

# Git Training



**Git Training Team**

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# About Git

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.

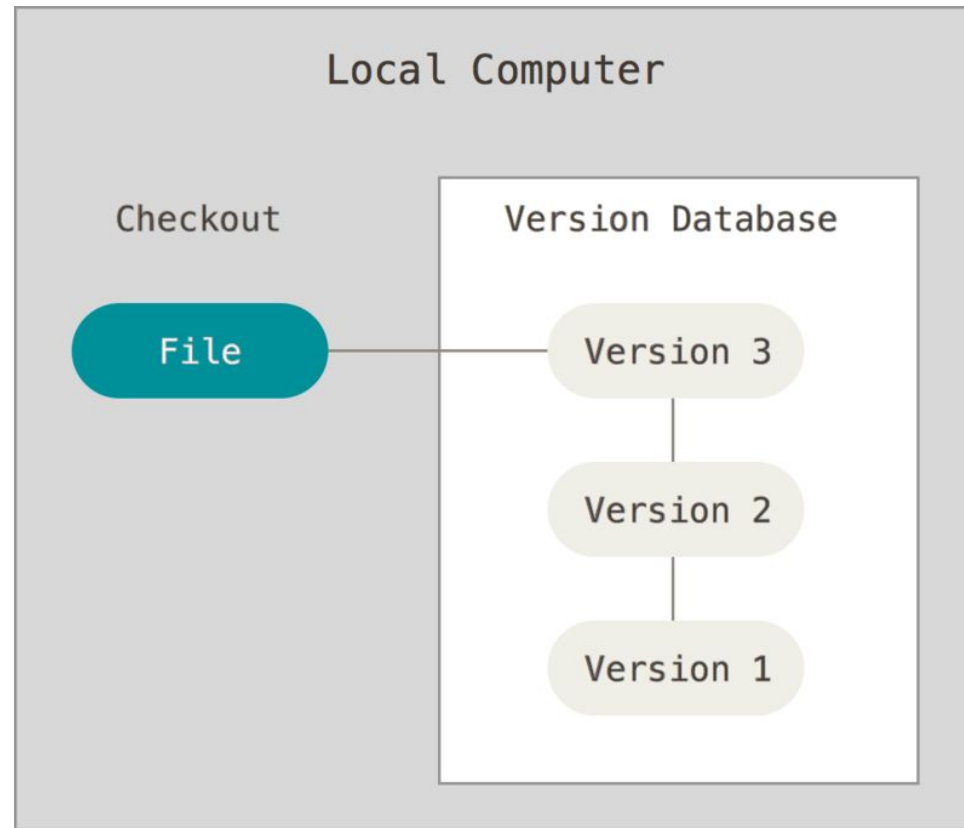
- VCS
- SVN
- Git + Github

Why using GIT:

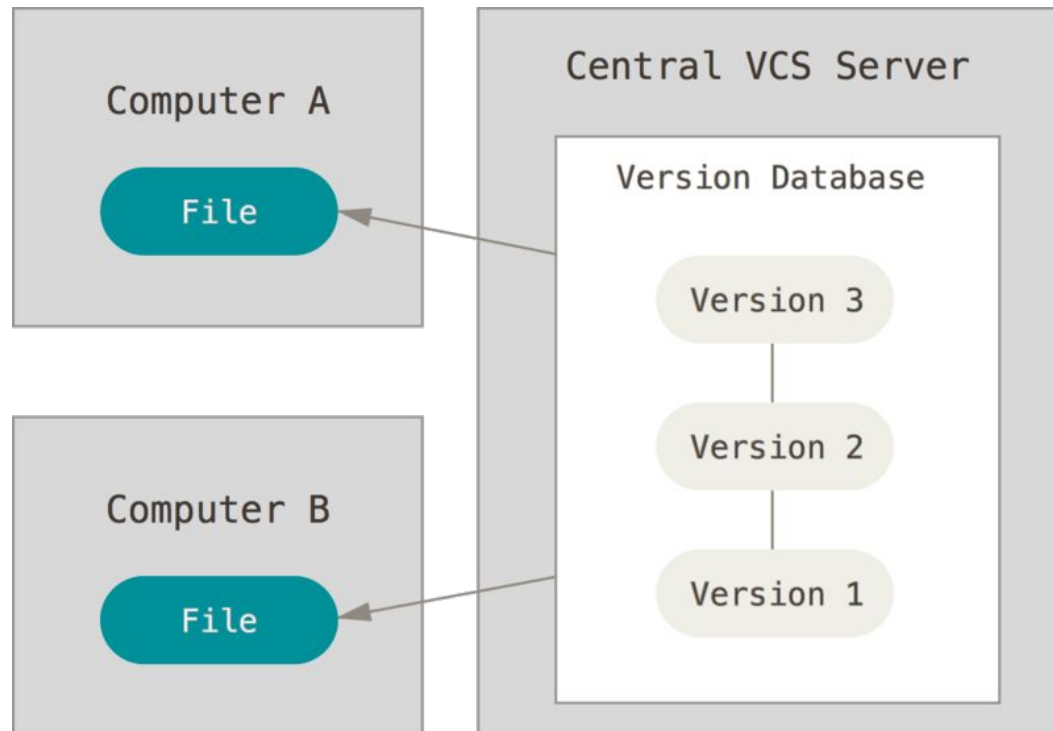
- Git easy to use, safe and fast.
- Can help workflow code in groups a lot simpler by combining the branch (branch).
- You can work anywhere because just clone the source code from the repository or clone a certain version changes from the repository, or a certain branch from the repository
- Ease of product deployment.

# Local Version Control Systems

Keep all the changes to files under revision control.

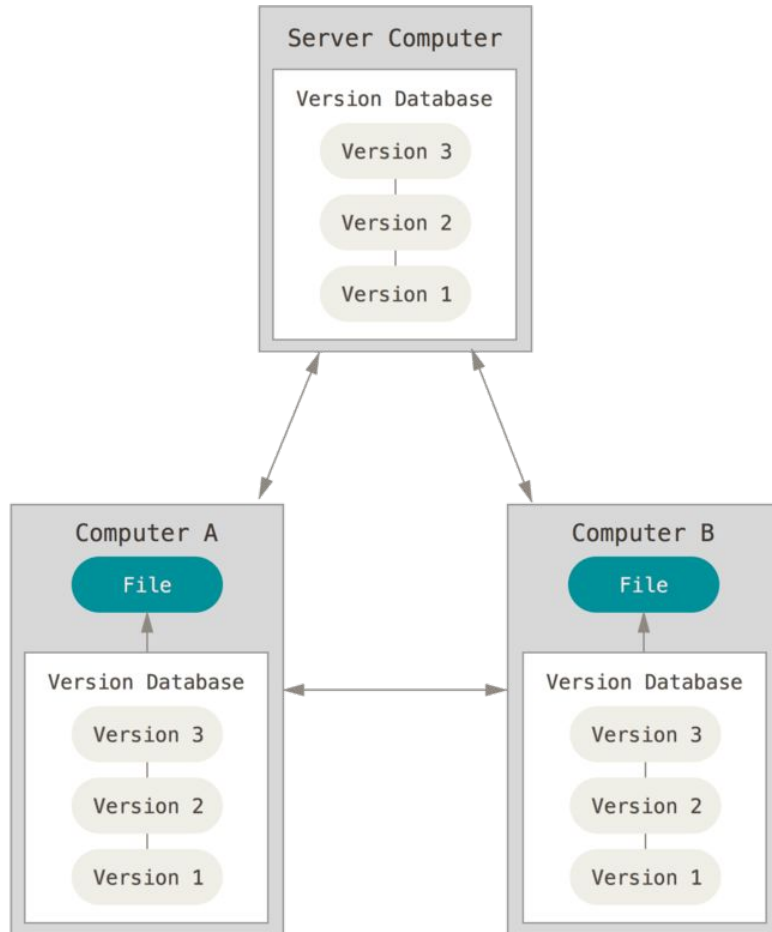


# Centralized Version Control Systems



Collaborate with developers on other systems. Have a single server that contains all the versioned files, and a number of clients that check out files from that central place.

# Distributed Version Control Systems



Fully mirror the repository, if any server dies, and these systems were collaborating via it, any of the client repositories can be copied back up to the server to restore it.

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

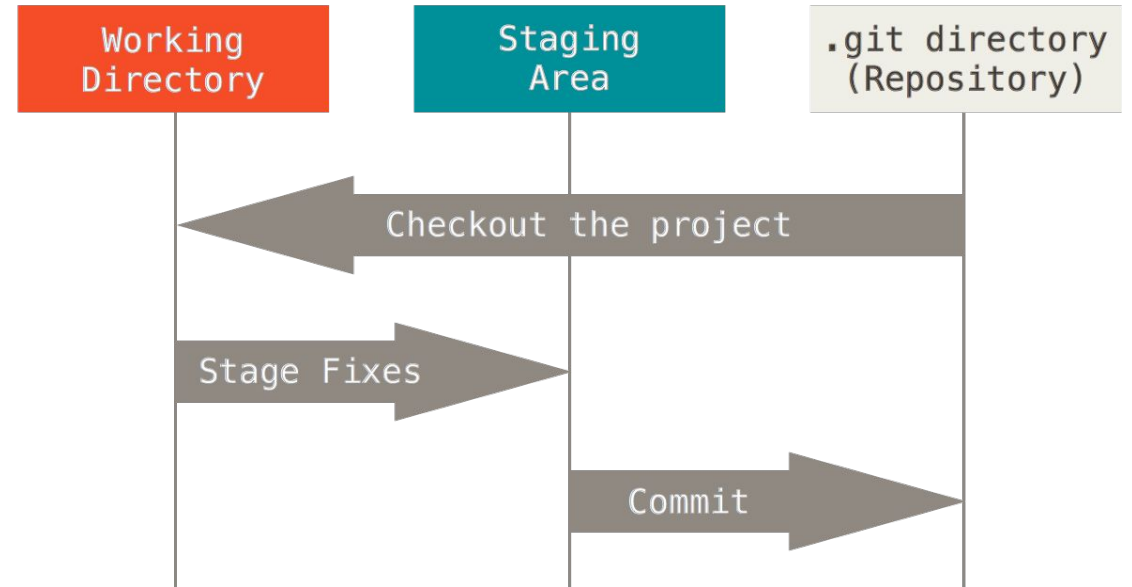
# The Three States

Git has three main states that your files can reside in: committed, modified, and staged.

