

# 개발환경

ECE20010

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가을 학기 데이터 구조

# Mingw-w64 설치하기

- <https://sourceforge.net/projects/mingw-w64/> 에 접속합니다.

클릭

The screenshot shows the SourceForge project page for MinGW-w64. The page has a dark header with the SourceForge logo and navigation links. Below the header, there's a blue banner for 'audience network by facebook'. The main content area has a dark background with the project title 'MinGW-w64 - for 32 and 64 bit Windows' and a subtitle 'A complete runtime environment for gcc'. It also shows '105 Reviews', 'Downloads: 84,499 This Week', and 'Last Update: 3 days ago'. A red arrow points to a green 'Download' button. Below the button are 'Get Updates' and 'Share This' buttons. The 'Summary' tab is selected, showing a description of the project and a list of features. The 'Project Activity' section at the bottom shows a recent comment by 'dick freebird'.

Home / Browse / Development / Compilers / MinGW-w64 - for 32 and 64 bit Windows

## MinGW-w64 - for 32 and 64 bit Windows

A complete runtime environment for gcc  
Brought to you by: [jon\\_y](#), [ktietz70](#), [nightstrike](#)

★★★★★ 105 Reviews Downloads: 84,499 This Week Last Update: 3 days ago

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Windows

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The mingw-w64 project is a complete runtime environment for gcc to support binaries native to Windows 64-bit and 32-bit operating systems.

### Features

- Compiler toolchain hosts natively
- Supports Wide-Character Startup (-municode)
- Supports Multilib toolchains
- Supports Native TLS Callbacks
- Supports 32-bit and 64-bit Windows i386/x64
- Supports bleeding edge gcc/binutils

### Project Activity

[dick freebird](#) posted a comment on [discussion Help](#) 1 day ago

Get next way down the package install list in the win build. CHL and it just happens with some packages download failed. Installer will not resume, demands an empty file.

Recommended Projects

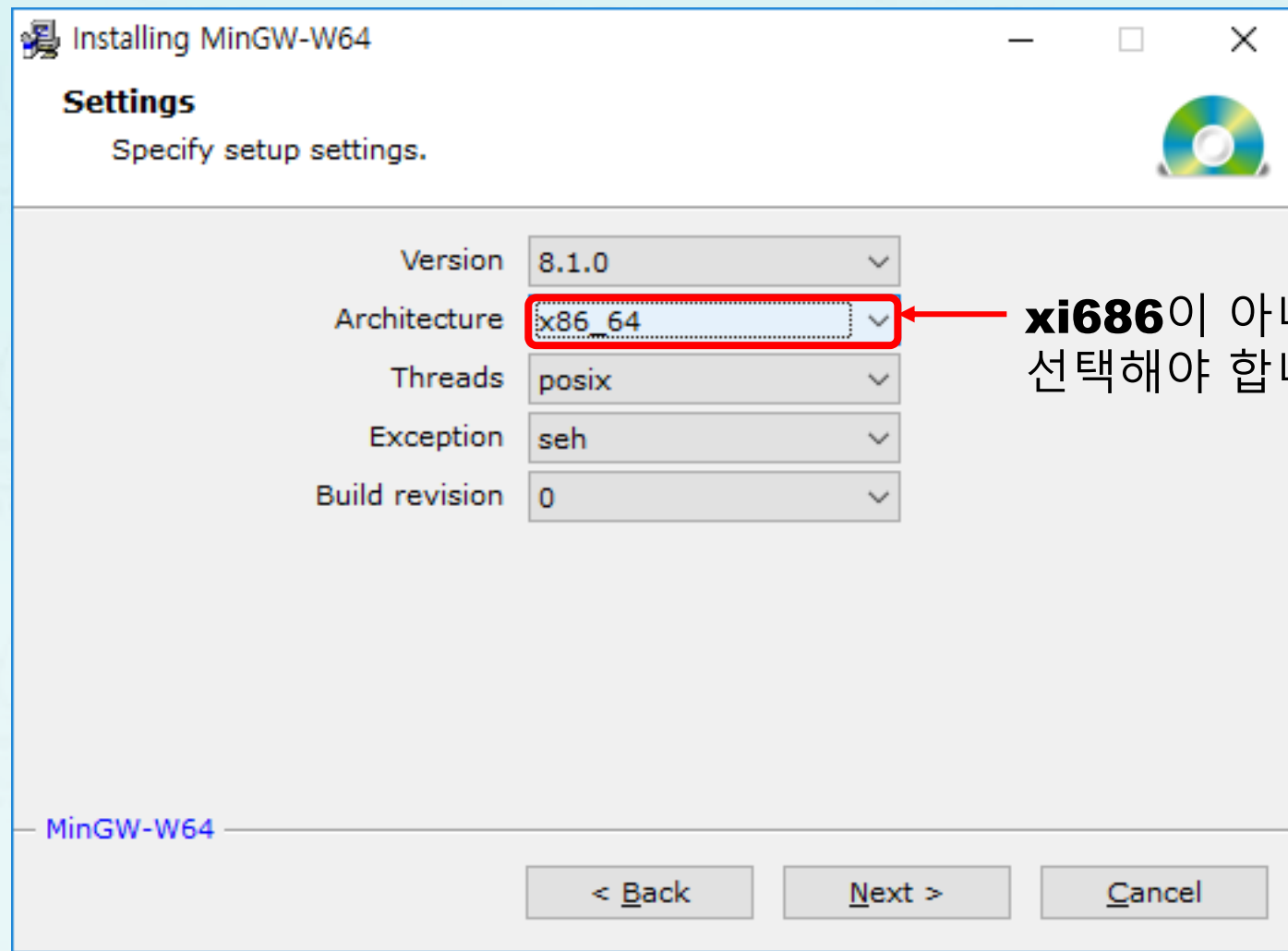
- MinGW - Minimalist GNU for Windows  
A native Windows port of the

# Mingw-w64 설치하기

- Mingw-w64-install.exe 파일을 실행합니다.

