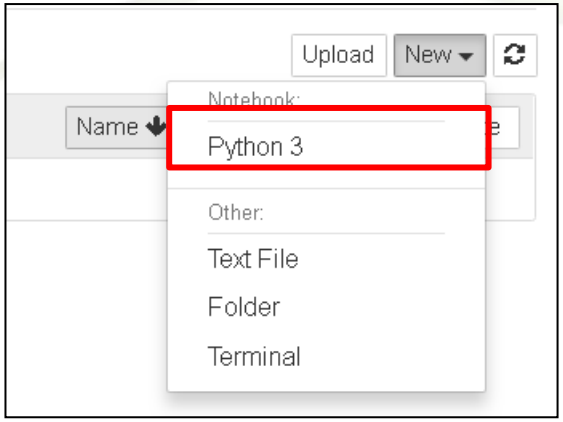
- notebook 시작

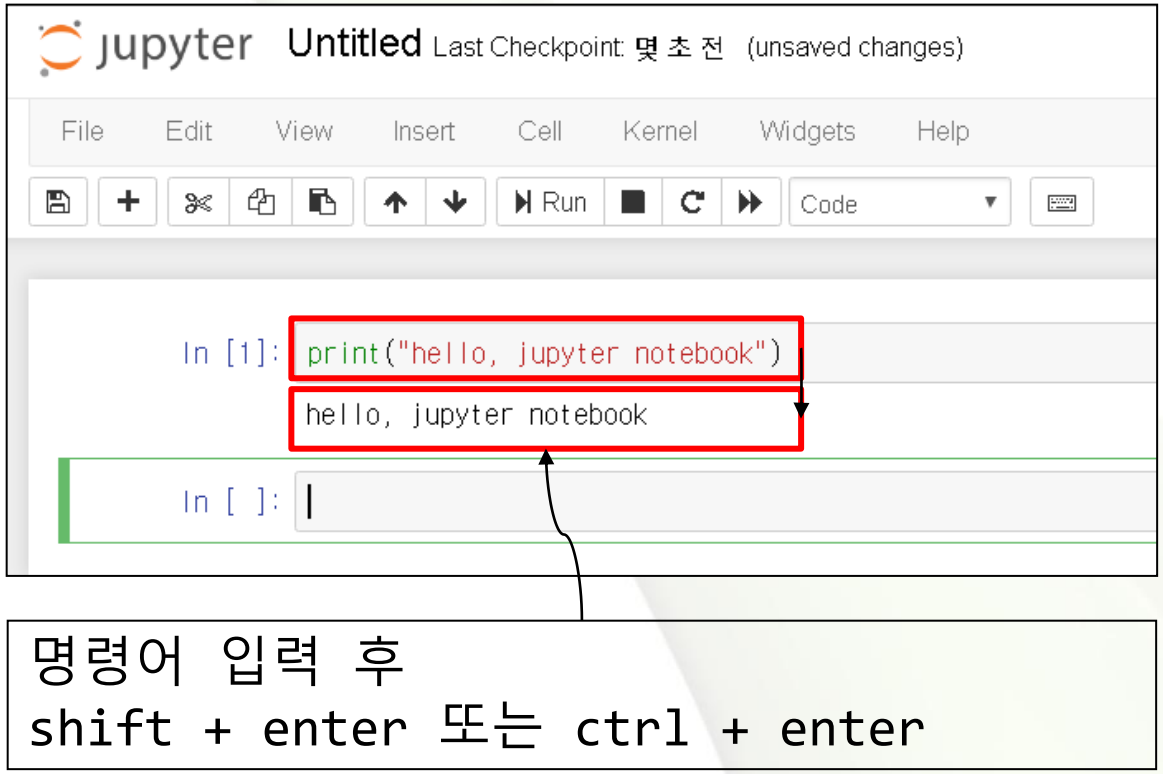


# 대화형 실행 환경

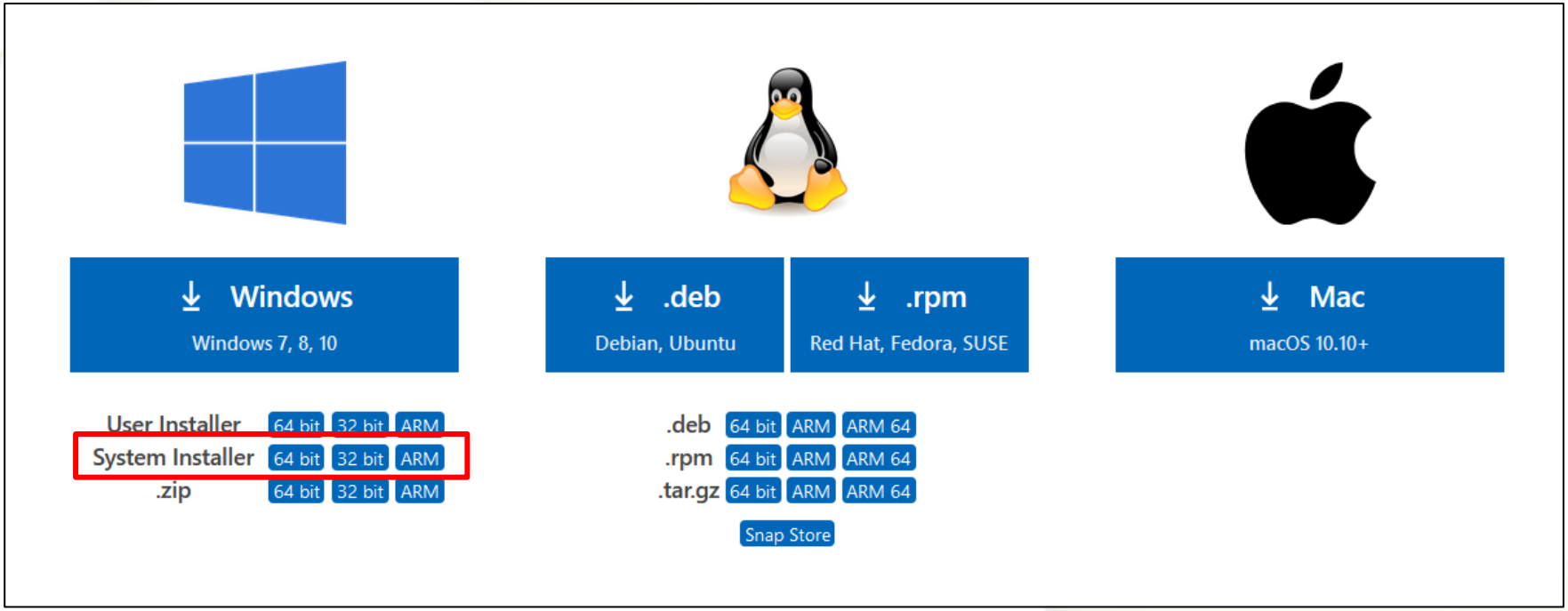
- 작업 파일 만들기



# Visual Studio Code 설치

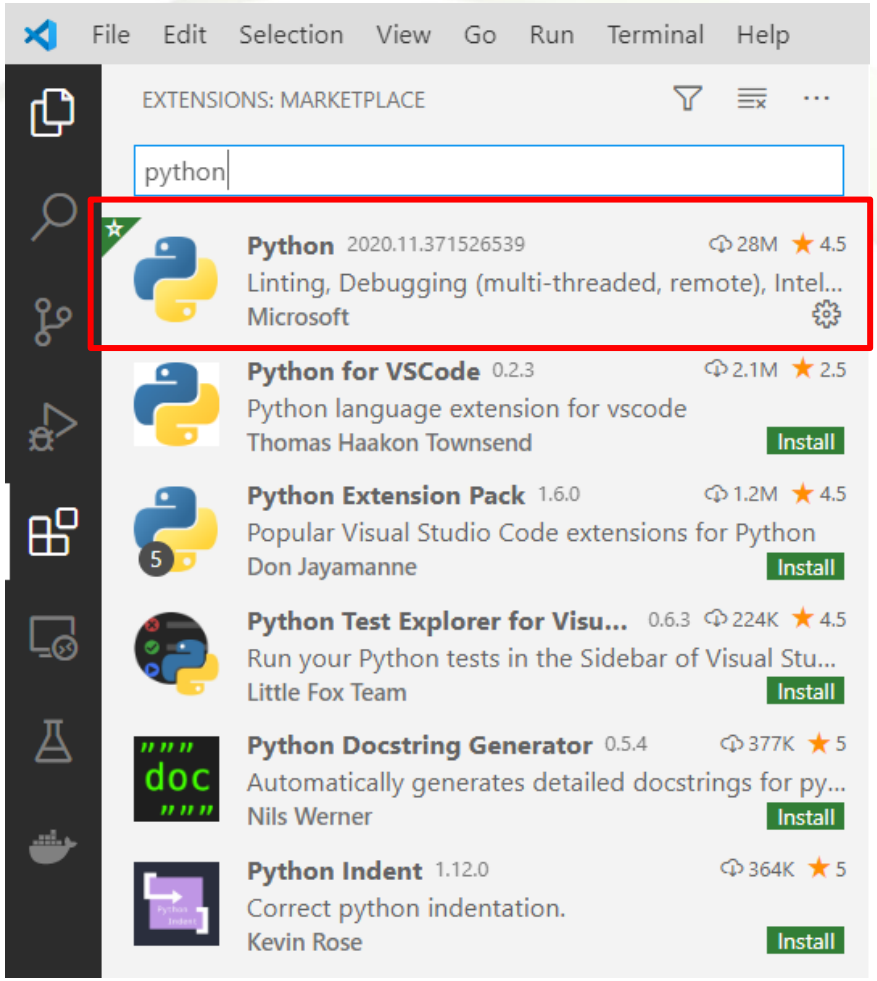
- 다운로드 → https://code.visualstudio.com/Download

