

Git / Github

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

- 2017.08.08 -

분산관리 시스템

Download

Download

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

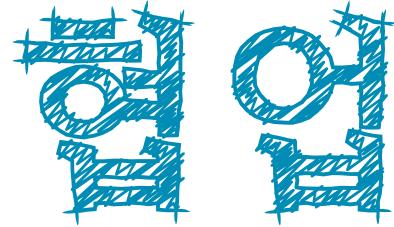
- ▶ SourceTree
 - <https://www.sourcetreeapp.com/>

- ▶ 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

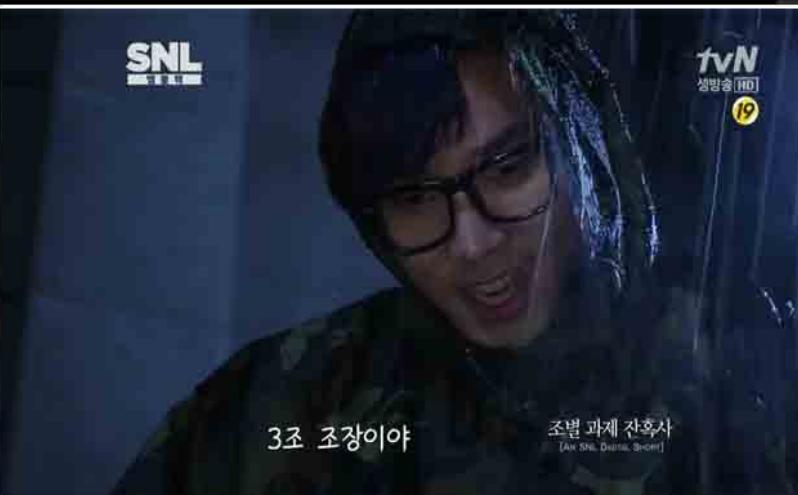
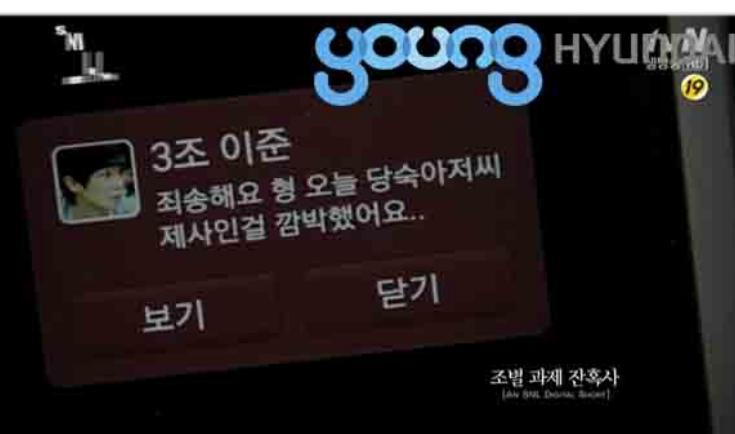
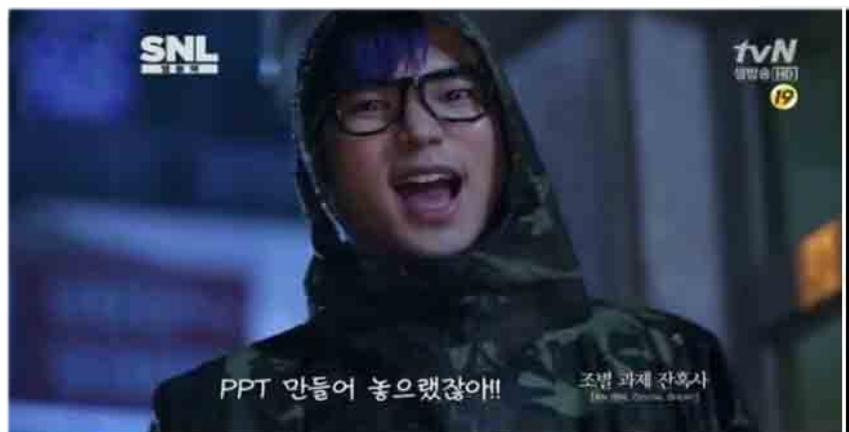
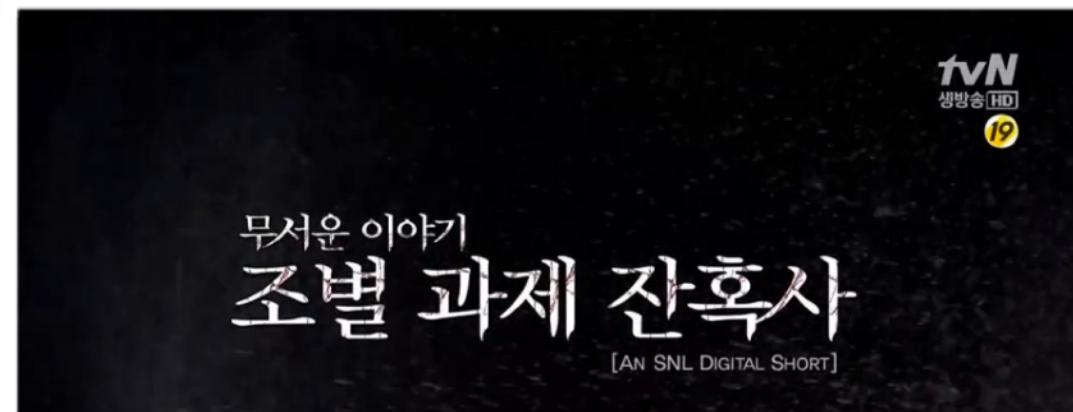


협업

- ▶ 우리는 태생적으로 협업을 싫어해요

협업

- ▶ 공산주의가 왜 망했는지
완벽한 예



협업

- › 커뮤니케이션 능력 아주 중요!!
- › 커뮤니케이션을 잘하는 방법은
커뮤니케이션을 하지 않는 것이다
 - 말 (X)
 - 글 (O)
 - 그림 (O)
- › 자신의 생각을
글과 그림으로 빠르게 표현 할 수 있어야 한다

협업

- ▶ 자신의 생각을
글과 그림으로 **빠르게** 표현 할 수 있어야 한다

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

- <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

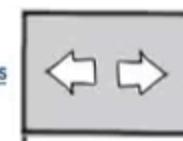
Accordion

Alert Box

Arrow / Line

Breadcrumbs

Home > Products



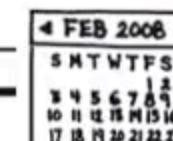
Browser Window

Button

One Two

Button

Button Bar / Tab B...



Calendar

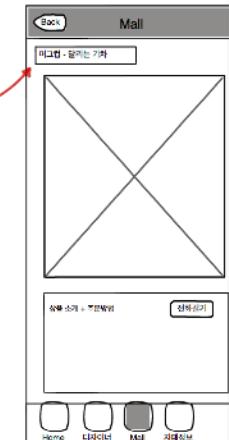
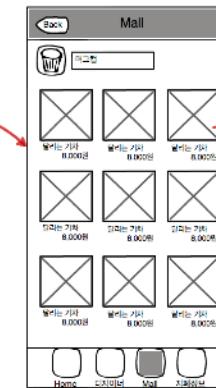
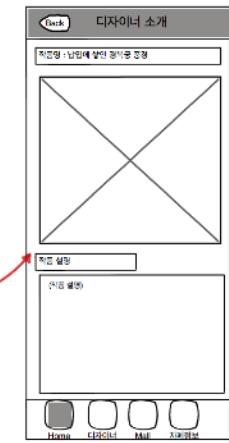
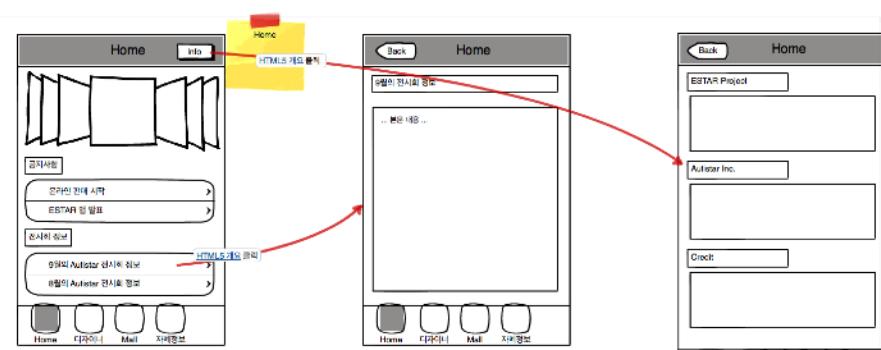


