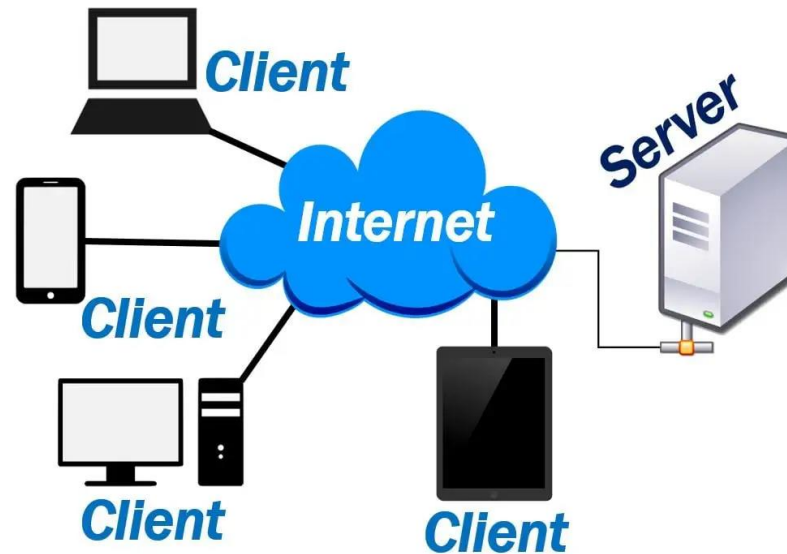




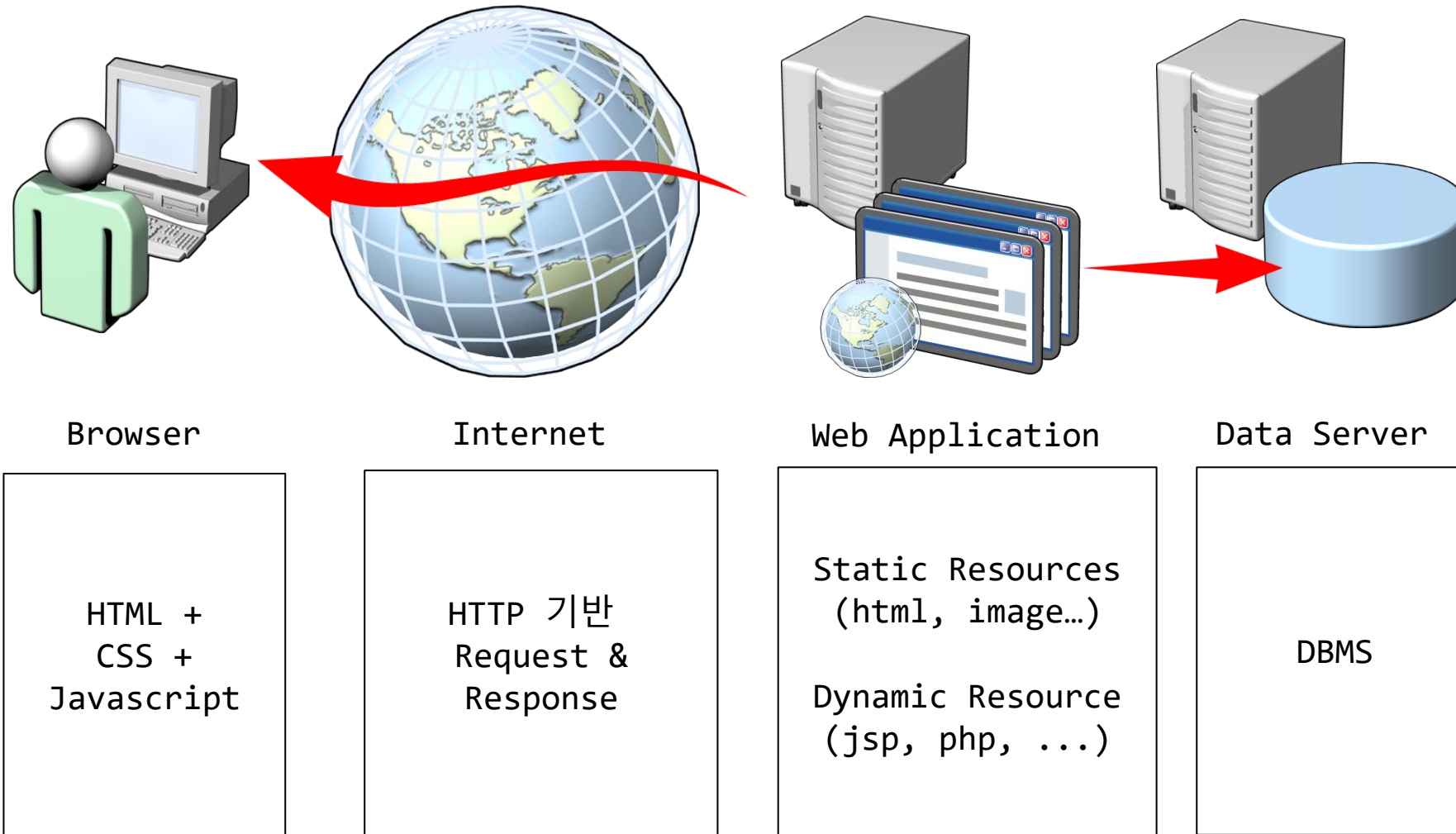
Web Server Control

웹 (World Wide Web, WWW)