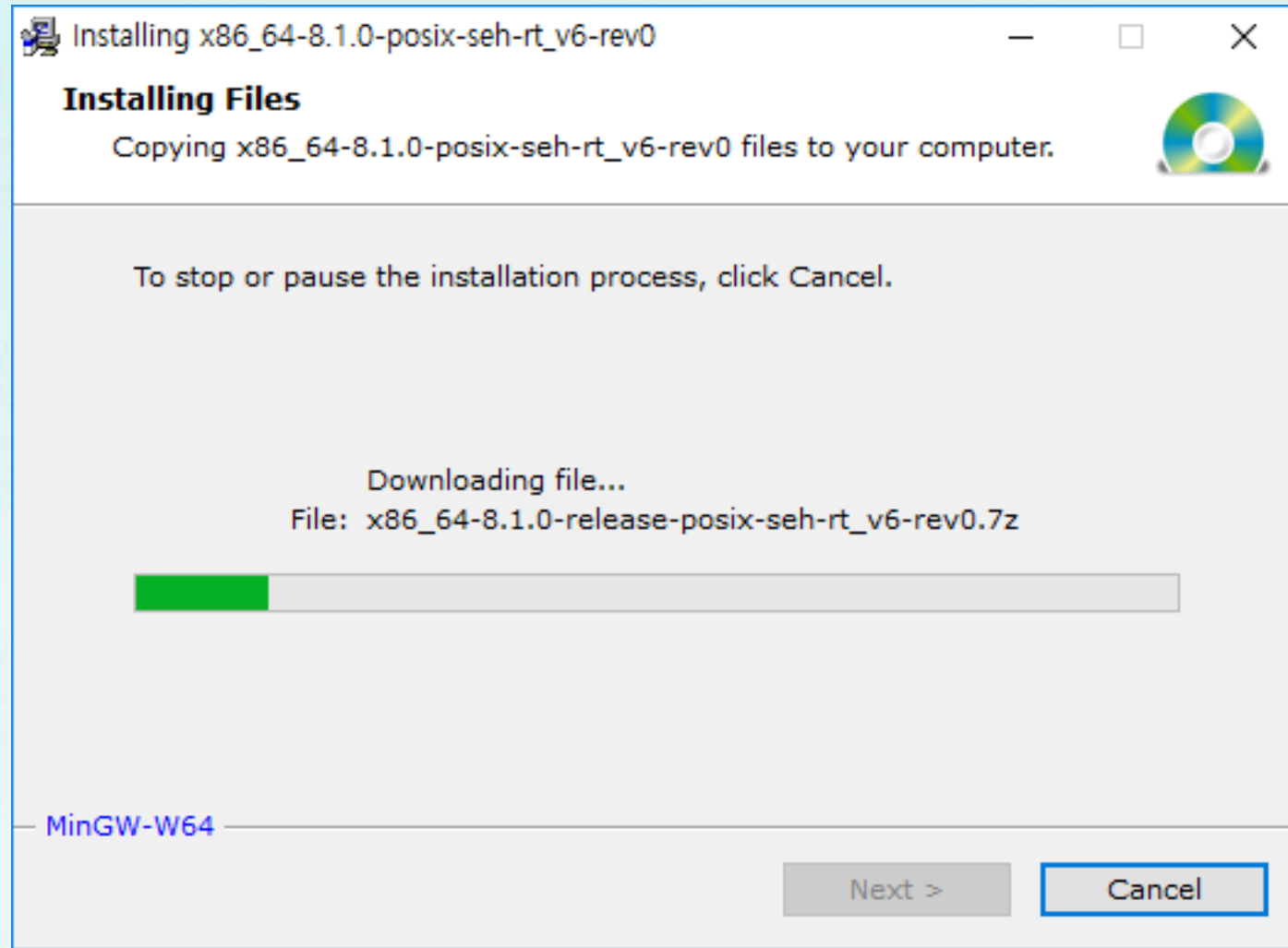


# Mingw-w64 설치하기



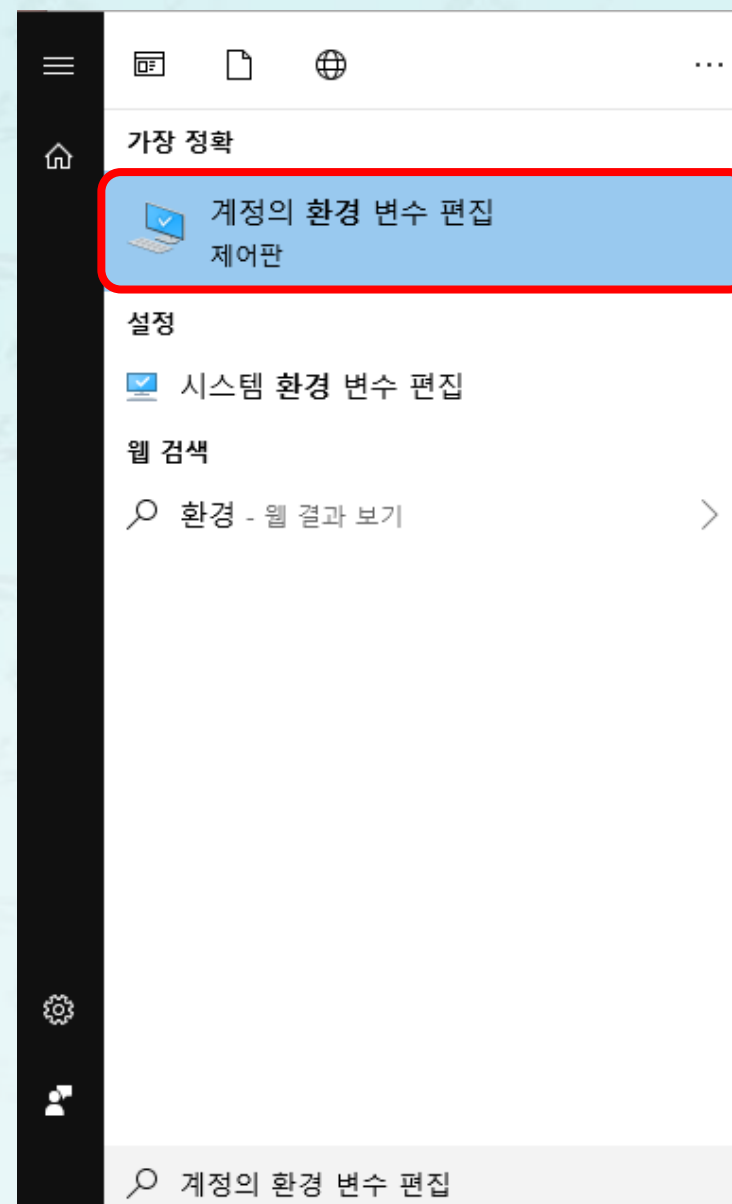
**xi686**이 아니라 **x86\_64**를  
선택해야 합니다.

# Mingw-w64 설치하기



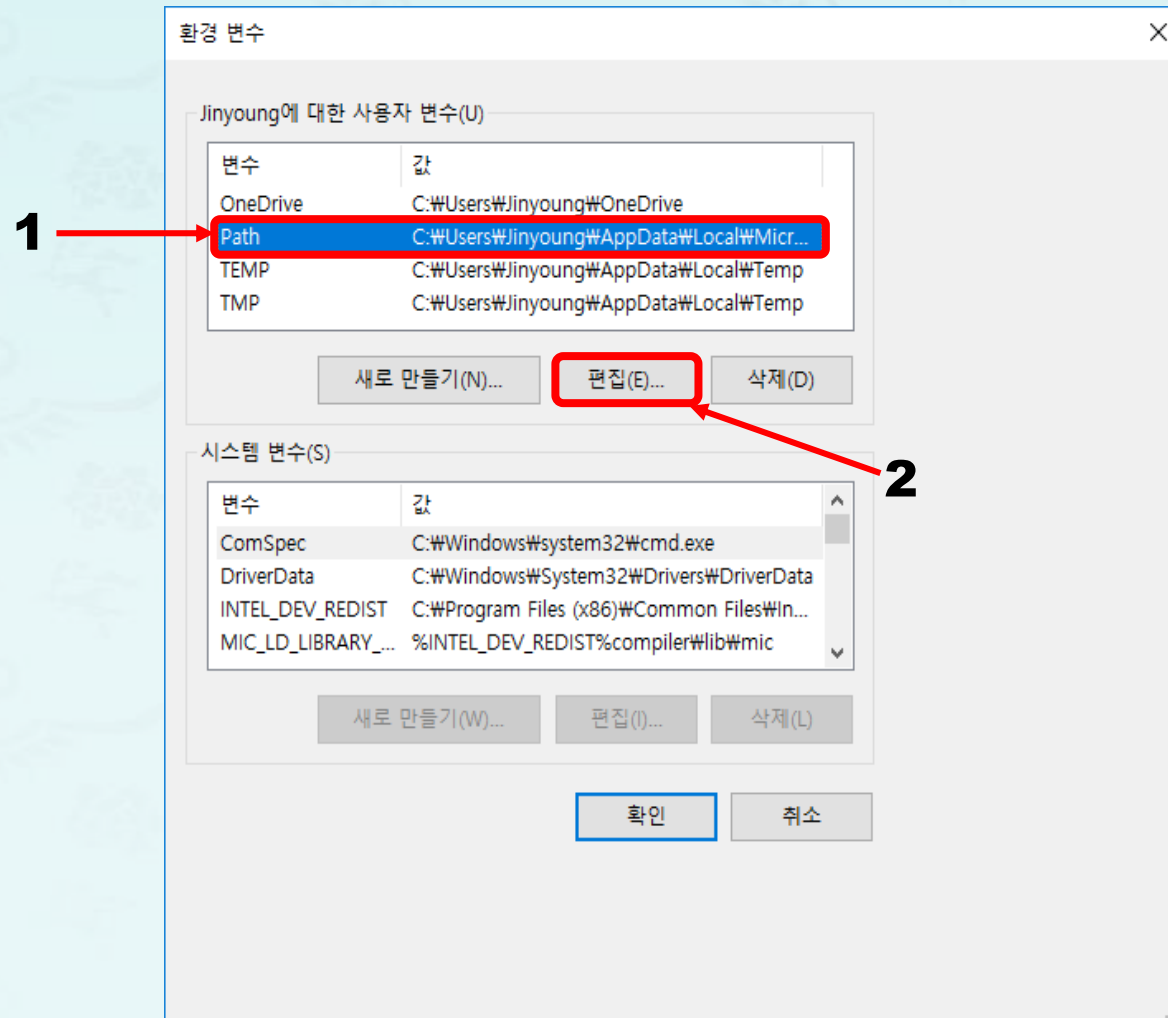
# Mingw-w64 설치하기

- 환경변수를 설정해주기 위해 윈도우 검색에서 “환경 변수”를 입력하고 계정의 환경 변수 편집으로 들어갑니다.



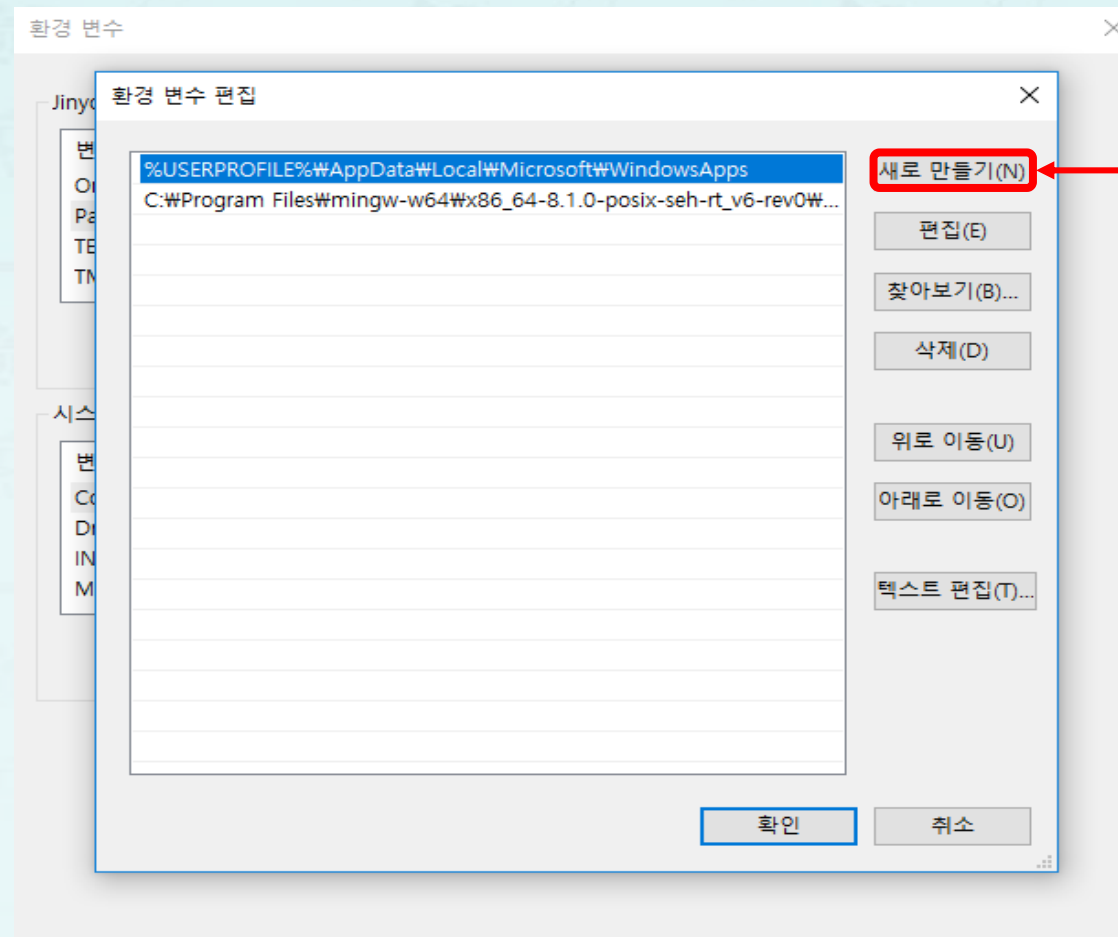
# Mingw-w64 설치하기

- 윈도우 10기준 Path를 선택한 후 편집을 클릭합니다.



