



Chapter 06

GitHub

Open Source SW Development
CSE22300

What is GitHub?

- **Platform**
 - **Controls Git Repository (Upload/Download)**
 - **Shares your codes**
 - **Collaborate your projects with others**
 - **Provides web-based interface**
 - **Features : Fork, Pull Request, Issues, Wiki**



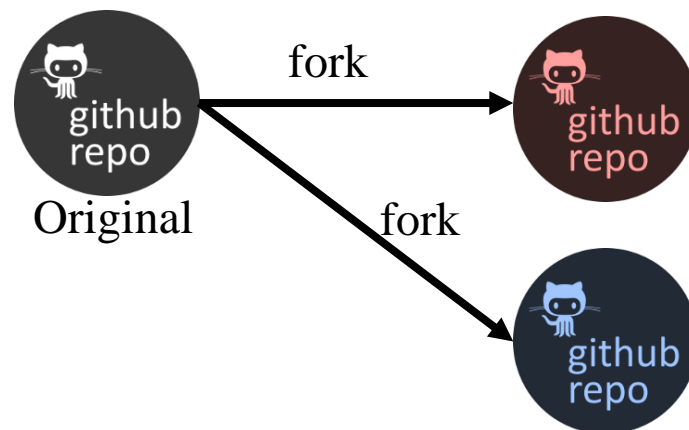
Why Use GitHub?

- **Independent Development**
 - Branch and Pull Requests
 - You can develop new features on different branches/forked repository
- **Communication**
 - Reports bugs
 - Specify new features
- **Review Work-In-Progress**
 - Pull Requests show Work-In-Progress and latest changes
- **Team Progress**
 - Pulse
 - Review commit history

Key

Fork

- **If you are not owner or contributor, you cannot add/edit the repository**
 - So we need fork!
- **Creating a personal copy of someone else's project**
 - You can add commit and push without affecting the original repository

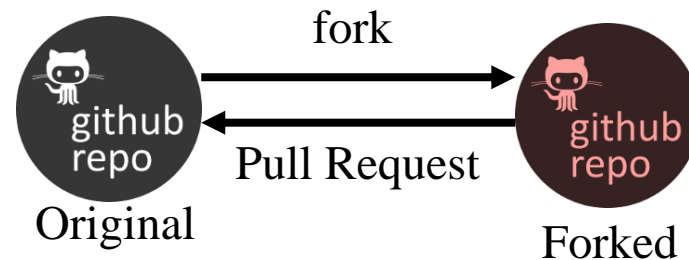


Fork

- **Importance for Open Source**
 - Forks are used to test on ideas and changes before applying original repository
- **Upstream in Forked Repository**
 - Represents original repository
 - You can sync changes made in the original repository
- **Configuring Upstream**
 - `git remote add upstream`
`https://github.com/ORIGINAL_OWNER/ORIGINAL_REPOSITORY.git`

Pull Request

- **Mean**
 - You requests **PULL** to original repository
 - Tell original repository about changes (commits) you've pushed to a forked repository



Pull Request

- **Importance for Open Source**
 - You can contribute open source with pull request
 - You write some codes and create a pull request to open source projects
- **Applying a pull request**
 - Quickly evaluate/review the value of the changes
 - Send feedback
 - Pull/Merge the changes

Glance

Repository

- **Fresco**
 - **Android Image Library**

The screenshot shows the GitHub repository page for `facebook/fresco`. At the top, it displays the repository name and navigation links for Watch (950), Star (14,274), and Fork (3,523). Below this is a tabbed interface with 'Code' selected, and links for Issues (80), Pull requests (2), Projects (0), Wiki, and Insights. A description states: 'An Android library for managing images and the memory they use. <http://frescolib.org/>'. A summary bar shows 1,607 commits, 8 branches, 32 releases, 118 contributors, and the MIT license. Action buttons include 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. The commit history table shows the latest commit by Kevin Rodriguez and facebook-github-bot, followed by several commits updating license headers for various animated image components.

facebook / fresco

Watch 950 Star 14,274 Fork 3,523

Code Issues 80 Pull requests 2 Projects 0 Wiki Insights

An Android library for managing images and the memory they use. <http://frescolib.org/>

1,607 commits 8 branches 32 releases 118 contributors MIT

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

Kevin Rodriguez and facebook-github-bot	Revert D7382307: [Fresco] Added ImageOrigin and ImageOriginListener f...	Latest commit 9b7bd92 7 hours ago
.github	Update pull request template	a year ago
.idea	Update codeStyleSettings.xml	8 months ago
animated-base-test	Update license headers for MIT license	a month ago
animated-base	Update license headers for MIT license	a month ago
animated-drawable	Update license headers for MIT license	a month ago
animated-gif	Update license headers for MIT license	a month ago
animated-webp	Update license headers for MIT license	a month ago

README.md

- **An Introduction to Project**
 - **Includes Useful Information**
 - **How to use code, How to make contribution, How to install**
 - **Must be located in root of projects with name of README.md**

Fresco

circleci passing

Fresco is a powerful system for displaying images in Android applications.

Fresco takes care of image loading and display, so you don't have to. It will load images from the network, local storage, or local resources, and display a placeholder until the image has arrived. It has two levels of cache; one in memory and another in internal storage.

In Android 4.x and lower, Fresco puts images in a special region of Android memory. This lets your application run faster - and suffer the dreaded `OutOfMemoryError` much less often.

Commit History

- **Easy way to Check Progress**
 - **Commit implies works that have been completed**

Branch: master ▾

Commits on Mar 25, 2018

Revert D7382307: [Fresco] Added ImageOrigin and ImageOriginListener f...
Kevin Rodriguez authored and facebook-github-bot committed 7 hours ago ✓

9b7bd92

<>

Added ImageOrigin and ImageOriginListener for Drawee controllers
oprisnik authored and facebook-github-bot committed 8 hours ago ✓

038c057

<>

Commits on Mar 24, 2018

Debug overlay final image time should be a long
oprisnik authored and facebook-github-bot committed 2 days ago ✓

f1cf07b

<>

Commits on Mar 21, 2018

Default request timeout
jnowaz authored and facebook-github-bot committed 5 days ago ✓

005f38a

<>

Commits on Mar 20, 2018

Fall back to bitmap.createBitmap()
erikandre authored and facebook-github-bot committed 5 days ago ✓

3cdb67a

<>

12

Commit History


Debug overlay final image time should be a long

Reviewed By: erikandre

Differential Revision: D7382103

fbshipit-source-id: 0bc48acc789f92f5ddd59c9ff4227f23b4aae402

master

 oporisnik authored and facebook-github-bot committed 2 days ago

1 parent [005f38a](#) commit [f1cf07b58dc5dc34b6275251bc5f5138ecac3d04](#)

Showing 1 changed file with 1 addition and 1 deletion.

