

# Lab 01

## How to Survive & Introduction to Git

Software Studio  
DataLab, CS, NTHU

# Notice

- These slides will focus on how to submit you code by using Git command line
- You can also use other Git GUI tool or built-in Git tool in other IDE/editor

# Teaching Assistants



Yu-Hsuan Chen

陳佑軒



Sheng-Ya Chiu

邱聖雅



Zhao-Jie Chen

陳昭潔

# How to Find Us?

- Office Hour (TAs)
  - Tue. 10:10am-12:00pm at Delta 729
- Email
  - Yu-Hsuan Chen : [yhch@datalab.cs.nthu.edu.tw](mailto:yhch@datalab.cs.nthu.edu.tw)
  - Sheng-Ya Chiu : [sych@datalab.cs.nthu.edu.tw](mailto:sych@datalab.cs.nthu.edu.tw)
  - Zhao-Jie Chen: [zjchen@datalab.cs.nthu.edu.tw](mailto:zjchen@datalab.cs.nthu.edu.tw)
- Online Forum
  - eeclass



# If I have Question?

- Always Google first !
  - Learn how to google is important.
- If you try your best but still can't catch it.
  - Feel free to ask us on eecllass or office hour.



# Outline

- General Rule
- Introduction to Git
  - Version control
  - Git Basics
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References

# Outline

- General Rule
- Introduction to Git
  - Version control
  - Git Basics
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References

# The Policy of Labs

- **All labs need to be submitted to GitLab.**
- Late submission will **not** be accepted.
- Plagiarism will not be tolerated.
  - If we find you copy someone's code, you will get **0 point** for that lab.
- Grading
  - Submission before lab ends gets 100% score
  - Submission before **11:59pm** gets 60% score

# Grading Example

- 4 problems, 25% each
- Solved 4 during the lab
  - 100
- Solved 3 during the lab, 1 before 11:59pm
  - $75 + 25 * 0.6 = 90$
- Solved 4 after the lab, before 11:59pm
  - $100 * 0.6 = 60$

# Team Up

- 3~6 people each team
  - 3 people is accepted if you can do as well as others.
- Please register your team here before **3/7 23:59**
  - Register form : [Teaming](#)
  - After that day we will match the rest student.

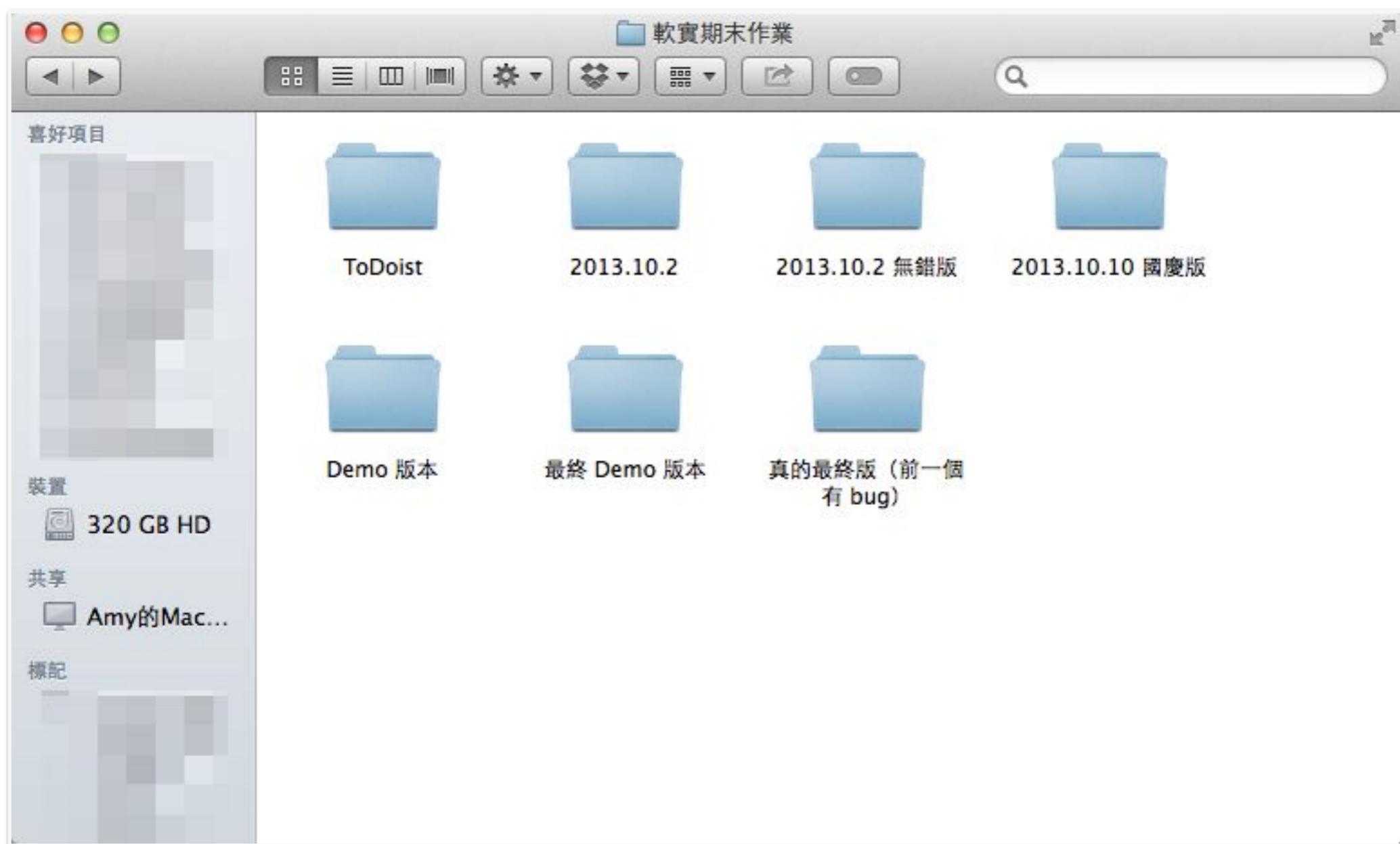
# Outline

- General Rule
- Introduction to Git
  - Version control
  - Git Basics
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References

# Why use version control?

We want to track what we did and when we did it.

