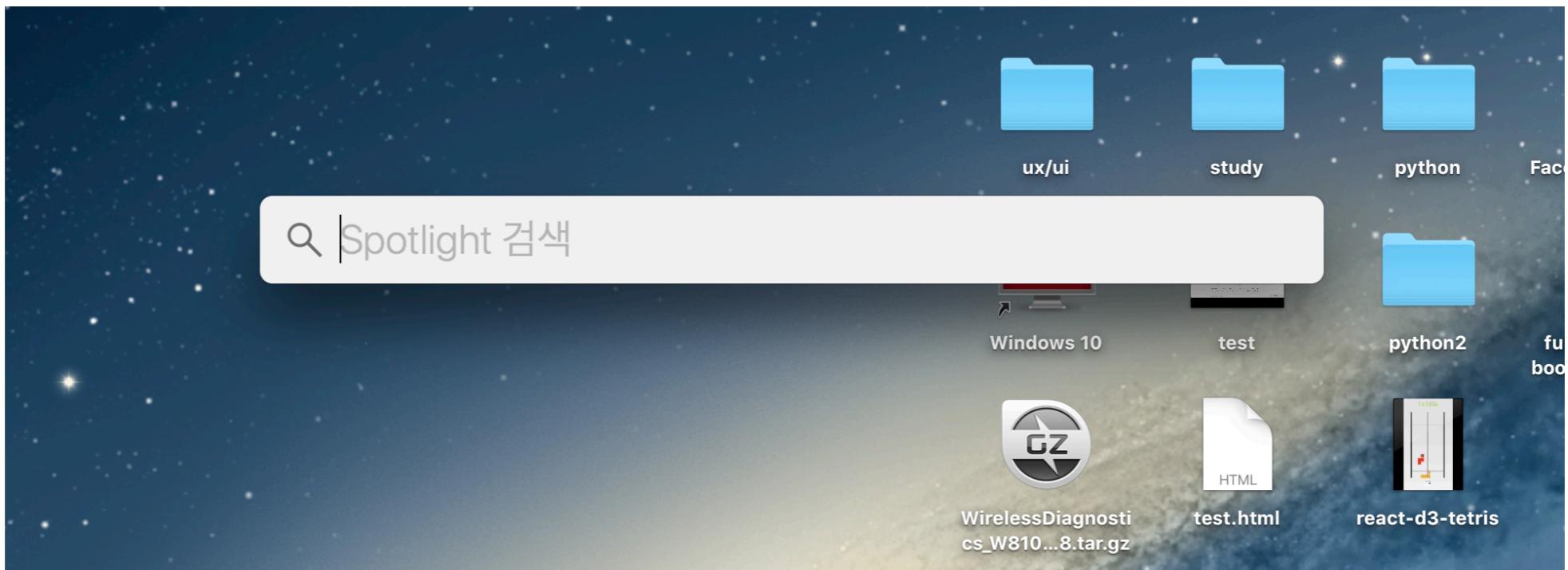


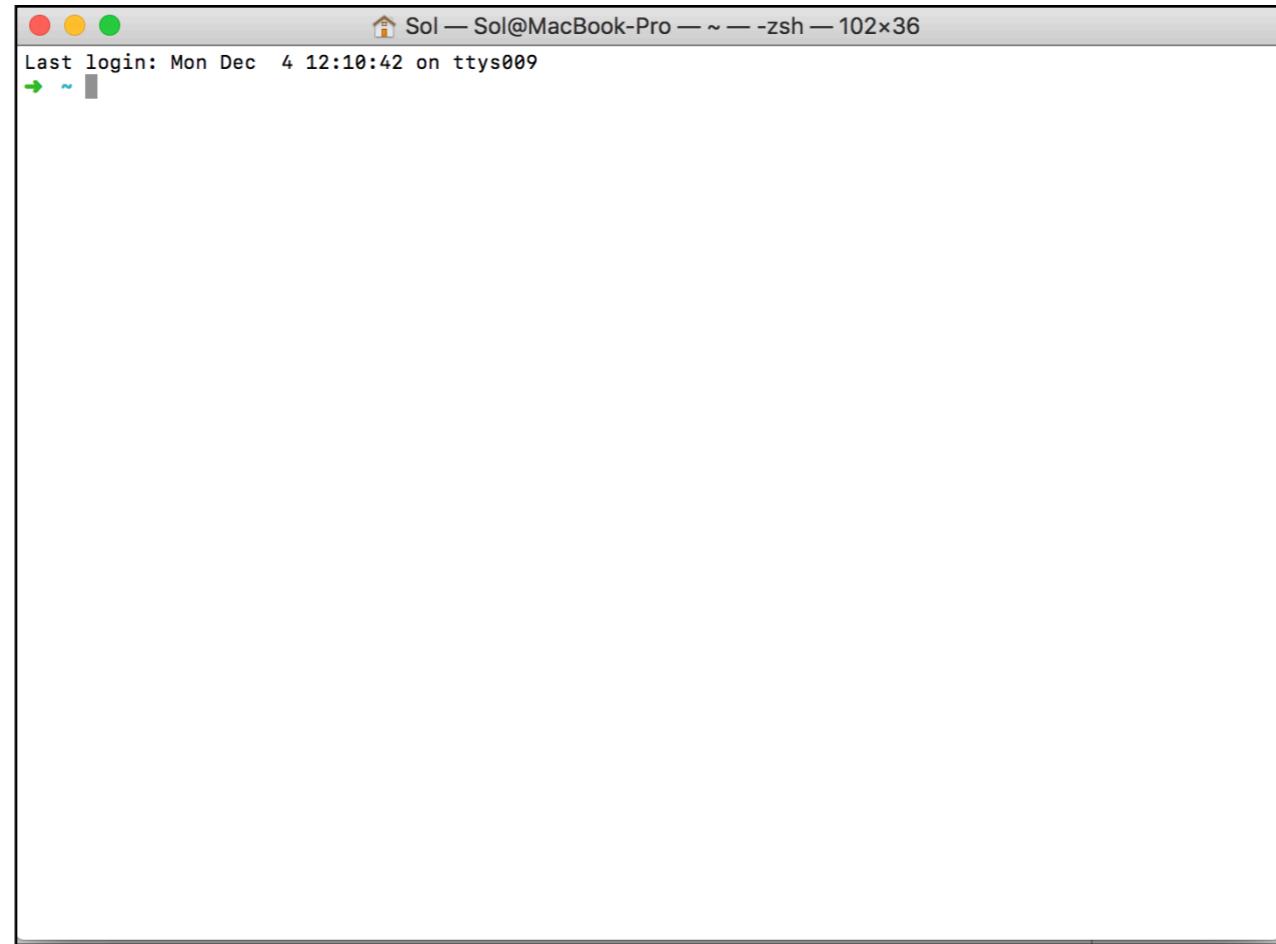
Python 설치

Mac OS 환경



**spotlight를 실행한뒤
터미널 (or Terminal)을 실행하세요.**

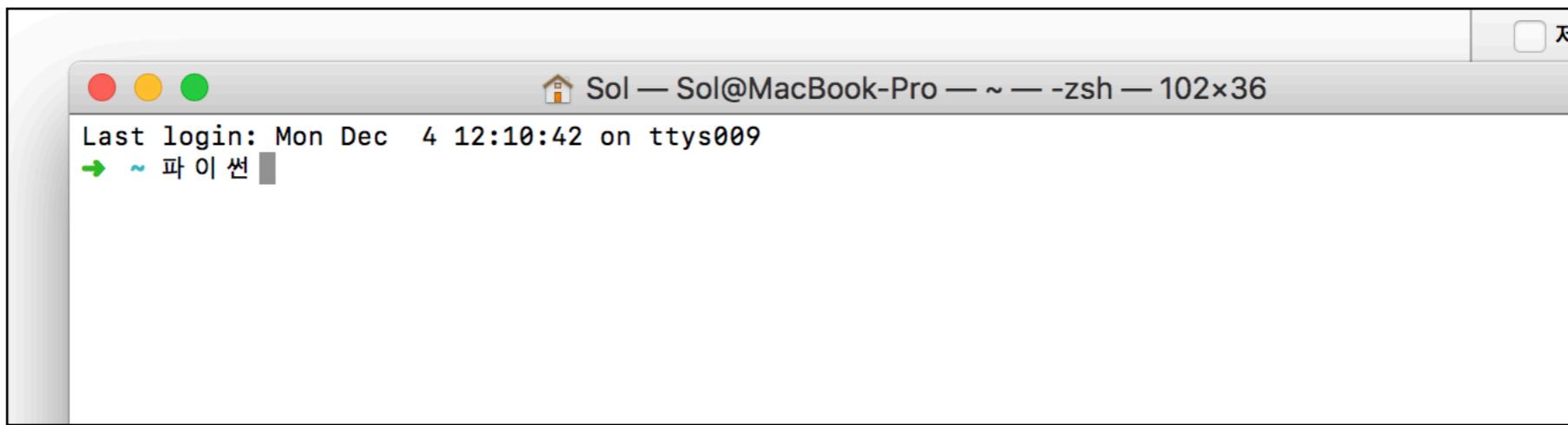
**Spotlight 실행할줄 모른다면, 구글에서 검색하세요
‘맥 spotlight’**



**깨끗한 하얀색 Color감이 돋보이고,
뭘 해야하지? 라는 생각과 덩달아 머리속도 하얗게 만들어주는
터미널창이 열렸습니다.**

초면이지만 프로그래밍을하면서 같이 친해질겁니다.

파이썬이라고 쳐볼까요?



아뇨 영어로요.

```
zsh: command not found: 파이썬
→ ~ python
Python 2.7.10 (default, Jul 15 2017, 17:16:57)
[GCC 4.2.1 Compatible Apple LLVM 9.0.0 (clang-900.0.31)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

무언가 실행된거같네요! 파이썬이라고 써있는거보니까 파이썬같아요

```
Python 2.7.10 (default, Jul 15 2017, 17:16:57)
[GCC 4.2.1 Compatible Apple LLVM 9.0.0 (clang-900.0.31)]
Type "help", "copyright", "credits" or "license" for more information.
>>> print("Hello World!")
Hello World!
>>>
```

파이썬 코드가 잘먹히네요.

아쉽지만 맥에 내장된, 방금 실행한 파이썬은 2.7버전입니다.

우리는 오늘 파이썬3버전을 설치해야합니다.

```
python
Python 2.7.10 (d
[GCC 4.2.1 Compa
```

'quit()'
이라고 써줘서 실행한
python을 종료해줍니다.

'>>>' 앞에서 깜빡거리던 커서가
'>>>' 이 아닌 새로운 줄에서 깜빡거리면 성공

```
[GCC 4.2.1 Compatible Apple LLVM 9.0.0 (clang-900.0.31) on Darwin]
Type "help", "copyright", "credits" or "license" for more information.
>>> print("Hello World!")
Hello World!
>>> quit()
→ ~
```

파이썬을 설치하는 방법은 다양하지만
우리는 맥에서 Homebrew라는 패키지관리자를 이용하여서
Python을 설치하려고합니다.

Google에서 ‘Homebrew’를 검색하세요.

The screenshot shows a Google search results page for the query 'homebrew'. At the top, there's a green circular icon with a white 'H' and the word 'homebrew' in bold black text. Below the search bar are six tabs: 전체 (selected), 지도, 이미지, 동영상, 뉴스, and 더보기. A search result for 'Homebrew — macOS 용 패키지 관리자' is highlighted with a blue border. To its right, the text 'Click!' is displayed in bold. Below the result, the URL 'https://brew.sh/index_ko.html' is shown with a downward arrow. A detailed description follows: 'Homebrew 설치하기. /usr/bin/ruby -e "\$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)". 터미널에 붙여넣기 하세요. 해당 스크립트는 전에 잠시 멈춥니다. 더 자세한 설치 관련사항을 보려면 여기를 참고하세요.' Underneath this, there's a section titled 'Installation' with the subtext 'Installation. The suggested and easiest'.

텍스트를 복사해주세요.

아까 켰던 터미널창에
Homebrew를 설치하라고
명령을 내리기위한
명령어입니다.

The screenshot shows the GitHub repository landing page for 'Homebrew'. It features a large logo of a beer mug with foam and an apple. The word 'Homebrew' is written in a large, orange, sans-serif font. Below it, the text 'macOS 용 패키지 관리자' is visible. A language dropdown menu is set to '한국어'. On the right side, there's a yellow button with the text '복사!' (Copy!). Below the main title, the heading 'Homebrew 설치하기' is displayed. At the bottom of the page, a code block contains the command '/usr/bin/ruby -e "\$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"'. A note below the command says '터미널에 붙여넣기 하세요.' (Paste into the terminal). Another note to the right states: '해당 스크립트는 무엇을 할지 설명하고 실행하기 전에 잠시 멈춥니다. 더 자세한 설치 관련사항을 보려면 여기를 참고하세요.' (The script will pause before running to explain what it does. For more detailed installation instructions, see the linked page).

```
Hello World!
$ ~ /usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

복사한 텍스트를 터미널에서 붙여넣기한다음 Enter키를 눌러주세요

잠깐!

여기서 만약 맥에 Xcode가 설치되지 않은 경우 Error가 발생됩니다.