Unified Split

2 drawee/src/main/java/com/facebook/drawee/debug/DebugControllerOverlayDrawable.java View

	@@ -304,7 +304,7 @@ int determineOverlayColor{
304	return OVERLAY_COLOR_IMAGE_NOT_OK;
305	}
306	
307	- public void setFinalImageTimeMs(int finalImageTimeMs) {
307	+ public void setFinalImageTimeMs(long finalImageTimeMs) {
308	mFinalImageTimeMs = finalImageTimeMs;
309	}
310	

Pull Request

- **Inform Your Works**
 - **Discuss and review the changes with collaborators**

The screenshot shows a GitHub Pull Request interface. At the top, the title is "inline proguard rules #2075". Below the title, a green "Open" button is visible, followed by the text "gengjiawen wants to merge 1 commit into facebook:master from gengjiawen:feature/inline_proguard". Below this, there are tabs for "Conversation" (3), "Commits" (1), and "Files changed" (9). The main content area shows a comment from "gengjiawen" made 2 days ago. The comment includes two sections: "Motivation (required)" and "Test Plan (required)". The "Motivation" section states: "Android library should maintain their own proguard rules like butterknife, so library user should manually copy and paste proguard rules everytime the rules updated." The "Test Plan" section states: "Test current sample app works as expect." Below the comment, there is a commit history section showing a commit "inline proguard rules" with a green checkmark and the number "8741263". Below the commit, there is a message from "facebook-github-bot" stating "added the CLA Signed label 2 days ago". Below that, there is a message from "facebook-github-bot" stating "reviewed 2 days ago" with a "View changes" button. Below the review, there is a message from "@lambdapioneer" stating "has imported this pull request. If you are a Facebook employee, you can view this diff on Phabricator." Below the message, there is a message from "lambdapioneer" stating "referenced this pull request 2 days ago" with a green "Open" button. At the bottom, there is a message "Fixed webp native memory leak #2074" with a green "Open" button.

inline proguard rules #2075

Open gengjiawen wants to merge 1 commit into facebook:master from gengjiawen:feature/inline_proguard

Conversation 3 Commits 1 Files changed 9

gengjiawen commented 2 days ago

Motivation (required)

Android library should maintain their own proguard rules like butterknife, so library user should manually copy and paste proguard rules everytime the rules updated.

Test Plan (required)

Test current sample app works as expect.

inline proguard rules 8741263

facebook-github-bot added the CLA Signed label 2 days ago

facebook-github-bot reviewed 2 days ago View changes

@lambdapioneer has imported this pull request. If you are a Facebook employee, you can view this diff on Phabricator.

lambdapioneer referenced this pull request 2 days ago

Fixed webp native memory leak #2074 Open

Issues

- **Communication Channel**
 - **Pull Request focuses on current bug fix and features being worked**
 - **Issues are used for various ways**
 - **Proposes new features and reports bugs**

80 Open

✓ 1,678 Closed

Author

Labels

Projects

Milestones

Assignee

Sort

!

java.lang.UnsatisfiedLinkError couldn't find DSO to load: libimagepipeline.so

#2076 opened 2 days ago by jyh149129

1

!

webp have native memory leak

bug

help wanted

starter-task

#2073 opened 4 days ago by howardpang

1

!

there are sawteeth when setting rounding border to display round pic

bug

help wanted

needs-details

#2072 opened 5 days ago by YuZhiLiang

2

!

why is EncodedImage#get/setEncodedCacheKey deprecated? other method replace?

question

needs-details

#2071 opened 6 days ago by qhyuan1992

6

!

Unknown Image Format for LowLight, HDR, DOF images captured using Samsung S8 Camera.