# Students' VCS



# How to work with others?



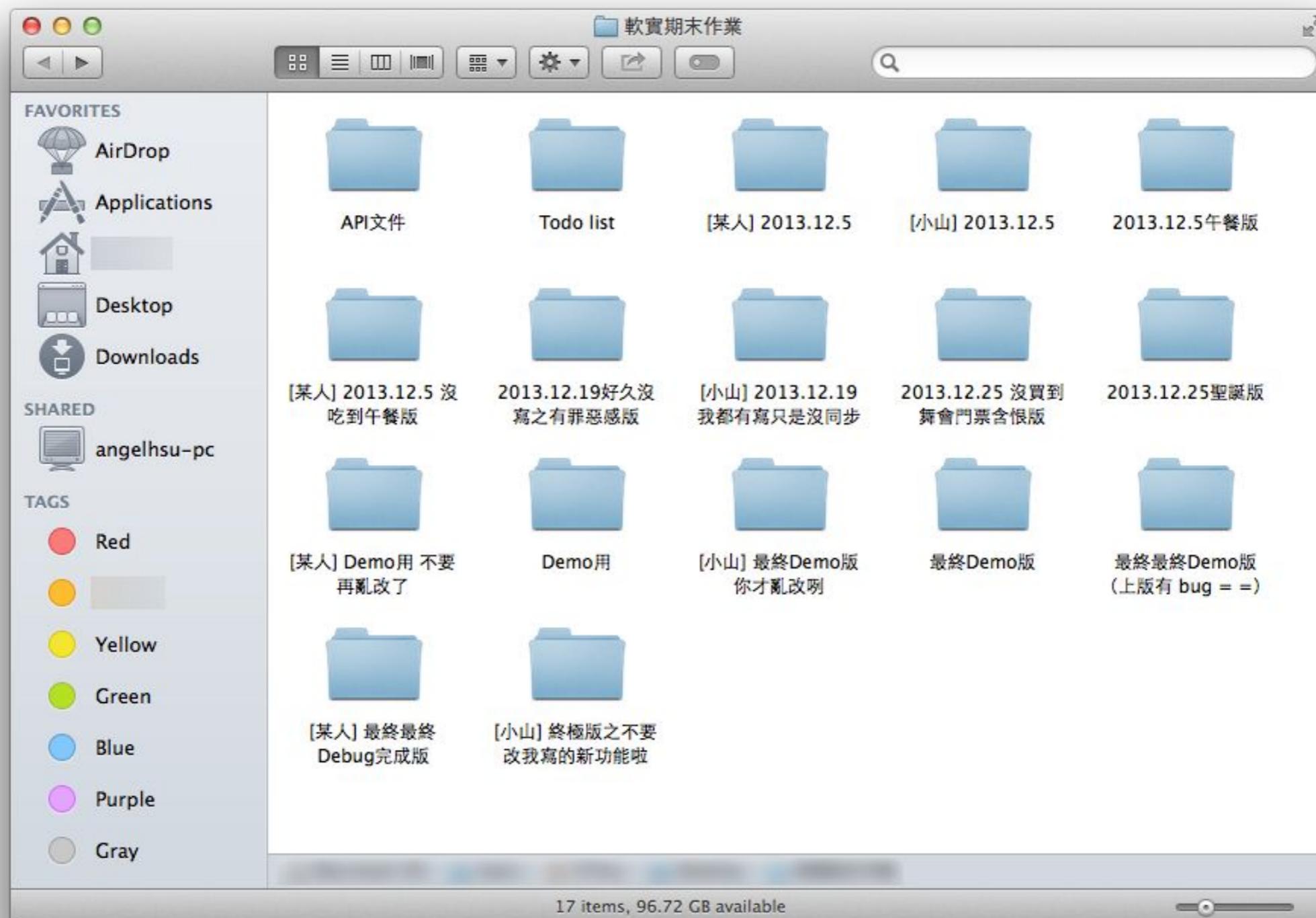
?



Dropbox

?

# Dropbox VCS in Reality



# Why use VCS?

- Managing your projects - tracking your files and modifications.
- Synchronization between modifications made by different developers.
- Revision history is still very helpful even if you work alone.

# Outline

- General Rule
- Introduction to Git
  - Version control
  - **Git Basics**
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References

# Git



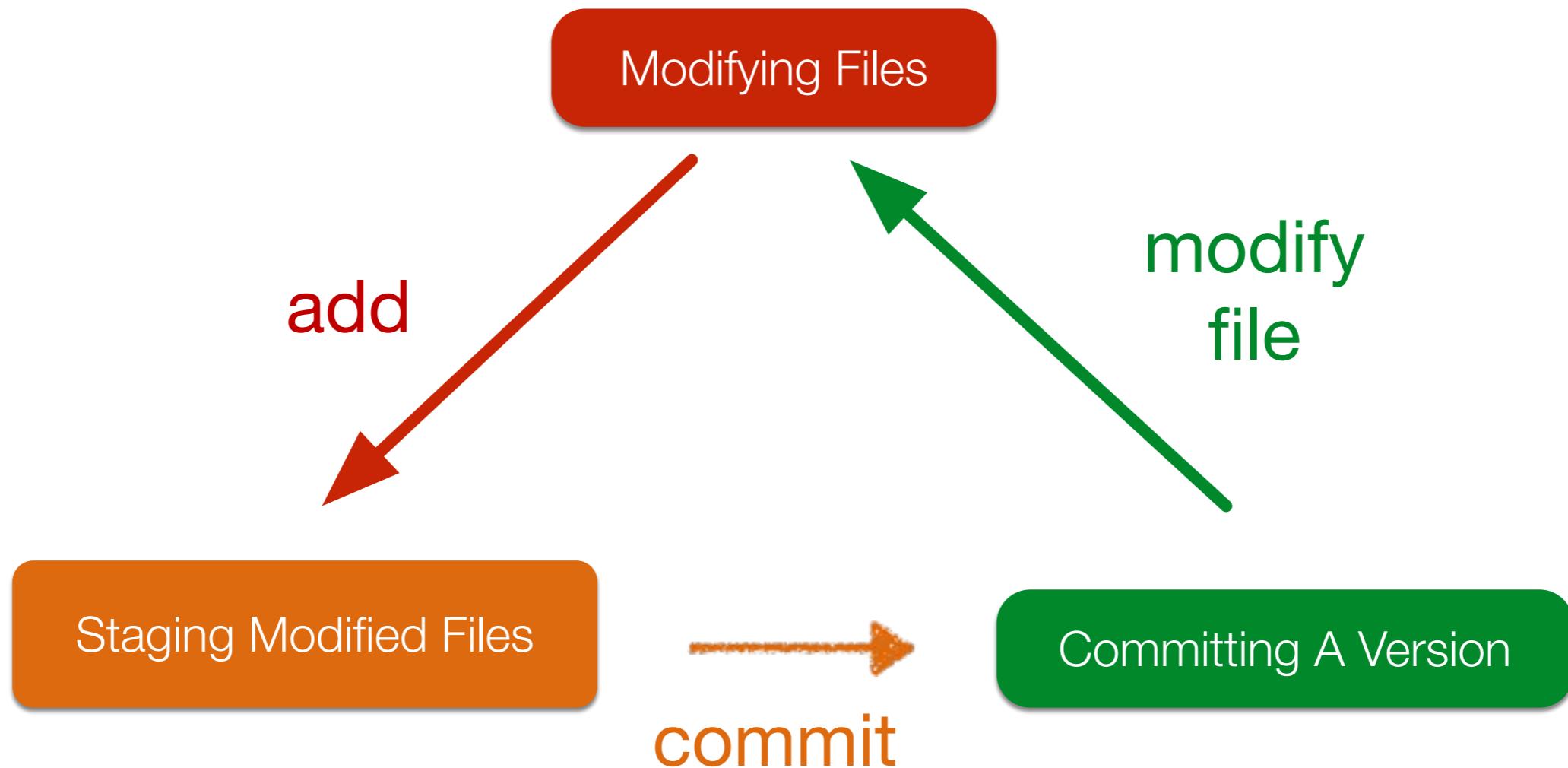
# Git

- Git is a popular version control system which is
  - Fast
  - Easy to use
  - Distributed
- A git repository is a mini database that tracks your files.

