대한뇌졸중학회 역학연구회 토요공부모임

Introduction to Git and GitHub

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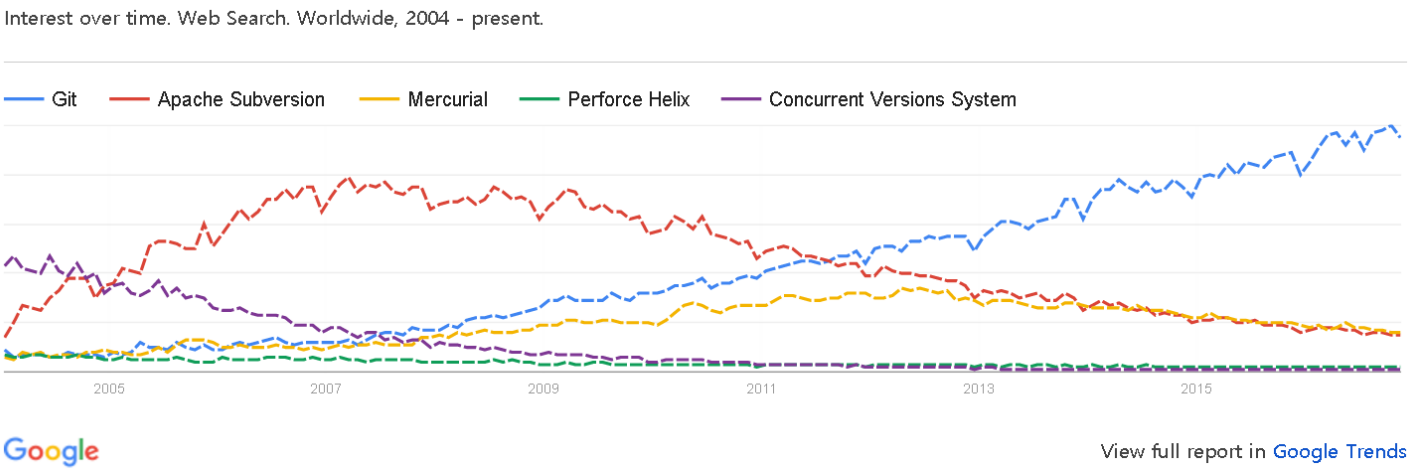
Chung-Ang Univ.

Git and GitHub are not

Git and GitHub are useful when . . .



- 여러 사람이 하나의 주제로 일을 할 때의 협업의 도구.
- 과거의 작업으로 돌아가고 싶을 때
- 관련 파일들을 한 곳에 모아두고 싶을 때.

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

Version Control System

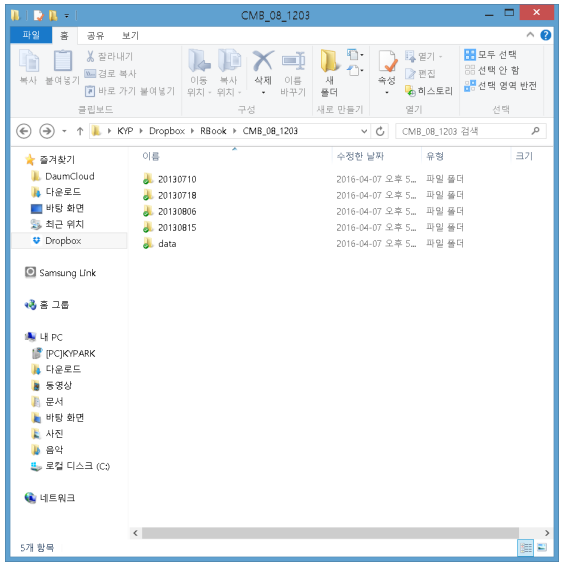
버전 관리 시스템은 파일 변화를 시간에 따라 기록했다가 나중에 특정 시점의 버전을 다시 꺼내올 수 있는 시스템이다.

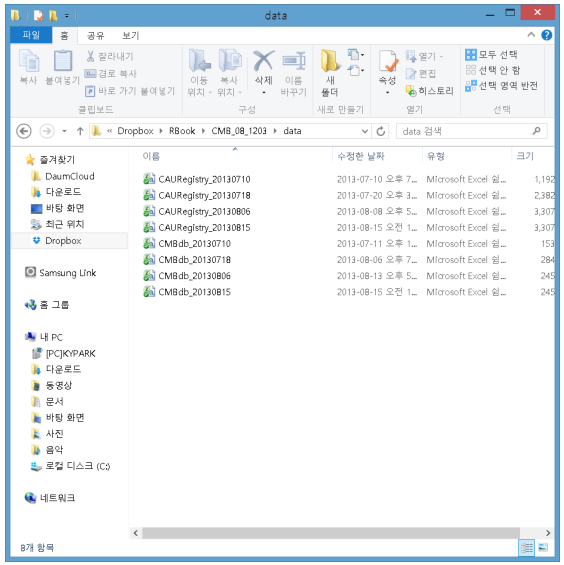
Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.