# Mingw-w64 설치하기

- 새로 만들기를 클릭 후 path를 적어줍니다.
- 기본적으로 path는 C:\Program Files\mingw-w64\x86\_64-8.1.0-posix-seh-rt\_v6-rev0\mingw64\bin입니다.

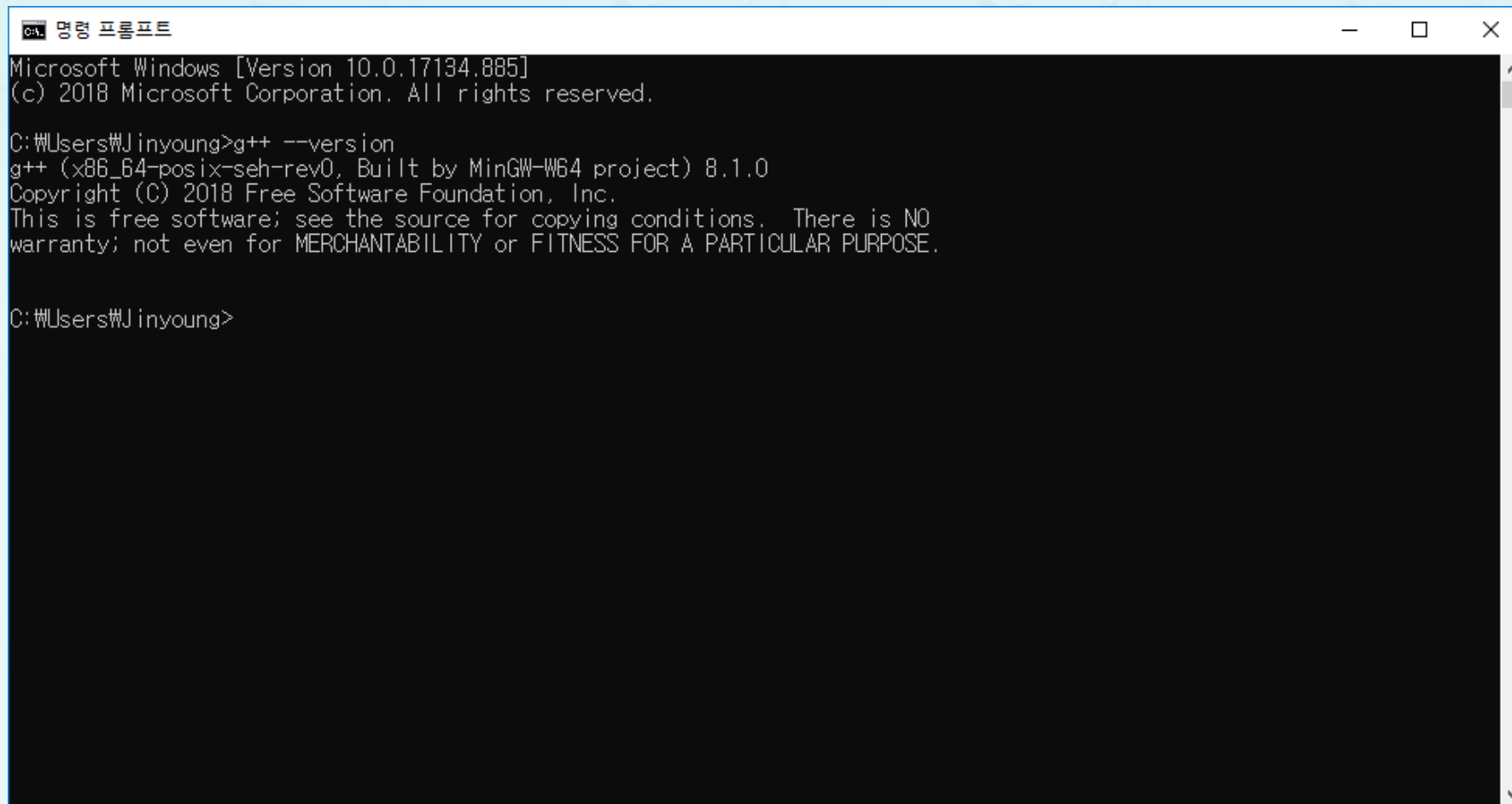


클릭 후 **path** 입력



# Mingw-w64 설치하기

- 윈도우 검색창에 “cmd”를 입력하여 명령 프롬프트를 실행합니다.
- 프롬프트 창에 “g++ --version”을 입력하여 다음과 같이 화면이 나온다면 path추가가 정상적으로 된 것 입니다.

A screenshot of a Windows Command Prompt window titled "명령 프롬프트". The window shows the output of the command "g++ --version" entered at the prompt "C:\Users\Jinyoung>". The output text is: "g++ (x86\_64-posix-seh-rev0, Built by MinGW-W64 project) 8.1.0", "Copyright (C) 2018 Free Software Foundation, Inc.", "This is free software; see the source for copying conditions. There is NO", "warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.", followed by a new prompt "C:\Users\Jinyoung>".

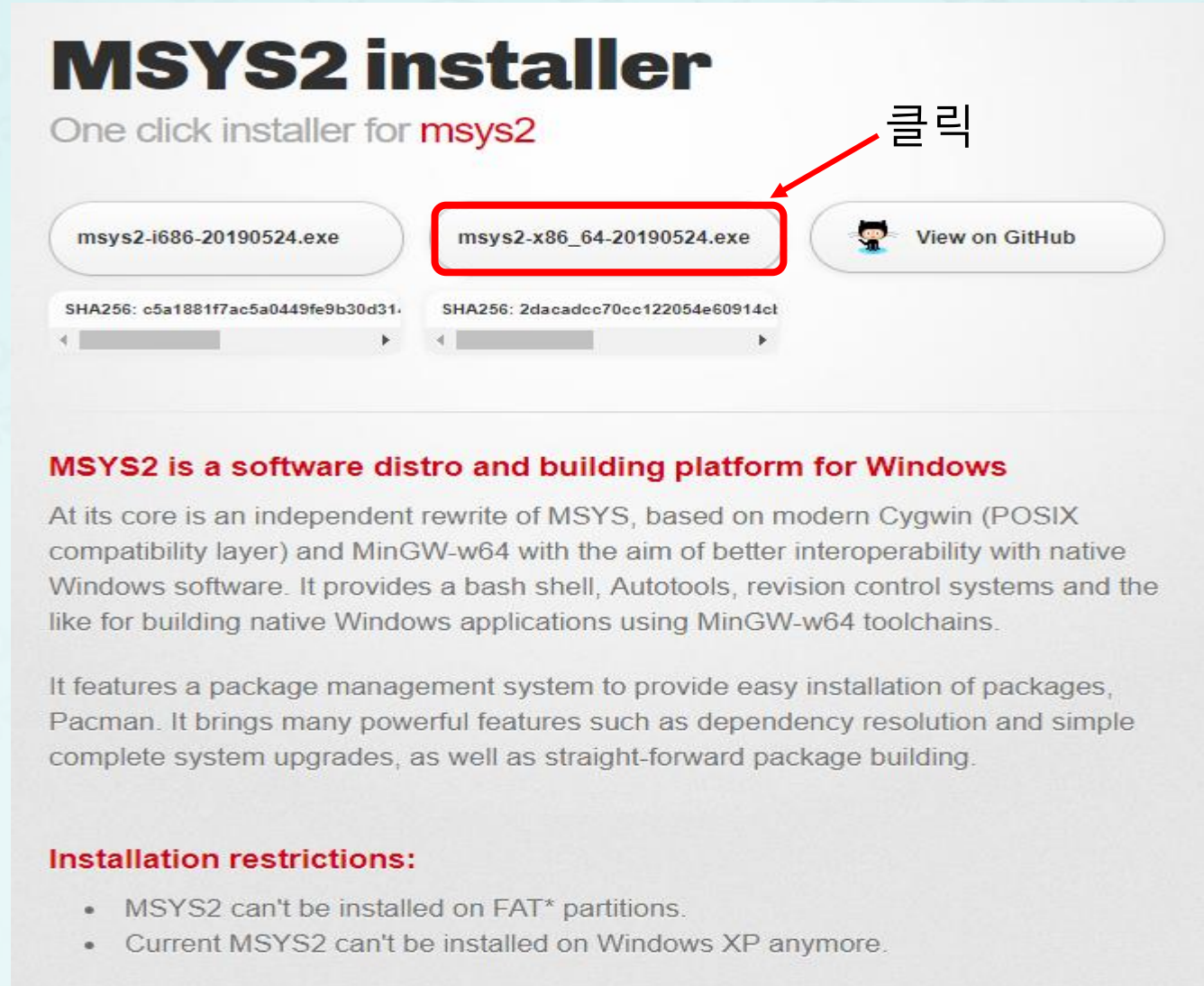
```
명령 프롬프트
Microsoft Windows [Version 10.0.17134.885]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Jinyoung>g++ --version
g++ (x86_64-posix-seh-rev0, Built by MinGW-W64 project) 8.1.0
Copyright (C) 2018 Free Software Foundation, Inc.
This is free software; see the source for copying conditions. There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

C:\Users\Jinyoung>
```

# MSYS2 설치하기

- <http://www.msys2.org/>로 접속합니다.