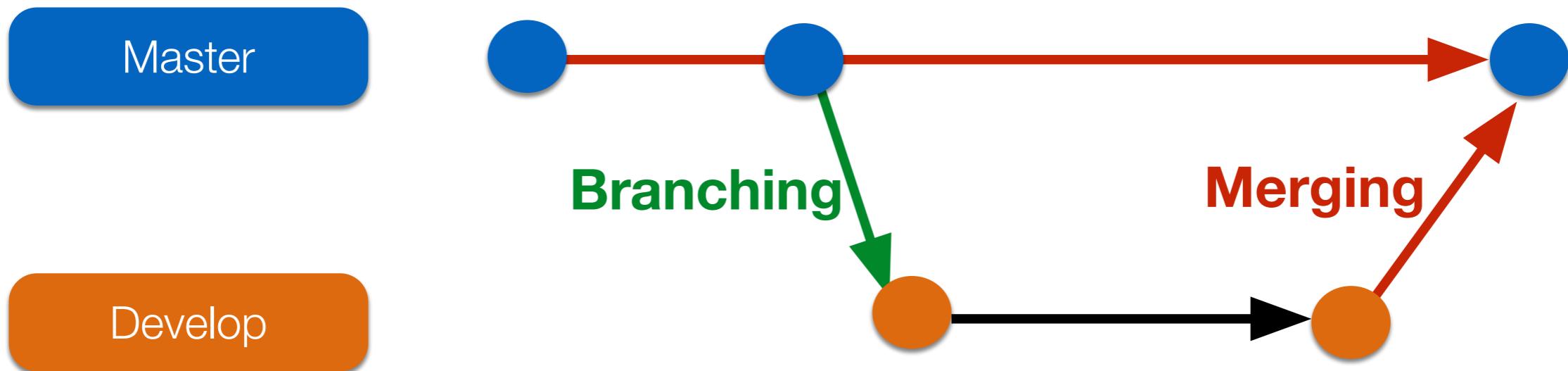
# Git Workflow (1/2)

- With a local repository in your computer, you'll need following operations to make git track your work:
  1. Create/modify files
  2. Let git monitor the files by *adding* them to staging files.
  3. *Commit* your changes to and git will create snapshots (versions) of the files for you.

# Git Workflow (2/2)



# Git Branch



# Outline

- General Rule
- Introduction to Git
  - Version control
  - Git Basics
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References

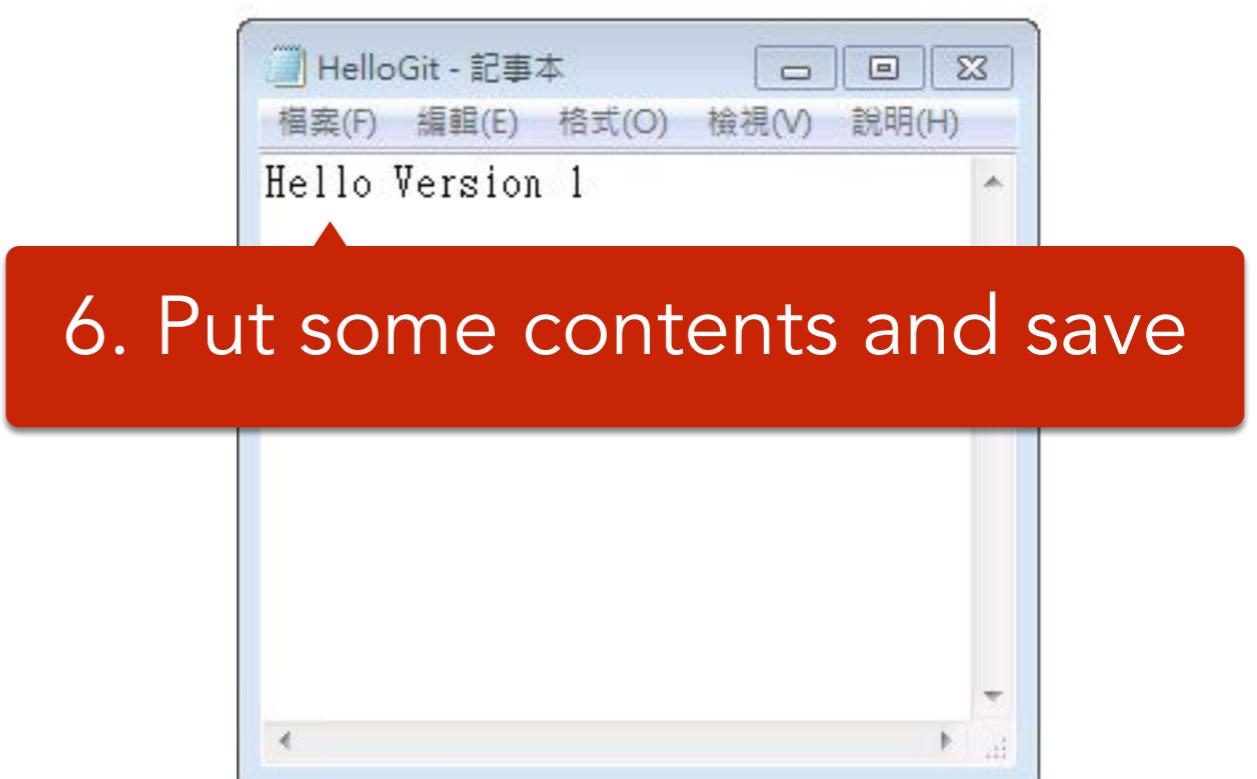
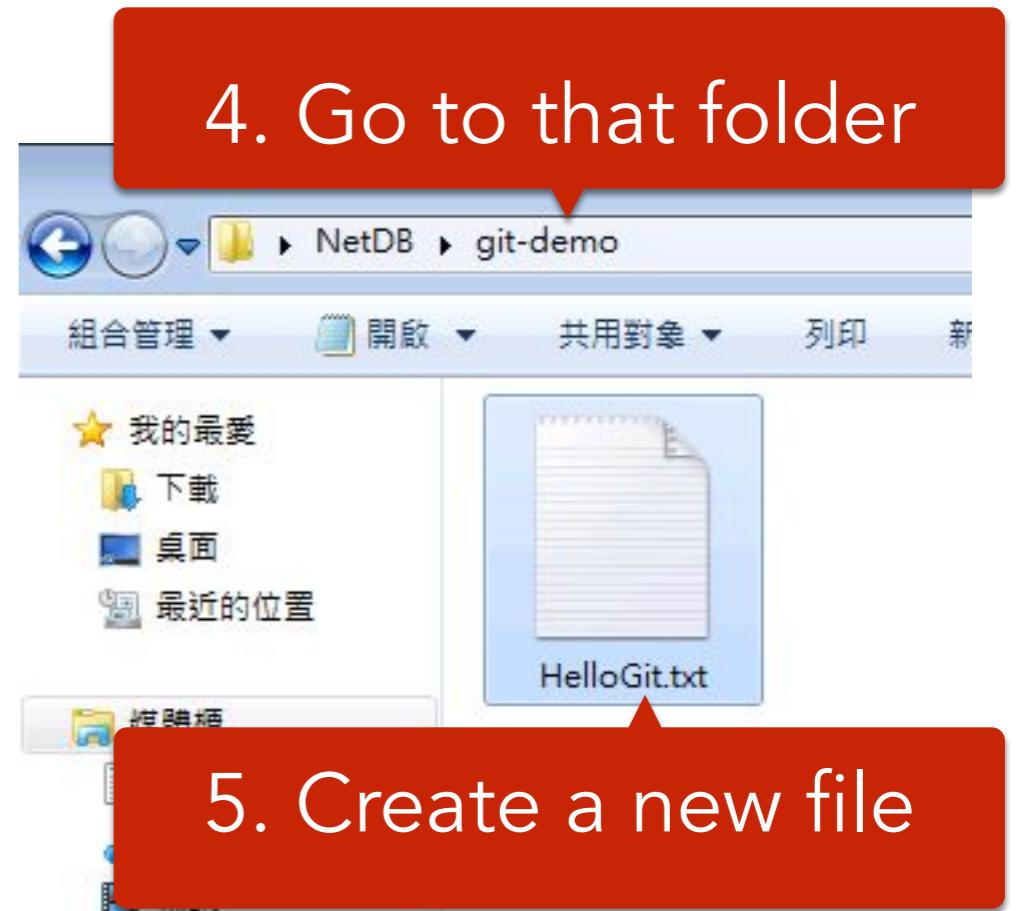
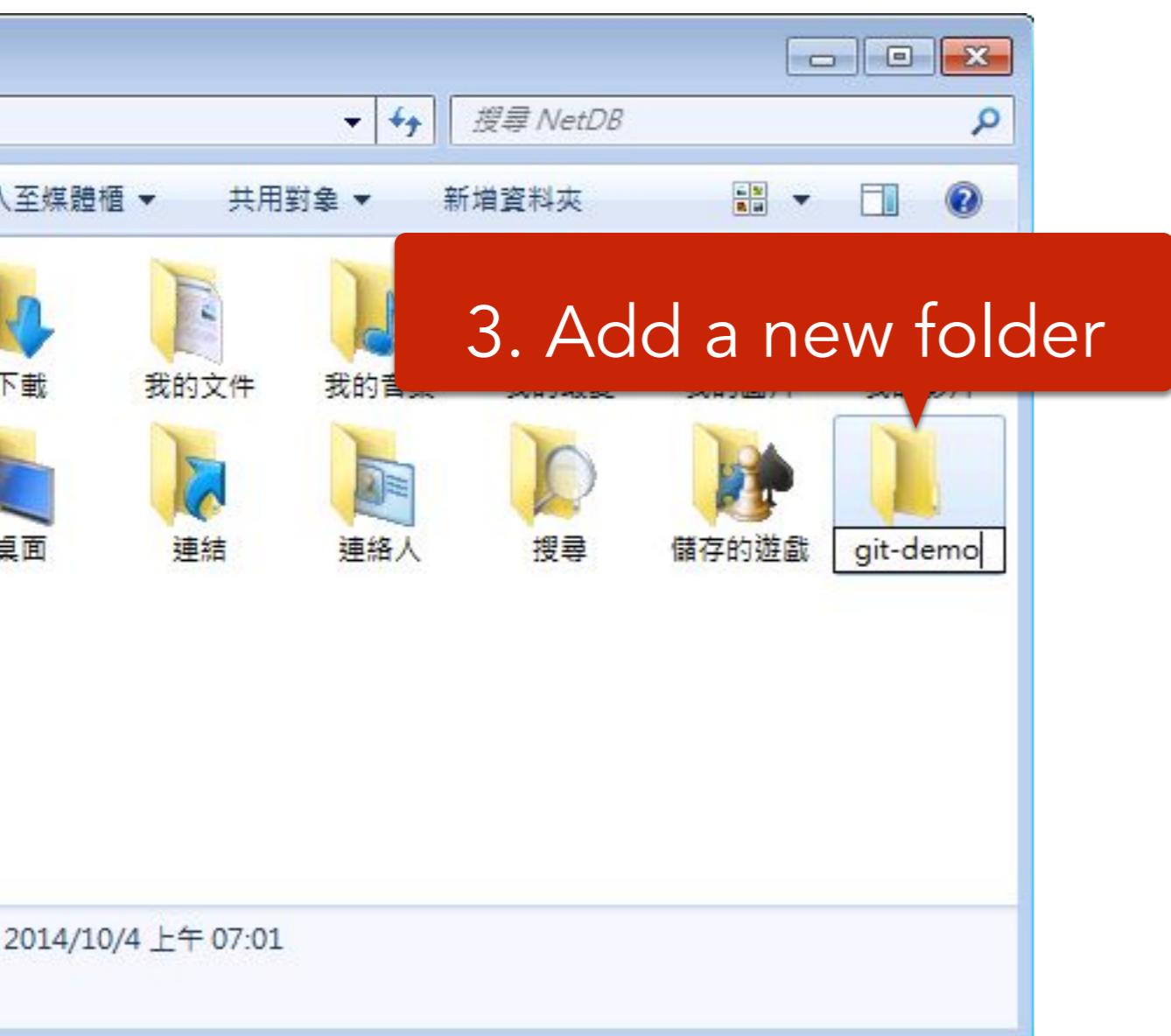
# Be Professional