- 연결된 컴퓨터를 통해 정보를 공유할 수 있는 범세계적 네트워크
- 네트워크로 연결된 다수의 컴퓨터에서 문서 공유
- 웹 문서 → 웹에서 다루는 문서
- 구성
 - » 웹 서버 → 클라이언트의 요청을 수신/처리하고 응답하는 역할
 - » 웹 클라이언트 → 웹 서버에 웹 문서를 요청하고 수신하는 역할

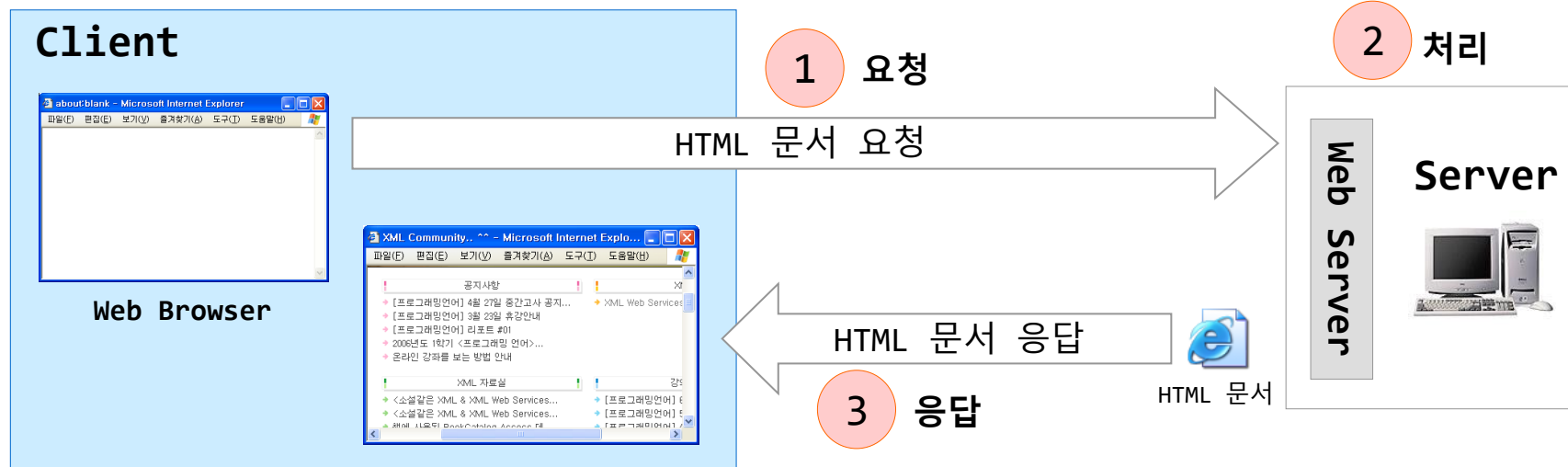


웹 애플리케이션 구조



웹 구성요소

■ 웹 애플리케이션 작동 구조



■ 웹 서버(Web Server)

» 클라이언트의 요청을 받아서 처리한 후 결과를 클라이언트에 전송해 주는 주체

■ 웹 클라이언트(Web Client)

» 필요한 데이터를 웹 서버에 요청하는 주체

» 일반적으로 웹 브라우저(Web Browser)

정적 웹 응용프로그램 vs 동적 웹 응용프로그램

- 정적 웹 응용프로그램

- » Html, image 등 미리 만들어진 자원으로 사용자의 요청에 대해 응답
- » 미리 생성된 자원이 없으면 응답할 수 없으며
- » 작은 차이라도 각각 다른 페이지로 구성해야 합니다.
- » 웹 서버 수준에서 응답이 처리됩니다.

- 동적 웹 응용프로그램

- » 요청이 들어오면 요청에 따라 동적으로 응답할 결과를 생성
- » Web Server는 요청을 받고 적절한 웹 응용프로그램에 요청을 전달
- » CGI 를 이용한 프로세스 기반 웹 응용프로그램 서비스 또는
- » php, jsp, asp 등의 쓰레드 기반 동적 웹 응용프로그램 기술 사용