Callout



Chart: Bar

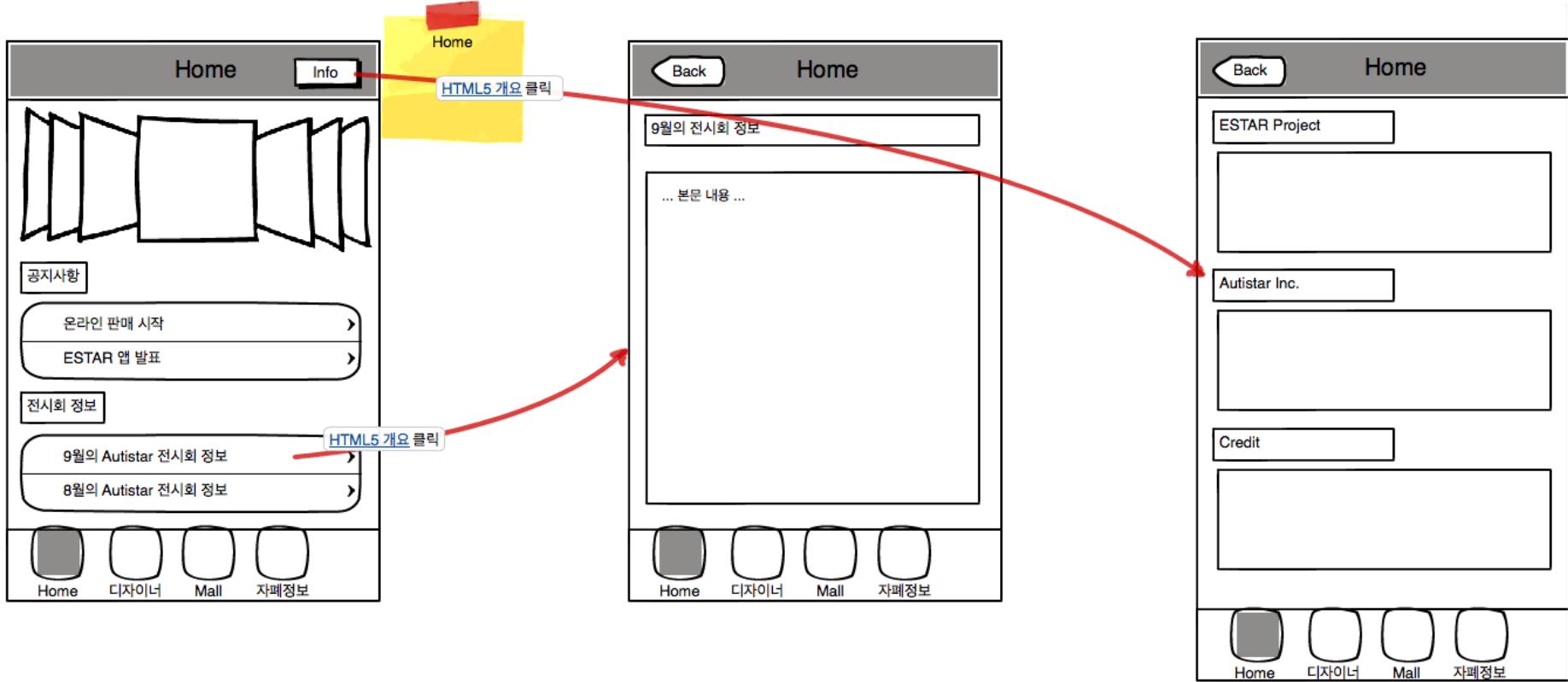
Mockup Tool



Mockup Tool

▶ 실습

- <https://balsamiq.com>



Github Issue

Github - Issue

▶ Issue

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

▶ 잘 운영되고 있는 Issue

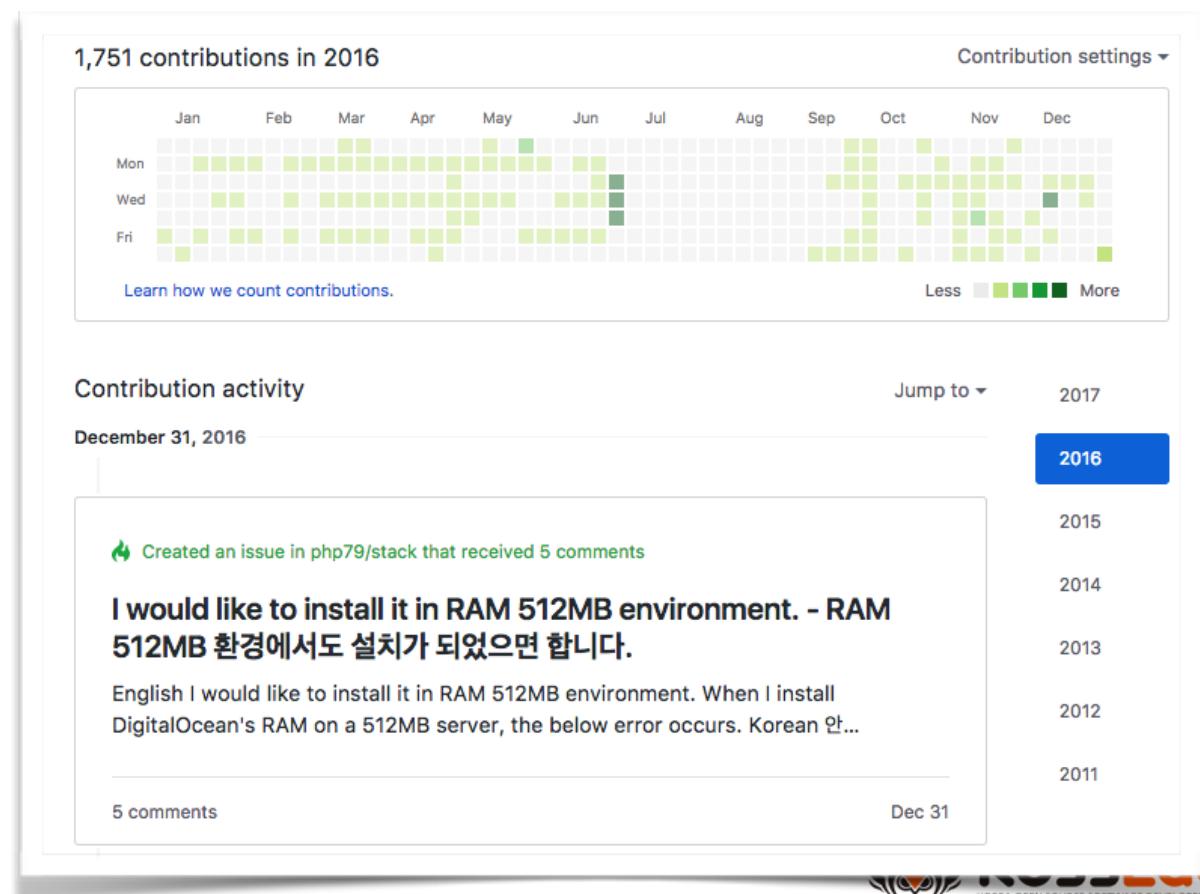
- AXISJ
 - <https://github.com/thomaslang/axisj/issues>
- TensorFlow
 - <https://github.com/tensorflow/tensorflow/issues>
 - <https://github.com/tensorflow/tensorflow/issues/12059>
- php79/stack
 - <https://github.com/php79/stack/issues>

