

Git / Github

오픈소스 프로젝트를 이해하고,
Github을 통한 실제 오픈소스 프로젝
트에 참여하는 워크샵

- 2018.02.05 -

분산관리 시스템

Download

Download

- ▶ Git
 - <http://git-scm.com/download/win>

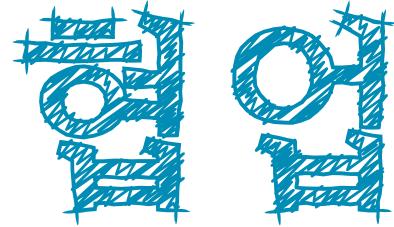
- ▶ SourceTree
 - <https://www.sourcetreeapp.com/>

- ▶ ATOM
 - <https://atom.io/>

- ▶ Java
 - <http://www.oracle.com/technetwork/java/javase/downloads/index.html>
 - JDK 다운로드 (가입/로그인 필수)

- ▶ Eclipse
 - <https://www.eclipse.org/downloads/>

Git - 그림설명

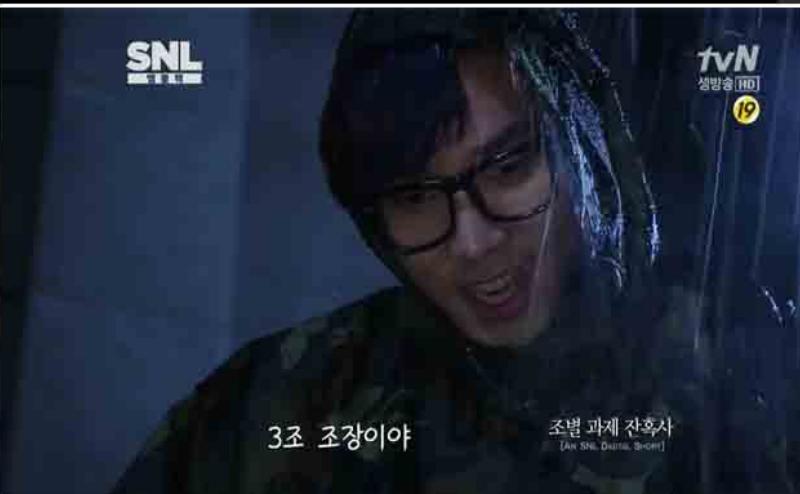
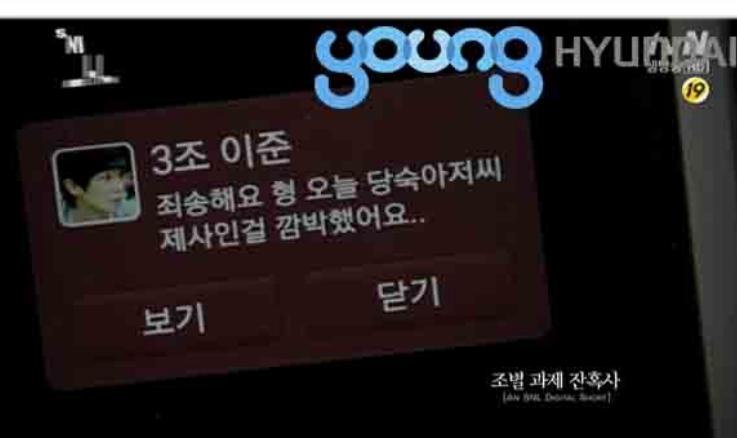
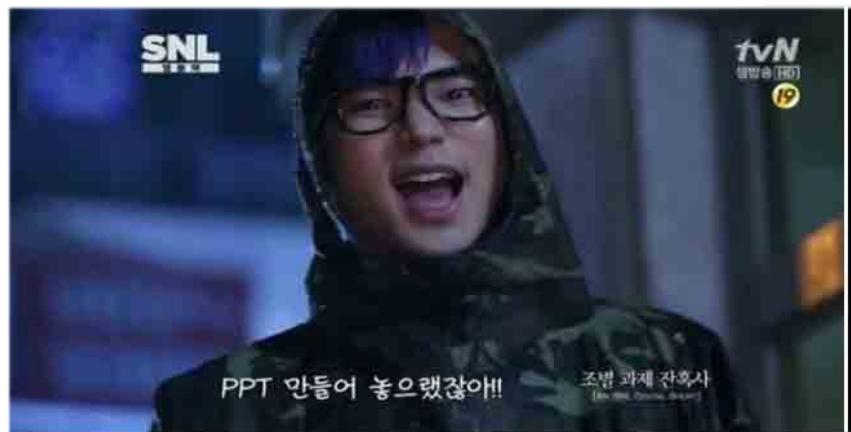
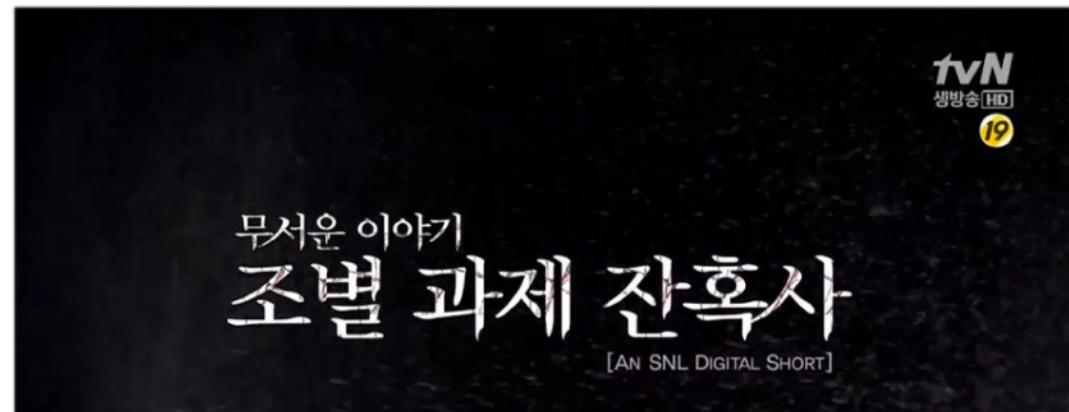


협업

- ▶ 우리는 태생적으로 협업을 싫어해요

협업

- ▶ 공산주의가 왜 망했는지
완벽한 예

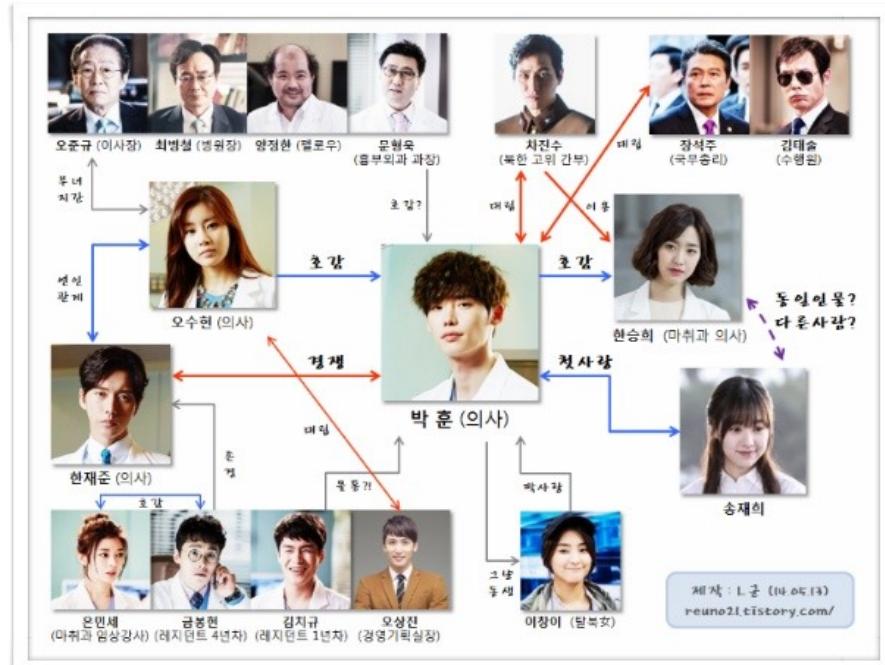


- ▶ 커뮤니케이션 능력 아주 중요!!

- ▶ 커뮤니케이션을 잘하는 방법은
커뮤니케이션을 하지 않는 것이다

- 말 (X)
 - 글 (O)
 - 그림 (O)
 - 드라마 주인공의 관계도는 그림으로 설명해야 한다

- ▶ 자신의 생각을
글과 그림으로 빠르게 표현 할 수 있어야 한다



협업

- › 자신의 생각을
글과 그림으로 빠르게 표현 할 수 있어야 한다

e

Markdown

협업 – Markdown

▶ Markdown

- 마크업 언어의 일종
- 텍스트 문서의 양식을 편집하는 문법
- 확장자 : .md
- 2004년 처음 만들어짐

▶ Github 문서 == Markdown

- Github 뿐 아니라, 최근 유행하는 개발자 플랫폼은 Markdown
- Bitbucket
- Yobi (Naver)

Seeing is
Believing

협업 - Markdown

- Marxico

- <https://marxi.co/#notebook-tags>

- Haroopad - 추천!!

- <http://pad.haroopress.com>
 - Demo

협업 - Markdown

▶ 문법

- <http://blog.kalkin7.com/2014/02/05/wordpress-markdown-quick-reference-for-koreans>
- <https://gist.github.com/ihoneymon/652be052a0727ad59601>

협업 - Markdown

▶ 실습 1

- <http://pad.haroopress.com/page.html?f=markdown>
 - 이 페이지를 똑같이 작성해 주세요

▶ 실습 2

- 계산기 Github 에 설명(README.md) 파일을 작성해주세요

Mockup Tool

Mockup Tool

Mockup Tool

- ▶ Prototype 디자인 도구

- 빠르게 그릴 수 있다
- 정확하게 그릴 수 있다

Seeing is
Believing

Quick Add: Search UI Library

[All](#) [Big](#) [Buttons](#) [Common](#) [Containers](#) [Layout](#) [Markup](#) [Media](#) [Text](#) [iPhone](#)

Item One

Ale

Alert text

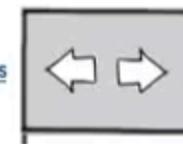
Accordion

Alert Box

Arrow / Line

Breadcrumbs

Home > Products



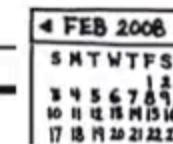
Browser Window

Button

One Two

Button

Button Bar / Tab B...



