

Git & GitHub

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Geon

✓ 목차

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2. Git 설치
3. GitHub 사용하기
4. Git & RStudio 연동
5. Commit

1. Git & GitHub 이란?

Git

출처 : [https://ko.wikipedia.org/wiki/깃_\(소프트웨어\)](https://ko.wikipedia.org/wiki/깃_(소프트웨어))

- 분산 버전 관리 시스템으로 소프트웨어 개발에서 소스 코드 관리에 주로 사용
- 분산 버전 관리 시스템으로서 빠른 수행 속도에 중점
- 데이터 무결성, 분산, 비선형 워크플로를 지원



GitHub

출처 : <https://ko.wikipedia.org/wiki/깃허브>

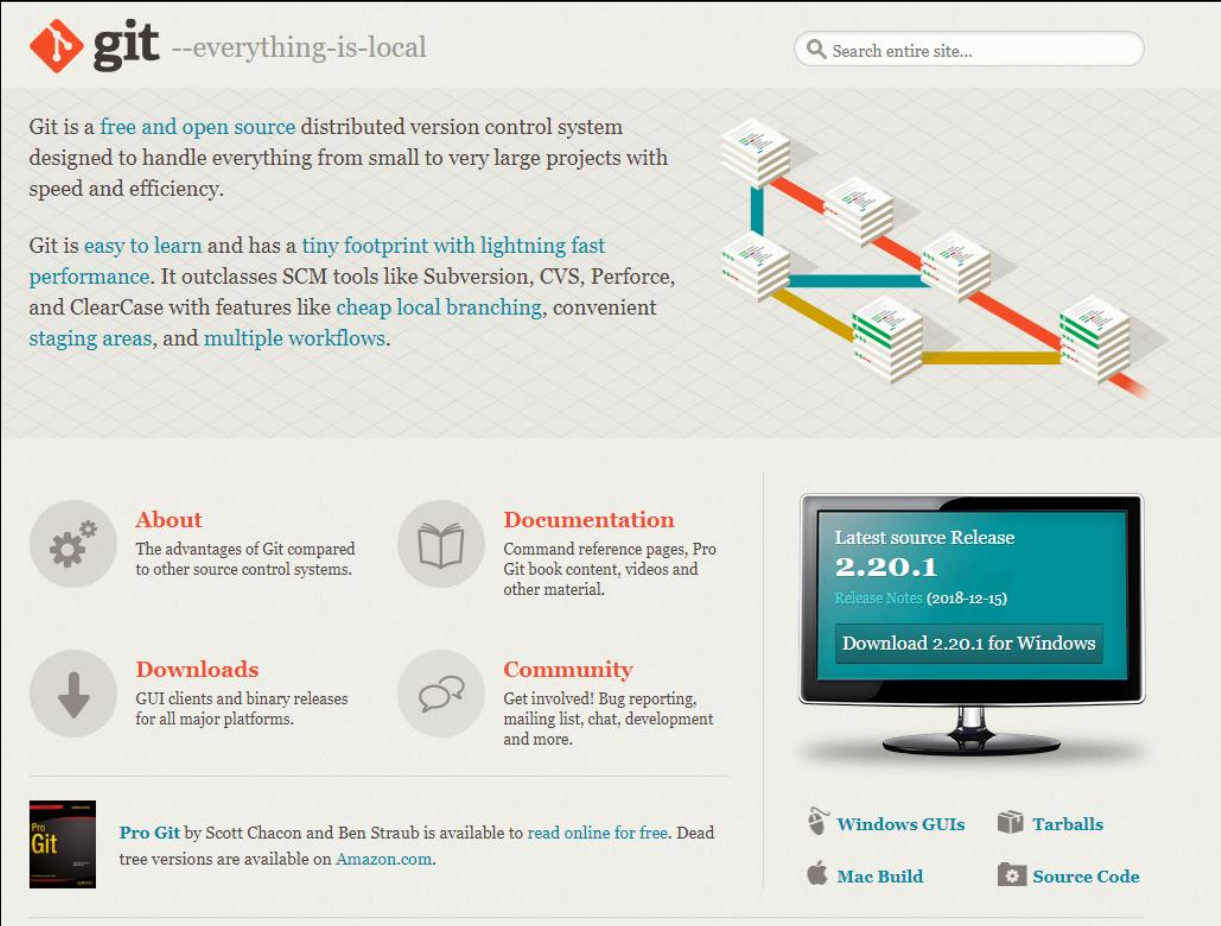
- 분산 버전 관리 툴(Git)을 사용하는 프로젝트를 지원하는 웹호스팅 서비스
- Git은 텍스트 명령어 입력 방식인데 반해, GitHub는 그래픽 유저 인터페이스(GUI) 제공



2. Git 설치

Git 사이트

<https://www.git-scm.com/>



The screenshot shows the Git website homepage. At the top left is the Git logo with the tagline "--everything-is-local". To the right is a search bar. Below the logo, there is a paragraph describing Git as a free and open source distributed version control system. To the right of this text is a diagram showing a branching model with stacks of code and colored lines representing branches. Below the description, there are four main sections: "About", "Documentation", "Downloads", and "Community", each with an icon and a brief description. On the right side, there is a monitor displaying the latest source release (2.20.1) and a button to download for Windows. At the bottom left, there is a book cover for "Pro Git" and a link to read it online for free. At the bottom right, there are links for Windows GUIs, Tarballs, Mac Build, and Source Code.

git --everything-is-local

Search entire site...

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**.

About
The advantages of Git compared to other source control systems.

Documentation
Command reference pages, Pro Git book content, videos and other material.

Downloads
GUI clients and binary releases for all major platforms.

Community
Get involved! Bug reporting, mailing list, chat, development and more.

Latest source Release
2.20.1
Release Notes (2018-12-15)
Download 2.20.1 for Windows

Pro Git
by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

Windows GUIs Tarballs
Mac Build Source Code

2. Git 설치

Git 사이트

<https://www.git-scm.com/>

The screenshot shows the Git website's 'Downloading Git' page. The header features the Git logo and the tagline '--fast-version-control'. A search bar is located in the top right corner. The left sidebar contains navigation links: 'About', 'Documentation', 'Downloads' (highlighted), 'GUI Clients', 'Logos', and 'Community'. Below the sidebar, there is a box mentioning the 'Pro Git book' by Scott Chacon and Ben Straub, available online for free, with links to read it or purchase it on Amazon.com. The main content area is titled 'Downloading Git' and features a large downward arrow icon. The text states: 'Your download is starting... You are downloading the latest (2.20.1) 64-bit version of Git for Windows. This is the most recent maintained build. It was released about 2 months ago, on 2018-12-15. If your download hasn't started, click here to download manually.' Below this, there is a section for 'Other Git for Windows downloads' with links for 'Git for Windows Setup', '32-bit Git for Windows Setup', '64-bit Git for Windows Setup', 'Git for Windows Portable ("thumbdrive edition")', '32-bit Git for Windows Portable', and '64-bit Git for Windows Portable'. At the bottom, it mentions the current source code release is version 2.20.1 and provides a link to the source code.

git --fast-version-control

Search entire site...

About

Documentation

Downloads


GUI Clients

Logos

Community

The entire **Pro Git book** written by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

Downloading Git

 **Your download is starting...**

You are downloading the latest (2.20.1) 64-bit version of **Git for Windows**. This is the most recent **maintained build**. It was released **about 2 months ago**, on 2018-12-15.

If your download hasn't started, [click here to download manually](#).

Other Git for Windows downloads

Git for Windows Setup

[32-bit Git for Windows Setup](#).

[64-bit Git for Windows Setup](#).

Git for Windows Portable ("thumbdrive edition")

[32-bit Git for Windows Portable](#).

[64-bit Git for Windows Portable](#).

The current source code release is version 2.20.1. If you want the newer version, you can build it from [the source code](#).