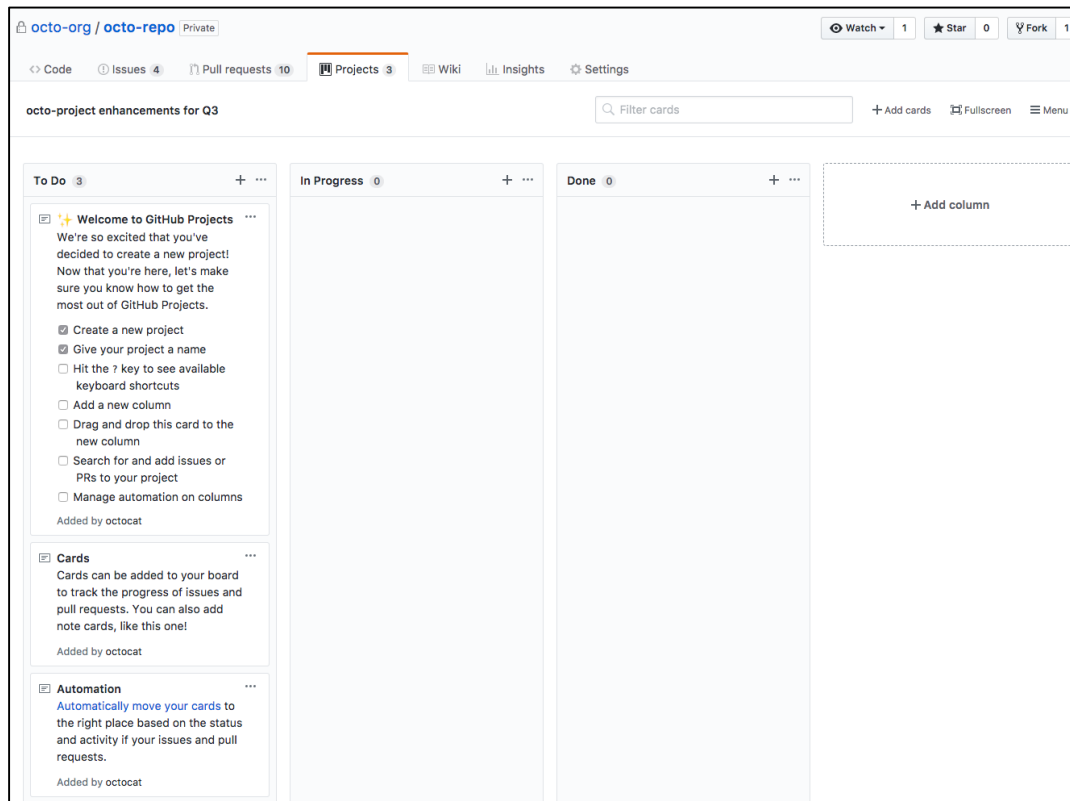
needs-details

#2070 opened 9 days ago by MustafaHalimehHH

2

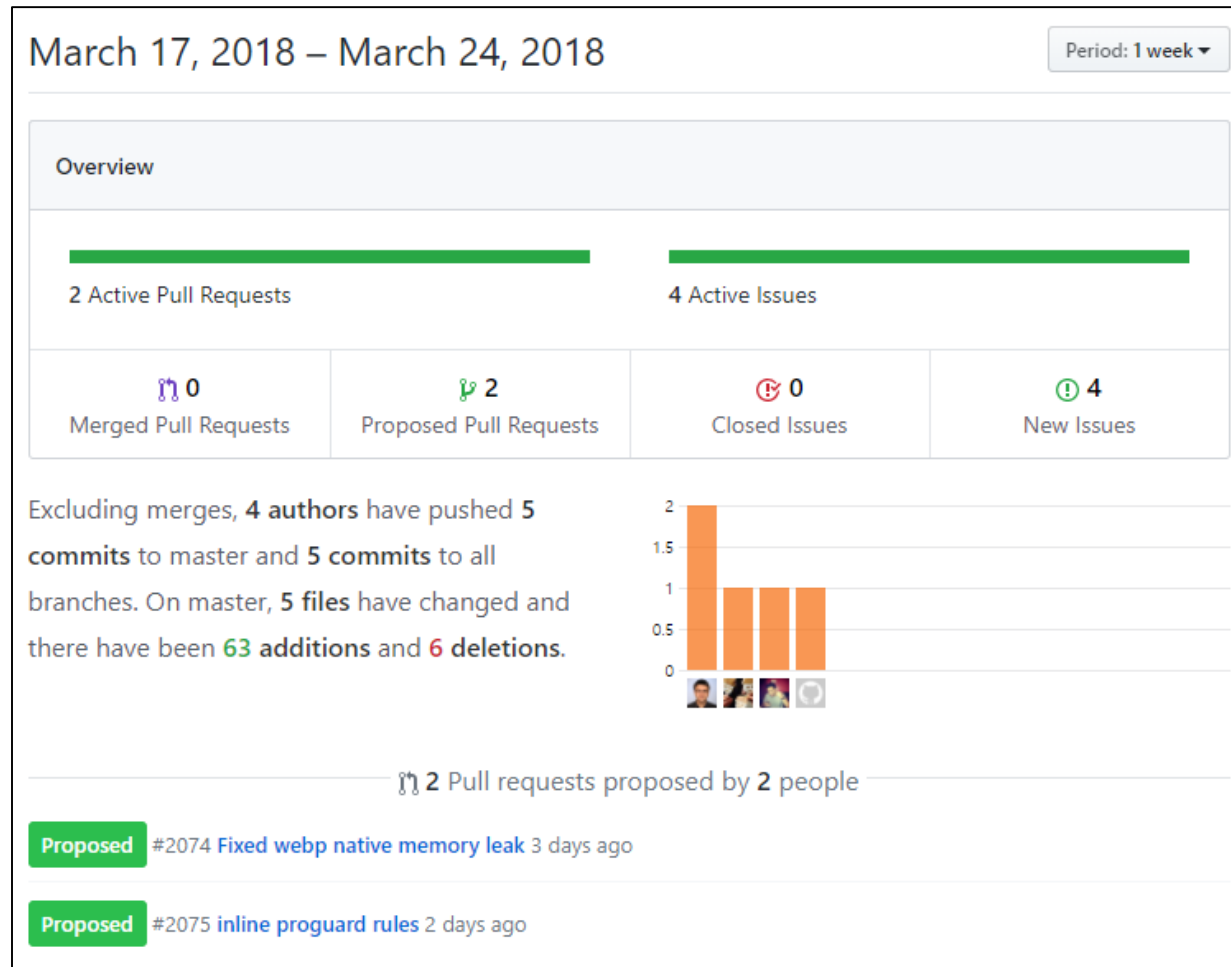
Projects

- **Project Management**
 - Long-term project work
 - Idea, Next release goal



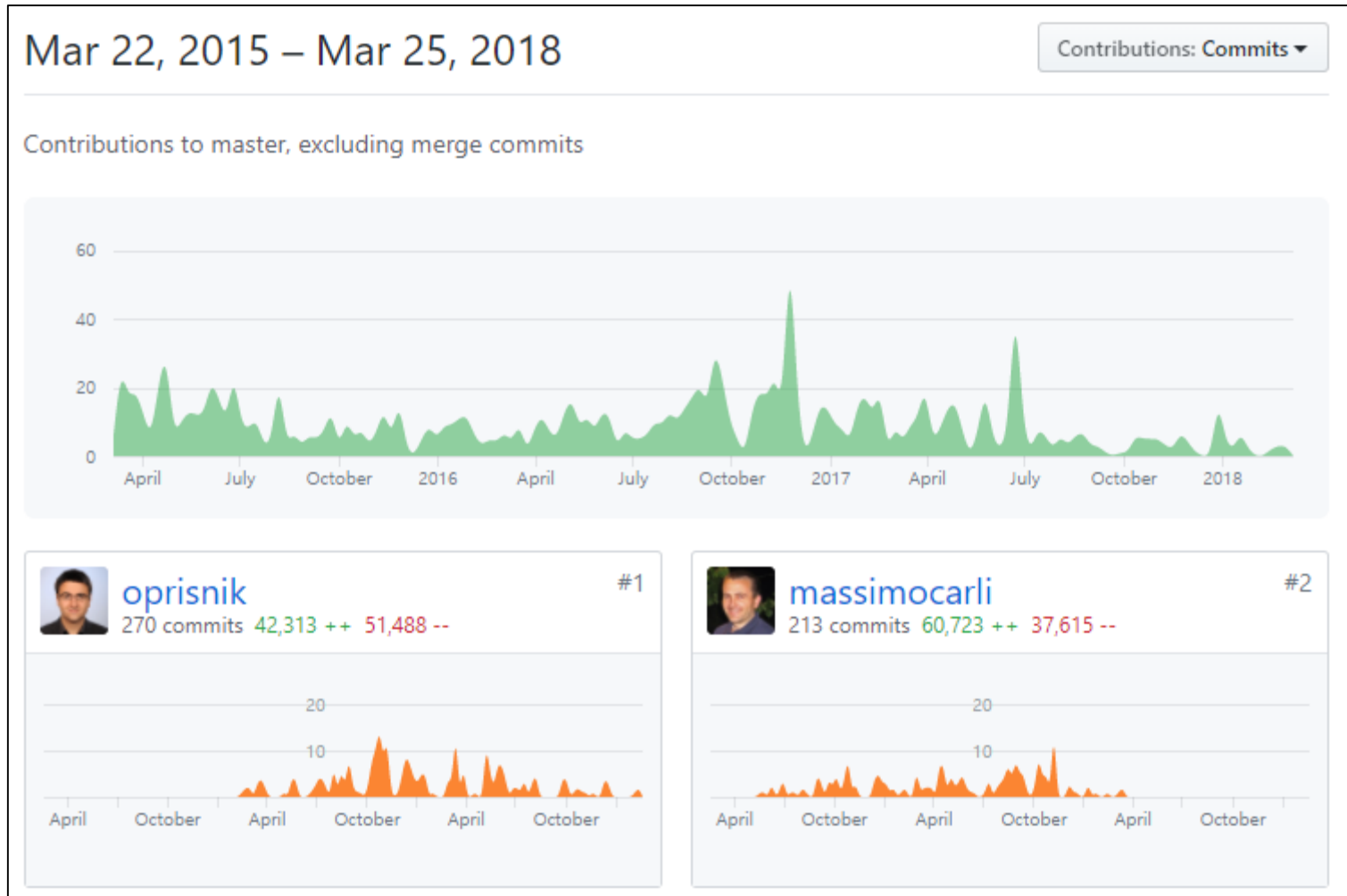
Insights - Pulse

- Recent Activity