Calendar

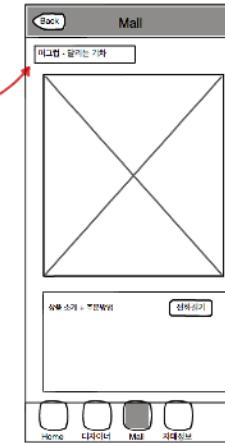
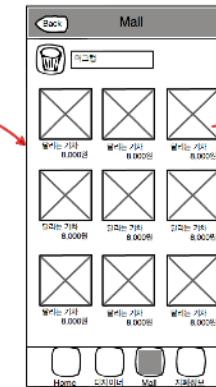
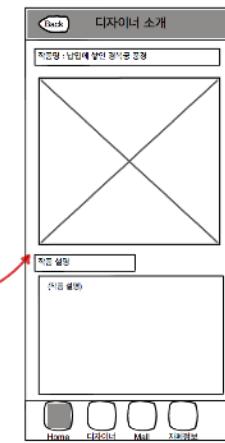
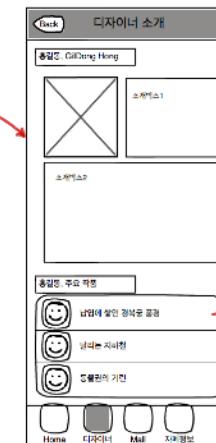
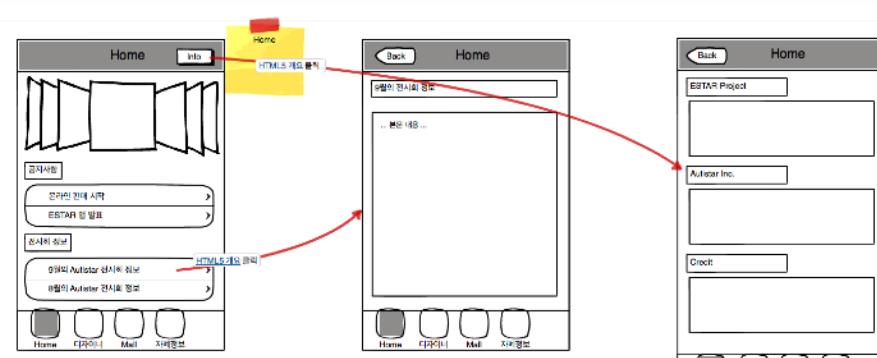


Callout



Chart: Bar

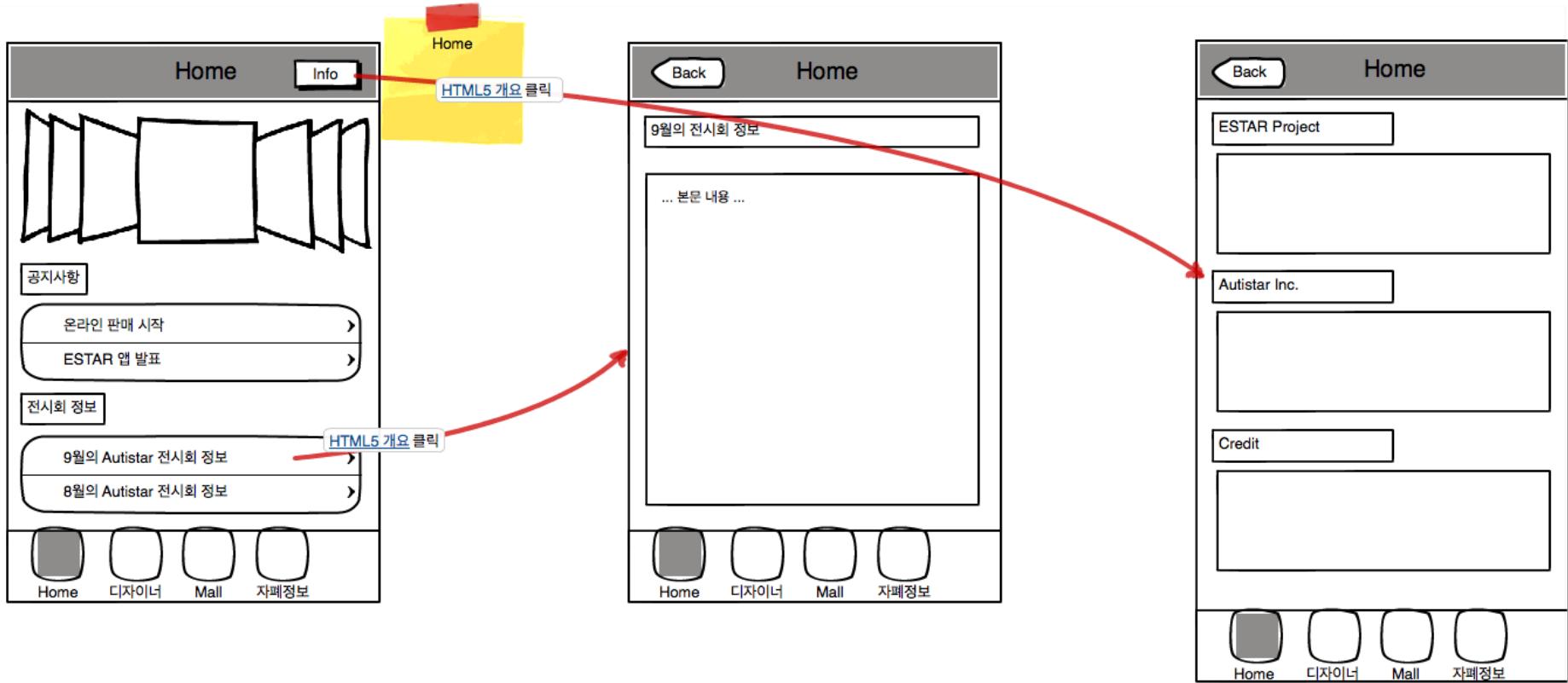
Mockup Tool



Mockup Tool

▶ 실습

- <https://balsamiq.com>



Github Issue

Github - Issue

▶ Issue

- 질문 및 요구사항들을 올려 놓는 곳
- 담당자
- Label
- Milestones

▶ 잘 운영되고 있는 Issue

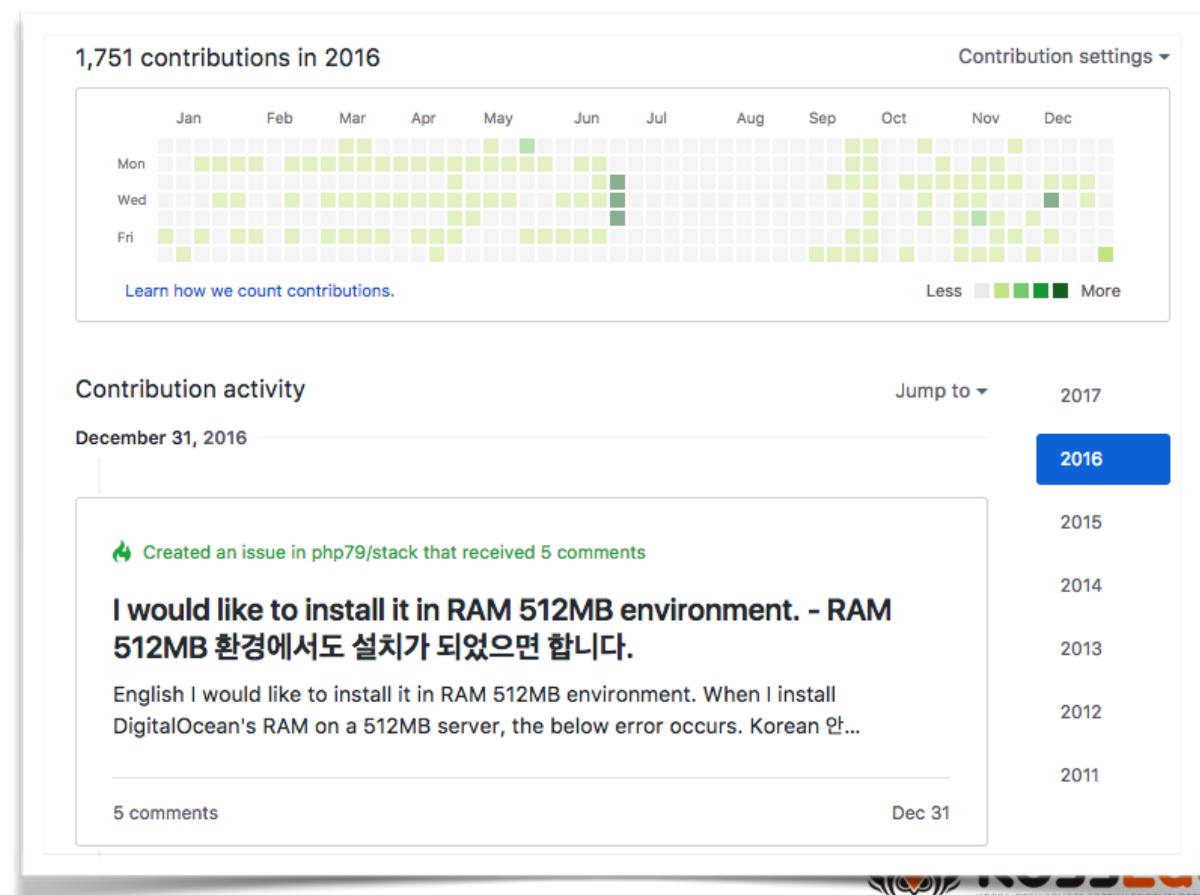
- AXISJ
 - <https://github.com/thomaslang/axisj/issues>
- TensorFlow
 - <https://github.com/tensorflow/tensorflow/issues>
 - <https://github.com/tensorflow/tensorflow/issues/12059>
- php79/stack
 - <https://github.com/php79/stack/issues>