2. Git 설치

Git 설치

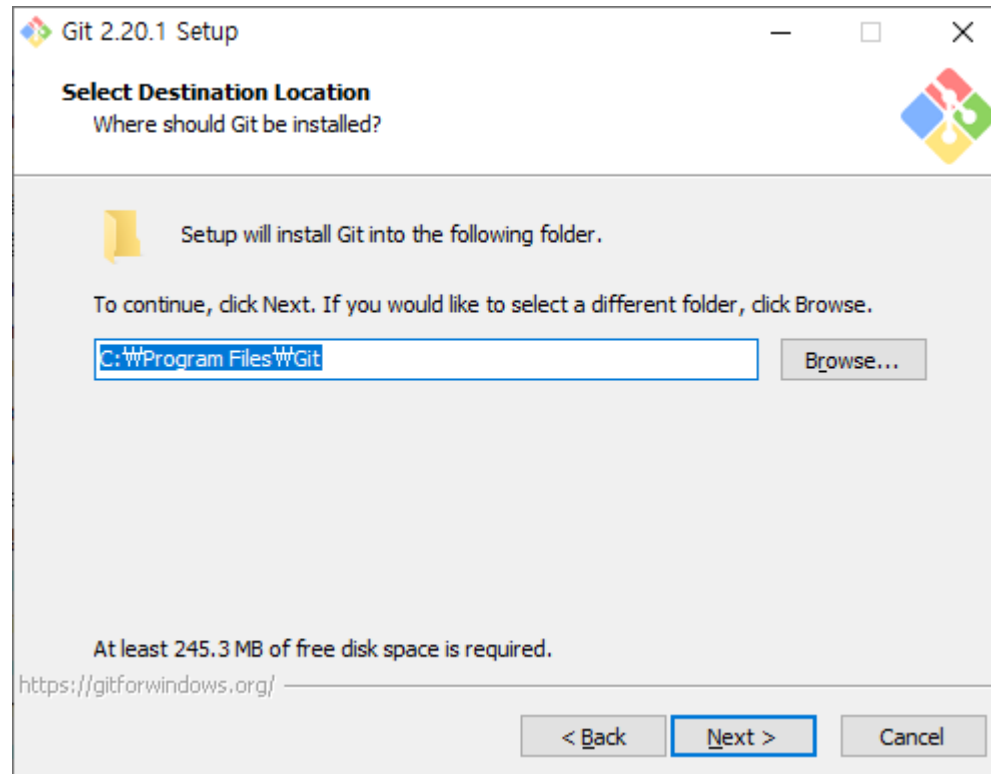
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

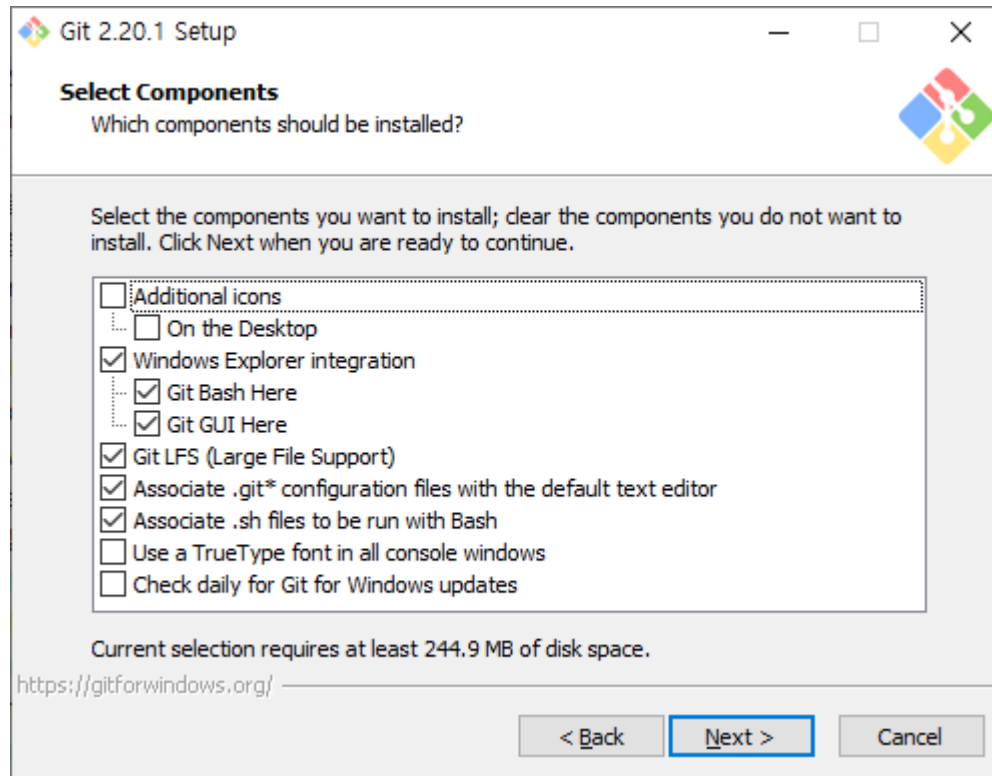
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

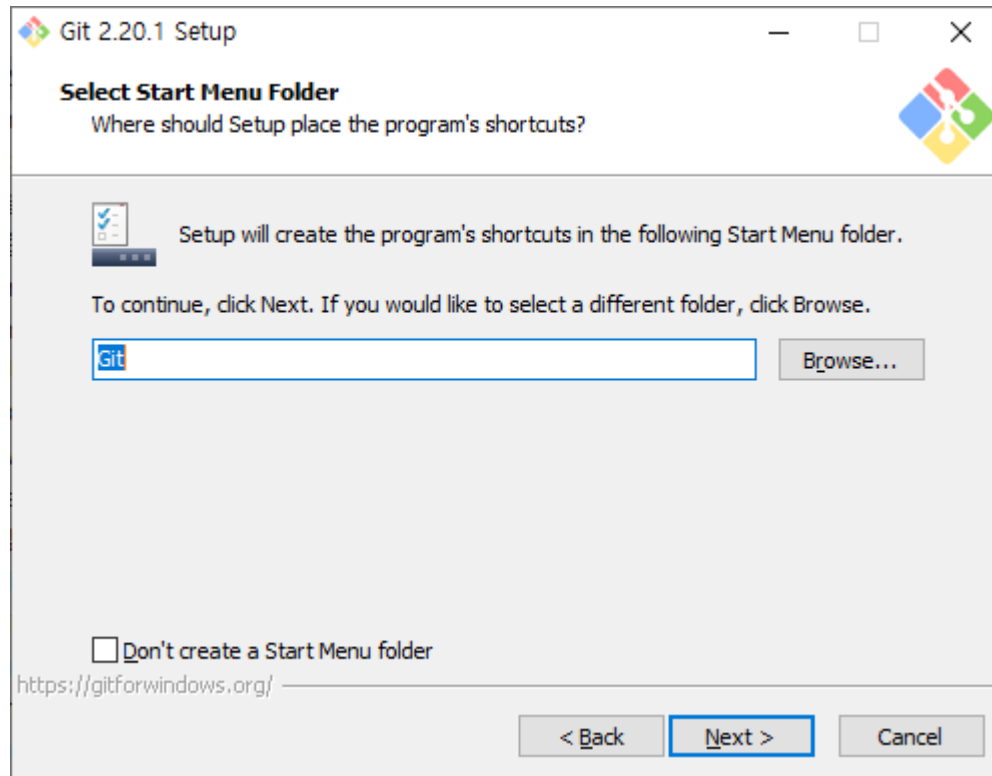
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

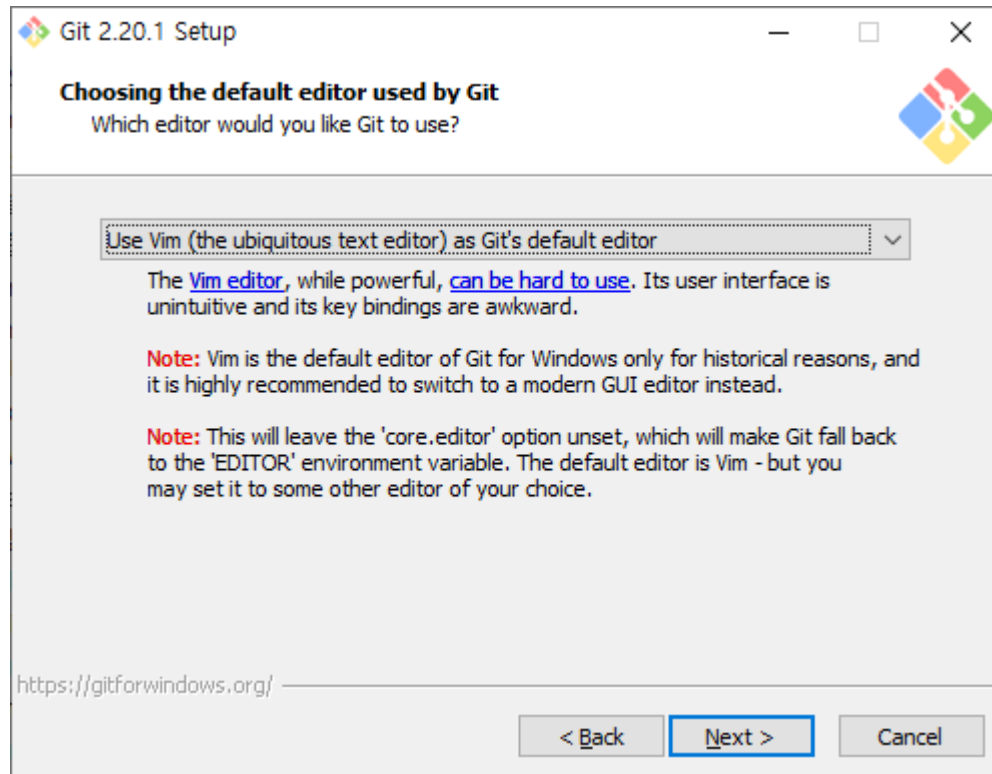
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

