

대학 주도형 아카데미 K-디지털 트레이닝
AI 데이터분석 풀스택 웹 개발자 양성과정

개발환경 설정 및 Git 설정

김경민

(pnumin@pusan.ac.kr)



웹(Web)

- 인터넷(Internet)

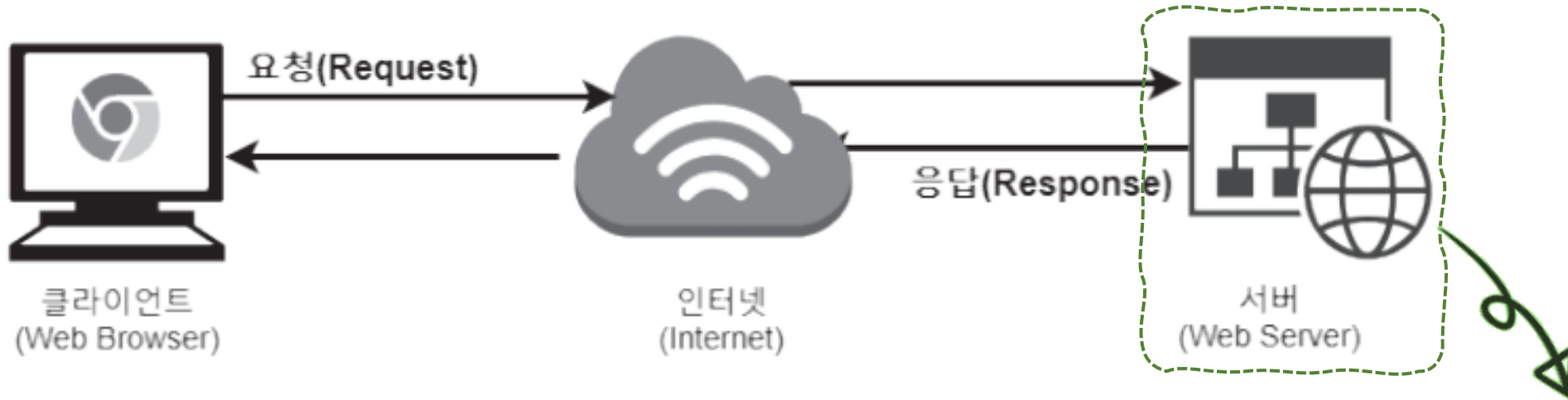
- 전 세계의 여러 네트워크가 서로 연결되어 정보를 주고받을 수 있는 거대한 정보 통로
- TCP/IP라는 일련의 표준화된 프로토콜을 사용하여 다양한 장치와 컴퓨터 시스템을 연결하여 데이터가 이동
- 각 컴퓨터는 고유의 IP 주소를 가지며, 이 주소를 통해 서로를 인식하고 데이터를 주고 받음

- 월드 와이드 웹(World Wide Web, WWW, W3)

- 인터넷에 연결된 컴퓨터를 통해 하이퍼텍스트와 하이퍼미디어를 이용하여 정보를 쉽게 접근하고 탐색할 수 있는 기술
 - 브라우저를 통해 사용자는 다양한 웹 페이지를 탐색하고, 필요한 정보를 찾을 수 있음
- 웹 프로토콜
 - HTTP(Hypertext Transfer Protocol)
 - TCP/IP 위에서 HTTP(Hypertext Transfer Protocol) 라는 프로토콜이 사용하여 클라이언트와 서버 간의 웹 데이터(HTML, CSS, 이미지 등)를 주고 받음
 - HTTPS (Hypertext Transfer Protocol Secure)
 - HTTP의 보안 버전으로, SSL/TLS 암호화 기술을 추가하여 데이터가 전송되는 동안 도청이나 변조를 방지