Insights - Contributors

- The number of contribution



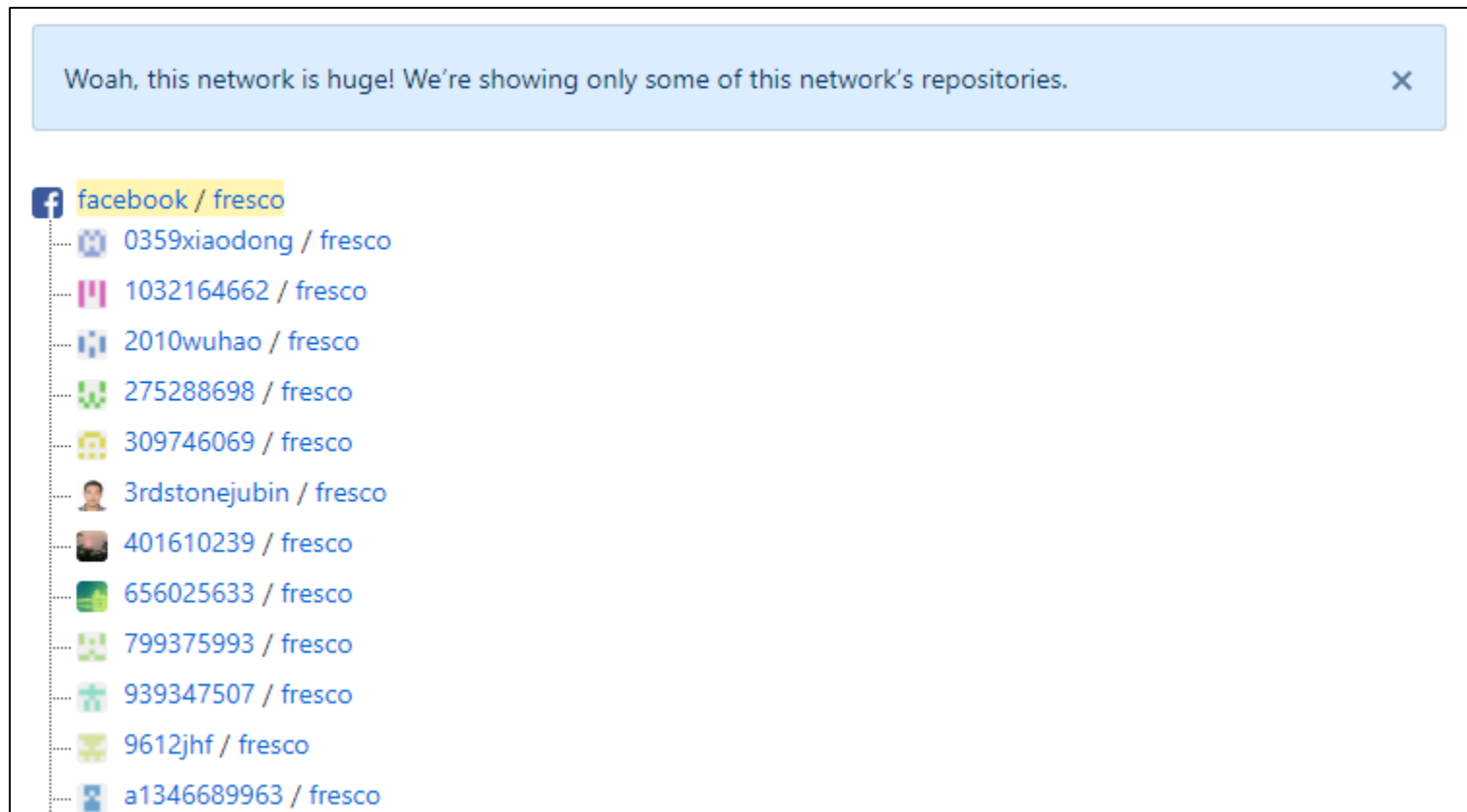
Insights – Code Frequency

- The number of lines added and removed
- Shows Large Changes to repository



Insights – Fork

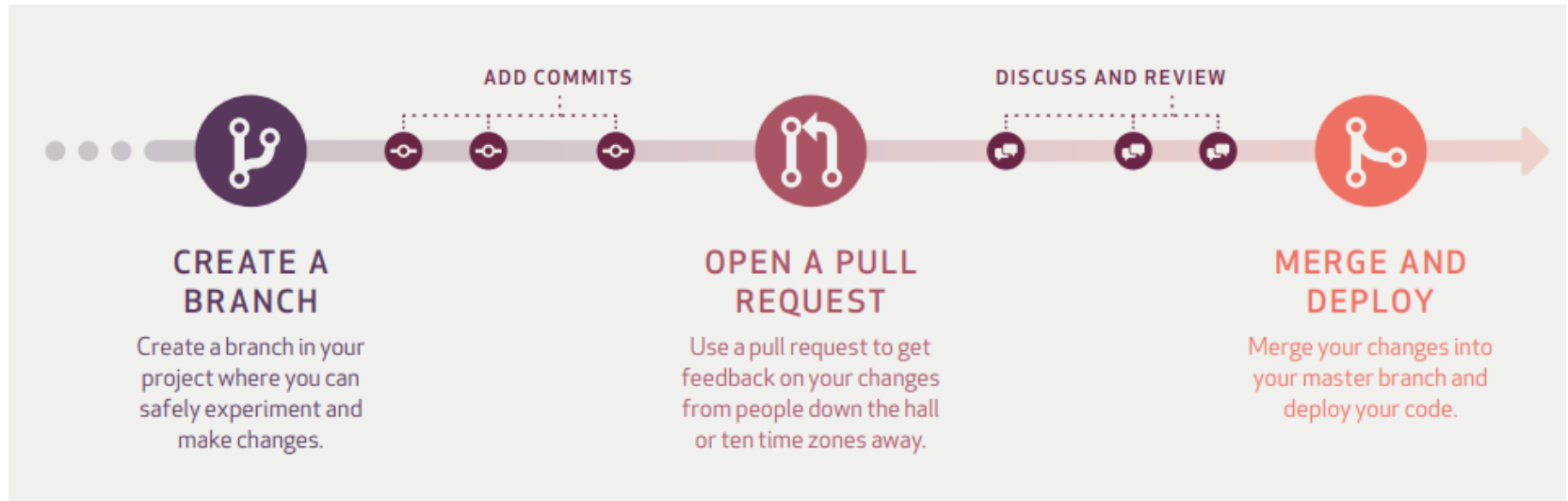
- The list of people
 - Forked this repository