Github - Issue

▶ Issue 도 훌륭한 기여를 하는 것이다

- Issue 도 여러분의 Profile 에 남는다

- <https://github.com/php79/stack/issues/25>



Github

Pull

Github - Pull

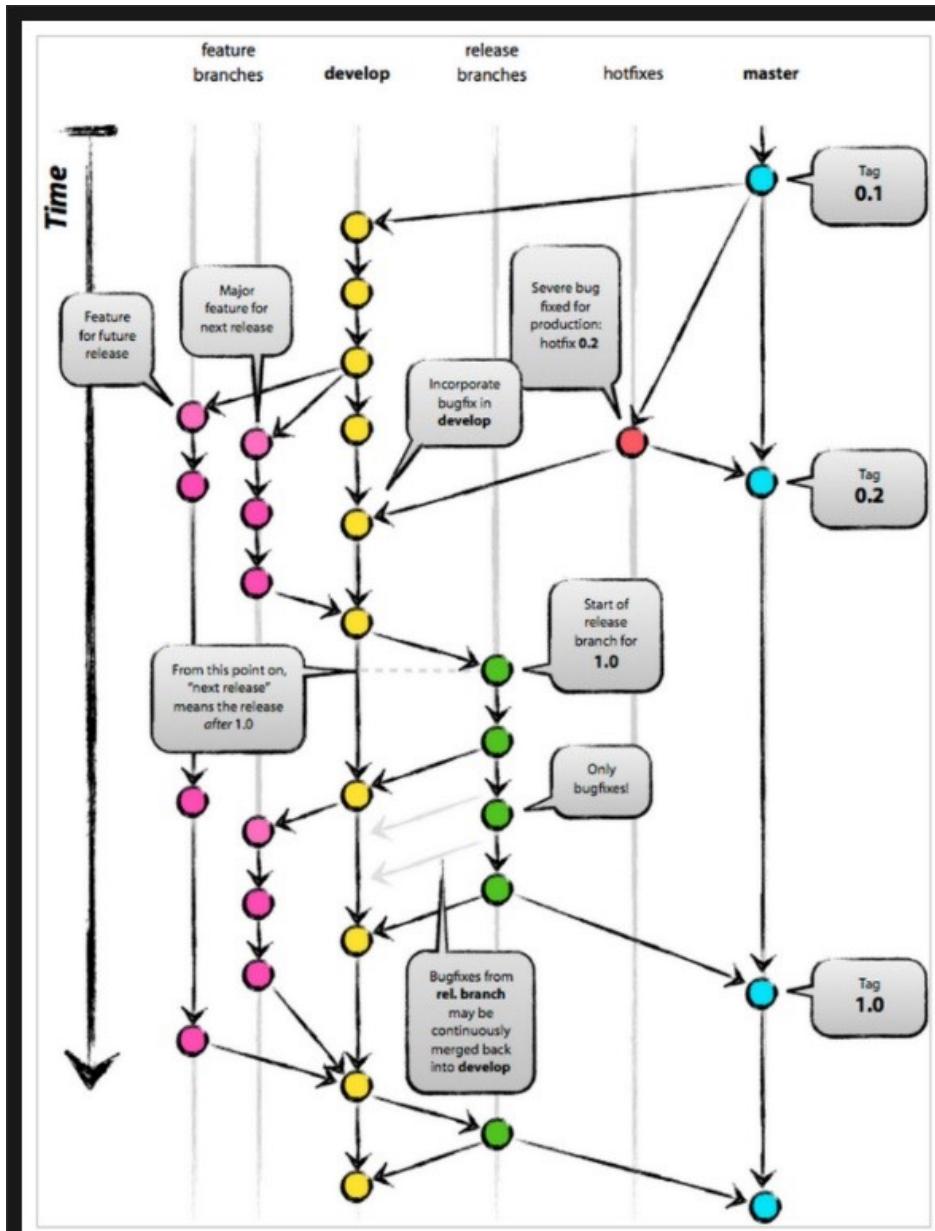
- › 원격지 Repository 의 변경사항을 가져온다

Merge

Github - Merge

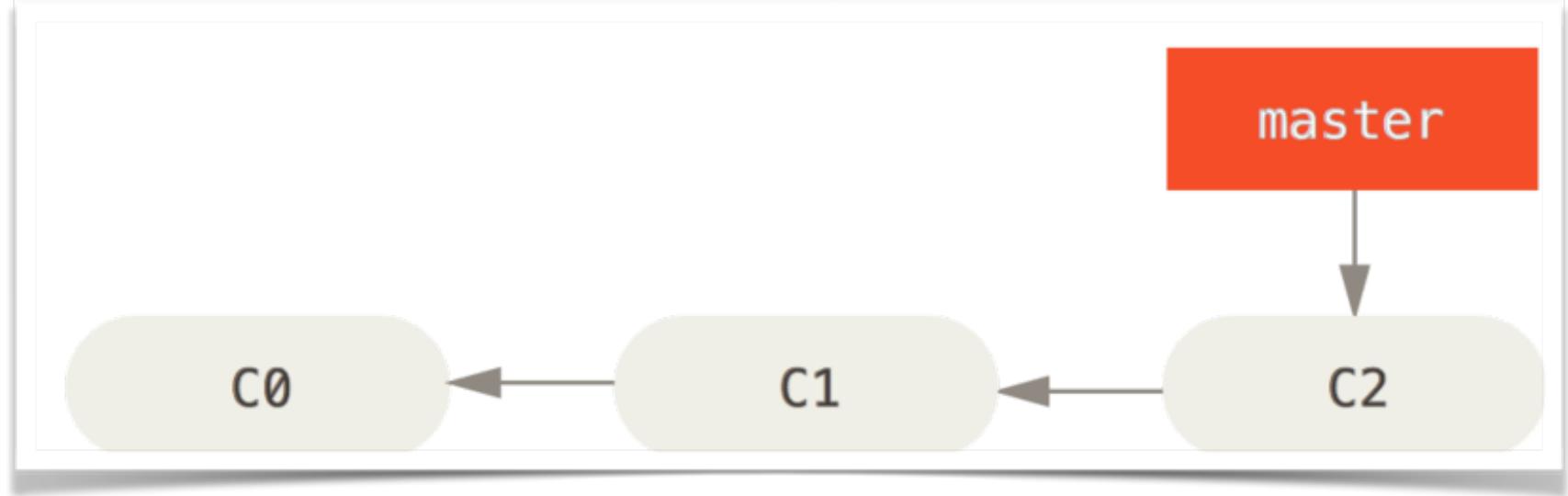
▶ Code 합치기

- 주로 Branch 를 합친다
- Git이 충돌(Conflict) 을 알려준다



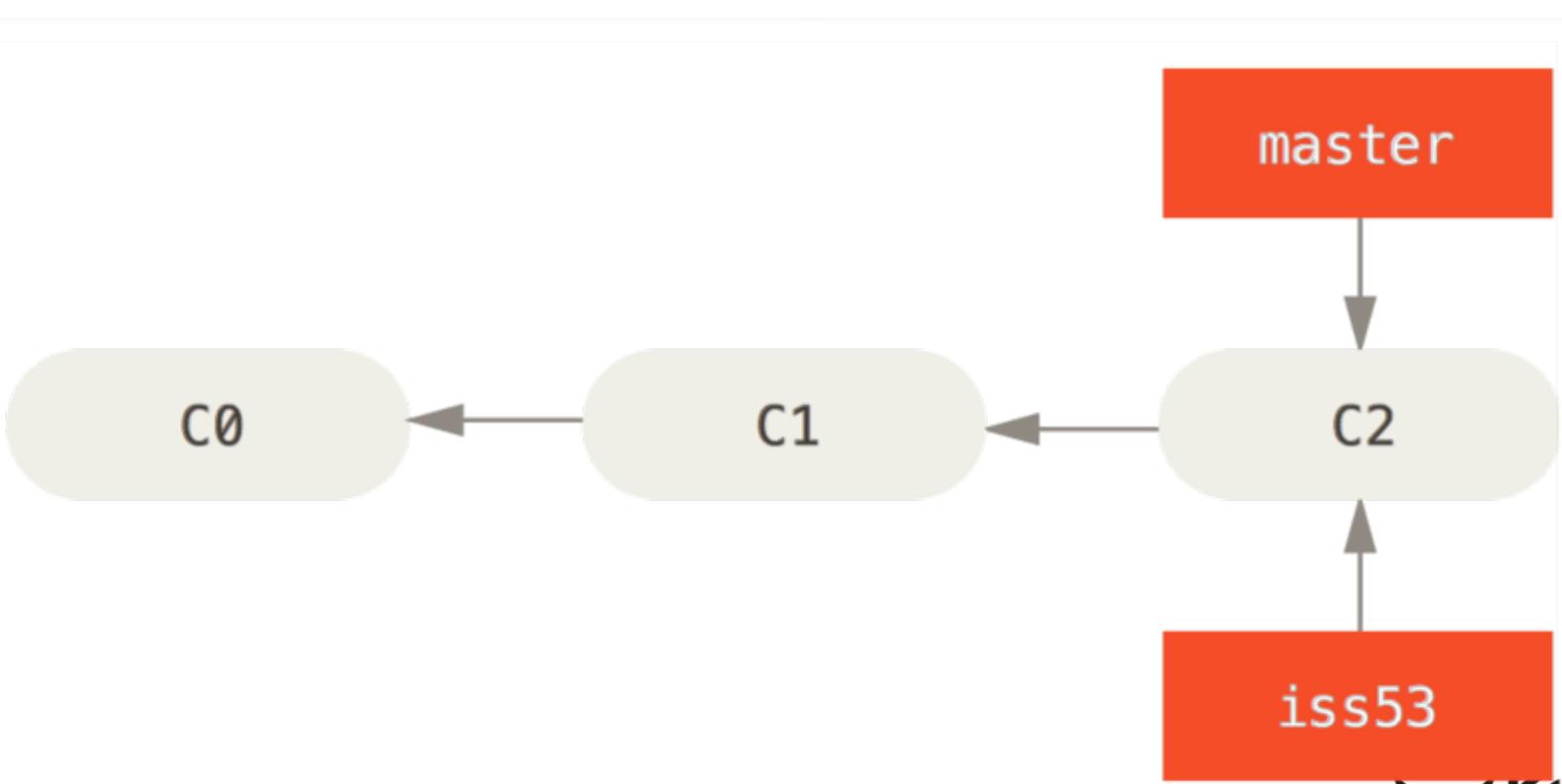
Github - Merge

- 3번의 커밋이 진행되고 있었다



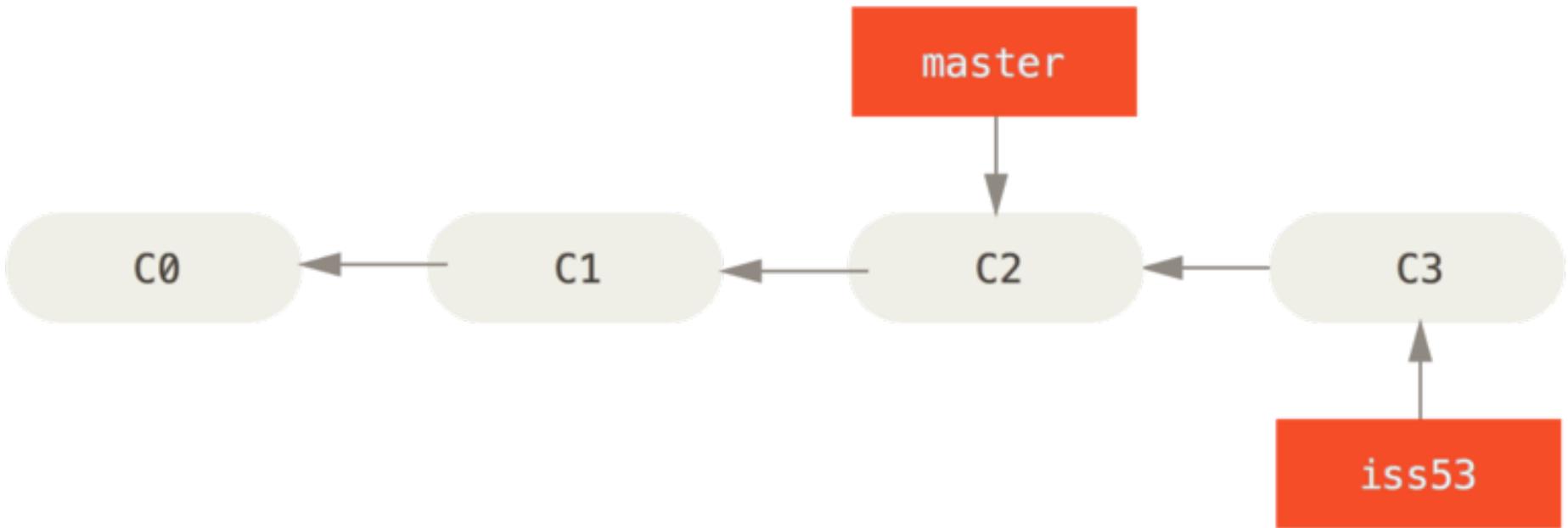
Github - Merge

- ▶ 이슈 53번 해결을 위해
Branch 생성