웹 동작



프론트 엔드(FRONT-END)
사용자가 직접 상호작용하는
웹사이트의 사용자 인터페이스와
관련된 모든 것



백엔드(BACK-END)
웹사이트가 실행되는 서버와 관련된 모든
것을 포함 주로 서버사이드 언어를
사용하여 DB를 다룸



웹 개발 기본 구성 요소



웹 콘텐츠의 구조를 짜고 의미를 부여하는 마크업 언어



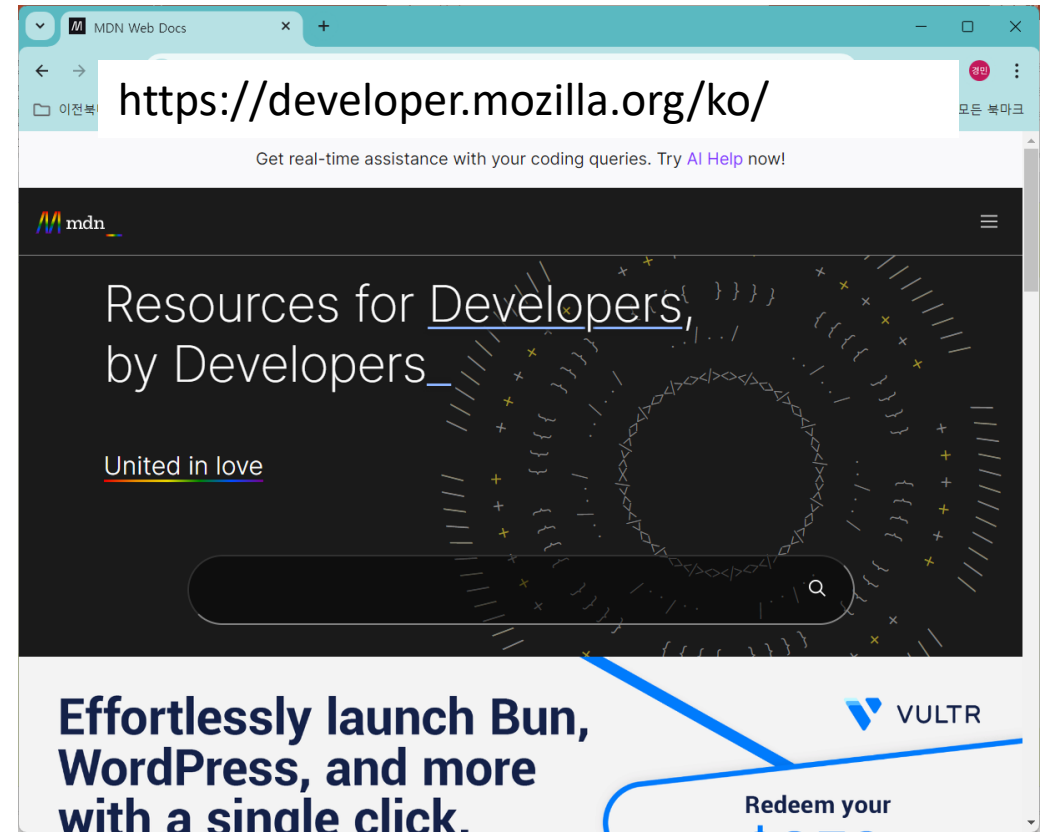
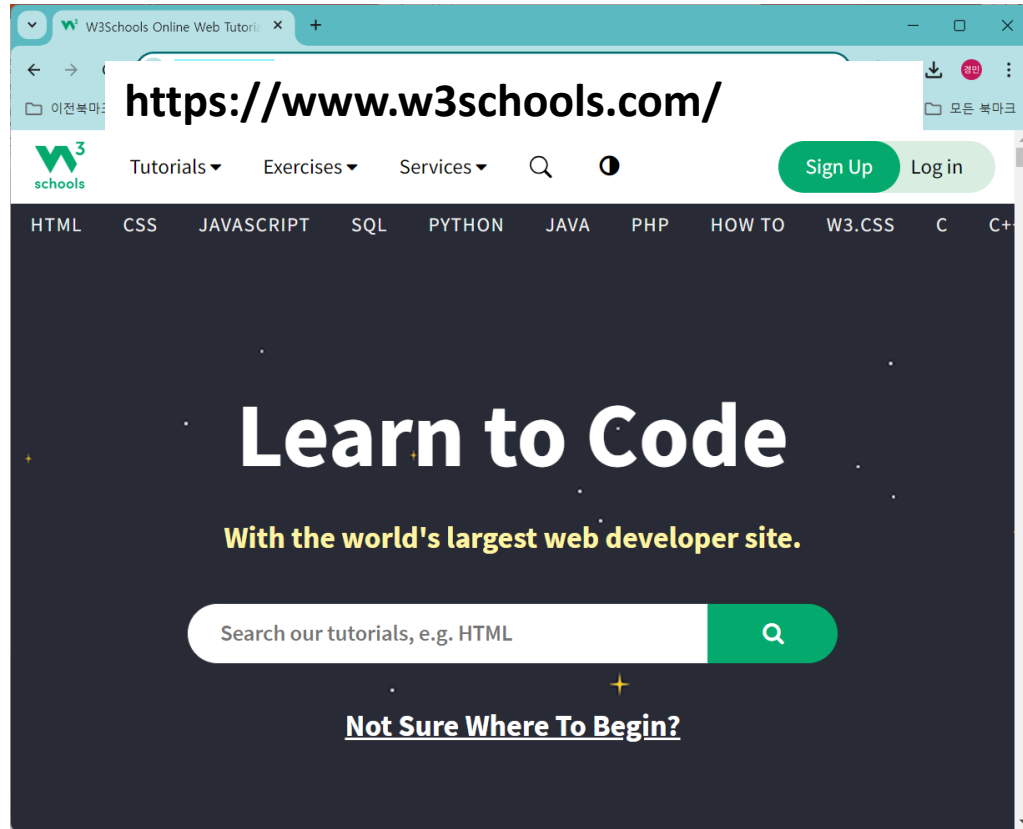
HTML 콘텐츠에 스타일을 적용할 수 있는 스타일 규칙 언어



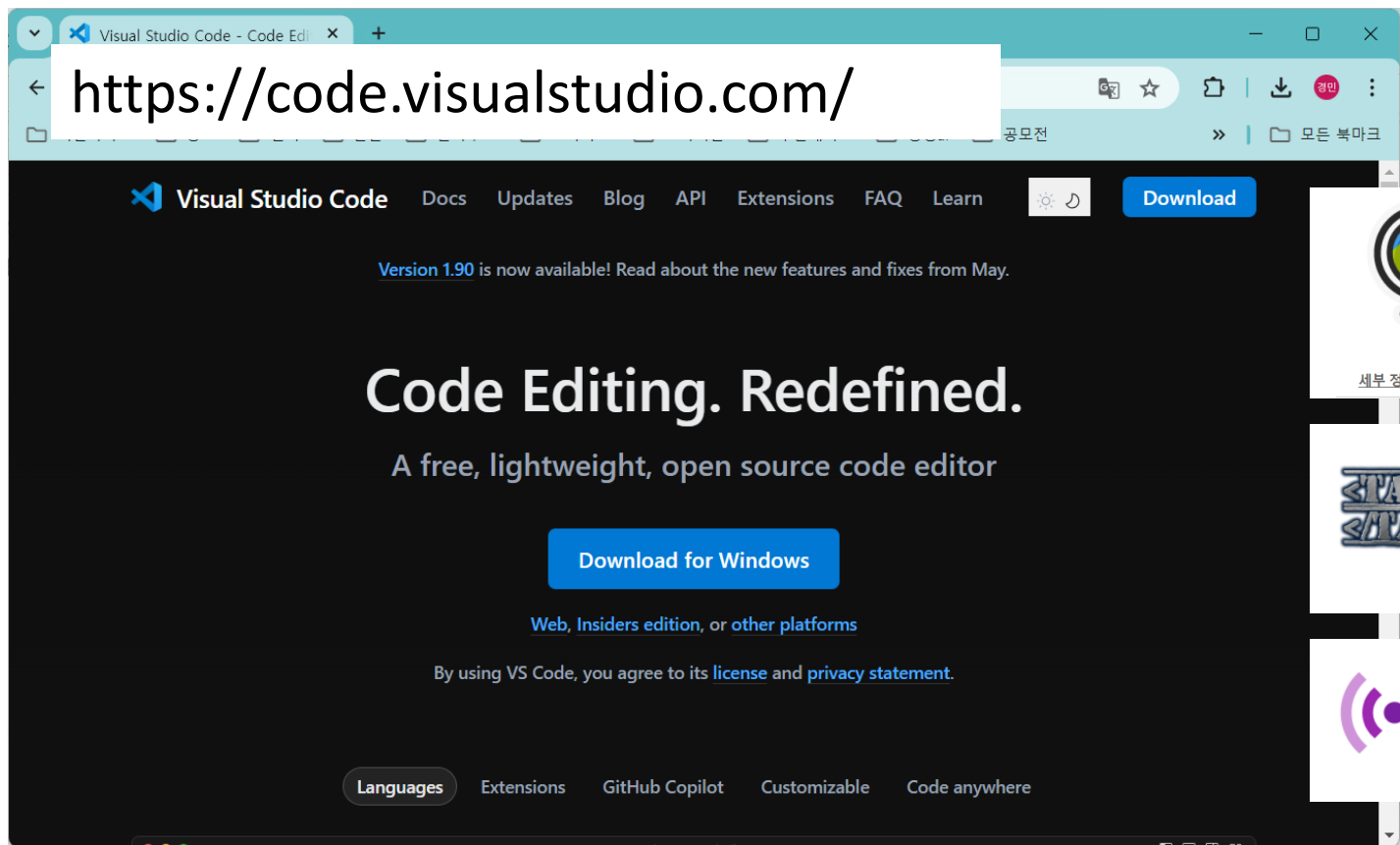
동적으로 콘텐츠를 바꾸고, 멀티미디어를 제어하고, 애니메이션을 추가하는 등 거의 모든 것을 만들 수 있는 스크립팅 언어