GitHub Flow

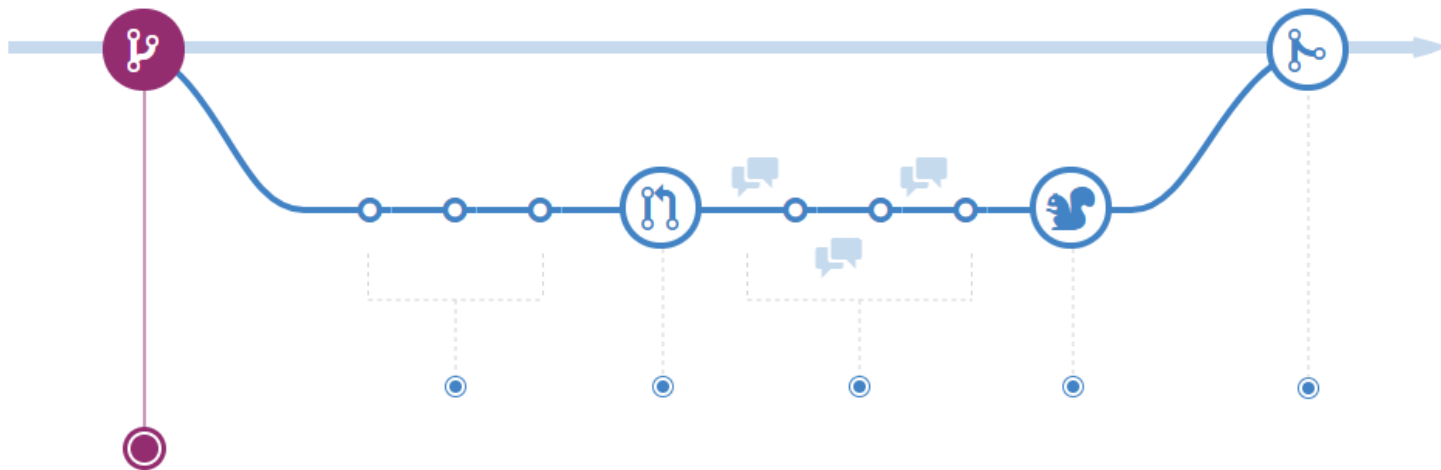
GitHub Flow

- **Lightweight and Branch-based Workflow**



Create Branch

- **Without Affecting others**
 - Implement new features and ideas with a new branch

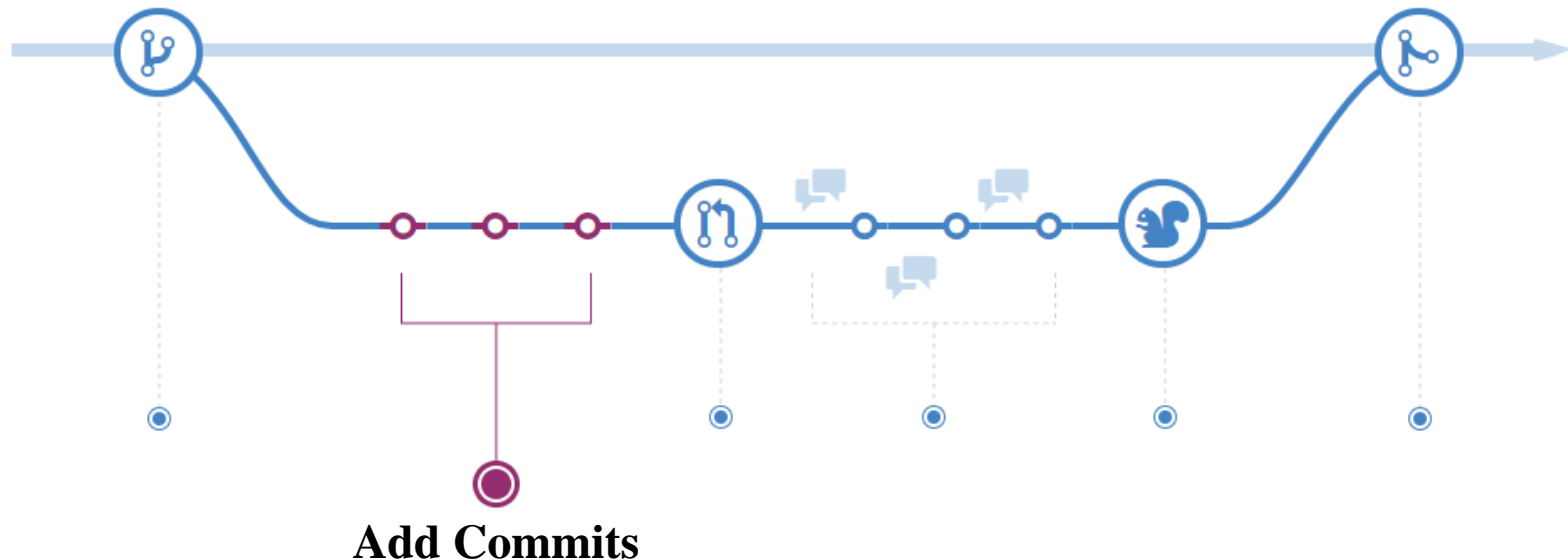


Create Branch

- A new branch must be created from master branch
- Your changes should be applied on master branch