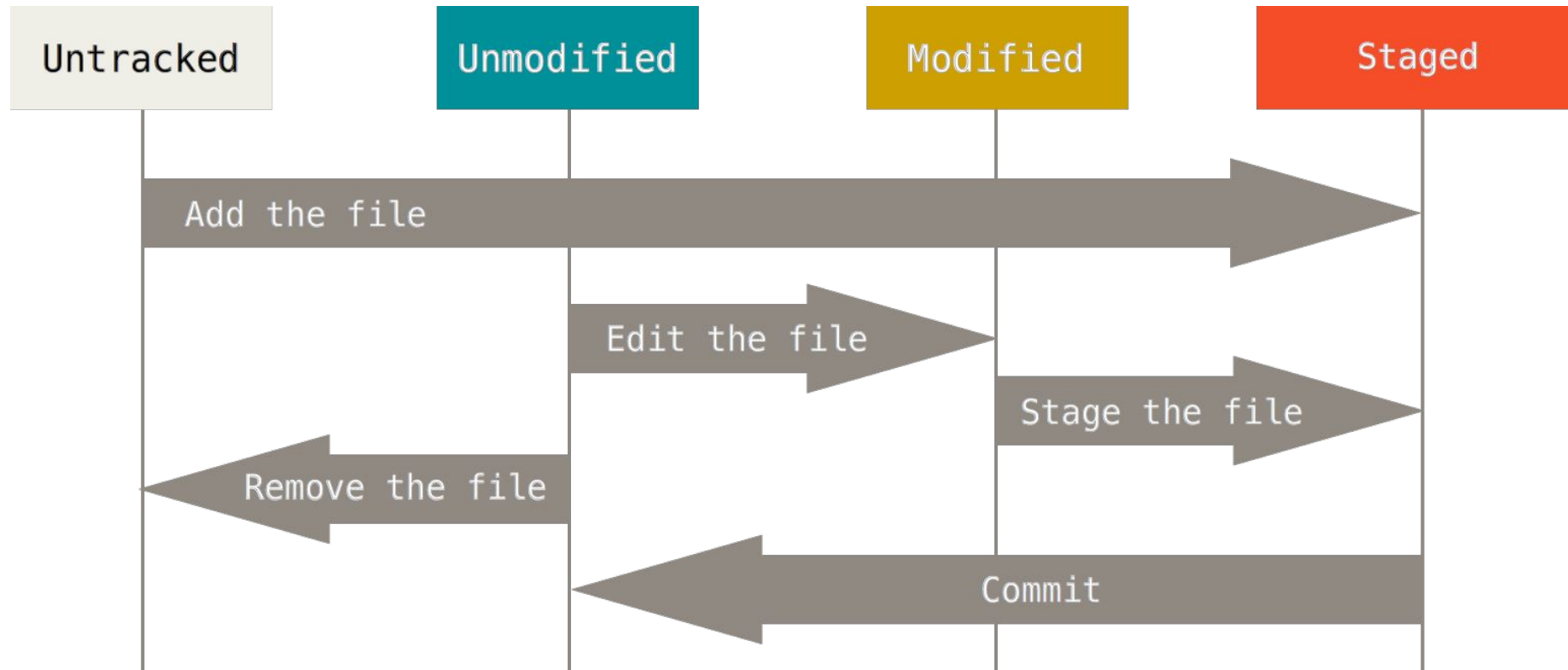
This leads us to the three main sections of a Git project: the Git directory, the working tree, and the staging area.

Command:

- `$ git add`
- `$ git commit`
- `$ git checkout`

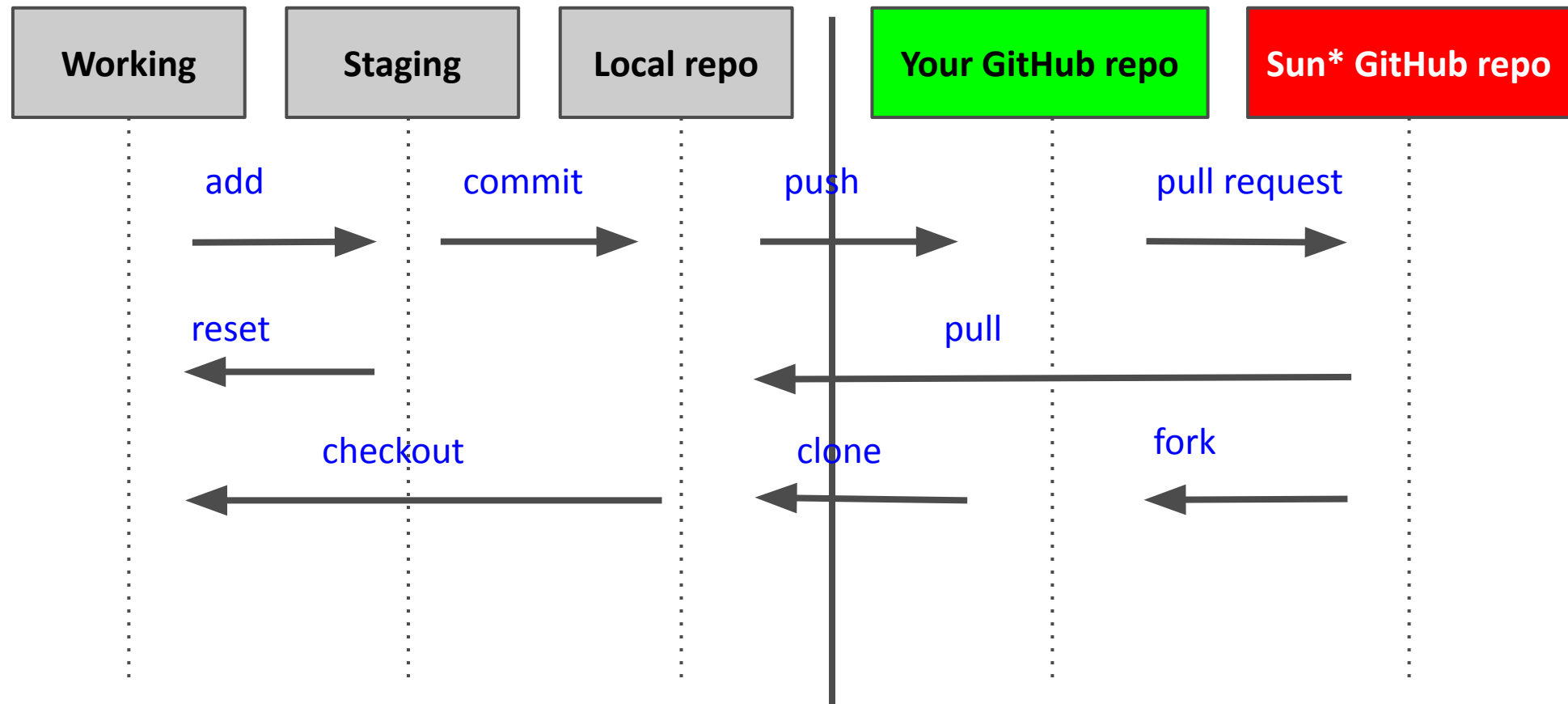


# Recording Changes to the Repository





# Git follow in Sun Asterisk



# Git follow in Sun Asterisk

## 1. Fork

Press button “fork” on GitHub

## 1. Clone

use https: `$ git clone https://github.com/<your-github-account>/<repo-name>.git`

use ssh: `$ git clone git@github.com:<your-github-account>/<repo-name>.git`

## 1. Add remote “sun-asterisk”

`$ git remote add awesome https://github.com/awesome-academy/<repo-name>`

# Git follow in Sun Asterisk

## 4. Checkout

```
$ git checkout -b new_branch
```

## 4. Add | Commit

```
$ git add . | -A | <tên_file>
```

```
$ git commit -m <nội_dung_message>
```

## 6. Rebase (\*)

```
$ git rebase master
```

## 6. Push (\*)

```
$ git push origin <new_branch>
```

## 6. Create pull request

# Git follow in Sun Asterisk

6. rebase master: `$ git rebase master`
  1. checkout master: `$ git checkout master`
  2. pull awesome master: `$ git pull awesome master`
  3. checkout new\_branch: `$ git checkout new_branch`
  4. rebase master: `$ git rebase master`

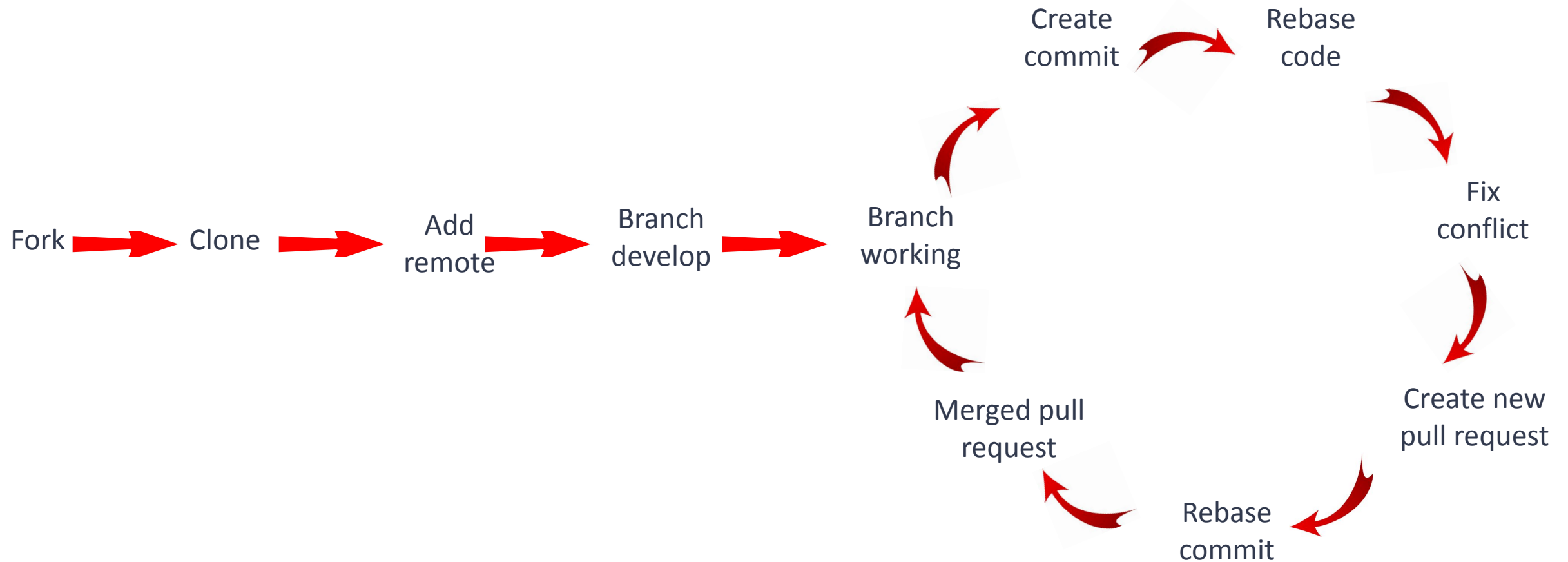
# Git follow in Sun Asterisk

If conflict:

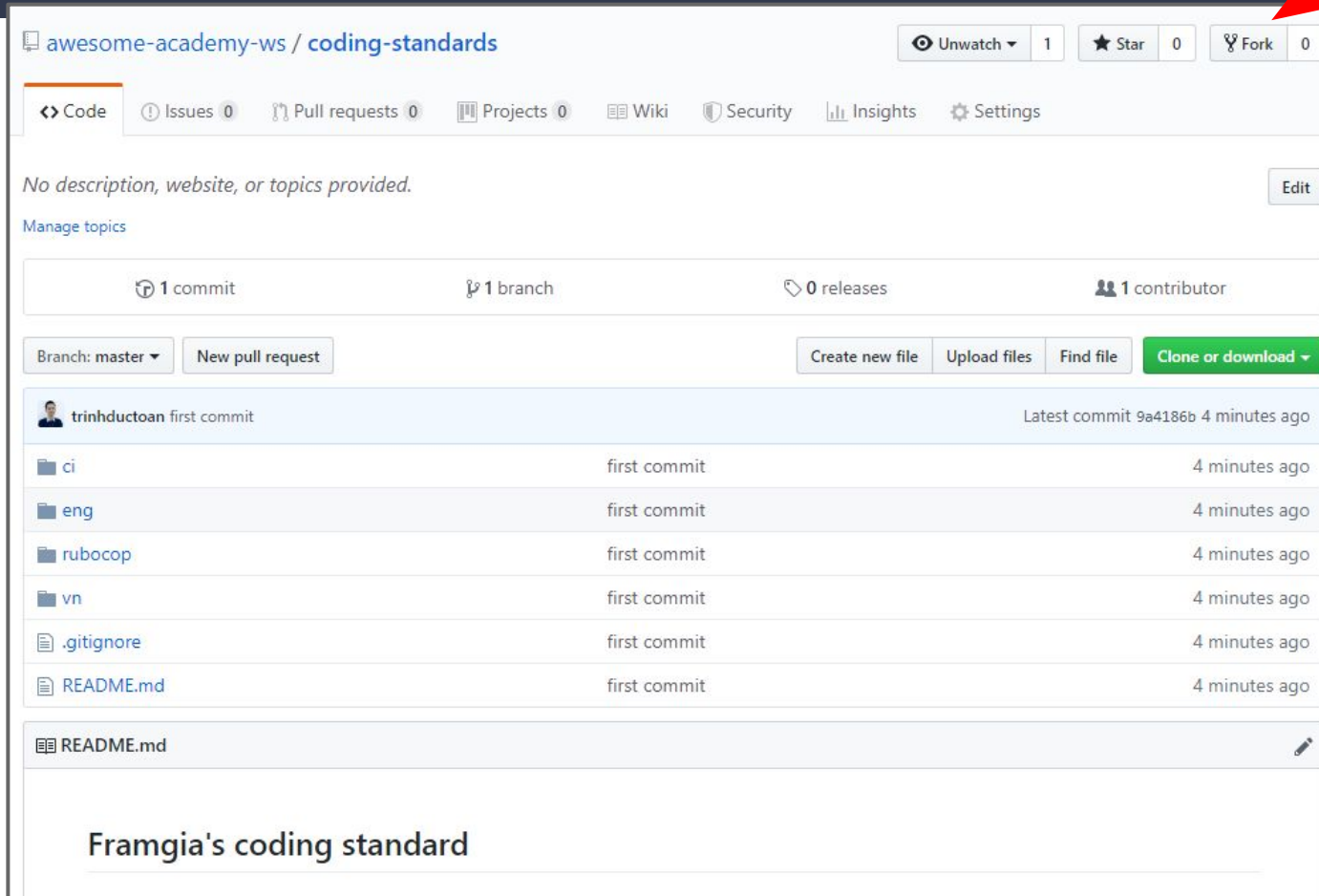
6. rebase master
  4. rebase master
    1. (no branch)
    2. fix conflict
    3. `$ git add . | -A | <tên_file>`
    4. `$ git rebase --continue`
    5. `$ git push origin new_branch -f`

# Practice

# Git follow



# Git follow – Step 1: Fork



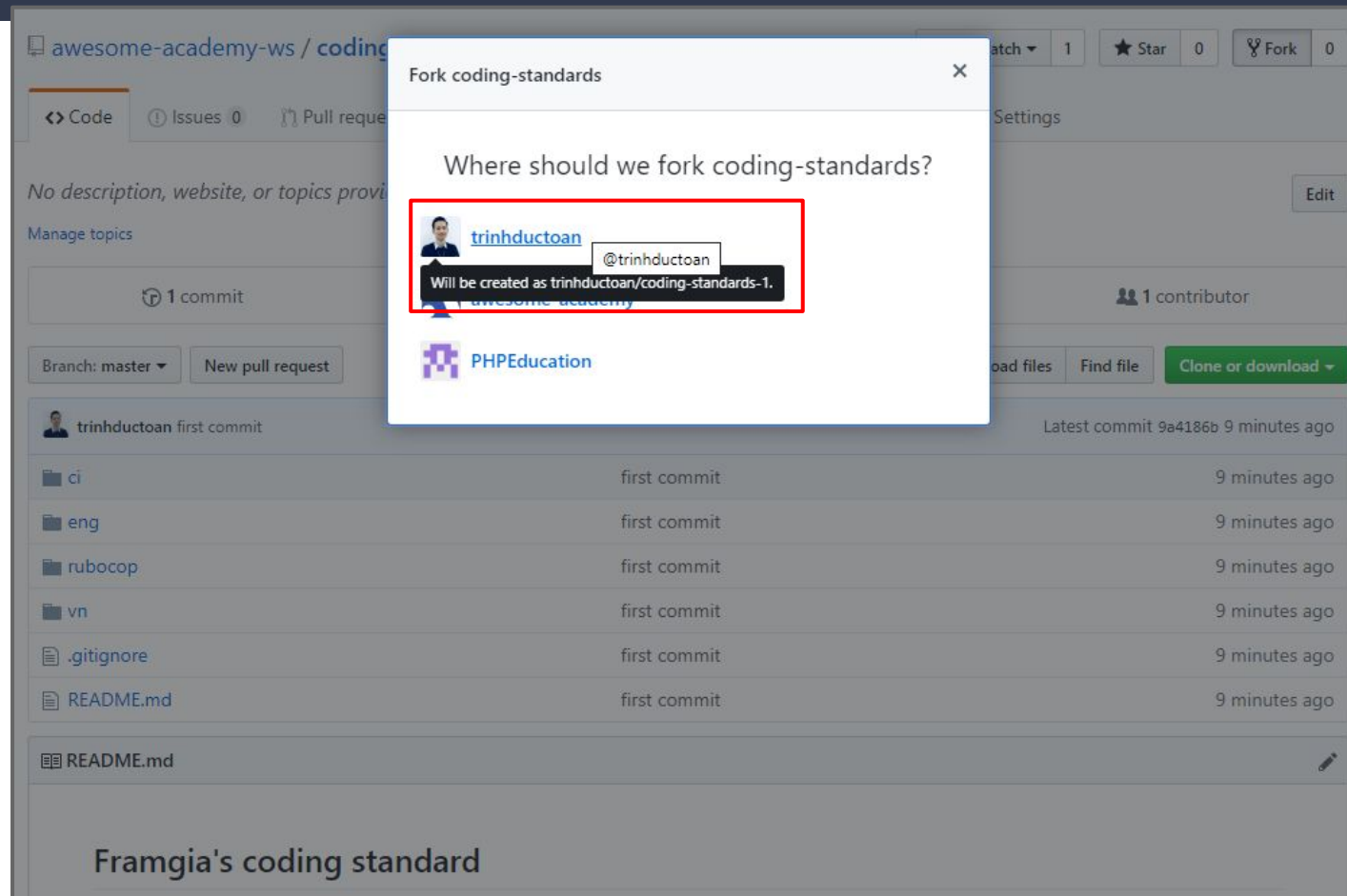
The screenshot shows the GitHub interface for the repository 'awesome-academy-ws / coding-standards'. At the top right, there are buttons for 'Unwatch', 'Star' (0), and 'Fork' (0). A red arrow points to the 'Fork' button. Below these are tabs for 'Code', 'Issues' (0), 'Pull requests' (0), 'Projects' (0), 'Wiki', 'Security', 'Insights', and 'Settings'. The main content area shows 'No description, website, or topics provided.' with an 'Edit' button. Below this is a 'Manage topics' link. A summary bar shows '1 commit', '1 branch', '0 releases', and '1 contributor'. There are buttons for 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. A table lists the commit history:

Commit	Author	Message	Time
trinhductoan first commit			
ci	trinhductoan	first commit	4 minutes ago
eng	trinhductoan	first commit	4 minutes ago
rubocop	trinhductoan	first commit	4 minutes ago
vn	trinhductoan	first commit	4 minutes ago
.gitignore	trinhductoan	first commit	4 minutes ago
README.md	trinhductoan	first commit	4 minutes ago