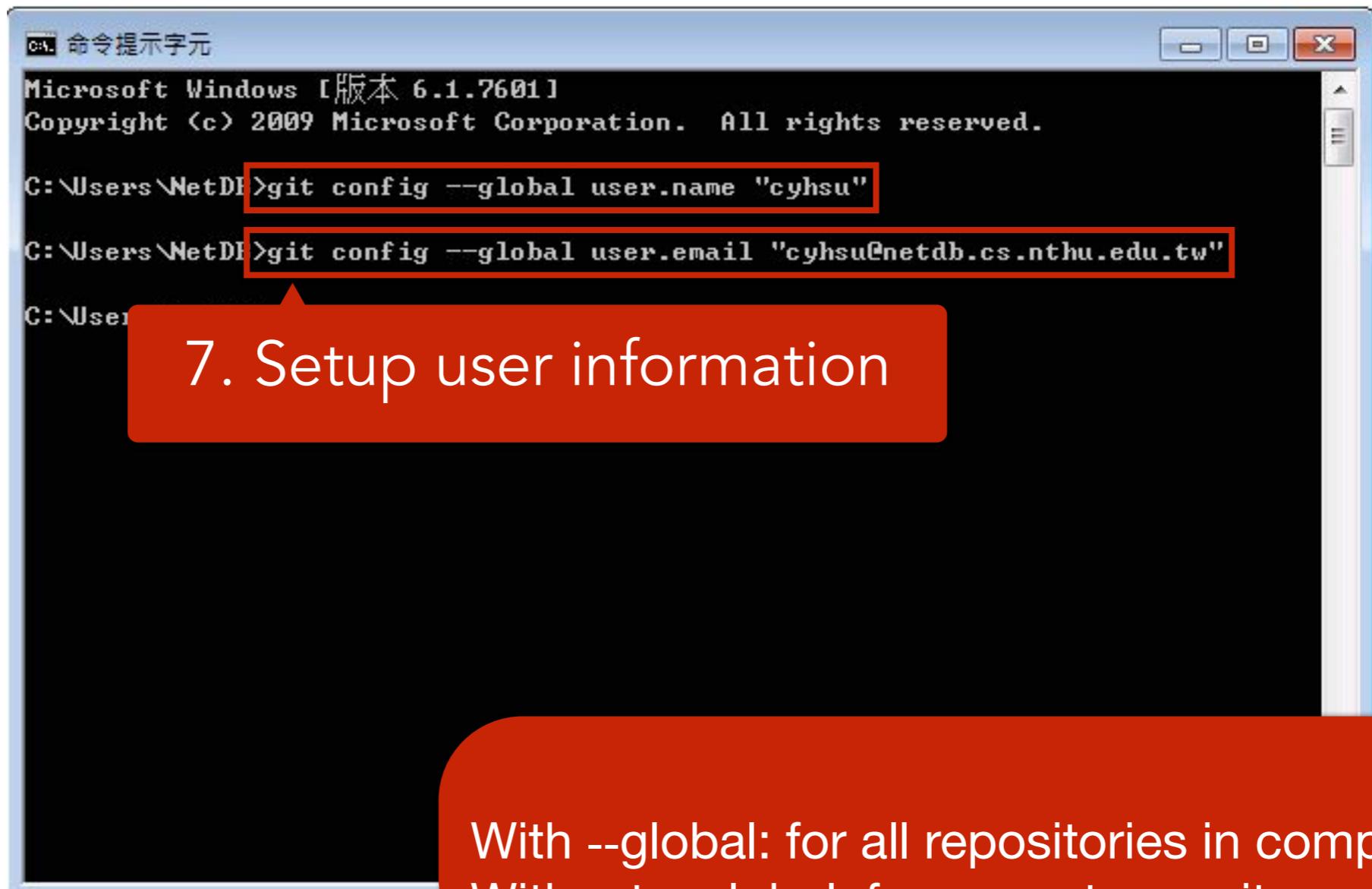


# Basic Git Commands

- **git init**
  - Initialize a repository at current directory.
- **git add [file\_name]**
  - Add files to git repository and let git track them.
- **git commit -m "commit messages"**
  - Save the changes to the git repository and create snapshots of the files.
- **git checkout [version]**
  - Go to a specific version.







```
命令提示字元  
Microsoft Windows [版本 6.1.7601]  
Copyright < c > 2009 Microsoft Corporation. All rights reserved.  
  
C:\Users\NetDB>git config --global user.name "cyhsu"  
C:\Users\NetDB>git config --global user.email "cyhsu@netdb.cs.nthu.edu.tw"  
C:\Users\NetDB>
```