Add Commits

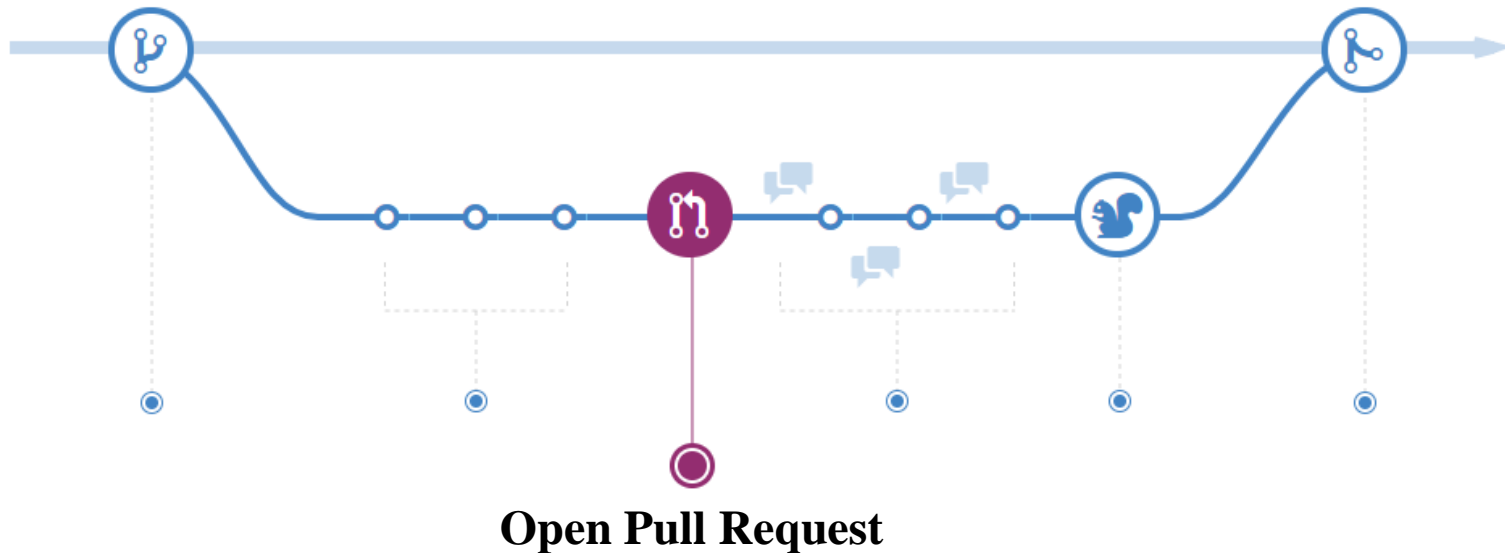
- **Making Changes**



- When you add/edit/delete a file, you must make a commit
This commit is added to your branch
- **Commit Message**
 - Writing clear commit message (Important!)

Open Pull Request

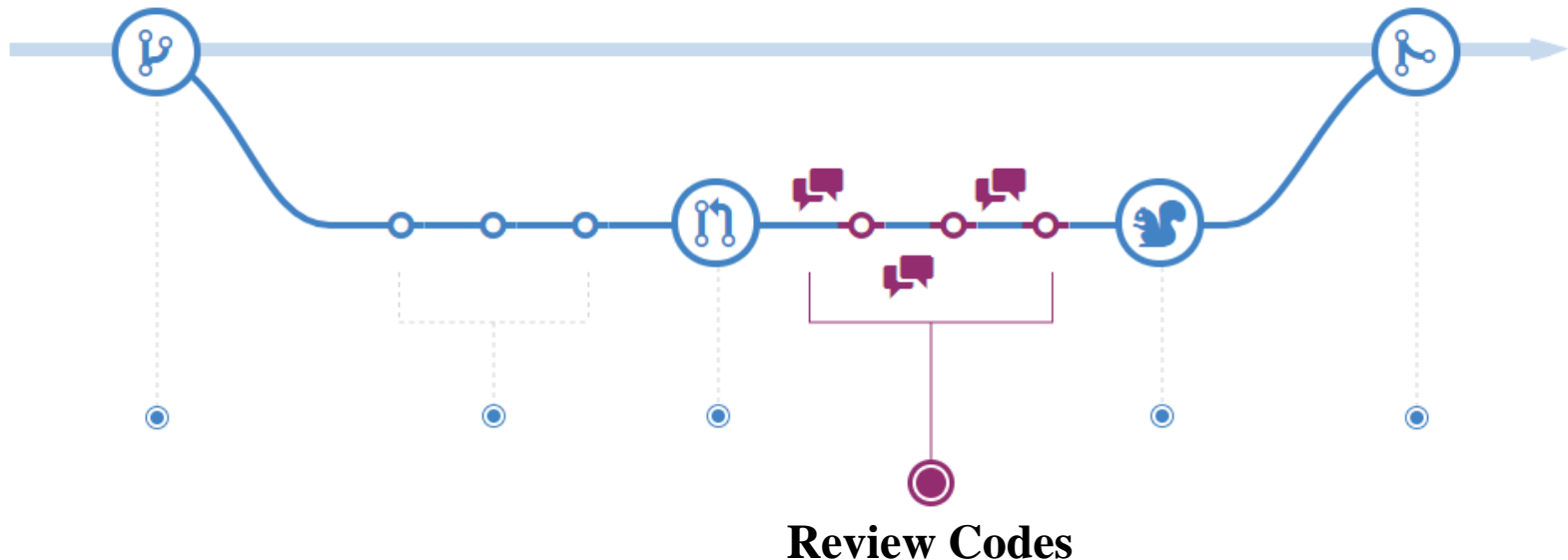
- **Initiate Discussion**



- Open a Pull Request at any time, even without commit
- Receive feedback from team or specific people

Review Codes

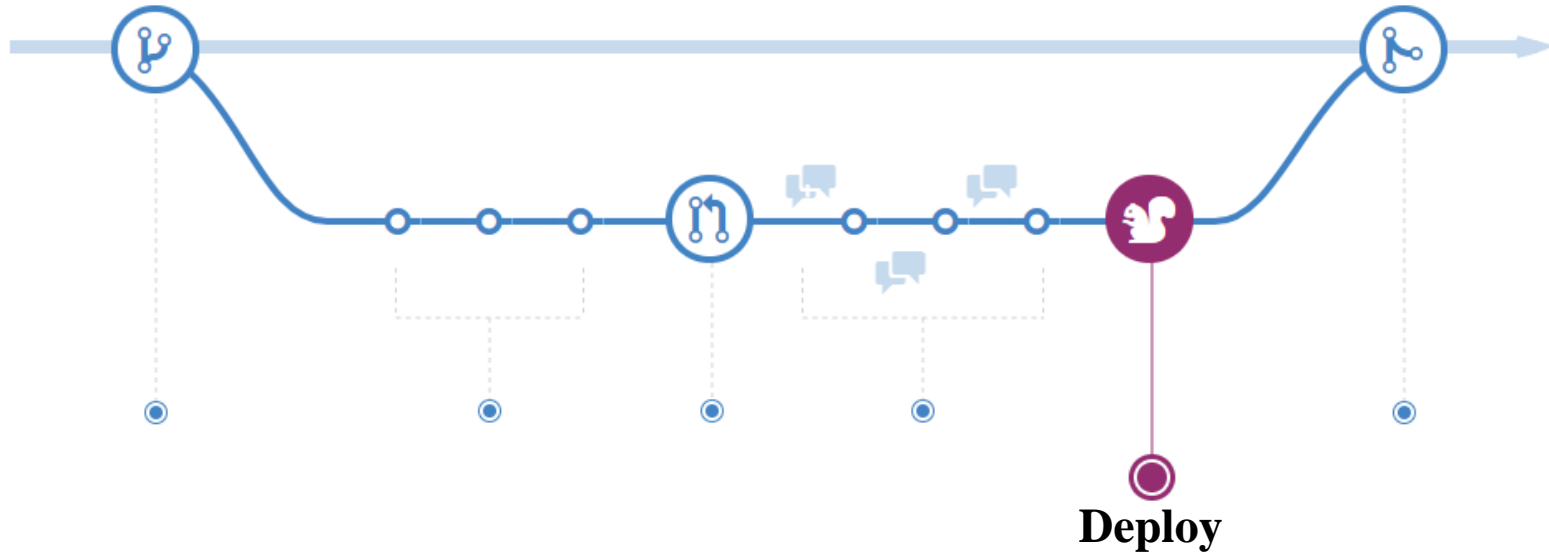
- **Discuss and Review**



- Questions and comments about your changes
- **Further Changes**
 - You can add further commit for apply feedback (e.g. bug)