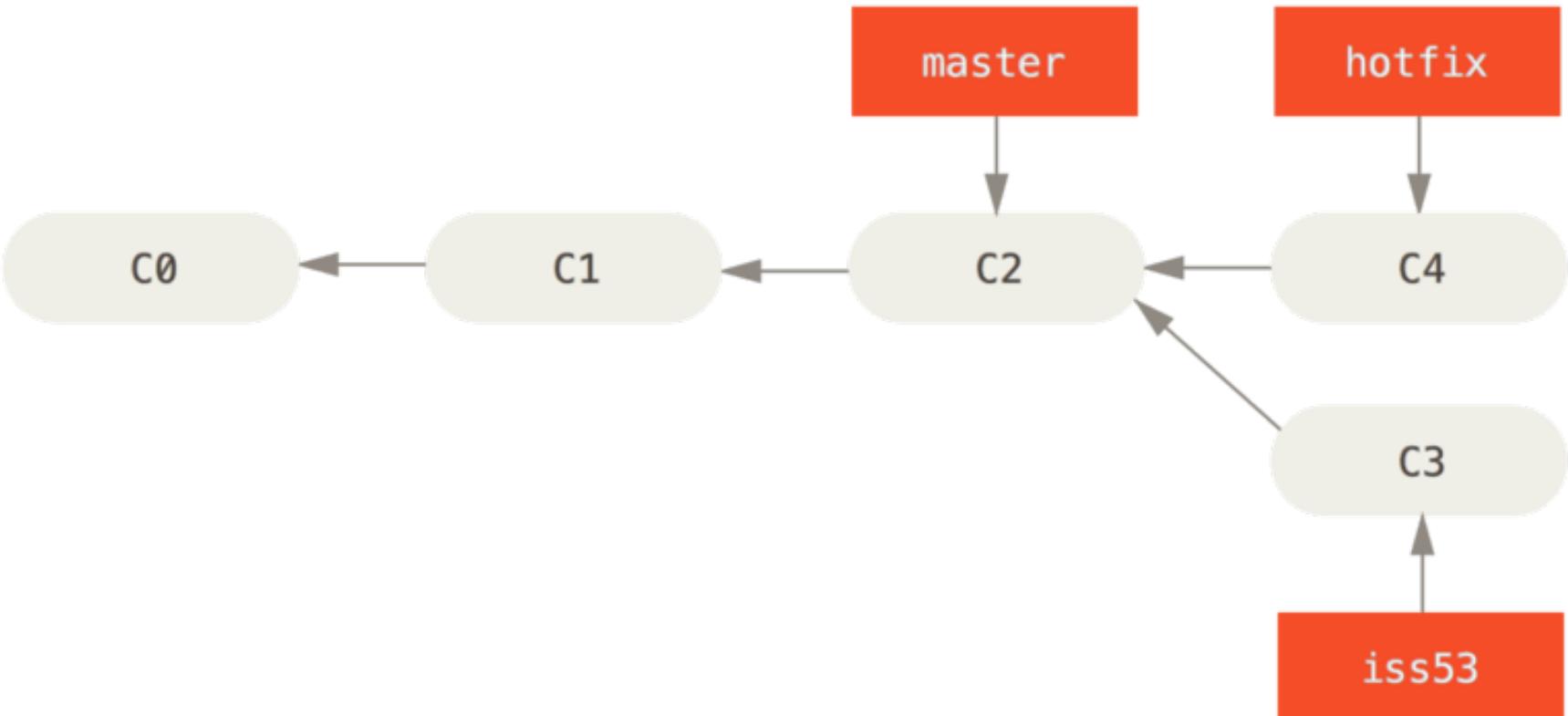
Github - Merge

- › iss53 branch 개발 진행



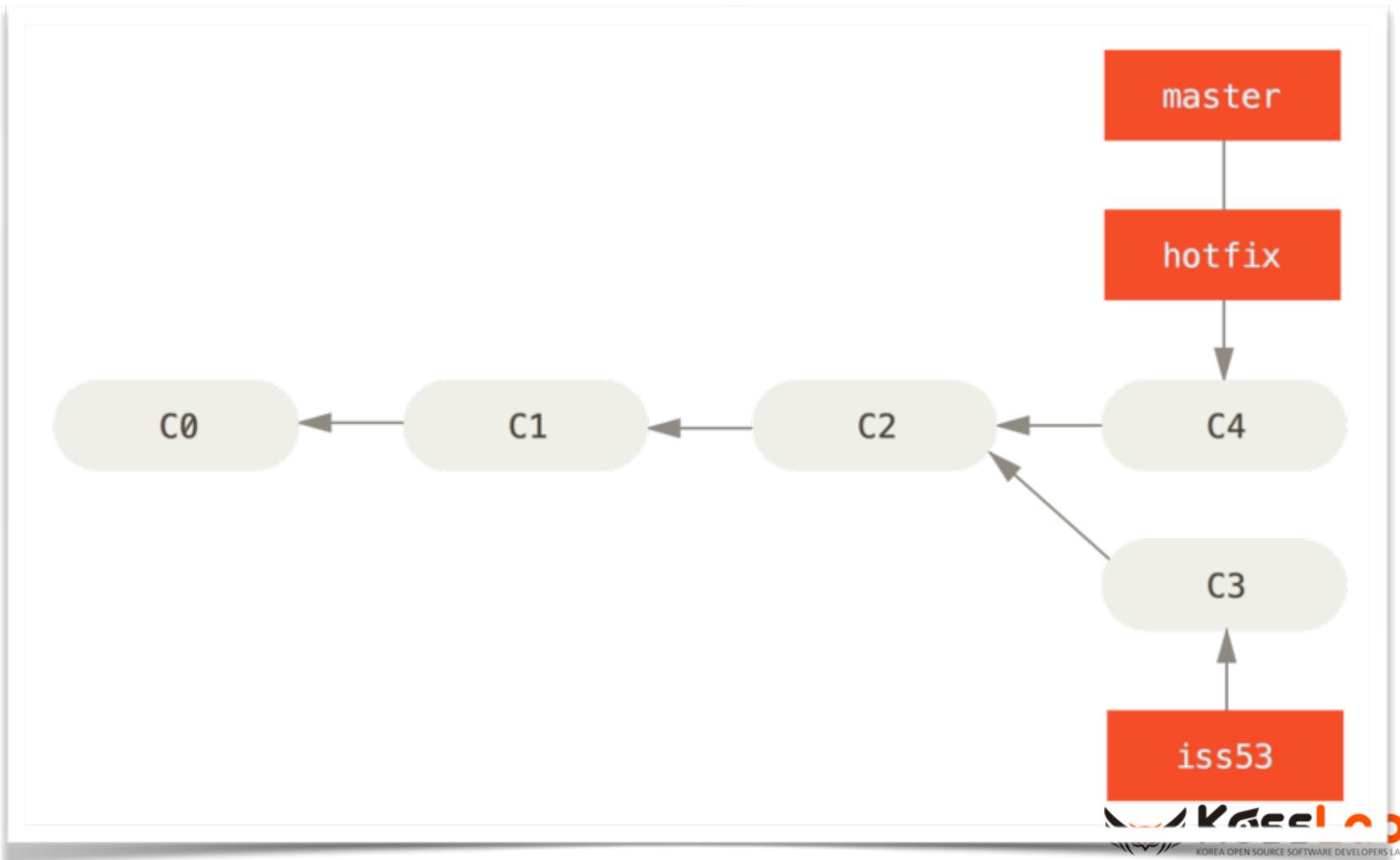
Github - Merge

- ▶ hotfix branch 생성



Github - Merge

- Merge : hotfix & master

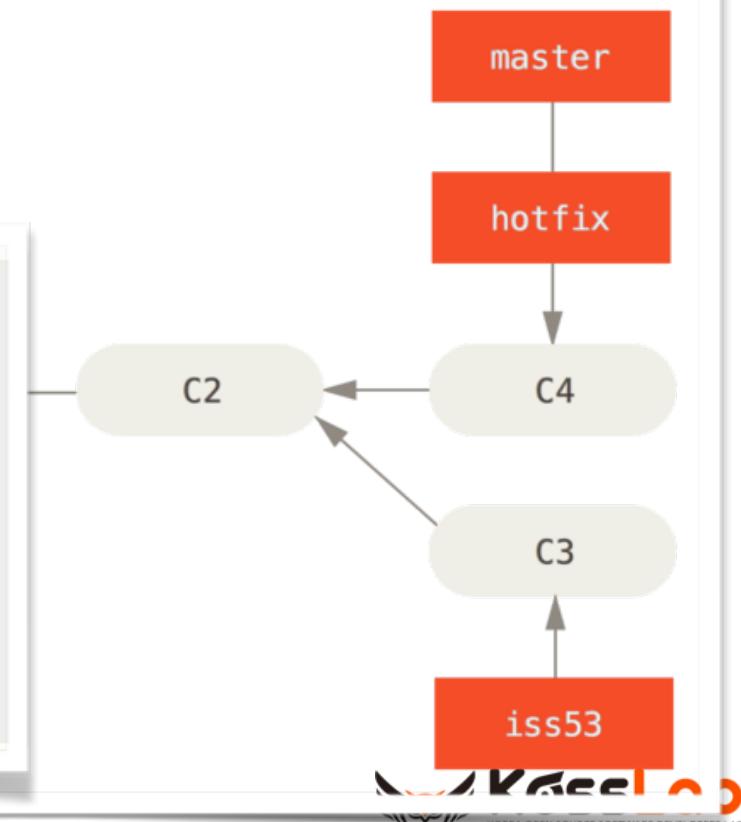


Github - Merge

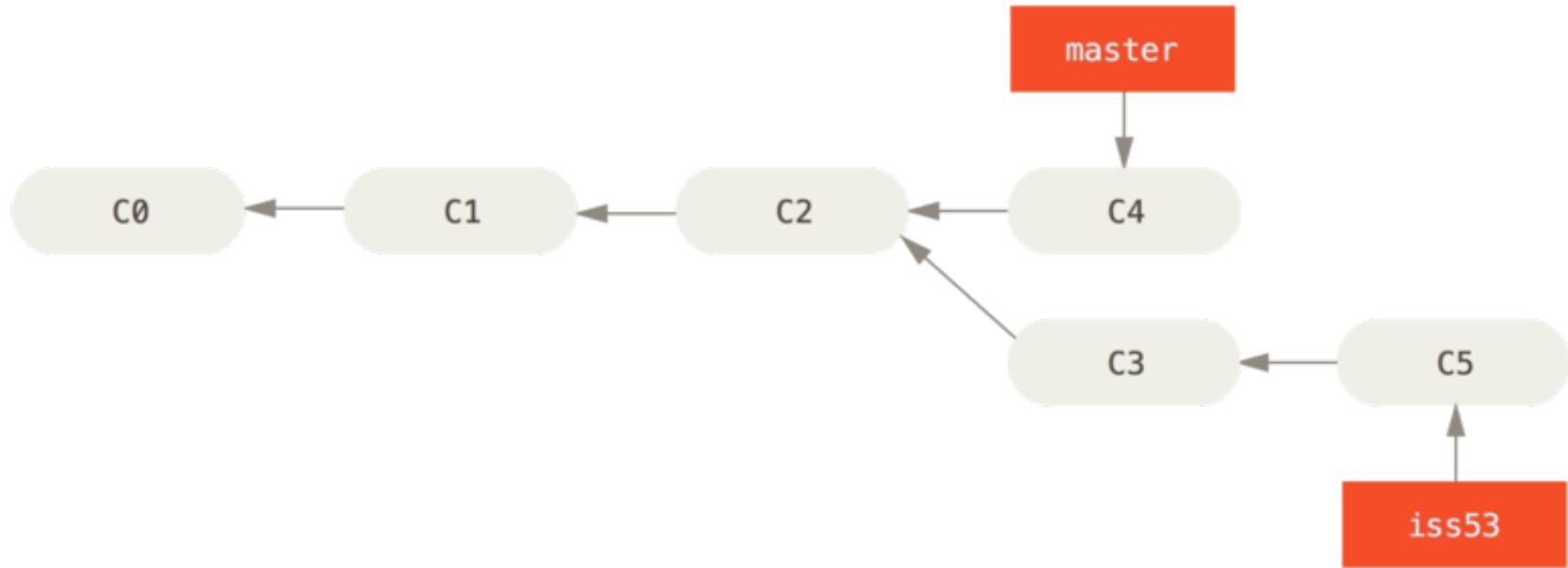
▶ C4 커밋의 부모는 C2

- 따라서, Merge 없이
- master 포인터만 C4로 이동한다
- “Fast-forward” Merge라고 한다

```
$ git checkout master
$ git merge hotfix
Updating f42c576..3a0874c
Fast-forward
 index.html | 2 ++
 1 file changed, 2 insertions(+)
```