이때는 App Store에서 Xcode를 설치하시거나

터미널에

xcode-select --install

을 위와같은 방식으로 입력하여 (복사 붙여넣기, 엔터)
설치한후

다시 위에 homebrew 설치 작업을 실행해주세요

터미널에서 **brew** 를 입력했을때,
다음과 같이 뜬다면 설치가 완료된것입니다.

```
➔ ~ brew
Example usage:
  brew search [TEXT|/REGEX/]
  brew (info|home|options) [FORMULA...]
  brew install FORMULA...
  brew update
  brew upgrade [FORMULA...]
  brew uninstall FORMULA...
  brew list [FORMULA...]

Troubleshooting:
  brew config
  brew doctor
  brew install --vd FORMULA

Developers:
  brew create [URL [--no-fetch]]
  brew edit [FORMULA...]
  https://docs.brew.sh/Formula-Cookbook.html

Further help:
  man brew
  brew help [COMMAND]
  brew home
➔ ~
```

brew install python3

을 입력하여서 python3을 설치합니다.

```
[➔ ~ brew install python3
Updating Homebrew...
==> Auto-updated Homebrew!
Updated 3 taps (homebrew/science, homebrew/core, caskroom/cask).
==> New Formulae
apm-server  clingo      dnsdist     joplin      mrboom      raylib
chamber     dislocker   glsvviewer  kubeless    neal        vert
==> Updated Formulae
flow ✓       lbdb
heroku ✓     ldc
libuv ✓      libcddb
little-cms2 ✓ libcdio
mercurial ✓ libdivecomputer
redis ✓      libgit2-glib
webp ✓       libgosu
abcmidi
adwaita-icon-theme
agedu
amazon-ecs-cli
angular-cli
ansible
libgweather
libmaxminddb
libmicrohttpd
libphonenumbers
librealsense
libtcod
```

다음과 같이 설치가 완료된다음 python3이라고 입력했을때
빨간 박스에서 처럼 3.x.x로 시작하는 버전이 뜬다면 설치 성공
아까와 같이 quit() 을 입력해서 python을 종료하세요.

```
==> Caveats
Pip, setuptools, and wheel have been installed. To update them
    pip3 install --upgrade pip setuptools wheel

You can install Python packages with
    pip3 install <package>

They will install into the site-package directory
    /usr/local/lib/python3.6/site-packages

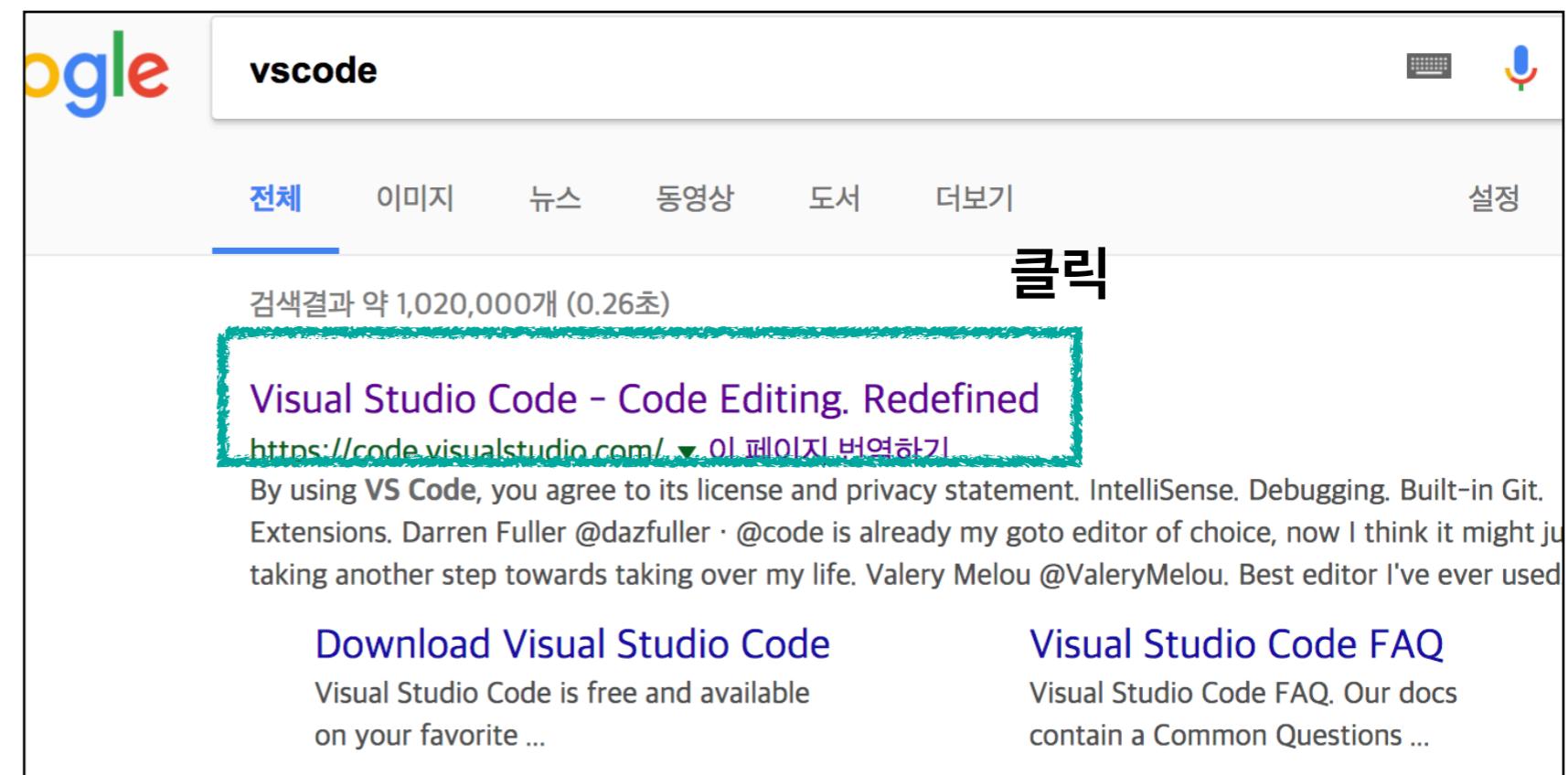
See: https://docs.brew.sh/Homebrew-and-Python.html
==> Summary
🍺 /usr/local/Cellar/python@3.6/3.6.3: 7,973 files, 111MB, built in 7 minutes 34 seconds
→ ~ python3
Python 3.5.2 (v3.5.2:24def2a2901a5, Jun 26 2016, 10:47:25)
[GCC 4.2.1 (Apple Inc. build 5666) (dot 3)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
[>>> quit()

종료
```

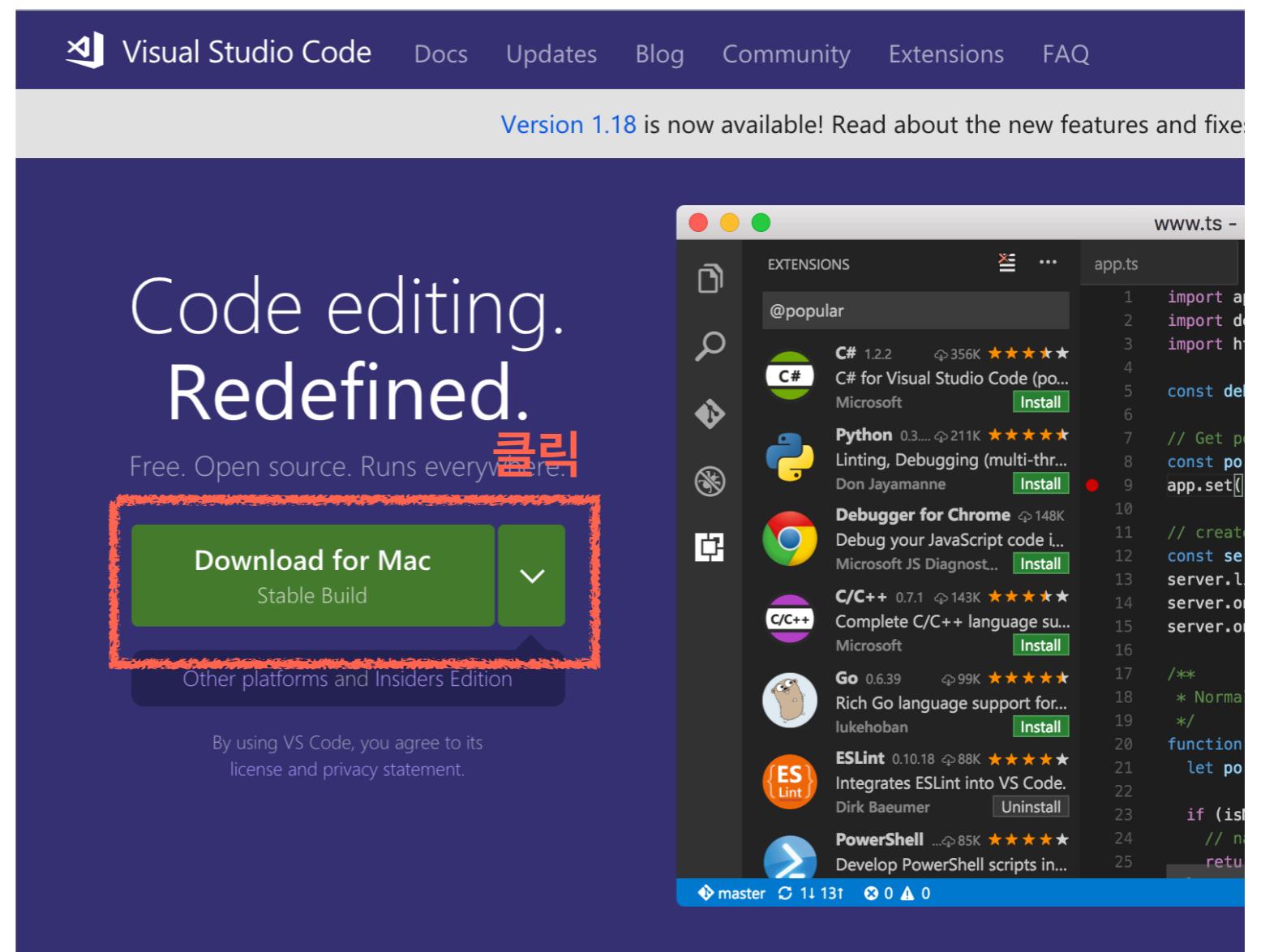
VS CODE 설치

Mac OS 환경

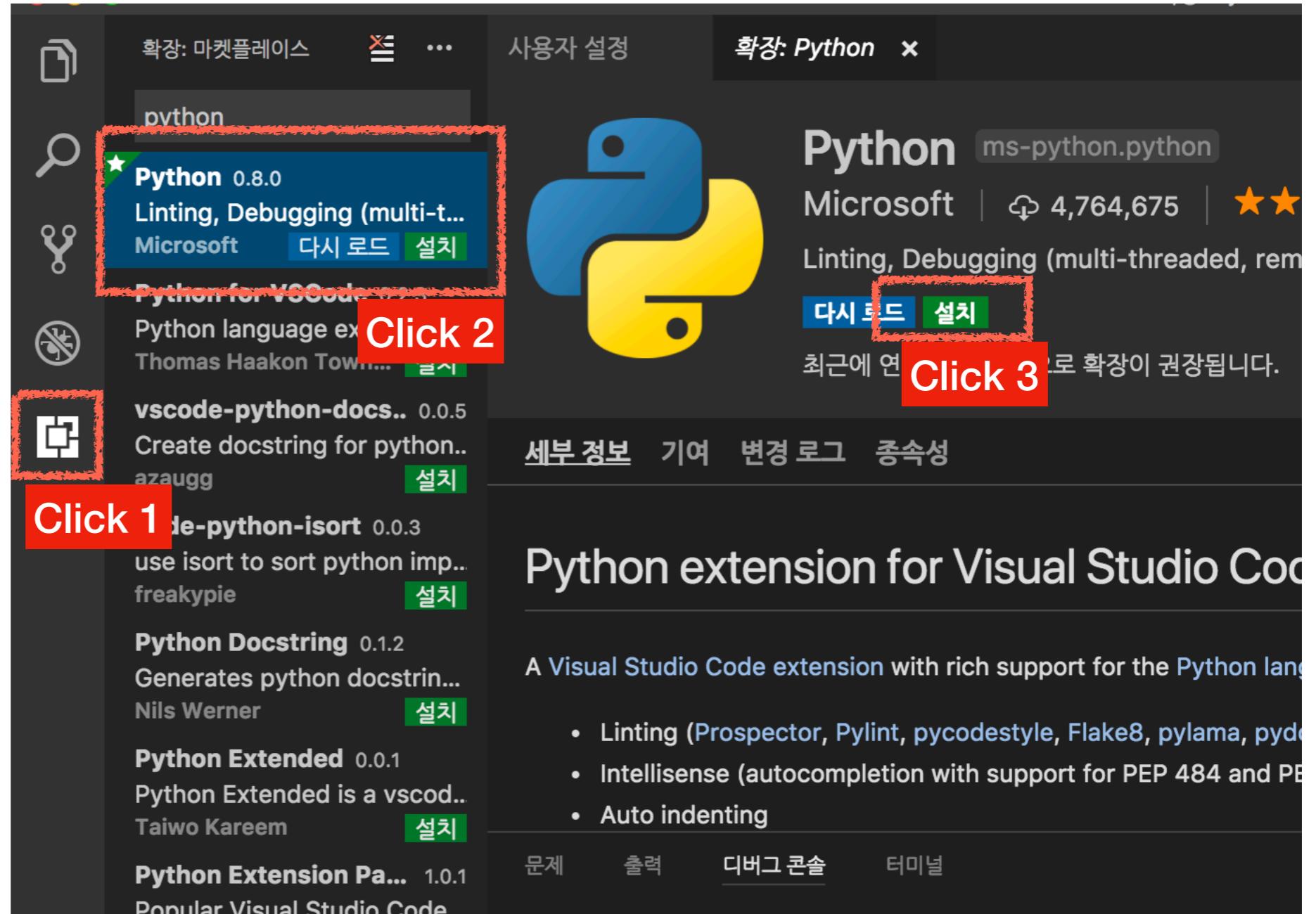
Google에서
“**VSCODE**”를 검색한 후
Visual Studio Code 를 클릭