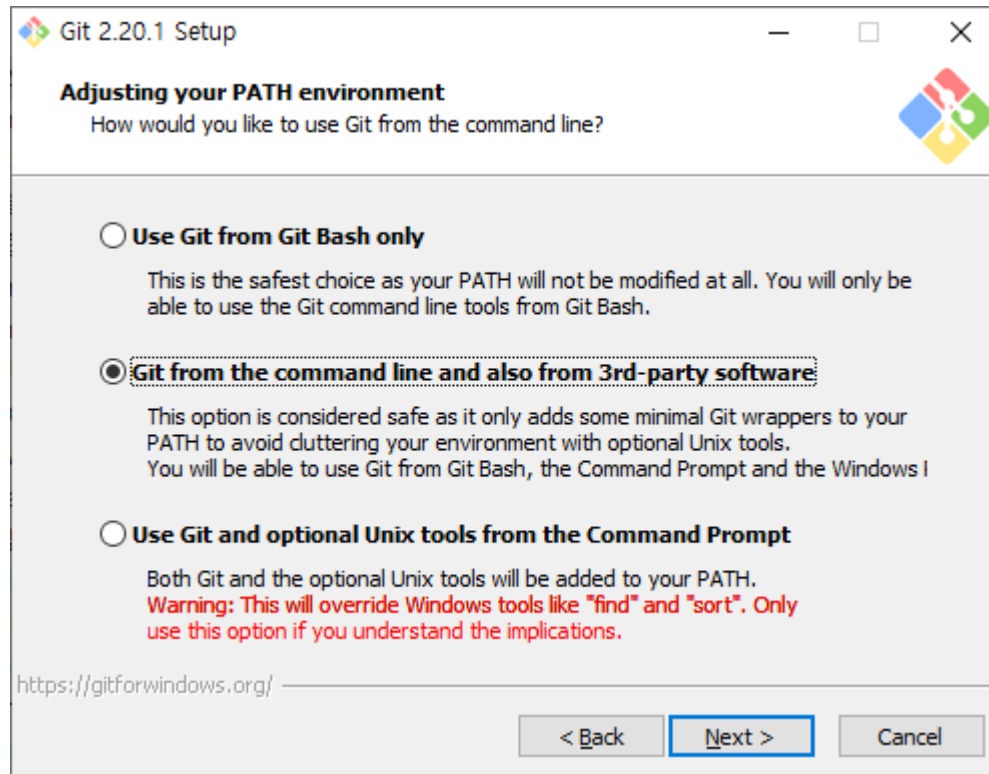
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

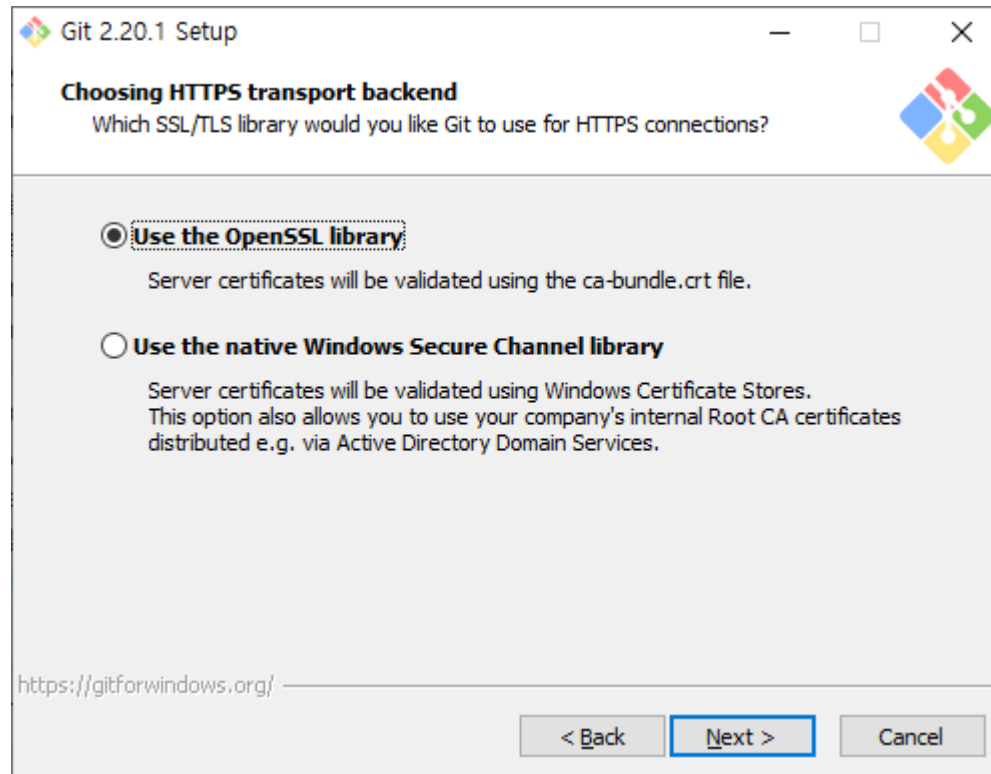
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

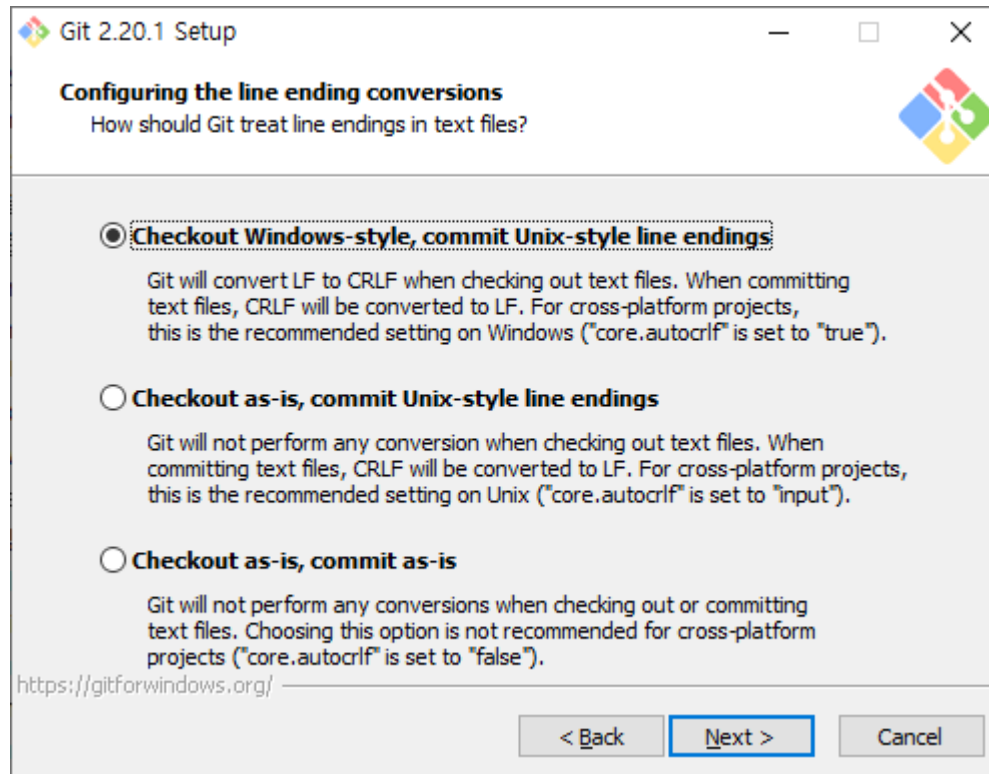
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

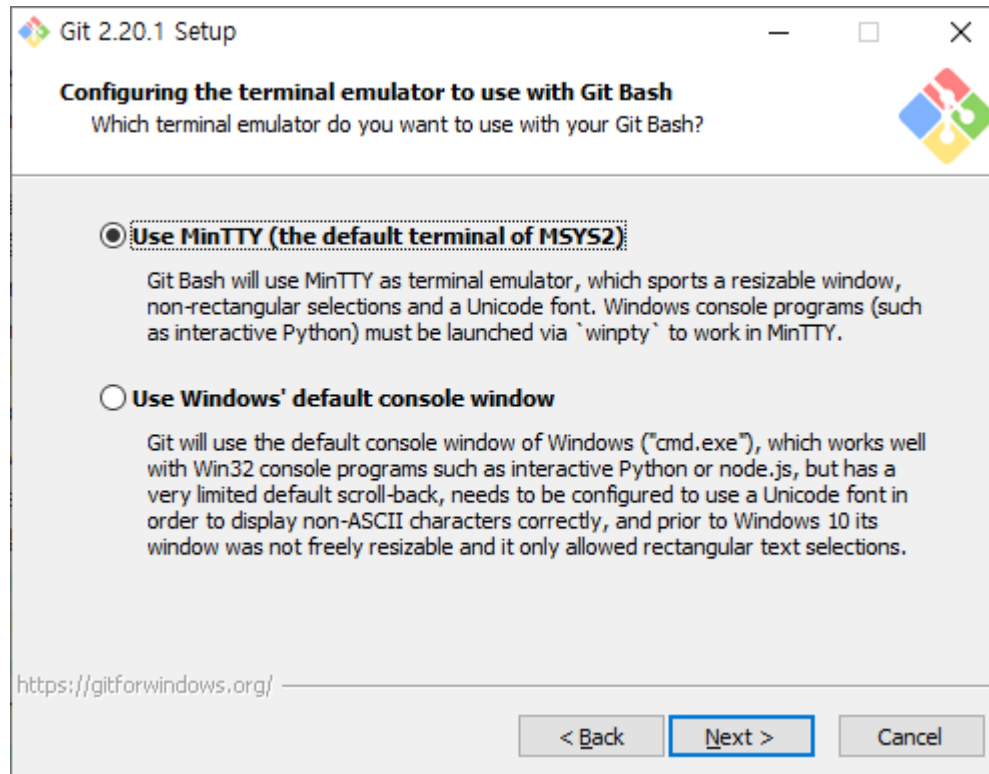
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