환경 구축

■ Web Browser

» Microsoft Edge → <https://www.microsoft.com/ko-kr/edge/download>



» Chrome → <https://www.google.com/intl/ko/chrome/>



» Firefox

→ <https://www.mozilla.org/en-US/firefox/new/>



Get the browser that protects what's important

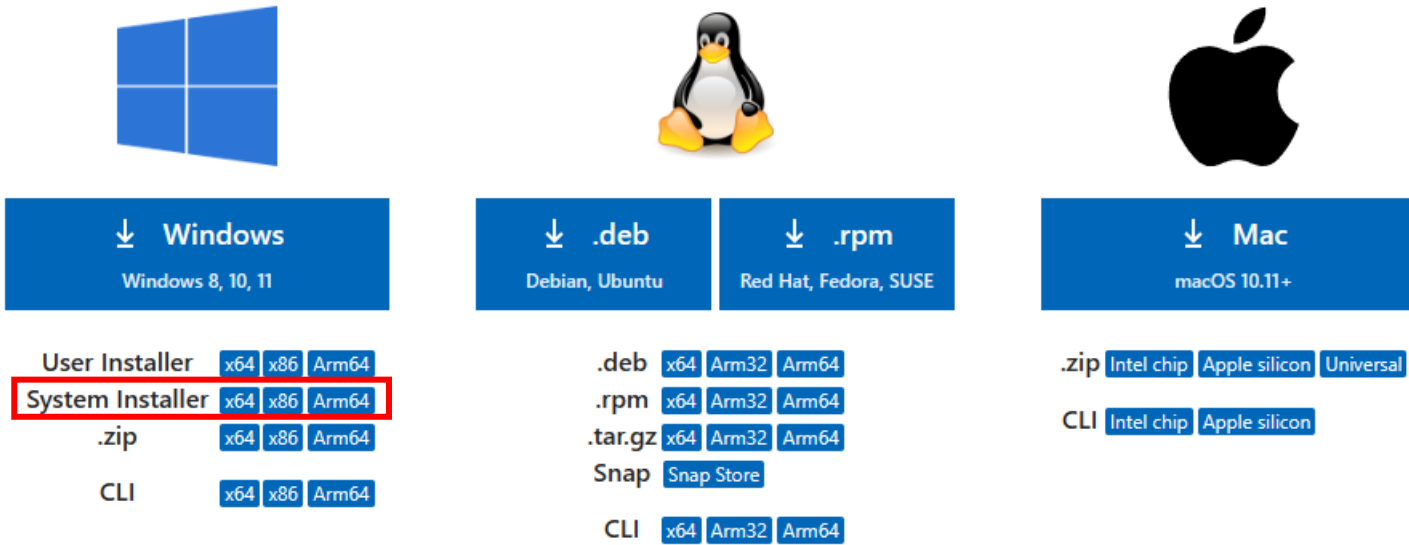
No shady privacy policies or back doors for advertisers. Just a lightning fast browser that doesn't sell you out.

[Download Firefox](#)

환경 구축

- 코드 편집기

- » Visual Studio Code → <https://code.visualstudio.com/#alt-downloads>



The image shows the Visual Studio Code download page. It is divided into three main sections: Windows, Linux, and Mac. Each section has a download button and a list of available installers. The Windows section has a 'System Installer' option highlighted with a red box. The Linux section has options for .deb, .rpm, .tar.gz, Snap, and CLI. The Mac section has options for .zip and CLI.

Platform	OS/Version	Installer Type	Architecture	
Windows	Windows 8, 10, 11	User Installer	x64, x86, Arm64	
		System Installer	x64, x86, Arm64	
		.zip	x64, x86, Arm64	
		CLI	x64, x86, Arm64	
Linux	Debian, Ubuntu	.deb	x64, Arm32, Arm64	
		.rpm	x64, Arm32, Arm64	
	Red Hat, Fedora, SUSE	.rpm	x64, Arm32, Arm64	
		.tar.gz	x64, Arm32, Arm64	
	Snap	Snap Store		
	CLI	x64, Arm32, Arm64		
	Mac	macOS 10.11+	.zip	Intel chip, Apple silicon, Universal
			CLI	Intel chip, Apple silicon

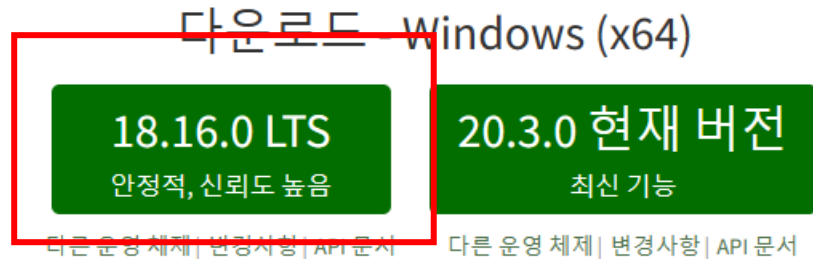
- » 다운로드 완료 후 설치 파일 실행

환경 구축

- 자바스크립트 실행 환경
 - » Node.js → <https://nodejs.org/ko>

Node.js®는 Chrome V8 JavaScript 엔진으로 빌드된 JavaScript 런타임입니다.