**Download를 클릭 후
설치해서 실행해주세요**



Python 확장 모듈 설치

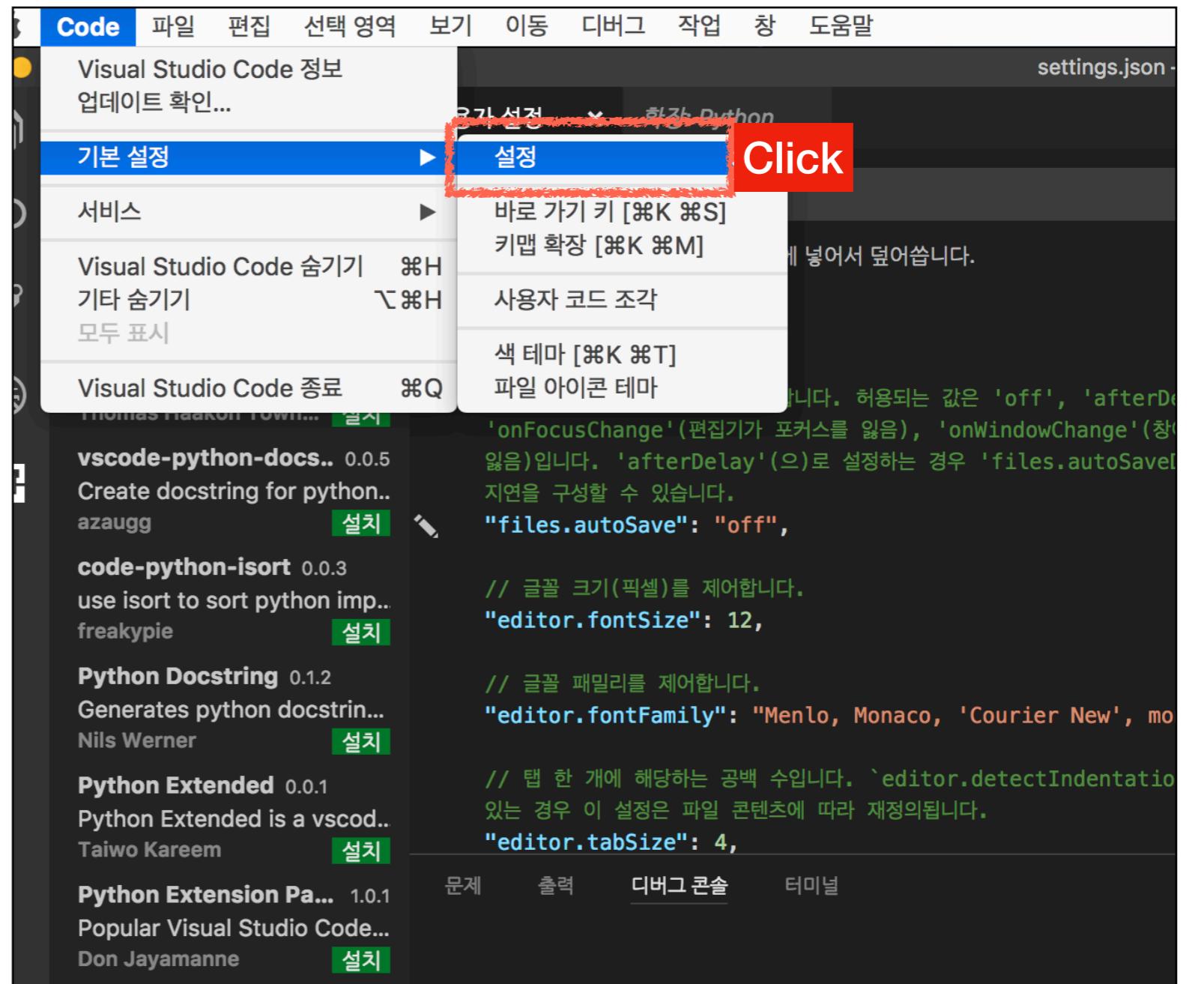


Python extension for Visual Studio Code

A Visual Studio Code extension with rich support for the Python language.

- Linting (Prospector, Pylint, pycodestyle, Flake8, pylama, pydocstyle)
- Intellisense (autocompletion with support for PEP 484 and PEP 526)
- Auto indenting

사용할 Python version (가상환경) 경로 설정을 위한 VS code 설정창 열기



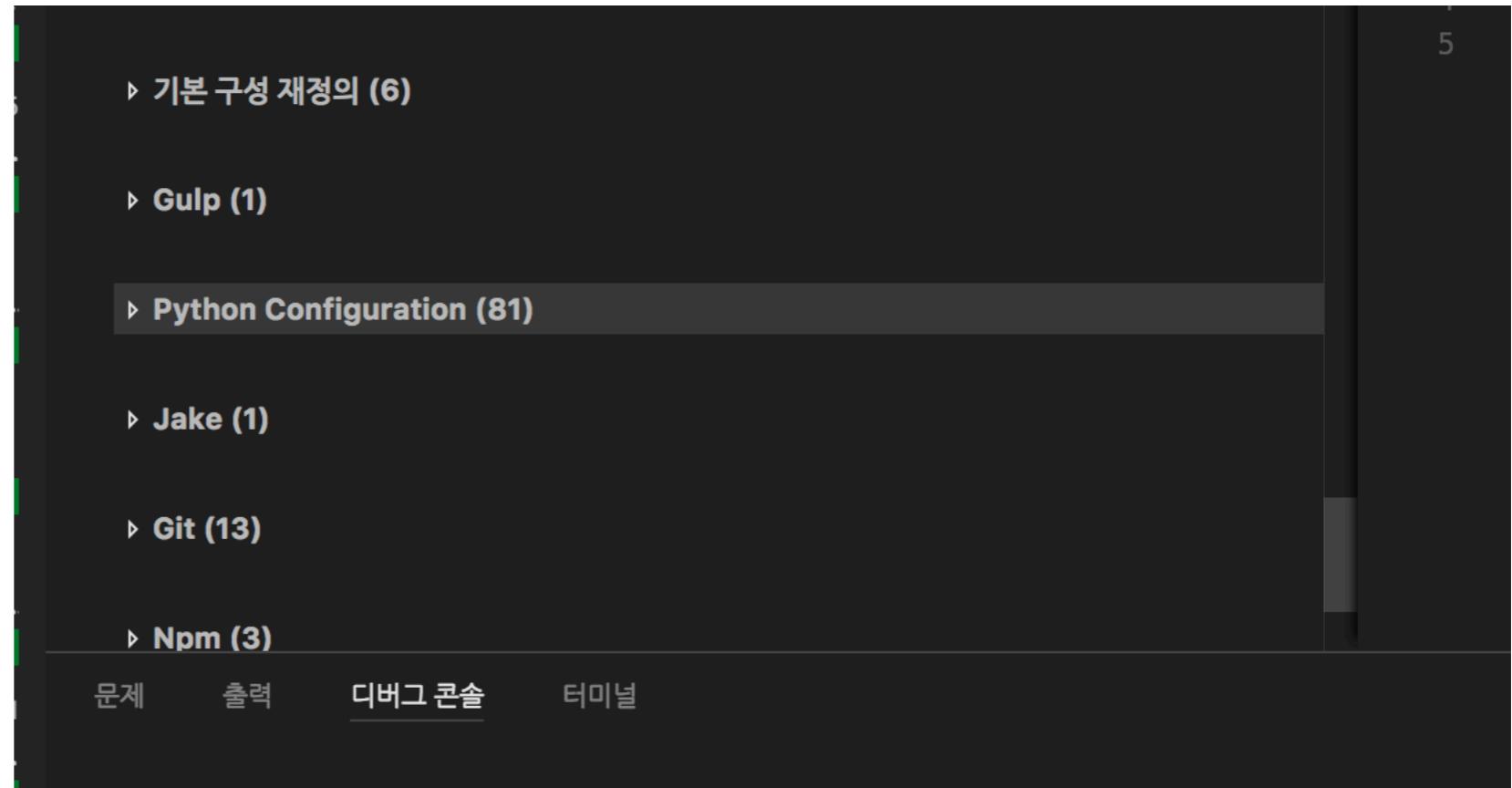
“사용자 설정” 탭이 열린걸
확인할 수 있습니다.

The screenshot shows the VS Code interface with the title bar "settings.json — test". The top navigation bar has tabs for "User Settings" and " 확장: Python". A search bar at the top says "설정 검색". Below it, a message says "기본 설정 설정을 오른쪽 편집기에 넣어서 덮어씁니다.". A section titled " 일반적으로 사용되는 설정 (11)" contains code snippets. One snippet explains the "files.autoSave" setting, another sets the font size to 12, and another sets the font family to Menlo, Monaco, Courier New, monospace. A note about "editor.detectIndentation" is also present. The right side of the screen shows a preview of the JSON file with some code snippets. The bottom navigation bar includes tabs for "문제", "출력", "디버그 콘솔" (which is underlined), and "터미널".

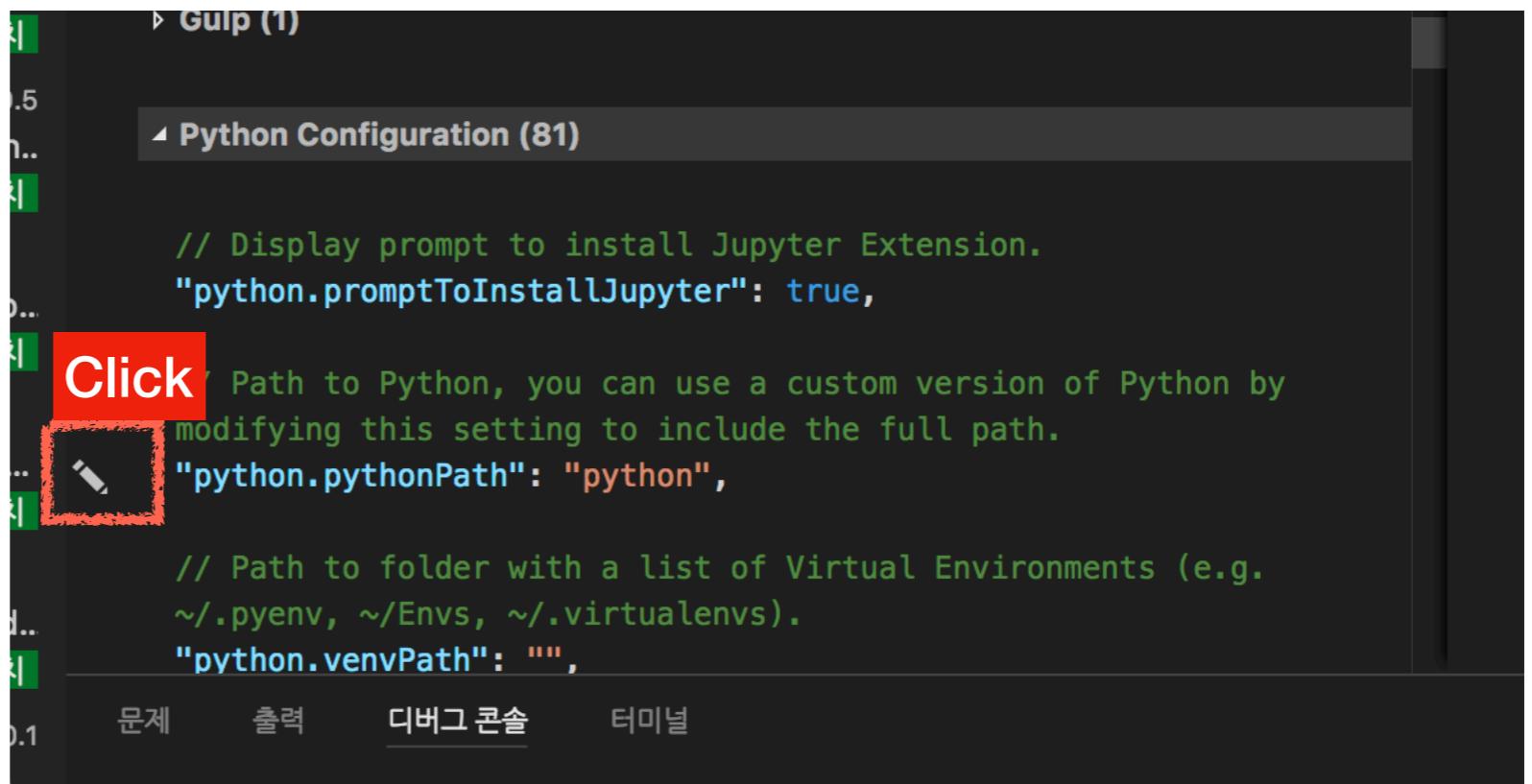
```
1 {  
2   "wo  
3   "pyt  
4   "pyt  
5 }
```

```
// 더티 파일 자동 저장을 제어합니다. 허용되는 값은 'off', 'afterDelay',  
'onFocusChange'(편집기가 포커스를 잃음), 'onWindowChange'(창이 포커스를  
잃음)입니다. 'afterDelay'(으)로 설정하는 경우 'files.autoSaveDelay'에서  
지연을 구성할 수 있습니다.  
"files.autoSave": "off",  
  
// 글꼴 크기(픽셀)를 제어합니다.  
"editor.fontSize": 12,  
  
// 글꼴 패밀리를 제어합니다.  
"editor.fontFamily": "Menlo, Monaco, 'Courier New', monospace",  
  
// 탭 한 개에 해당하는 공백 수입니다. `editor.detectIndentation`이 켜져  
있는 경우 이 설정은 파일 콘텐츠에 따라 재정의됩니다.  
"editor.tabSize": 4,
```

“사용자 설정” 탭을 스크롤 해서
아래로 쭈욱 내리면
[>Python Configuration]
메뉴가 나옵니다.