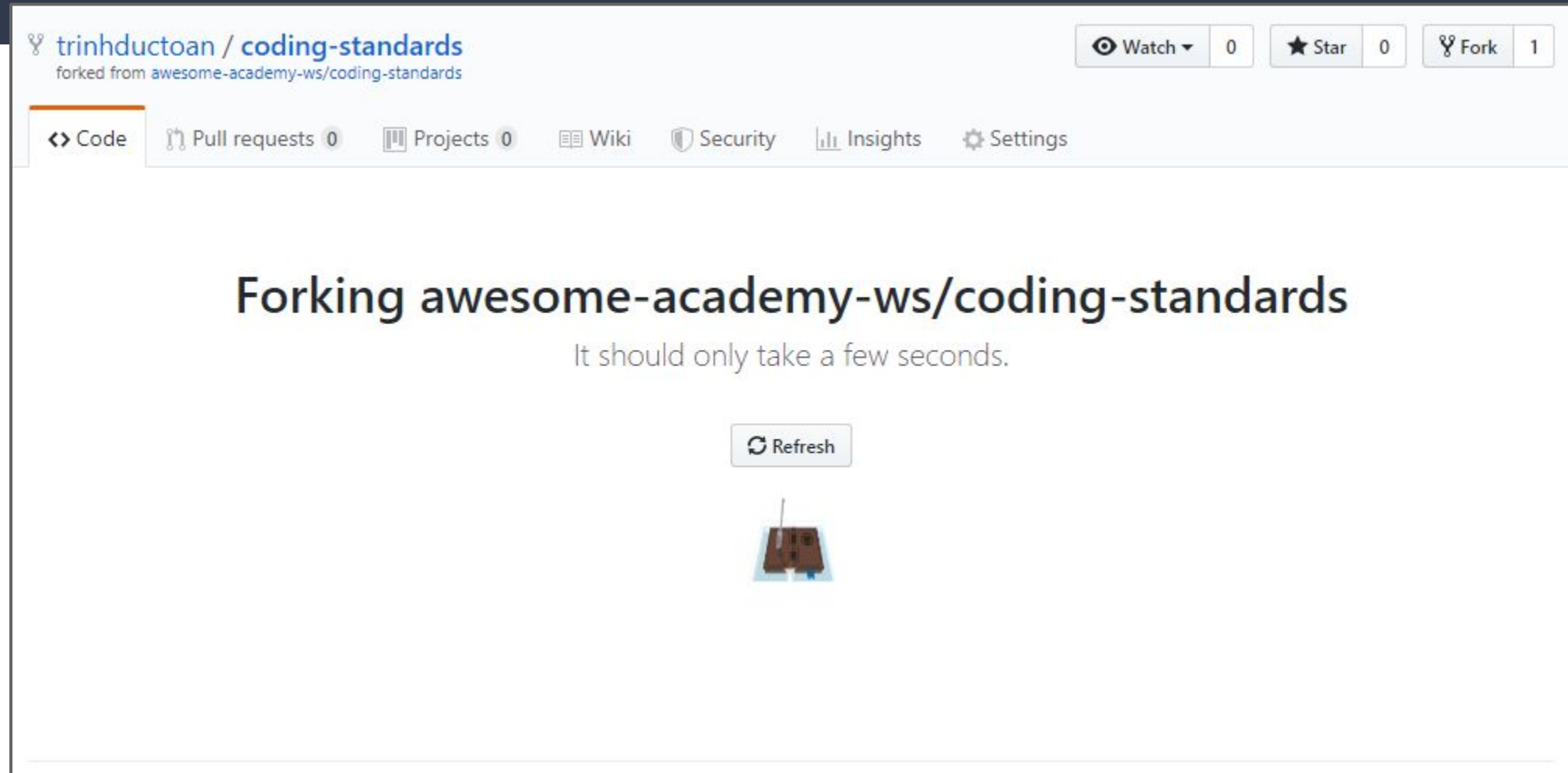
Below the table is a section for 'README.md' with the text 'Framgia's coding standard'.



# Git follow – Step 1: Fork



# Git follow – Step 1: Fork



# Git follow – Step 1: Fork

The screenshot shows a GitHub repository page for 'trinhductoan / coding-standards', which is a fork of 'awesome-academy-ws/coding-standards'. The repository is currently empty, with no description, website, or topics provided. It has 1 commit, 1 branch, 0 releases, and 1 contributor. The 'master' branch is selected, and the 'Clone or download' button is visible. The commit history shows a single commit by 'trinhductoan' 17 minutes ago, with files 'ci', 'eng', 'rubocop', 'vn', '.gitignore', and 'README.md' all added in the first commit. The README file is currently empty, containing only the text 'Framgia's coding standard'.

trinhductoan / coding-standards  
forked from awesome-academy-ws/coding-standards

Watch 0 Star 0 Fork 1

Code Pull requests 0 Projects 0 Wiki Security Insights Settings

No description, website, or topics provided. Edit

Manage topics

1 commit 1 branch 0 releases 1 contributor

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

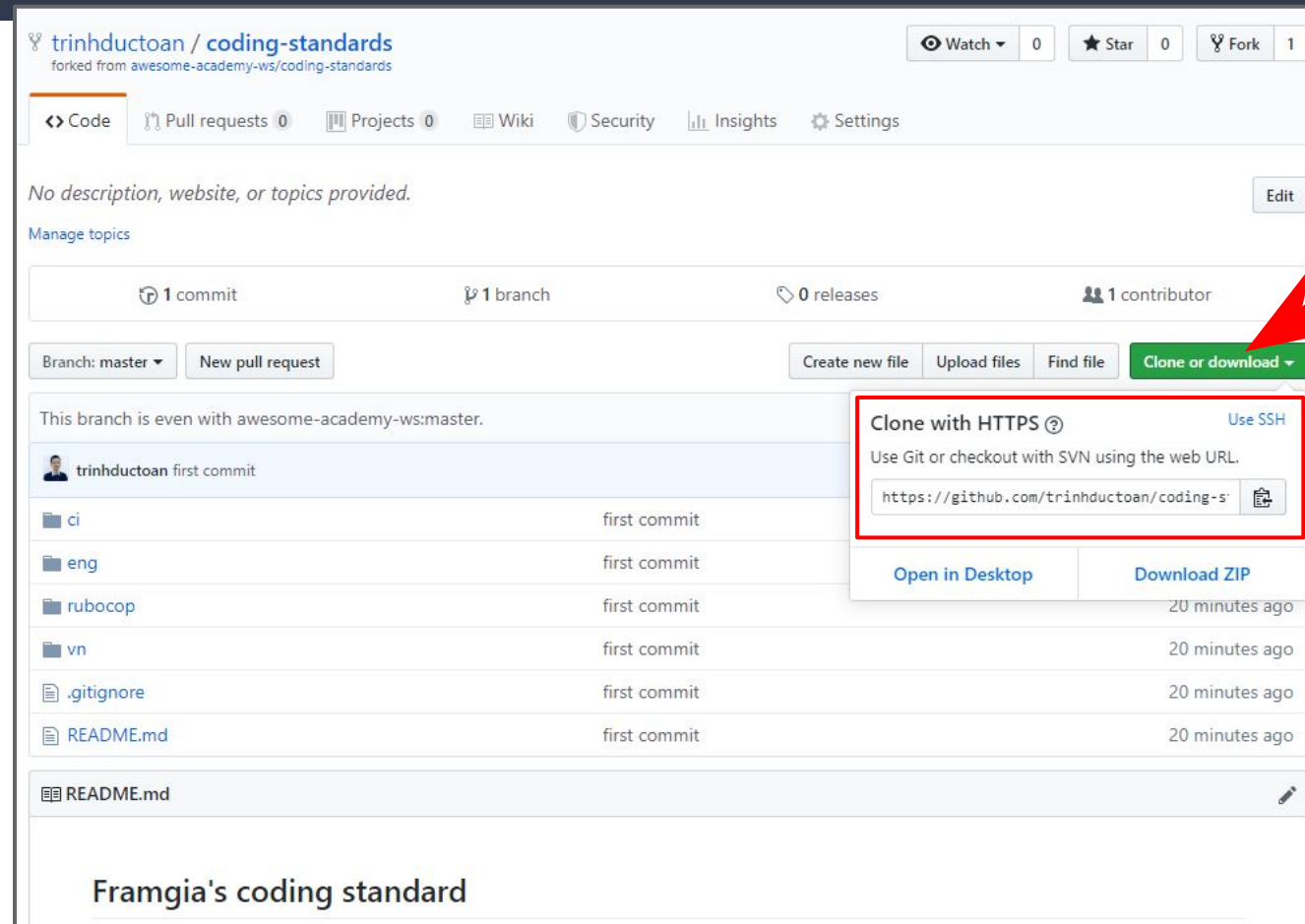
This branch is even with awesome-academy-ws:master. Pull request Compare

trinhductoan first commit	Latest commit 9a4186b 17 minutes ago
ci	first commit 17 minutes ago
eng	first commit 17 minutes ago
rubocop	first commit 17 minutes ago
vn	first commit 17 minutes ago
.gitignore	first commit 17 minutes ago
README.md	first commit 17 minutes ago

README.md

Framgia's coding standard

# Git follow – Step 2: Clone



The screenshot shows the GitHub interface for the repository 'trinhductoan / coding-standards', which is forked from 'awesome-academy-ws/coding-standards'. The repository has 0 Watchers, 0 Stars, and 1 Fork. The 'Code' tab is selected, showing the repository's structure with a table of files and folders. A red arrow points to the 'Clone or download' button, which has opened a dropdown menu. The menu shows the 'Clone with HTTPS' option, which is highlighted with a red box. The dropdown also includes a 'Use SSH' link, a text input field with the URL 'https://github.com/trinhductoan/coding-s', and buttons for 'Open in Desktop' and 'Download ZIP'.

trinhductoan / coding-standards  
forked from awesome-academy-ws/coding-standards

Watch 0 Star 0 Fork 1

Code Pull requests 0 Projects 0 Wiki Security Insights Settings

No description, website, or topics provided. Edit

Manage topics

1 commit 1 branch 0 releases 1 contributor

Branch: master New pull request

Create new file Upload files Find file Clone or download

This branch is even with awesome-academy-ws:master.

trinhductoan first commit	
ci	first commit
eng	first commit
rubocop	first commit
vn	first commit
.gitignore	first commit
README.md	first commit

20 minutes ago

Open in Desktop Download ZIP

Clone with HTTPS Use SSH

Use Git or checkout with SVN using the web URL.