**MSYS2 installer**  
One click installer for **msys2**

[msys2-i686-20190524.exe](#) [msys2-x86\\_64-20190524.exe](#) [View on GitHub](#)

SHA256: c5a1881f7ac5a0449fe9b30d31. SHA256: 2dacadcc70cc122054e60914ct

**MSYS2 is a software distro and building platform for Windows**

At its core is an independent rewrite of MSYS, based on modern Cygwin (POSIX compatibility layer) and MinGW-w64 with the aim of better interoperability with native Windows software. It provides a bash shell, Autotools, revision control systems and the like for building native Windows applications using MinGW-w64 toolchains.

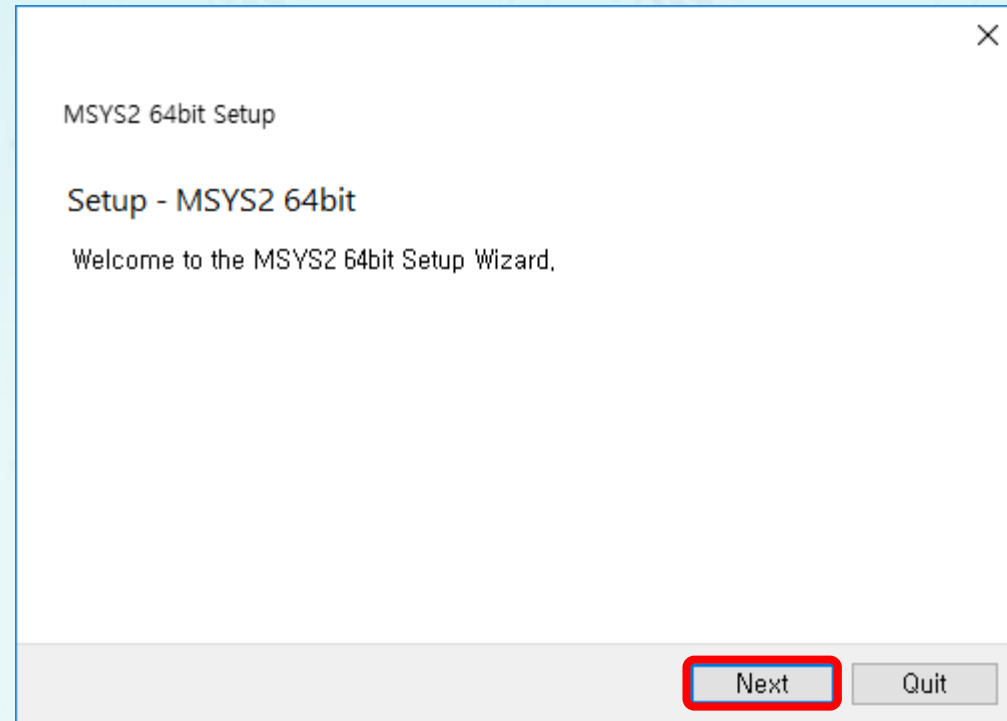
It features a package management system to provide easy installation of packages, Pacman. It brings many powerful features such as dependency resolution and simple complete system upgrades, as well as straight-forward package building.

**Installation restrictions:**

- MSYS2 can't be installed on FAT\* partitions.
- Current MSYS2 can't be installed on Windows XP anymore.

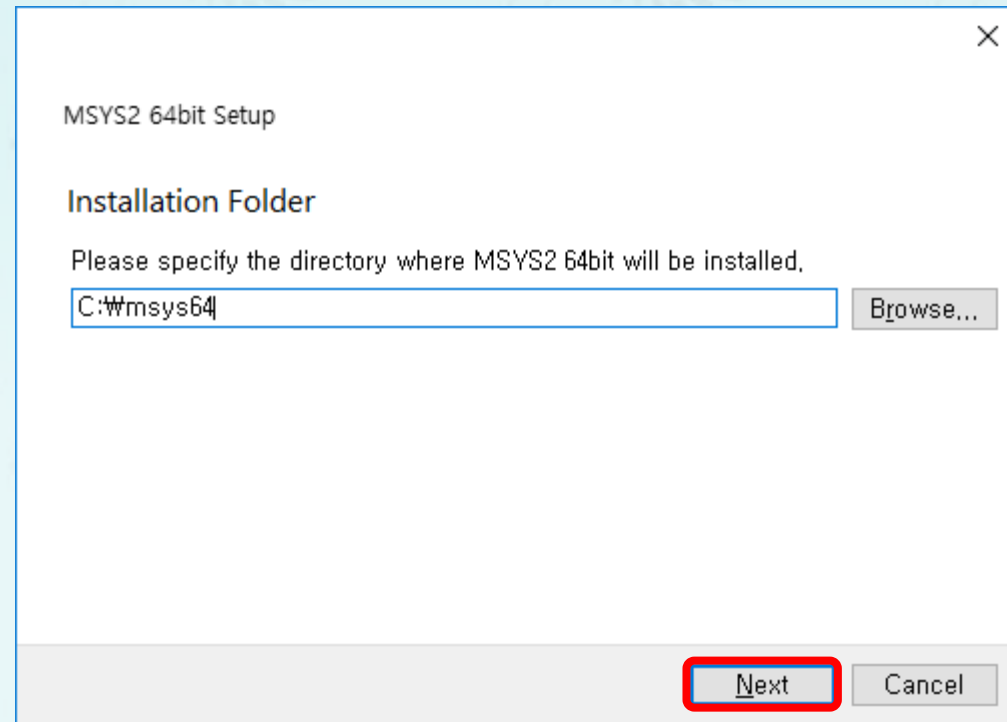
# MSYS2 설치하기

- `msys2-x86_64-20190524.exe`를 실행합니다.



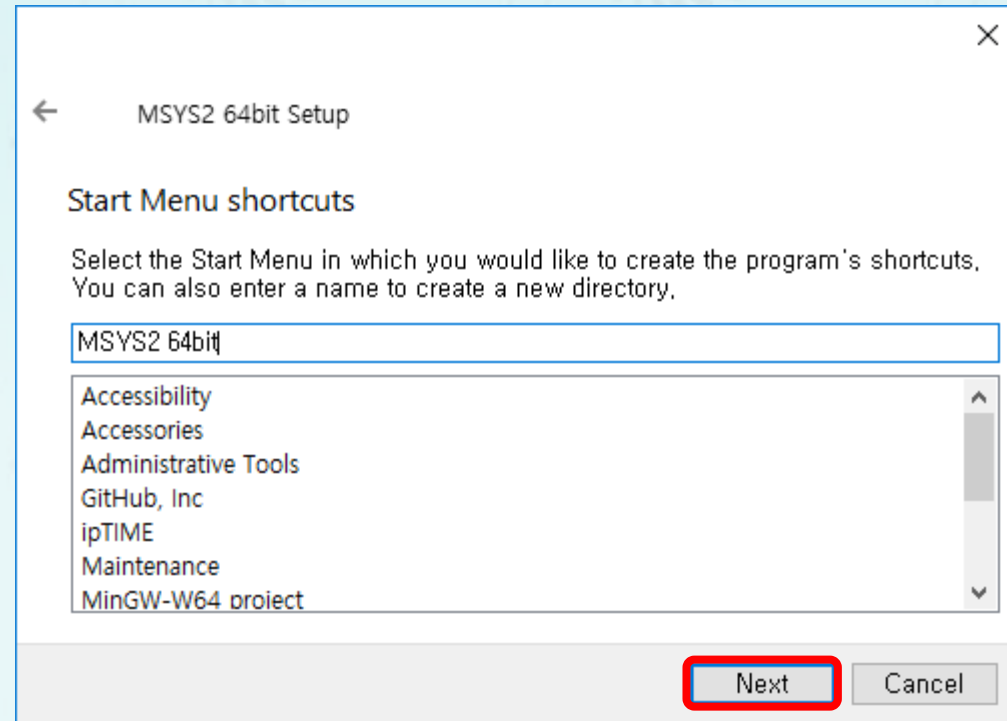
# MSYS2 설치하기

- `msys2-x86_64-20190524.exe`를 실행합니다.