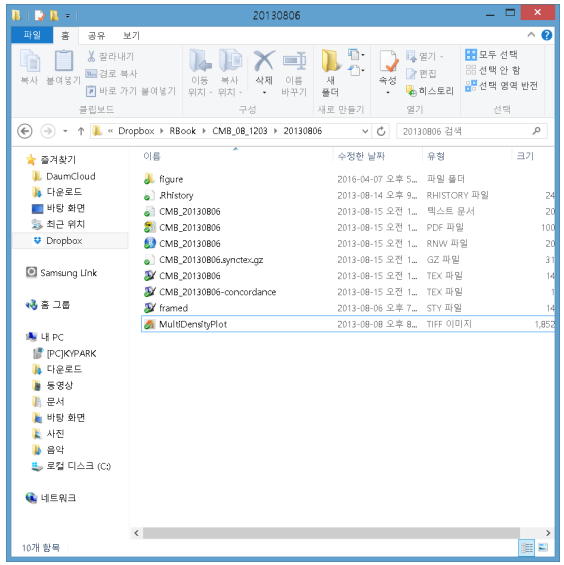
- Local version control system
- Centralized version control system
- Distributed Version Control Systems

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

Current method

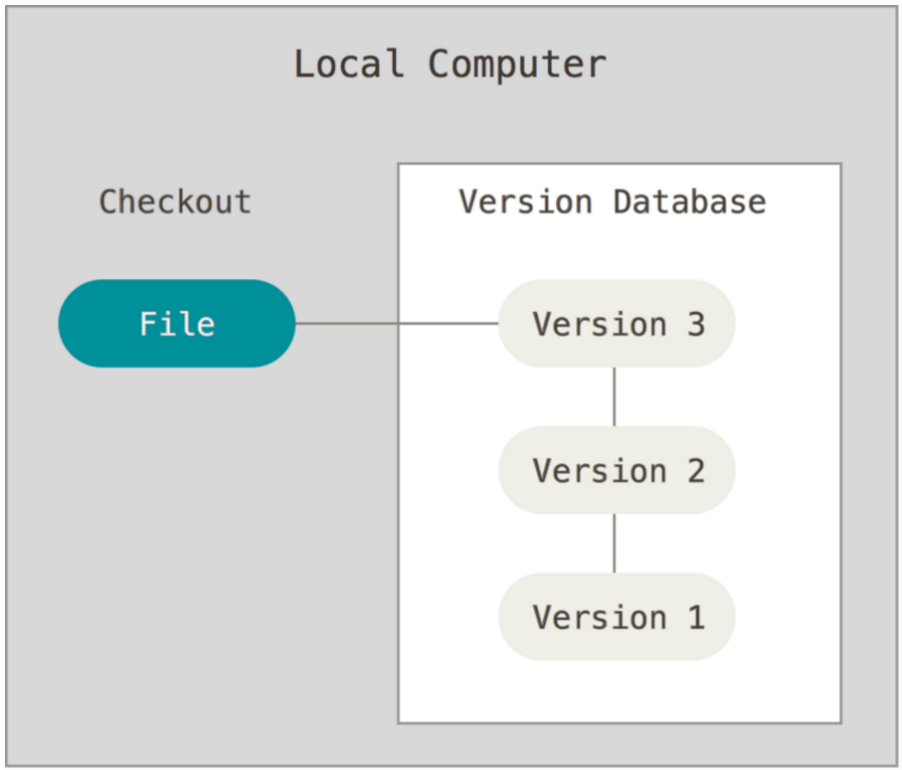






Local version control system

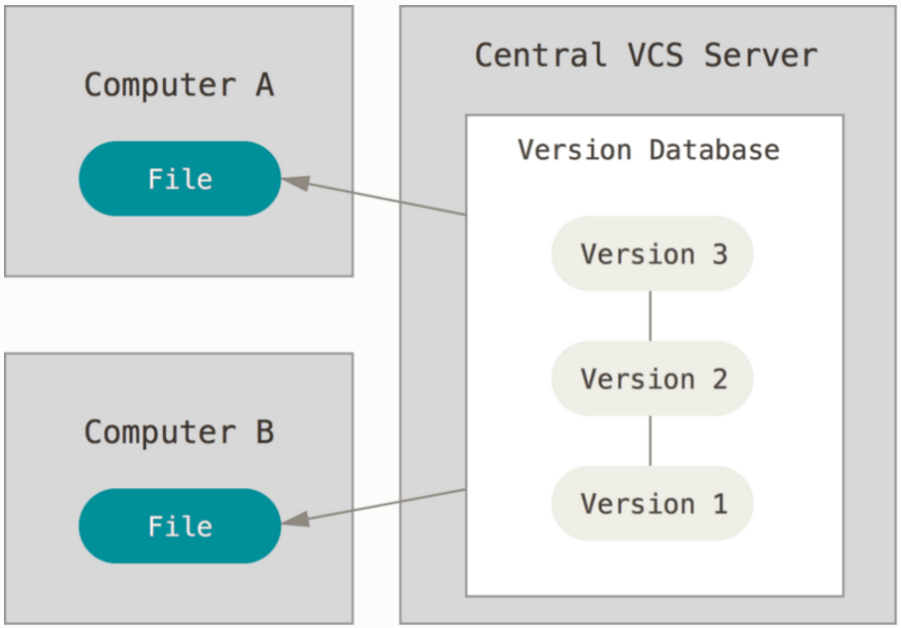
This approach is very common because it is so simple, but it is also incredibly error prone.



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

Centralized version control system

Administrators have fine-grained control over who can do what



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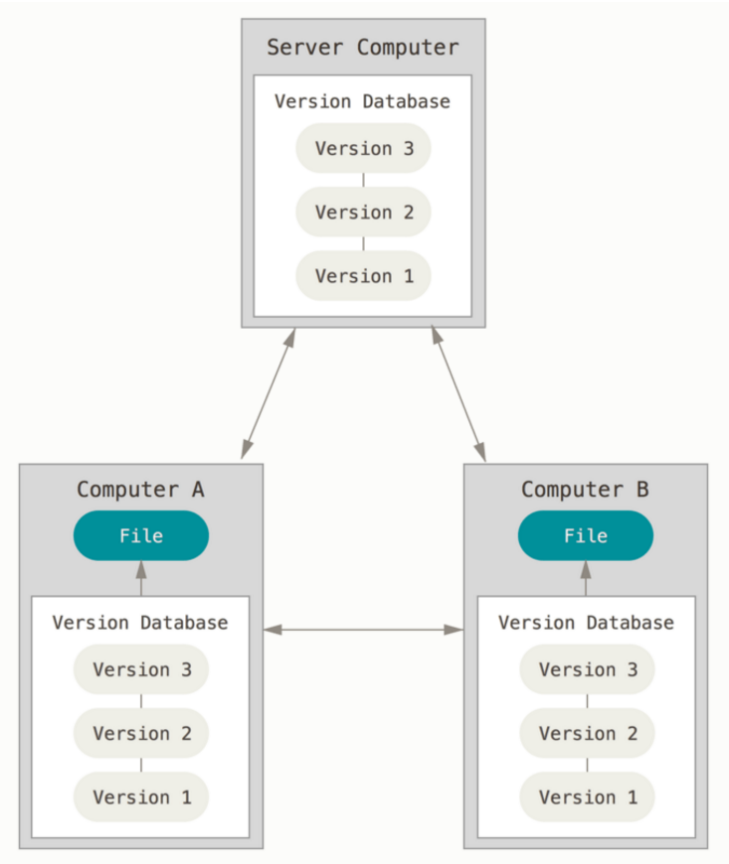
Distributed Version Control Systems