## 7. Setup user information

With --global: for all repositories in computer  
Without --global: for current repository

```
$ git config --global user.name "name"  
$ git config --global user.email "email"
```

命令提示字元  
Microsoft Windows [版本 6.1.7601]  
Copyright (c) 2009 Microsoft Corporation. All rights reserved.  
C:\Users\NetDB>whoami  
'cyhsu'  
C:\Users\NetDB>hostname  
"cyhsu@netdb.cs.nthu.edu.tw"  
C:\Users\NetDB>cd git-demo  
C:\Users\NetDB\git-demo>dir  
磁碟區 C 中的磁碟是 WIN7  
磁碟區序號: 187B-C5C9  
C:\Users\NetDB\git-demo 的目錄  
2014/10/04 上午 02:12 <DIR>  
..  
15 HelloGit.txt  
15 位元組  
6,944 位元組可用  
C:\Users\NetDB\git-demo>git init  
Initialized empty Git repository in C:/Users/NetDB/git-demo/.git/  
C:\Users\NetDB\git-demo>

8. Go to "git-demo"

9. Show the files in "git-demo"

10. Initialize a Git repository

```
$ cd git-demo # go to git-demo directory  
$ dir # list the files  
$ git init # initialize a repository
```

```
命令提示字元  
C:\Users\NetDB>cd git-demo  
  
C:\Users\NetDB\git-demo>dir  
 磁碟區 C 中的磁碟是 WIN7  
 磁碟區序號: 187B-C5C9  
  
C:\Users\NetDB\git-demo 的目錄  
  
2014/10/04 上午 07:17 <DIR> .  
2014/10/04 上午 07:17 <DIR> ..  
2014/10/04 上午 07:16 1 個檔案 15 HelloGit.txt  
15 位元組  
  
C:\Users\NetDB>git add HelloGit.txt  
  
C:\Users\NetDB\git-demo>git commit -m "version 1"  
[master (root-commit) b302d9c] version 1  
 1 file changed, 1 insertion(+)  
 create mode 100644 HelloGit.txt  
  
C:\Users\NetDB\git-demo>
```

11. Add HelloGit.txt to staging files

12. Commit your changes

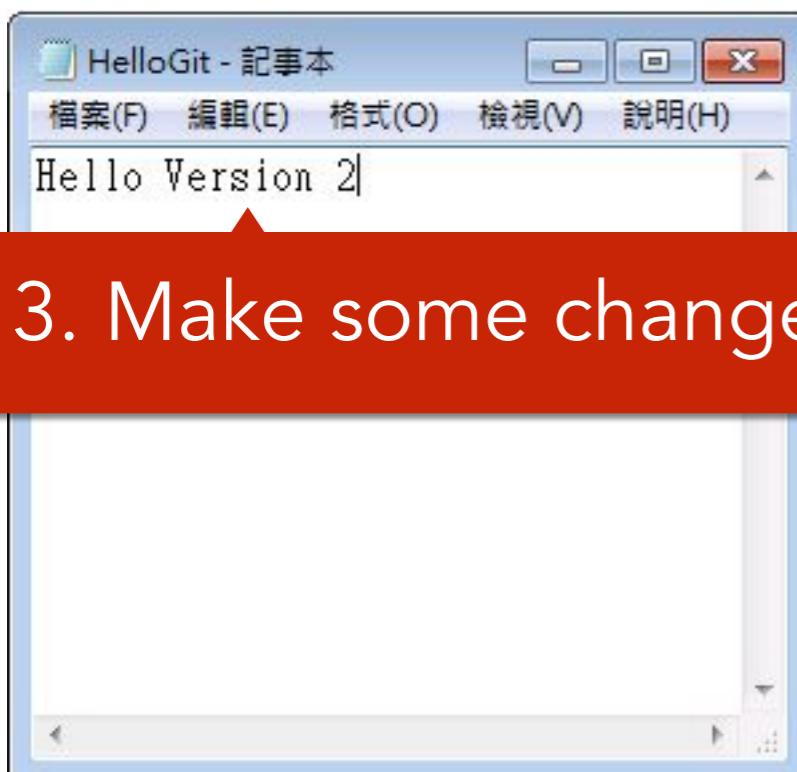
```
# Add HelloGit.txt to staging files  
$ git add HelloGit.txt
```

```
# Commit the changes to the repository  
# where "version 1" is the commit message  
$ git commit -m "version 1"
```

14. Add it and commit again

```
C:\Users\NetDB\git-demo>git add HelloGit.txt  
C:\Users\NetDB\git-demo>git commit -m "version 2"  
[master e134c84] version 2  
 1 file changed, 1 insertion(+), 1 deletion(-)
```

13. Make some changes and save



## 15. View your versions

Version  
ID

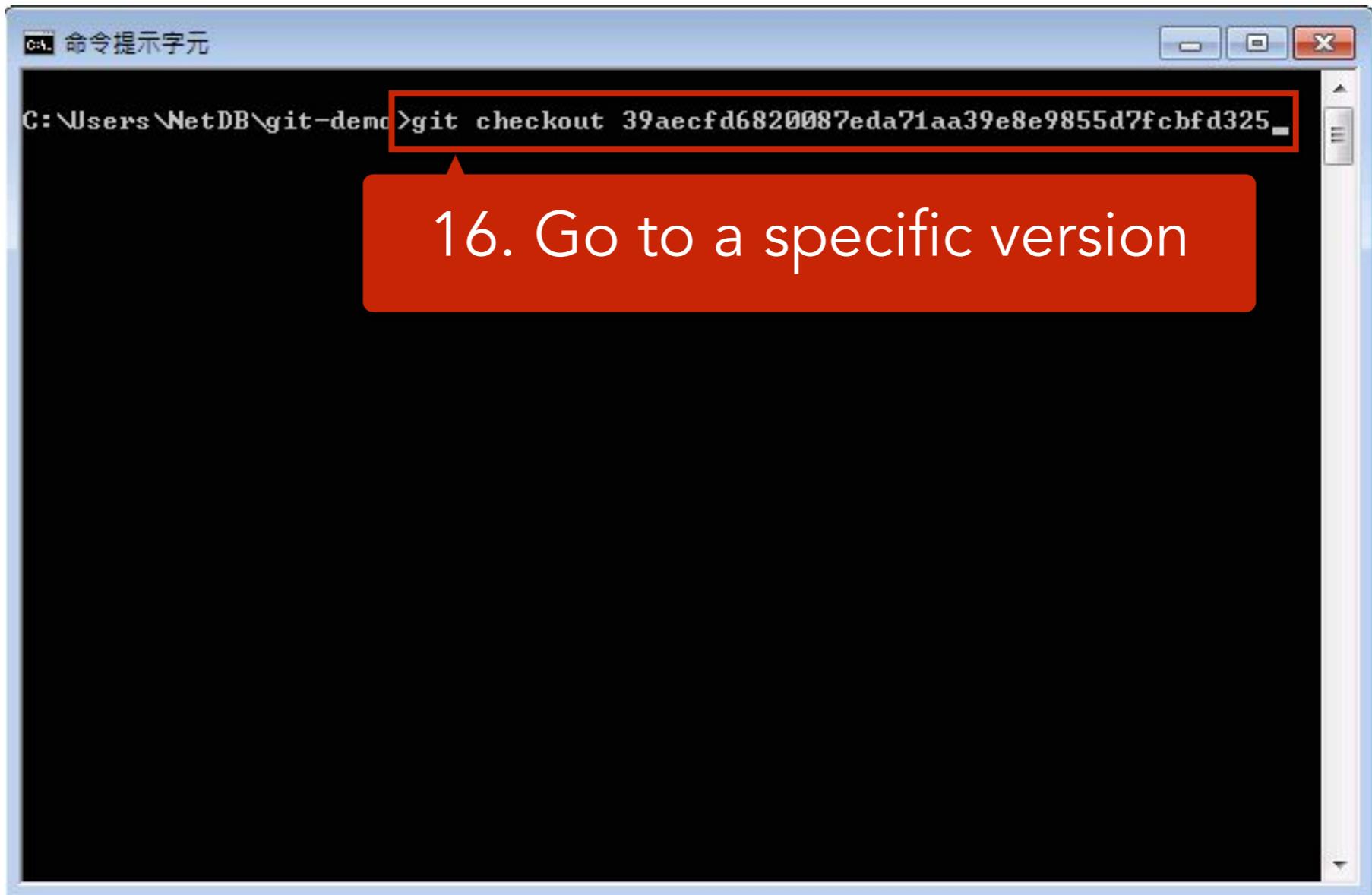
```
C:\Users\NetDB\git-demo>git log
commit e134c845df593f1451c4e9e6c874ddef6df42a76
Author: cyhsu <cyhsu@netdb.cs.nthu.edu.tw>
Date:   Sat Oct 4 08:09:55 2014 +0800

    version 2

commit 39aecfd6820087eda71aa39e8e9855d7fcfd325
Author: cyhsu <cyhsu@netdb.cs.nthu.edu.tw>
Date:   Sat Oct 4 08:09:16 2014 +0800

    version 1
```

```
# Show the versions you've created so far
$ git log
```