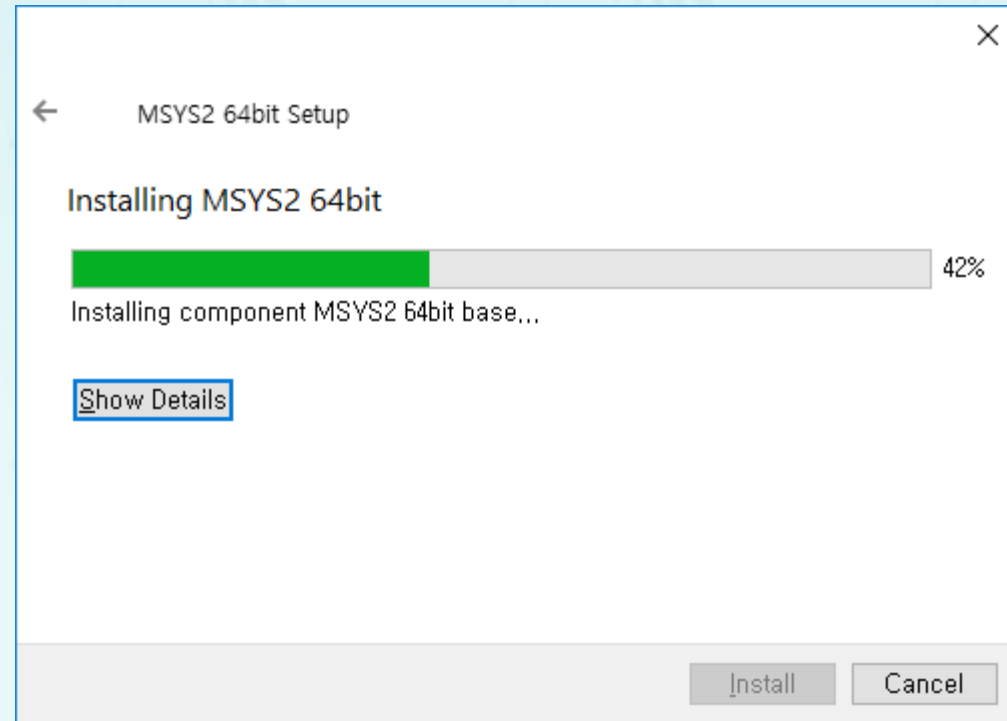
# MSYS2 설치하기

- **msys2-x86\_64-20190524.exe**를 실행합니다.



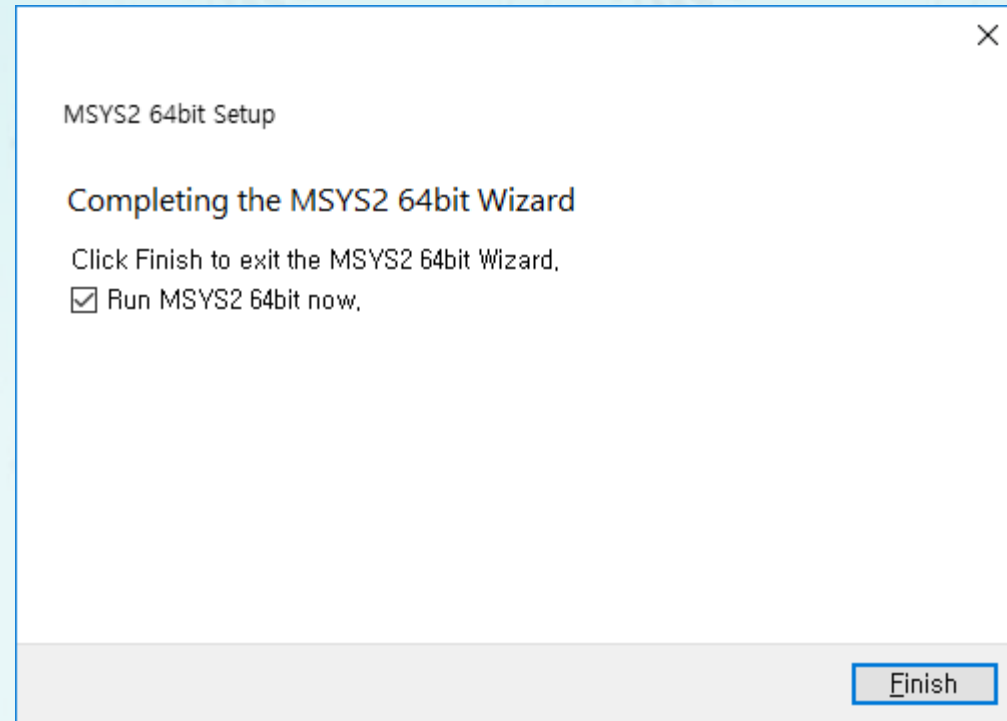
# MSYS2 설치하기

- `msys2-x86_64-20190524.exe`를 실행합니다.



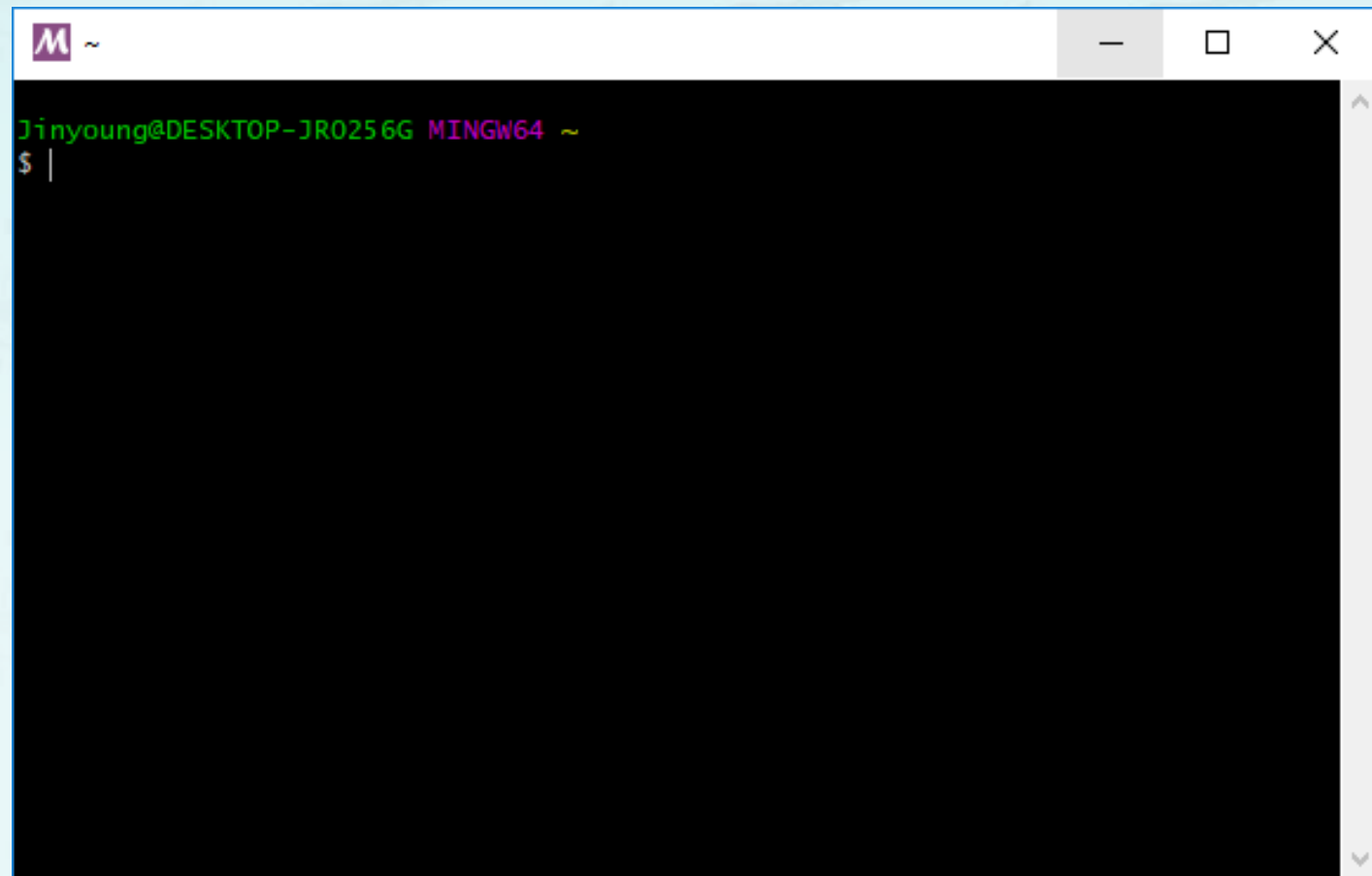
# MSYS2 설치하기

- **Finish**를 클릭하여 **MSYS2**를 실행합니다.



# MSYS2 설치하기

- MSYS2를 실행한 화면 입니다.



A screenshot of a terminal window titled "M ~". The terminal shows the prompt "Jinyoung@DESKTOP-JR0256G MINGW64 ~" in green and pink text, followed by a dollar sign "\$" and a vertical bar "|" on a black background. The window has standard Windows window controls (minimize, maximize, close) in the top right corner.