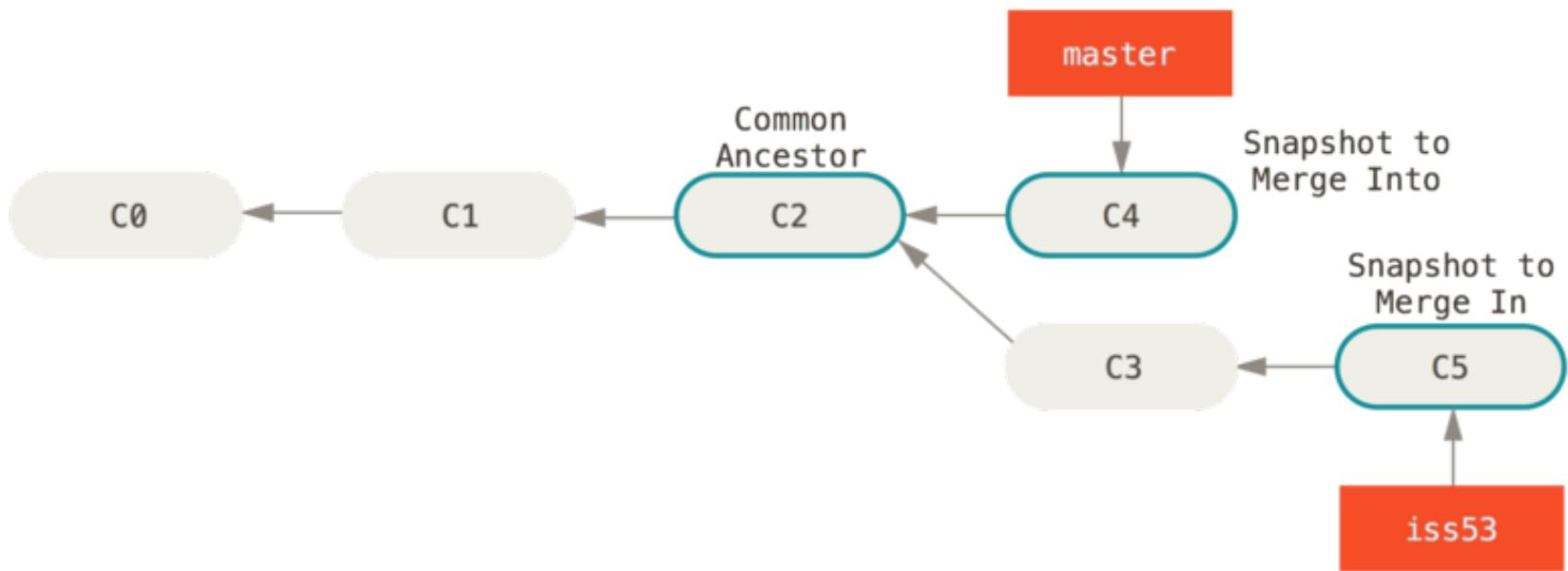


Github - Merge



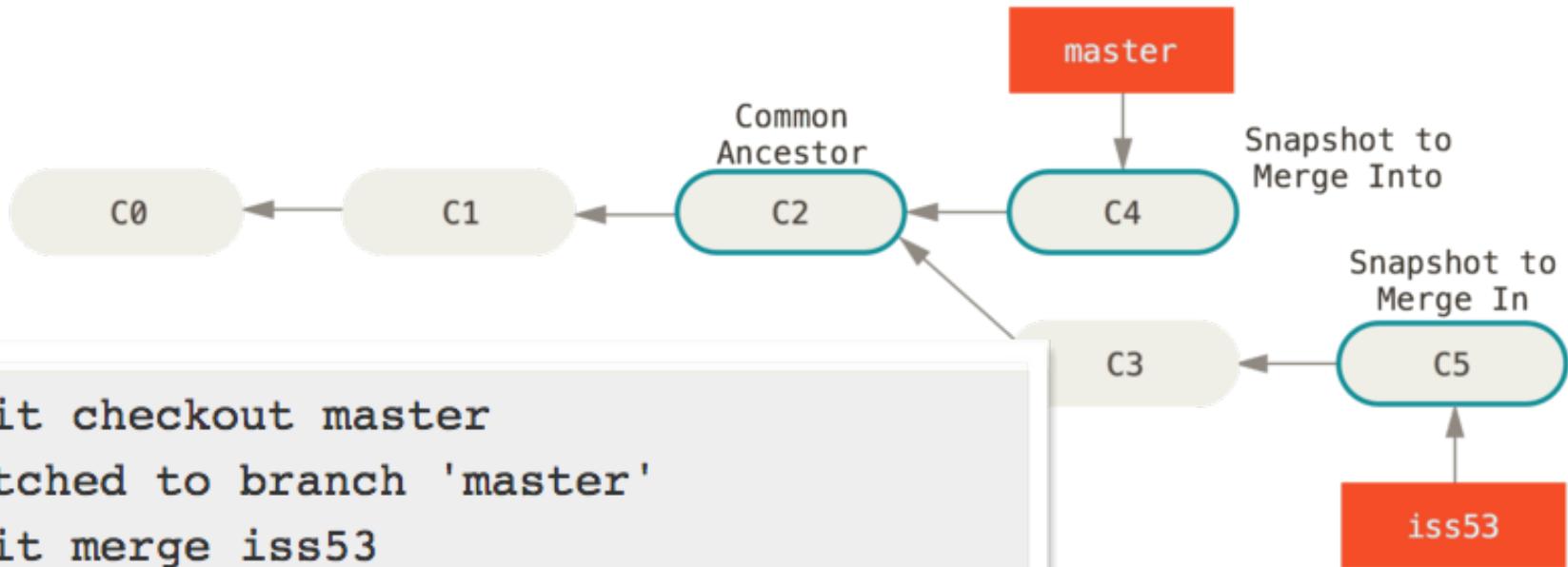
Github - Merge

- Merge : iss53 + master



Github - Merge

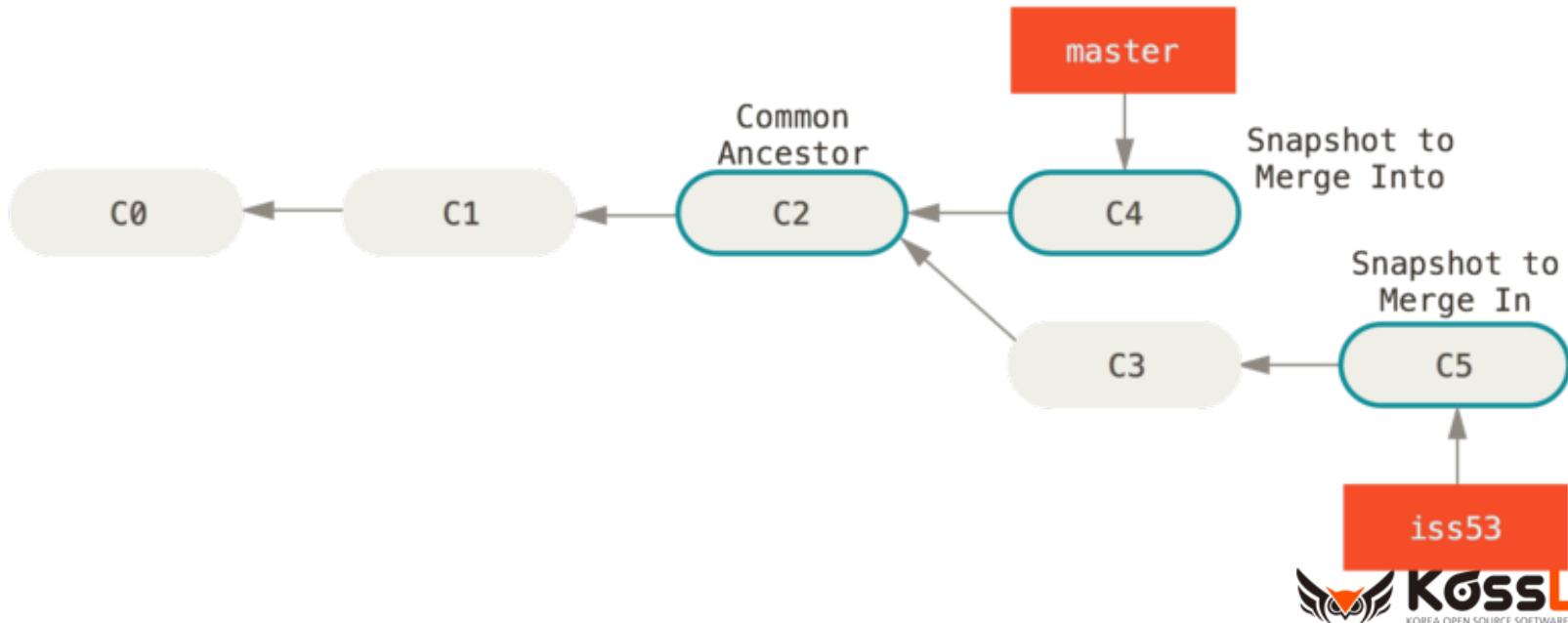
- Merge : iss53 + master



```
$ git checkout master
Switched to branch 'master'
$ git merge iss53
Merge made by the 'recursive' strategy.
 README |    1 +
 1 file changed, 1 insertion(+)
```

Github - Merge

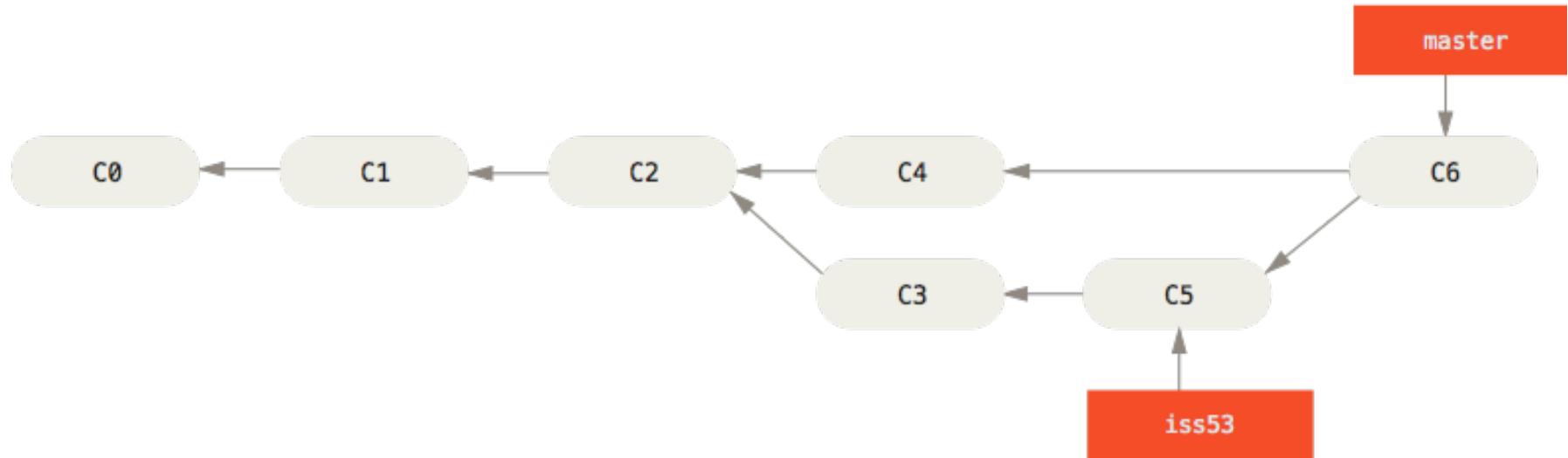
- ▶ 부모가 서로 다르다
 - “Fast-forward” 머지가 이뤄지지 않는다
- ▶ 3-way Merge 진행
 - 각 브랜치 커밋 2개
 - 공통부모 커밋 1개



Github - Merge

› 3-way Merge 진행

- 단순 포인터 이동이 아니다
- 3-way Merge 결과를 별도 커밋으로 만들고
이곳에 포인터를 이동
- 이런 커밋을 Merge 커밋이라고 부른다



Conflict

Github – Conflict

- › 같은 파일을 양쪽 브랜치에서 변경한 경우 발생
- › Merge 되지 않고, 차이점을 비교해준다

```
$ git merge iss53
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.
```

Github – Conflict

- › 같은 파일을 양쪽 브랜치에서 변경한 경우 발생
- › Merge 되지 않고, 차이점을 비교해준다

```
<<<<< HEAD:index.html
<div id="footer">contact : email.support@github.com</div>
=====
<div id="footer">
  please contact us at support@github.com
</div>
>>>>> iss53:index.html
```

Github = Conflict

- › 같은 파일을 양쪽 브랜치에서 변경한 경우 발생
- › Merge 되지 않고, 차이점을 비교해준다
- › Solved 표시하고, 커밋

```
<<<<< HEAD:index.html
<div id="footer">contact : email.support@github.com</div>
=====
<div id="footer">
  please contact us at support@github.com
</div>
>>>>> iss53:index.html
```

Github → Fork

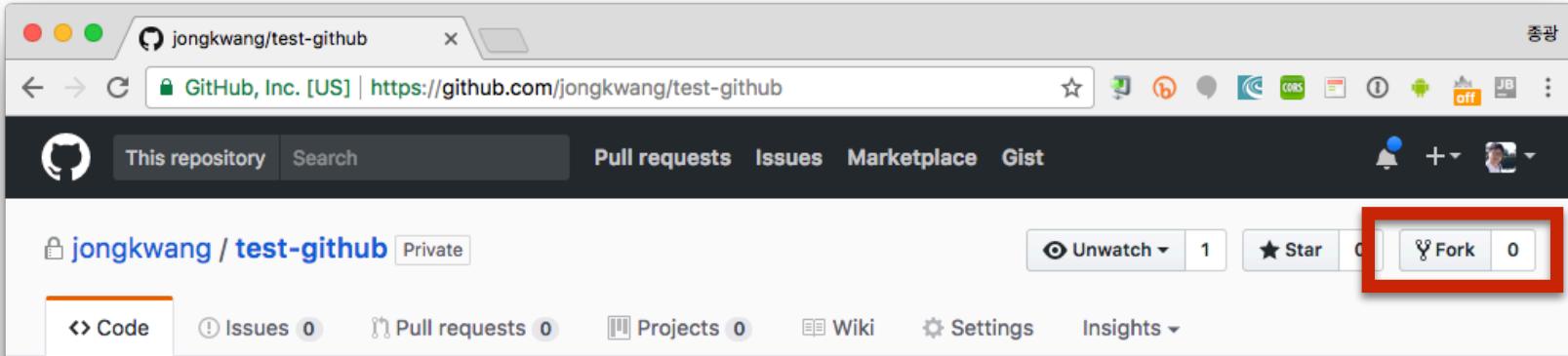
Github – Fork

- › 상대방의 Repository 를 내것으로 가져온다
- › 관점의 차이
 - 남의 소스를 내 주머니에 넣는 것은 금기 사항이었으나
 - Github 에서는 적극 권장한다
- › Fork 를 해야
 - 코드 기여를 할 수 있기 때문
 - 인기 지수의 척도



Github - Fork

▶ Fork button