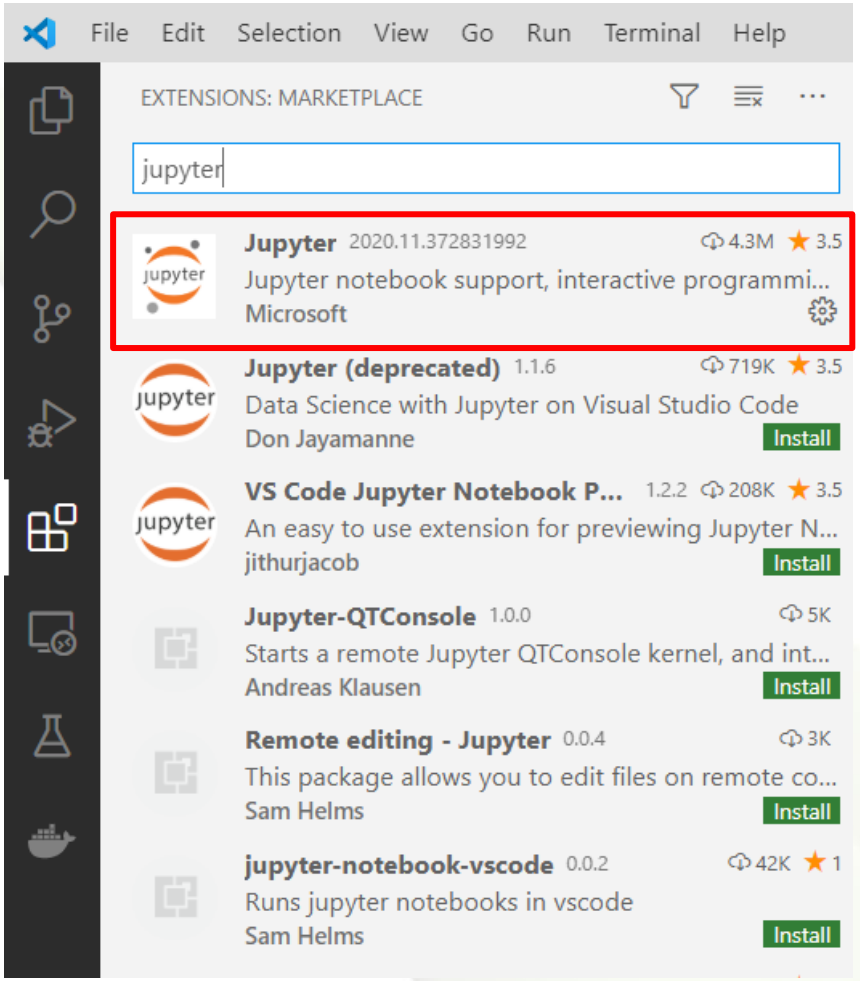



- 다운로드 완료 후 관리자 권한으로 실행 → 설치

# Visual Studio Code 사용

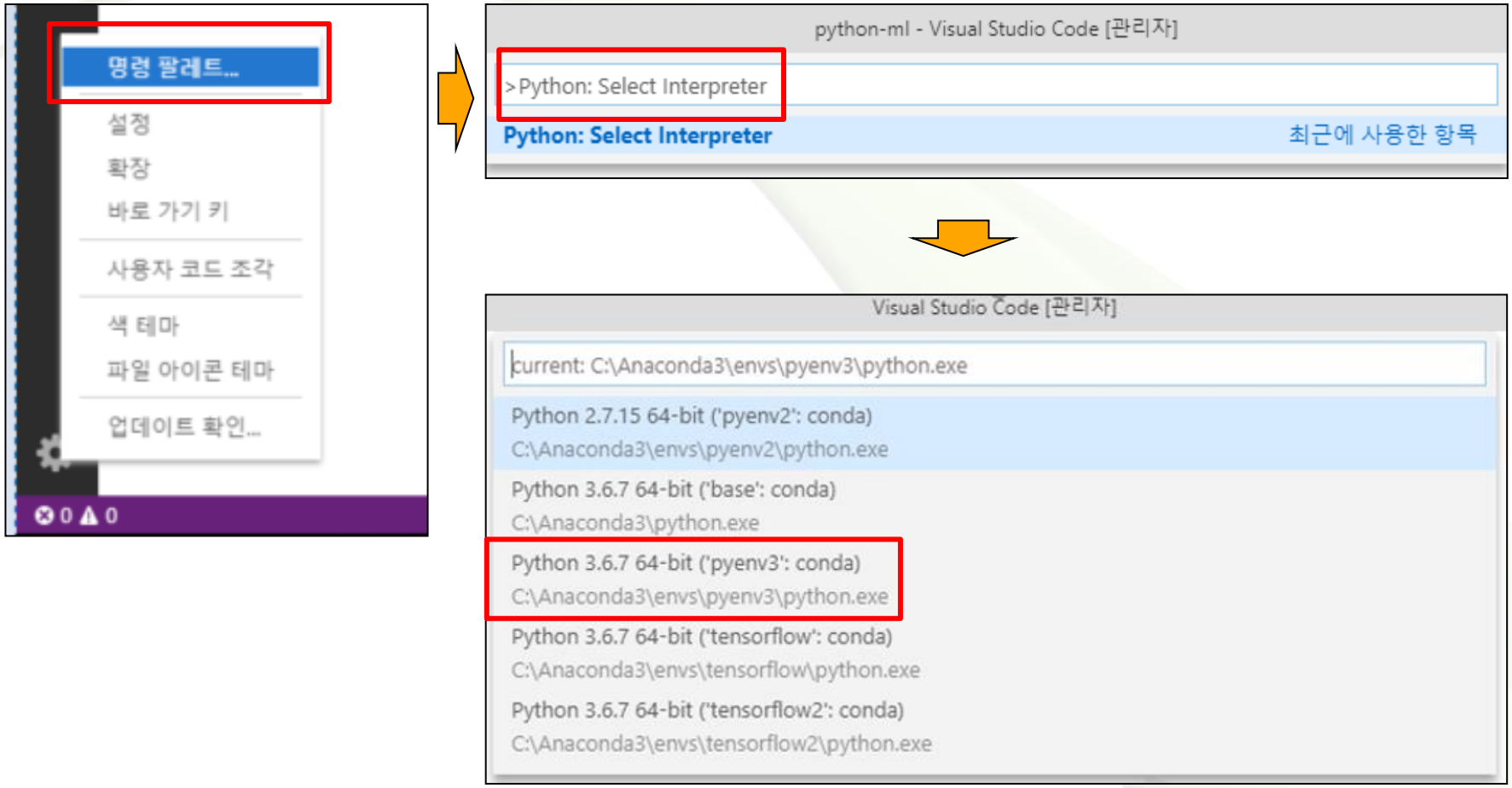
- 파이썬 확장 설치



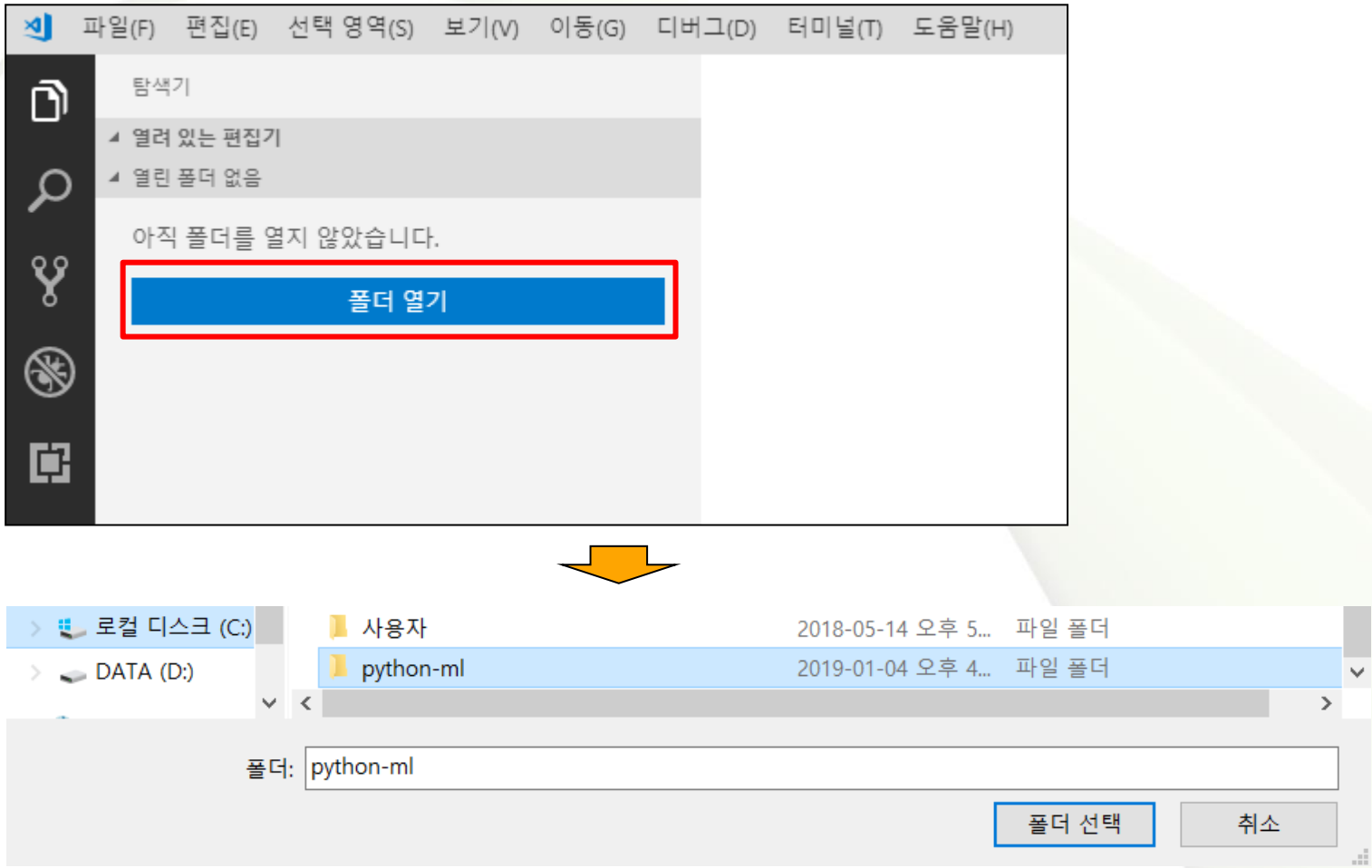
# Visual Studio Code 사용

- 파이썬 인터프리터 설정



