

대한뇌졸중학회 역학연구회 토요공부모임

## Introduction to Git and GitHub



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## Git and GitHub가 도움이 되는 경우

- 여러 사람이 하나의 주제로 일을 할 때의 협업의 도구.
- 과거의 작업으로 돌아가고 싶을 때

- 1 Introduction to Git
- 2 Introduction to GitHub
- 3 Installation of Git
- 4 Using GitHub

# Version Control System

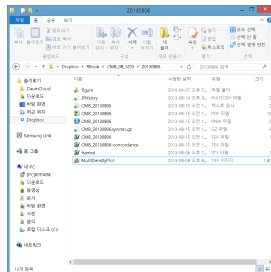
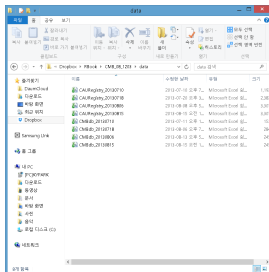
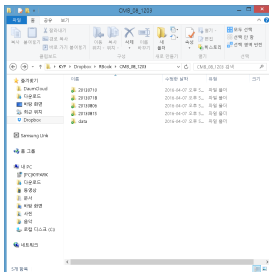
버전 관리 시스템은 파일 변화를 시간에 따라 기록했다가 나중에 특정 시점의 버전을 다시 꺼내올 수 있는 시스템이다.

Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.

- Local version control system
- Centralized version control system
- Distributed Version Control Systems

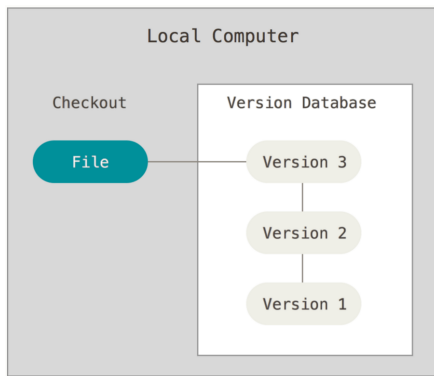
<https://git-scm.com/book/en/v2>

# Current method



# Local version control system

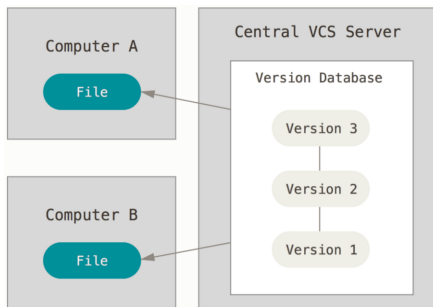
This approach is very common because it is so simple, but it is also incredibly error prone.



<https://git-scm.com/book/en/v2>

# Centralized version control system

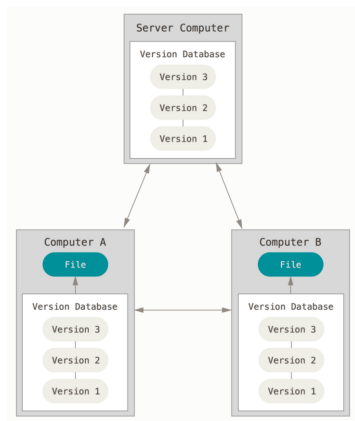
Administrators have fine-grained control over who can do what



<https://git-scm.com/book/en/v2>

# Distributed Version Control Systems

Every clone is really a full backup of all the data.