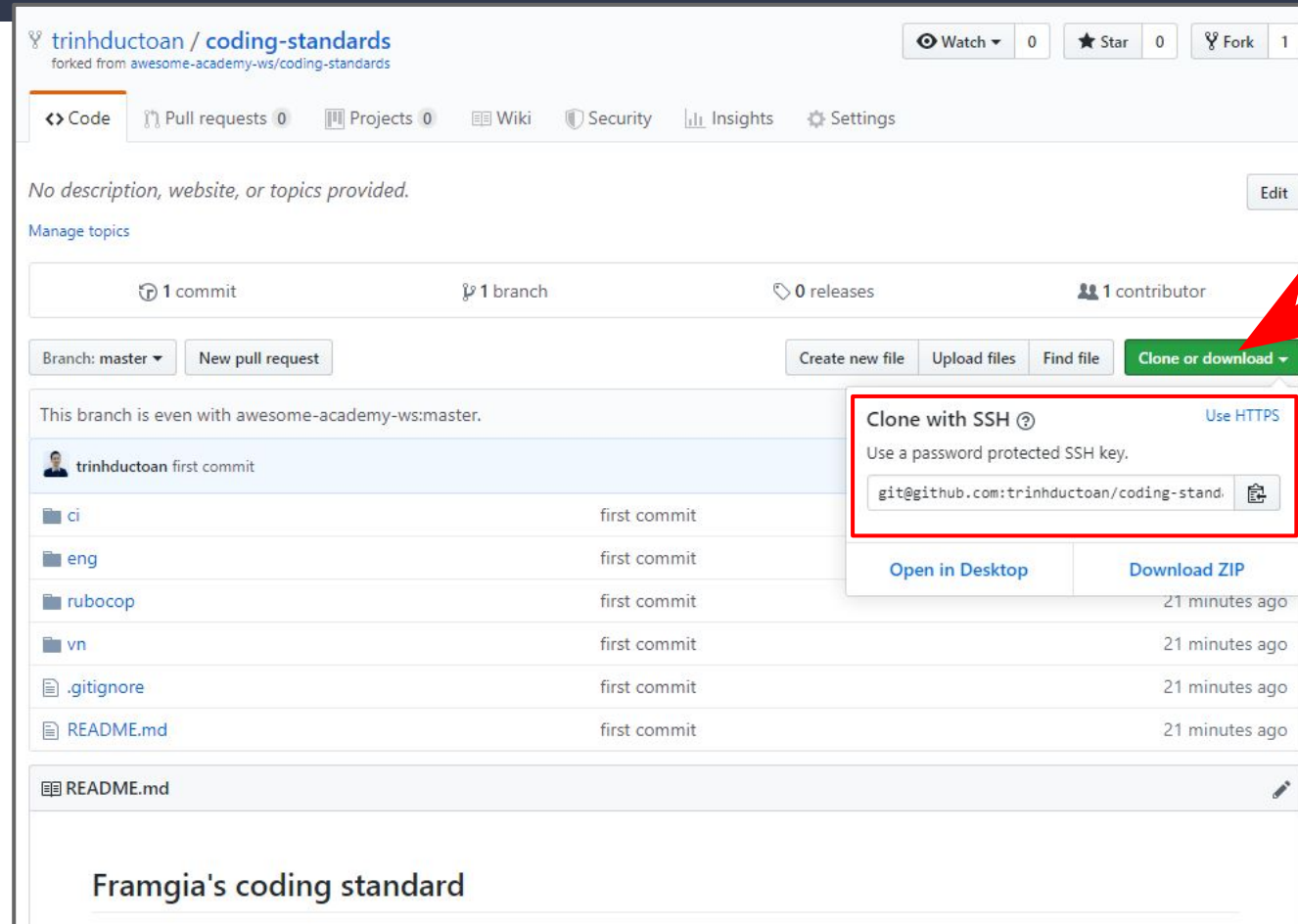
https://github.com/trinhductoan/coding-s

Open in Desktop Download ZIP

README.md

Framgia's coding standard

# Git follow – Step 2: Clone



The screenshot shows the GitHub interface for a repository named 'trinhductoan / coding-standards', which is a fork of 'awesome-academy-ws/coding-standards'. The repository has 1 commit, 1 branch, 0 releases, and 1 contributor. The 'Code' tab is selected, showing a file tree with folders 'ci', 'eng', 'rubocop', and 'vn', and files '.gitignore' and 'README.md'. All files are marked as 'first commit' and were committed '21 minutes ago'. A red arrow points to the 'Clone or download' button, which has opened a dropdown menu. This menu is highlighted with a red box and contains the following options:

- Clone with SSH** (with an eye icon): Use a password protected SSH key. The text 'git@github.com:trinhductoan/coding-stand.' is shown with a copy icon.
- [Use HTTPS](#)
- [Open in Desktop](#)
- [Download ZIP](#)

Below the file tree, the 'README.md' file is partially visible, showing the text 'Framgia's coding standard'.

# Git follow – Step 2: Clone

Syntax:

```
$ git clone remote_url [project_name]
```

Clone with https:

```
$ git clone https://github.com/trinhductoan/coding-standards.git
```

Clone with ssh:

```
$ git clone git@github.com:trinhductoan/coding-standards.git
```

```
TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs
$ git clone https://github.com/trinhductoan/coding-standards.git
Cloning into 'coding-standards'...
remote: Enumerating objects: 63, done.
remote: Counting objects: 100% (63/63), done.
remote: Compressing objects: 100% (53/53), done.
remote: Total 63 (delta 5), reused 63 (delta 5), pack-reused 0
Unpacking objects: 100% (63/63), done.
```

# Git follow – Step 3: Remote Add

Check the remote at the local machine:

```
$ git remote -v
```

Result:

```
TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (master)
$ git remote -v
origin  https://github.com/trinhductoan/coding-standards.git (fetch)
origin  https://github.com/trinhductoan/coding-standards.git (push)
```

# Git follow – Step 3: Remote Add

Syntax: `$ git remote add [remote_name] [remote_url]`

Sample: `$ git remote add awesome https://github.com/trinhductoan/coding-standards.git`

Result:

```
TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (master)
$ git remote add awesome https://github.com/trinhductoan/coding-standards.git

TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (master)
$ git remote -v
awesome https://github.com/trinhductoan/coding-standards.git (fetch)
awesome https://github.com/trinhductoan/coding-standards.git (push)
origin https://github.com/trinhductoan/coding-standards.git (fetch)
origin https://github.com/trinhductoan/coding-standards.git (push)
```



# Git follow – Step 4: Checkout

Checking local branches

Syntax: `$ git branch`

Result:

```
TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (master)
$ git branch
* master
```

# Git follow – Step 4: Checkout

Create branch develop

Syntax: `$ git fetch [remote_name] [branch_name]`

Sample: `$ git fetch awesome develop`

Result:

```
TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (master)
$ git fetch awesome master
From https://github.com/trinhductoan/coding-standards
* branch          master      -> FETCH_HEAD
* [new branch]     master      -> awesome/master
```

# Git follow – Step 4: Checkout

Checkout local branches

Syntax: `$ git checkout [branch_name]`

Result:

```
TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (master)
$ git checkout develop
error: pathspec 'develop' did not match any file(s) known to git.
```

# Git follow – Step 4: Create new branch

New branch

Syntax: `$ git checkout -b [branch_name]`

Result:

```
TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (master)
$ git checkout -b develop
Switched to a new branch 'develop'

TOANTD@DESKTOP-FUE15KD MINGW64 /f/xampp/htdocs/coding-standards (develop)
$ ..
```

# Git follow – Step 4: Create new branch

Using PULL command:

Create new branch develop from branch master:

```
$ git checkout -b [branch_name]
```

Pull code from branch develop to awesome remote:

```
$ git pull awesome develop
```

# Git follow – Step 4: Create new branch

Result:

# Git follow – Step 5: Add/Commit file

```
GNU nano 2.5.3                               File: Gemfile                               Modified
source "https://rubygems.org"

gem "rails", "~> 5.0.0", ">= 5.0.0.1"
gem "bootstrap-sass", "3.3.6"
#gem "sqlite3"
gem "mysql2"
gem "puma", "~> 3.0"
gem "sass-rails", "~> 5.0"
gem "uglifier", ">= 1.3.0"
gem "coffee-rails", "~> 4.2"
gem "bcrypt", "3.1.11"
gem "jquery-rails"
gem "turbolinks", "~> 5"
gem "jbuilder", "~> 2.5"
gem "will_paginate", "3.1.0"
gem "bootstrap-will_paginate", "0.0.10"
gem "config"

group :development, :test do
  gem "byebug", platform: :mri
end

group :development do
  gem "web-console"
  gem "listen", "~> 3.0.5"
  gem "spring"
  gem "spring-watcher-listen", "~> 2.0.0"
end

gem "tzinfo-data", platforms: [:mingw, :mswin, :x64_mingw, :jruby]
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos ^Y Prev Page M-^ First Line M-W WhereIs Next  
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^\_ Go To Line ^V Next Page M-/ Last Line M-\_ To Bracket

# Git follow – Step 5: Add/Commit file

Check status in current branch:

Syntax: `$ git status`

Result:

```
On branch working
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Gemfile

no changes added to commit (use "git add" and/or "git commit -a")
```



# Git follow – Step 5: Add/Commit file

Change file to Added status:

- Add all file change and new file
- Add all file change, new file and delete file
- Add file with file name
- Delete file in cache (remove file from git)

```
$ git add .
```

```
$ git add -A
```

```
$ git add [filename]
```

```
$ git rm -r --cache filename
```

# Git follow – Step 5: Add/Commit file

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:41:29]
→ git add .

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:41:32]
→ git status
On branch working
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   Gemfile

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:41:35]
→
```

# Git follow – Step 5: Add/Commit file

Create new commit:

Syntax: `$ git commit -m [tên_commit]`

Sample: `$ git commit -m "working"`

Result:

```
[working c4a8ac3] Working
1 file changed, 2 insertions(+), 1 deletion(-)
```

# Git follow – Step 5: Add/Commit file

Logging:

Syntax: `$ git log`

Result:

```
commit a683cde317f5e12788f745f38e721850772ff5e5
Author: TrungNT <hellovietnan93@gmail.com>
Date: Mon Dec 26 08:42:14 2016 +0700

    Working

    Working

commit 985339fe601bf07707bb17111751ec83789a64c1
Merge: 3b5bf72 cdf1fa8
Author: TrungNT <hellovietnan93@gmail.com>
Date: Mon Dec 12 16:30:47 2016 +0700

    Merge pull request #19 from dieptran00888/activity

    View activity

commit cdf1fa8e1244cc8130b94e998did5362fb24bb94
Author: dieptran <dieptx.ptit@gmail.com>
Date: Fri Dec 9 08:06:07 2016 +0700

    View activities

commit 3b5bf724ba76c1cec631ad6f95d9632c007b8300
Merge: e81aec7 d945d61
Author: TrungNT <hellovietnan93@gmail.com>
Date: Mon Dec 12 14:21:07 2016 +0700

    Merge pull request #20 from dieptran00888/fix-interface

    fix interface admin

commit d945d61581e7812eb4ca7e97ebcd97bc901e800a
Author: dieptran <dieptx.ptit@gmail.com>
Date: Fri Dec 9 14:18:07 2016 +0700

    fix interface

:|
```

# Git follow – Step 5: Add/Commit file

Logging:

Short logging:

```
$ git log --oneline [-line_number]
```

Sample:

```
$ git log --oneline -5
```

Result:

```
a683cde Working
985339f Merge pull request #19 from dieptran00888/activity
cdf1fa8 View activites
3b5bf72 Merge pull request #20 from dieptran00888/fix-interface
d945d61 fix interface
(END)
```

# Git follow – Step 6: Rebase master

Lấy code mới nhất từ branch develop của remote framgia để rebase

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:23:29]
→ git checkout develop
Switched to branch 'develop'

# trungnt at trungnt in ~/working_space/project/fels_215 on git:develop ● [8:23:55]
→ git pull framgia develop
From https://github.com/framgia/fels_215
 * branch                develop      -> FETCH_HEAD
Already up-to-date.