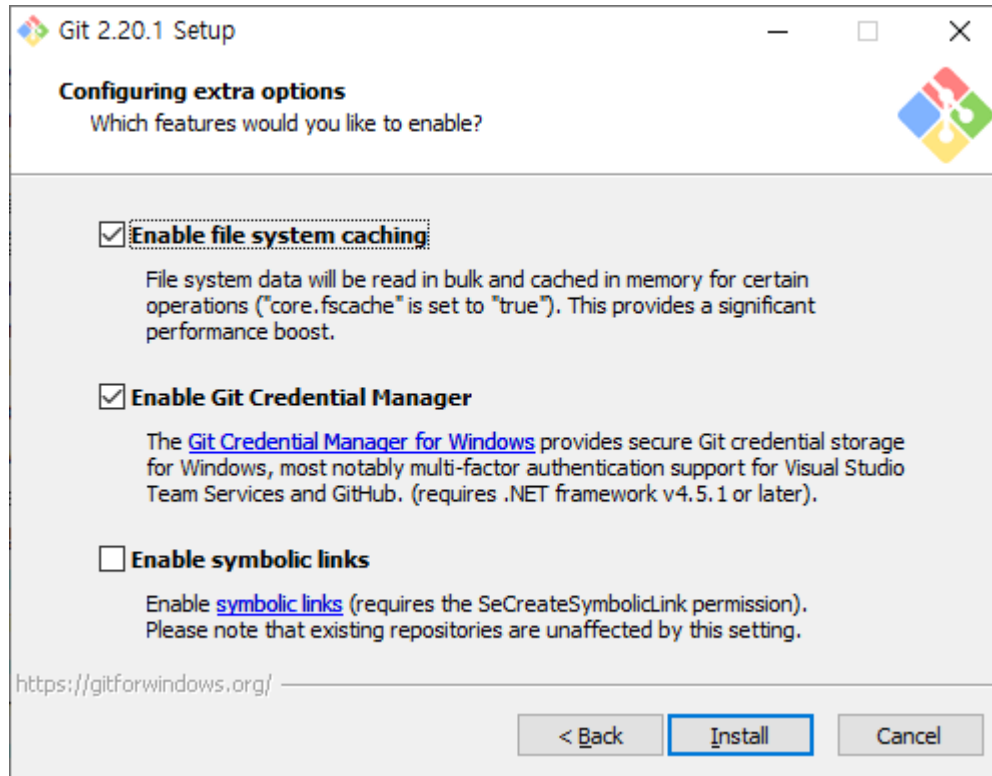
Git-2.20.1-64-bit.exe



2. Git 설치

Git 설치

Git-2.20.1-64-bit.exe

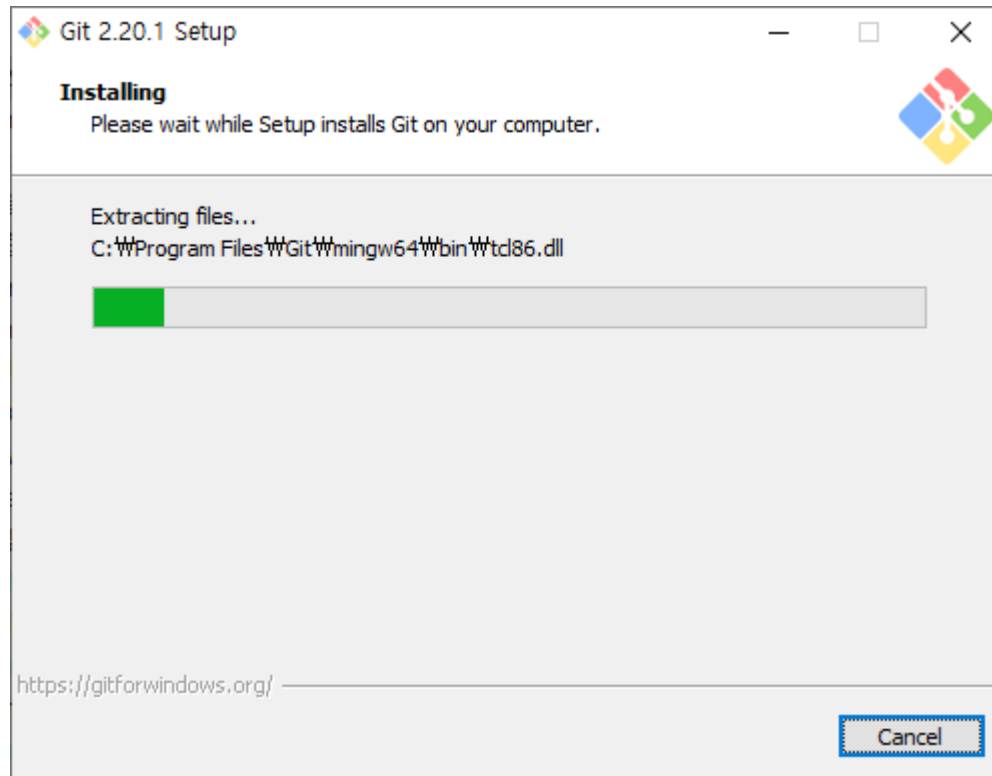


- Enable file system caching
 - 성능향상을 위해 파일 시스템 데이터를 메모리에 캐시
- Enable Git Credential Manager
 - Windows 용 보안 Git 자격증명 저장소를 사용하기 위해 Git Credential Manager 활성화
- Enable symbolic links
 - symbolic links 활성화 (기존 저장소는 영향을 받지 않음)

2. Git 설치

Git 설치

Git-2.20.1-64-bit.exe



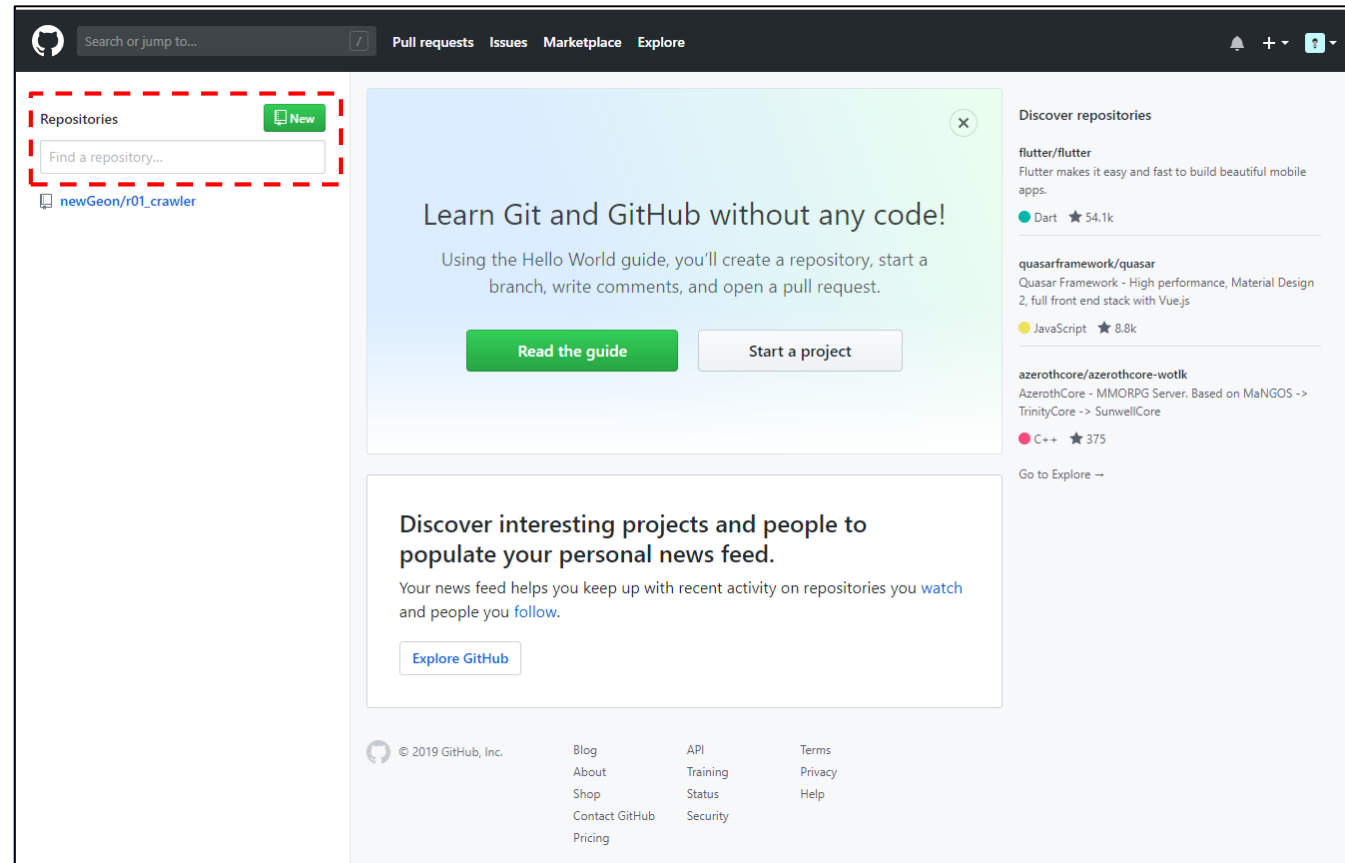
설치 마지막 화면

3. GitHub 사용하기

GitHub

<https://github.com/>

① Repositories > News 클릭



3. GitHub 사용하기

GitHub


<https://github.com/>

- ① Repository name 설정
- ② Description 설정
- ③ Public & Private 설정
- ④ License 설정

Create a new repository

A repository contains all project files, including the revision history.