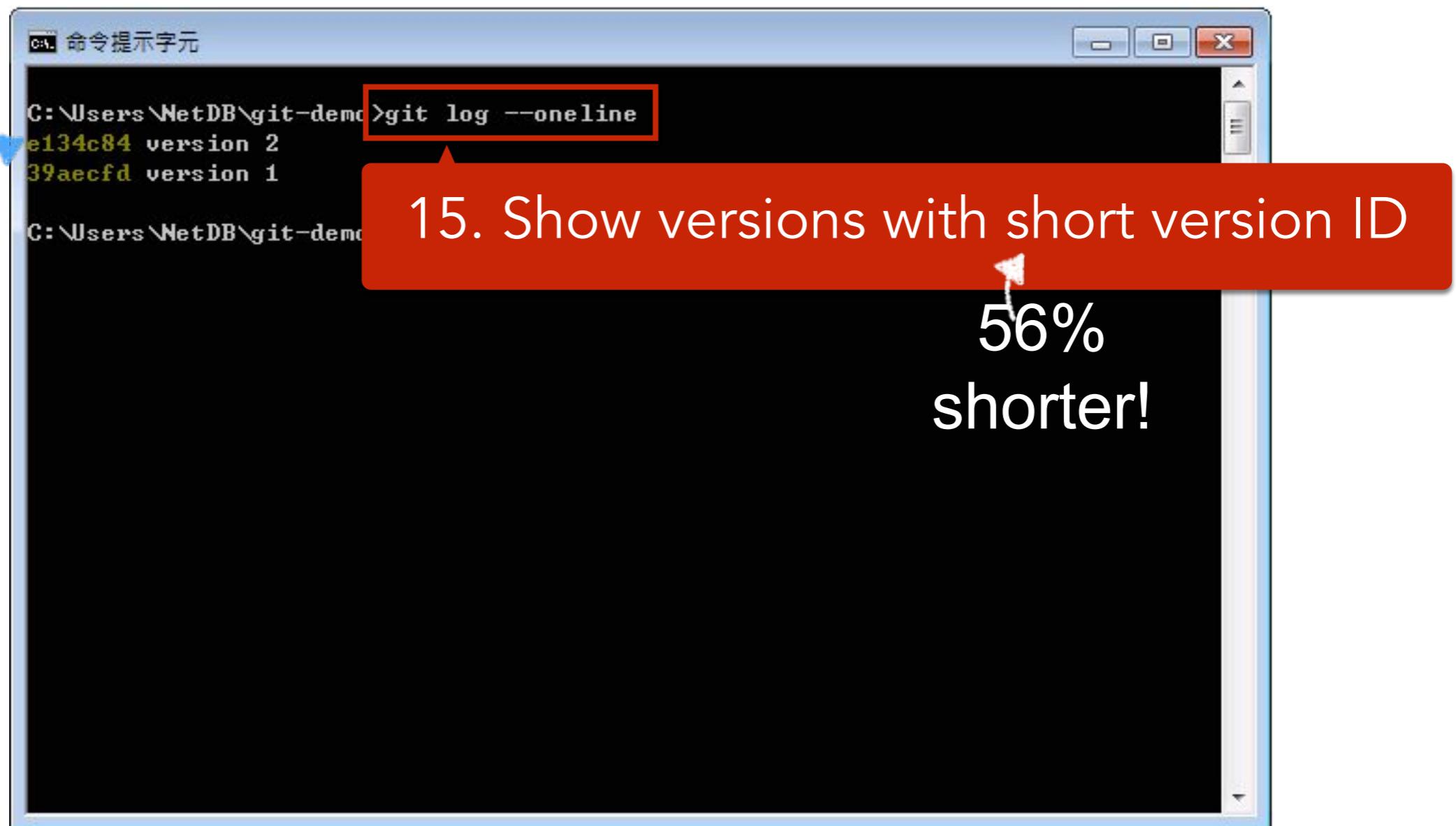


```
# Go to a specific version  
$ git checkout {version_id}
```