참고 사이트



개발환경



Korean Language Pack for Visual Studio Code

Microsoft | 1,743,490 | ★★★★★ (8)

Language pack extension for Korean

제거

이 확장은 전역적으로 사용하도록 설정되었습니다.

세부 정보 기능 기여도 변경 로그 런타임 상태



Auto Rename Tag v0.1.10

Jun Han | 10,447,452 | ★★★★★ (162)

Auto rename paired HTML/XML tag

사용 안 함

이 확장은 전역적으로 사용하도록 설정되었습니다.



Live Server v5.7.9

Ritwick Dey | 25,538,109 | ★★★★★ (391)

Launch a development local Server with live reload feature for static & dynamic pages

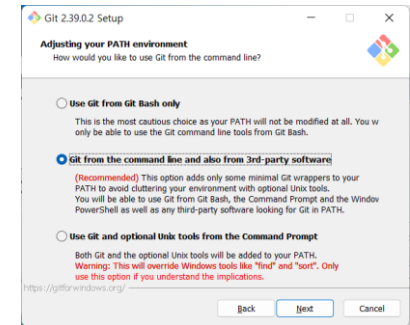
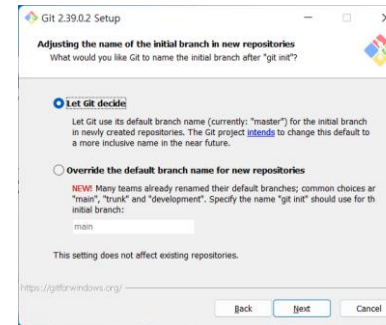
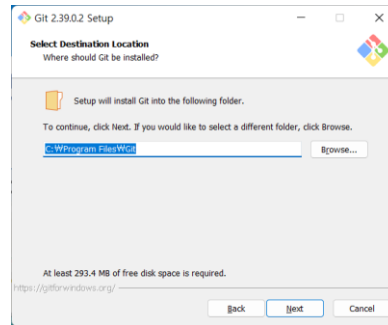
사용 안 함

이 확장은 전역적으로 사용하도록 설정되었습니다.



git 설치

- 소스코드 및 파일의 변경내역을 저장하는 분산 버전 관리 시스템
- Git 설치 (window)



Git 초기화 확인

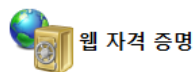
자격 증명 관리자

← → ↕ ↑

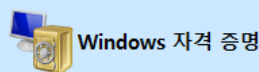
제어판 > 제어판 > 모든 제어판 항목 > 자격 증명 관리자

제어판 홈

웹 사이트, 연결된 응용 프로그램 및 네트워크에 대해 저장된 로그인 정보를 보고 삭제합니다.



웹 자격 증명



Windows 자격 증명

자격 증명 백업(B) 자격 증명 복원(R)

Windows 자격 증명

Windows 자격 증명 추가

SWEC

수정한 날짜: 2023-02-23

인증서 기반 자격 증명

인증서 기반 자격 증명 추가

인증서가 없습니다.

일반 자격 증명

일반 자격 증명 추가

com.ridi.books/global

수정한 날짜: 2023-01-15

git:https://github.com

수정한 날짜: 오늘

인터넷 또는 네트워크 주소: git:https://github.com

사용자 이름: cybermin

암호:

지속성: 로컬 컴퓨터

편집 제거

자격 증명 관리자에서 widows 자격 증명에
이전 git 로그인 정보가 있는지 확인

참고 항목

11071 게시

HTML



CSS



JavaScript



React JS



Git 설정

Git CMD

```
C:\Users\minnote>git --version
git version 2.39.0.windows.2
```

git --version

• 버전확인

```
C:\Users\minnote>git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
core.editor="C:\Users\minnote\AppData\Local\Programs\Microsoft VS Code\bin\code" --wait
```

git config --list

• 설정확인

```
C:\Users\minnote>
```

Git CMD

```
C:\Users\minnote>git config --global user.name "pnumin"
```

```
C:\Users\minnote>git config --global user.email pnumin@pusan.ac.kr
```

초기설정

```
C:\Users\minnote>git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
core.editor="C:\Users\minnote\AppData\Local\Programs\Microsoft VS Code\bin\code" --wait
```

```
user.name=pnumin
user.email=pnumin@pusan.ac.kr
```

```
C:\Users\minnote>
```

참고 : <https://github.com/arslanbilal/git-cheat-sheet/blob/master/other-sheets/git-cheat-sheet-ko.md>



Git을 이용하여 로컬 버전관리

로컬 저장소(내컴퓨터)



1. 워킹디렉토리 생성하고 이동

- mkdir 폴더명
- cd 폴더명

Working디렉토리



2. 워킹디렉토리 초기화

- git init

Staging 영역



3. Git 관리 파일등록

- git add 파일명
- git add .