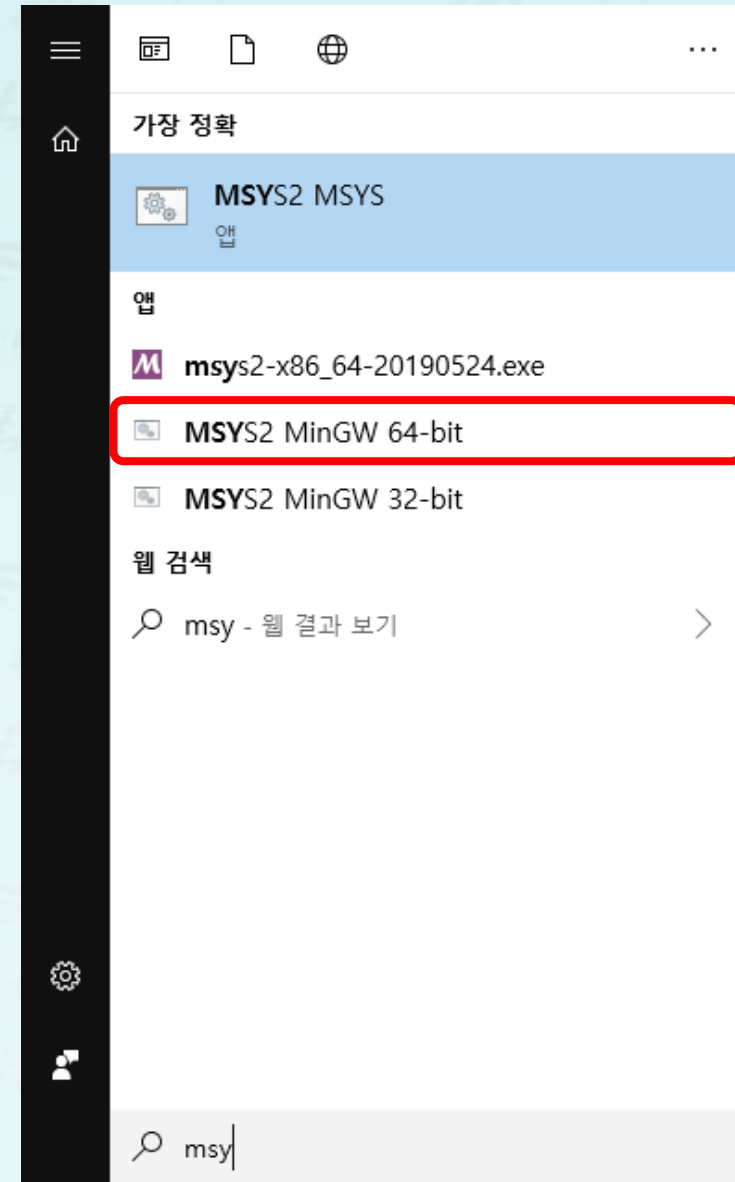


## MSYS2 설치하기

- 쉘에서 “**pacman -Su**”를 입력하고 **Enter** 키를 눌러 패키지 목록과 **MSYS2**를 업데이트 합니다.
- “**::설치를 진행하시겠습니까? [Y/N]**”라는 질문이 나오면 **Enter** 키를 누릅니다.
- 실행 결과를 보면 “**경고:terminate MSYS2 without returning....**”, “**경고: for example close your terminal window...**”이라는 메시지가 나오면 경고를 무시하고 창을 닫습니다.

# MSYS2 설치하기

- 윈도우검색창에 “msys2”를 입력하여 **MSYS2 MinGW 64-bit**를 실행합니다.
- 반드시 **64-bit**를 실행해야 합니다.



## MSYS2 설치하기

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- 다시 한번 쉘에 “**pacman -Su**”를 입력하여 **MSYS2**를 업데이트합니다.
- “:: 설치를 진행하시겠습니까? [Y/n]”라는 질문이 나오면 **<Enter>**키를 누릅니다.

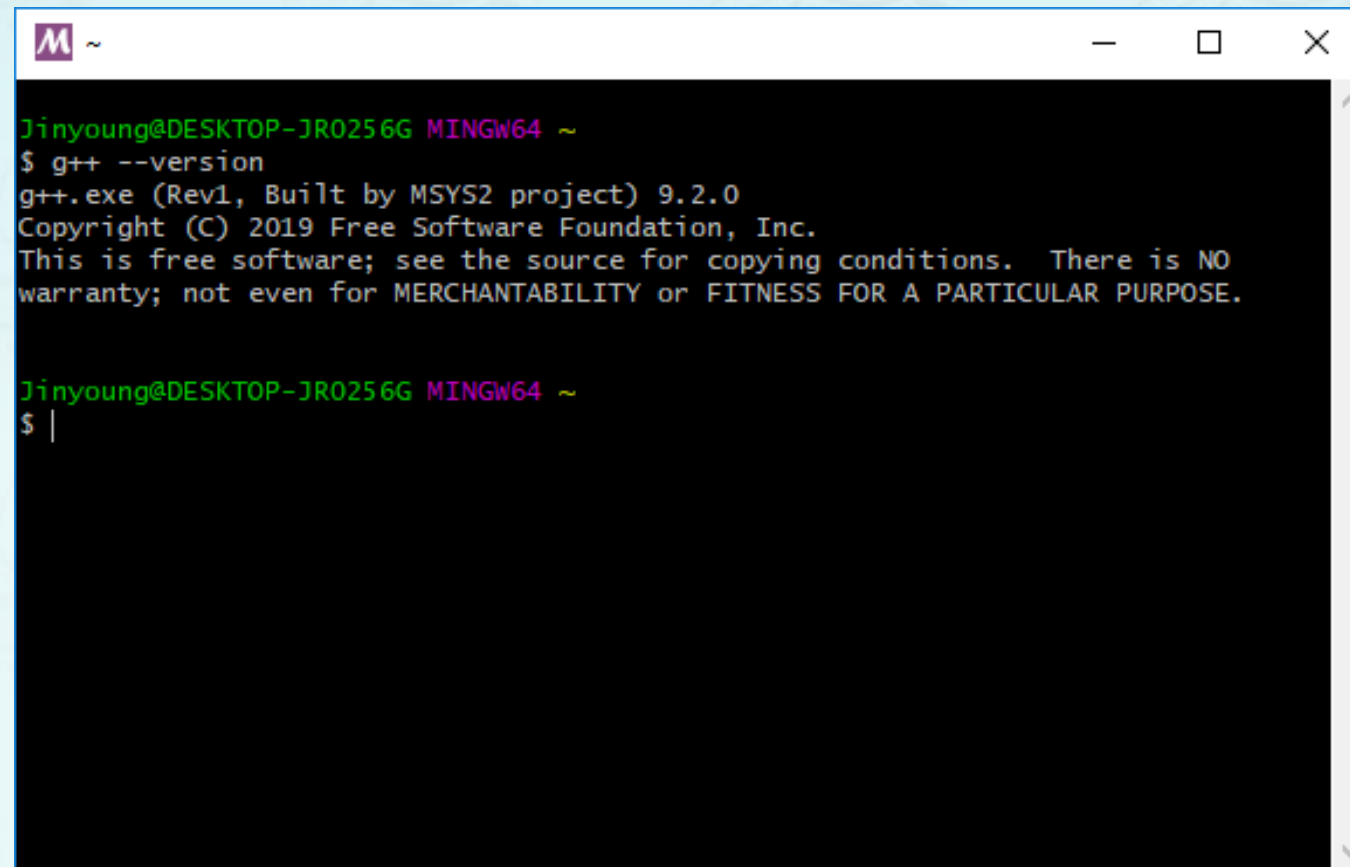
## MSYS2 설치하기

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- 쉘에 “**pacman --needed -S git mingw-w64-x86\_64-gcc base-devel**”를 입력한후 **Enter** 키를 누릅니다.
- 설치 패키지 질문이 나오면 기본값이 **all**입니다. --> **Enter** 키를 누릅니다.
- “:: 설치를 진행하시겠습니까? **[Y/n]**”라는 질문이 나오면 **Enter** 키를 누릅니다.

# MSYS2 설치하기

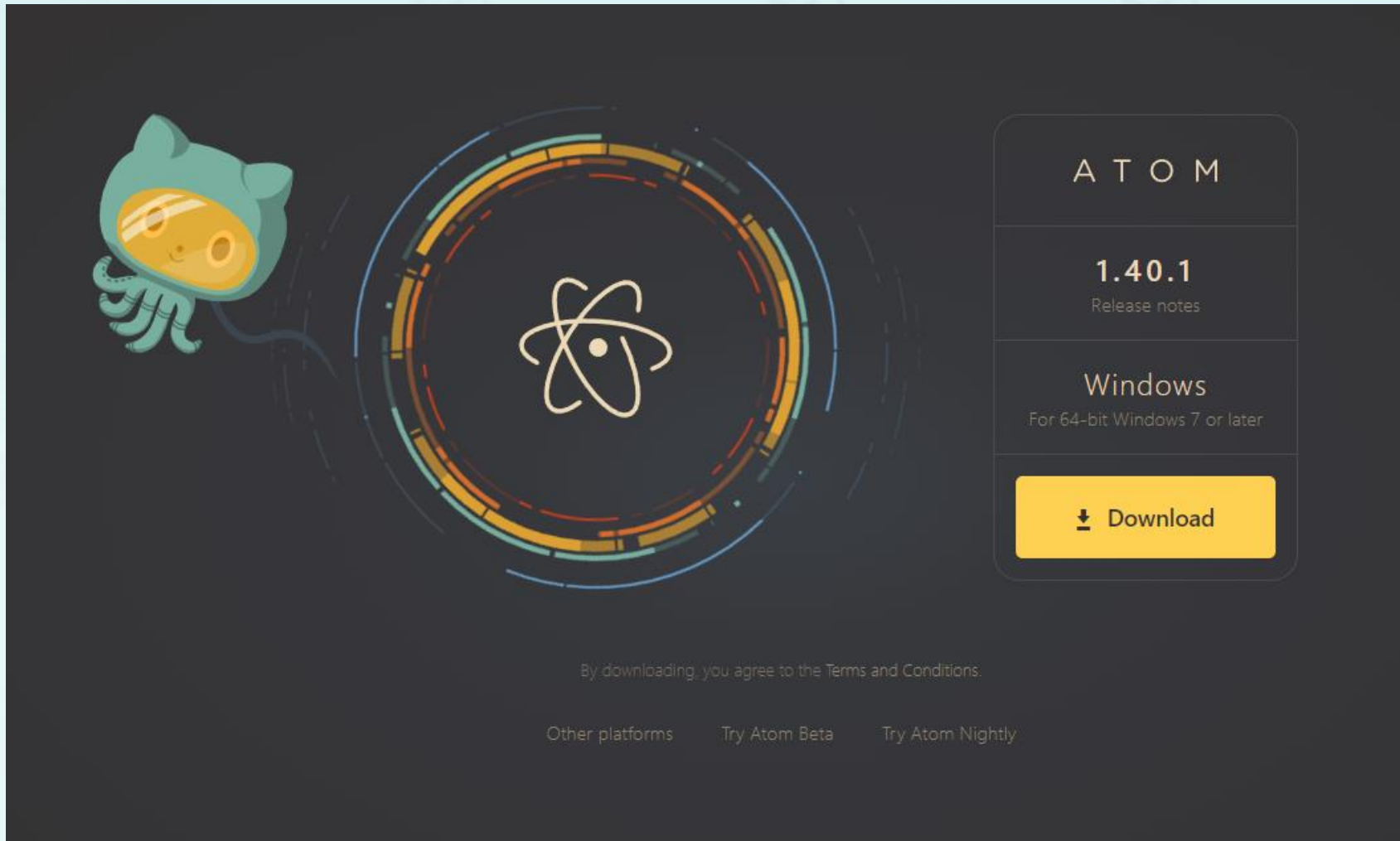
- 쉘에 “**g++ --version**”을 입력하여 개발툴이 설치가 되었는지 확인합니다. 다음과 같이 나온다면 정상적으로 설치가 된 것입니다.