Deploy

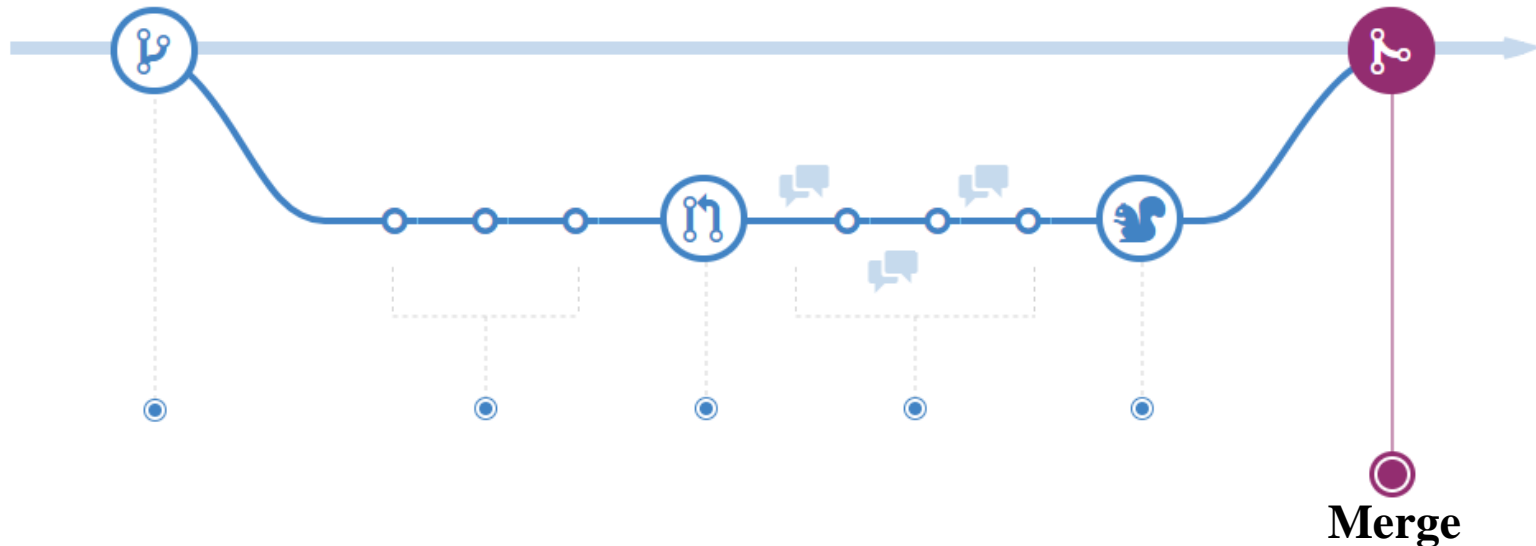
- **Final Testing**



- After review, you deploy your changes to verify them in production

Merge

- **Merge Changes into Master Branch**

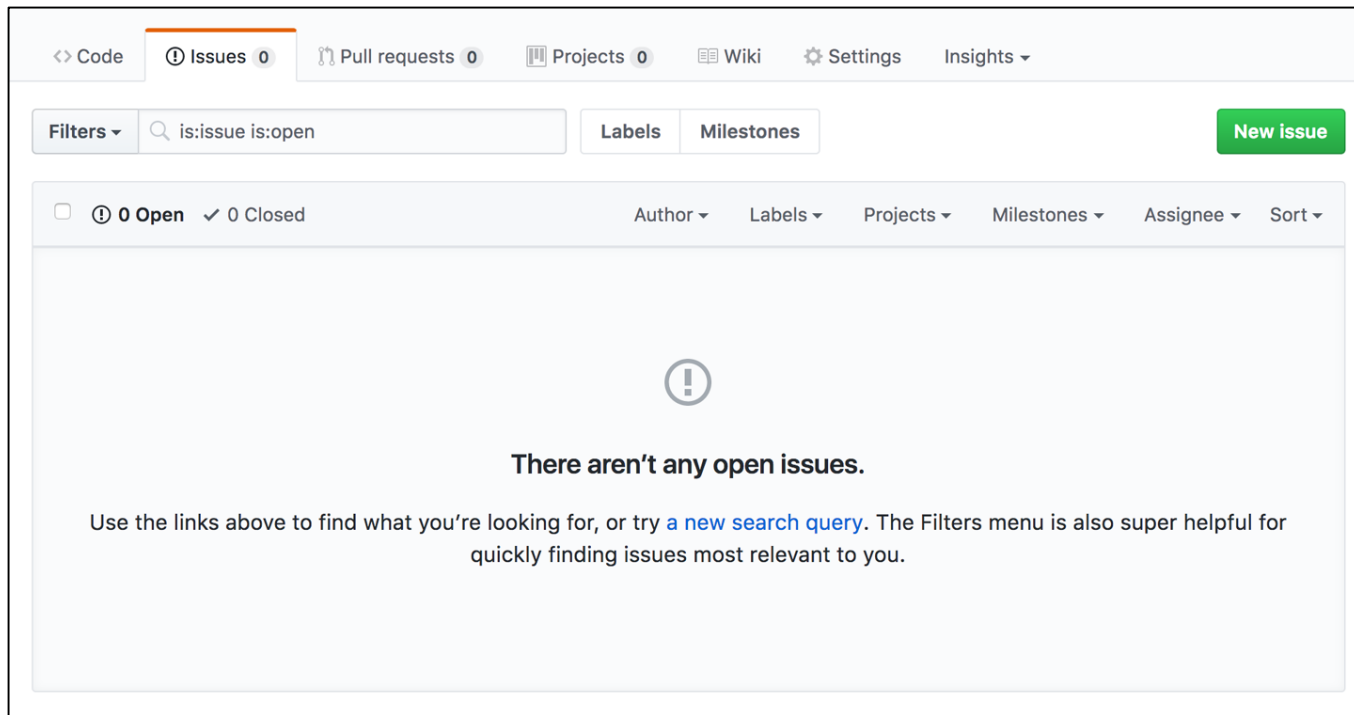


- **After merged, Pull Requests preserved a record of the historical changes to your code**