4. Git 버전 만들기

- git commit -m "버전메시지"

local 레포지토리



```
Git CMD
C:\gtest>dir /a
C 드라이브의 볼륨에는 이름이 없습니다.
볼륨 일련 번호: 82EA-121F

C:\gtest 디렉터리
2023-01-15 오전 11:47 <DIR> .
2023-01-15 오전 11:44 <DIR> ..
2023-01-15 오전 11:47 <DIR> .git
2023-01-15 오전 11:46 244-index.html
1개 파일 244 바이트
3개 디렉터리 794,852,888,576 바이트 남음

C:\gtest>
```

Git 현재 시점 변경

- git checkout (커밋아이디) // 커밋아이디는 git log확인
- git checkout master //최근 커밋 상태로 돌아오기

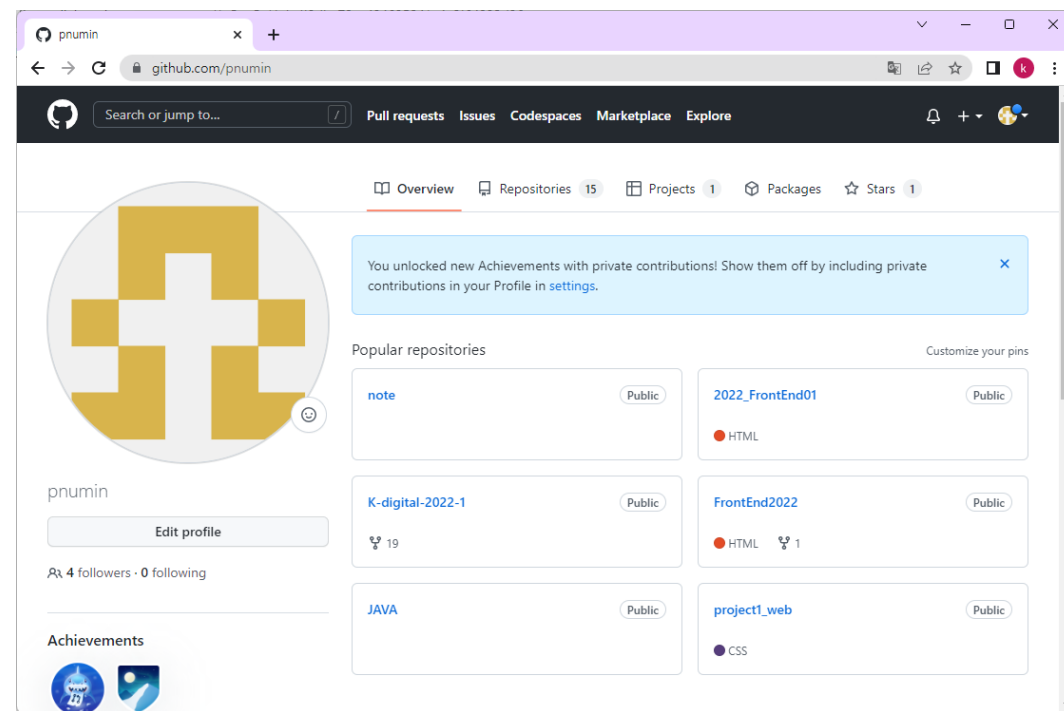
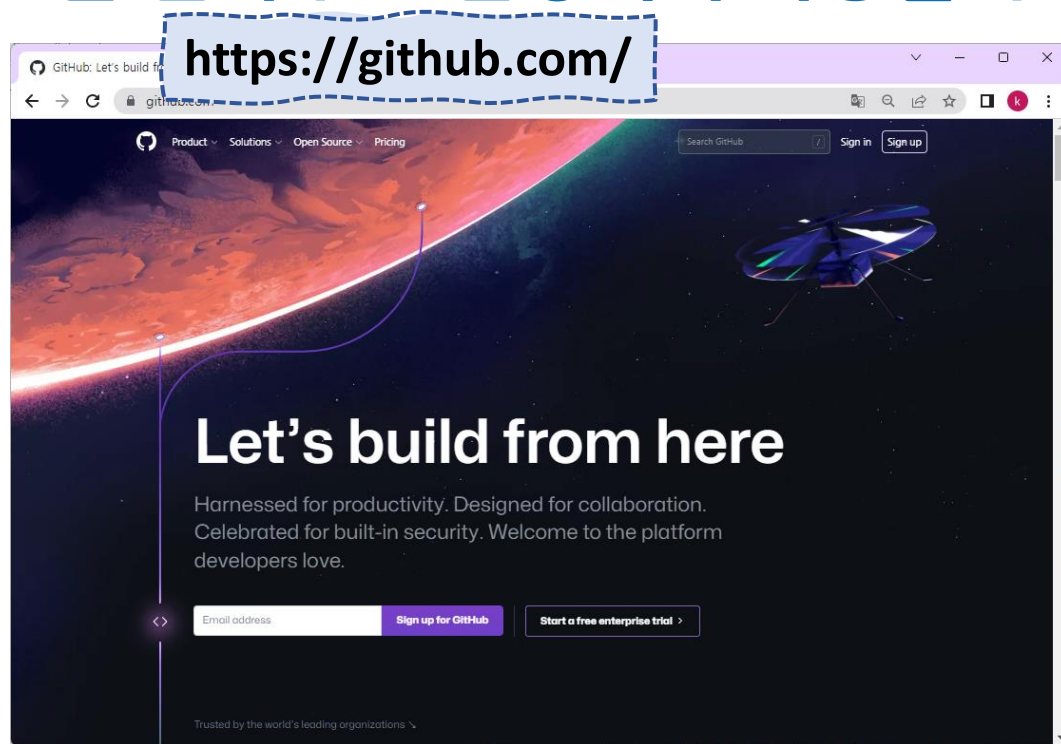
Git 이전 commit으로 돌아가고 이후 commit 삭제

- git reset --hard (커밋아이디)



GitHub 원격 버전관리

- 분산 버전 관리 툴인 Git을 관리해주는 웹 호스팅 서비스가 바로 GitHub
- Git을 클라우드 환경에서 사용할 수 있게 제공하는 공간이 GitHub



GitHub 저장소(repository) 만들기

The image displays three overlapping browser windows illustrating the steps to create a new repository on GitHub.