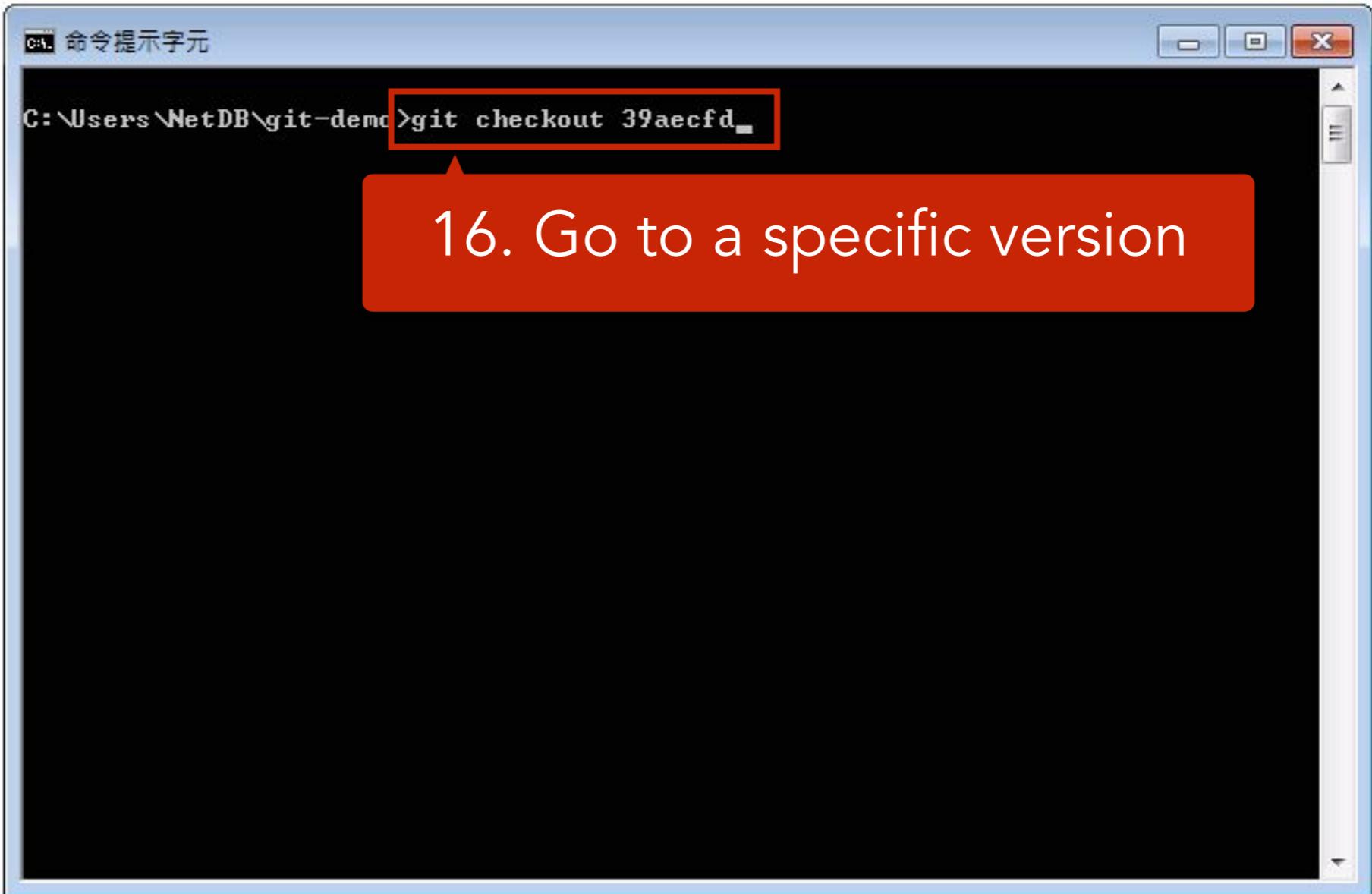
LIFE IS  
TOO SHORT  
TO TYPE  
THAT  
VERSION ID,

which is 40 characters long...

Version  
ID

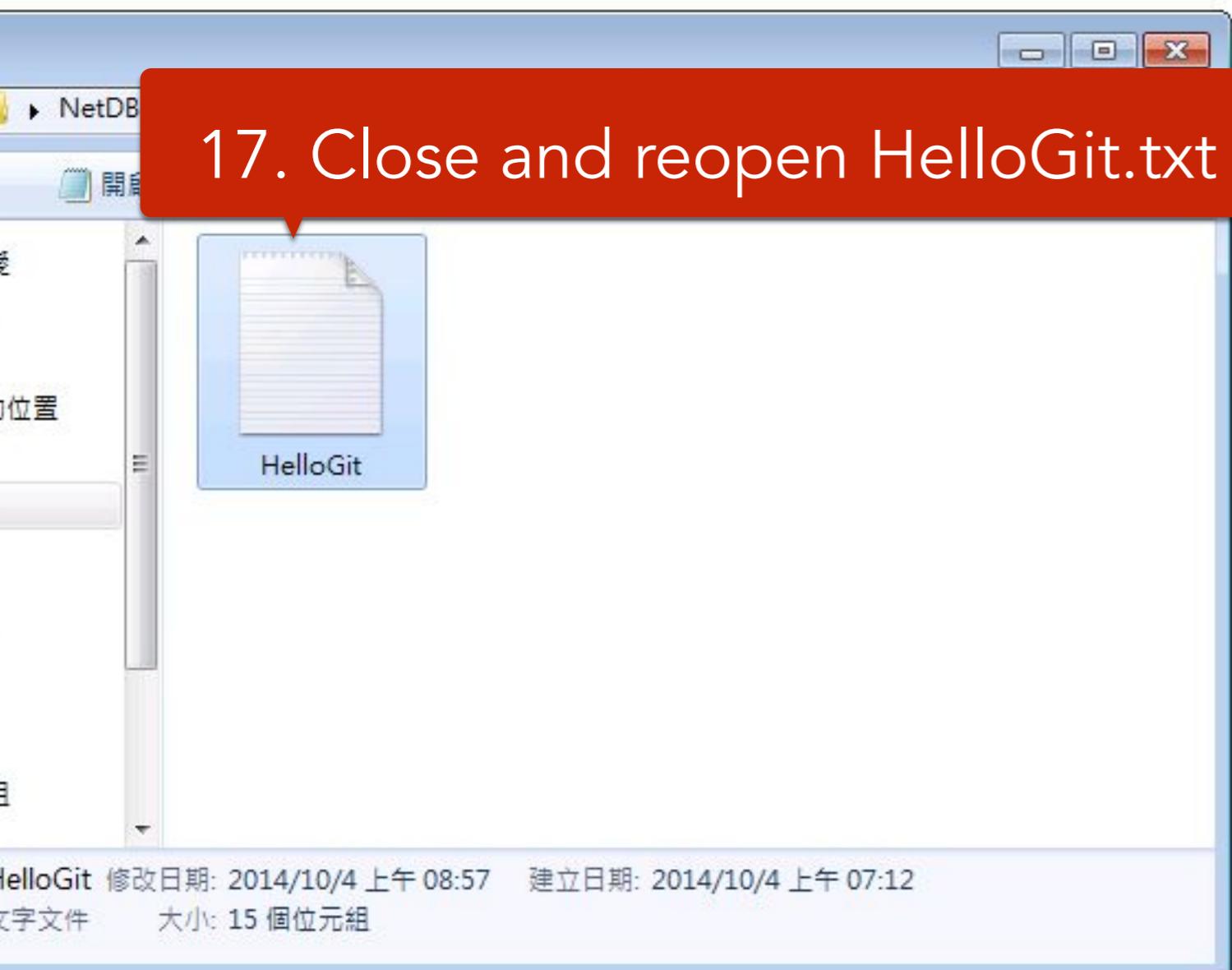


```
# Show versions with short version id
$ git log --oneline
```



```
# Go to a specific version.  
# In fact, you only need to type  
# the first 5 characters.  
$ git checkout {short_version_id}
```

17. Close and reopen HelloGit.txt



18. Back to the version 1!

# Try yourself (1 / 2)

- Branching steps
  - Creating a new branch

```
git branch [branch name]
```

- Checking out the branch

```
git checkout [branch name]
```

# Try yourself (2/2)

- Merging steps
  - Checking out a branch to merge

```
git checkout [branch 1 name]
```

- Merging another branch

```
git merge [branch 2 name]
```

# Today's exercise (1/2)

- Install Git command line tool in your computer.
  - Follow appendix A.
  - Follow above steps.