A screenshot of a GitHub repository page for 'jongkwang/test-github'. The page shows basic repository statistics: 6 commits, 1 branch, 0 releases, 1 contributor, and MIT license. At the top right, there is a 'Fork' button with a count of 0, which is highlighted with a red box. Below the stats, there are buttons for 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and a large green 'Clone or download' button. The repository's history is listed at the bottom, showing the initial commit of 'Print Hello World' by 'jongkwang' and other files like '.gitignore', 'Calculator.java', 'LICENSE', and 'README.md'.

jongkwang/test-github GitHub, Inc. [US] | https://github.com/jongkwang/test-github

This repository Search Pull requests Issues Marketplace Gist

jongkwang / test-github Private Unwatch 1 Star 0 Fork 0

No description, website, or topics provided. Edit

Add topics

6 commits 1 branch 0 releases 1 contributor MIT

Branch: master New pull request Create new file Upload files Find file Clone or download

jongkwang Print Hello World Latest commit 2e06410 10 hours ago

.gitignore Initial commit a day ago

Calculator.java Print Hello World 10 hours ago

LICENSE Initial commit a day ago

README.md Initial commit a day ago

Github - Fork

This repository Search Pull requests Issues Marketplace Gist

jongkwang / tensorflow forked from tensorflow/tensorflow

Unwatch 1 Star 0 Fork 32,406

Code Pull requests 0 Projects 0 Settings Insights

Computation using data flow graphs for scalable machine learning <http://tensorflow.org> Edit

Add topics

8,256 commits 12 branches 11 releases 413 contributors

Branch: master New pull request Create new file Upload files Find file Clone or download