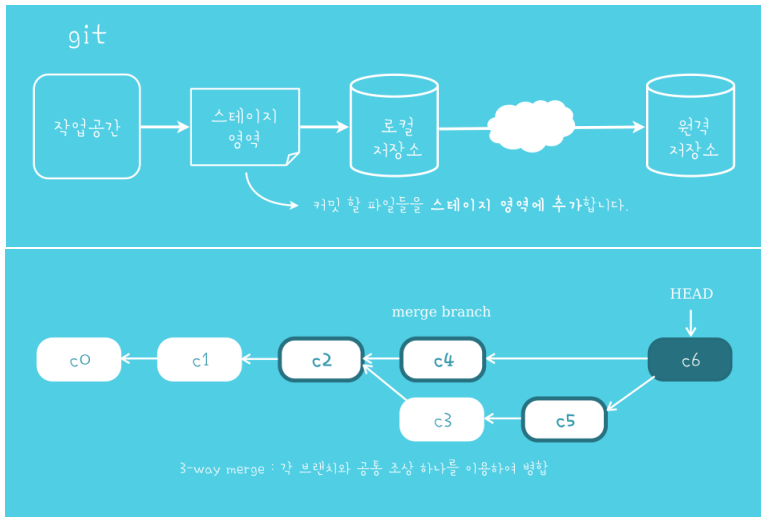


<https://git-scm.com/book/en/v2>



- The Linux kernel is an open source software project of fairly large scope.
- In 2002, the Linux kernel project began using a proprietary DVCS called BitKeeper.
- In 2005, the relationship between the community that developed the Linux kernel and the commercial company that developed BitKeeper broke down
- This prompted the Linux development community (and in particular Linus Torvalds, the creator of Linux) to develop Git.

<https://git-scm.com/book/en/v2>



<https://git-scm.com/book/en/v2>

[http://www.slideshare.net/einsub/svn-git-17386752?from\\_action=save](http://www.slideshare.net/einsub/svn-git-17386752?from_action=save)

## Disadvantage

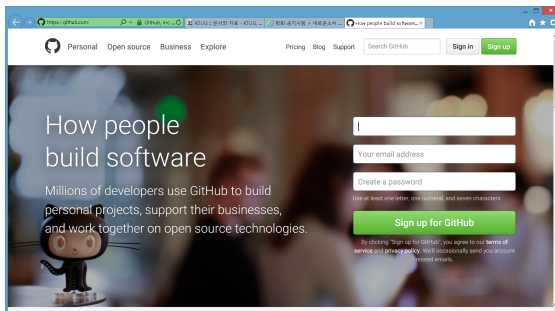
- Difficult to learn
  - “I didn’t really expect anyone to use it because it’s so hard to use.”  
by Linus Torvalds (This is a fake interview!)

## Advantage

- Collaboration
- Fully distributed (Protection from virus or crash)

# What is GitHub?

- www.github.com (founded in 2008)
- Web-based Git repository hosting service
- Allows for collaboration with anyone online
- Adds extra functionality on top of Git (pull request..)

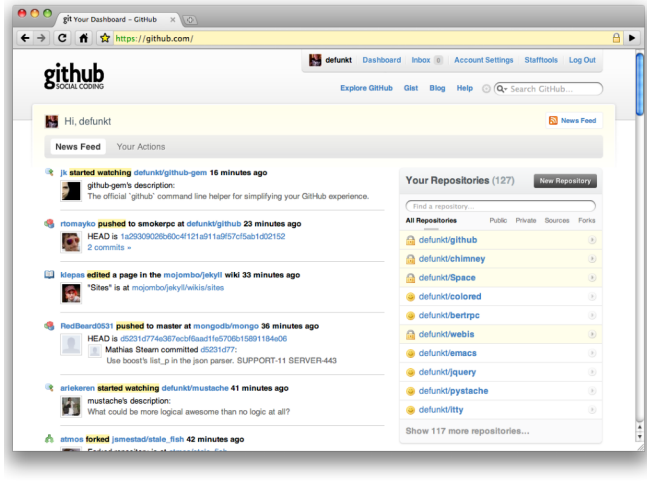




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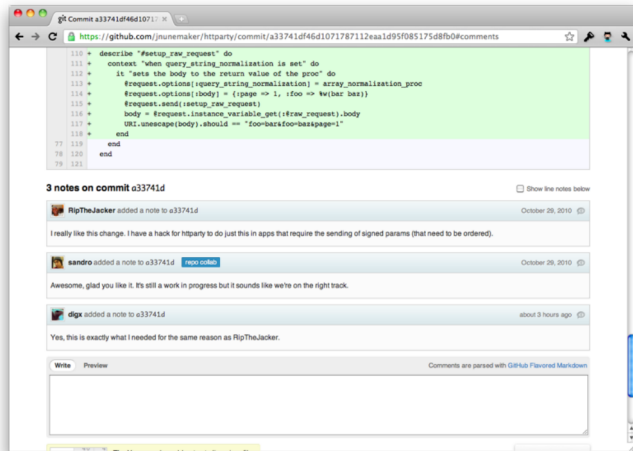
GitHub is what we like to call “social coding.”