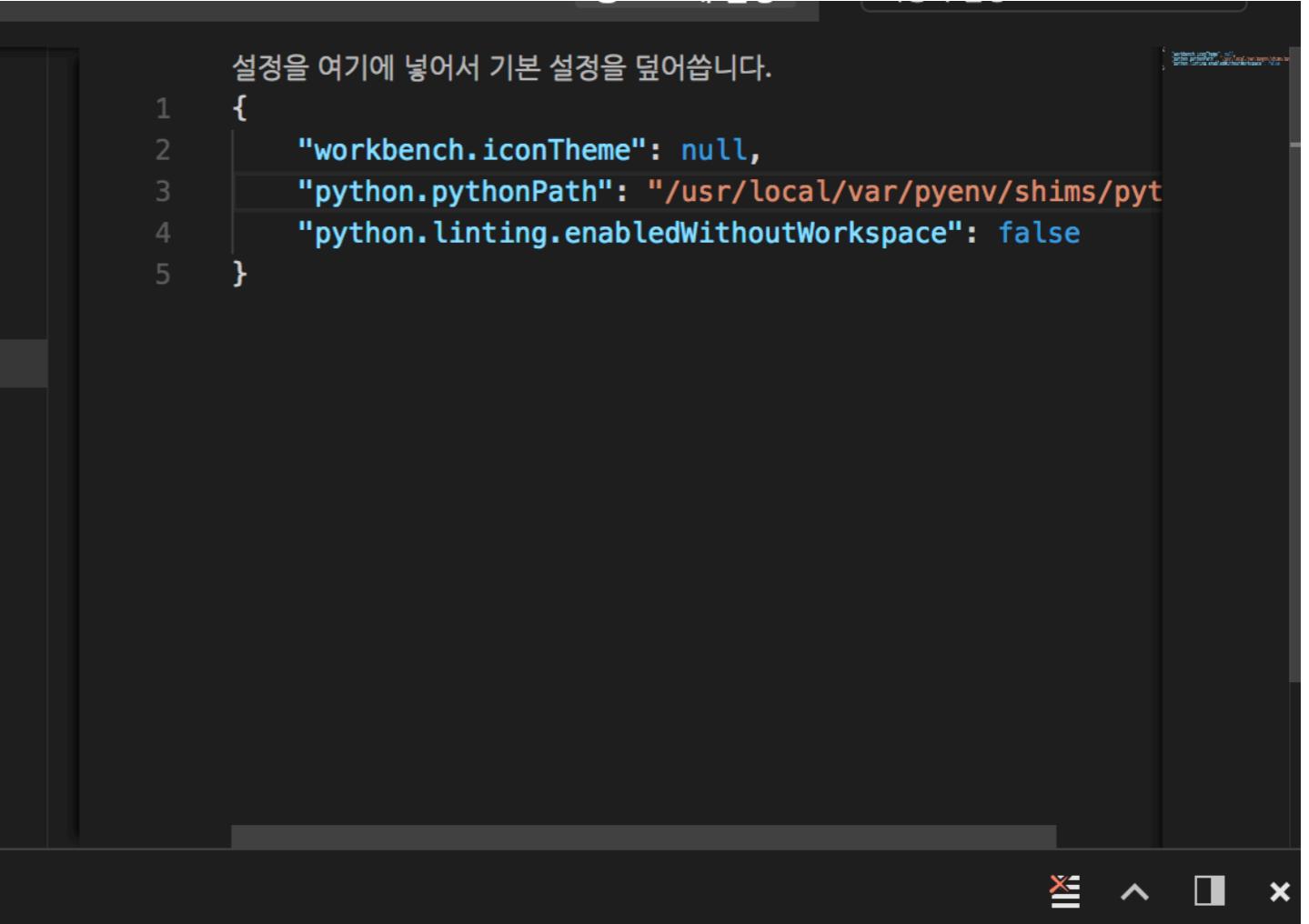


python path설정 부분에
마우스를 가져대면
‘연필’ 모양 아이콘이 생깁니다.
클릭!



오른쪽 이미지와 같은(혹은 비슷한)
화면이 됩니다.

“python.pythonPath”부분을
수정할겁니다.

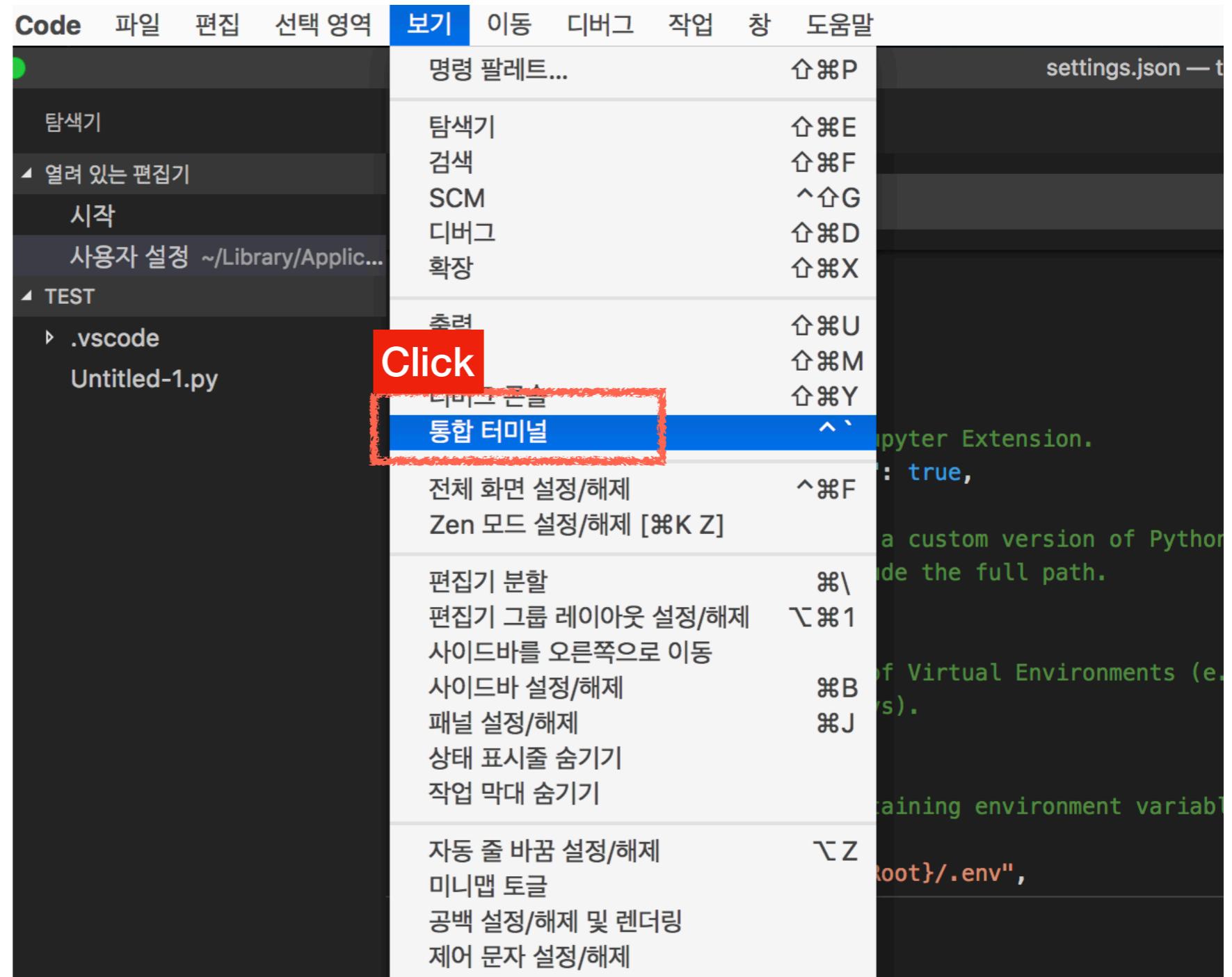


The screenshot shows the VS Code interface with a dark theme. A floating window displays a JSON configuration file. The text in the window is as follows:

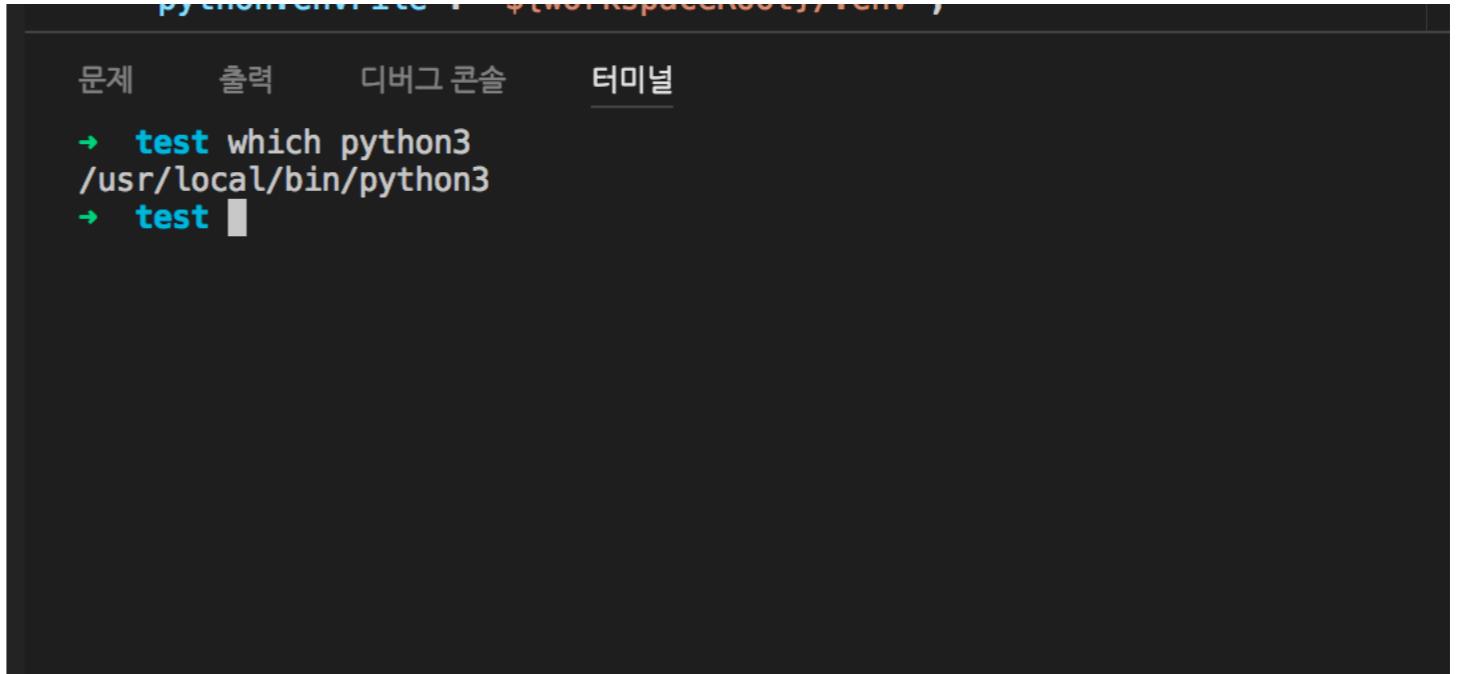
```
설정을 여기에 넣어서 기본 설정을 덮어씁니다.
{
  "workbench.iconTheme": null,
  "python.pythonPath": "/usr/local/var/pyenv/shims/python",
  "python.linting.enabledWithoutWorkspace": false
}
```

The "python.pythonPath" key is highlighted in orange, indicating it is selected or being edited. The bottom right corner of the window contains standard floating window controls: close, minimize, maximize, and expand.

**별도 터미널창이 아닌,
VS CODE안에서 사용할 수 있게
터미널창을 열어줍니다.**



터미널 창에서
“which python3”
명령어를 쳐서
python3가 설치된 경로를 확인하고,
복사해줍니다. (command+c)

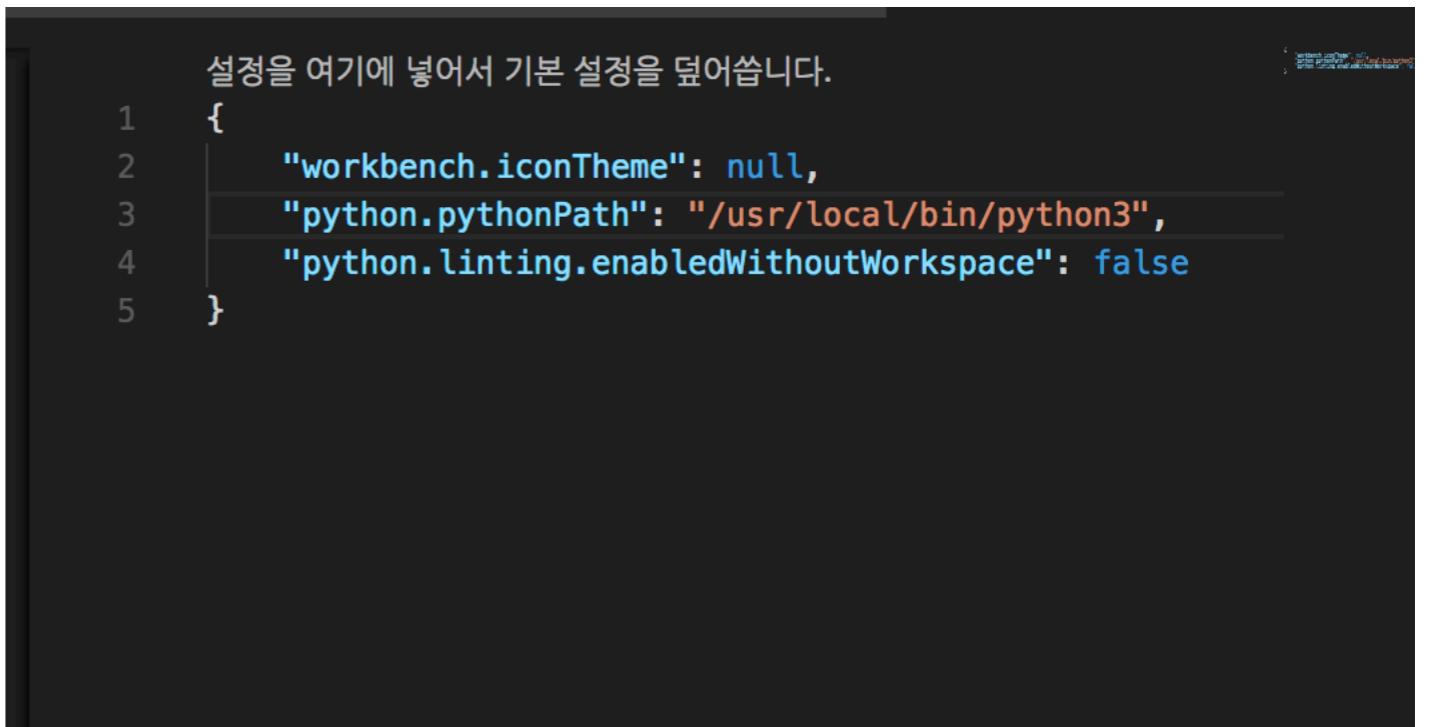


```
pycharmsenvite : /workspaces/test/venv
```