GitHub Issues

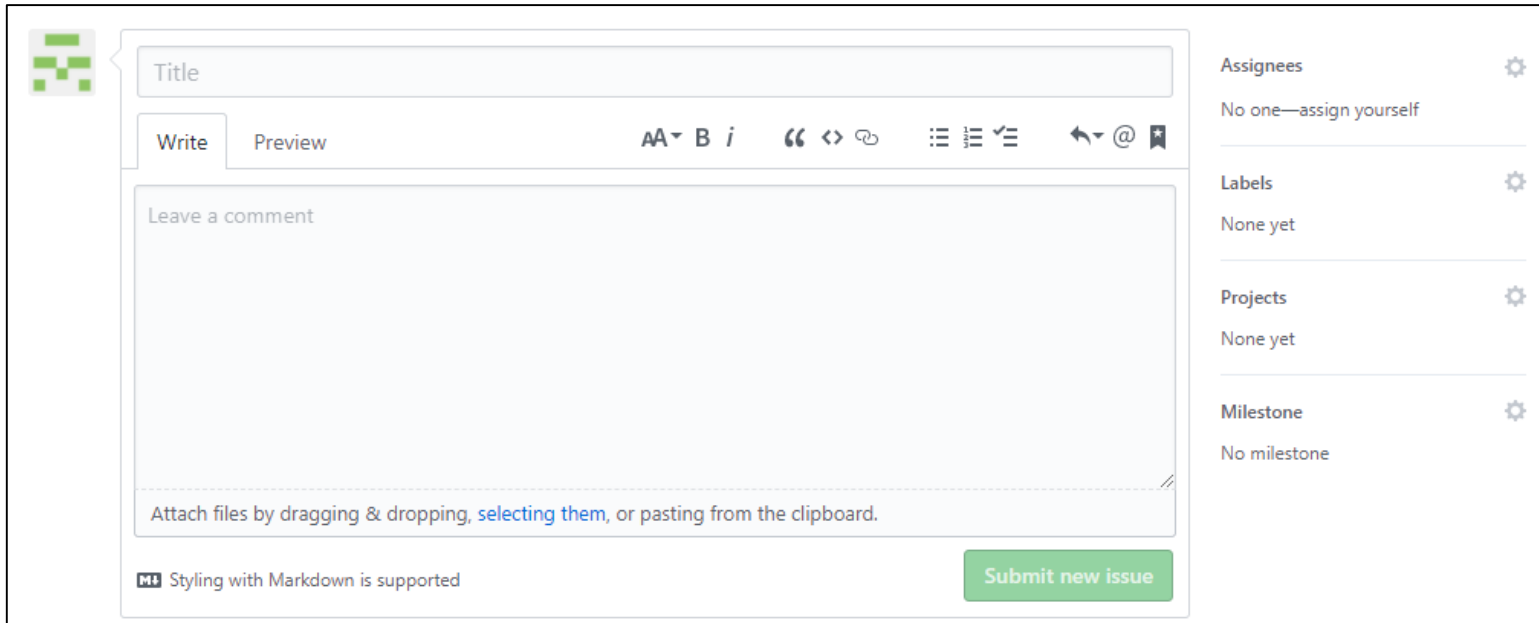
Issues

- **GitHub Issues**
 - A light-weight communication tool
 - Managing new features and bugs



Issues

- **New Issues**



The screenshot shows the GitHub 'New Issue' form. On the left, there is a sidebar with a green icon. The main form has a 'Title' input field at the top. Below it are 'Write' and 'Preview' tabs. A rich text editor follows, with a toolbar containing icons for bold, italic, quote, code, link, list, and other formatting options. The editor area has a placeholder text 'Leave a comment'. Below the editor is a dashed line indicating where to attach files, with the text 'Attach files by dragging & dropping, selecting them, or pasting from the clipboard.' At the bottom left of the form, it says 'Styling with Markdown is supported'. At the bottom right is a green 'Submit new issue' button. On the right side of the form, there are four sections: 'Assignees' with the text 'No one—assign yourself', 'Labels' with 'None yet', 'Projects' with 'None yet', and 'Milestone' with 'No milestone'. Each section has a gear icon for settings.

- **Assignees** : contributor to handle this issues
- **Labels** : custom label like feature, bug
- **Milestone** : external deadline and big event

Milestones

- Tracking progress of issues
 - Open, Closed Status

Labels

Milestones

New milestone

↑ 1 Open ✓ 0 Closed

Sort ▾

Sprint week 34

No due date ⌚ Last updated less than a minute ago

0% complete 0 open 0 closed

List of items that we are working on for sprint week 34

Edit Close Delete

New milestone

Create a new milestone to help organize your issues and pull requests. Learn more about [milestones](#) and [issues](#).

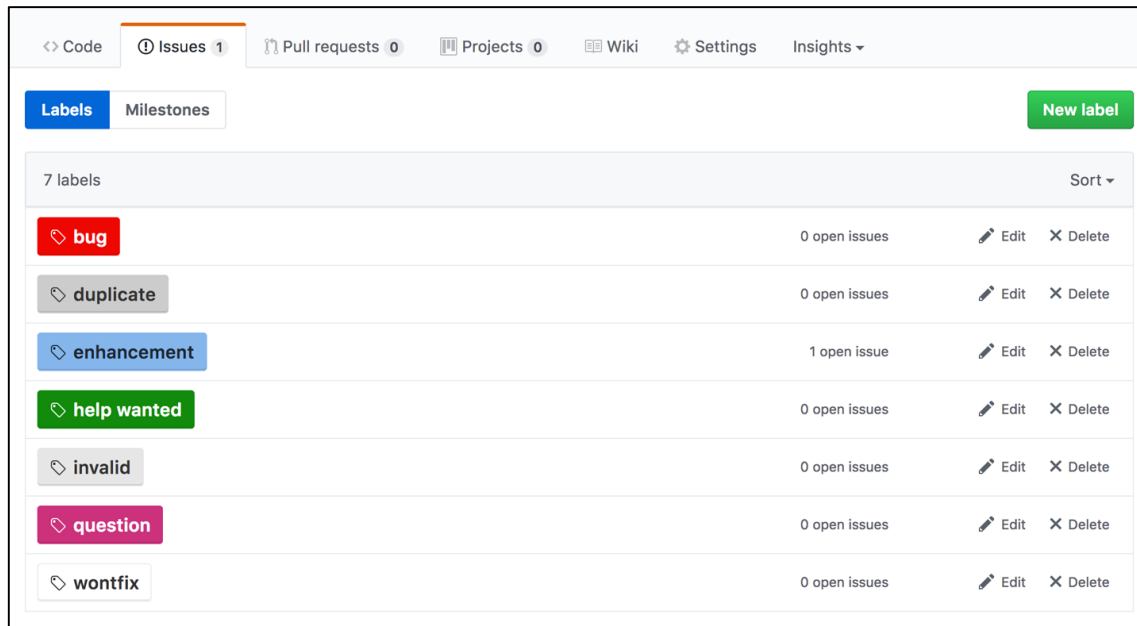
Title

Due date (optional)

Description

Label

- **Custom Label**



- **Edit colors and title**
- **Label show issues at a glance**