*[http://www.slideshare.net/rubymeetup/inside-github-with-chris-wanstrath/32-Along\\_the\\_way\\_we\\_managed](http://www.slideshare.net/rubymeetup/inside-github-with-chris-wanstrath/32-Along_the_way_we_managed)*



You can see what your friends are doing from your dashboard or news feed

[http://www.slideshare.net/rubymeetup/inside-github-with-chris-wanstrath/32-Along\\_the\\_way\\_we\\_managed](http://www.slideshare.net/rubymeetup/inside-github-with-chris-wanstrath/32-Along_the_way_we_managed)



And you can do things like leave comments on commits.

[http://www.slideshare.net/rubymeetup/inside-github-with-chris-wanstrath/32-Along\\_the\\_way\\_we\\_managed](http://www.slideshare.net/rubymeetup/inside-github-with-chris-wanstrath/32-Along_the_way_we_managed)

## Mac

already installed

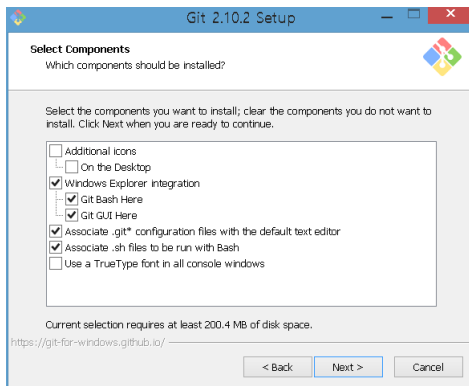
<https://code.google.com/archive/p/git-osx-installer/downloads>

## Windows

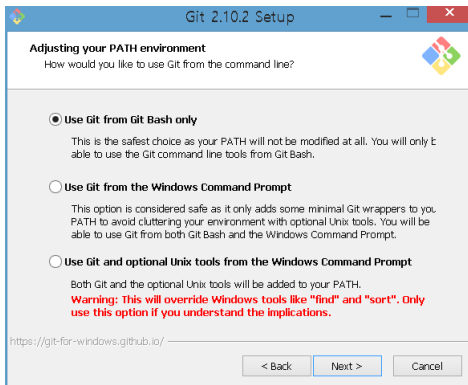
<https://git-for-windows.github.io/>



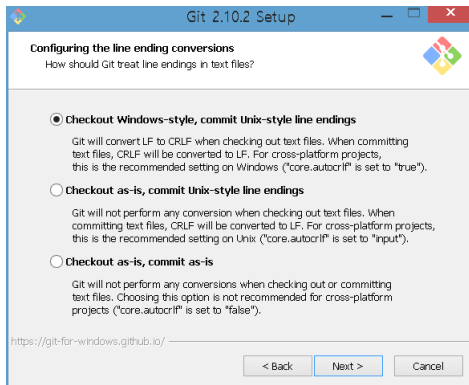
# Installation in Windows



# Installation in Windows



# Installation in Windows



# 기본 설정

## Name and e-mail address

```
$ git config - -global user.name "Kwang Yeol Park"
```

```
$ git config - -global user.email "kwangyeol.park@gmail.com"
```

```
$ git config - -global color.ui auto
```

## Check configuration

```
$ git config - -list
```

```
$ git config user.name
```

- go to *<https://github.com/>* and sign up
- generating SSH-key and register  
*<https://help.github.com/articles/generating-an-ssh-key/>*
- adding a new SSH key to GitHub account  
*<https://help.github.com/articles/adding-a-new-ssh-key-to-your-github-account/>*

- Making repository
- Cloning repository  
`git clone git@github.com:sbaram1/***.git`
- `git status`
- `git add *.*`
- `git commit -m " "`
- `git push`

## Websites

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

<http://gitref.org/> *reference*

<http://rogerdudler.github.io/git-guide/>

<http://rogerdudler.github.io/git-guide/index.ko.html>

## Free books

<https://git-scm.com/book/ko/v2>

## Video

<https://www.coursera.org/learn/ruby-on-rails-intro/lecture/8F19A/introduction-to-git>

<https://www.coursera.org/learn/ruby-on-rails-intro/lecture/i0AZs/local-git-repository>

<https://www.coursera.org/learn/ruby-on-rails-intro/lecture/mK3K6/remote-repos-and-github>