문제	출력	디버그 콘솔	터미널
----	----	--------	-----

```
→ test which python3
/usr/local/bin/python3
→ test █
```

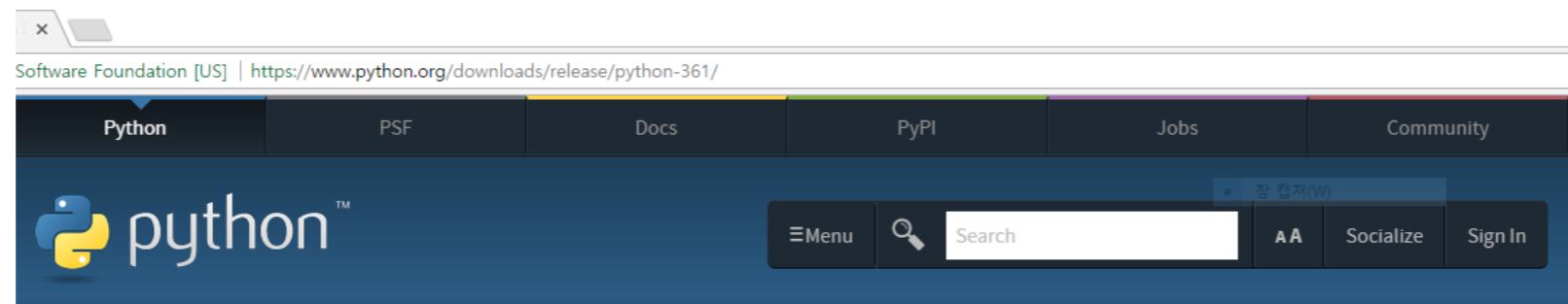
터미널에서 확인한 경로를
파이썬 설정파일
“python.pythonPath”에
입력해줍니다.



```
설정을 여기에 넣어서 기본 설정을 덮어씁니다.
{
  "workbench.iconTheme": null,
  "python.pythonPath": "/usr/local/bin/python3",
  "python.linting.enabledWithoutWorkspace": false
}
```

Python 설치

Window 환경



Python 3.6.1

www.python.org 접속후 Download 클릭한 화면

Release Date: 2017-03-21

Python 3.6.1 is the first maintenance release of Python 3.6. The Python 3.6 series contains many new features and optimizations. See the [What's New In Python 3.6](#) document for more information.

Major new features of the 3.6 series, compared to 3.5

Among the new major new features in Python 3.6 are:

- [PEP 468](#), Preserving Keyword Argument Order
- [PEP 487](#), Simpler customization of class creation
- [PEP 495](#), Local Time Disambiguation
- [PEP 498](#), Literal String Formatting
- [PEP 506](#), Adding A Secrets Module To The Standard Library
- [PEP 509](#), Add a private version to dict
- [PEP 515](#), Underscores in Numeric Literals
- [PEP 519](#), Adding a file system path protocol
- [PEP 520](#), Preserving Class Attribute Definition Order
- [PEP 523](#), Adding a frame evaluation API to CPython
- [PEP 524](#), Make os.urandom() blocking on Linux (during system startup)

Software Foundation [US] | <https://www.python.org/downloads/release/python-361/>

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		2d0fc9f3a5940707590e07f03ecb08b9	22540566	SIG
XZ compressed source tarball	Source release		692b4fc3a2ba0d54d1495d4ead5b0b5c	16872064	SIG
Mac OS X 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	6dd08e7027d2a1b3a2c02cfacbe611ef	27511848	SIG
Windows help file	Windows		69082441d723060fb333dcda8815105e	7986690	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64, not Itanium processors	708496ebbe9a730d19d5d288af216f1	6926999	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64, not Itanium processors	ad69fdacde90f2ce8286c279b11ca188	31392272	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64, not Itanium processors	a055a1a0e938e74c712a1c495261ae6c	1312520	SIG
Windows x86 embeddable zip file	Windows		8dff09a1b19b7a7dcb915765328484cf	6320763	SIG
Windows x86 executable installer	Windows		3773db079c173bd6d8a631896c72a88f	30453192	SIG
Windows x86 web-based installer	Windows		f58f019335f39e0b45a0ae68027888d7	1287064	SIG

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Help	Mac OS X	Developer's Guide	Python Conferences	Engineering	PyCon News
Python Brochure	Other Platforms	FAQ	Special Interest Groups	Government	
	License	Non-English Docs	Python Wiki	Scientific	Events
Contributing	Alternative Implementations	PEP Index	Python Logo	Software Development	Python Events

1 3.6.1 (64-bit) Setup



Install Python 3.6.1 (64-bit)

Select Install Now to install Python with default settings, or choose Customize to enable or disable features.

Install Now

C:\Users\choi\AppData\Local\Programs\Python\Python36

Includes IDLE, pip and documentation
Creates shortcuts and file associations

→ Customize installation

Choose location and features

Install launcher for all users (recommended)

Add Python 3.6 to PATH

Ca

1 3.6.1 (64-bit) Setup



Optional Features

Documentation

Installs the Python documentation file.

pip

Installs pip, which can download and install other Python package

tcl/tk and IDLE

Installs tkinter and the IDLE development environment.

Python test suite

Installs the standard library test suite.

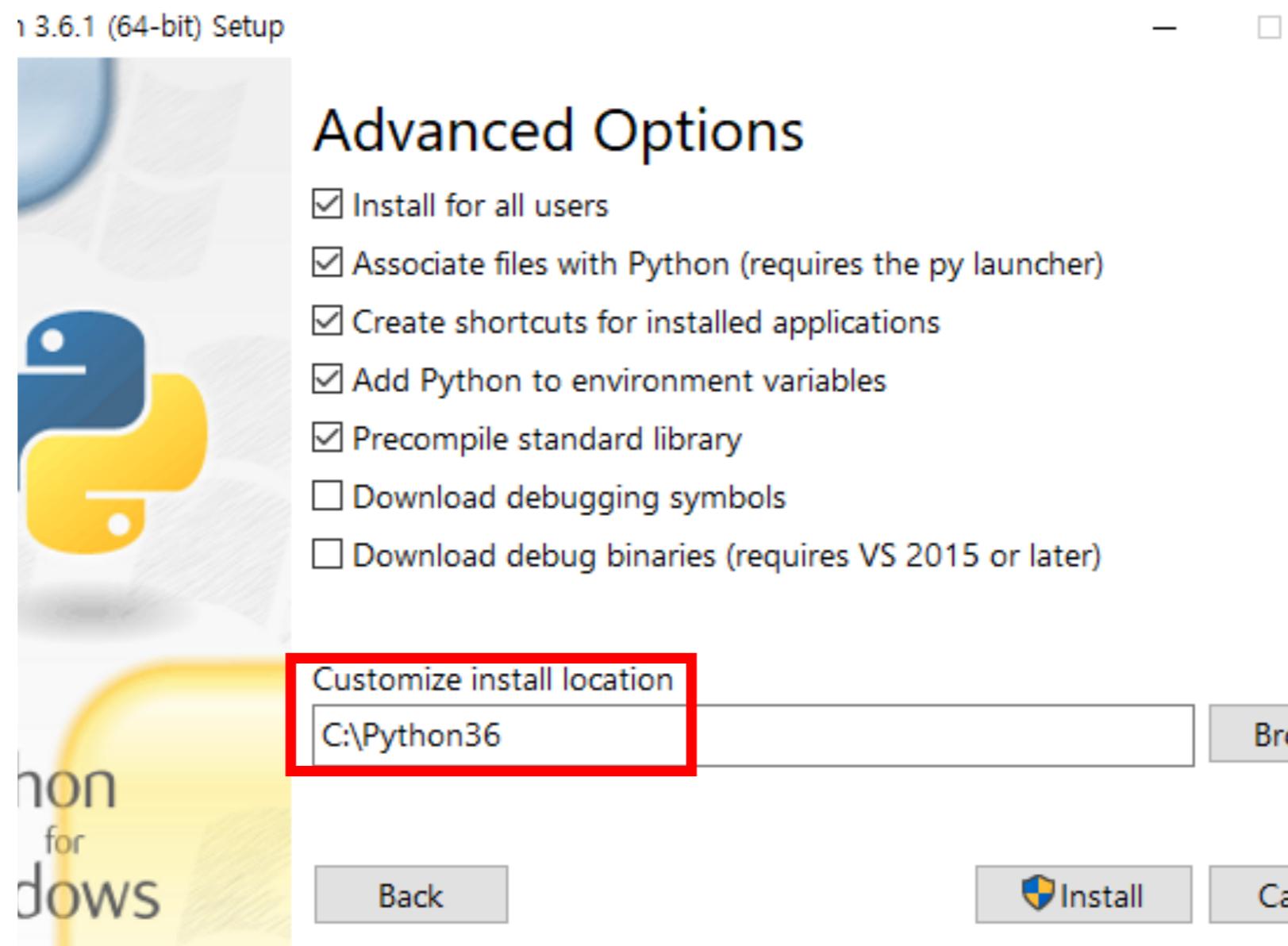
py launcher for all users (requires elevation)

Installs the global 'py' launcher to make it easier to start Python.

Back

Next

Ca



1 3.6.1 (64-bit) Setup

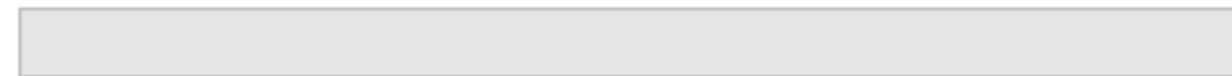


Setup Progress



Installing:

Python 3.6.1 Core Interpreter (64-bit)



Car

1 3.6.1 (64-bit) Setup



Setup was successful

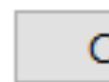
Special thanks to Mark Hammond, without whose years of freely shared Windows expertise, Python for Windows would still be Python for DOS.

New to Python? Start with the [online tutorial](#) and [documentation](#).

See [what's new](#) in this release.

Disable path length limit

Changes your machine configuration to allow programs, including Python, to bypass the 260 character "MAX_PATH" limitation.



Windows PowerShell

```
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights re
```

```
PS C:\Users\choi> python
Python 3.6.1 (v3.6.1:69c0db5, Mar 21 2017, 18:41:36) [M
Type "help", "copyright", "credits" or "license" for mo
>>>
```

**Python이 설치되었는지 확인하기 위해,
PowerShell 클릭 후 python을 입력합니다.
위와 같이 실행되면 설치 완료.**

확인되었으면

“exit()”