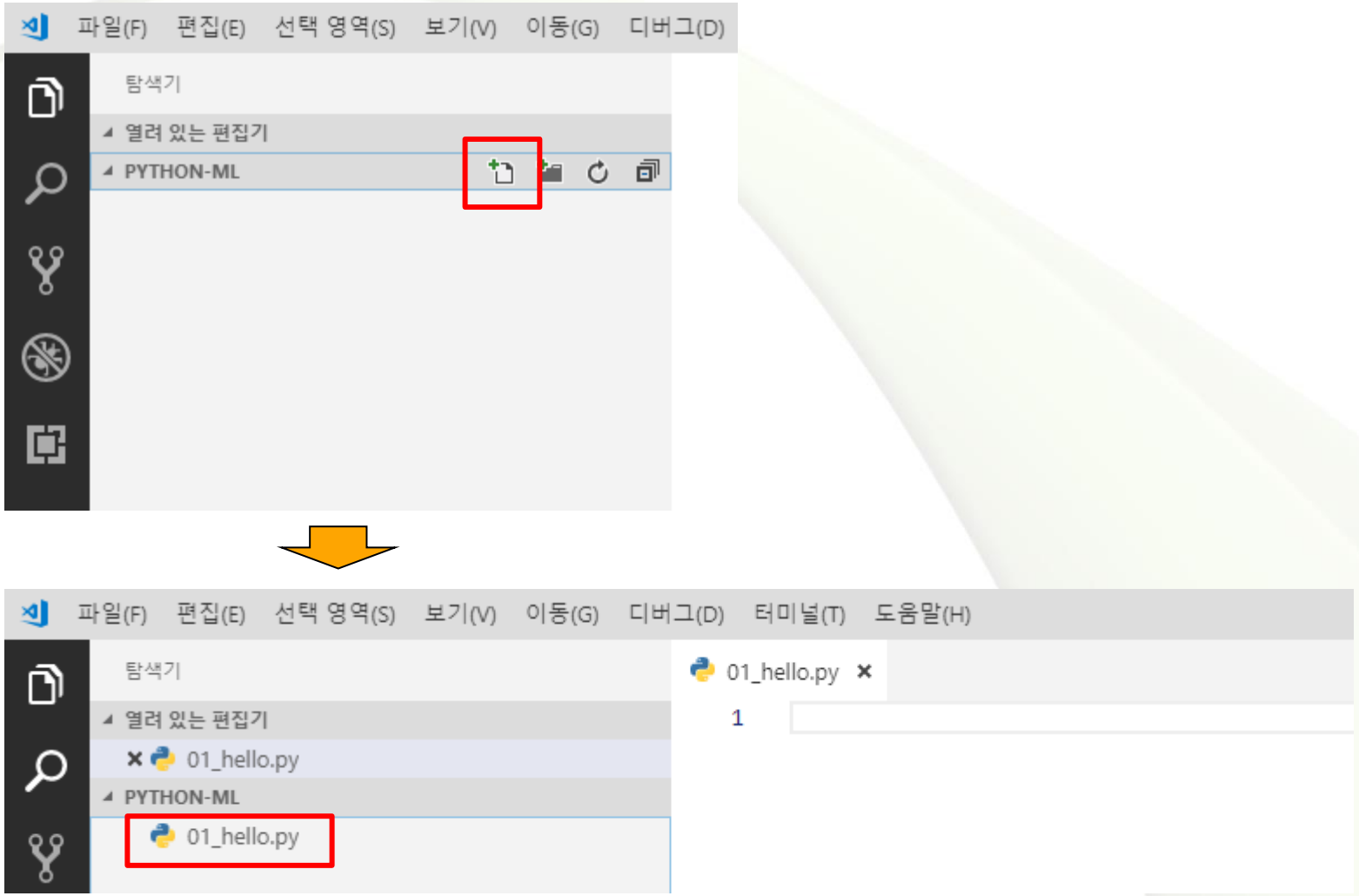
# Visual Studio Code 사용

- 작업 디렉터리 지정



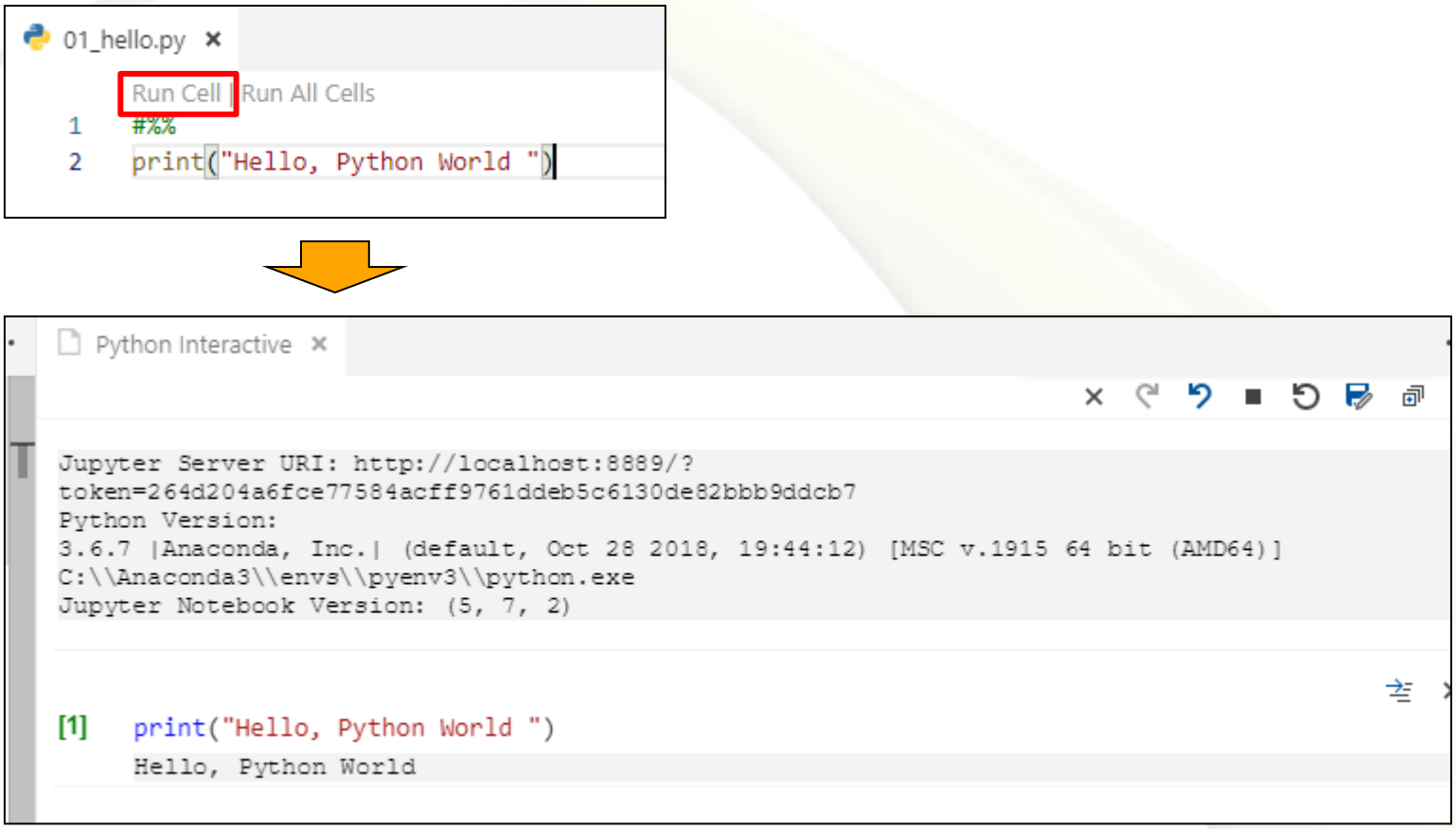
# Visual Studio Code 사용

- 새 파일 추가



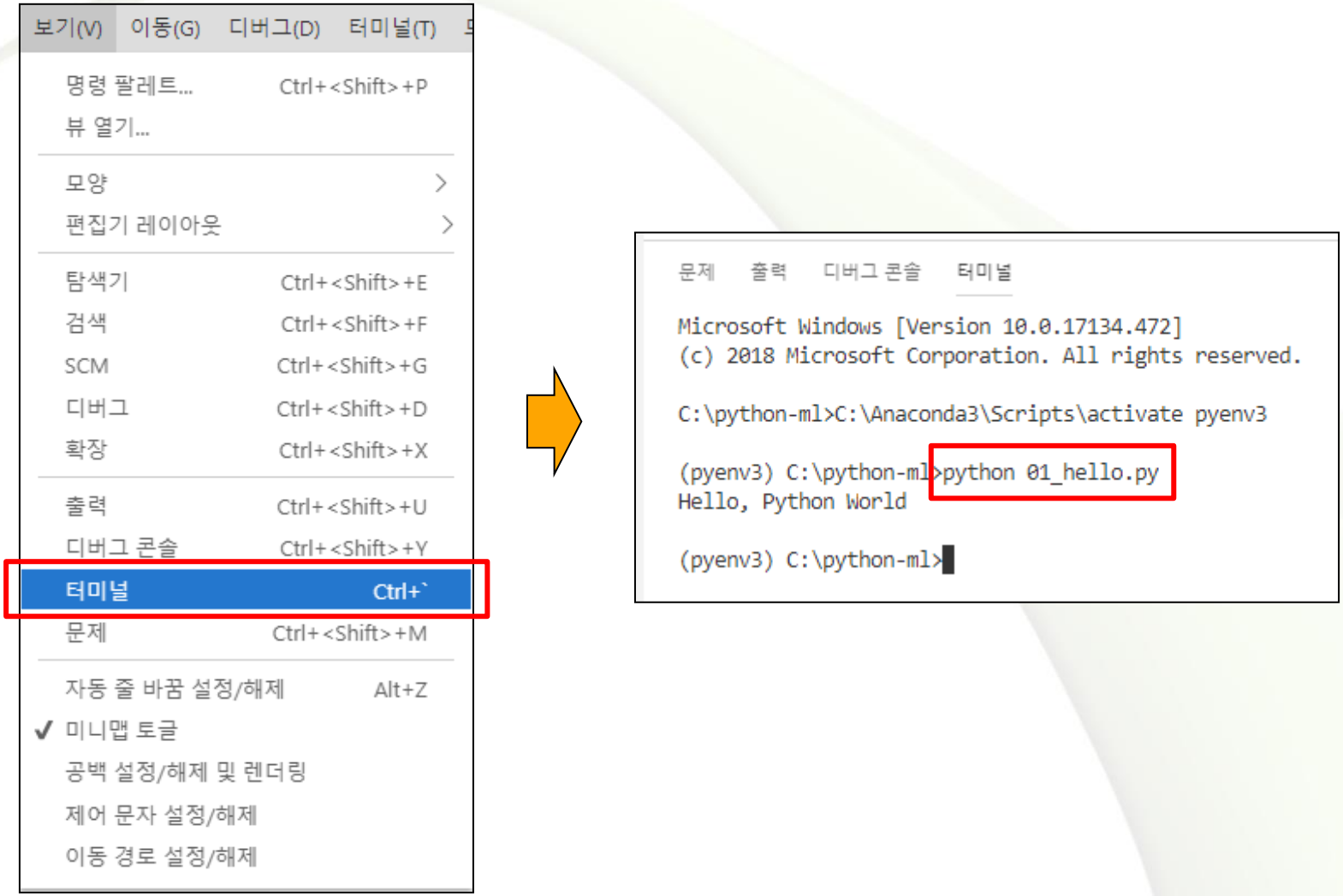
# Visual Studio Code 사용

- 대화형 명령 실행