Left Window (github.com/pnumin): Shows the user's profile page for 'pnumin'. It includes a profile picture, a bio, and a list of popular repositories: 'note', 'K-digital-2022-1', and 'JAVA'. The 'K-digital-2022-1' repository is highlighted.

Middle Window (github.com/new): Shows the 'Create a new repository' page. The 'Repository name' field is filled with 'K-digital-2023-2'. The 'Owner' is 'pnumin'. The 'Description' field is empty. The 'Public' option is selected under 'Initialize this repository with:'. The 'Add a README file' checkbox is checked. The 'Add .gitignore' section shows a dropdown menu with 'None' selected. The 'Choose a license' section shows a dropdown menu with 'None' selected. A green 'Create repository' button is at the bottom.

Right Window (github.com/pnumin/K-digital-2023-2): Shows the newly created repository page. It includes a 'Quick setup' section with instructions for setting up on a desktop, using HTTPS or SSH, and creating a new repository on the command line. The command line instructions are:

```
echo "# K-digital-2023-2" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/pnumin/K-digital-2023-2.git
git push -u origin main
```

At the bottom right, there are icons for various programming languages: Python, JavaScript, Java, and C++.

로컬저장소와 원격저장소 연결

• 로컬저장소에 자료가 있는 경우

The image illustrates the process of connecting a local Git repository to a remote GitHub repository. It consists of three main components:

- Terminal Window (Left):** Shows the initial setup of a local repository. The commands entered are:

```
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/pnumin/K-digital-2023-2.git
git push -u origin main
```
- Terminal Window (Middle):** Shows the output of the commands. The commands entered are:

```
C:\Wgtest>git remote add origin https://github.com/pnumin/K-digital-2023-2.git
C:\Wgtest>git branch -M main
C:\Wgtest>git push -u origin main
```

The output shows the repository being pushed to the remote origin.

```
info: please complete authentication in your terminal
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 380 bytes | 380.0 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/pnumin/K-digital-2023-2.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
C:\Wgtest>
```
- GitHub Repository Page (Right):** Shows the repository page for 'pnumin/K-digital-2023-2'. The 'Code' tab is selected, and the 'main' branch is shown. The 'Add a README' button is highlighted.

Red dashed boxes highlight the commands in the terminal and the 'git push' command in the GitHub repository page. An orange arrow points from the terminal to the GitHub page.

로컬저장소와 원격저장소 연결

• 원격저장소에 자료가 있는 경우

```
Git CMD
C:\Wgtest>
C:\Wgtest>mkdir p1

C:\Wgtest>cd p1

C:\Wgtest\p1>git clone https://github.com/pnmin/project1_web.git
Cloning into 'project1_web'...
remote: Enumerating objects: 25, done.
remote: Counting objects: 100% (25/25), done.
remote: Compressing objects: 47% (11/23)
remote: Compressing objects: 52% (12/23)Receiving objects:
remote: Compressing objects: 100% (23/23), done.
remote: Total 25 (delta 2), reused 15 (delta 0), pack-reused
Receiving objects: 68% (17/25)
Receiving objects: 100% (25/25), 47.62 KiB | 4.33 MiB/s, don
e.
Resolving deltas: 100% (2/2), done.
C:\Wgtest\p1>_
```

```
EXPLORER
GTEST
p1\project1_web
  images
  styles
  index.html
  README.md
  README.md

index.html X
p1 > project1_web > index.html > ...
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title>K디지털 웹</title>
5 <meta name="viewport" content="width=device-width, initial-scale=1.0">
6 <link rel="stylesheet" href="/styles/index.css">
7 <link rel="stylesheet" href="/styles/nav.css">
8 <link rel="stylesheet" href="/styles/header.css">
9 <!--웹아이콘가져오기-->
10 <script src="https://kit.fontawesome.com/74df50e688.js" crossorigin="anonymou
11 <!--웹폰트-->
12 <link rel="preconnect" href="https://fonts.googleapis.com">
13 <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
14 <link href="https://fonts.googleapis.com/css2?family=Dongle&family=Nanum+Goth
15 </head>
16 <body>
17 <nav>
18 <div class="nav_logo">
19 <p>mylogo</p>
20 </div>
21 <ul class="nav_menu">
22 <li><a href="#">HTML</a></li>
23 <li><a href="#">CSS</a></li>
24 <li><a href="#">JavaScript</a></li>
25 <li><a href="#">React</a></li>
26 </ul>
27 <ul class="nav_icon">
28 <li><i class="fa-brands fa-facebook-f"></i></li>
29 <li><i class="fa-brands fa-square-instagram"></i></li>
30 </ul>
31 </nav>
32 </body>
```



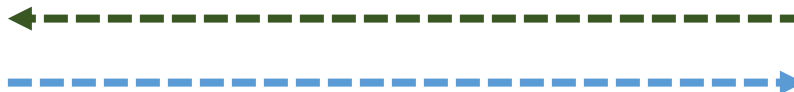
로컬저장소와 원격저장소

로컬 저장소(내컴퓨터)



원격저장소 자료 가져오기

- git pull origin main



원격저장소에 자료 올리기

- git push origin main

원격 저장소



```
Git CMD
C:\#gtest>git add .
C:\#gtest>git commit -m "local 자료 수정1"
[main c0e5a2a] local 자료 수정1
1 file changed, 1 insertion(+), 1 deletion(-)
C:\#gtest>git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 355 bytes | 355.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local
object.
To https://github.com/pnumin/K-digital-2023-2.git
4558dfb..c0e5a2a main -> main
C:\#gtest>
```