Owner


 /

Repository name *

Great repository names are short and memorable. Need inspiration? How about **refactored-carnival**?

Description (optional)


☒  **Public**
Anyone can see this repository. You choose who can commit.

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

☐ **Initialize this repository with a README**
This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None**

Add a license: **MIT License**



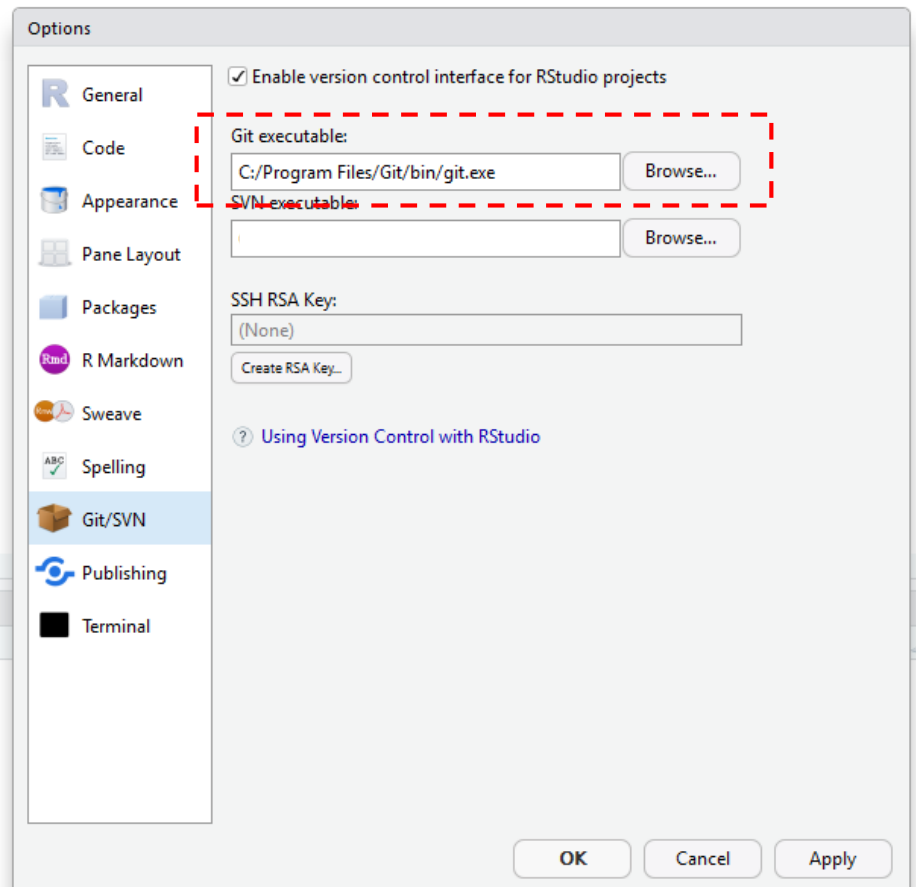
Create repository

4. Git & RStudio 연동

RStudio

RStudio 설정

- ① Tools > Global Options 선택
- ② Git/SVN 메뉴 선택
- ③ Git 설치 경로 설정
- ④ 경로 : C:\Program Files\Git\bin\git.exe

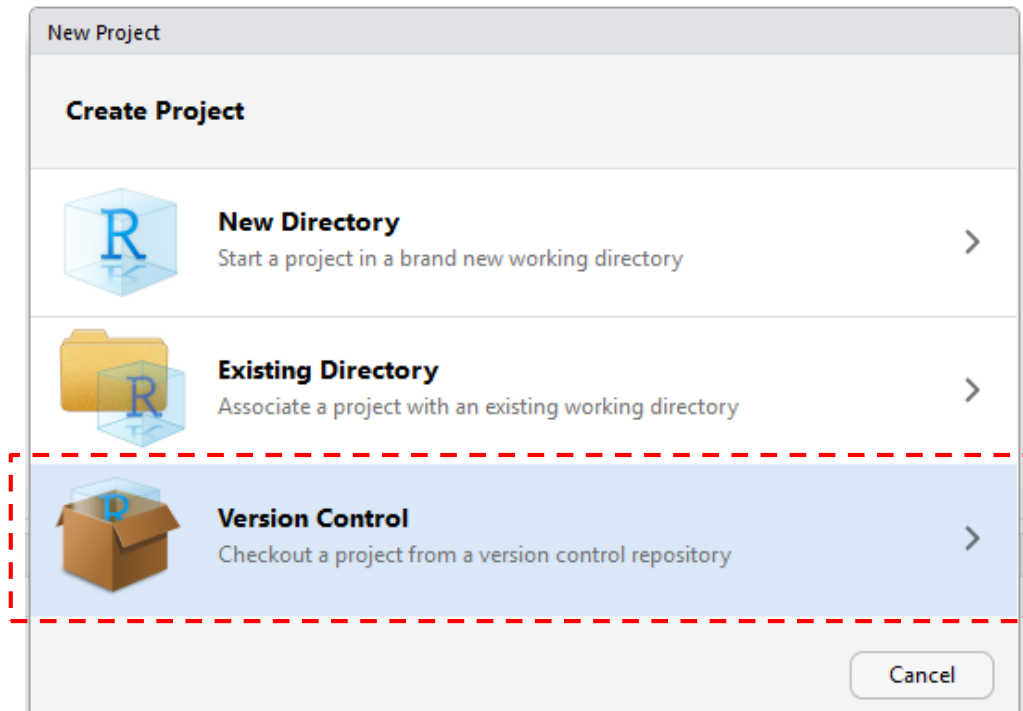


4. Git & RStudio 연동

RStudio

Project 만들기

- ① File > New Project 선택
- ② Create Project > Version Control 선택

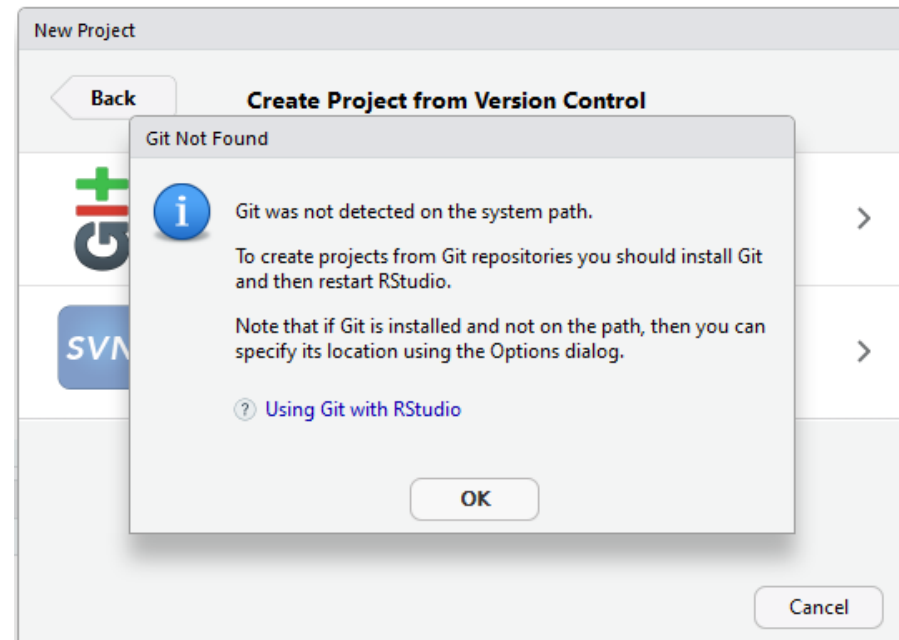
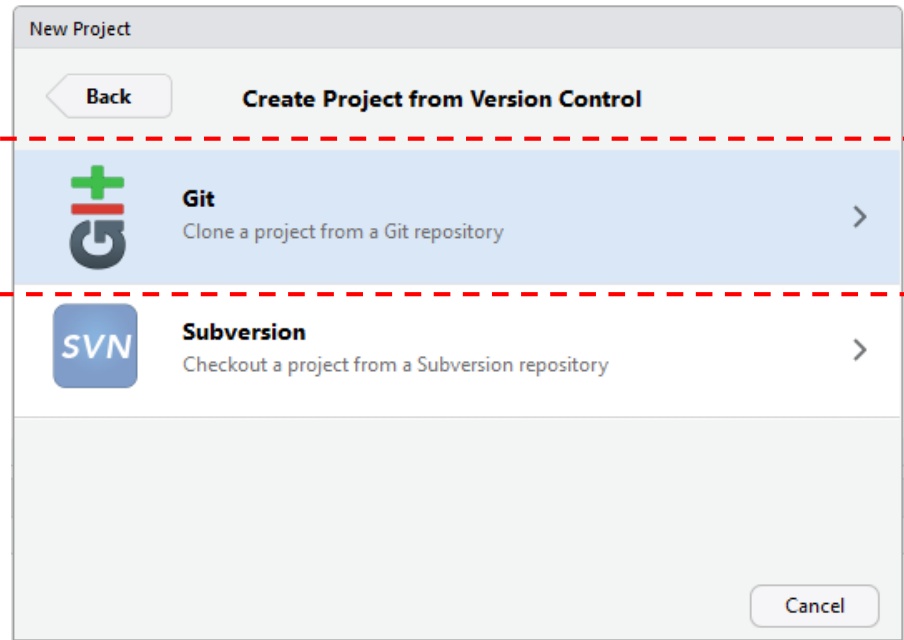


