

컴파일러 수업 환경구성

Ubuntu linux & Mac OS

Ubuntu 24.04

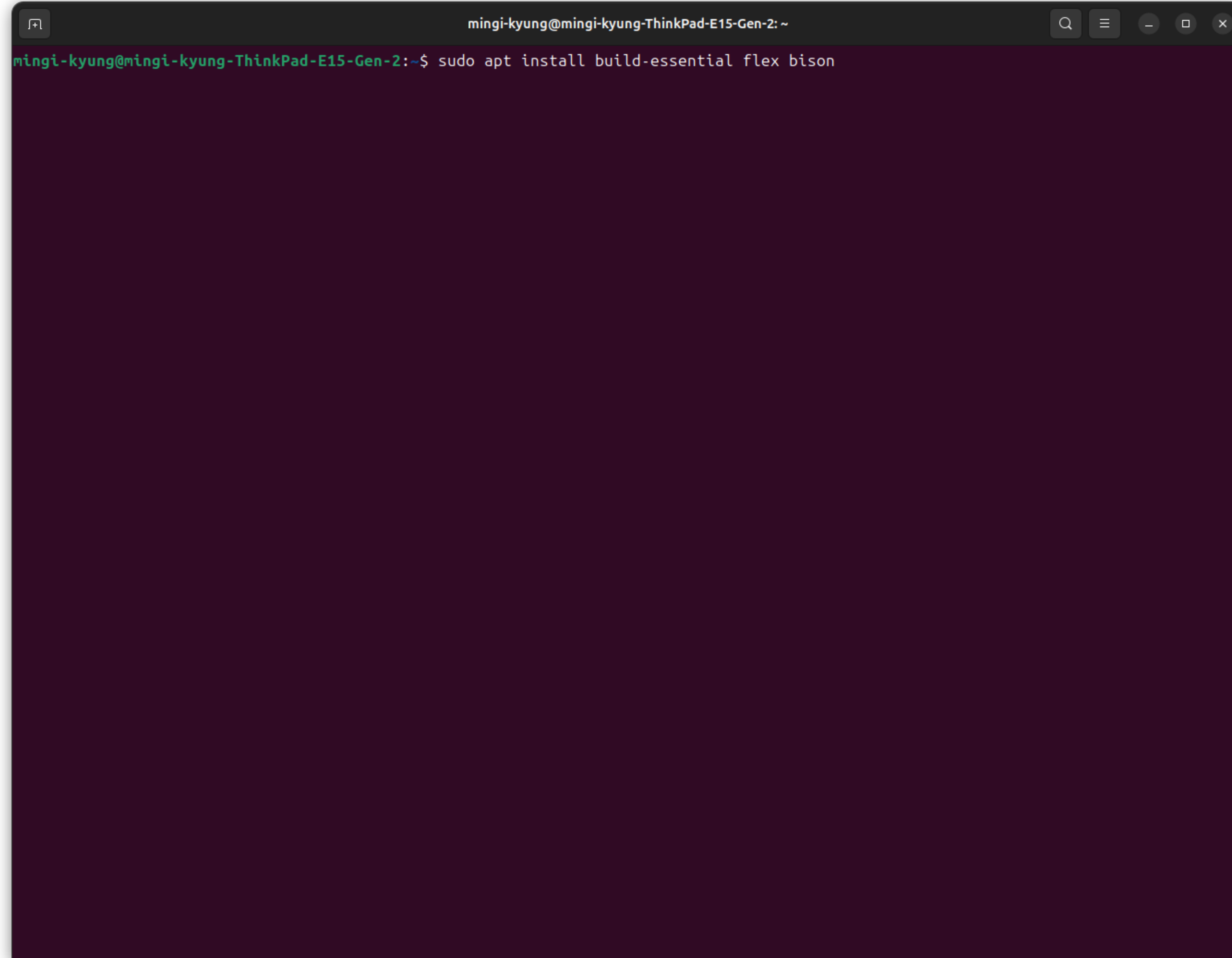
- 2024년 4월 출시된 버전으로 장기 지원 (Long-term support) 지원되는 우분투 버전
-