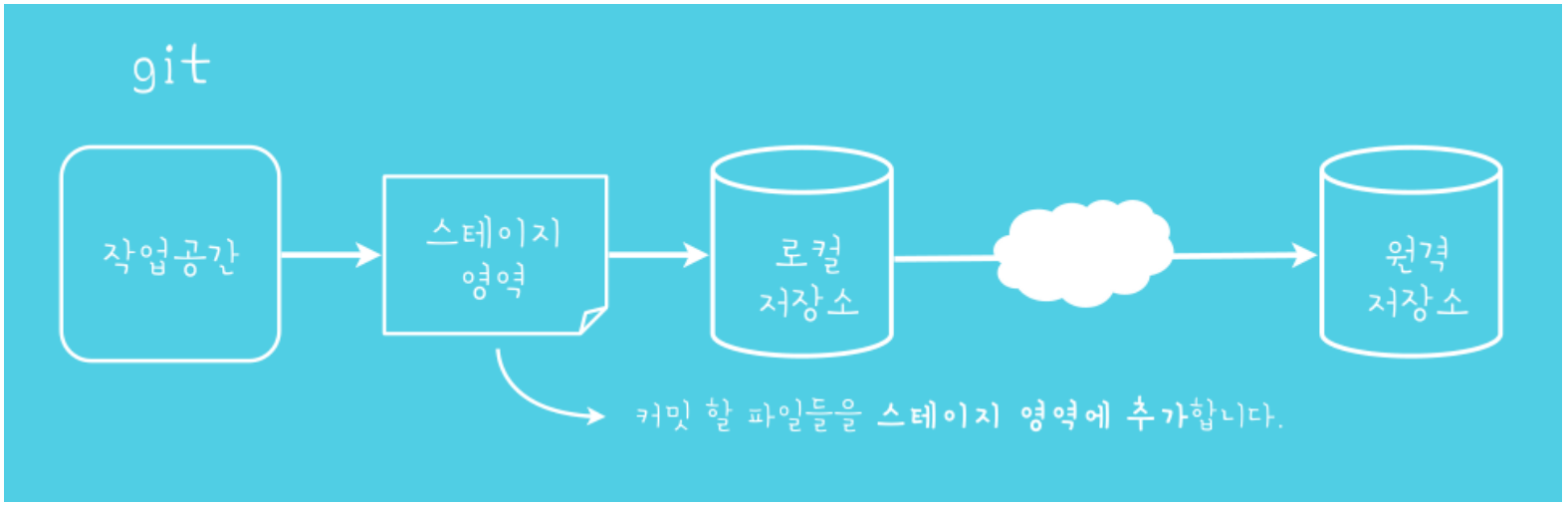
Every clone is really a full backup of all the data.

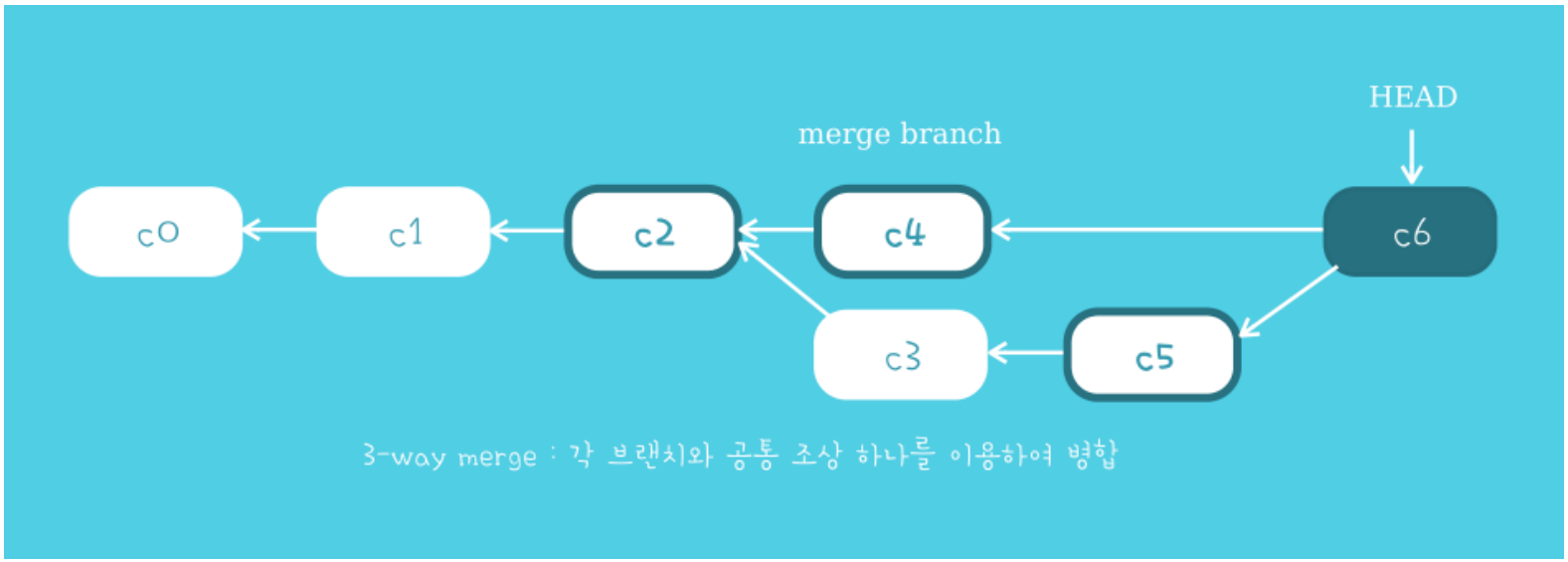


https://git-scm.com/book/en/v2

- 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

Disadvantage

- Diffcult to learn

  "I didn't really expect anyone to use it because it's so hard to use."