4. Git & RStudio 연동

RStudio

Project 만들기

- ① 왼쪽 화면이면 "Git" 을 클릭
- ② 왼쪽 화면이면 RStudio를 다시 시작을 진행 (다시 실행하면 왼쪽 화면과 같이 나옴)

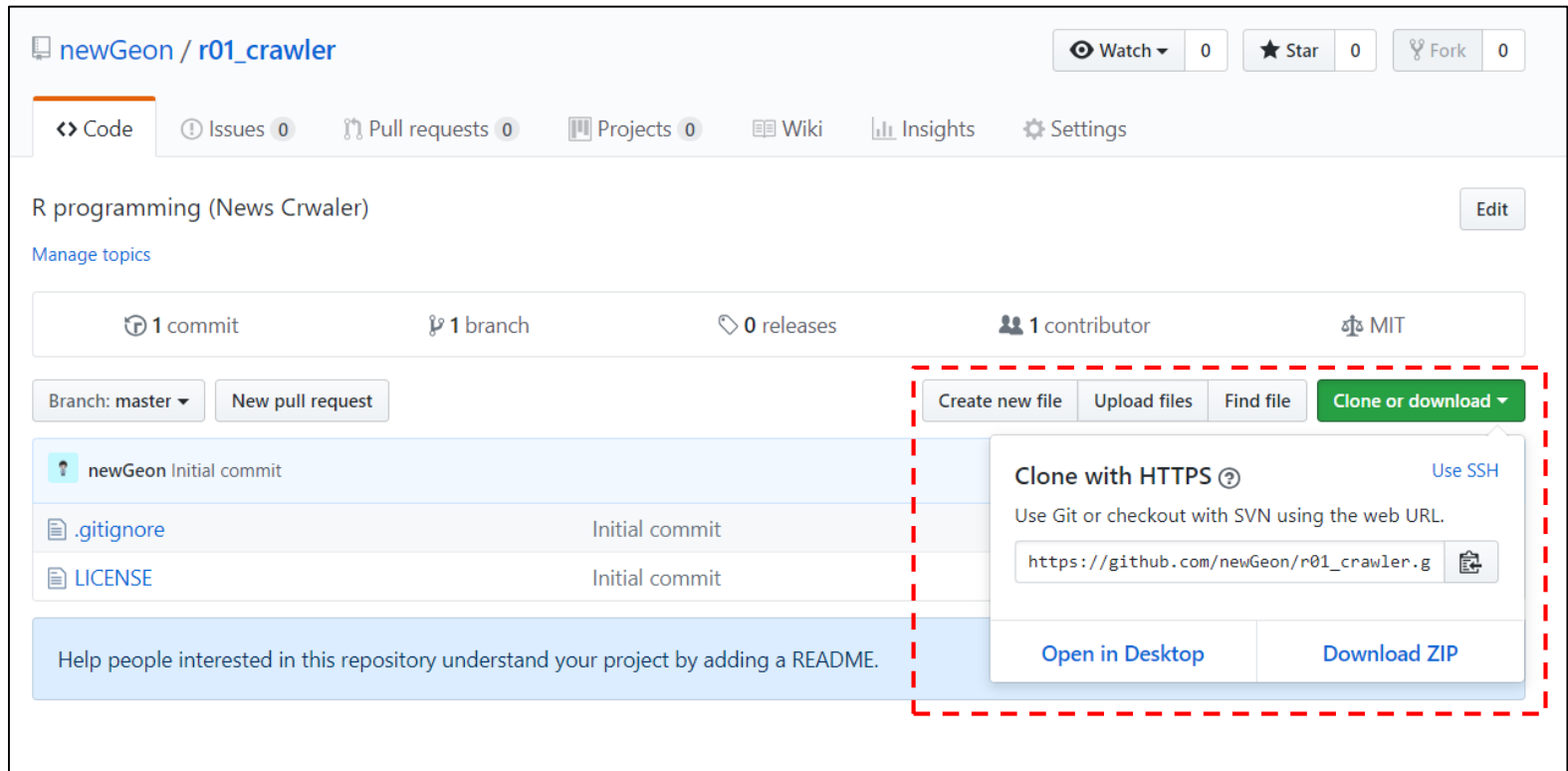


4. Git & RStudio 연동

GitHub

GitHub 연동

- ① Clone or download 클릭
- ② Clone with HTTPS 주소 복사

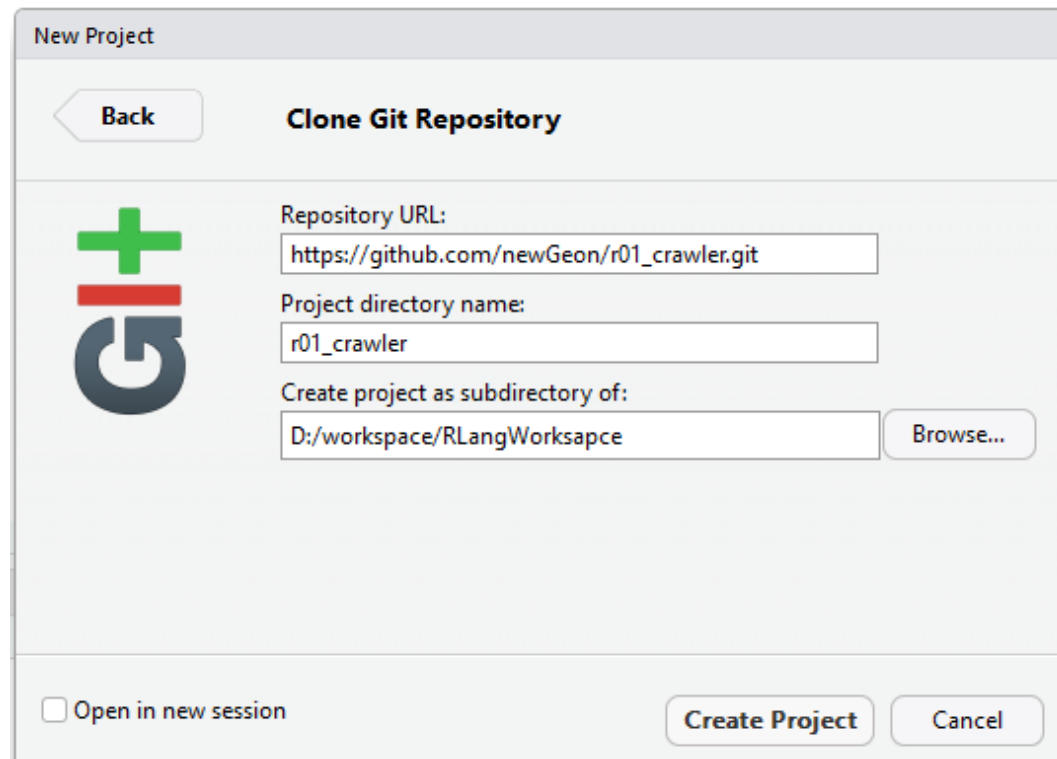


4. Git & RStudio 연동

RStudio

Project 만들기

- ① Repository URL에 복사했던 URL 붙여넣기
- ② Project 명 & Project 경로 설정



4. Git & RStudio 연동

RStudio

GitHub 연동1

The screenshot displays the RStudio environment with the following components:

- Clone Repository Dialog:** Shows the command `C:\Program Files\Git\bin\git.exe clone --progress https://github.com/newGeon/r...` and progress logs for enumerating and compressing objects.
- Environment Pane:** Lists variables like `headLines`, `line`, `listHtml`, `newsList`, `values`, `newurl`, and `suburl`.
- Console:** Shows the R startup message and workspace loading from `D:/workspace/RLangWorkspace/crawling/.Rdata`.
- Viewer Pane:** Displays the documentation for the `'vest'` package version 0.3.2, including a list of help pages and their descriptions.