을 입력하여 실행한 python을 종료합니다

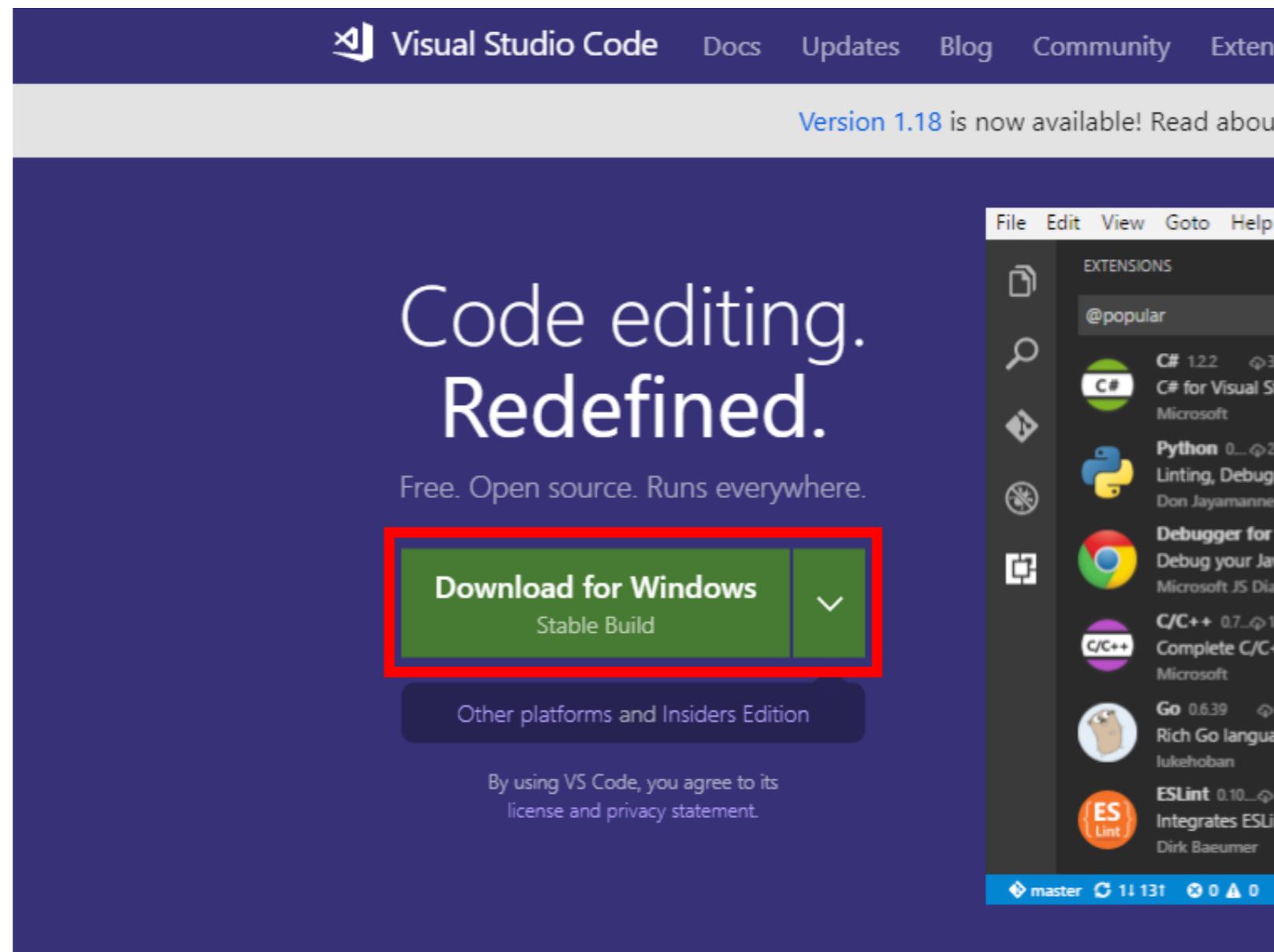
Windows PowerShell

```
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

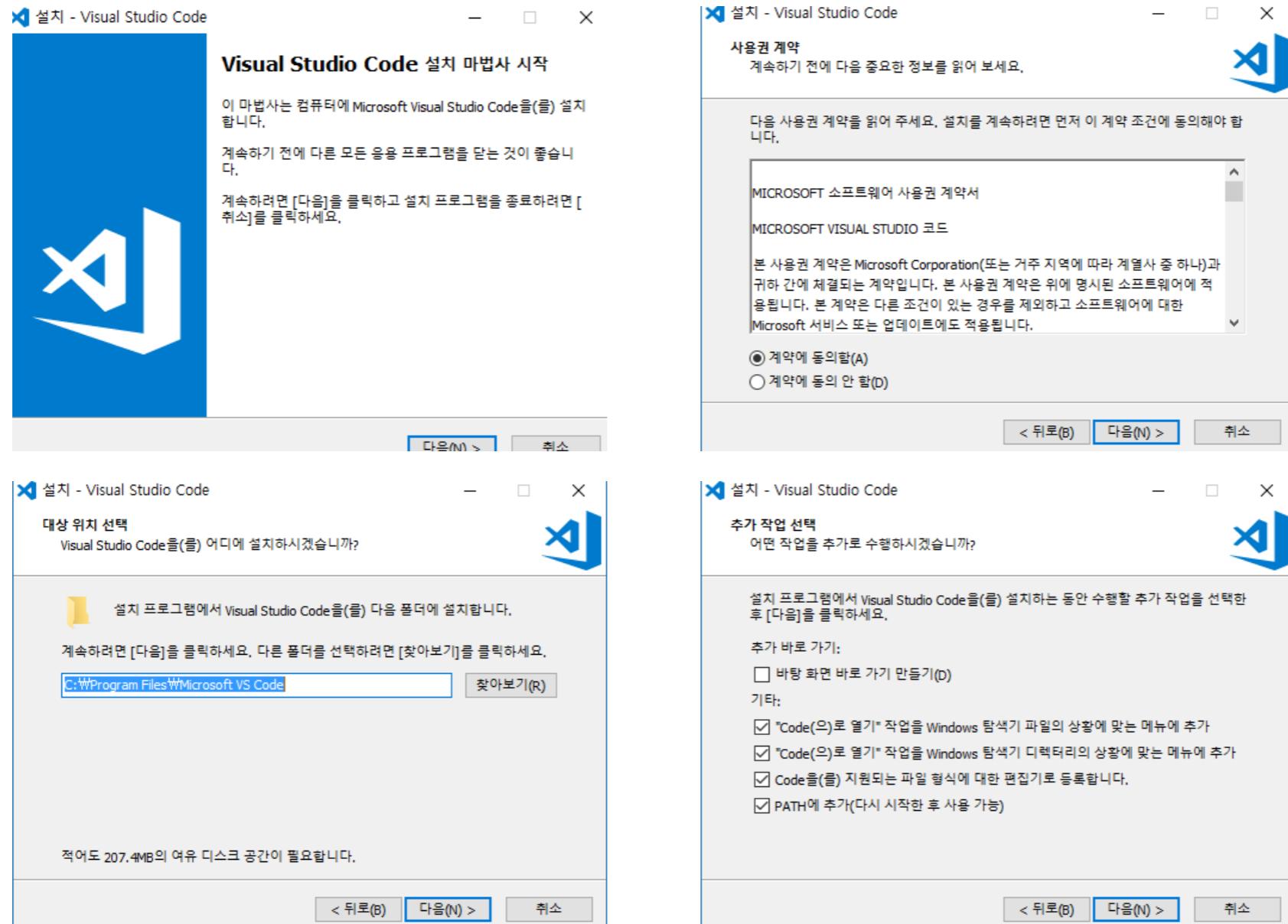
PS C:\Users\choi> python
Python 3.6.1 (v3.6.1:69c0db5, Mar 21 2017, 18:41:36) [MSC v.1900 32 bit (Intel)]
Type "help", "copyright", "credits" or "license" for more information.
>>> exit()
PS C:\Users\choi> pip --version
pip 9.0.1 from c:\python36\lib\site-packages (python 3.6)
PS C:\Users\choi>
```