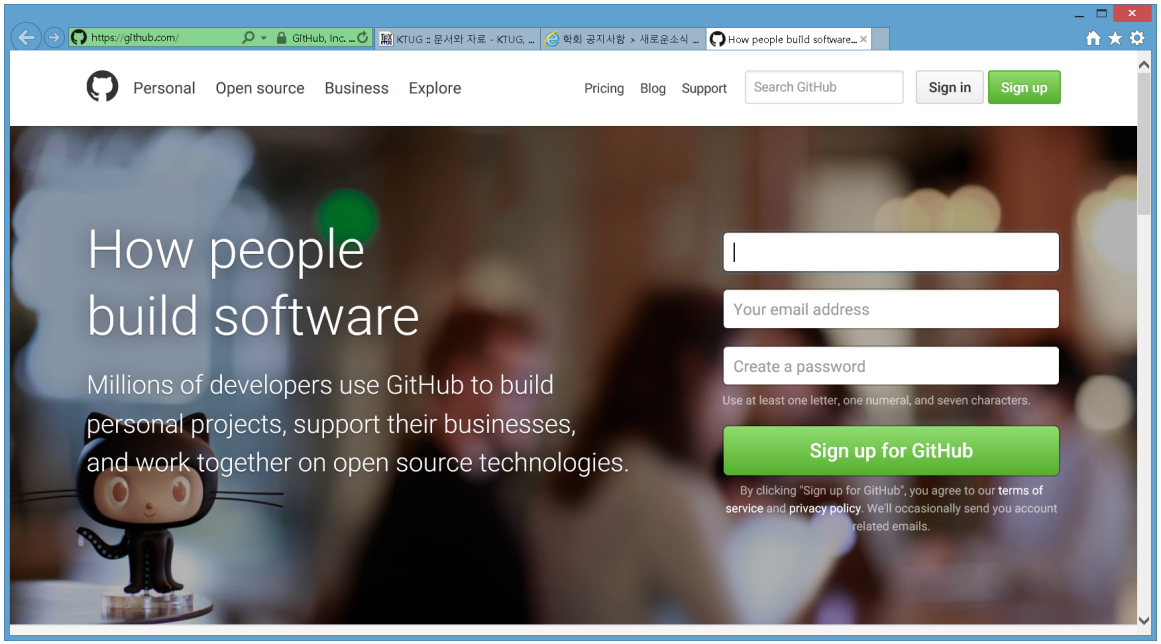
  by Linus Torvalds (This is a fake interview!)