New security releases to be made available June 20th, 2023

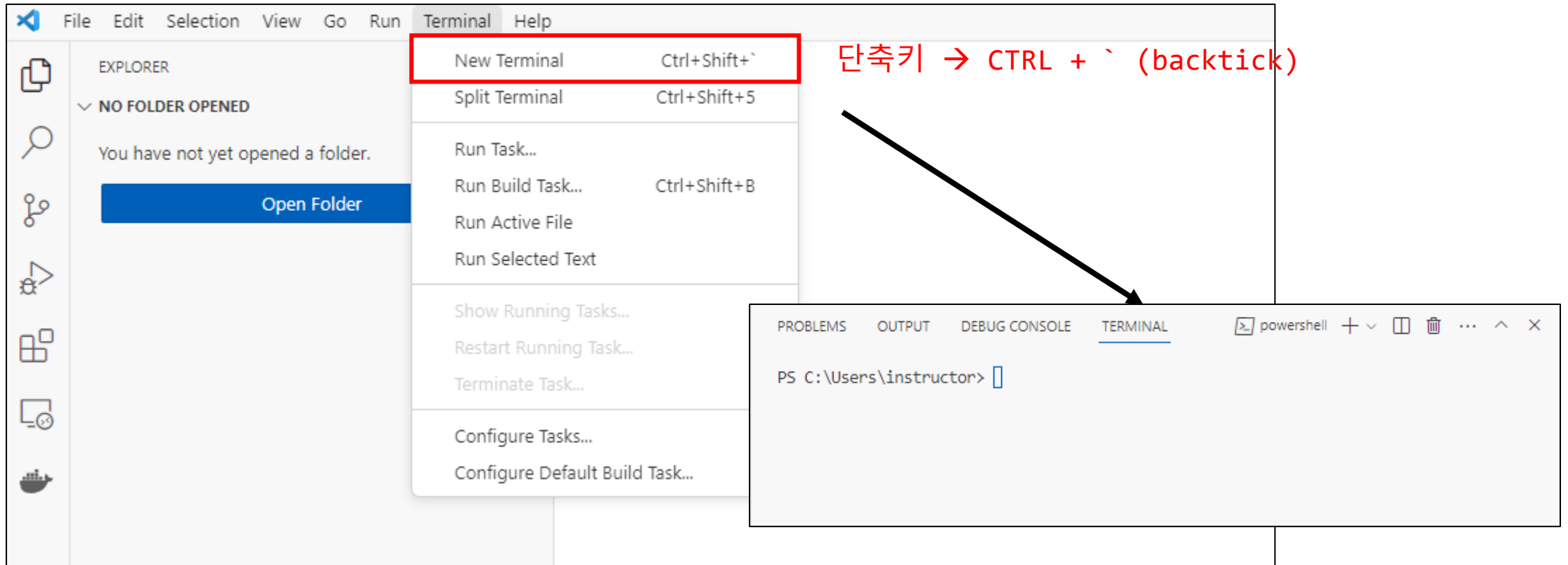


LTS 일정은 [여기서](#) 확인하세요.