# trungnt at trungnt in ~/working_space/project/fels_215 on git:develop ● [8:24:01]
→ git checkout working
Switched to branch 'working'

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:24:04]
→ □
```

# Git follow – Step 6: Rebase master

Lấy code mới nhất từ branch develop của remote framgia để rebase

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:53:51]
→ git rebase develop
Current branch working is up to date.

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:54:18]
→ □
```

# Git follow – Step 6: Rebase master

Fix conflict

```
trungnt at trungnt in ~/working_space/project/ftms on git:1.2.1 ● [8:54:34]
→ git rebase develop
First, rewinding head to replay your work on top of it...
Applying: Authorize user
Using index info to reconstruct a base tree...
M       Gemfile
M       Gemfile.lock
M       app/controllers/users_controller.rb
M       app/models/user.rb
Falling back to patching base and 3-way merge...
Auto-merging app/models/user.rb
Auto-merging app/controllers/users_controller.rb
Auto-merging Gemfile.lock
Auto-merging Gemfile
CONFLICT (content): Merge conflict in Gemfile
error: Failed to merge in the changes.
Patch failed at 0001 Authorize user
The copy of the patch that failed is found in: .git/rebase-apply/patch

When you have resolved this problem, run "git rebase --continue".
If you prefer to skip this patch, run "git rebase --skip" instead.
To check out the original branch and stop rebasing, run "git rebase --abort".

trungnt at trungnt in ~/working_space/project/ftms on git:4f9a4d8 ✖ [8:55:01]
→ □
```



# Git follow – Step 6: Rebase master

Fix conflict

```
# trungnt at trungnt in ~/working_space/project/ftms on git:4f9a4d8 [8:55:01]
→ git status
rebase in progress; onto 4f9a4d8
You are currently rebasing branch '1.2.1' on '4f9a4d8'.
  (fix conflicts and then run "git rebase --continue")
  (use "git rebase --skip" to skip this patch)
  (use "git rebase --abort" to check out the original branch)

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   Gemfile.lock
        modified:   app/controllers/application_controller.rb
        modified:   app/controllers/users_controller.rb
        modified:   app/models/user.rb
        new file:    app/policies/application_policy.rb
        new file:    app/policies/user_policy.rb
[ ]

Unmerged paths:
  (use "git reset HEAD <file>..." to unstage)
  (use "git add <file>..." to mark resolution)

        both modified:   Gemfile

# trungnt at trungnt in ~/working_space/project/ftms on git:4f9a4d8 [8:55:26]
→
```

# Git follow – Step 6: Rebase master

Fix conflict

Tìm đến các file có chứa các đoạn:

```
<<<<<<<< (code ở branch muốn rebase)
[code]
=====
[code]
>>>>>>>> (code ở branch hiện tại đang đứng)
```

Ví dụ:

```
<<<<<<< 4f9a4d8917dfcf799249fd564957a6edea103274
gem "cloudinary"
gem "roo"
gem "activerecord-import"
=====
gem "pundit"
>>>>>>> Authorize user
```

# Git follow – Step 6: Rebase master

Sau khi sửa xong hết các đoạn bị conflict. Thực hiện các lệnh sau:

Add các file thay đổi bằng lệnh:

```
$ git add . / -A / filename
```

Tiếp theo sử dụng lệnh:

```
$ git rebase --continue
```

# Git follow – Step 6: Rebase master

```
# trunght at trunght in ~/working_space/project/ftms on git:4f9a4d8 [8:28:33]
→ git add .

# trunght at trunght in ~/working_space/project/ftms on git:4f9a4d8 [8:28:36]
→ git rebase --continue
Applying: Authorize user
Applying: Authorize course
Using index info to reconstruct a base tree...
M       app/controllers/user_courses_controller.rb
Falling back to patching base and 3-way merge...
Auto-merging app/controllers/user_courses_controller.rb
CONFLICT (content): Merge conflict in app/controllers/user_courses_controller.rb
error: Failed to merge in the changes.
Patch failed at 0002 Authorize course
The copy of the patch that failed is found in: .git/rebase-apply/patch

When you have resolved this problem, run "git rebase --continue".
If you prefer to skip this patch, run "git rebase --skip" instead.
To check out the original branch and stop rebasing, run "git rebase --abort".

# trunght at trunght in ~/working_space/project/ftms on git:744496e [8:28:41]
→
```

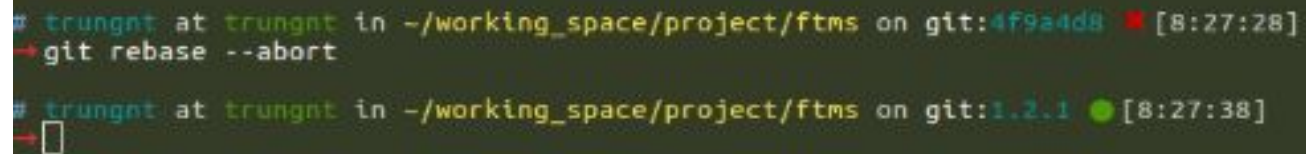
# Git follow – Step 6: Rebase master

Fix conflict

Trong trường hợp không muốn rebase code nữa có thể sử dụng lệnh:

```
$ git rebase --abort
```

Ví dụ:



```
# trungnt at trungnt in -/working_space/project/ftms on git:4f9a4d8 [8:27:28]
→ git rebase --abort

# trungnt at trungnt in -/working_space/project/ftms on git:1.2.1 [8:27:38]
→
```

# Git follow – Step 6: Rebase master

Push to remote:

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:42:14]
→ git push origin working
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 312 bytes | 0 bytes/s, done.
Total 3 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To git@github.com:hellovietnam93/fels_215.git
 * [new branch]      working -> working