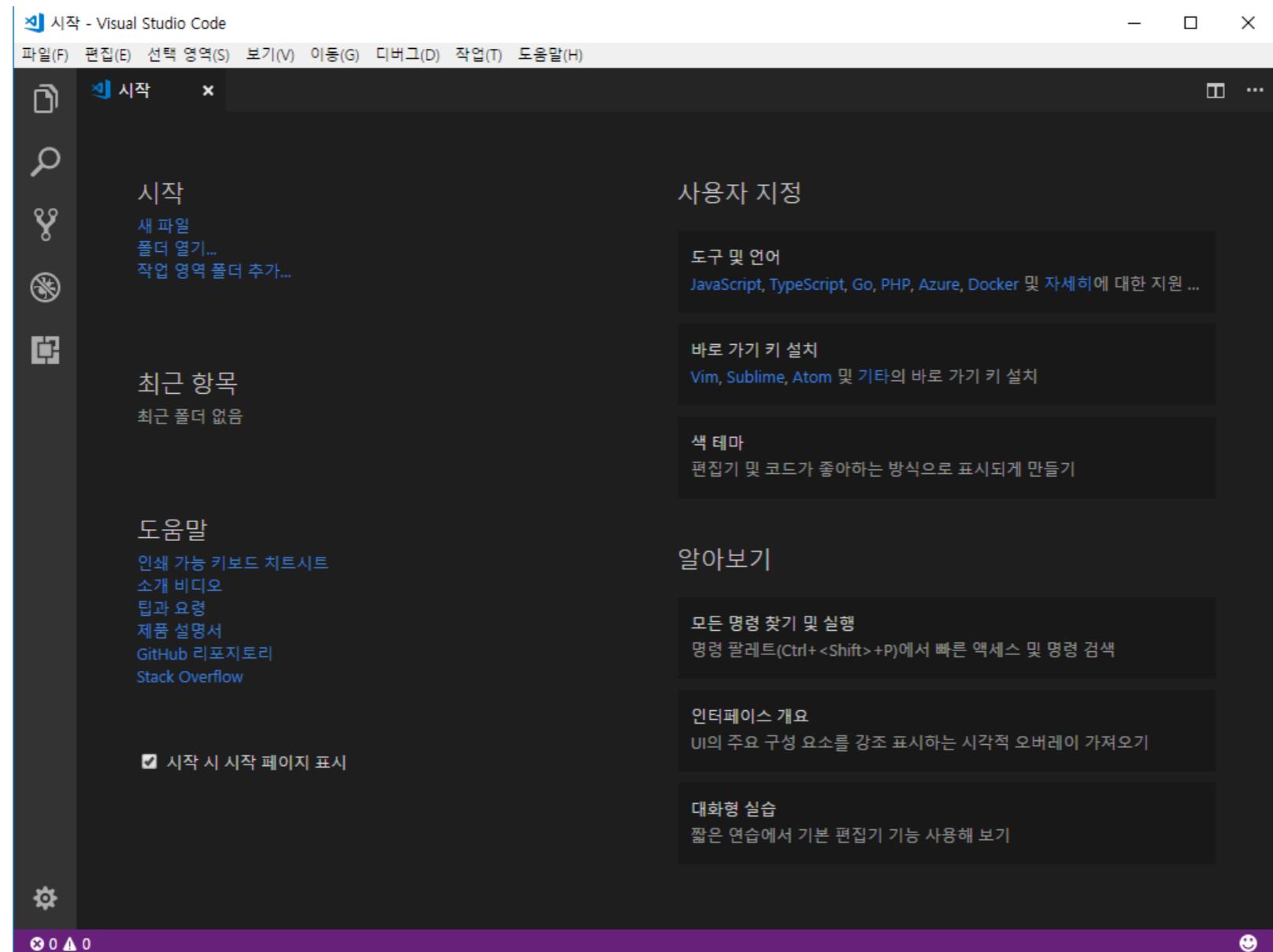
VS CODE 설치

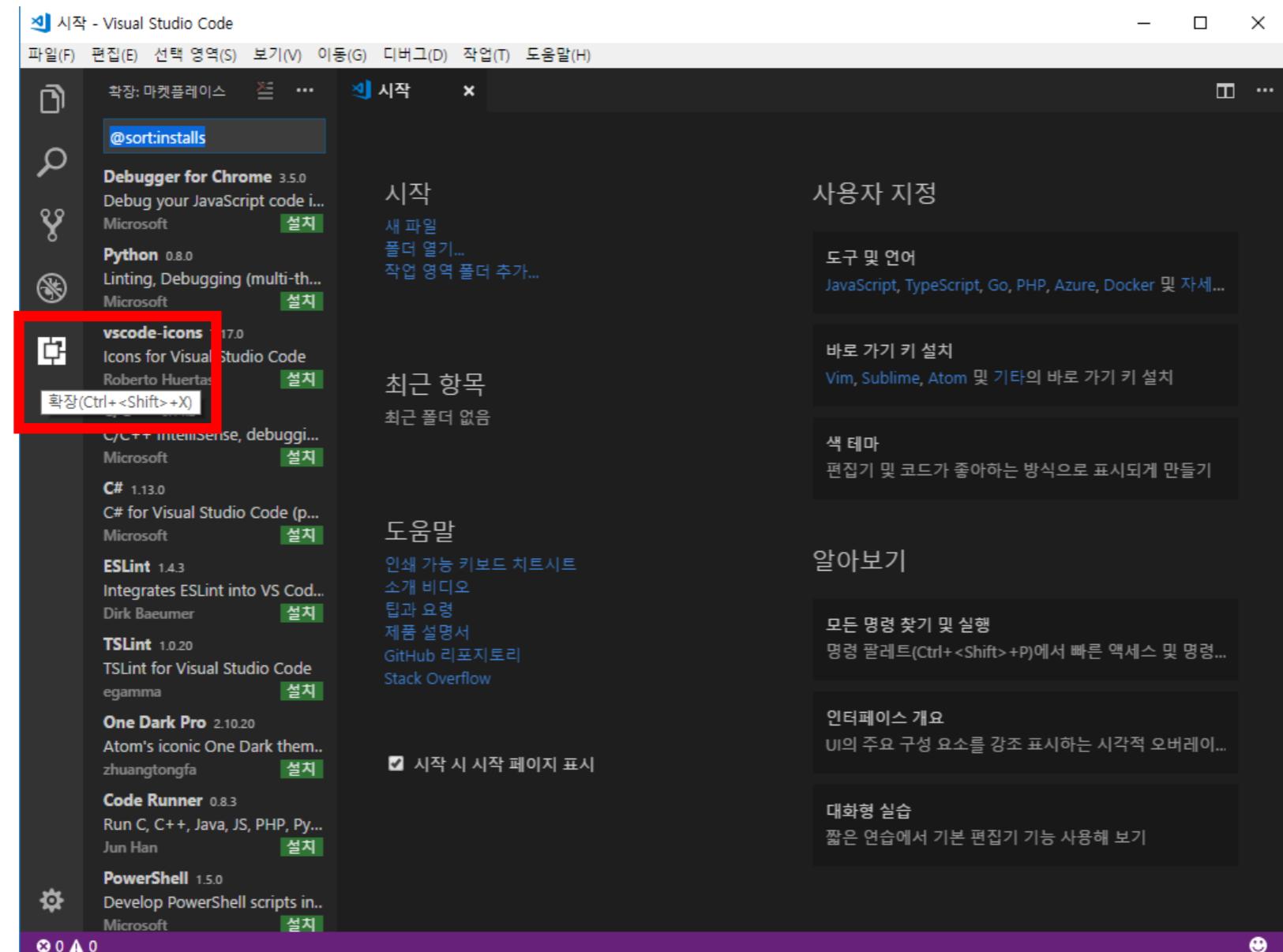
Window 환경

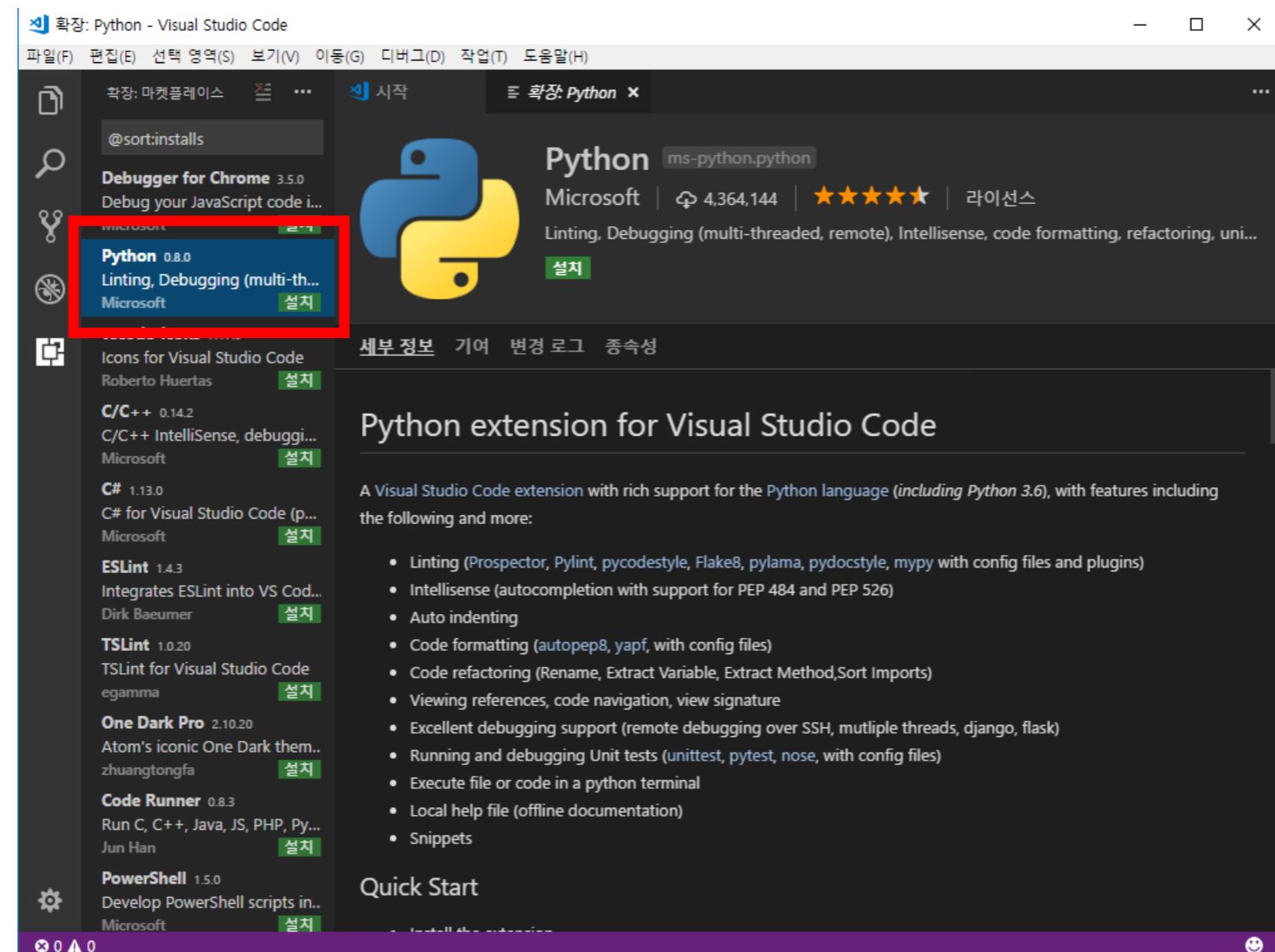


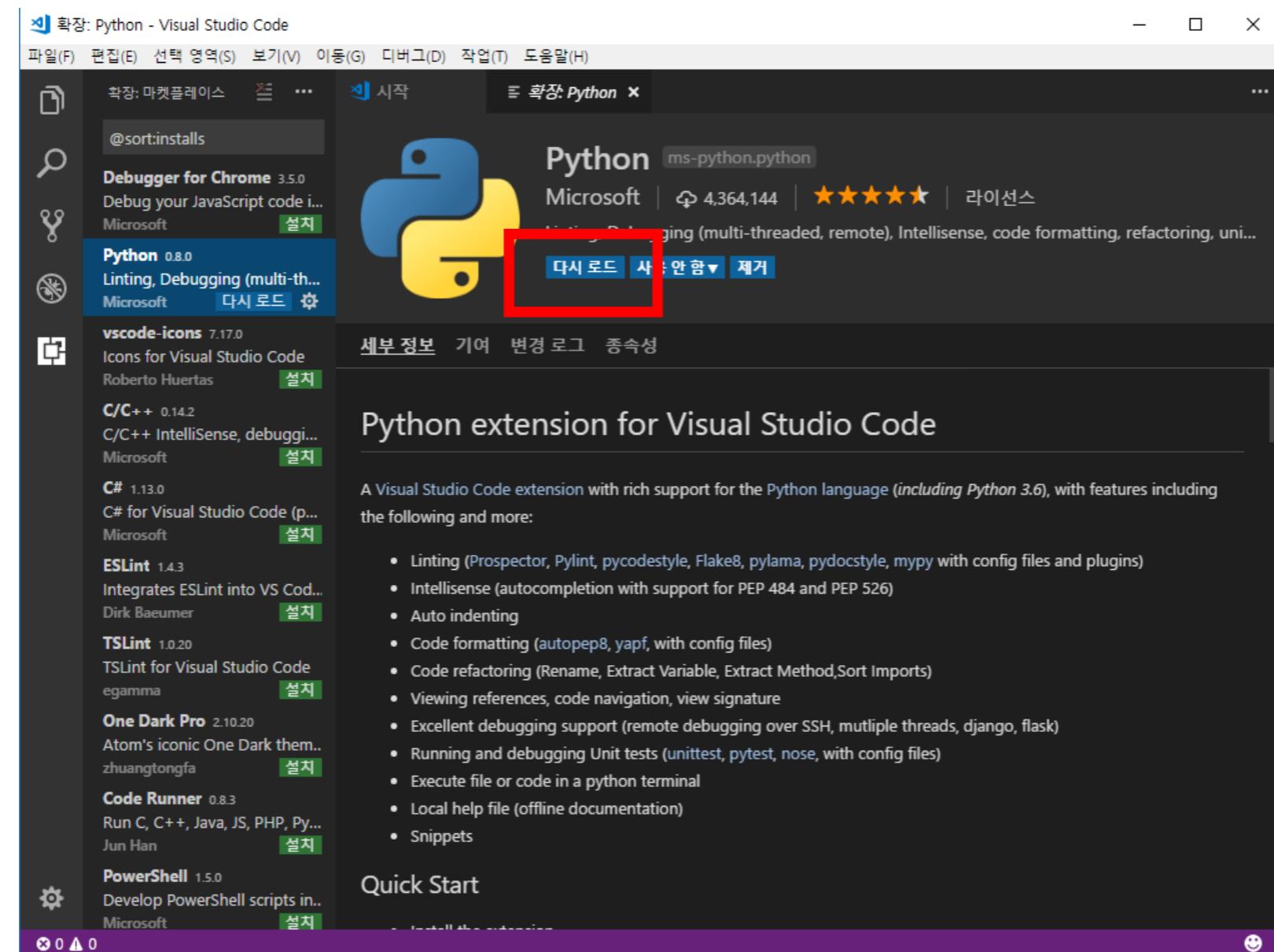
The screenshot shows the official Visual Studio Code website. At the top, there's a dark blue header with the Visual Studio Code logo and navigation links for Docs, Updates, Blog, Community, and Extensions. A banner at the top right announces "Version 1.18 is now available! Read about it". Below the banner, the main headline reads "Code editing. Redefined." followed by the tagline "Free. Open source. Runs everywhere." A large green button labeled "Download for Windows" (with "Stable Build" underneath) is prominently displayed, and this button is highlighted with a red rectangular box. Below the download button is a link to "Other platforms and Insiders Edition". A small note below the download area states: "By using VS Code, you agree to its license and privacy statement." To the right of the main content area, there's a sidebar titled "File Edit View Goto Help" and "EXTENSIONS". It lists several popular extensions: C# (version 1.2.2), Python (version 0.1.0), Debugger for Chrome, C/C++ (version 0.7.0), Go (version 0.6.39), and ESLint. At the bottom of the sidebar, there's a footer bar with icons for GitHub, npm, and other metrics.