Advantage

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

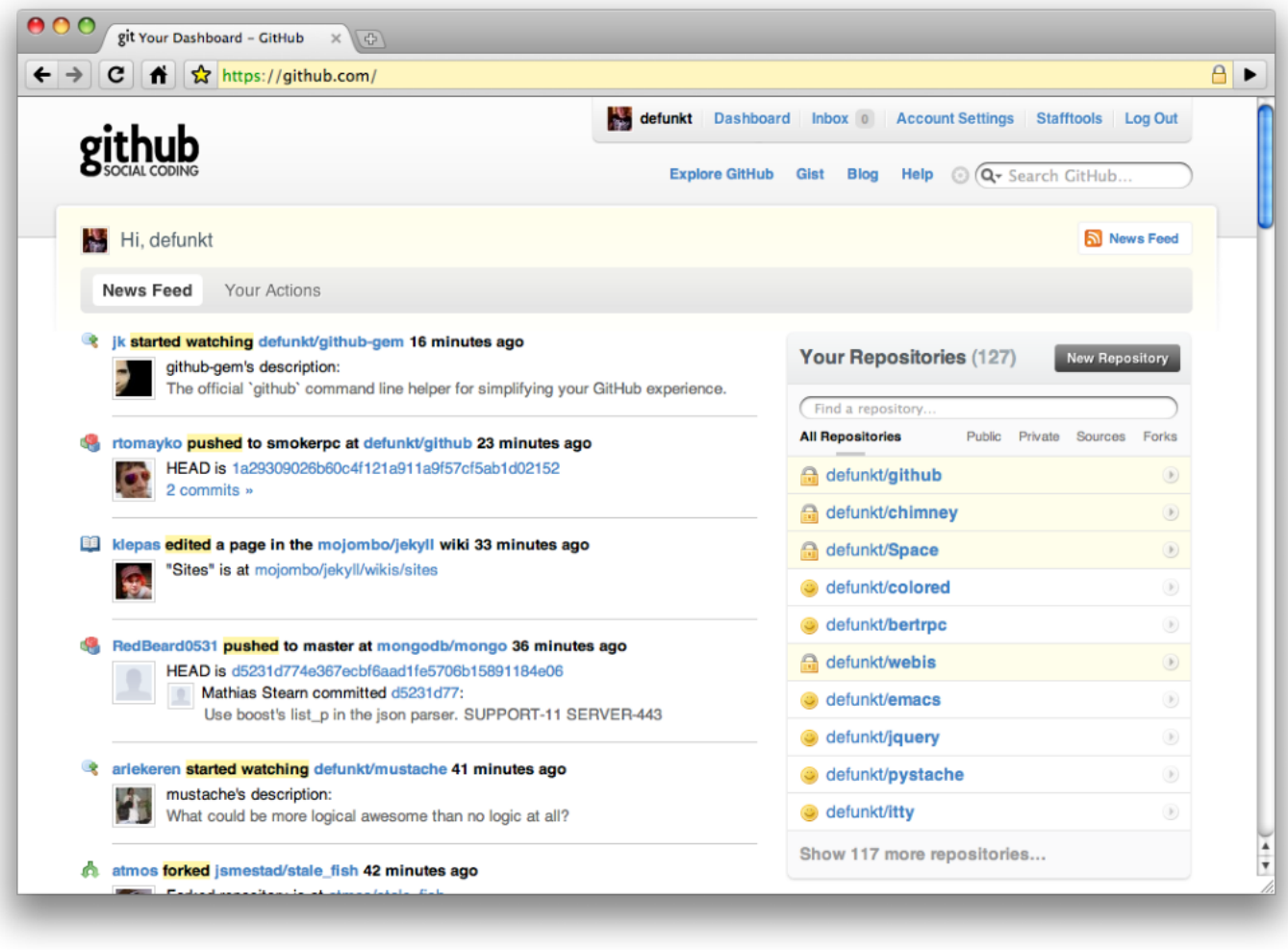
What is GitHub?

- 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..)