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:42:43]
→ □
```

# Pull Request Rule

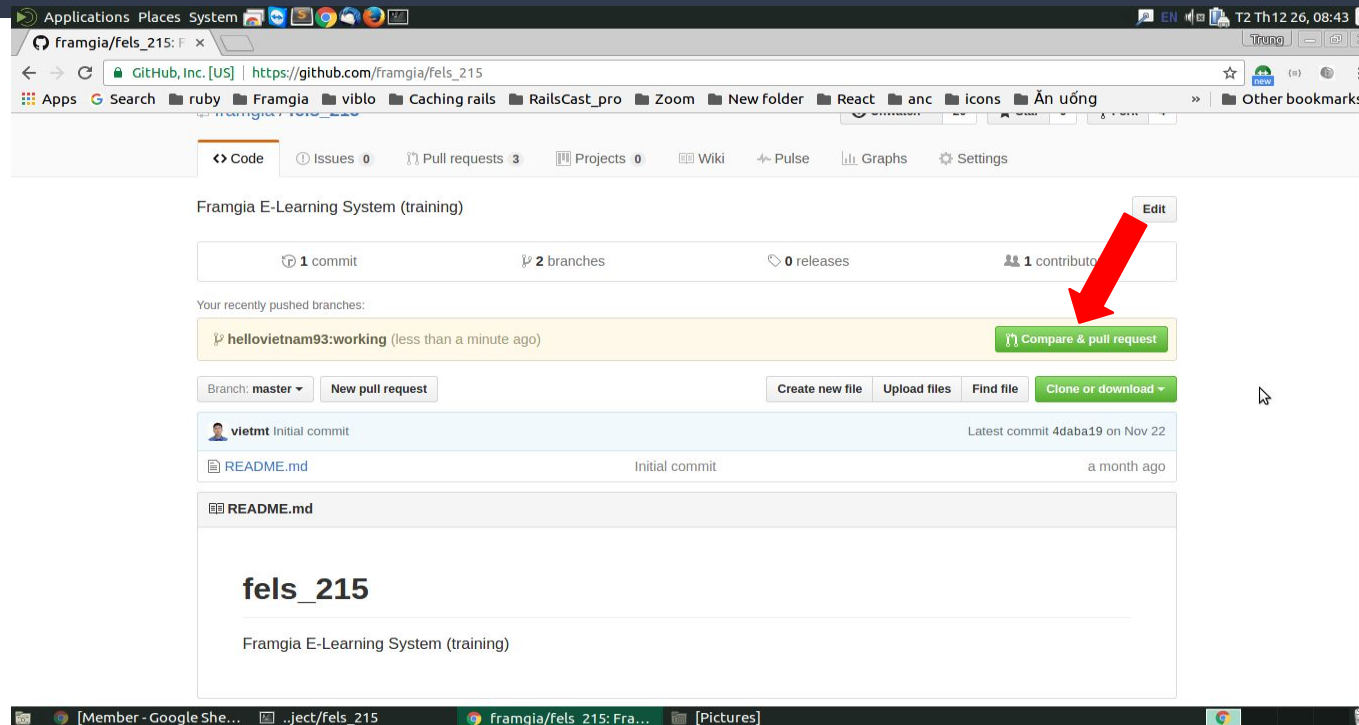
Rule:

1 commit / 1 pull request

< 15 files / 1 pull request

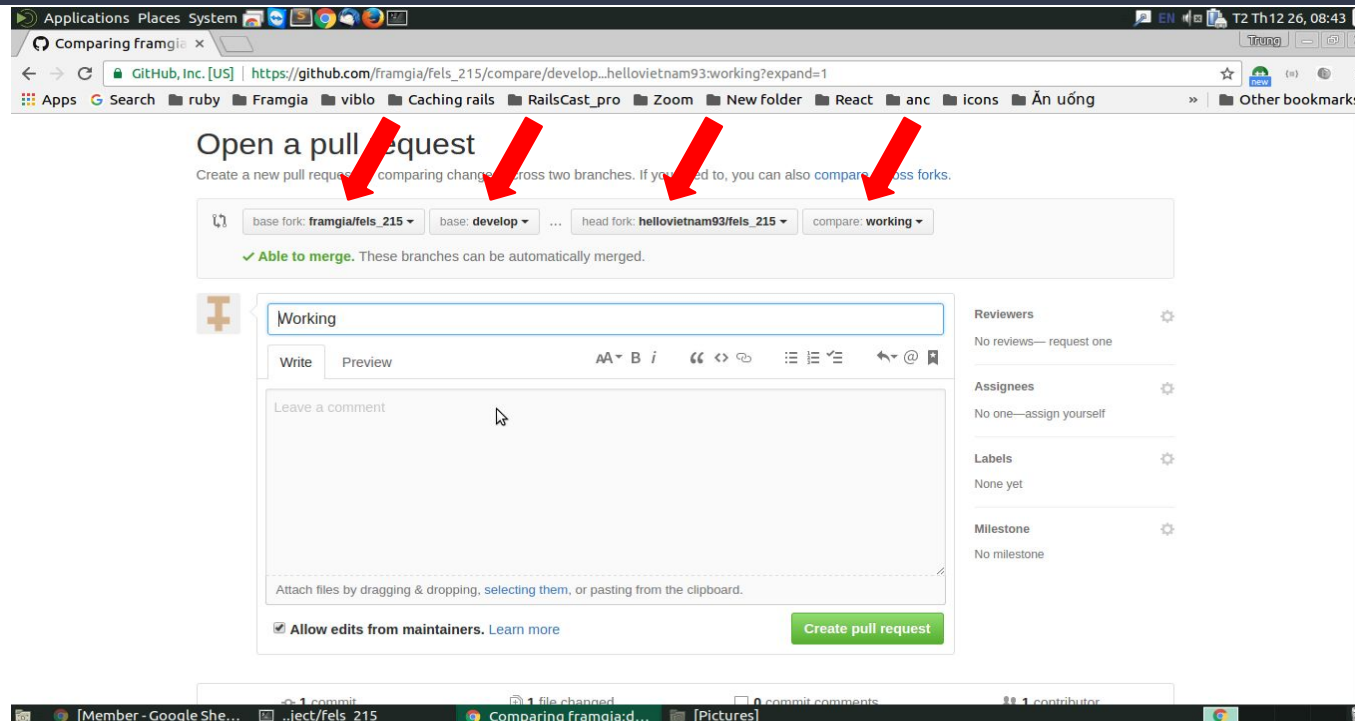


# Git follow – Step : Create pull request

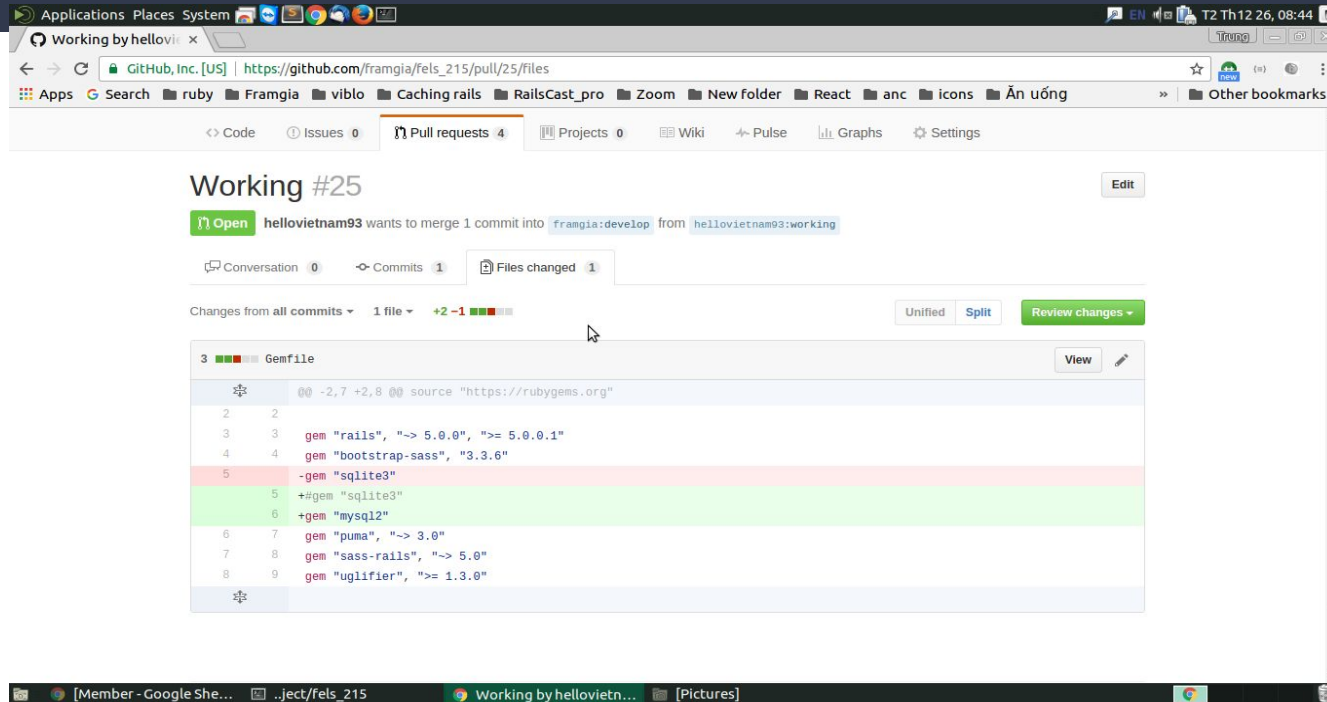




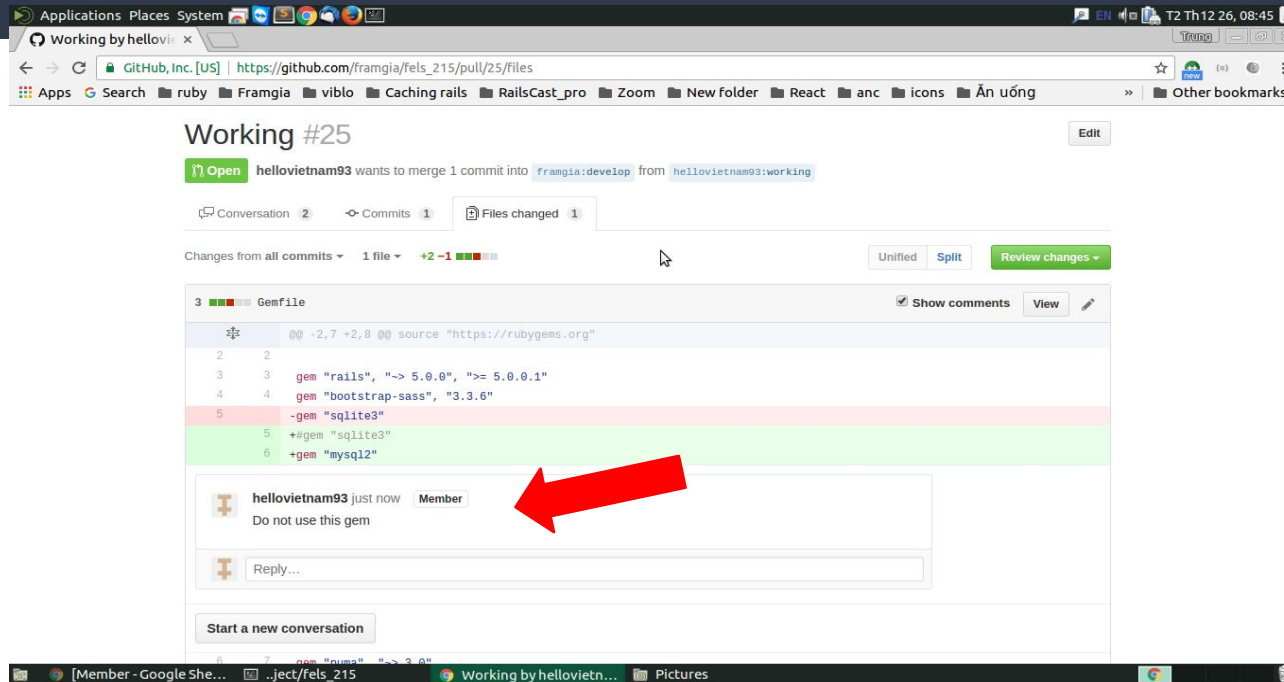
# Git follow – Step : Create pull request



# Git follow – Step : Create pull request



# Git follow – Step : Create pull request



# Git follow – Step : Rebase commit

Rebase cách 1:

Syntax:     \$ git rebase -i [tên\_nhánh]

Sample:     \$ git rebase -i develop

Rebase cách 2:

Syntax:     \$ git rebase HEAD~[số\_commit\_cần\_gộp]

Sample:     \$ git rebase HEAD~2

# Git follow – Step

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:41:29]
→ git add .

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:41:32]
→ git status
On branch working
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   Gemfile

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:41:35]
→ □
```

# Git follow – Step

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:41:35]
→ git commit -m "Working"
[working c4a8ac3] Working
1 file changed, 2 insertions(+), 1 deletion(-)

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [8:42:14]
→ □
```

# Git follow - Step

```
Fd09d66 Working
2927f65 Working
985339f Merge pull request #19 from dieptran00888/activity
cdf1fa8 View activites
3b5bf72 Merge pull request #20 from dieptran00888/flx-interface
d945d61 fix interface
e81aec7 Merge pull request #23 from dieptran00888/filter-words
082588a Merge pull request #21 from dieptran00888/delete-category
ea44214 Merge pull request #22 from dieptran00888/manage-users
11d803f filter words
8d5dad8 Manage users
db38c44 admin delete category
67defab Merge pull request #17 from dieptran00888/flx-create-word-answer
27458fe fix create word answer
3722b1b Merge pull request #15 from annt49/following-users
93272aa follow users
b78ab7a Merge pull request #16 from dieptran00888/do-lesson
df3339c User do lesson
71a2537 Merge pull request #14 from dieptran00888/create-lesson-pull
1fb8bcd User create lesson
384525d Merge pull request #11 from dieptran00888/create-lesson
baec771 Fix i18n
0548721 Merge pull request #13 from annt49/searching-words
a1be1d9 search all word
6205a72 Merge pull request #12 from annt49/searching-categories
b6edcde searching-category
450601e Merge pull request #10 from annt49/updating-users
26cf0b8 updating-users
bbfeace Merge pull request #9 from dieptran00888/flx-create-edit-category
49fd929 Fix create edit category
71c7441 Merge pull request #8 from dieptran00888/create-word-answer
93e9941 Admin reate word and answer
4ff5674 Merge pull request #7 from dieptran00888/feature-create-edit-category
3a00a01 Create and edit category
0dd3b4c Merge pull request #6 from Diemly09/sign-up
0993f7a sign up
969f495 Merge pull request #5 from dieptran00888/login
4ac6cea Login
:
```

# Git follow - Step

```
GNU nano 2.5.3      File: /home/trungnt/working space/project/fels 215/.git/rebase-merge/git-rebase-todo

pick 2927f65 Working
pick fd09d66 Working

# Rebase 985339f..fd09d66 onto 985339f (2 command(s))
#
# Commands:
# p, pick = use commit
# r, reword = use commit, but edit the commit message
# e, edit = use commit, but stop for amending
# s, squash = use commit, but meld into previous commit
# f, fixup = like "squash", but discard this commit's log message
# x, exec = run command (the rest of the line) using shell
# d, drop = remove commit
#
# These lines can be re-ordered; they are executed from top to bottom.
#
# If you remove a line here THAT COMMIT WILL BE LOST.
#
# However, if you remove everything, the rebase will be aborted.
#
# Note that empty commits are commented out

^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify      ^C Cur Pos      ^V Prev Page    ^-_ First Line  ^N Where's Next
^X Exit          ^R Read File    ^A Replace      ^U Uncut Text   ^T To Spell     ^G Go To Line   ^V Next Page    ^_/ Last Line  ^O To Bracket