4. Git & RStudio 연동

RStudio

GitHub 연동2

The screenshot shows the RStudio IDE interface. The main editor displays a script named `01_newsList.R` with the following R code:

```

1 library(rvest)
2 library(dplyr)
3
4 newUrl <- "https://news.naver.com/main/main.nhn?mode=LSD&mid=shm&sid1=100"
5
6 listHtml <- read_html(newUrl)
7
8 headLines <- listHtml %>%
9   html_nodes("._persist") %>%
10  html_nodes("._cluster")
11
12 for(line in headLines) {
13   suburl <- line %>% html_nodes("._cluster_text a") %>% html_attr("href")
14
15   ## print(line)
16   print(suburl)
17 }
18
19 newsList <- listHtml %>%
20   html_nodes("#section_body") %>%
21   html_node("u1")
22

```

The Environment pane on the right shows the following objects:

Staged	Status	Path
<input type="checkbox"/>	M	.gitignore
<input type="checkbox"/>	? ?	code/
<input type="checkbox"/>	? ?	r01_crawler.Rproj

The Files pane on the right shows the project structure:

Name	Size	Modified
..		
.gitignore	630 B	Feb 11, 2019, 8:50 PM
LICENSE	1.1 KB	Feb 11, 2019, 8:50 PM
r01_crawler.Rproj	218 B	Feb 11, 2019, 8:50 PM
code		

The Console pane at the bottom shows the R startup message:

```

D:/workspace/RLangWorkspce/r01_crawler/
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>

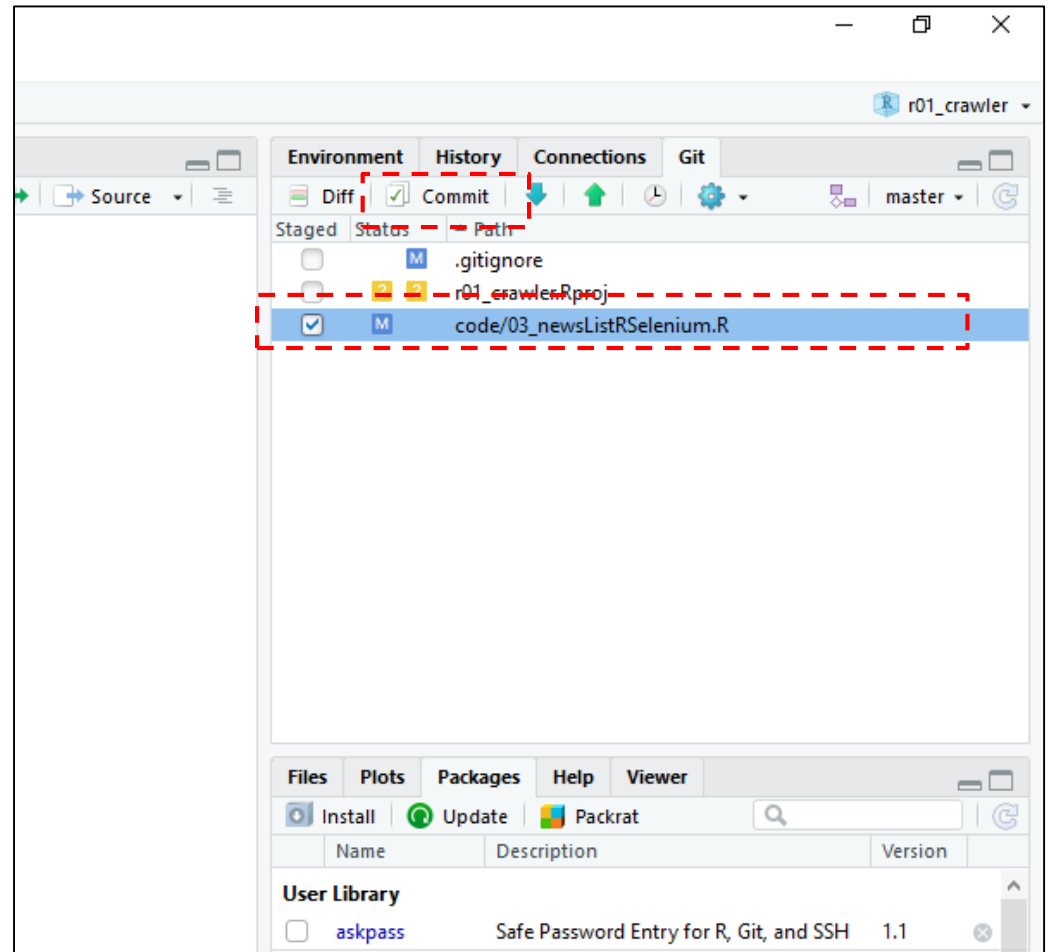
```