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



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

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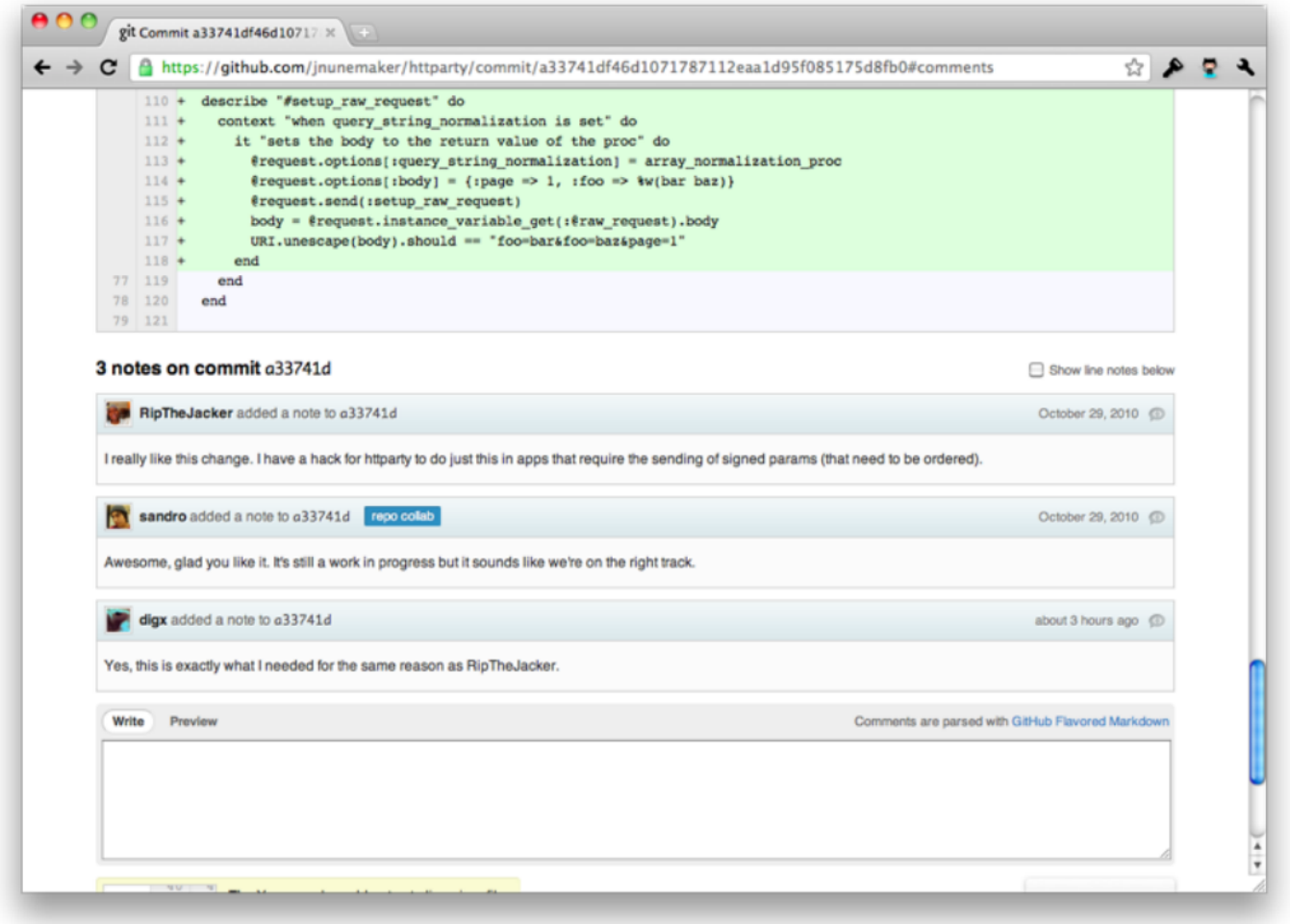