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

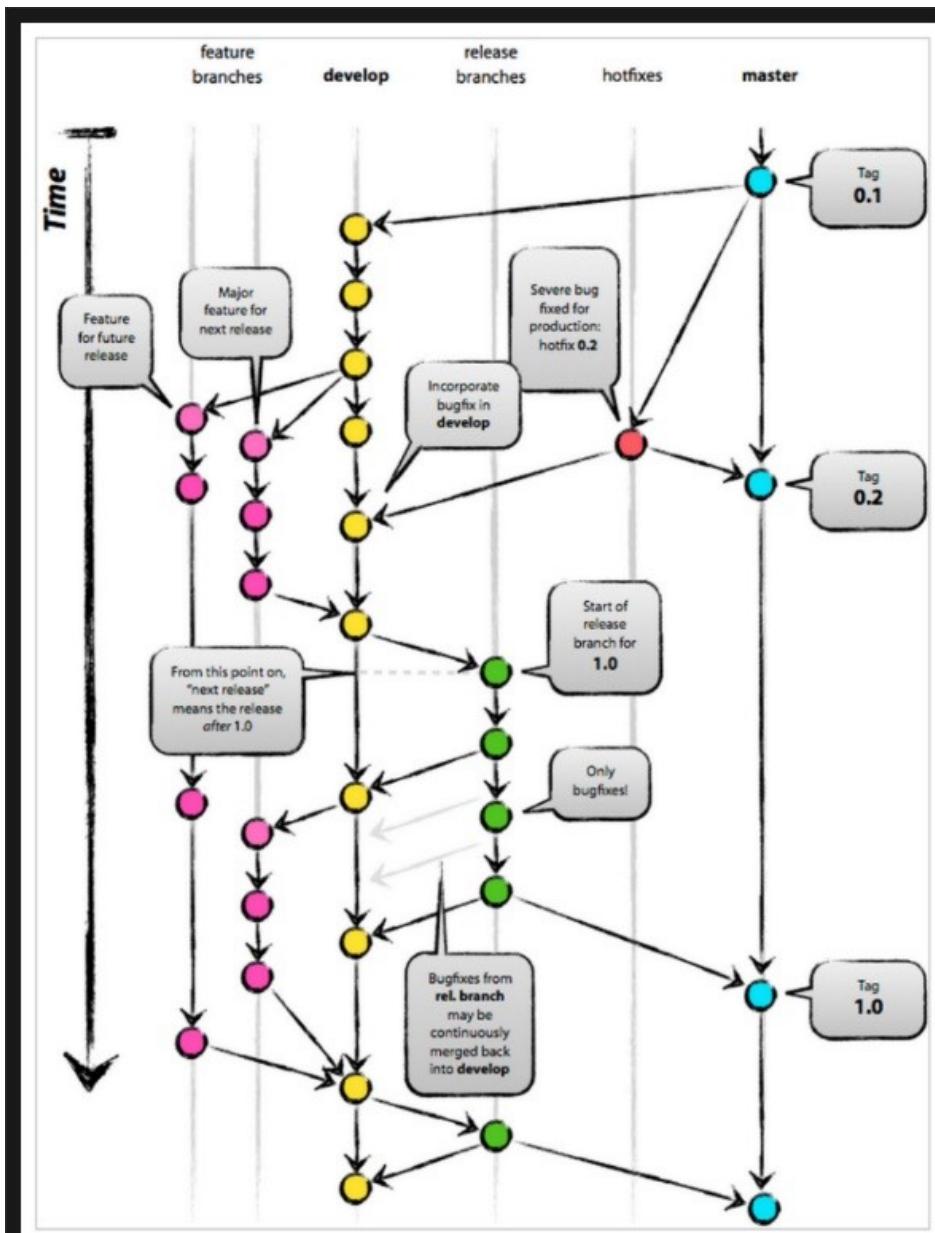
- › 원격지 Repository 의 변경사항을 가져온다

Merge

Github - Merge

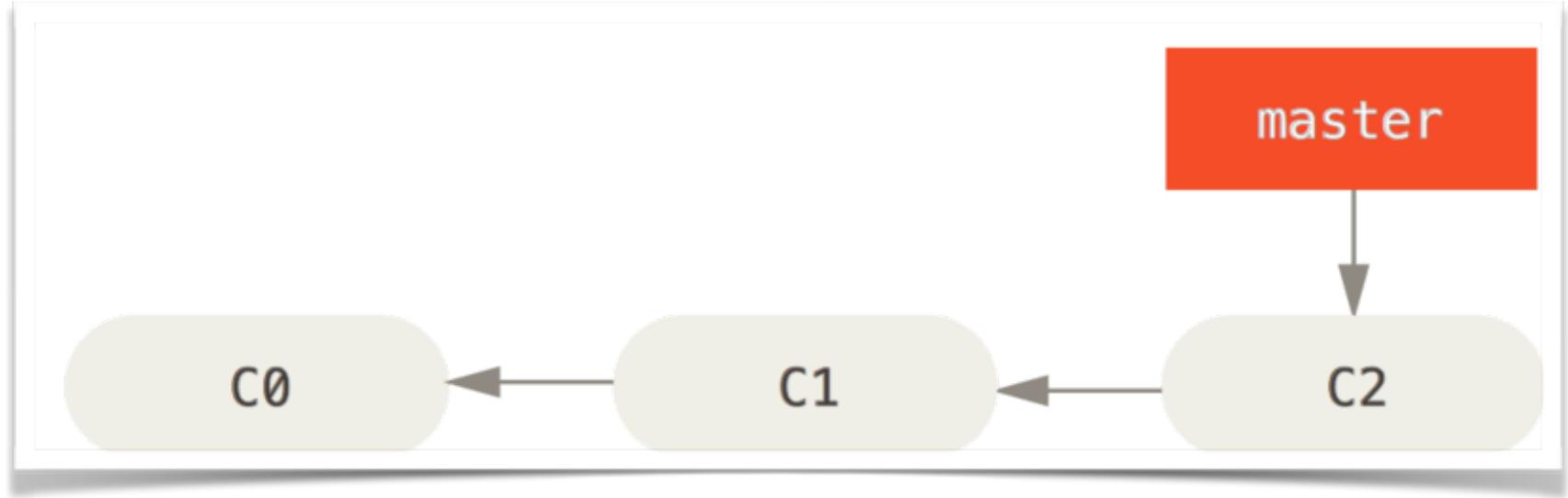
▶ Code 합치기

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



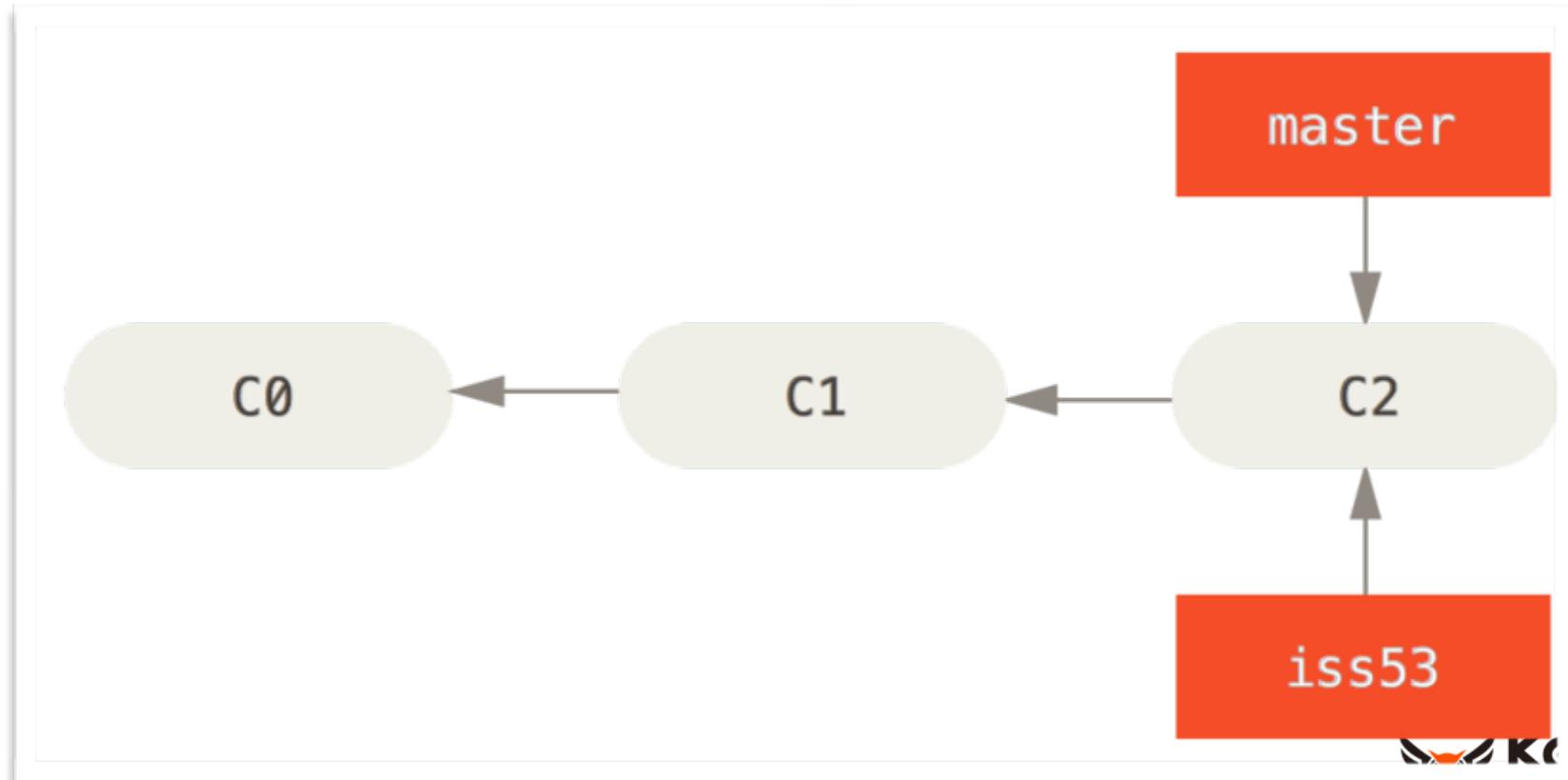
Github - Merge

- 3번의 커밋이 진행되고 있었다



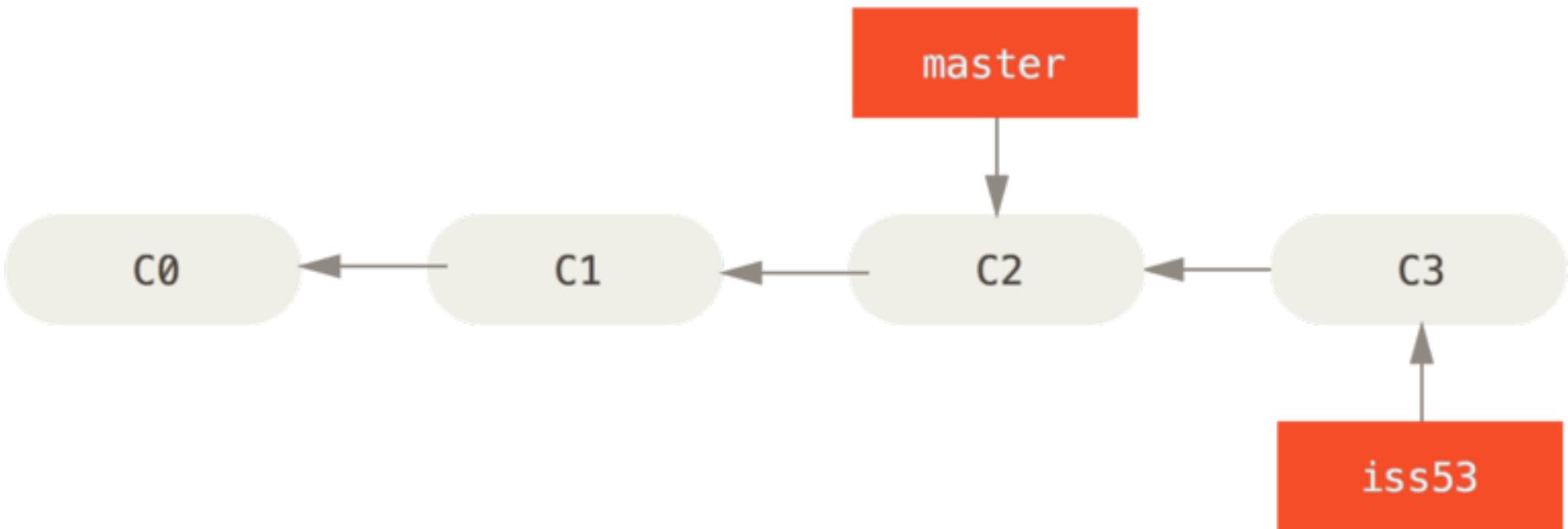
Github - Merge