This branch is 12354 commits behind tensorflow:master. Pull request Compare

tyfkda committed with martinwicke Fix symbol duplication on Xcode/clang (#4504) ... Latest commit 6218ac2 on Sep 24, 2016

tensorflow Fix symbol duplication on Xcode/clang (#4504) 11 months ago

KOREA OPEN SOURCE SOFTWARE DEVELOPERS LAB

Github - Fork

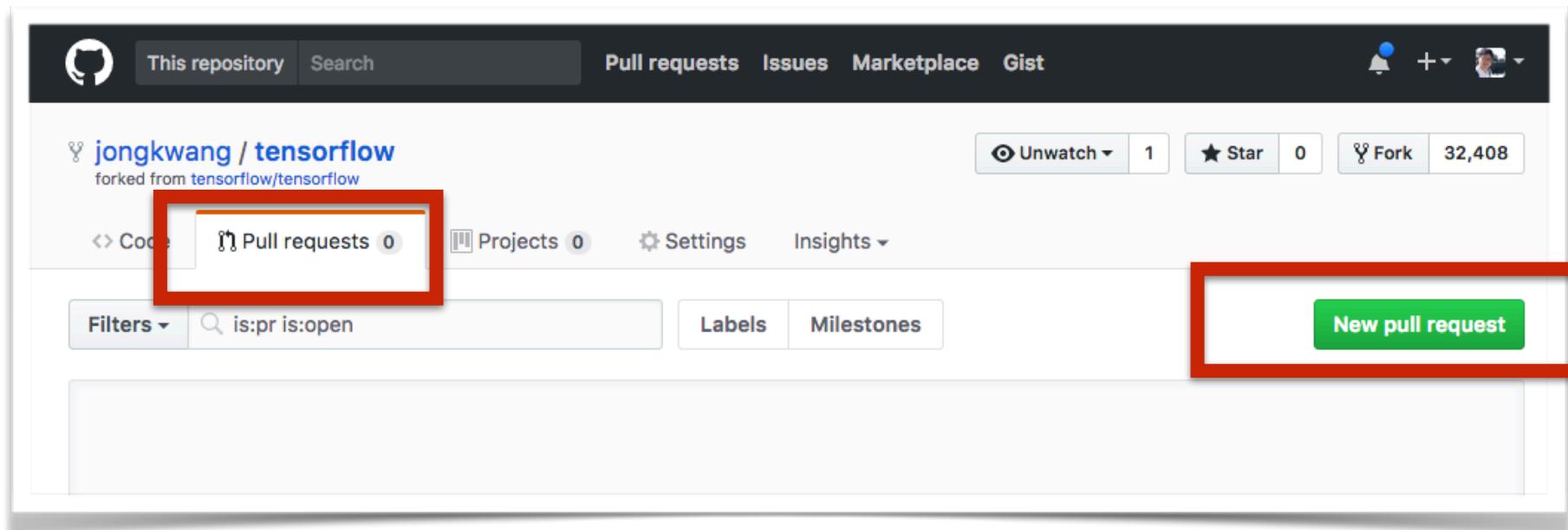
▶ Fork 를 하는 이유

- Fork 를 안하면 수정 권한이 없다
- 단순 Copy 는 버전관리가 되지 않는다
 - 커밋 불가
 - 원본 Repository 와 비교가 안됨
 - 수정된 파일들을 보낼 수 없음
- Fork 를 하면, 모든 권한 획득
 - 마음껏 테스트 가능

Github Pull Request

Github – Pull Request

- ▶ Fork Repository 수정 사항을
원본 Repository 에 제안 하는 행위



Github – Pull Request

› Sample

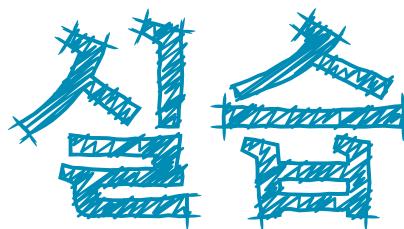
- TensorFlow
 - <https://github.com/tensorflow/tensorflow/pulls>
- AXISI
 - <https://github.com/thomaslang/axisj/pulls>

The screenshot shows the GitHub interface for the tensorflow/tensorflow repository. The top navigation bar includes links for Watch (5,871), Star (66,211), Fork (32,408), and the repository name. Below the navigation, there are tabs for Code, Issues (915), Pull requests (98, highlighted in orange), Projects (0), and Insights. A search bar with the query "is:pr is:open" is present, along with filters for Labels and Milestones, and a "New pull request" button.

Key statistics at the top: 98 Open pull requests and 4,333 Closed pull requests.

The main list displays three open pull requests:

- #12111: Added a bias term in Bahdanau attention alignments • cla: yes (1 comment)
- #12107: Corrected dimension notes in attention_wrapper.py • cla: yes (2 comments)
- #12105: show proper error message when run `saved_model_cli` without arguments instead of an error said `AttributeError: 'Namespace' object has no attribute 'func'` • cla: yes (1 comment)



Fork & Pull Request

Github

Remote Pull

Github - Remote Pull

- ▶ Fork 한 후에
원본 Repository 에 수정이 발생됨
 - 최신 변경 사항을 Fork Repository 에도 넣어야 한다
- ▶ 방법
 - Remote Repository
 - Github Repository : 원래부터 있었음
 - 원본 Repository : 새로 등록하여 추가 한다
 - Pull from 원본 Repository

Unit Test

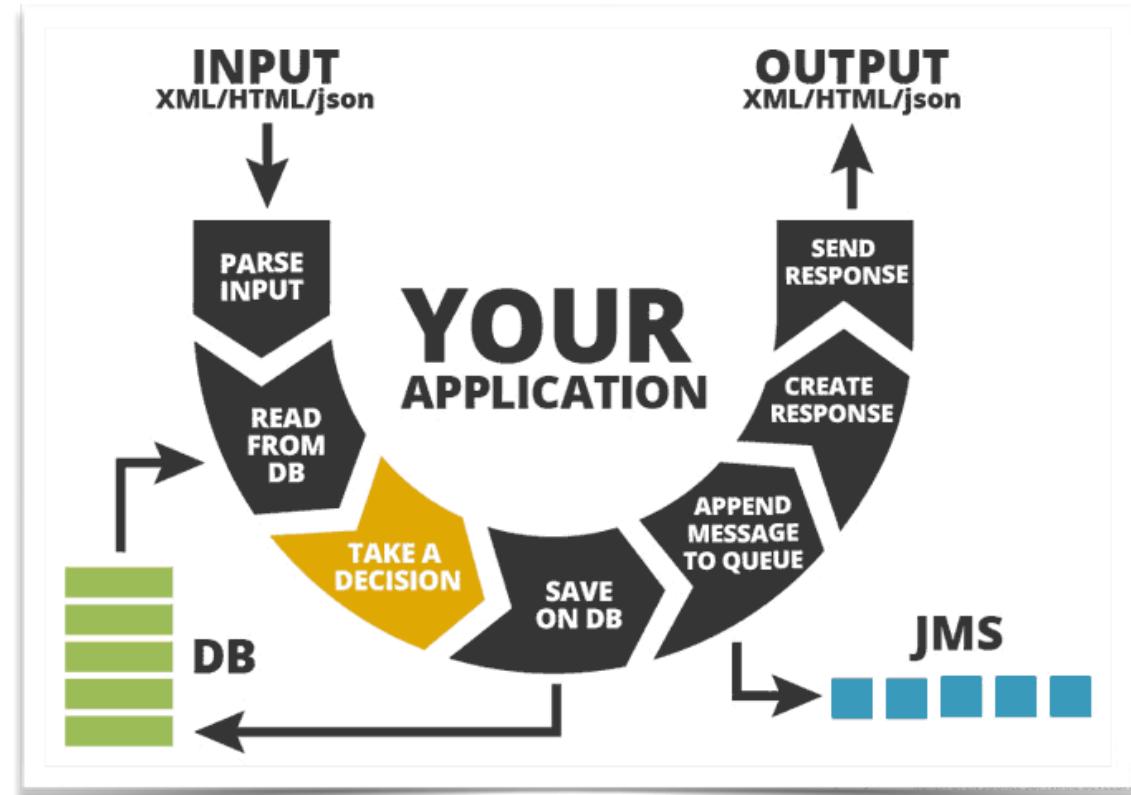
Unit Test

- ▶ 단위 테스트

- 코드 테스트를 통해 무결성 보장

- ▶ 꼭 해야 하는가?