GitHub로 웹 호스팅

Pages

github.com/pnumin/testp2/settings/pages

Search or jump to... Pull requests Issues Codespaces Marketplace Explore

pnumin / testp2 Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Actions

Webhooks

Environments

Codespaces

Pages

Security

Code security and analysis

Deploy keys

Secrets and variables

GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

Build and deployment

Source

Deploy from a branch

Branch

Your GitHub Pages site is currently being built from the main branch. [Learn more.](#)

main / (root) Save

[Learn how to add a Jekyll theme to your site.](#)

Custom domain

Custom domain

Custom domains allow you to serve your site from a domain other than pnumin.github.io. [Learn more.](#)

Save Remove

DNS records should point to the [internationalized domain name](#).

pages build and deployment · pnumin / testp2

github.com/pnumin/testp2/actions/runs/3923232550

Search or jump to... Pull requests Issues Codespaces Marketplace Explore

pnumin / testp2 Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

pages build and deployment #1

Re-run all jobs

Summary

Triggered via dynamic 1 minute ago

Status Success

Total duration 52s

Artifacts 1

Jobs

- build
- report-build-status
- deploy

Run details

Usage

pages-build-deployment on: dynamic

build 22s

report-build-status 2s

deploy 7s

<https://pnumin.github.io/testp2/>

Artifacts

Script React JS



원본 원격저장소 복사

복사할 원격 저장소

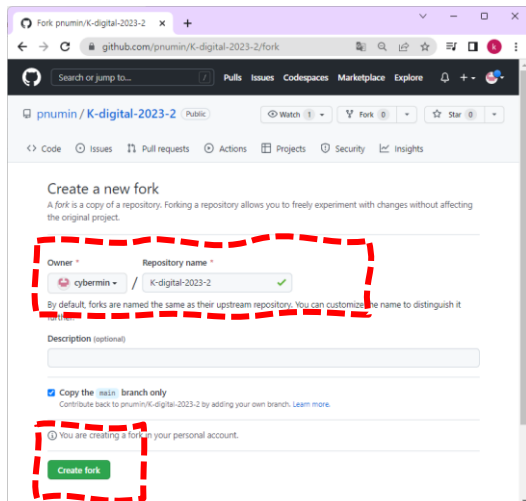
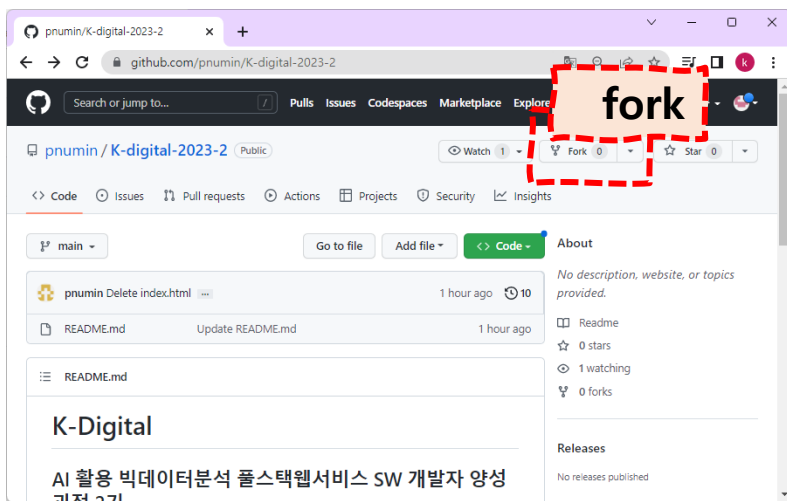