- ▶ 이슈 53번 해결을 위해
Branch 생성



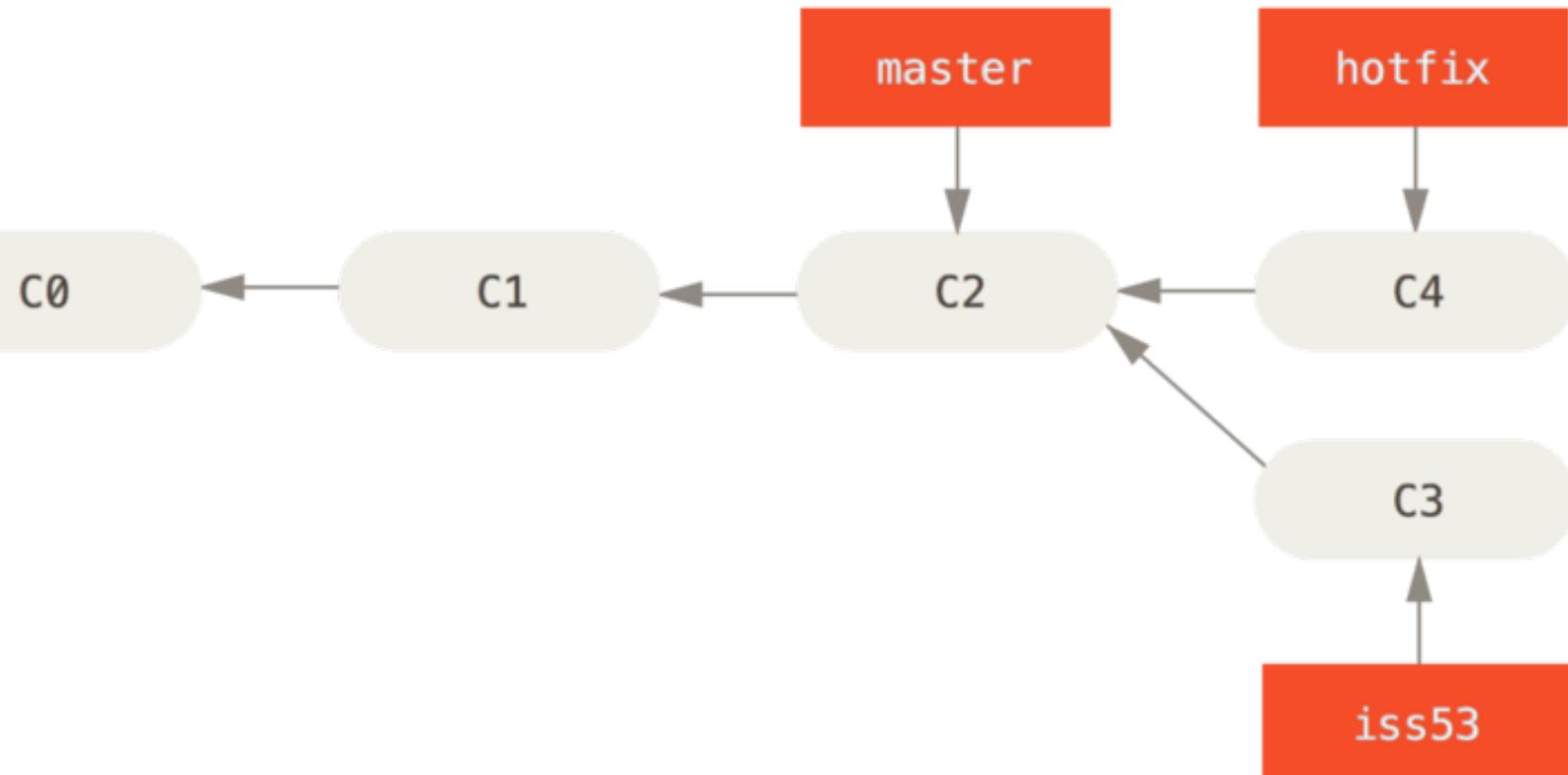
Github - Merge

- › iss53 branch 개발 진행



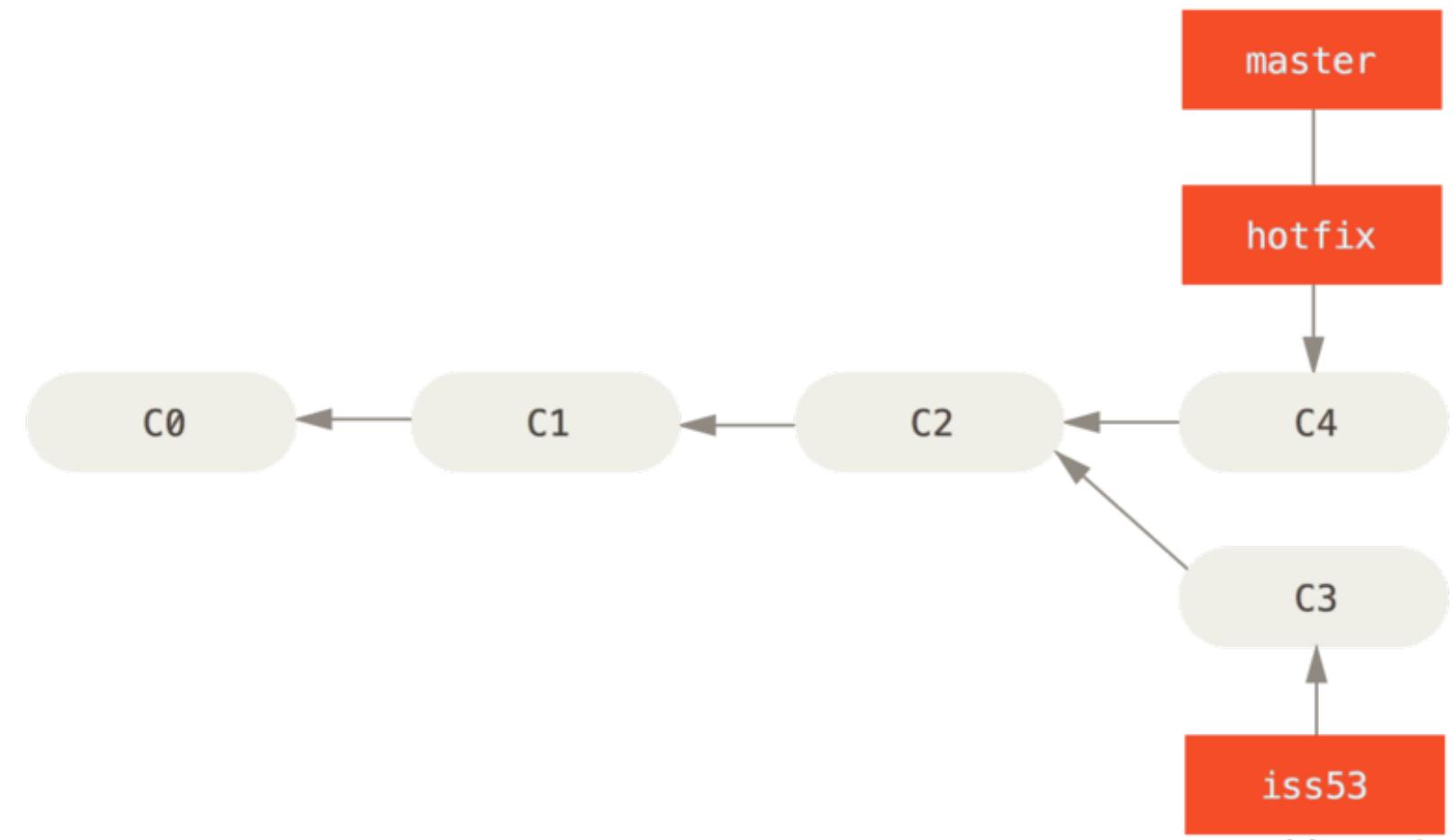
Github - Merge

- ▶ hotfix branch 생성



Github - Merge

- Merge : hotfix & master

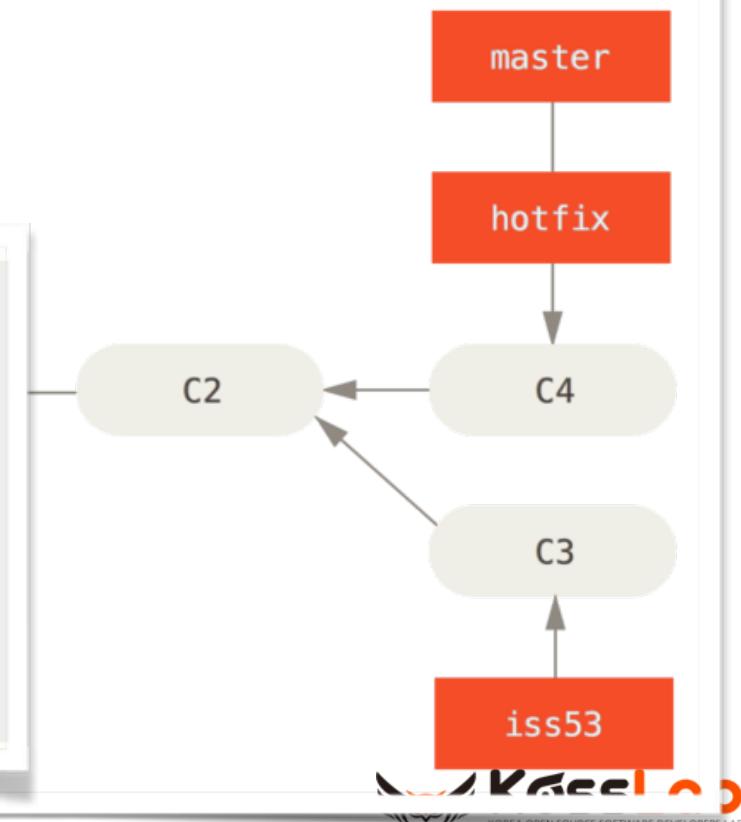


Github - Merge

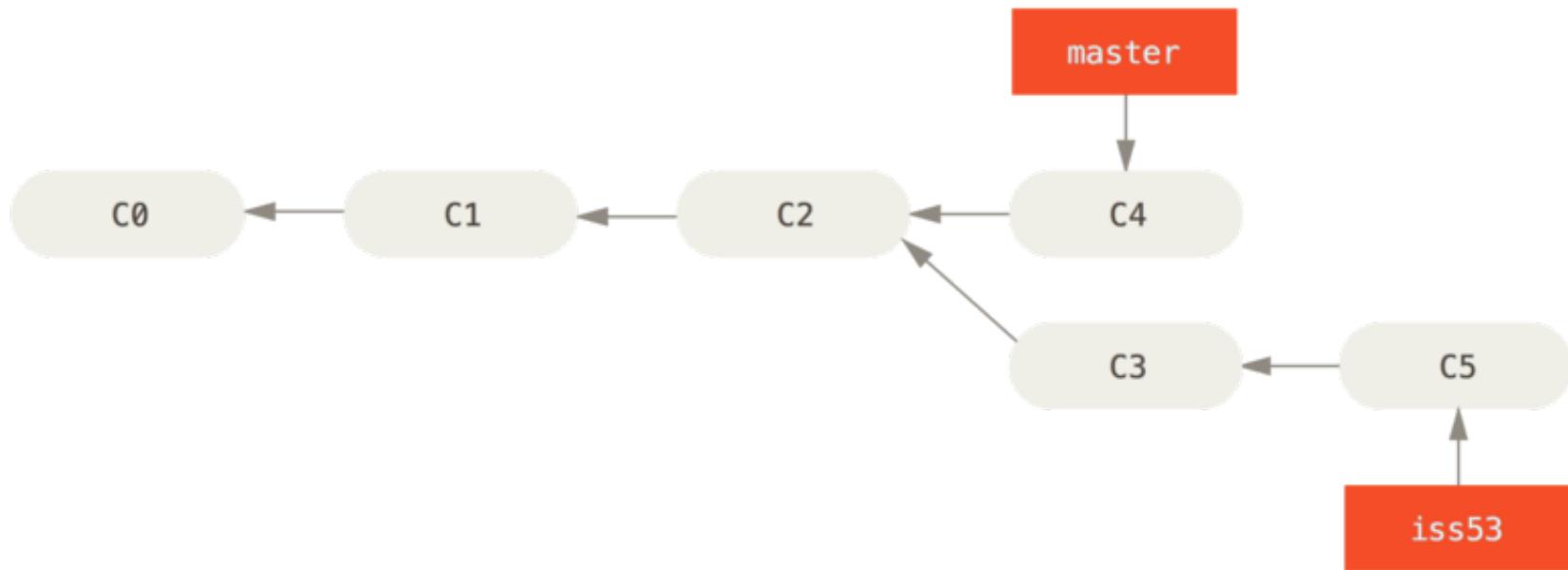
▶ C4 커밋의 부모는 C2

- 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(+)