- » 다운로드 완료 후 설치 파일 실행

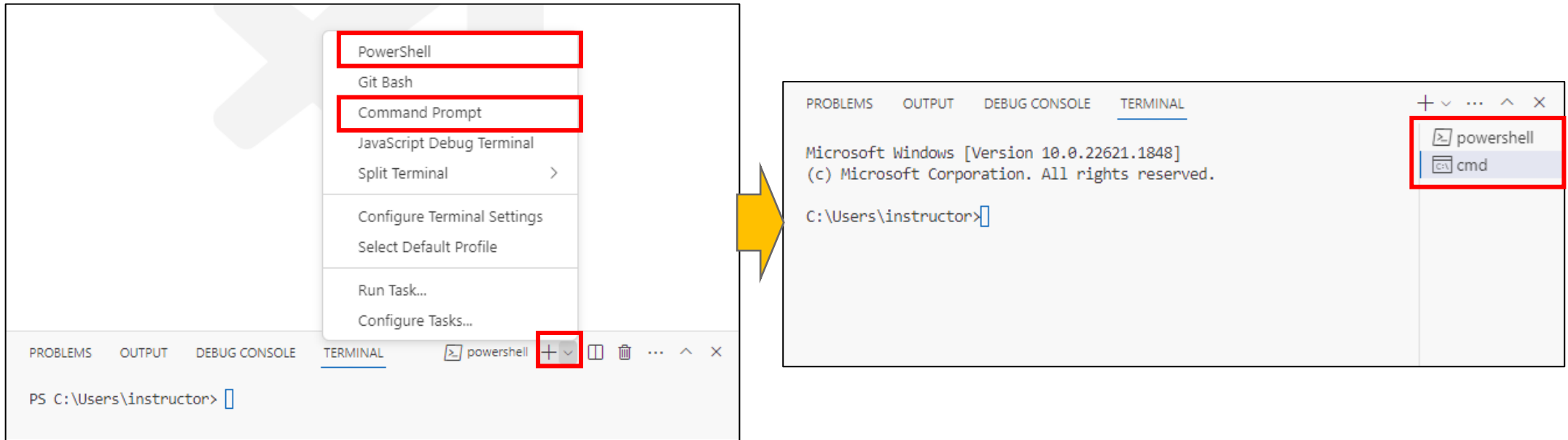
VS Code에서 터미널 실행

- Visual Studio Code 실행
- 터미널 창 표시



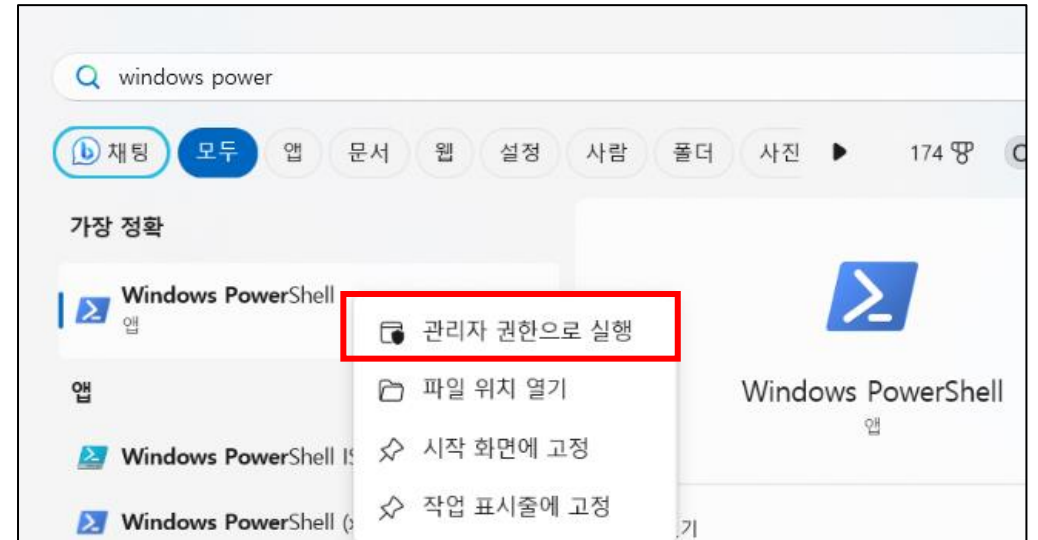
VS Code 터미널 선택

- Visual Studio Code 실행 → 터미널 창 표시
- 터미널 종류 선택



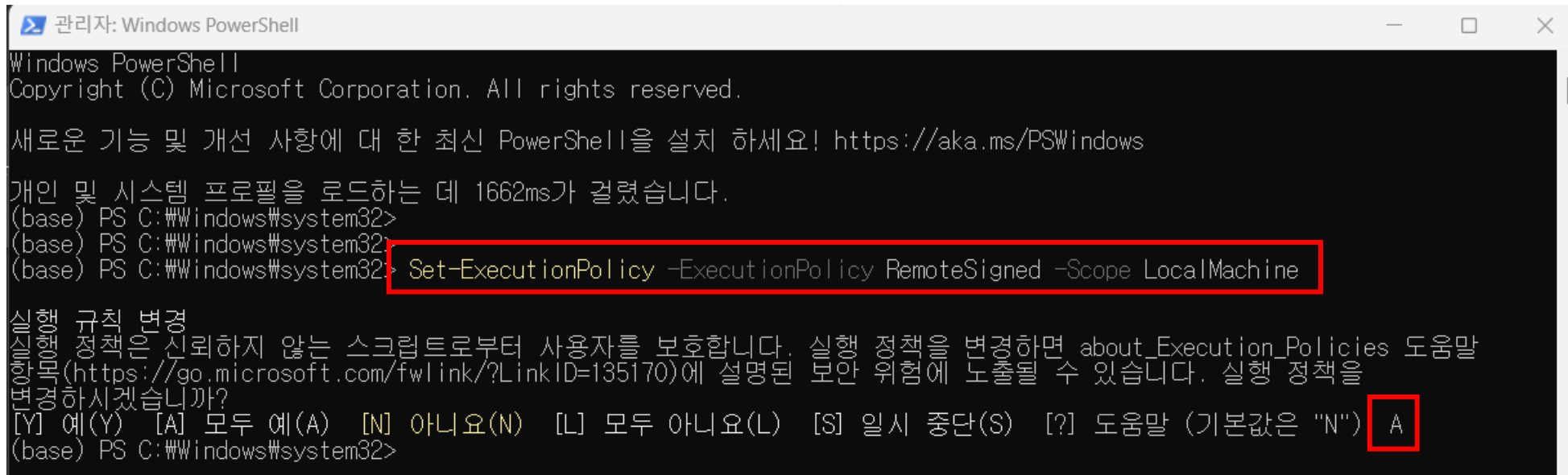
PowerShell 권한 오류 수정

- Windows PowerShell 실행 (관리자 권한으로 실행)