1. 본인의 원격저장소에서
복사할 원격저장소로 이동

본인의 원격 저장소

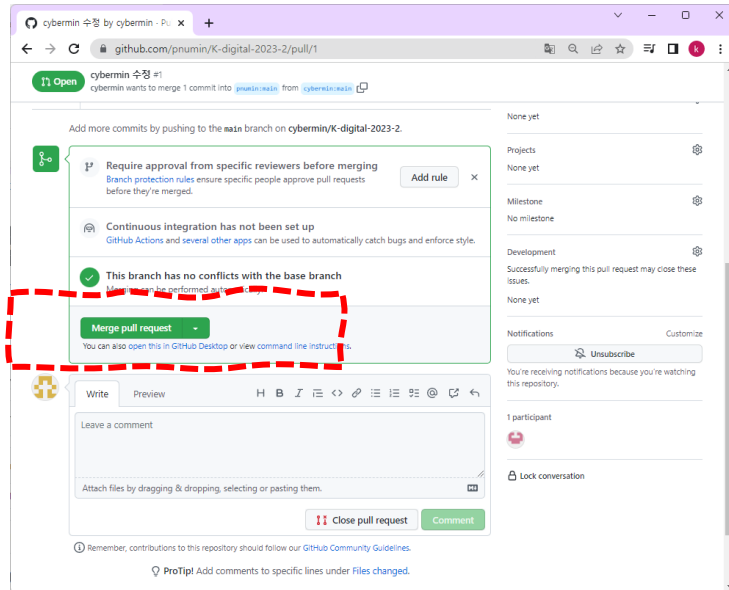


2. fork



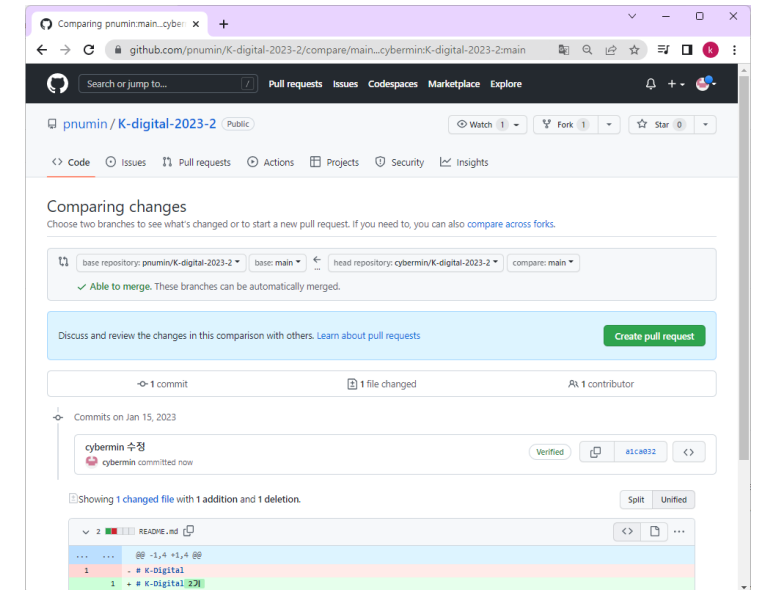
원본 원격저장소 복사

복사할 원격 저장소



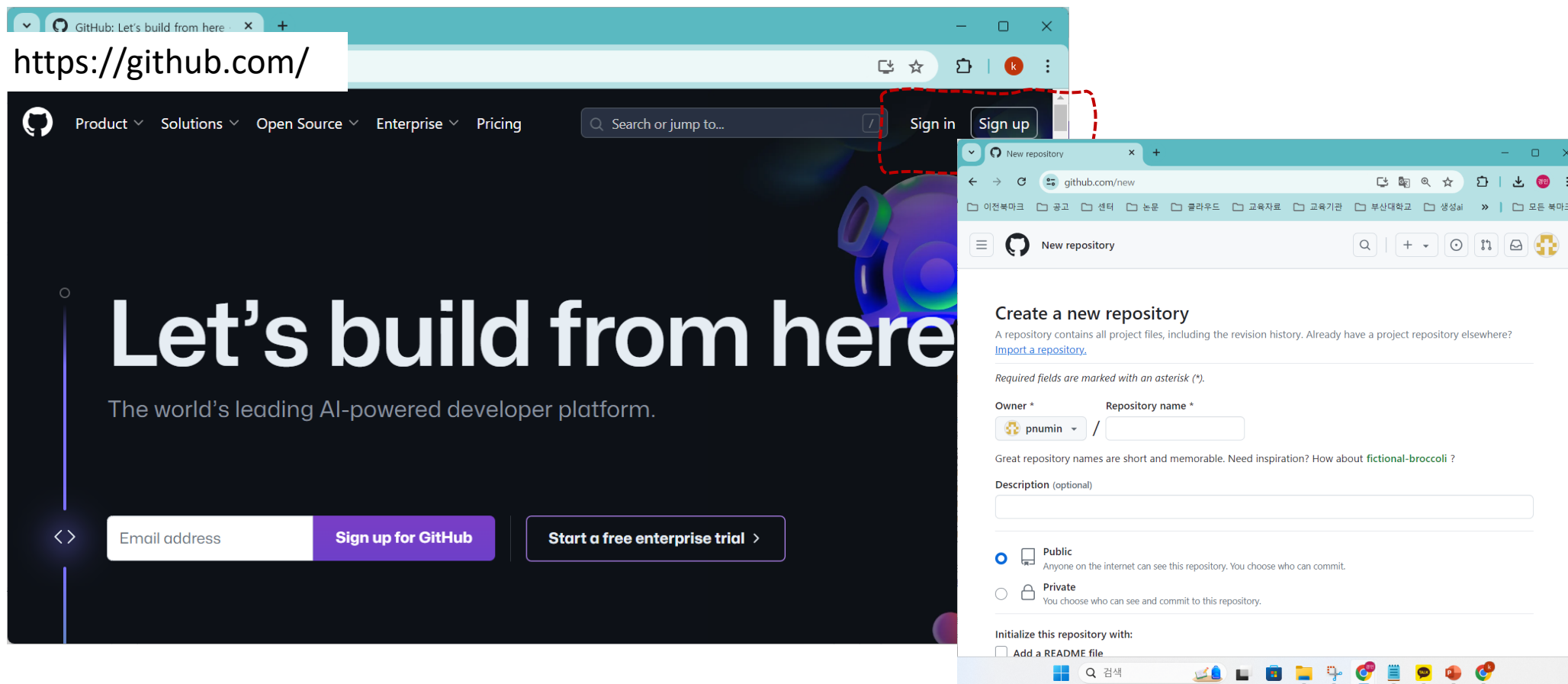
3. 본인의 원격저장소에서
수정후 pull requests보내기

본인의 원격 저장소



4. 수정내용 반영

GitHub 원격 버전관리



github와 로컬 디렉토리 연결

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Required fields are marked with an asterisk (*).

Owner * pnumin / Repository name * web_basic
web_basic is available.

Great repository names are short and memorable. Need inspiration? How about [solid-spoon](#)?

Description (optional)

<https://github.com/> 접속하여
새로운 repository 생성

☒ Public
Anyone on the internet can see this repository. You choose who can commit.

☐ Private
You choose who can see and commit to this repository.

Initialize this repository with:

☒ Add a README file
This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore

.gitignore template: None

Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

Choose a license

License: None

A license tells others what they can and can't do with your code. [Learn more about licenses.](#)

This will set main as the default branch. Change the default name in your [settings](#).

① You are creating a public repository in your personal account.

Create repository

pnumin / web_basic

<> Code Issues Pull requests Actions Projects Wiki Security Insights Settings

web_basic Public

Pin Unwatch 1 Fork 0 Star 0

main

Go to file

Code

Code

HTTPS SSH GitHub CLI

https://github.com/pnumin/web_basic.git

Clone using the web URL

Open with GitHub Desktop

Download ZIP

README

web_basic

About

No description, website, or topics provided.