And you can do things like leave comments on commits.

http://www.slideshare.net/rubymeetup/inside-github-with-chris-wanstrath/32-Along_the_way_we_managed

Mac

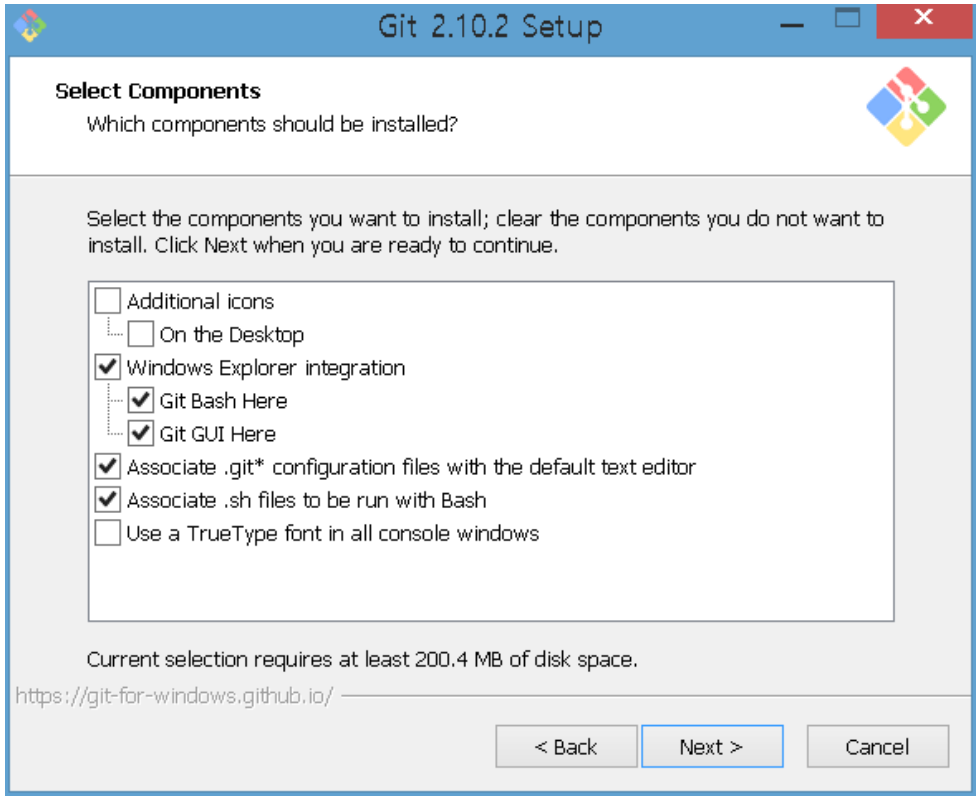
already installed

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