A screenshot of a terminal window with a black background and white text. The window title bar shows a purple 'M' icon and a tilde '~'. The prompt is 'Jinyoung@DESKTOP-JR0256G MINGW64 ~'. The command '\$ g++ --version' has been entered, and the output is displayed: 'g++.exe (Rev1, Built by MSYS2 project) 9.2.0', 'Copyright (C) 2019 Free Software Foundation, Inc.', and 'This is free software; see the source for copying conditions. There is NO warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.' The prompt '\$ |' is shown on the next line.

```
Jinyoung@DESKTOP-JR0256G MINGW64 ~  
$ g++ --version  
g++.exe (Rev1, Built by MSYS2 project) 9.2.0  
Copyright (C) 2019 Free Software Foundation, Inc.  
This is free software; see the source for copying conditions. There is NO  
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  
  
Jinyoung@DESKTOP-JR0256G MINGW64 ~  
$ |
```

# Atom 설치하기

- <https://atom.io/>로 접속합니다.

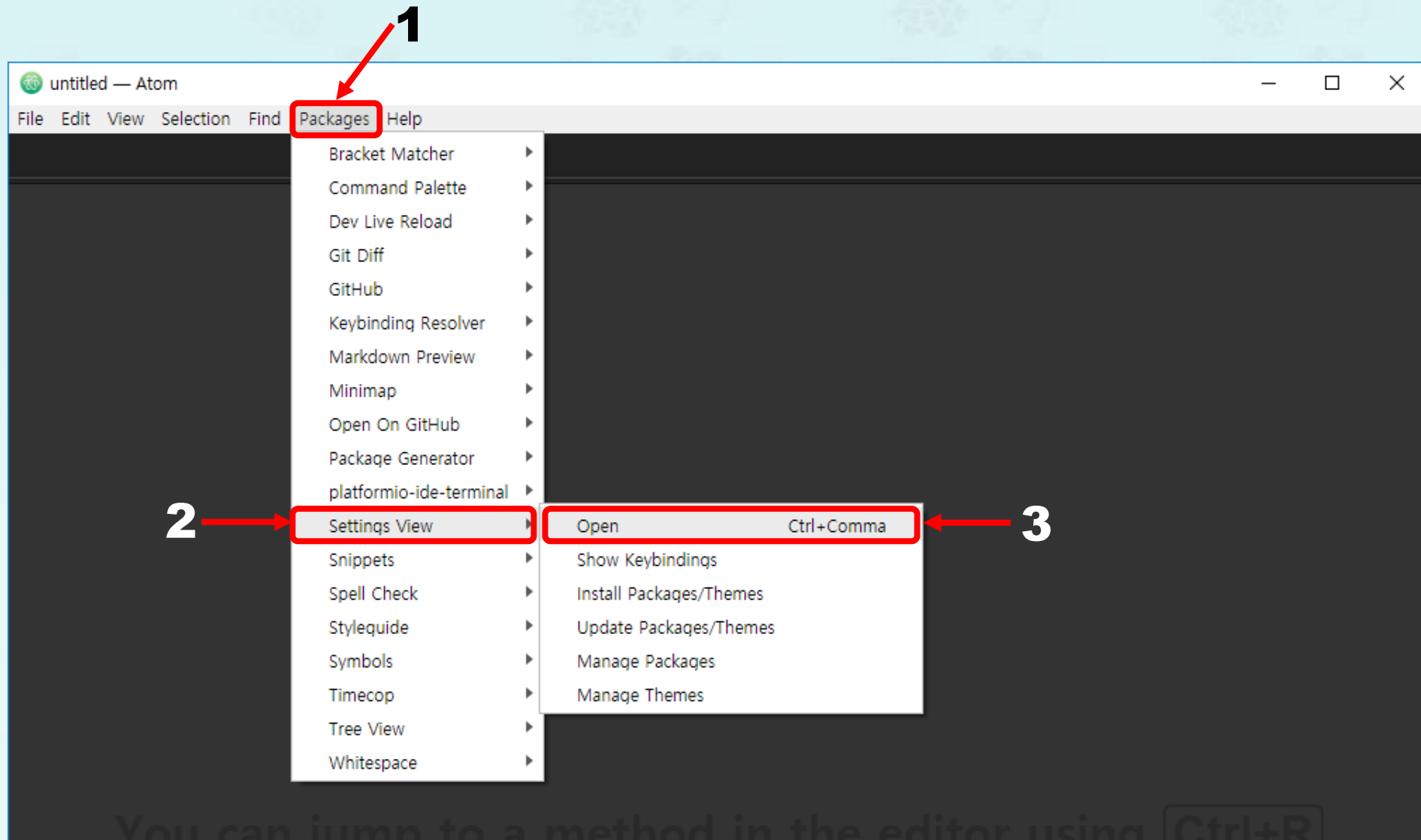


# Atom 설치하기

---

- **AtomSetup-x64.exe**를 실행하면 자동으로 **Atom**이 설치가 완료됩니다.