- 명령어 실행

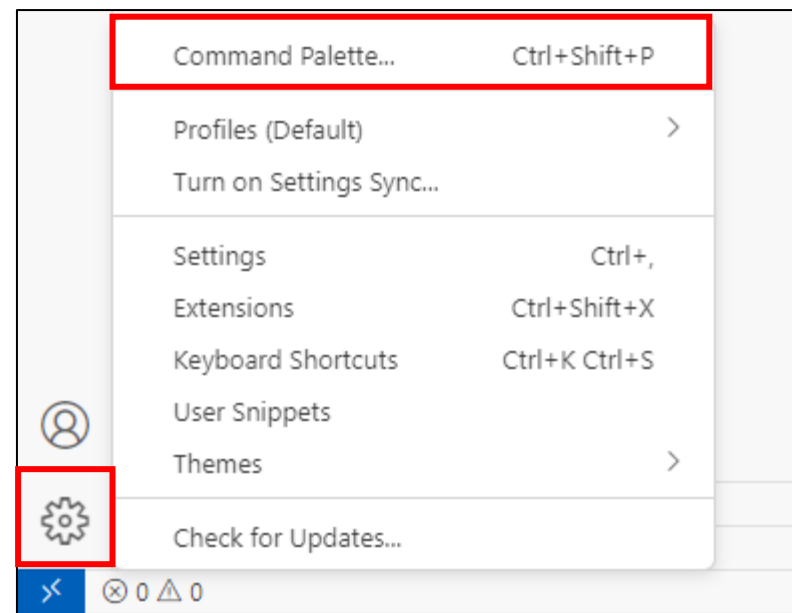
Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope LocalMachine