sudo apt update

- SW 패키지 업데이트

```
mingi-kyung@mingi-kyung-ThinkPad-E15-Gen-2: ~  
mingi-kyung@mingi-kyung-ThinkPad-E15-Gen-2:~$ sudo apt update  
기존:1 http://security.ubuntu.com/ubuntu noble-security InRelease  
기존:2 http://kr.archive.ubuntu.com/ubuntu noble InRelease  
기존:3 https://download.docker.com/linux/ubuntu noble InRelease  
기존:4 http://kr.archive.ubuntu.com/ubuntu noble-updates InRelease  
기존:5 https://packages.microsoft.com/repos/code stable InRelease  
기존:6 http://kr.archive.ubuntu.com/ubuntu noble-backports InRelease  
패키지 목록을 읽는 중입니다... 완료  
의존성 트리를 만드는 중입니다... 완료  
상태 정보를 읽는 중입니다... 완료  
42 패키지를 업그레이드할 수 있습니다. 확인하려면 'apt list --upgradable'를 실행하십시오.  
mingi-kyung@mingi-kyung-ThinkPad-E15-Gen-2:~$
```

sudo apt install -y build-essential flex bison



```
mingi-kyung@mingi-kyung-ThinkPad-E15-Gen-2: ~  
mingi-kyung@mingi-kyung-ThinkPad-E15-Gen-2:~$ sudo apt install build-essential flex bison
```

A terminal window with a dark background and light green text. The window title bar shows the user 'mingi-kyung' and the machine 'mingi-kyung-ThinkPad-E15-Gen-2'. The command 'sudo apt install build-essential flex bison' has been entered and is visible on the first line of the terminal output.

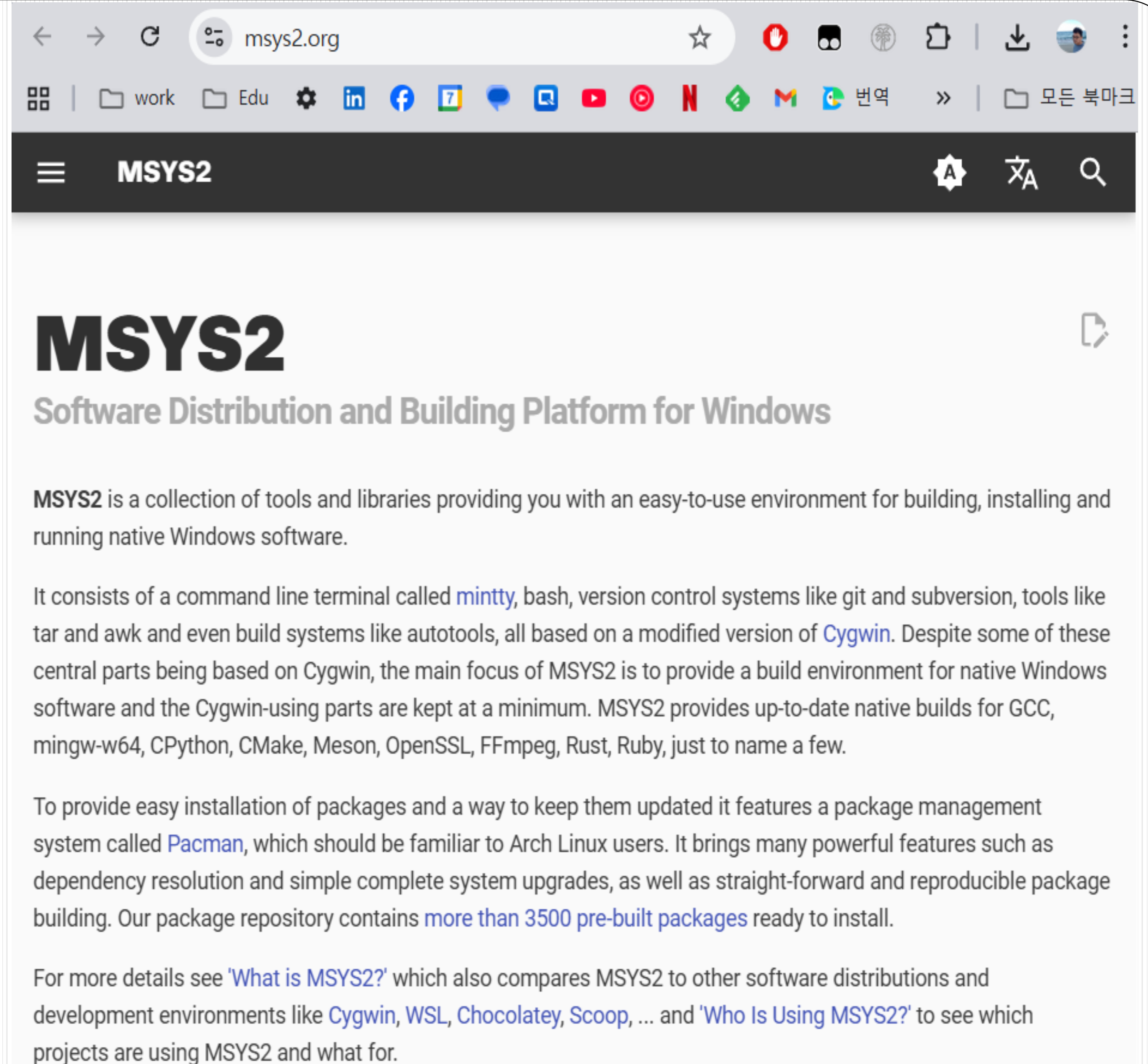
Mac os에서 설치

- Command + space 키를 동시에 누른 뒤, terminal을 쳐서 터미널을 띄움
- Brew 설치
 - `/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"`
- Gcc & Flex & bison 설치
 - `$ brew install gcc flex bison`