5. Commit

RStudio

Git Commit 해보기1

- ① 수정된 소스코드 선택
- ② Commit 버튼 클릭

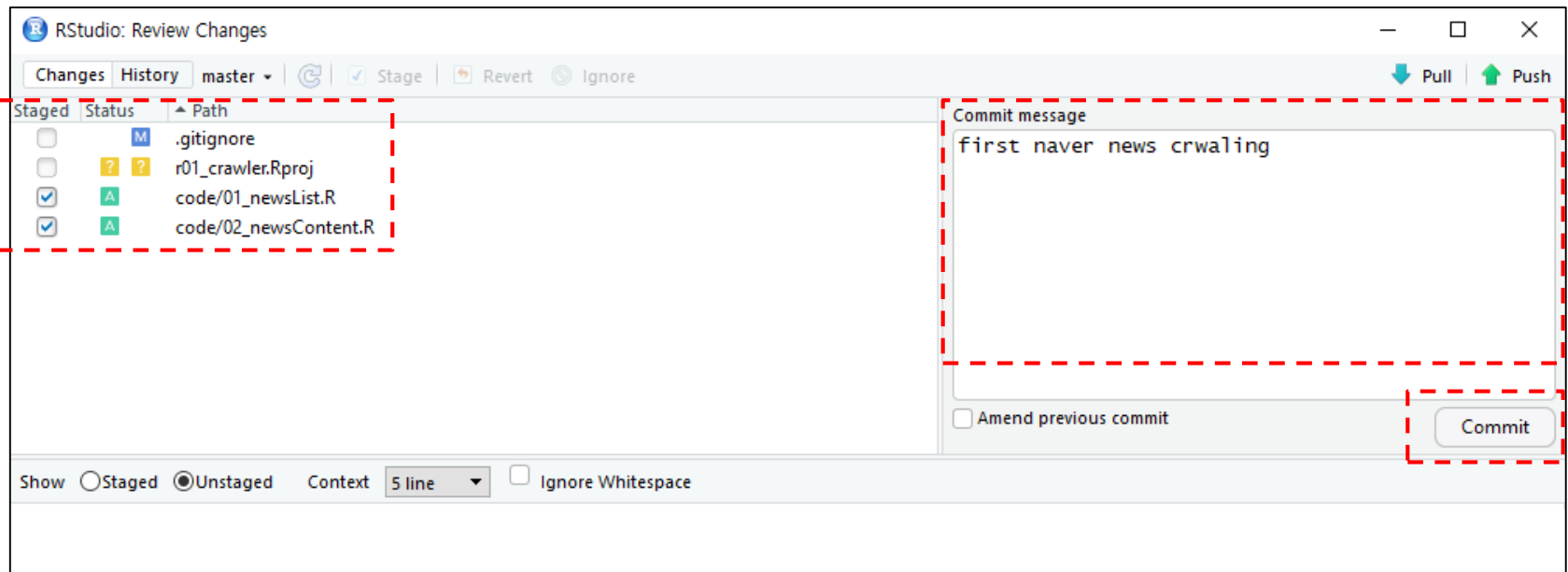


5. Commit

RStudio

Git Commit 해보기2

- ① 수정된 코드 선택
- ② Commit 메시지 작성 후 Commit 버튼 클릭

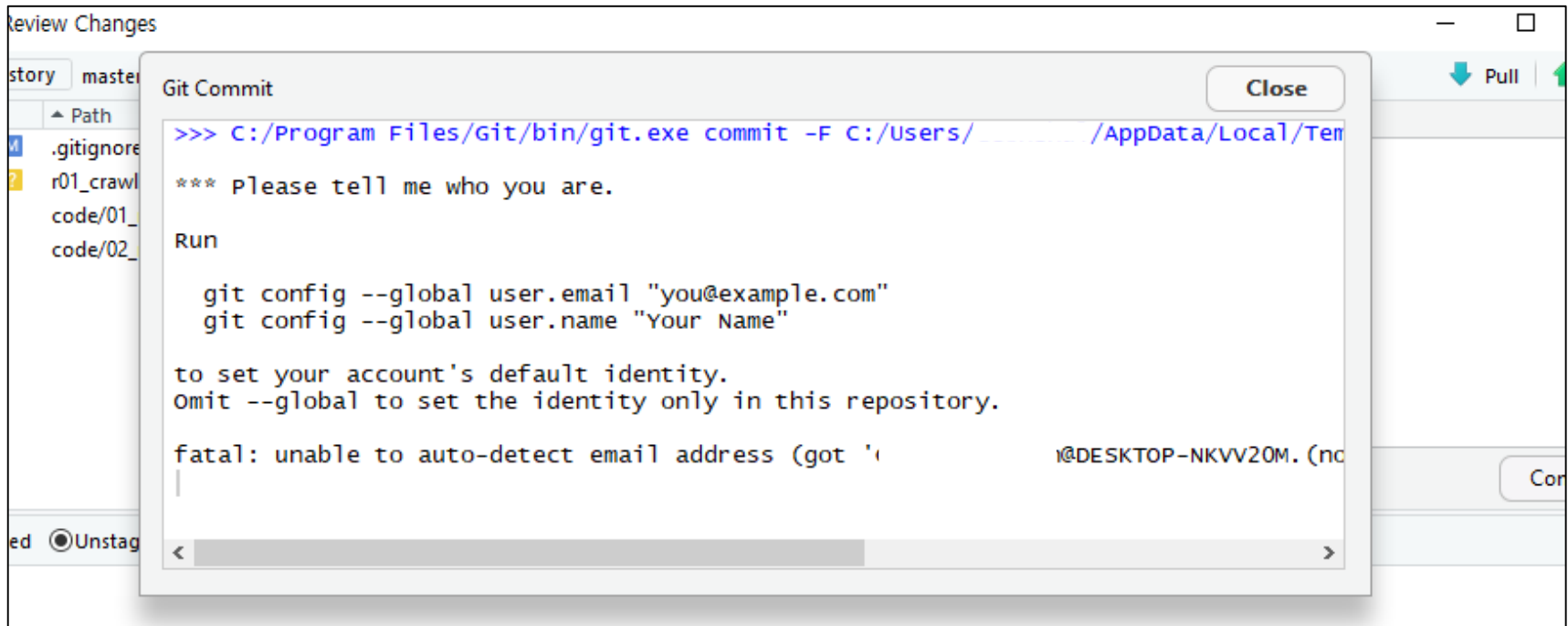


5. Commit

RStudio

Git Commit 해보기3

- ① Commit 실패
- ② 현재 컴퓨터 정보와 GitHub 연동이 안되어 있음

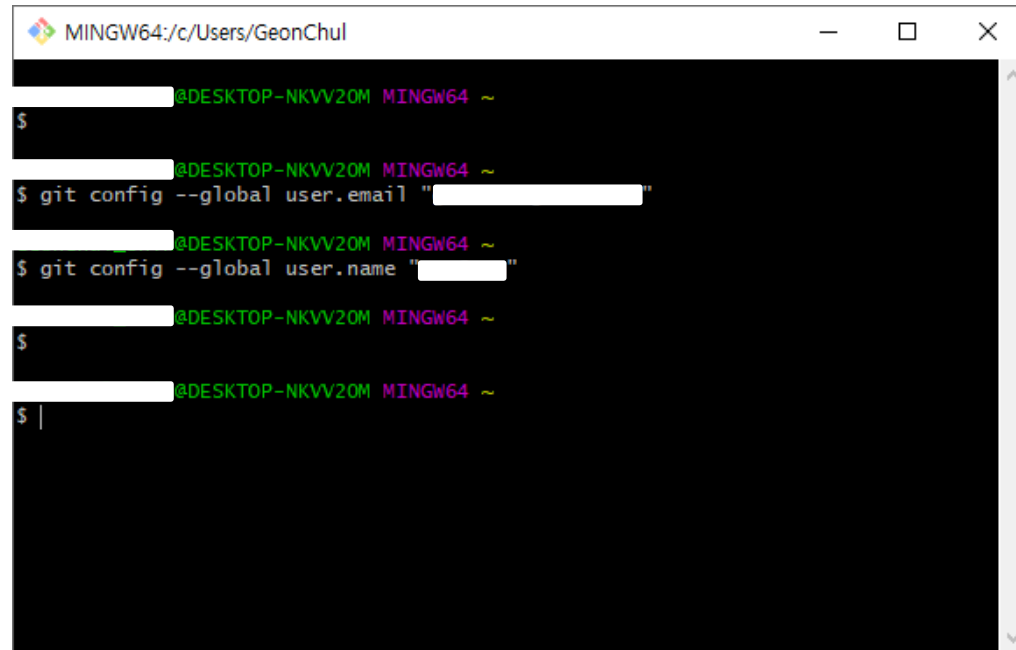


5. Commit

Git

Git Commit 해보기4

- ① Git Bash 실행
- ② `git config --global user.email OOOO@mail.com`
- ③ `Git config --global user.name "OOOOO"`



```
MINGW64:/c/Users/GeonChul
[redacted]@DESKTOP-NKVV20M MINGW64 ~
$
[redacted]@DESKTOP-NKVV20M MINGW64 ~
$ git config --global user.email "[redacted]"
[redacted]@DESKTOP-NKVV20M MINGW64 ~
$ git config --global user.name "[redacted]"
[redacted]@DESKTOP-NKVV20M MINGW64 ~
$
[redacted]@DESKTOP-NKVV20M MINGW64 ~
$ |
```

5. Commit

Git

Git Commit 해보기5

- ① 설정 후 Commit 진행 하면 아래와 같이 성공 message 나옴

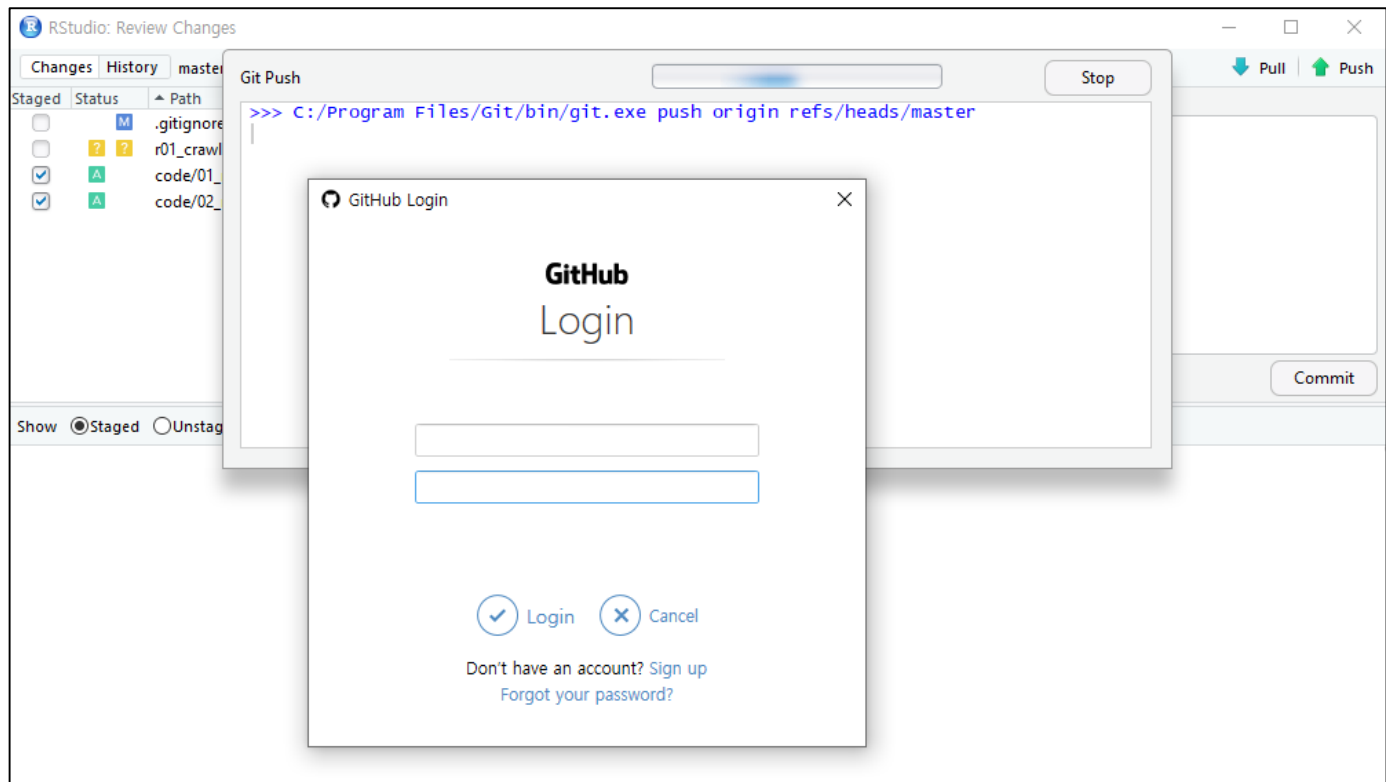


5. Commit

Git

Git Commit 해보기5

- ① Push 버튼 클릭
- ② GitHub 로그인 필요 > 로그인 후 커밋된 내용 GitHub에 저장 완료



Q & A