```

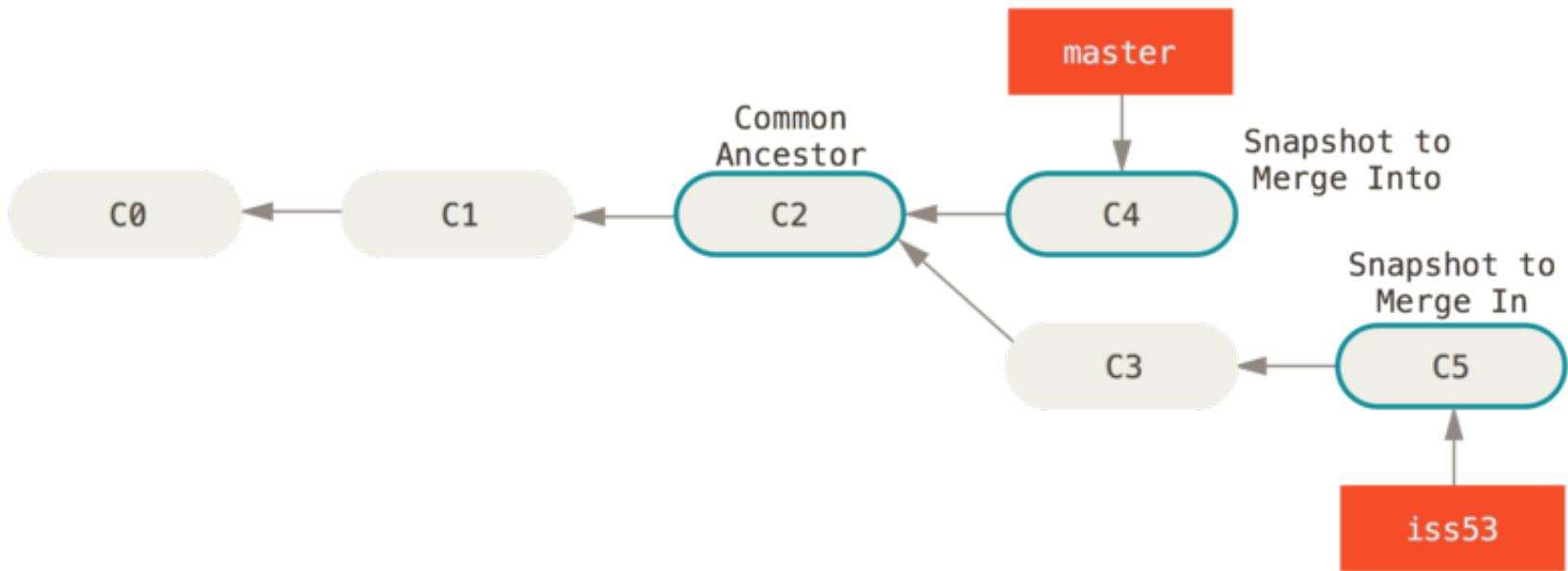


Github - Merge



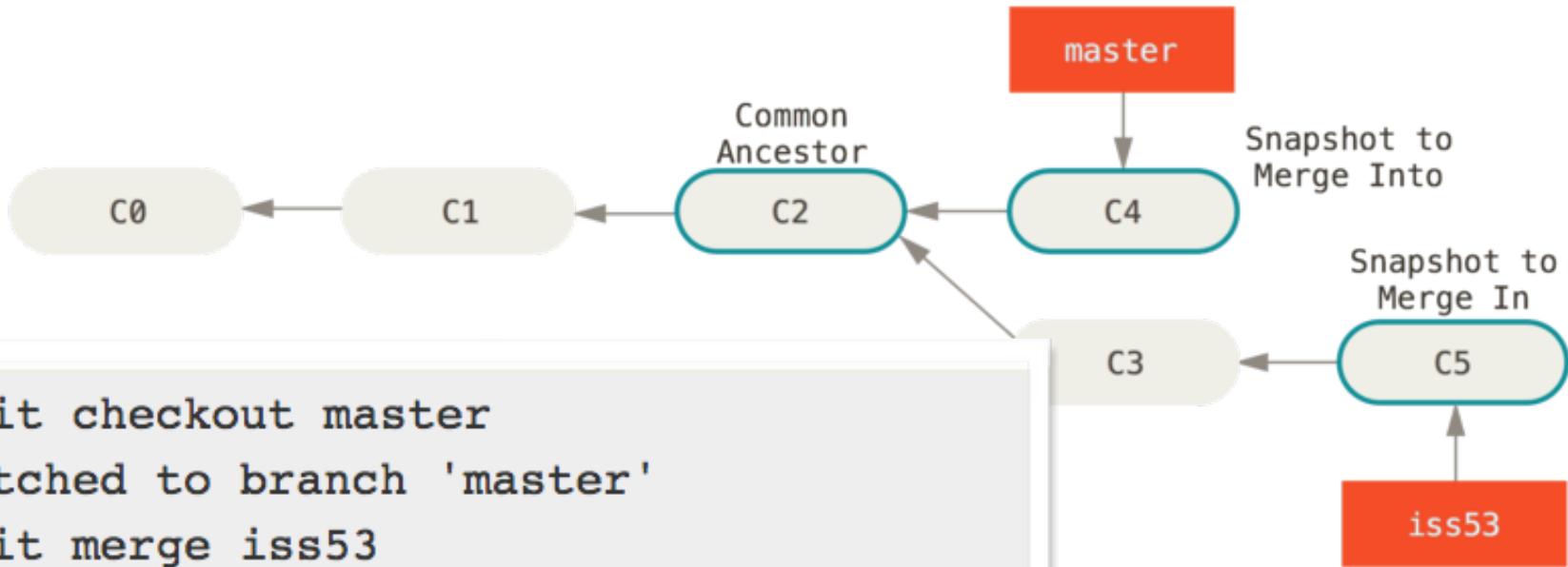
Github - Merge

- Merge : iss53 + master



Github - Merge

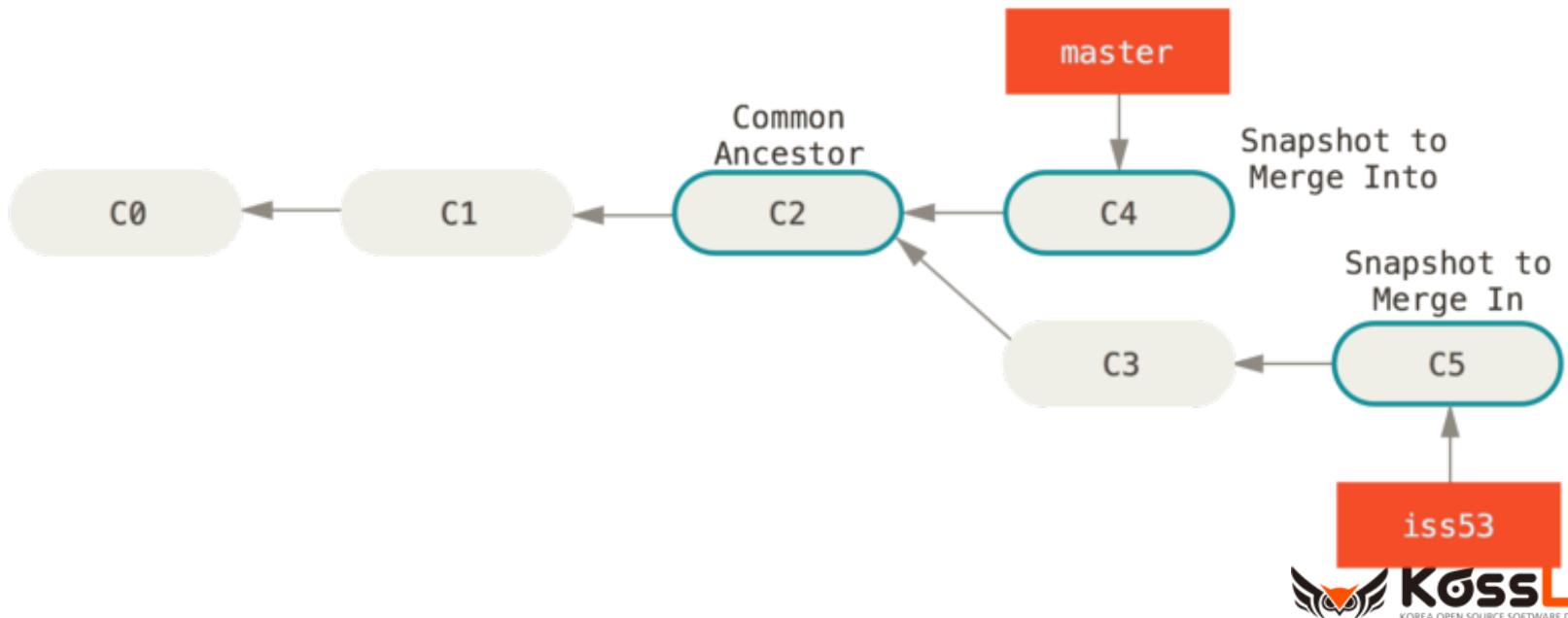
- Merge : iss53 + master



```
$ 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

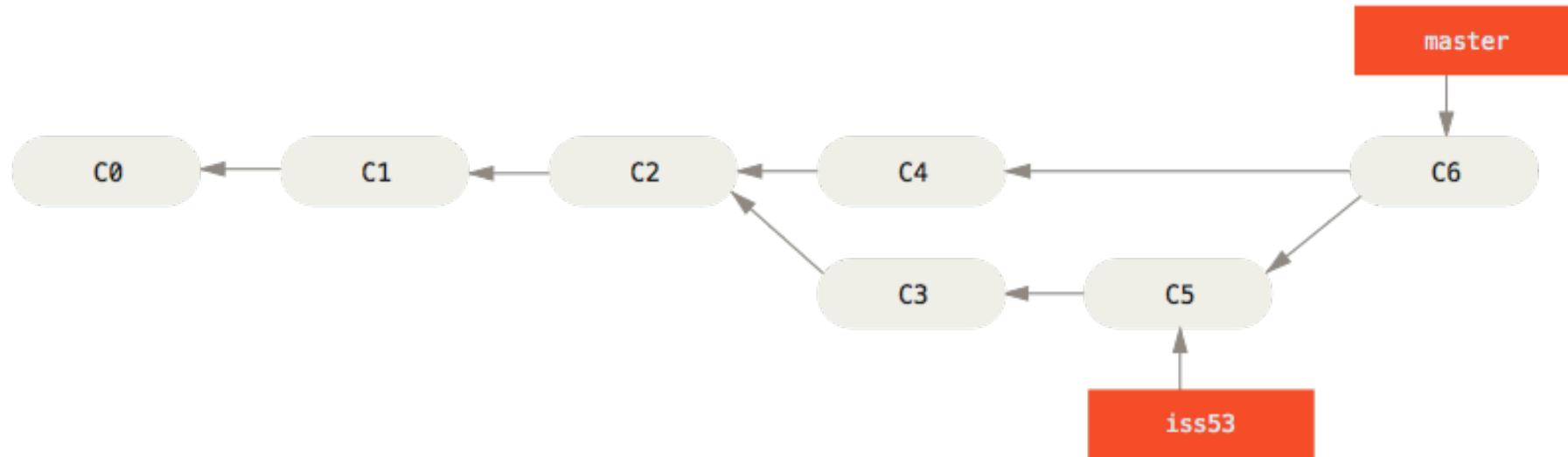
- ▶ 부모가 서로 다르다
 - “Fast-forward” 머지가 이뤄지지 않는다
- ▶ 3-way Merge 진행
 - 각 브랜치 커밋 2개
 - 공통부모 커밋 1개



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 has no description, website, or topics provided.

No description, website, or topics provided.

Add topics

Branch: master ▾ New pull request

Create new file Upload files Find file Clone or download

File	Commit Message	Time
.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.