Windows

msys2 설치

<https://www.msys2.org/>



The screenshot shows the homepage of the MSYS2 website. The browser's address bar displays 'msys2.org'. The website's navigation bar is dark with the 'MSYS2' logo and a search icon. The main heading is 'MSYS2' in large, bold, black letters, followed by the subtitle 'Software Distribution and Building Platform for Windows'. The text describes MSYS2 as a collection of tools and libraries for building, installing, and running native Windows software. It lists various tools and systems included, such as mintty, bash, git, subversion, tar, awk, autotools, and Cygwin. It also mentions the package management system Pacman and the availability of pre-built packages. The page concludes with links to 'What is MSYS2?' and 'Who Is Using MSYS2?' for more details.

MSYS2
Software Distribution and Building Platform for Windows

MSYS2 is a collection of tools and libraries providing you with an easy-to-use environment for building, installing and running native Windows software.

It consists of a command line terminal called [mintty](#), bash, version control systems like git and subversion, tools like tar and awk and even build systems like autotools, all based on a modified version of [Cygwin](#). Despite some of these central parts being based on Cygwin, the main focus of MSYS2 is to provide a build environment for native Windows software and the Cygwin-using parts are kept at a minimum. MSYS2 provides up-to-date native builds for GCC, mingw-w64, CPython, CMake, Meson, OpenSSL, FFmpeg, Rust, Ruby, just to name a few.

To provide easy installation of packages and a way to keep them updated it features a package management system called [Pacman](#), which should be familiar to Arch Linux users. It brings many powerful features such as dependency resolution and simple complete system upgrades, as well as straight-forward and reproducible package building. Our package repository contains [more than 3500 pre-built packages](#) ready to install.

For more details see '[What is MSYS2?](#)' which also compares MSYS2 to other software distributions and development environments like [Cygwin](#), [WSL](#), [Chocolatey](#), [Scoop](#), ... and '[Who Is Using MSYS2?](#)' to see which projects are using MSYS2 and what for.