Readme

Activity

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

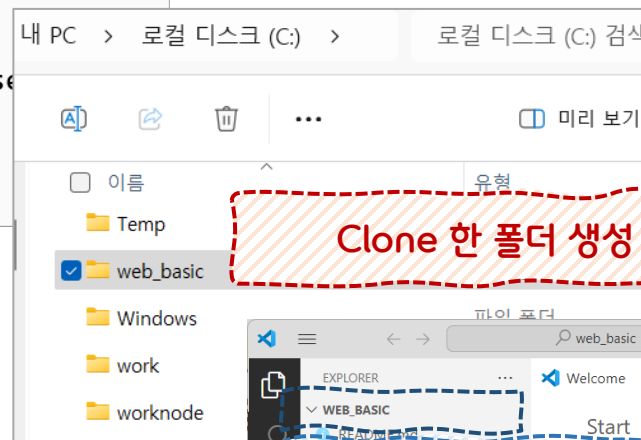


github와 로컬 디렉토리 연결

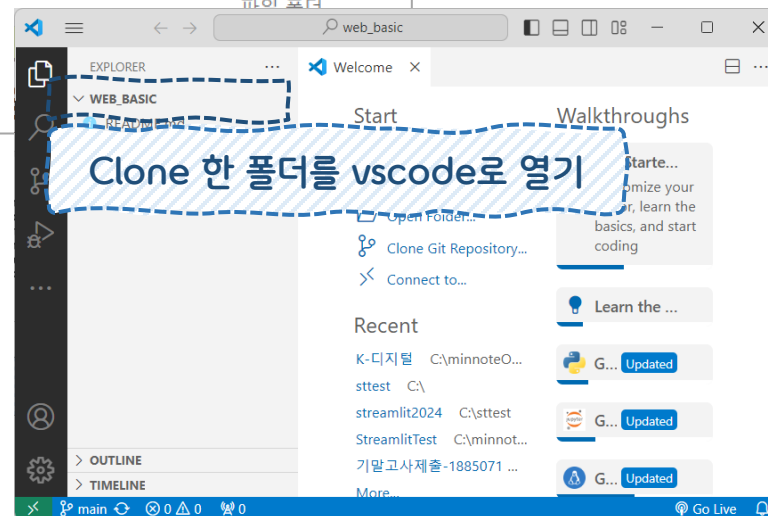
```
c:\>git clone https://github.com/pnumin/web_basic.git
Cloning into 'web_basic'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reuse 0
Receiving objects: 100% (3/3), done.

c:\>
```

명령 프롬프트에서 git clone



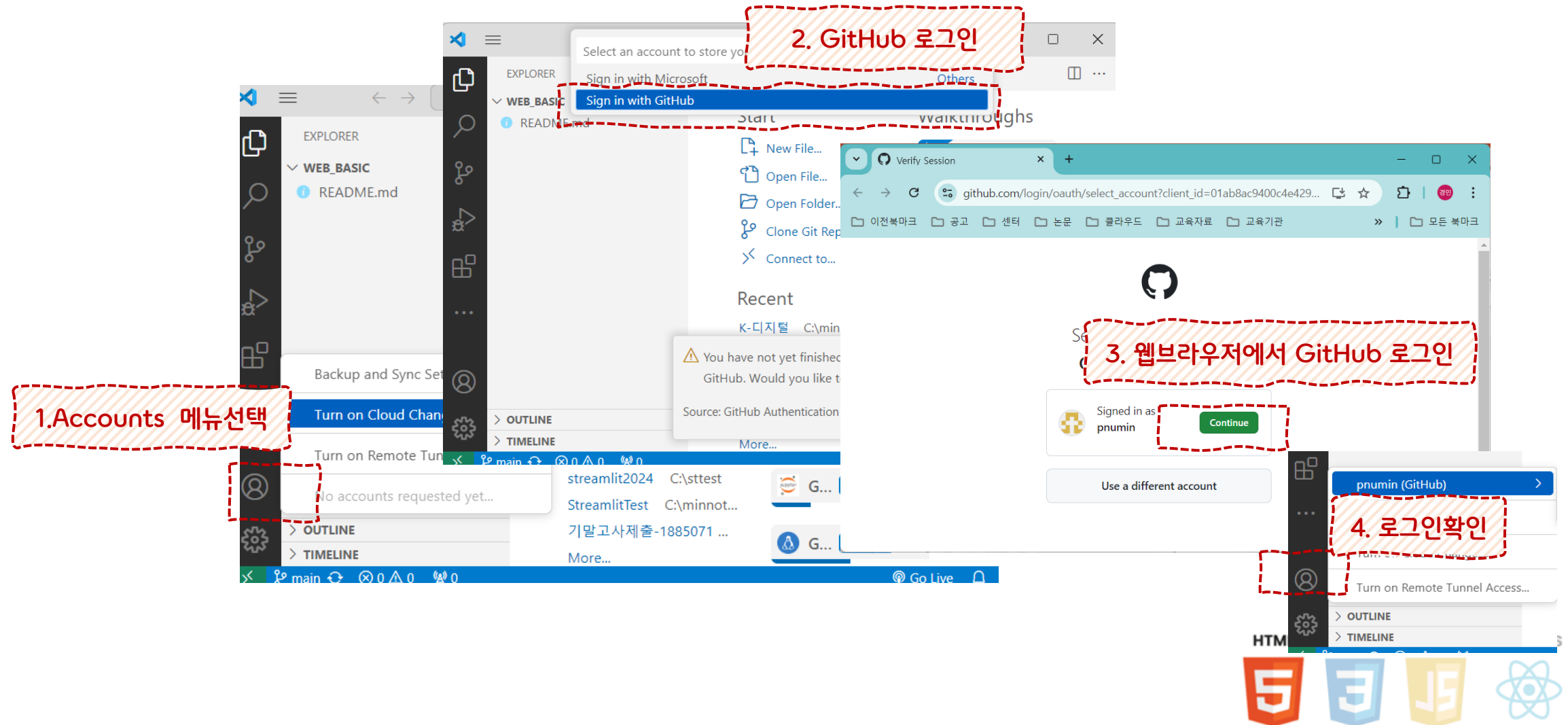
Clone 한 폴더를 vscode로 열기



SS JavaScript React JS



VSCode git 설정



VSCode git 설정



VSCode git 설정

The image illustrates the process of setting up Git in VS Code and pushing code to GitHub, divided into four numbered steps:

- 1. 파일을 수정하고 저장한 후 선택** (After editing the file and saving, select): This step shows the VS Code interface where the 'Commit' button is highlighted in the Source Control panel.
- 2. Commit 메시지 작성하고 Commit & Push** (Write commit message and Commit & Push): This step shows the 'Commit' dropdown menu in the Source Control panel, with 'Commit & Push' selected.
- 3. GitHub 저장소 연결** (Connect to GitHub repository): This step shows the GitHub repository page for 'web_basic' by 'pnumin', indicating the repository is connected.
- 4. 수정내용 확인** (Check the modified content): This step shows the 'web_basic' repository page, highlighting the '01 환경설정' (01 Environment Setup) file, which is the content that was pushed.