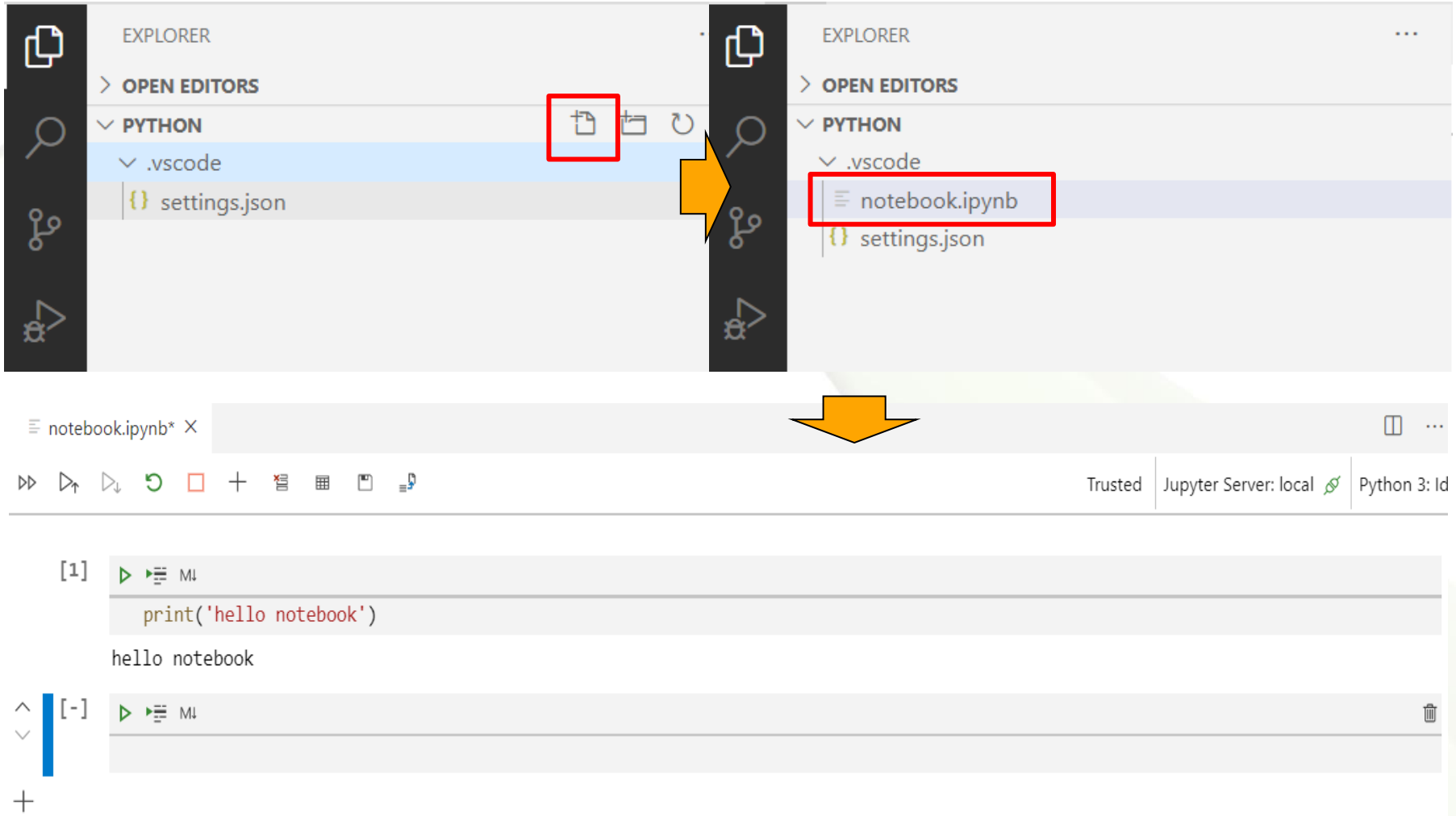


# Visual Studio Code 사용

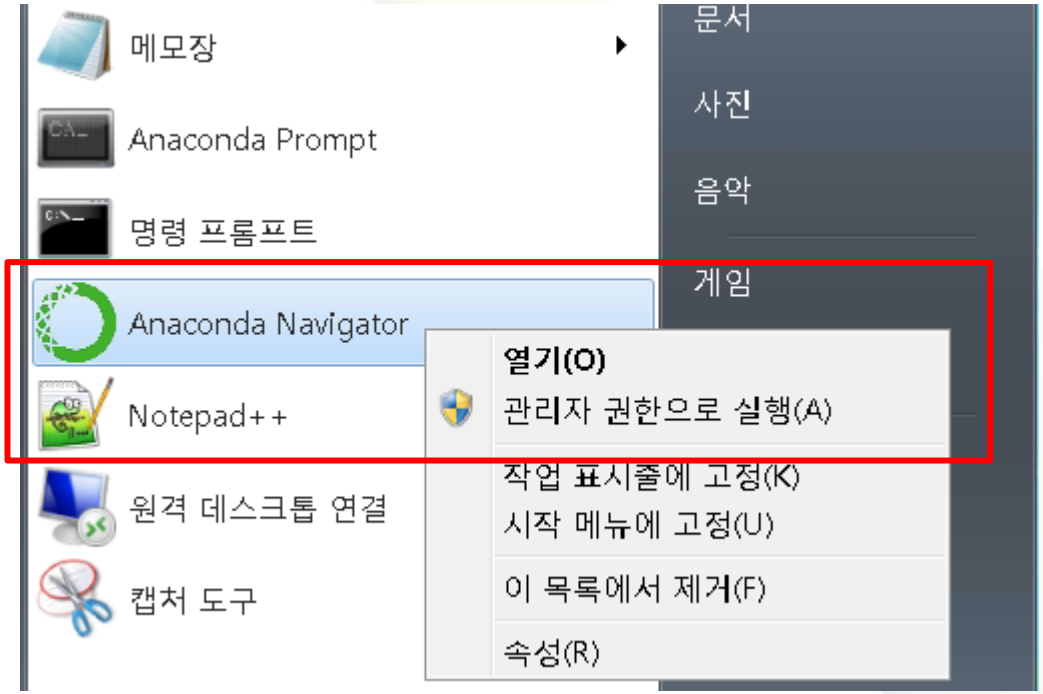
- 배치형 명령 실행



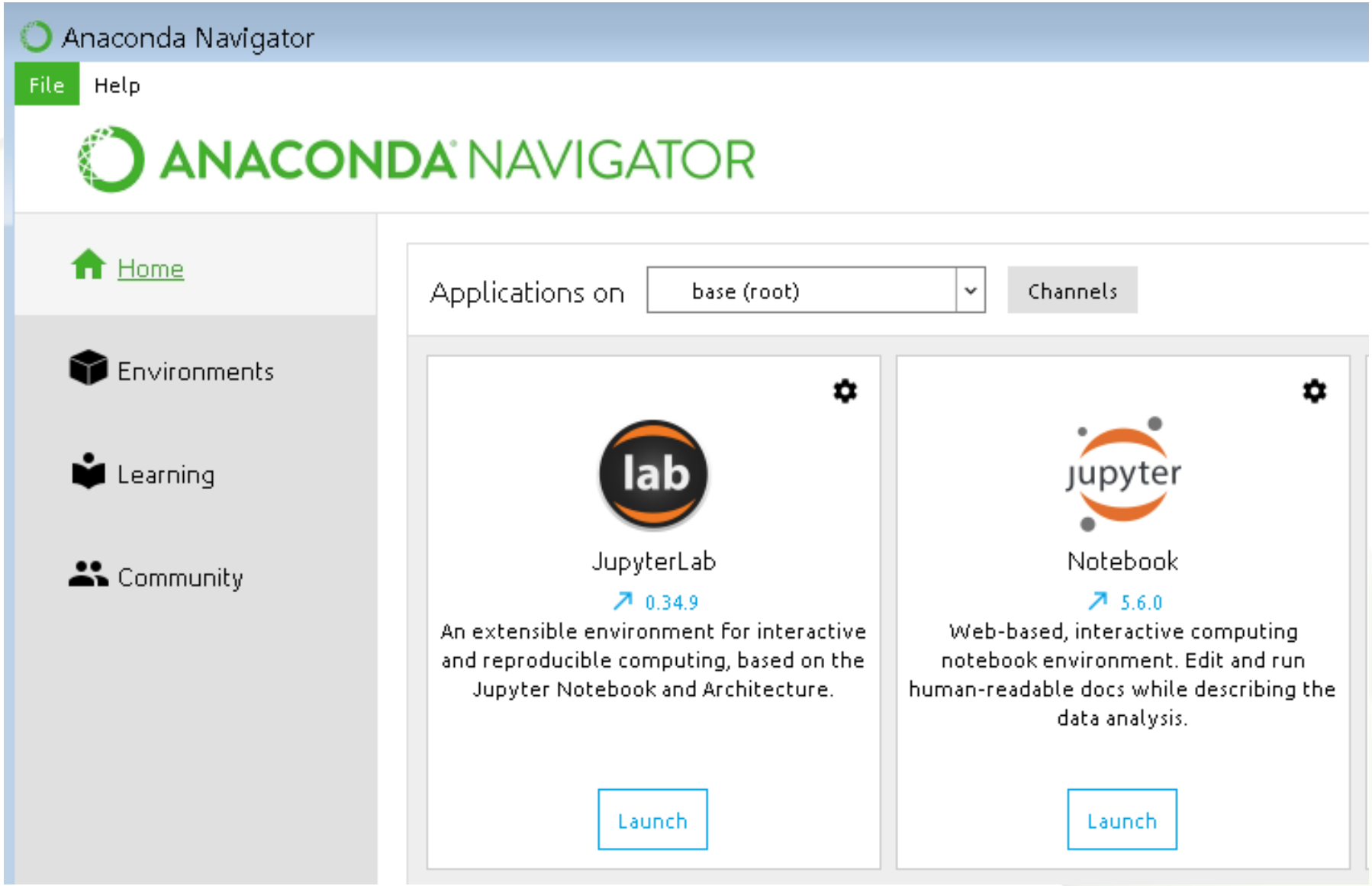
# Visual Studio Code 사용



# Anaconda Navigator 시작