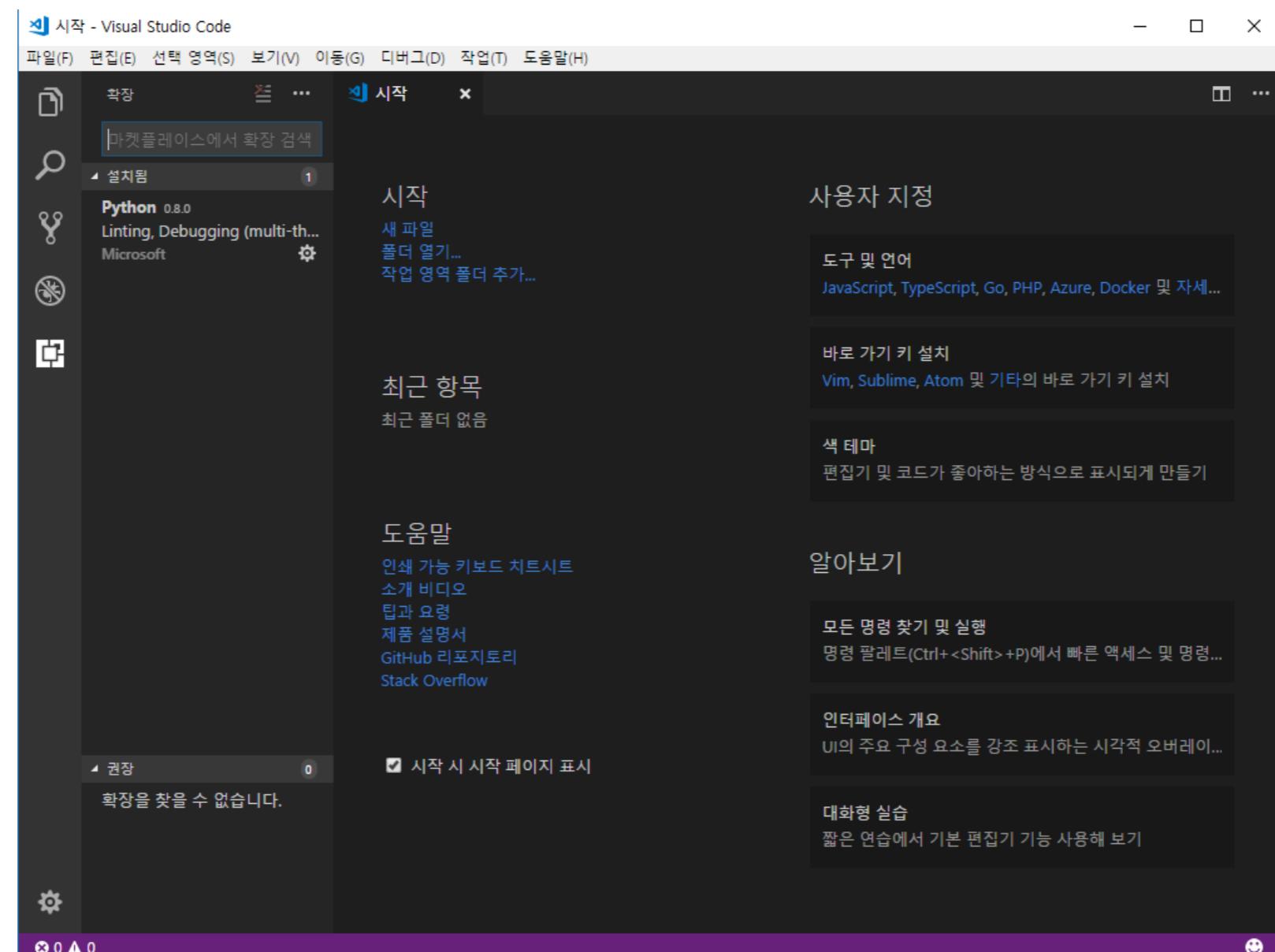


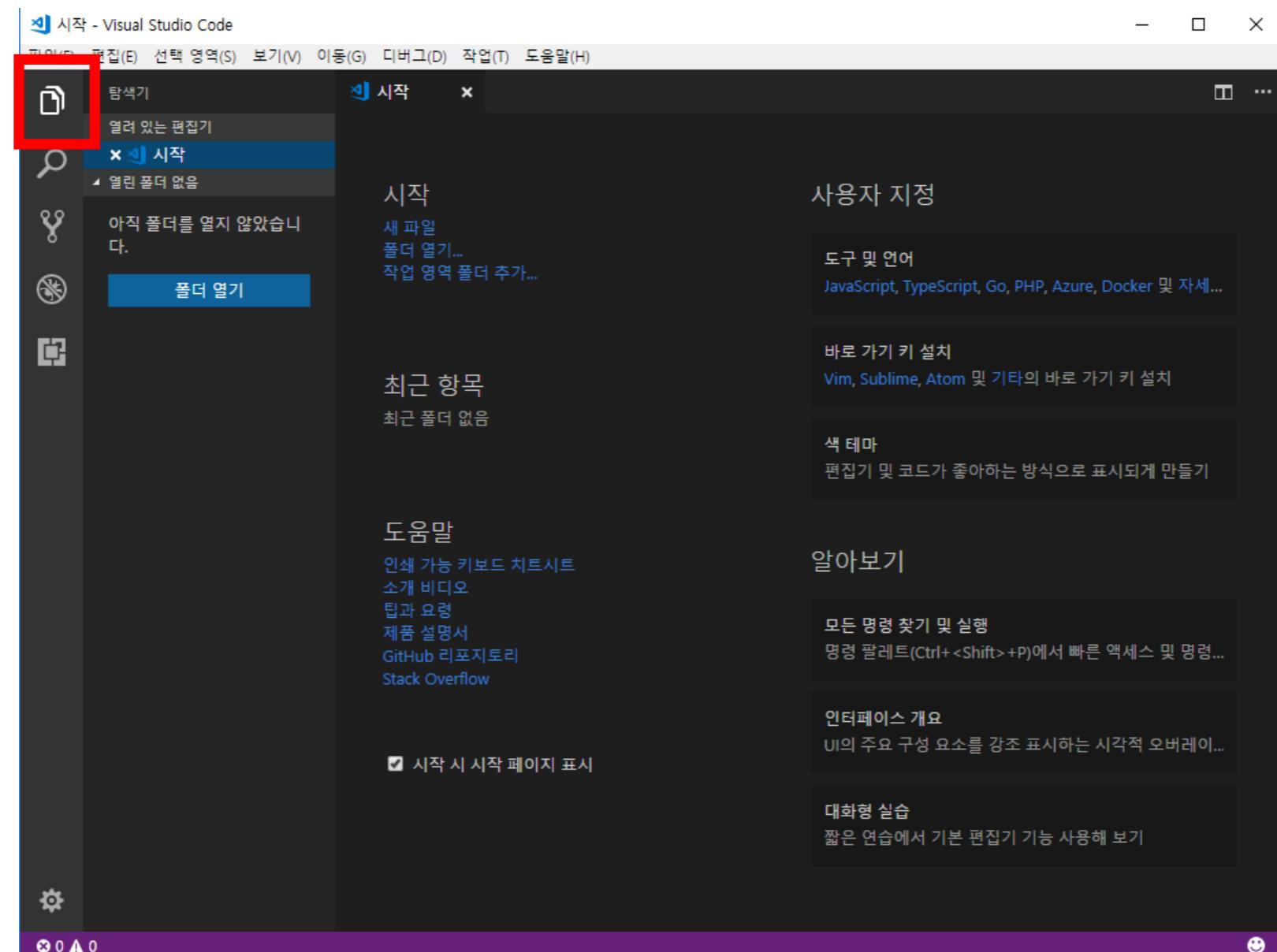
Python extension for Visual Studio Code

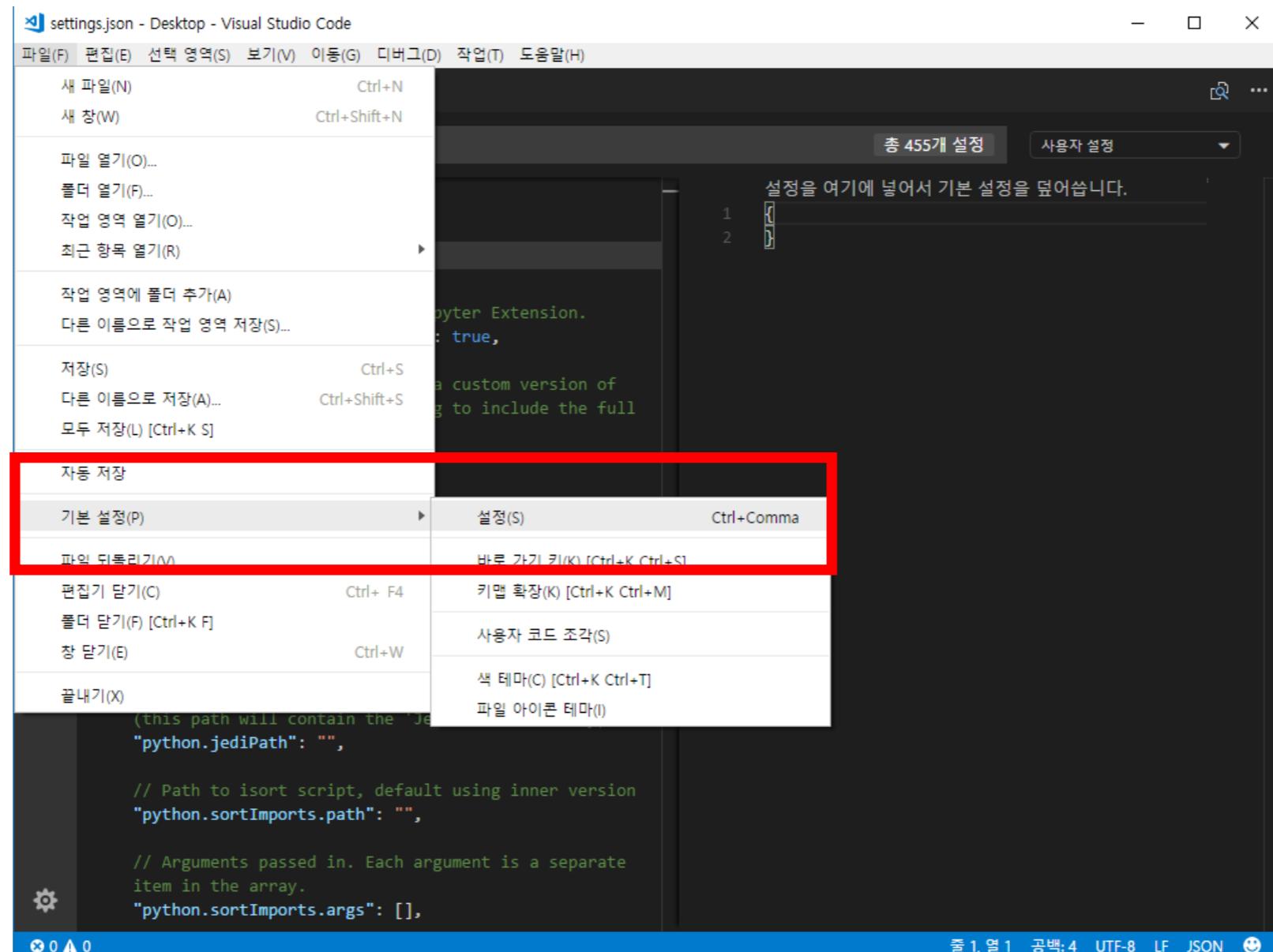
A Visual Studio Code extension with rich support for the Python language (*including Python 3.6*), with features including the following and more:

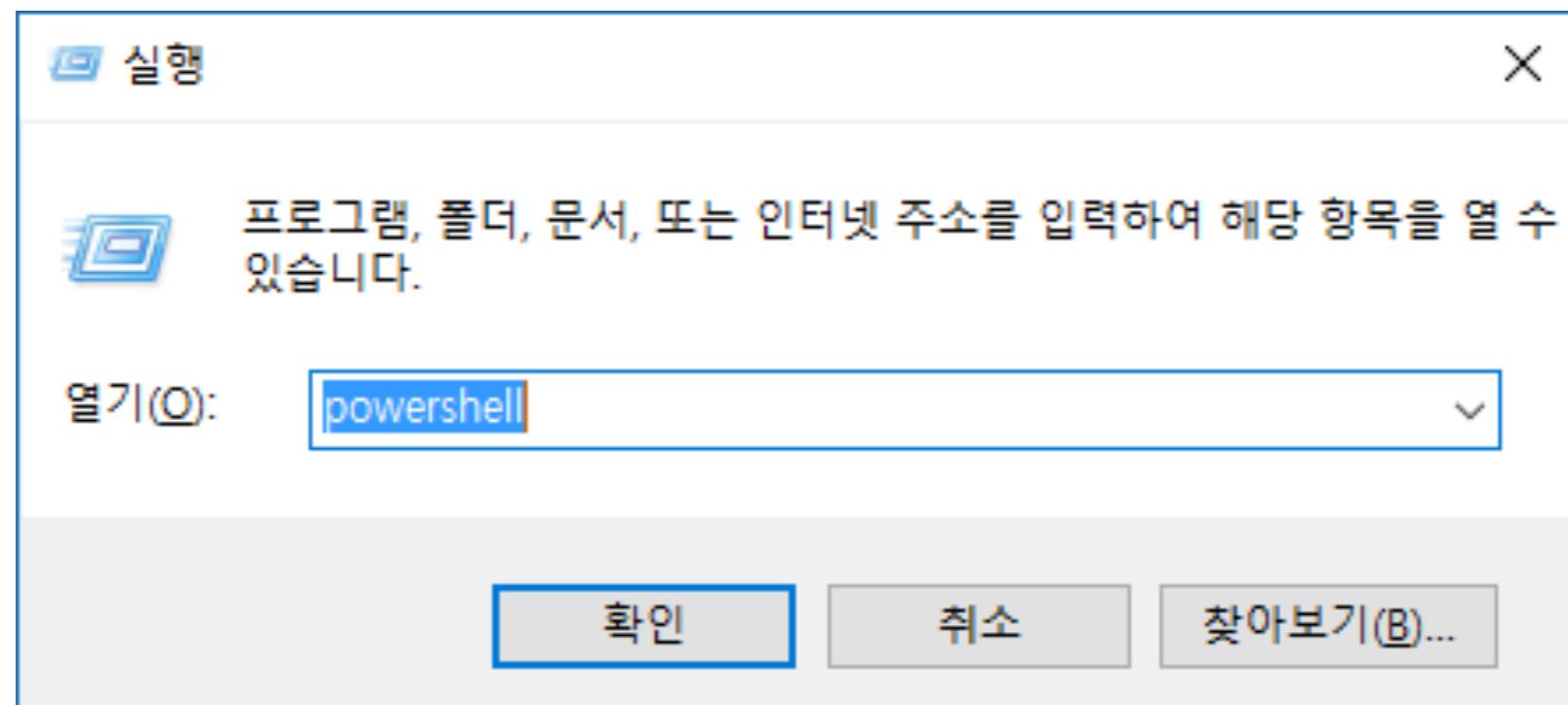
- Linting (Prospector, Pylint, pycodestyle, Flake8, pylama, pydocstyle, mypy with config files and plugins)
- Intellisense (autocomplete with support for PEP 484 and PEP 526)
- Auto indenting
- Code formatting (autopep8, yapf, with config files)
- Code refactoring (Rename, Extract Variable, Extract Method, Sort Imports)
- Viewing references, code navigation, view signature
- Excellent debugging support (remote debugging over SSH, multiple threads, django, flask)
- Running and debugging Unit tests (unittest, pytest, nose, with config files)
- Execute file or code in a python terminal
- Local help file (offline documentation)
- Snippets

Quick Start









```
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

[Users\choi] get-command python

Name      : python
Version   : 3.6.115...
Source    : C:\Python36\python.exe

[Users\choi]>
```

js.json - Desktop - Visual Studio Code

!|(E) 선택 영역(S) 보기(V) 이동(G) 디버그(D) 작업(T) 도움말(H)

사용자 설정 ●

설정 검색 총 455가 설정 사용자 설정

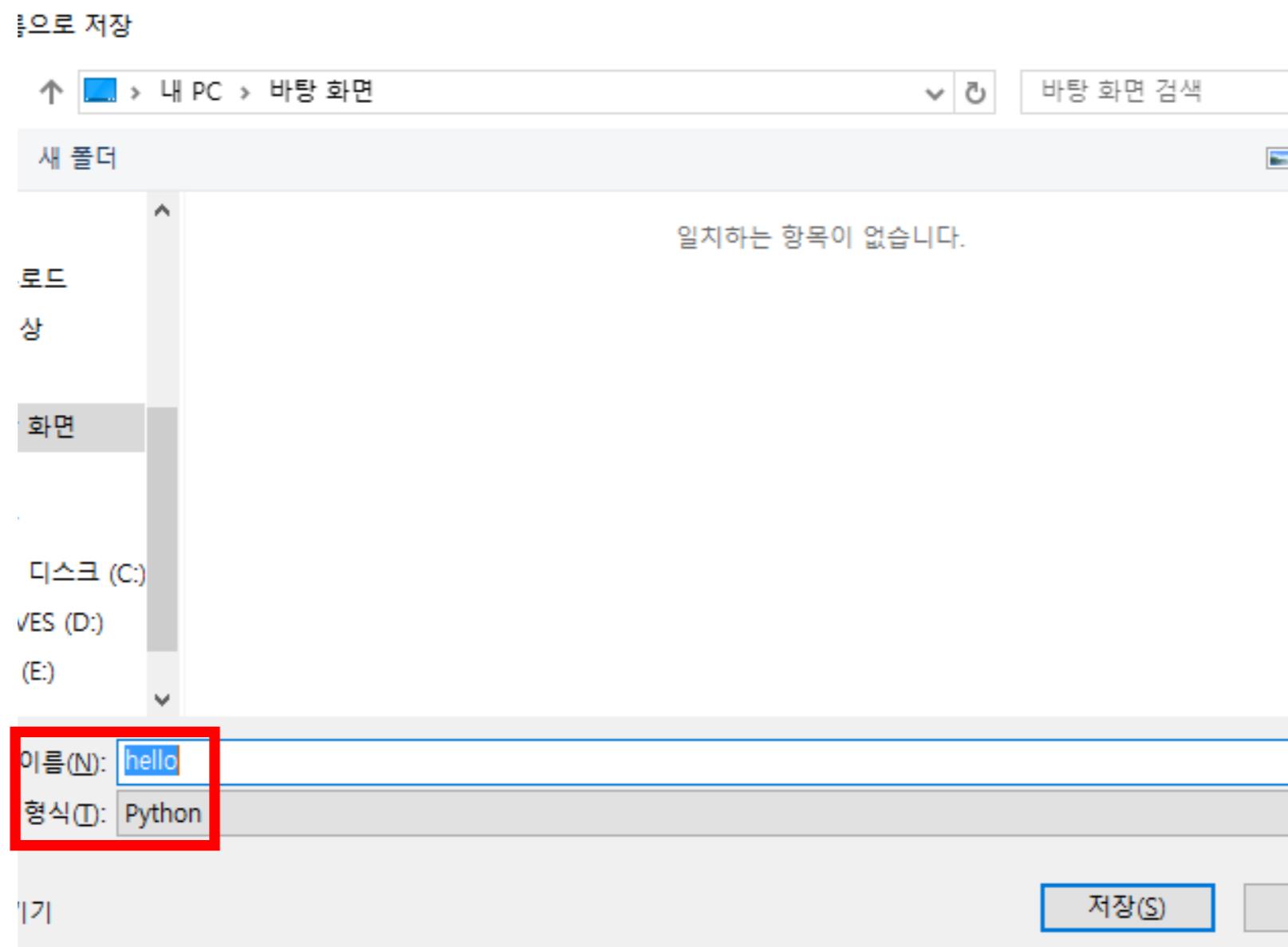
▶ 기본 구성 재정의 (6)

▶ Git (13)

◀ Python Configuration (81)

```
// Display prompt to install Jupyter Extension.  
"python.promptToInstallJupyter": true,  
  
// Path to Python, you can use a custom version of Python by  
// modifying this setting to include the full path.  
"python.pythonPath": "python",  
  
// Path to folder with a list of Virtual Environments (e.g.  
// ~/pyenv, ~/Envs, ~/virtualenvs).  
"python.venvPath": "",  
  
// Absolute path to a file containing environment variable  
// definitions.  
"python.envFile": "${workspaceRoot}/.env",  
  
// Path to directory containing the Jedi library (this path will  
// contain the 'Jedi' sub directory).  
"python.jediPath": "",  
  
// Path to isort script, default using inner version  
"python.sortImports.path": "",  
  
// Arguments passed in. Each argument is a separate item in the  
// array.  
"python.sortImports.args": [],
```

줄 1, 열 1 공백: 4 UTF-8 LF



- Desktop - Visual Studio Code

|(E) 선택 영역(S) 보기(V) 이동(G) 디버그(D) 작업(T) 도움말(H)

hello.py x

```
1 print("hello world")
```

S C:\Users\choi\Desktop> python hello.py
ello world
S C:\Users\choi\Desktop>

Python 3.6 (64-bit) 줄 1, 열 1 공백: 4 UTF-8 CRLF P