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

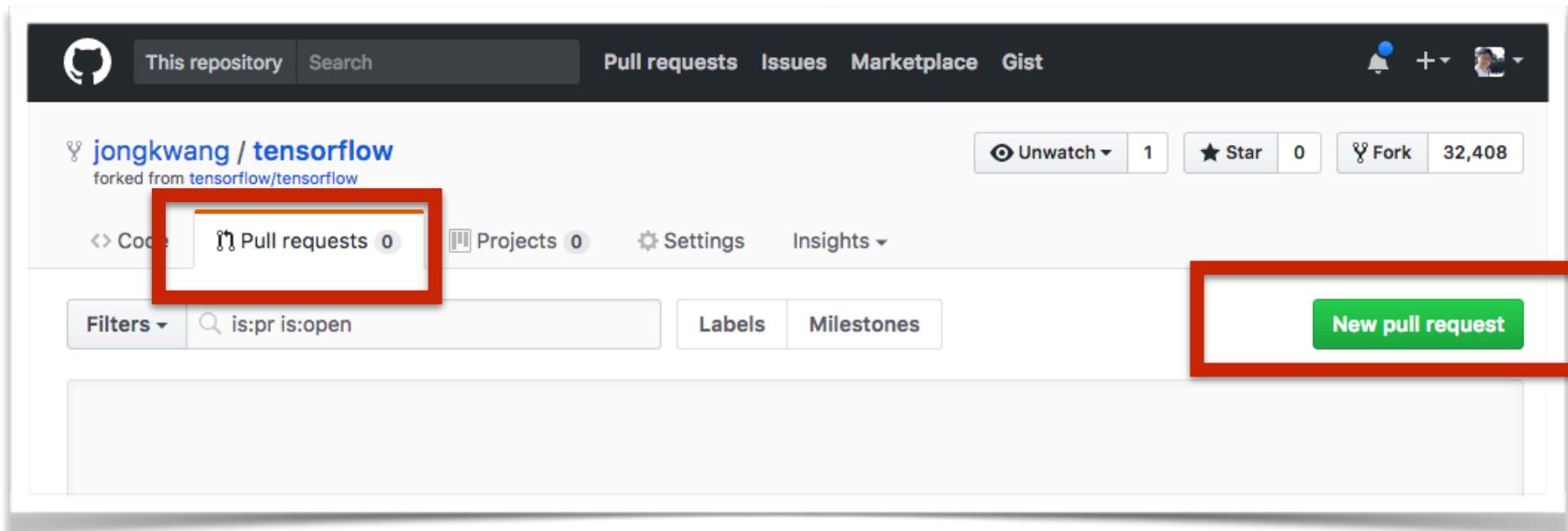
▶ Fork 를 하는 이유

- 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



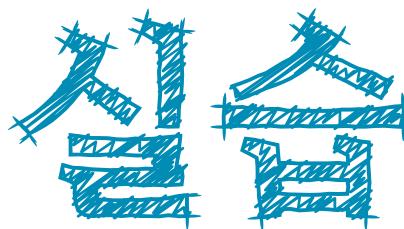
Github - Pull Request

▶ Sample

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

The screenshot shows the GitHub repository page for tensorflow/tensorflow. The top navigation bar includes links for Code, Issues (915), Pull requests (98, highlighted in orange), Projects (0), and Insights. Below the navigation, there are filters for 'is:pr is:open' and buttons for Labels, Milestones, and a prominent green 'New pull request' button. The main content area displays a list of 98 open pull requests. The first three are listed below:

- #12111: Added a bias term in Bahdanau attention alignments • cla: yes
#12111 opened 3 hours ago by rubenvereeken • Review required
- #12107: Corrected dimension notes in attention_wrapper.py • cla: yes
#12107 opened 5 hours ago by rubenvereeken • Review required
- #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
#12105 opened 7 hours ago by yjmade • Review required



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

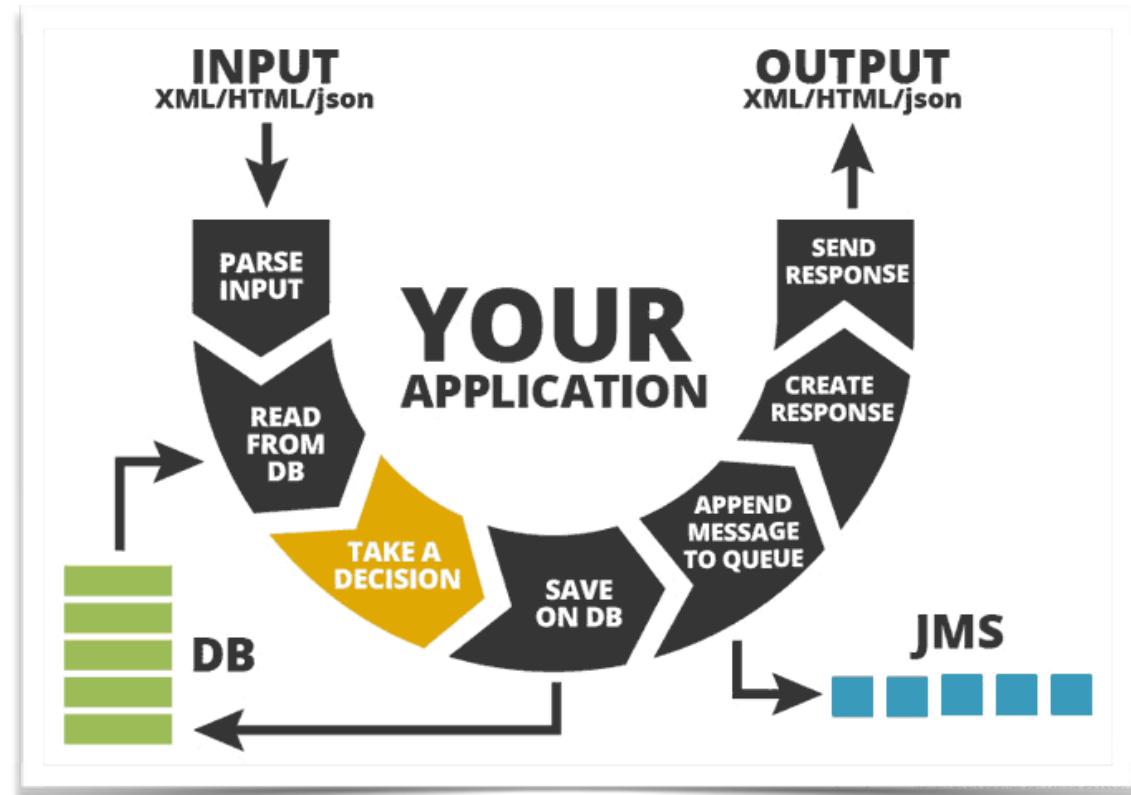
Unit Test

- ▶ 단위 테스트

- 코드 테스트를 통해 무결성 보장

- ▶ 꼭 해야 하는가?