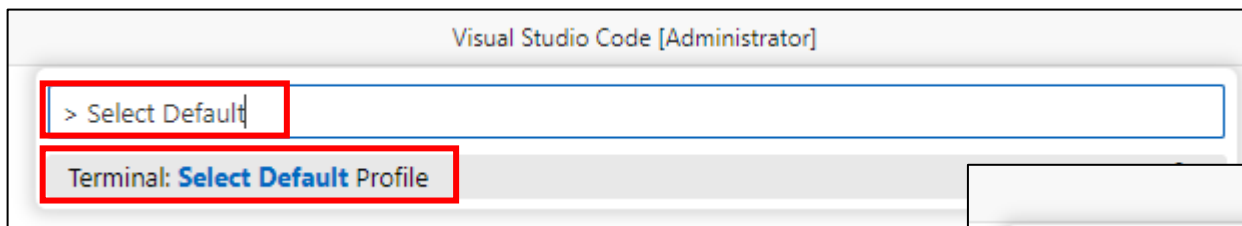
VS Code 기본 터미널 선택

- Visual Studio Code 실행 → 좌측 하단 설정 메뉴 선택

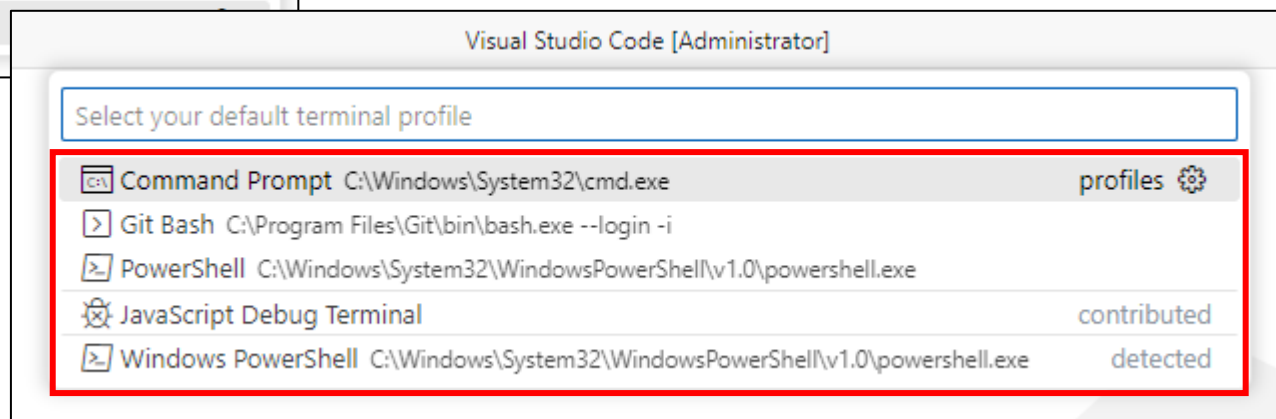
단축키 → CTRL + SHIFT + P



- 명령 입력 → 명령 선택



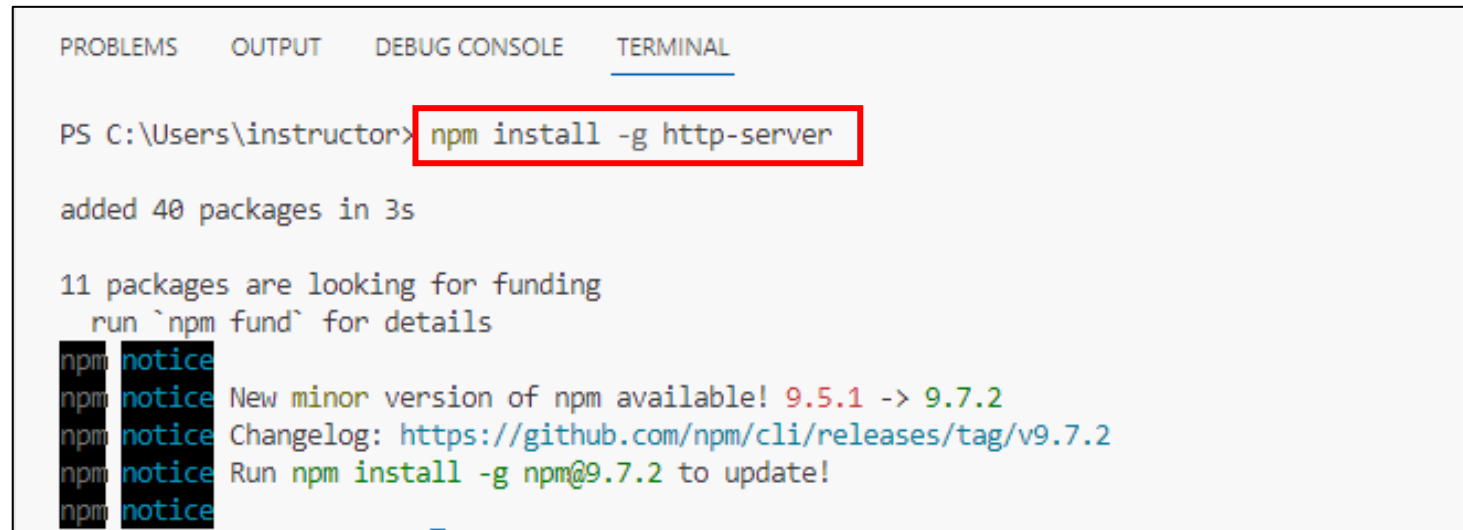
- 표시되는 목록에서 기본 터미널 선택



http-server

- Visual Studio Code 실행 → 터미널 실행
- http-server 설치

`npm install -g http-server`



The screenshot shows a Visual Studio Code interface with the 'TERMINAL' tab selected. The terminal window displays the command `npm install -g http-server` being executed in a PowerShell prompt at `C:\Users\instructor>`. The command is highlighted with a red rectangular box. Below the command, the terminal shows the output: `added 40 packages in 3s`, followed by a message about funding: `11 packages are looking for funding` and `run 'npm fund' for details`. At the bottom, there are four lines of 'npm notice' messages: `npm notice`, `npm notice New minor version of npm available! 9.5.1 -> 9.7.2`, `npm notice Changelog: https://github.com/npm/cli/releases/tag/v9.7.2`, and `npm notice Run npm install -g npm@9.7.2 to update!`. The first 'npm notice' line is partially obscured by a black redaction box.