tool 설치

- `pacman -S --needed base-devel git mingw-w64-ucrt-x86_64-toolchain flex bison gdb`

```
mingi@mg_winlaptop UCRT64 ~
$ pacman -S --needed base-devel git mingw-w64-ucrt-x86_64-toolchain flex bison gdb
:: There are 13 members in group mingw-w64-ucrt-x86_64-toolchain:
:: Repository ucrt64
 1) mingw-w64-ucrt-x86_64-binutils  2) mingw-w64-ucrt-x86_64-crt-git
 3) mingw-w64-ucrt-x86_64-gcc      4) mingw-w64-ucrt-x86_64-gdb
 5) mingw-w64-ucrt-x86_64-gdb-multiarch  6) mingw-w64-ucrt-x86_64-headers-git
 7) mingw-w64-ucrt-x86_64-libmangle-git  8) mingw-w64-ucrt-x86_64-libwinpthread
 9) mingw-w64-ucrt-x86_64-make      10) mingw-w64-ucrt-x86_64-pkgconf
11) mingw-w64-ucrt-x86_64-tools-git 12) mingw-w64-ucrt-x86_64-winthreads
13) mingw-w64-ucrt-x86_64-winstorecompat-git

Enter a selection (default=all):
resolving dependencies...
looking for conflicting packages...

Packages (94) binutils-2.45-1 diffstat-1.68-1 diffutils-3.12-1 dos2unix-7.5.2-1
heimdal-7.8.0-5 libcbor-0.12.0-1 libfido2-1.16.0-1 libgc-8.2.8-1
libguile-3.0.10-3 libxxhash-0.8.3-1 m4-1.4.19-2 make-4.4.1-2
mingw-w64-ucrt-x86_64-bzip2-1.0.8-3 mingw-w64-ucrt-x86_64-expat-2.7.1-2
mingw-w64-ucrt-x86_64-gcc-libs-15.2.0-8
mingw-w64-ucrt-x86_64-gettext-runtime-0.26-1 mingw-w64-ucrt-x86_64-gmp-6.3.0-2
mingw-w64-ucrt-x86_64-is1-0.27-1 mingw-w64-ucrt-x86_64-libffi-3.5.1-1
mingw-w64-ucrt-x86_64-libiconv-1.18-1 mingw-w64-ucrt-x86_64-libsystre-1.0.2-1
mingw-w64-ucrt-x86_64-libtre-0.9.0-1 mingw-w64-ucrt-x86_64-mpc-1.3.1-2
mingw-w64-ucrt-x86_64-mpdecimal-4.0.1-1 mingw-w64-ucrt-x86_64-mpfr-4.2.2-1
mingw-w64-ucrt-x86_64-ncurses-6.5.20241228-3 mingw-w64-ucrt-x86_64-openssh-8.3.2-1
mingw-w64-ucrt-x86_64-python-3.12.11-1 mingw-w64-ucrt-x86_64-readline-8.3.001-1
mingw-w64-ucrt-x86_64-sqlite3-3.50.4-1 mingw-w64-ucrt-x86_64-tcl-8.6.16-1
mingw-w64-ucrt-x86_64-termcap-1.3.1-7 mingw-w64-ucrt-x86_64-tk-8.6.16-1
mingw-w64-ucrt-x86_64-tzdata-2025b-2
mingw-w64-ucrt-x86_64-windows-default-manifest-6.4-4
mingw-w64-ucrt-x86_64-xxhash-0.8.3-1 mingw-w64-ucrt-x86_64-xz-5.8.1-2
mingw-w64-ucrt-x86_64-zlib-1.3.1-1 mingw-w64-ucrt-x86_64-zstd-1.5.7-1 mpc-1.3.1-1
mpdecimal-4.0.1-1 openssh-10.0p1-2 patch-2.7.6-3 perl-Authen-SASL-2.1900-1
perl-Clone-0.47-2 perl-Convert-BinHex-1.125-2 perl-Encode-Locale-1.05-2
perl-Error-0.17030-1 perl-File-Listing-6.16-1 perl-HTML-Parser-3.83-2
perl-HTML-Tagset-3.24-1 perl-HTTP-Cookies-6.11-1 perl-HTTP-Daemon-6.16-1
perl-HTTP-Date-6.06-1 perl-HTTP-Message-7.00-1 perl-HTTP-Negotiate-6.01-3
perl-IO-HTML-1.004-2 perl-IO-Socket-SSL-2.094-1 perl-IO-Stringy-2.113-2
perl-LWP-MediaTypes-6.04-2 perl-MIME-tools-5.515-1 perl-MailTools-2.22-1
perl-Net-HTTP-6.23-1 perl-Net-SMTP-SSL-1.04-2 perl-Net-SSLeay-1.94-3
perl-TermReadKey-2.38-7 perl-TimeDate-2.33-2 perl-Try-Tiny-0.32-1 perl-URI-5.32-1
perl-WWW-RobotRules-6.02-3 perl-http-cookiejar-0.014-1 perl-libwww-6.79-1
python-3.12.11-1 texinfo-7.2-2 texinfo-tex-7.2-2 xxhash-0.8.3-1
base-devel-2024.11-1 bison-3.8.2-5 flex-2.6.4-4 gdb-16.2-8 git-2.51.0-1
mingw-w64-ucrt-x86_64-binutils-2.45-2
mingw-w64-ucrt-x86_64-crt-git-13.0.0.r124.g2717de84e-1
mingw-w64-ucrt-x86_64-gcc-15.2.0-8 mingw-w64-ucrt-x86_64-gdb-16.3-1
mingw-w64-ucrt-x86_64-gdb-multiarch-16.3-1
mingw-w64-ucrt-x86_64-headers-git-13.0.0.r124.g2717de84e-1
mingw-w64-ucrt-x86_64-libmangle-git-13.0.0.r124.g2717de84e-1
mingw-w64-ucrt-x86_64-libwinpthread-13.0.0.r124.g2717de84e-1
mingw-w64-ucrt-x86_64-make-4.4.1-3 mingw-w64-ucrt-x86_64-pkgconf-1~2.5.1-1
mingw-w64-ucrt-x86_64-tools-git-13.0.0.r124.g2717de84e-1
mingw-w64-ucrt-x86_64-winthreads-13.0.0.r124.g2717de84e-1
mingw-w64-ucrt-x86_64-winstorecompat-git-13.0.0.r124.g2717de84e-1

Total Download Size: 177.92 MiB
Total Installed Size: 1264.60 MiB

:: Proceed with installation? [Y/n] y
```