# Atom 패키지 설치하기

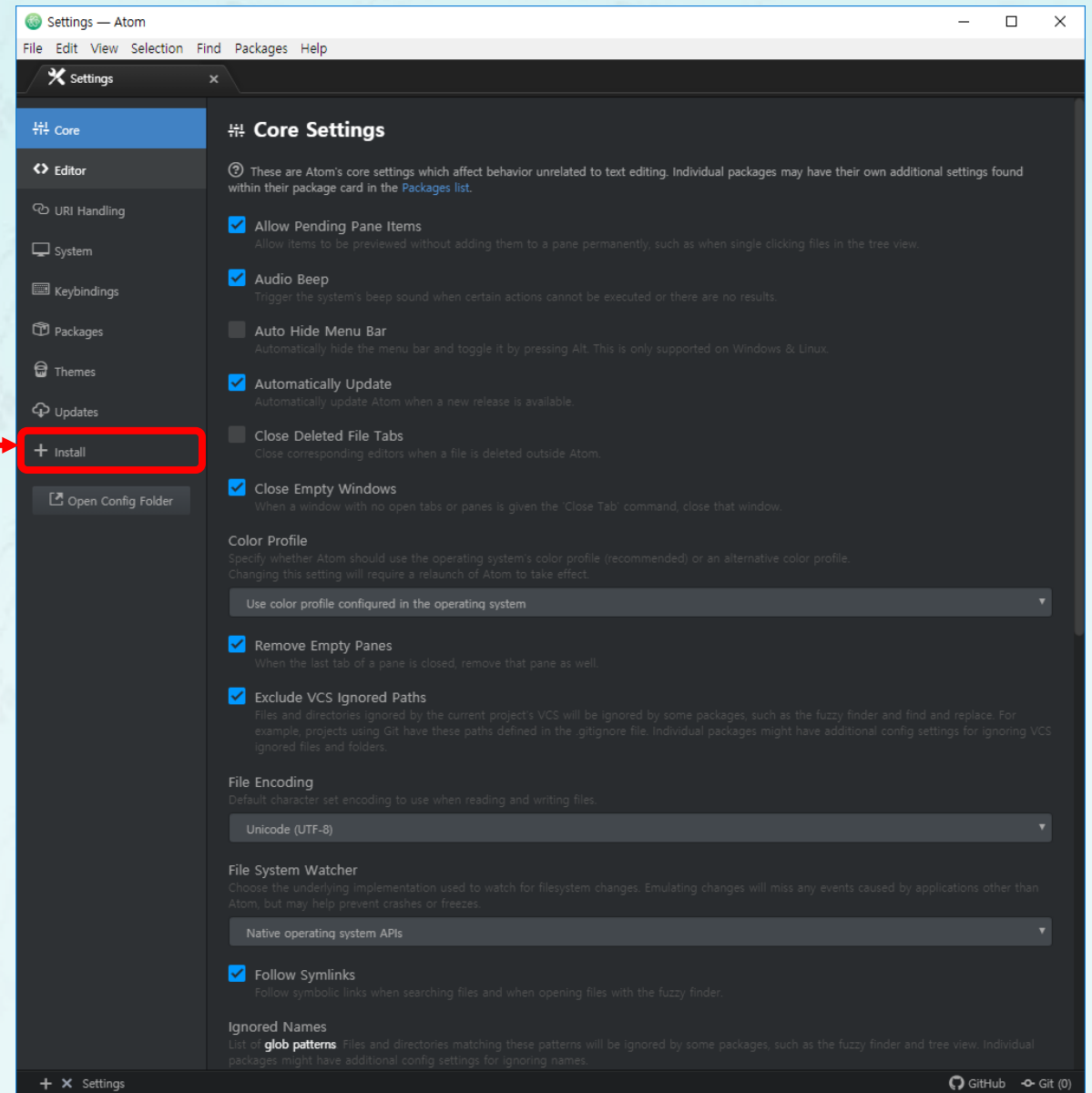




# Atom 패키지 설치하기

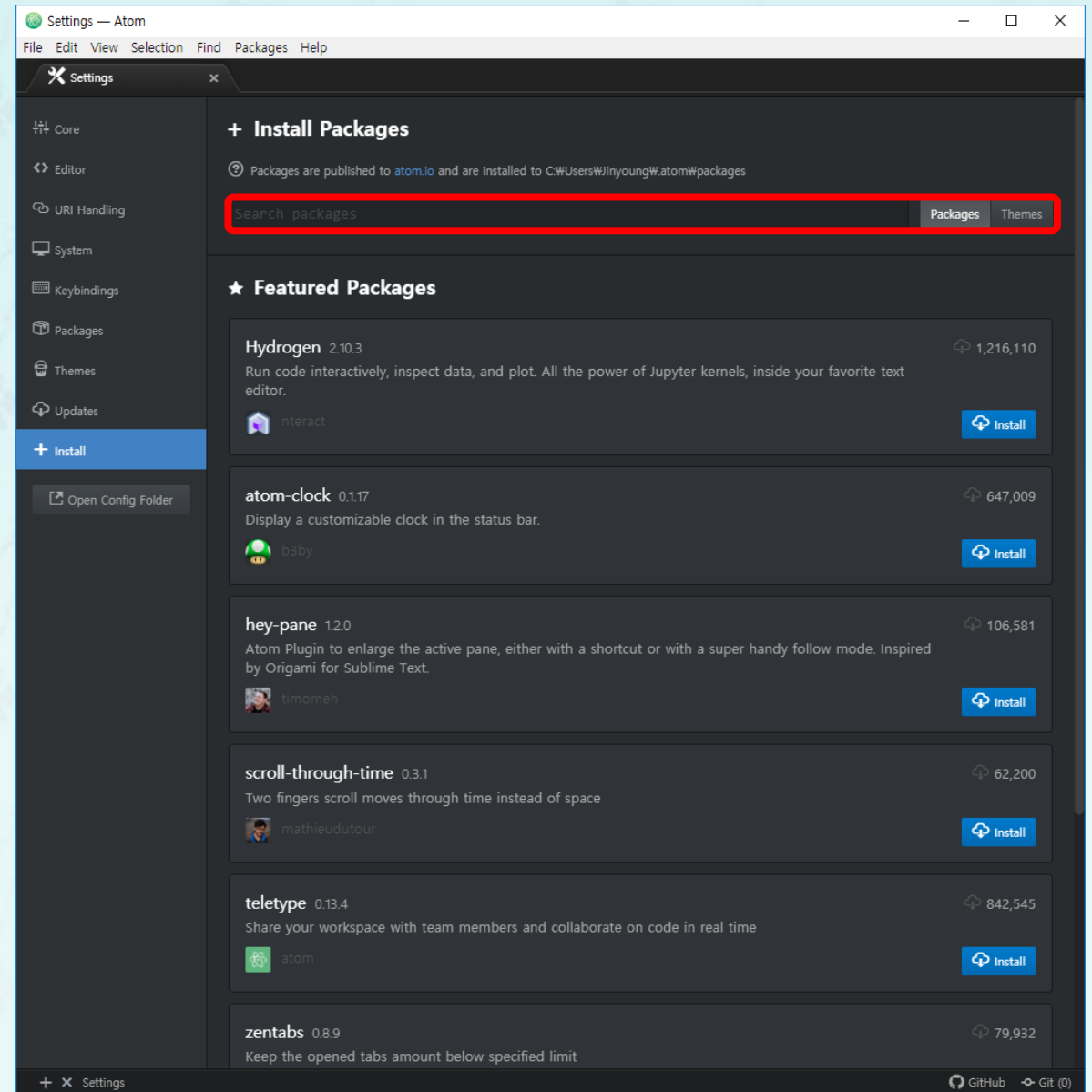
- Install를 클릭합니다.

클릭



# Atom 패키지 설치하기

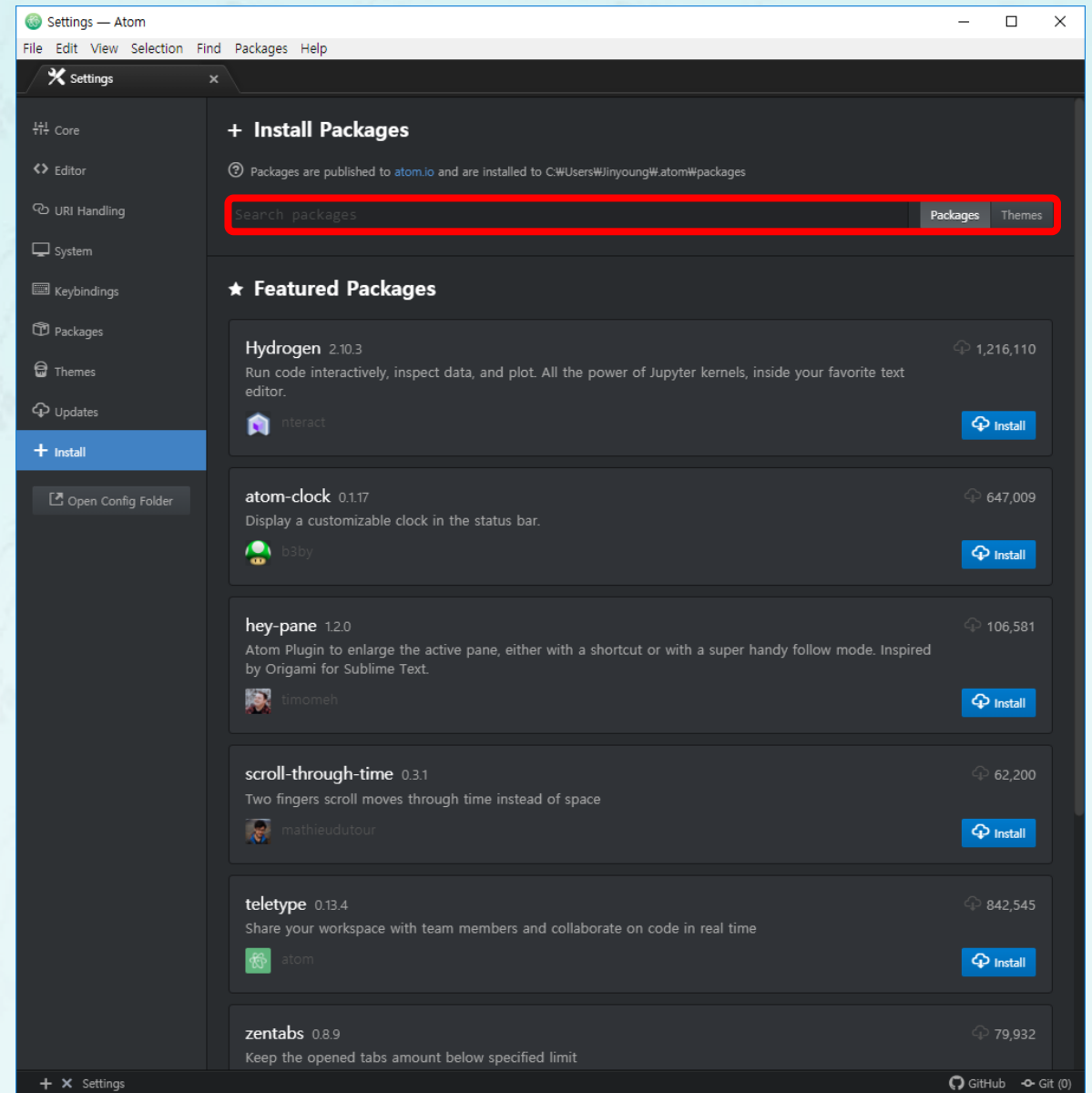
- 검색창에 다음의 패키지 이름들을 검색하여 설치합니다.
- **Platformio-ide-terminal**
- **File-icons**
- **Minimap**
- **Markdown-preview**
- **Autosave**



# Atom 패키지 설치하기

- 검색창에 다음의 패키지 이름들을 검색하여 설치합니다.
- **Platformio-ide-terminal**
- **File-icons**
- **Minimap**
- **Markdown-preview**
- **Autosave**

Markdown-preview와 Autosave는 기본적으로 설치가 되어있습니다. 설치가 되어있지 않다면 atom에서 배포한 것으로 설치하세요.



## Mingw-w64 설치 오류 관련

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- 설치 오류 관련하여 다루고 있는 링크 첨부합니다.
- <https://stackoverflow.com/questions/46455927/mingw-w64-installer-the-file-has-been-downloaded-incorrectly>
- <https://sourceforge.net/p/mingw-w64/bugs/558/>
- <https://taeguu.tistory.com/3>
- 블로그의 설명에 따르면 재설치하는 경우 문제가 발생한다고 합니다. 그러니 기존의 있는 폴더를 완전히 삭제한 후 설치해 보길 바랍니다.

# 개발환경

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한 동 대 학 교  
가을 학기 데이터 구조