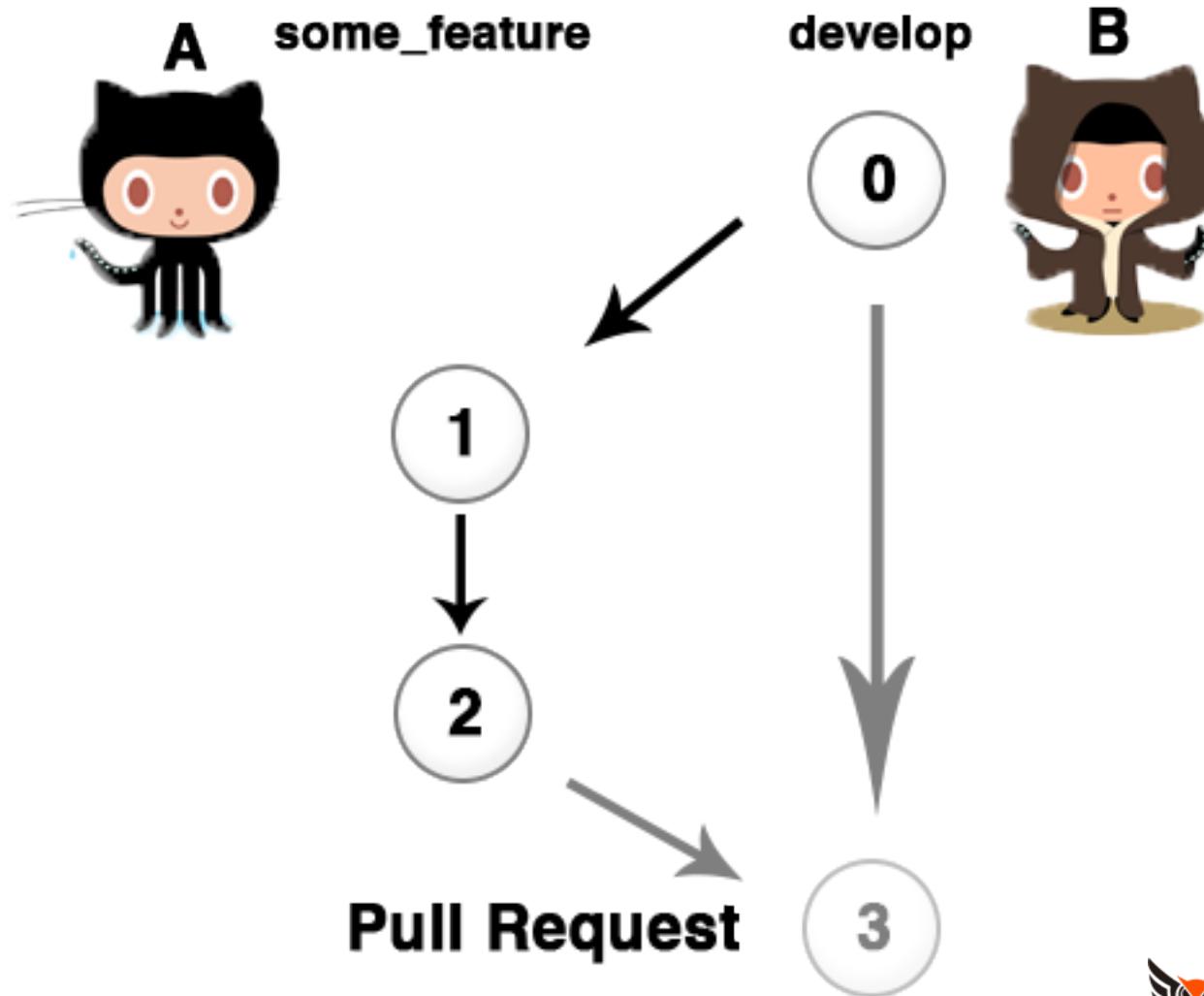
- 잘나가는 Open Source 프로젝트에는 반드시 적용되어 있다



Travis CI

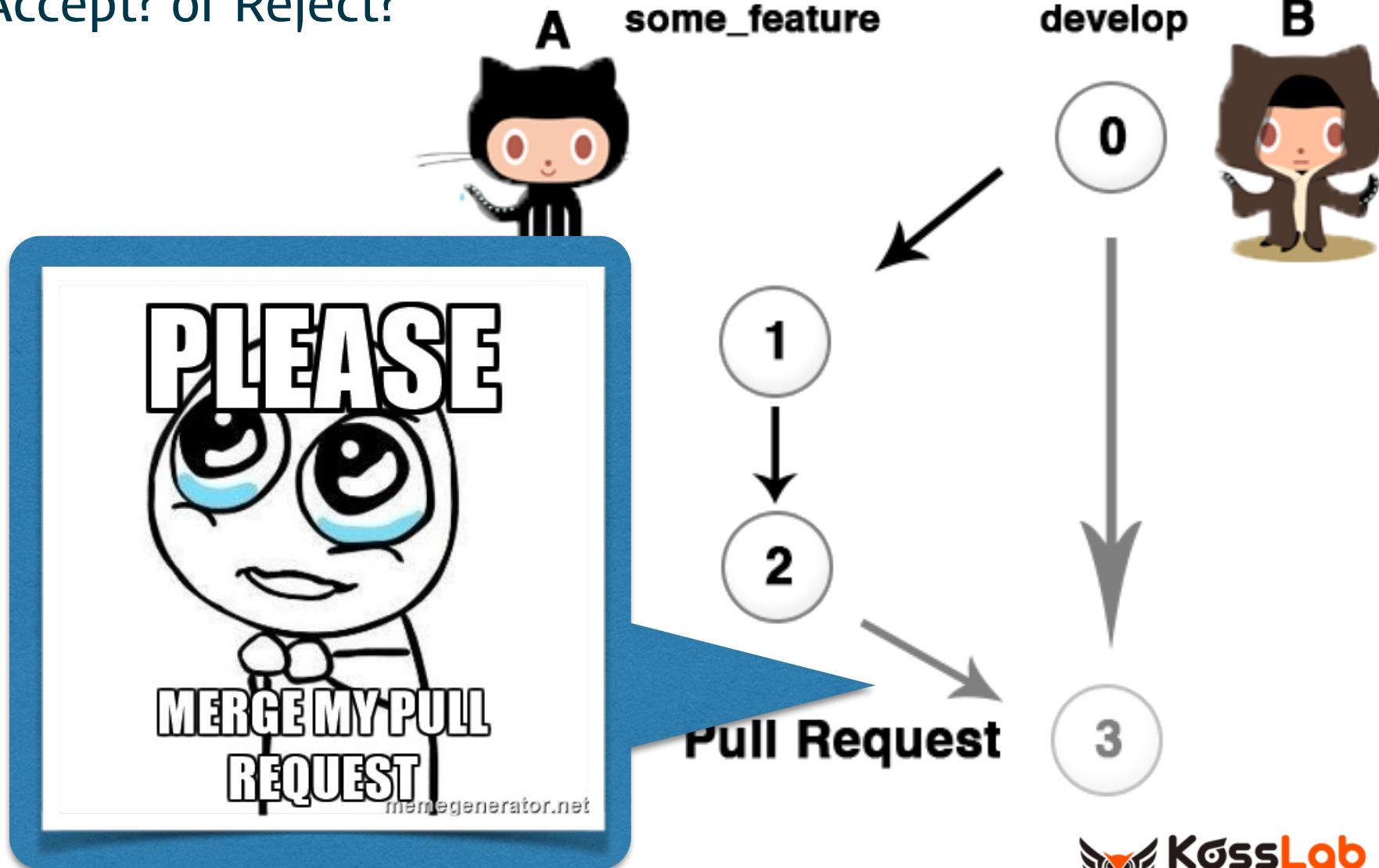
Pull Request

- ▶ Accept? or Reject?



Pull Request

- ▶ Accept? or Reject?



Pull Request

- Accept? or Reject?



Pull Request

- Accept? or Reject?

Unit

with **JUnit**



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](#) [add description](#)

 1 failures 4 tests Took 0 ms.

Test Result : Address

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 list of GitHub pull requests with their corresponding Travis CI build statuses. The interface includes a header with open and closed issue counts, and each pull request entry has a checkbox, a purple icon, the pull request title, a green checkmark or red X, and the merged user and time.

checkbox	purple icon	pull request title	status	merged by	time
<input type="checkbox"/>	Add travis build status	#6	✓	jongkwang	6 hours ago
<input type="checkbox"/>	Fix readme for tutorial	#5	✗	jongkwang	a day ago
<input type="checkbox"/>	Add missing web resources	#4	✗	toori67	4 days ago
<input type="checkbox"/>	json transform test	#3	✓	toori67	9 days ago
<input type="checkbox"/>	move dashboard from iotlabs.webserver	#2	✓	jongkwang	9 days ago
<input type="checkbox"/>	generate gradle project scheme	#1	✗	toori67	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 IoT Labs member + 
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

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

Add missing web resources #4

Merged toori67 merged 1 commit into iot-labs:master from toori67:add-web-resources 4 days ago

Conversation 1 Commits 1 Files changed 17

toori67 commented 4 days ago IoT Labs member + 😊 🖌

No description provided.

Add missing web resources alda417

codecov-io commented 4 days ago + 😊 🖌 ✎

Current coverage is 43.28% (diff: 0.00%)

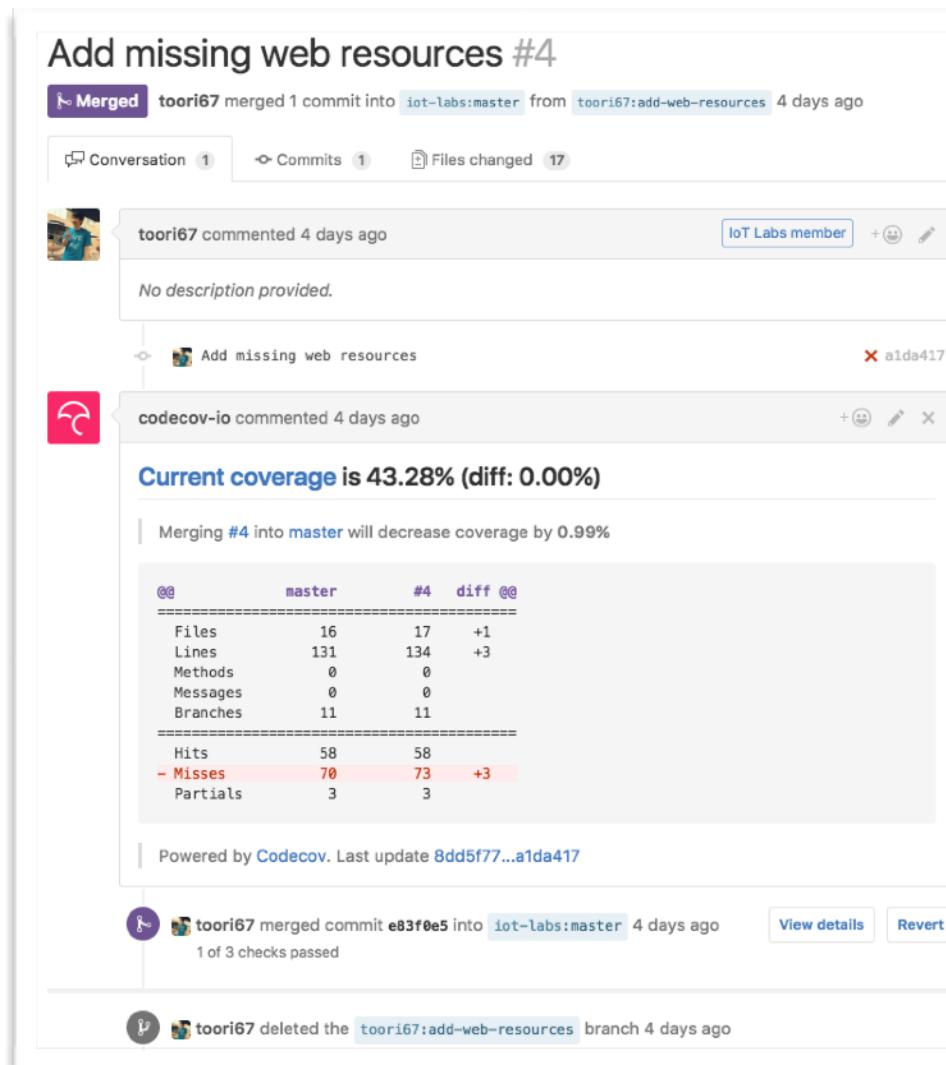
Merging #4 into master will decrease coverage by 0.99%

@@	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 View details Revert
1 of 3 checks passed

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



Demo

Unit



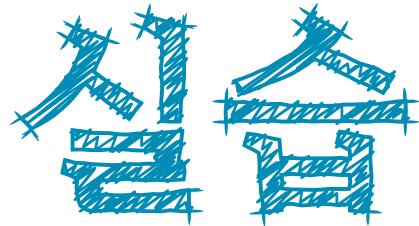
with **JUnit**



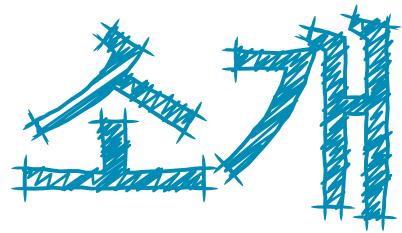
Travis CI



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