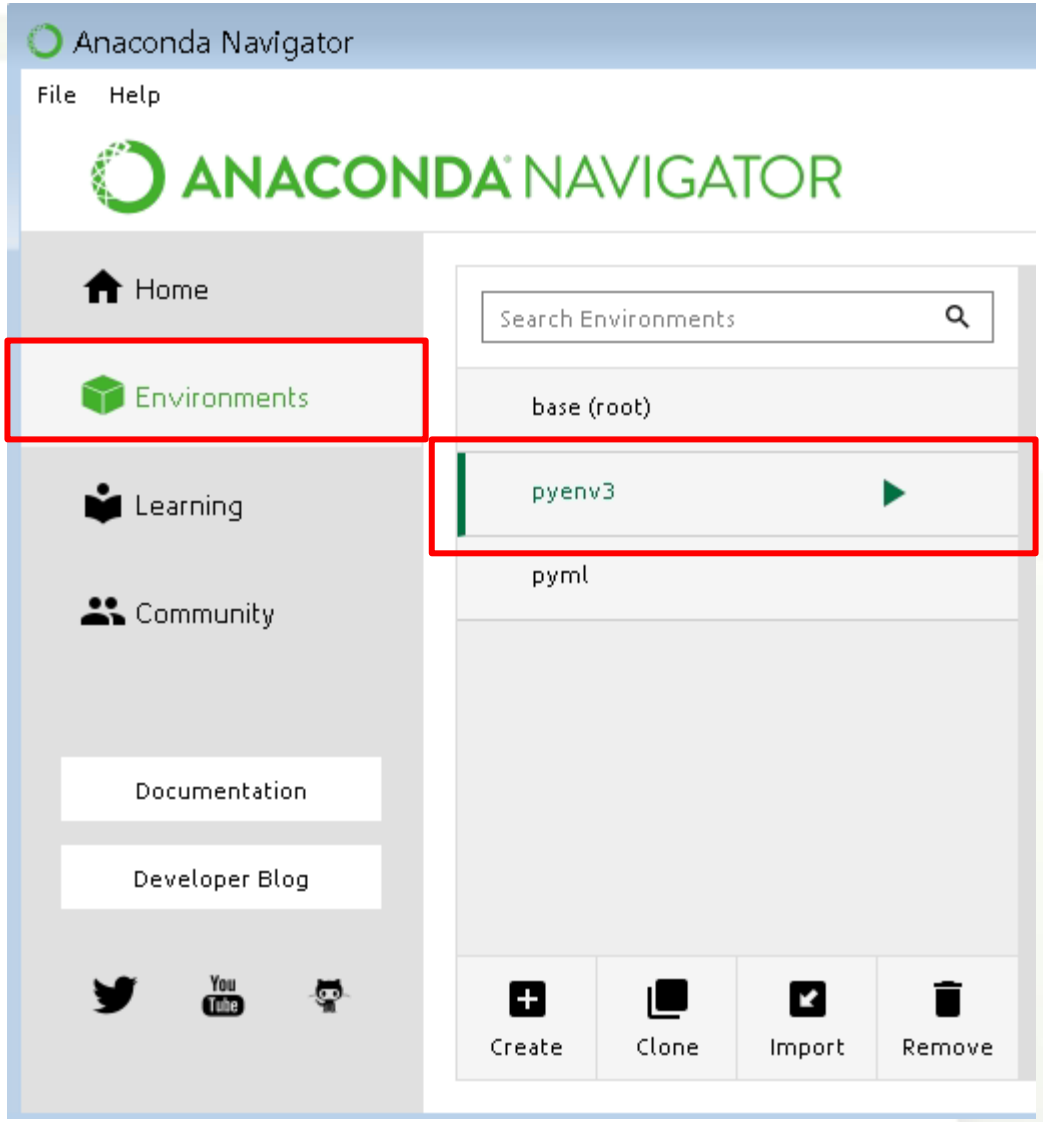


# Anaconda Navigator 시작 화면



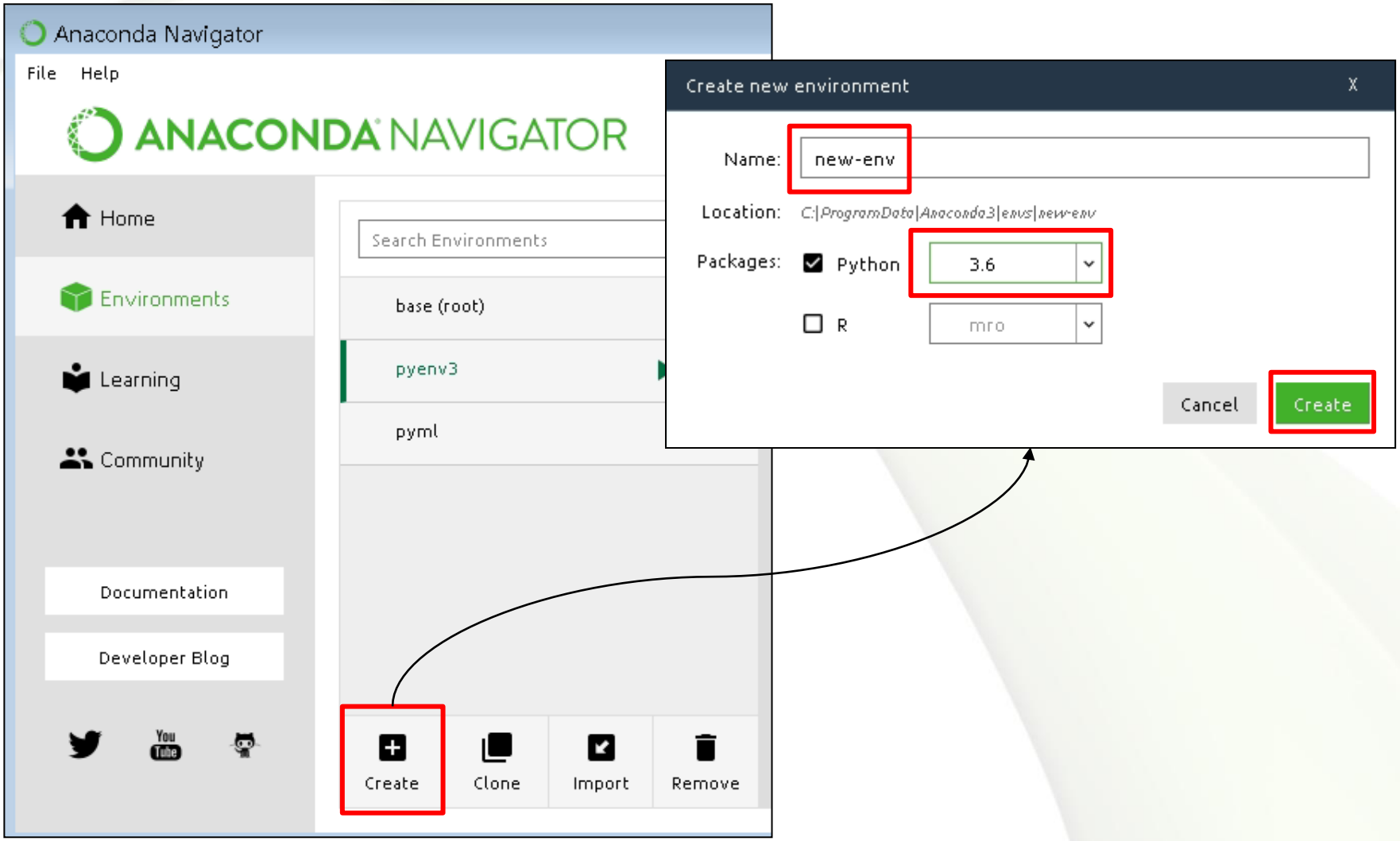
# Anaconda Navigator 가상 환경 관리

- 가상 환경 선택



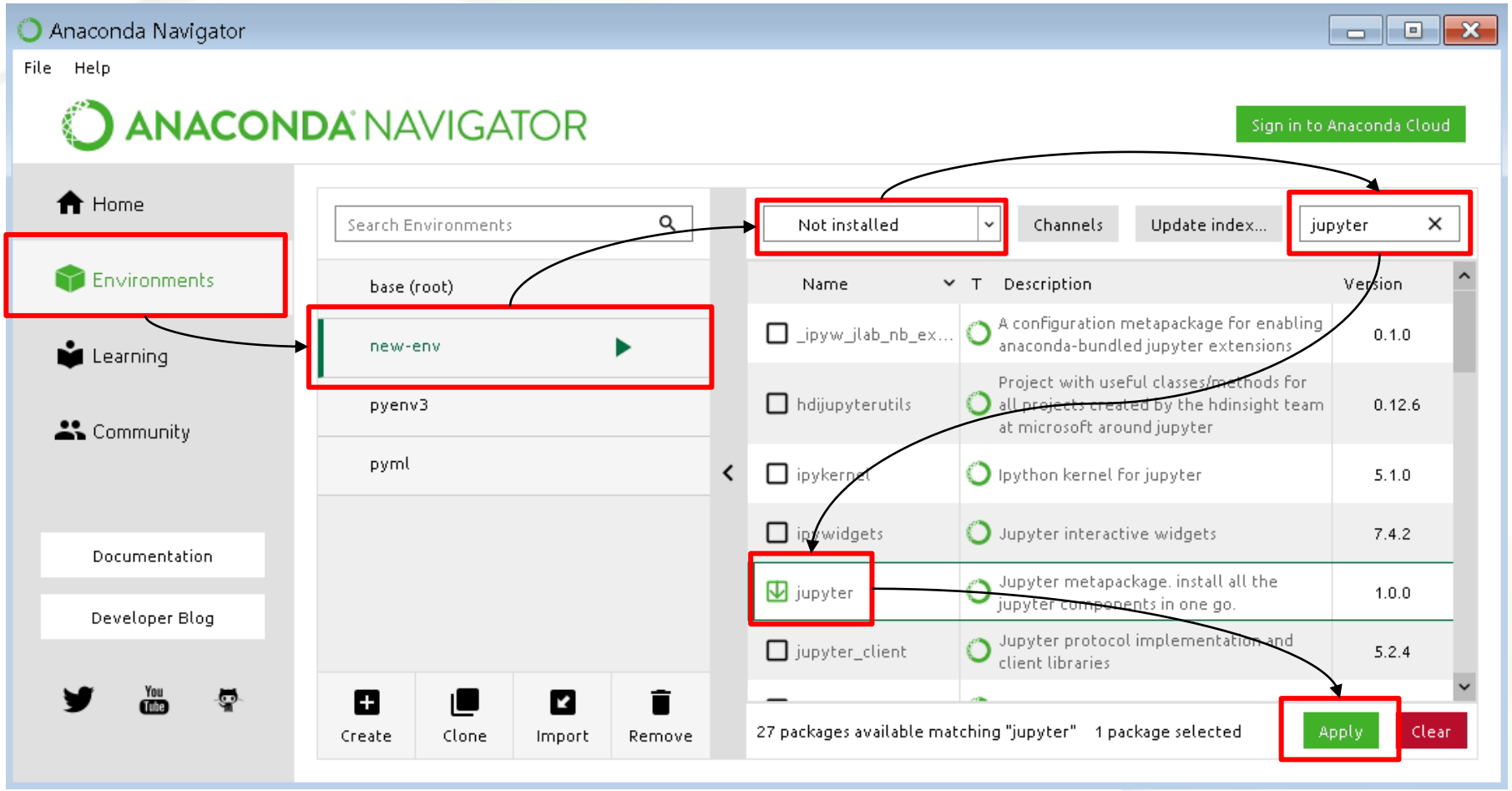
# Anaconda Navigator 가상 환경 관리

- 가상 환경 만들기