Read 21 lines
```



# Git follow – Step

```
GNU nano 2.5.3      File: /home/trungnt/working_space/project/fels 215/.git/rebase-merge/git-rebase-todo      Modified
pick d3c9dia Working
$ ae29a7f Working

# Rebase 985339f..ae29a7f onto 985339f (2 command(s))
#
# Commands:
# p, pick = use commit
# r, reword = use commit, but edit the commit message
# e, edit = use commit, but stop for amending
# s, squash = use commit, but meld into previous commit
# f, fixup = like "squash", but discard this commit's log message
# x, exec = run command (the rest of the line) using shell
# d, drop = remove commit
#
# These lines can be re-ordered; they are executed from top to bottom.
#
# If you remove a line here THAT COMMIT WILL BE LOST.
#
# However, if you remove everything, the rebase will be aborted.
#
# Note that empty commits are commented out

^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify      ^C Cur Pos      ^V Prev Page    ^H First Line  ^L Where's Next
^X Exit          ^R Read File    ^M Replace      ^U Uncut Text   ^I To Spell     ^G Go To Line   ^N Next Page    ^- Last Line   ^_ To Bracket
Read 21 lines
Activate Windows
Go to Settings to activate Windows
```

# Git follow – Step

```
GNU nano 2.5.3      File: /home/trungnt/working_space/project/fels 215/.git/COMMIT_EDITMSG
# This is a combination of 2 commits.
# The first commit's message is:
Working
# This is the 2nd commit message:
Working
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# Date:      Mon Dec 26 08:42:14 2016 +0700
#
# interactive rebase in progress; onto 985339f
# Last commands done (2 commands done):
#   pick 2927f65 Working
#   s fd09d66 Working
# No commands remaining.
# You are currently editing a commit while rebasing branch 'working' on '985339f'.
#
# Changes to be committed:
#   modified:   Genfile
#
```

Read 24 lines

^G Get Help	^O Write Out	^W Where Is	^K Cut Text	^J Justify	^C Cur Pos	^V Prev Page	^L First Line	^_ Where To
^X Exit	^R Read File	^A Replace	^U Uncut Text	^T To Spell	^G Go To Line	^N Next Page	^B Last Line	^] To Bracket

Where To Window

# Git follow – Step

```
a683cde Working
985339f Merge pull request #19 from dieptran00888/activity
cdf1fa8 View activites
3b5bf72 Merge pull request #20 from dieptran00888/flx-interface
d945d61 fix interface
(END)
```

# Git follow – Step : Rebase commit

Commit:

Syntax:     `$ git commit --amend`

Sample:     `$ git commit --amend`

Rebase:

Syntax:     `$ git rebase --amend`

Sample:     `$ git rebase --amend`

# Git follow – Step

```
GNU nano 2.5.3      File: /home/trungnt/working_space/project/fels_215/.git/COMMIT_EDITMSG      Modified
Working
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# Date:      Mon Dec 26 08:42:14 2016 +0700
#
# On branch working
# Your branch is up-to-date with 'origin/working'.
#
# Changes to be committed:
#   modified:   Genfile
#

```

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [9:59:26]
→ git add .

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [9:59:37]
→ git commit --amend
[working 0597733] Working
Date: Mon Dec 26 08:42:14 2016 +0700
1 file changed, 1 insertion(+)

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working [10:00:03]
→
```

# Git follow – Step

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:53:39]
→ git push origin working
To git@github.com:hellovietnam93/fels_215.git
 ! [rejected]        working -> working (non-fast-forward)
error: failed to push some refs to 'git@github.com:hellovietnam93/fels_215.git'
hint: Updates were rejected because the tip of your current branch is behind
hint: its remote counterpart. Integrate the remote changes (e.g.
hint: 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:53:51]
→ █
```

# Git follow – Step

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:51:54]
→ git push origin working -f
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 310 bytes | 0 bytes/s, done.
Total 3 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To git@github.com:hellovietnam93/fels_215.git
+ c4a8ac3...a683cde working -> working (forced update)

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:52:16]
→ □
```

# Git follow – Step

Working #25 Edit

Open hellovietnam93 wants to merge 1 commit into `frangia:develop` from `hellovietnam93:working`

Conversation 2 Commits 1 Files changed 1

Changes from all commits ▾ 1 file ▾ +1 -0 Review changes ▾

1 View Edit Gemfile

@@ -3,6 +3,7 @@ source "https://rubygems.org"

3	3	gem "rails", "~> 5.0.0", ">= 5.0.0.1"
4	4	gem "bootstrap-sass", "3.3.6"
5	5	gem "sqlite3"
6	7	+gem "mysql2"
6	7	gem "puma", "~> 3.0"
7	8	gem "sass-rails", "~> 5.0"
8	9	gem "uglifier", ">= 1.3.0"



# Other commands

Lệnh stash: <https://git-scm.com/book/en/v2/Git-Tools-Stashing-and-Cleaning>

- Lưu lại các thay đổi vào bộ nhớ tạm
- Cơ chế giống như lưu vào trong stack: “first in last out”
- Chỉ có thể lưu được các file bị thay đổi hoặc bị xóa
- Không thể lưu được các file thêm mới

Lệnh thực hiện:

```
$ git stash save
```

Hoặc

```
Saved working directory and index state WIP on working: f0407dd Working  
HEAD is now at f0407dd Working
```

```
$ git stash
```

# Other commands

Lấy code đã được lưu ra:

```
$ git stash pop
```

Ví dụ:

```
On branch working
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Gemfile

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (d56131d70b7ba4b5b8ca6cfbb11484a90a230eec)
```

# Other commands

Checkout file:

```
$ git checkout .
```

Hoặc

```
$ git checkout -- filename filename...
```

*Checkout tất cả các file thay đổi bao gồm: file bị xóa và sửa*

*Không checkout được các file thêm mới*

# Other commands

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ✖ [8:58:15]
→ git status
On branch working
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   GentFile

no changes added to commit (use "git add" and/or "git commit -a")

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ✖ [8:58:34]
→ git checkout .

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:58:38]
→ git status
On branch working
nothing to commit, working directory clean

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [8:58:42]
→ □
```

# Other commands

Checkout file ra khỏi commit:

```
$ git checkout HEAD_COMMIT file_name
```

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [9:02:21]
→ git checkout 985339f Gemfile

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ✖ [9:02:31]
→ git status
On branch working
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    modified:   Gemfile

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ✖ [9:02:35]
→ □
```

```
f0407dd Working
985339f Merge pull request #19 from dieptran00888/activity
cdf1fa8 View activites
3b5bf72 Merge pull request #20 from dieptran00888/fix-interface
d945d61 fix interface
(END) □
```

# Other commands

## Soft reset

*Unstage tất cả các file của commit hiện tại so với commit muốn reset về*

```
$ git reset HEAD_COMMIT
```

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [9:00:28]
→ git reset 985339f
Unstaged changes after reset:
M   Gemfile

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ✖ [9:00:32]
→ git status
On branch working
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

       modified:   Gemfile

no changes added to commit (use "git add" and/or "git commit -a")

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ✖ [9:00:35]
→
```

# Other commands

## Hard reset

*Xóa toàn bộ các thay đổi từ commit hiện tại so với commit muốn reset về*

```
$ git reset --hard HEAD_COMMIT
```

```
# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [9:01:07]
→ git reset --hard 985339f
HEAD is now at 985339f Merge pull request #19 from dieptran00888/activity

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [9:01:18]
→ git status
On branch working
nothing to commit, working directory clean

# trungnt at trungnt in ~/working_space/project/fels_215 on git:working ● [9:01:25]
→ □
```

# Other commands

Kiểm tra sự thay đổi ở local:

```
$ git diff
```

```
diff --git a/Gemfile b/Gemfile
index e953e42..247027d 100644
--- a/Gemfile
+++ b/Gemfile
@@ -2,7 +2,7 @@ source "https://rubygems.org"

gem "rails", "~> 5.0.0", ">= 5.0.0.1"
gem "bootstrap-sass", "3.3.6"
-#gem "sqlite3"
+#gem "sqlite3"
gem "puma", "~> 3.0"
gem "sass-rails", "~> 5.0"
gem "uglifier", ">= 1.3.0"
(END)
```



# Other commands

## Interactive Staging

```
$ git add -i
```

<https://git-scm.com/book/en/v2/Git-Tools-Interactive-Staging>

# Other commands

## Rewriting History

```
$ git commit --amend
```

<https://git-scm.com/book/en/v2/Git-Tools-Rewriting-History>

# Other commands

## Revision Selection

```
$ git log
```

```
$ git show
```

```
$ git reflog
```

<https://git-scm.com/book/en/v2/Git-Tools-Revision-Selection>

# Tip

Fetch pull request:

Add đoạn config sau vào file “.git/config”:

```
[remote "pullrequest"]  
url = remote_url  
fetch = +refs/pull/*/head:refs/remotes/pullrequest/pr/*
```

Dùng lệnh sau để kéo pull request về:

```
$ git fetch pull_request
```

# Reference

Book:

<http://git-scm.com/book>

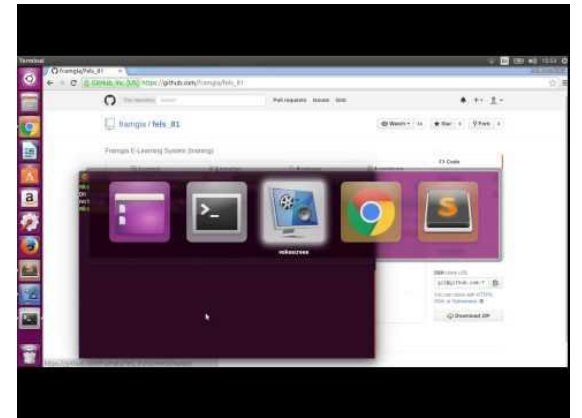
[http://backlogtool.com/git-guide/vn/intro/intro1\\_1.html](http://backlogtool.com/git-guide/vn/intro/intro1_1.html)

Tool:

<https://learngitbranching.js.org/>

Video:

<https://www.youtube.com/watch?v=OBCnmcgx4CE>



# Reference

Blog:

<https://itviec.com/blog/git-la-gi/>

<https://viblo.asia/p/mot-vai-cau-hoi-ve-git-GrLZDAgOlko>

<https://viblo.asia/p/git-va-mot-so-dieu-can-biet-1VgZv9qOKAw>

Một số vấn đề khi sử dụng Git:

<https://viblo.asia/p/19-bi-kip-ban-co-the-dung-khi-pham-sai-lam-voi-git-dWrvwdmPRw38>