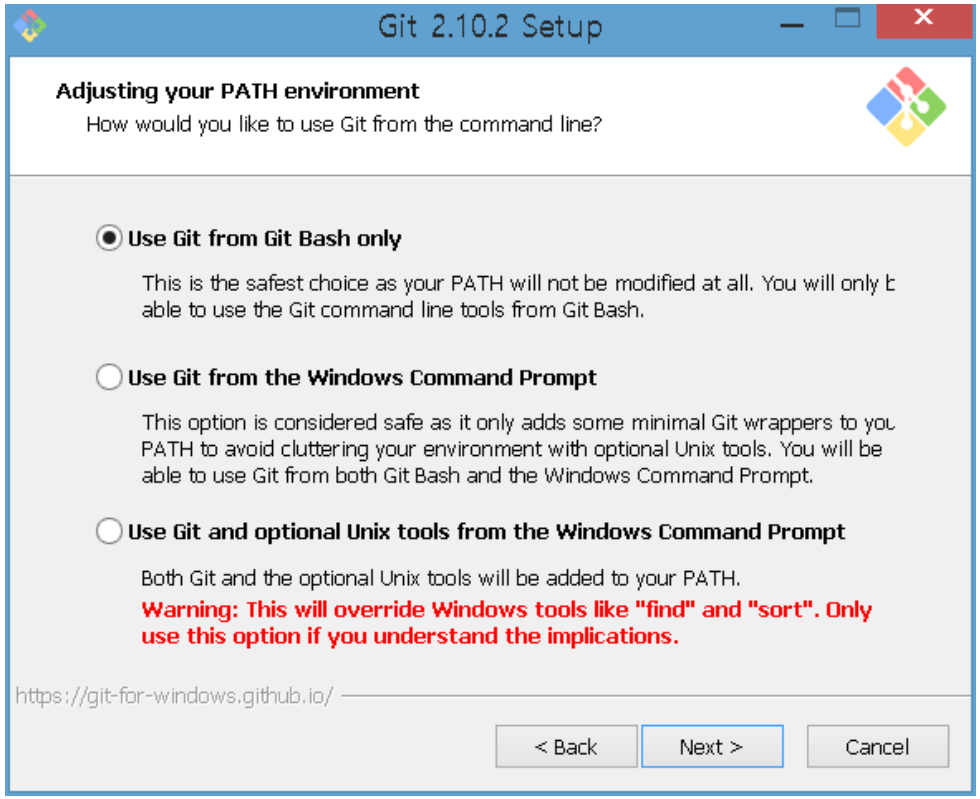
Windows

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

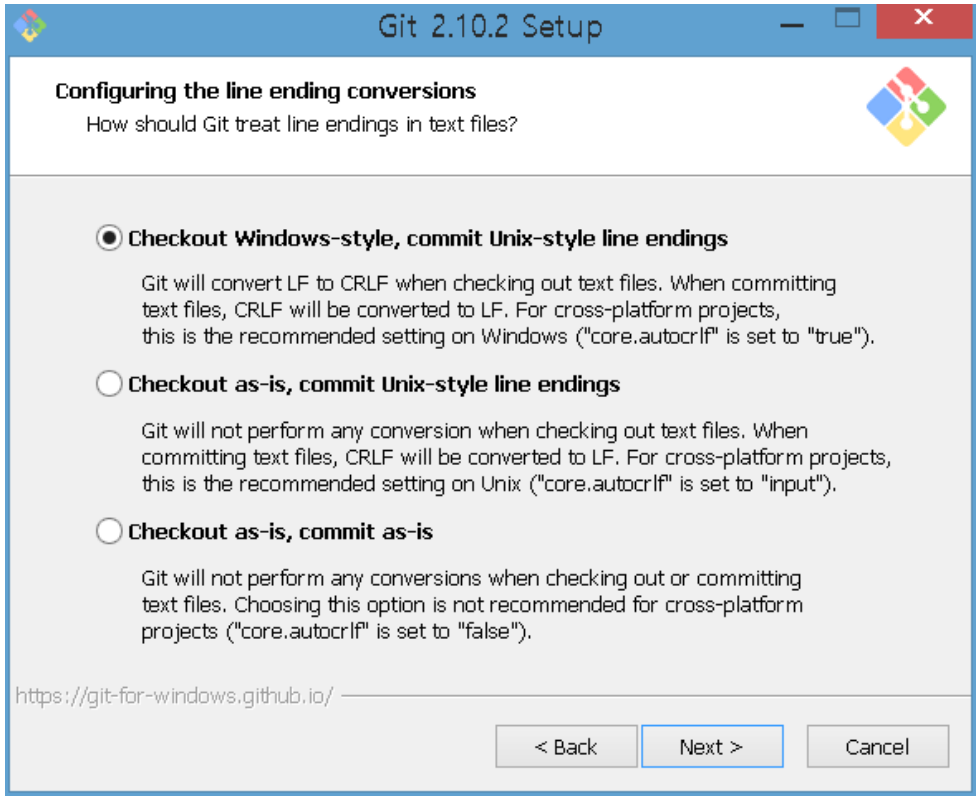
Installation in Windows



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