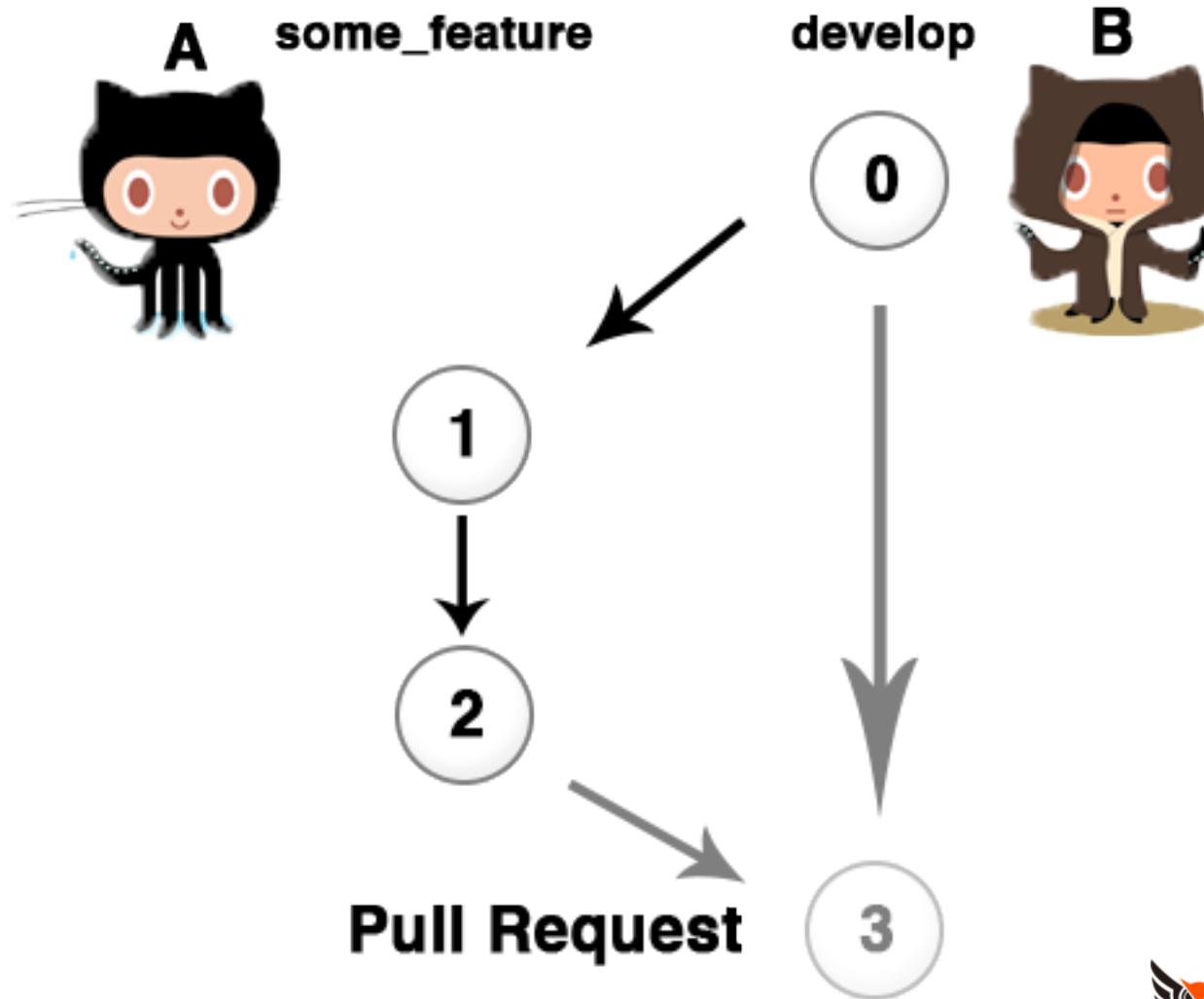
- 잘나가는 Open Source 프로젝트에는 반드시 적용되어 있다



Travis CI

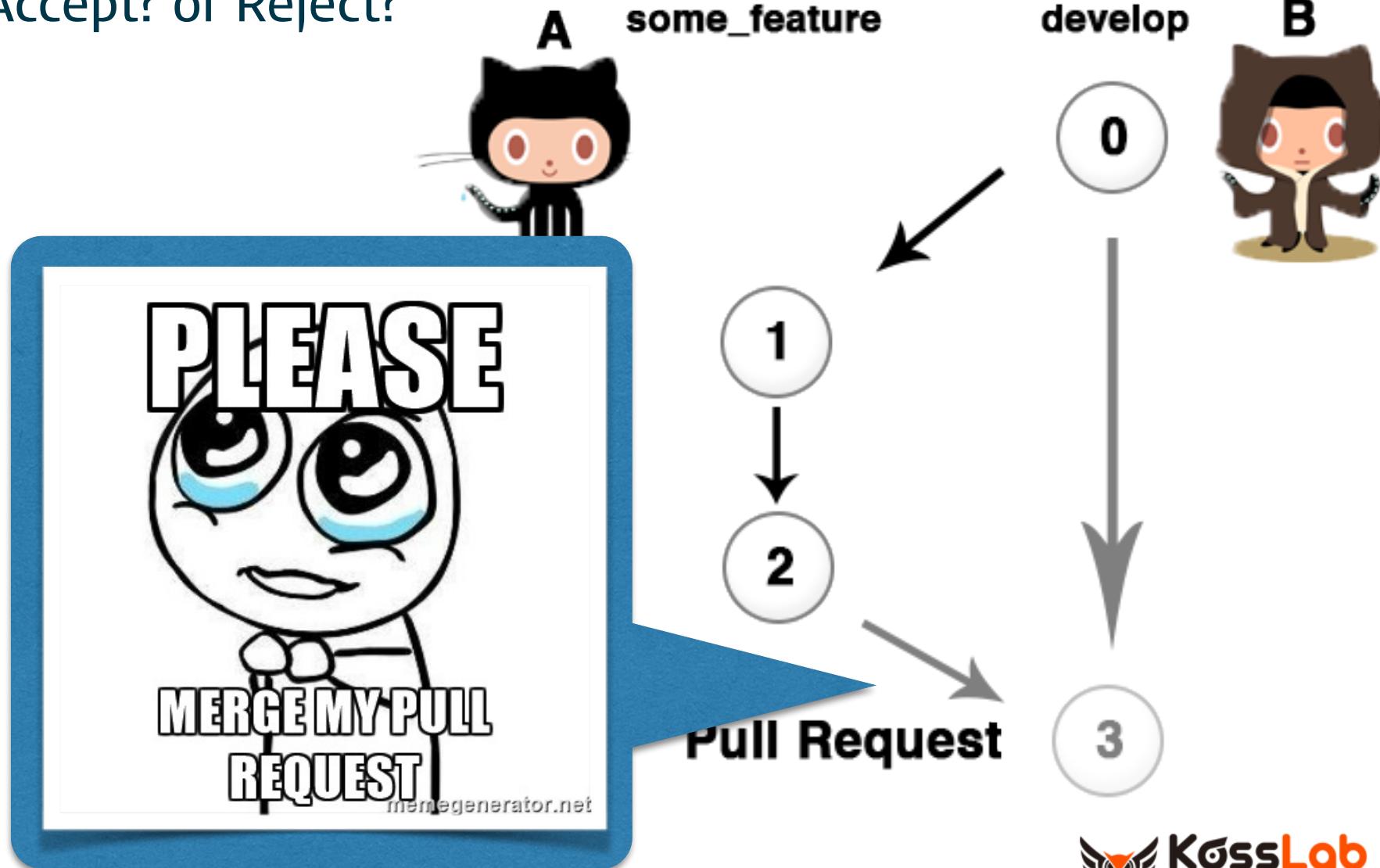
Pull Request

- ▶ Accept? or Reject?



Pull Request

- ▶ Accept? or Reject?



Pull Request

- Accept? or Reject?



Pull Request

- Accept? or Reject?

Unit

with **J**Unit



JUnit

▶ Unit test

Jenkins search ?

Jenkins > jUnit Example > #14 > Test Results > CustomerContact > Address > [ENABLE AUTO REFRESH](#)

[Back to Project](#) [Status](#) [Changes](#) [Console Output](#) [Edit Build Information](#) [History](#) [Test Result](#) [Previous Build](#)

Test Result : Address

1 failures  4 tests Took 0 ms. [add description](#)

All Tests

Test name	Duration	Status
Insert City	0 ms	Passed
Insert State	0 ms	Passed
Insert Street	0 ms	Passed
Zip	0 ms	Failed

Travis CI

- › Github 와 연동하여 지속적 통합(Continuous Integration)을 호스팅 하는 서비스
- › 다양한 언어 지원
 - C, C++, Clojure, Erlang, Go, Groovy, Haskell, Java, JavaScript (Node.js), Objective-C, Perl, PHP, Python, Ruby, Scala



Travis CI

Travis CI

- ▶ Github 에 Test 결과가 표시된다

The screenshot shows a GitHub pull request interface. At the top, there are two counts: 0 Open and 6 Closed. Below this, a list of commits is displayed, each with a checkbox, a purple icon, a commit message, and a merge status.

- ↗ Add travis build status ✓
#6 by jongkwang was merged 6 hours ago
- ↗ Fix readme for tutorial ✘
#5 by jongkwang was merged a day ago
- ↗ Add missing web resources ✘
#4 by toori67 was merged 4 days ago
- ↗ json transform test ✓
#3 by toori67 was merged 9 days ago
- ↗ move dashboard from iotlabs.webserver ✓
#2 by jongkwang was merged 9 days ago
- ↗ generate gradle project scheme
#1 by toori67 was merged 15 days ago

Travis CI

- › Github 에 Test 결과가 표시된다

Add travis build status #6

Merged jongkwang merged 2 commits into master from add-status-to-readme 6 hours ago

Conversation 1 Commits 2 Files changed 1

jongkwang commented 6 hours ago
No description provided.

jongkwang added some commits 6 hours ago

- Add travis build status ✓ c6e007d
- Add codecov status ✓ b0ae65f

Travis CI

- ▶ Docker 기반
- ▶ Test 용도의 Hosting 지원

Open Source	Startup	Small Business	Premium
Free always	\$129 USD per month	\$249 USD per month	\$489 USD per month
<ul style="list-style-type: none">✓ Fair use✓ Unlimited build minutes✓ Unlimited repositories✓ Unlimited collaborators	<ul style="list-style-type: none">2 Concurrent jobs✓ Unlimited build minutes✓ Unlimited repositories✓ Unlimited collaborators	<ul style="list-style-type: none">5 Concurrent jobs✓ Unlimited build minutes✓ Unlimited repositories✓ Unlimited collaborators	<ul style="list-style-type: none">10 Concurrent jobs✓ Unlimited build minutes✓ Unlimited repositories✓ Unlimited collaborators
Get Started	Start Trial	Start Trial	Start Trial

Codecov

- ▶ Code Coverage 를 표시한다.
 - Patch before/after 비교를 해준다
 - Line count 로 명확히 표시한다
- ▶ 손쉬운 사용



Codecov

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▶ 손쉬운 사용

The screenshot shows a GitHub pull request titled "Add missing web resources #4". The pull request has been merged by "toori67" 4 days ago. It shows 1 commit from "toori67" merged into "iot-labs:master" from "toori67:add-web-resources". There are 17 files changed. The conversation tab shows a comment from "toori67" 4 days ago: "No description provided." The commits tab shows a commit from "toori67" titled "Add missing web resources" and a comment from "codecov-io" 4 days ago: "Current coverage is 43.28% (diff: 0.00%)". Below this, it says "Merging #4 into master will decrease coverage by 0.99%". A detailed coverage report table is shown:

@@	master	#4	diff @@
Files	16	17	+1
Lines	131	134	+3
Methods	0	0	
Messages	0	0	
Branches	11	11	
=====			
Hits	58	58	
- Misses	70	73	+3
Partials	3	3	

Powered by Codecov. Last update 8dd5f77...a1da417

toori67 merged commit e83f0e5 into iot-labs:master 4 days ago
1 of 3 checks passed

toori67 deleted the toori67:add-web-resources branch 4 days ago

Demo

Unit



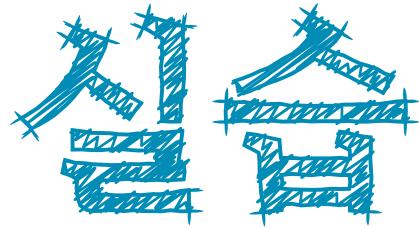
with **JUnit**



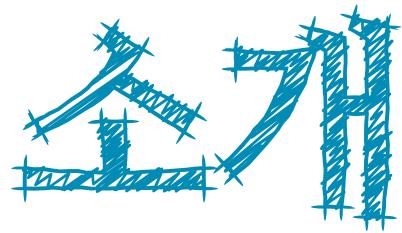
Travis CI



Travis CI



IoT Labs



Open Source

오픈 소스

Open Source Project 참여

› 첫발 내딛기

- 오타와 코드 정리부터 시작하세요.
 - 오타 : 한글 맞춤법 검사기 이용
 - 코드
 - > 사용하지 않는 변수 찾기
 - > 과도한 Stack 메모리 사용 억제
- Issue 도 큰 기여입니다

Open Source Project 참여

- ▶ 공개소프트웨어 개발자대회

- http://project.oss.kr/award/history.do?contest_seq=10

- ▶ 공개소프트웨어 개발자랩

- <https://kosslab.kr>
 - Menu : 글로벌 오픈프론티어 소개

Pull Request
1개 이상

- ▶ IoT Labs

- <https://github.com/iot-labs/dashboard>
 - <https://github.com/iot-labs/communication>

O/A

여제 오윤
다시 보기

Git / Github

깃허브