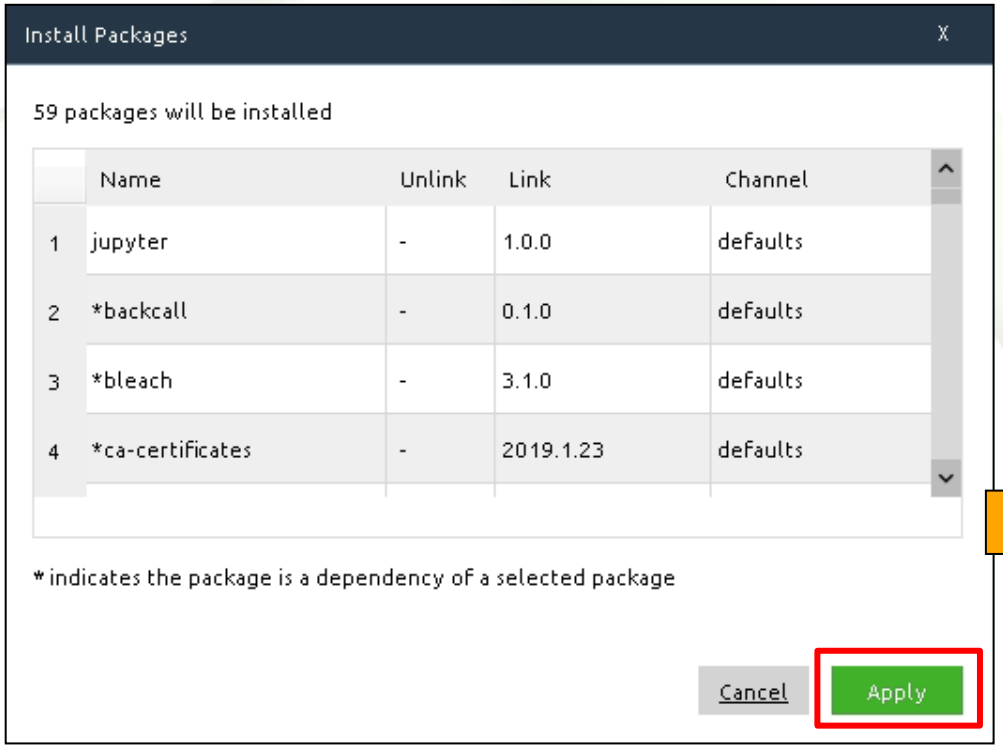
# Anaconda Navigator 가상 환경 관리

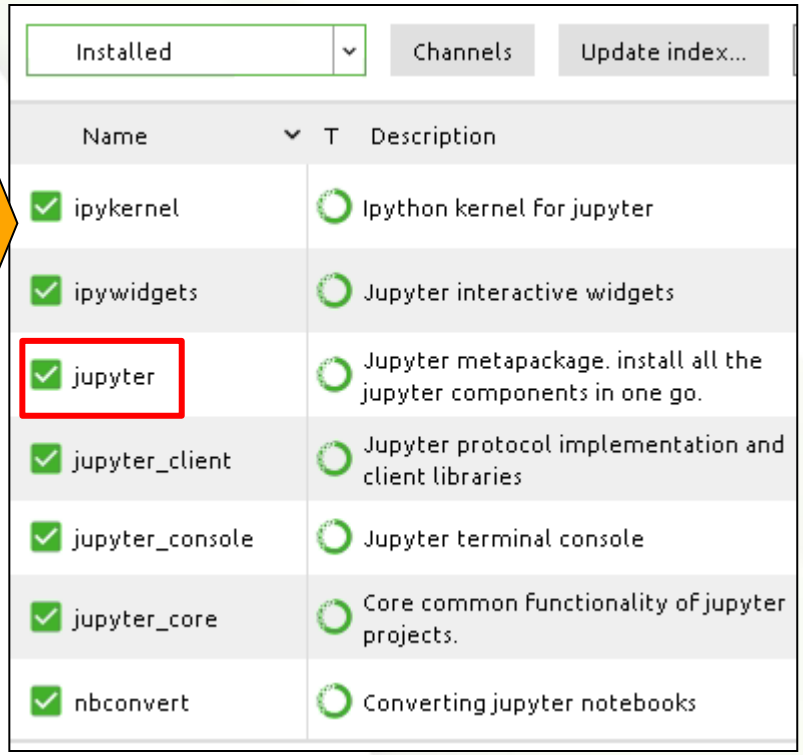
- 패키지 설치



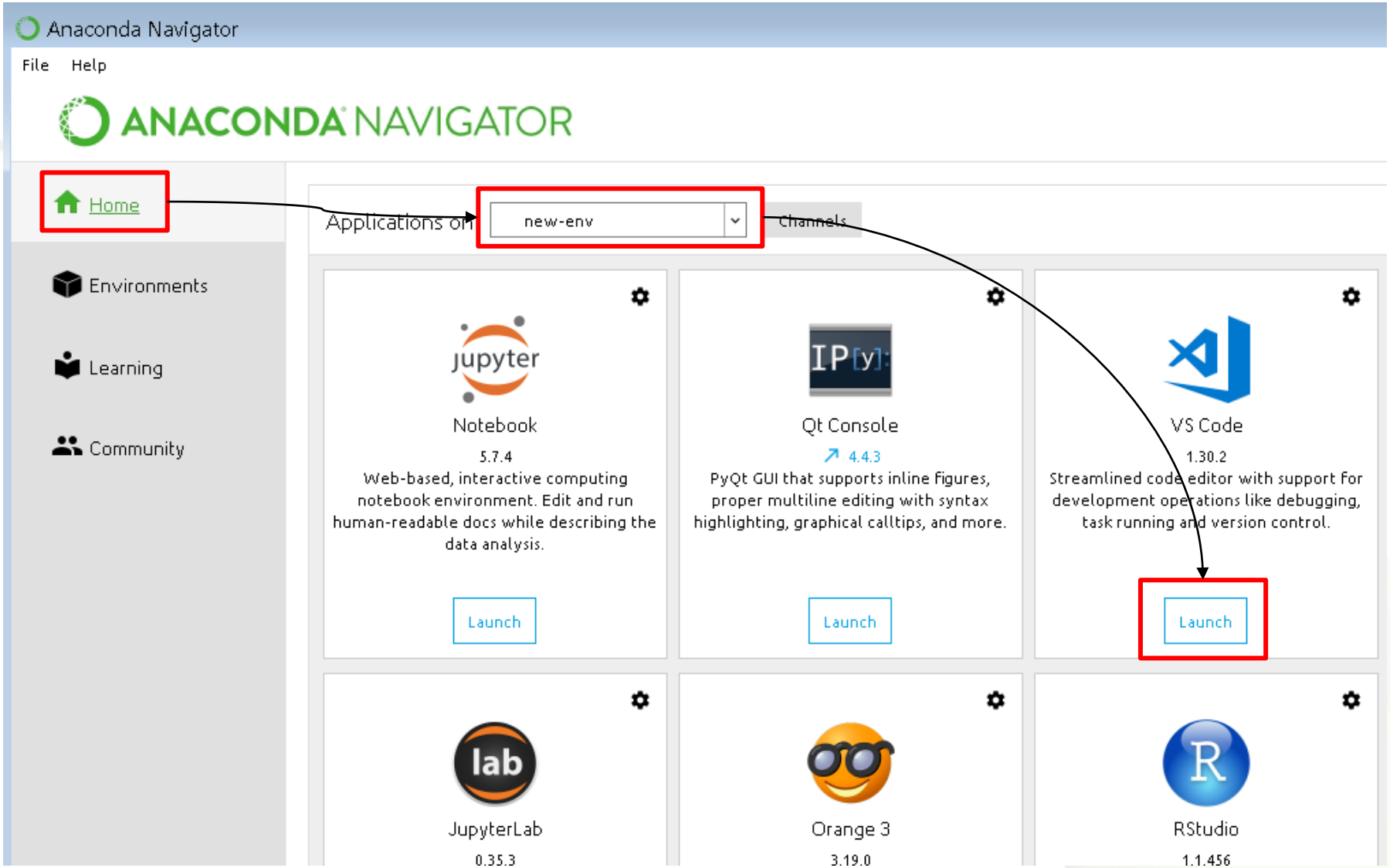
# Anaconda Navigator 가상 환경 관리

- 패키지 설치