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

PS C:\Users\instructor> npm install -g http-server

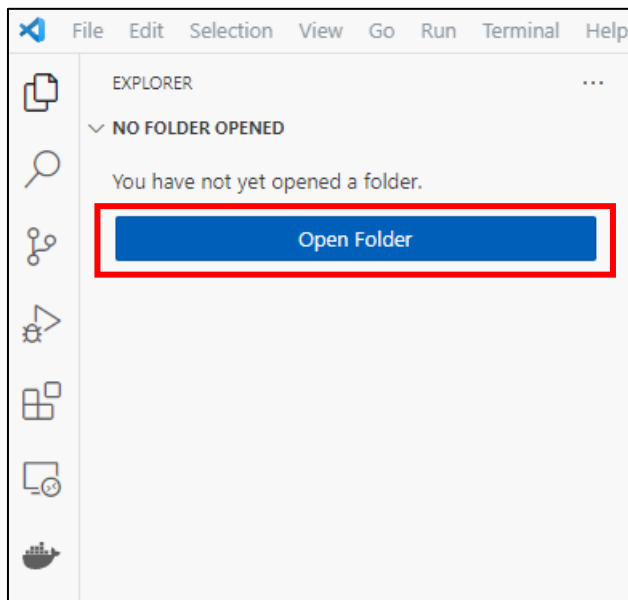
added 40 packages in 3s

11 packages are looking for funding
  run `npm fund` for details

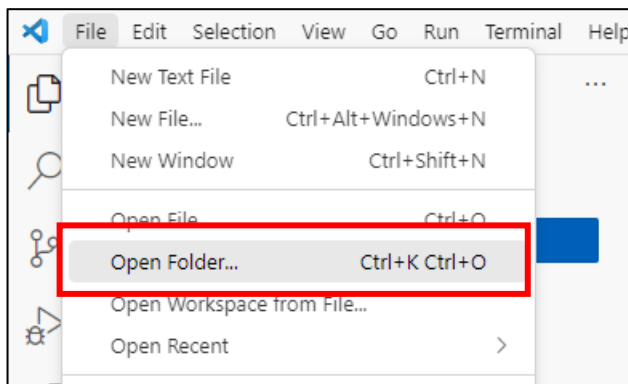
npm notice
npm notice New minor version of npm available! 9.5.1 -> 9.7.2
npm notice Changelog: https://github.com/npm/cli/releases/tag/v9.7.2
npm notice Run npm install -g npm@9.7.2 to update!
npm notice
```

http-server

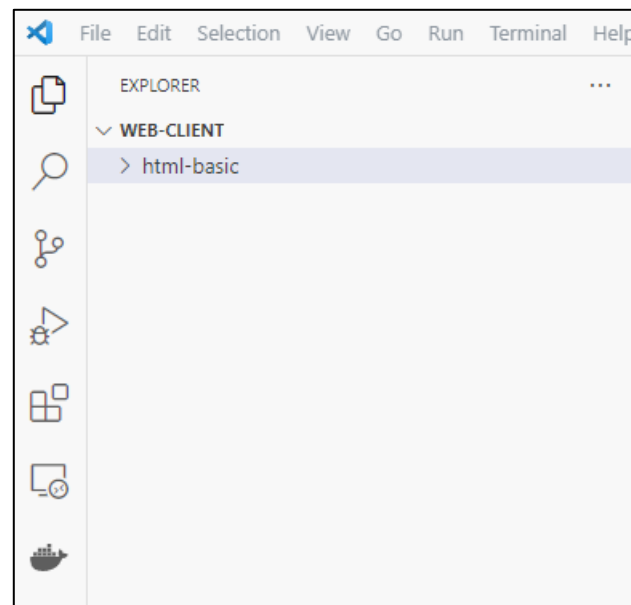
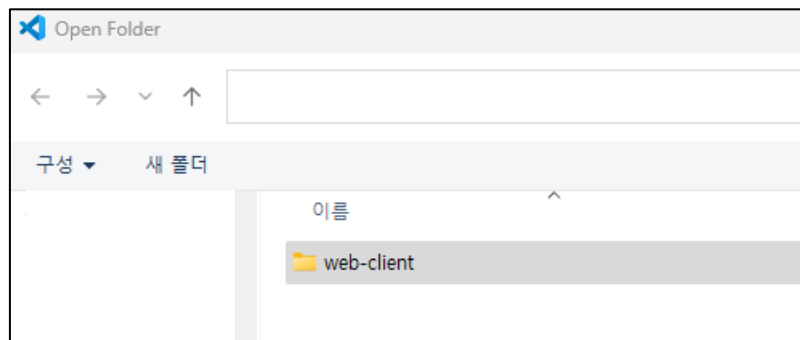
■ 작업 폴더 선택



OR



단축키 CTRL+K CTRL+O



http-server

■ 서버 실행

http-server **./html-basic** **-p 8081**

포트번호 (IP 뒤에 입력하는 식별 번호)

실행 위치 (웹사이트 최상위 경로 폴더 - 지정하지 않으면 현재 경로)

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
PS D:\workspaces\web-client> http-server html-basic -p 8081
Starting up http-server, serving html-basic

http-server version: 14.1.1

http-server settings:
CORS: disabled
Cache: 3600 seconds
Connection Timeout: 120 seconds
Directory Listings: visible
AutoIndex: visible
Serve GZIP Files: false
Serve Brotli Files: false
Default File Extension: none

Available on:
http://192.168.123.111:8081
http://127.0.0.1:8081
Hit CTRL-C to stop the server

█
```

전체 실행 옵션

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
PS D:\workspaces\web-client> http-server --help
usage: http-server [path] [options]

options:
  -p --port      Port to use. If 0, look for open port. [8080]
  -a --address   Address to use [0.0.0.0]
  -d            Show directory listings [true]
  -i            Display autoIndex [true]
  -g --gzip      Serve gzip files when possible [false]
  -b --brotli    Serve brotli files when possible [false]
                 If both brotli and gzip are enabled, brotli takes precedence
                 Can also be specified with the env variable NODE_HTTP_SERVER_PASSWORD
  -S --tls --ssl Enable secure request serving with TLS/SSL (HTTPS)
  -C --cert      Path to TLS cert file (default: cert.pem)
  -K --key       Path to TLS key file (default: key.pem)

  -r --robots    Respond to /robots.txt [User-agent: *\nDisallow: /]
  --no-dotfiles  Do not show dotfiles
  --mimetypes    Path to a .types file for custom mimetype definition
  -h --help      Print this list and exit.
  -v --version   Print the version and exit.

PS D:\workspaces\web-client> █
```

CTRL + Click 또는 브라우저 실행 후 주소 입력