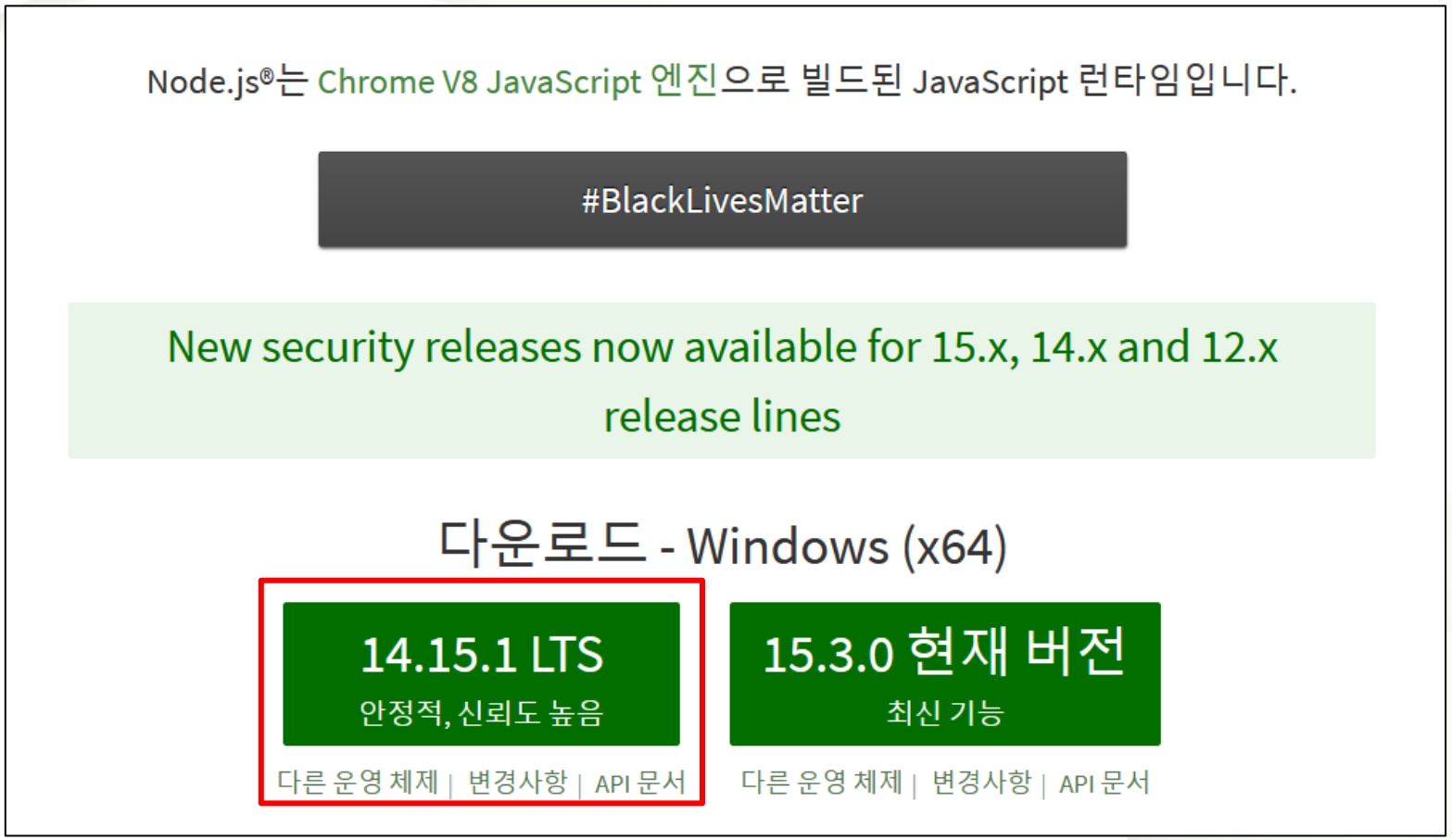



# Anaconda Navigator에서 개발 환경 시작



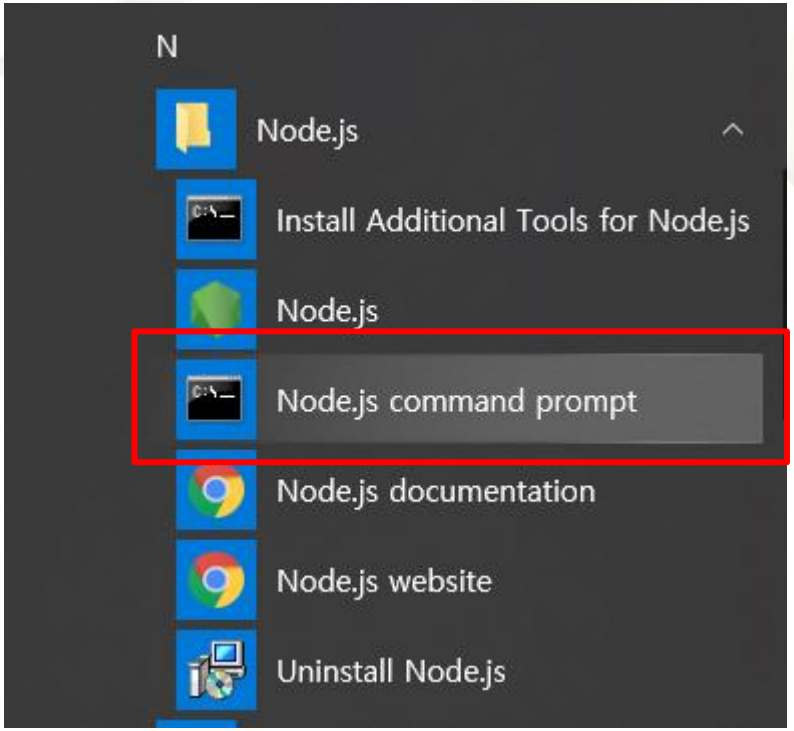
# Node.js 설치

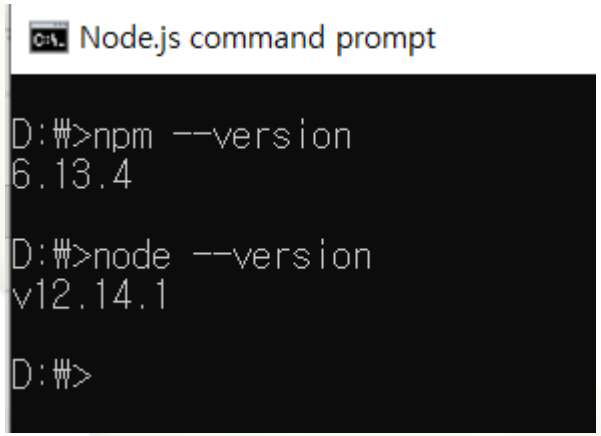
- 다운로드 → https://nodejs.org/ko/




- 다운로드 완료 후 설치 파일 실행 (관리자 권한으로 실행)

# Node.js 설치 확인


N
Node.js
Install Additional Tools for Node.js
Node.js
Node.js command prompt
Node.js documentation
Node.js website
Uninstall Node.js


Node.js command prompt
D:₩>npm --version
6.13.4
D:₩>node --version
v12.14.1
D:₩>