# Outline

- General Rule
- Introduction to Git
  - Version control
  - Git Basics
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References

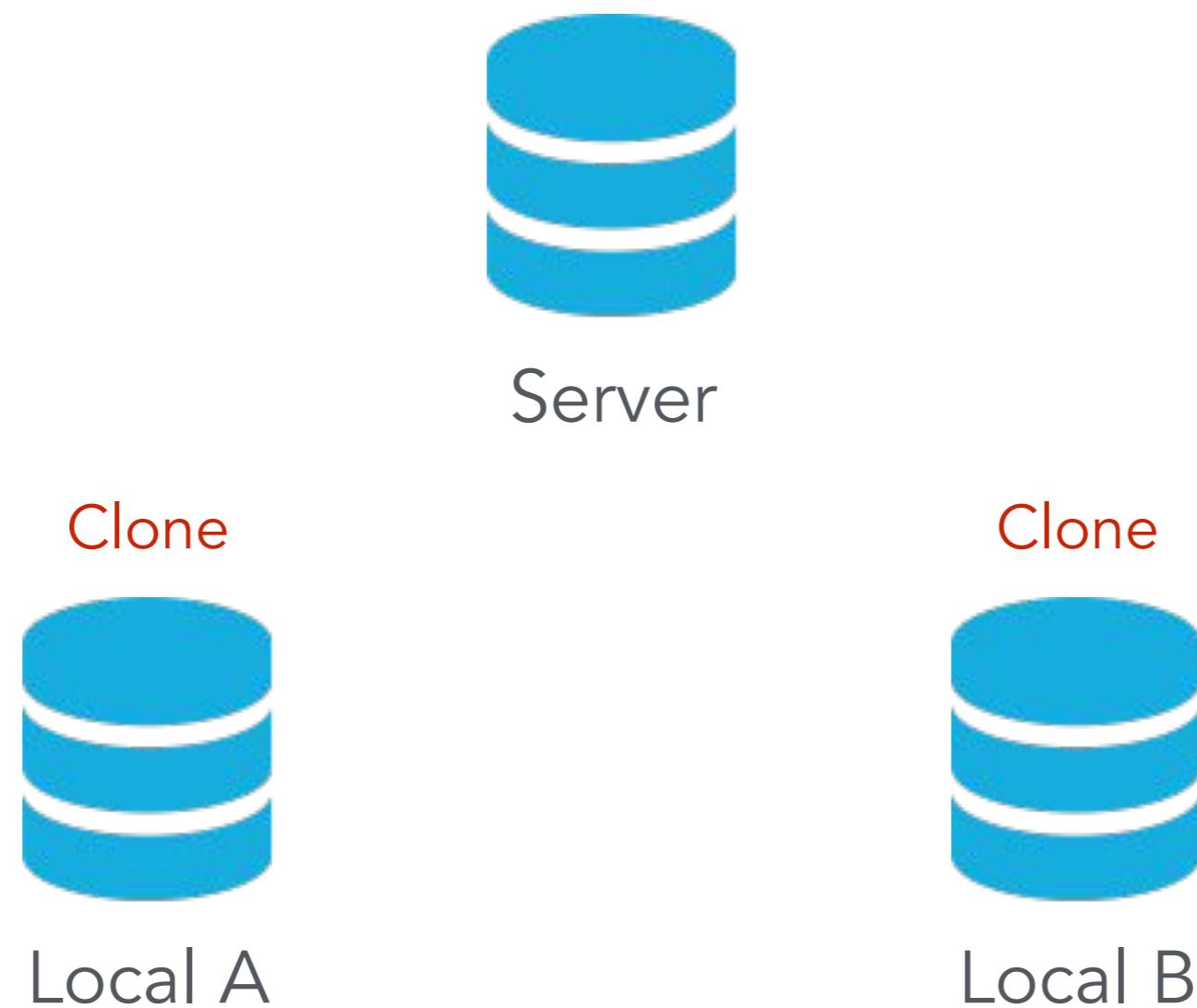
# Collaboration

- To work with others using git, you'll need a server that store the repository.
- Git is distributed, which means
  - Everyone can store a copy of the repository downloaded from the server to their computer and do their jobs independently.

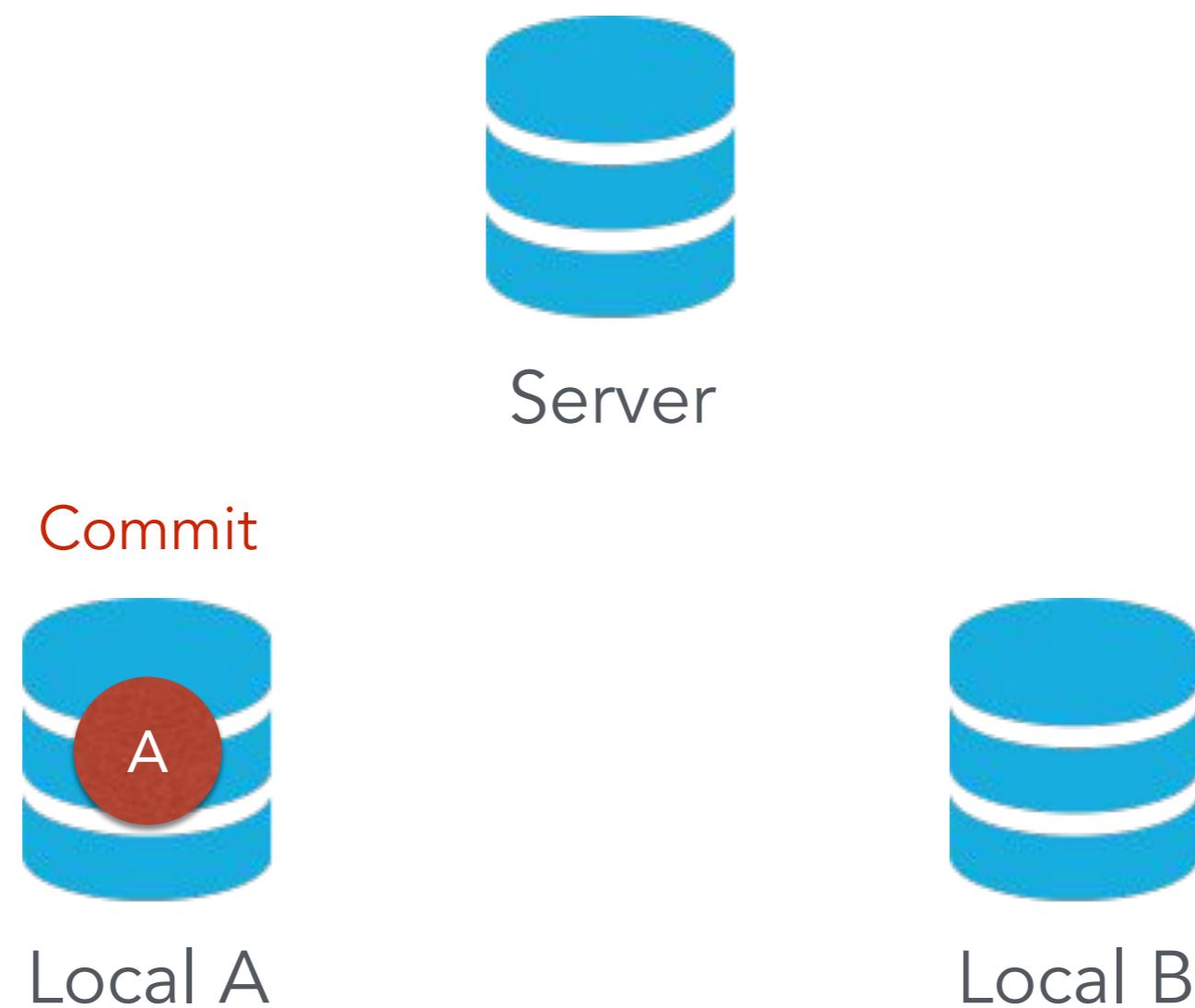
# Collaboration Workflows (1/2)

1. If you don't have the project, *clone* (download) the repository from the server.
2. Do your work and commit the changes at local. Once done, *push* (upload) the repository to the server.
3. If someone else modified the project, you can *pull* (sync) the repository to get the updated project.
4. Repeat 2 and 3.

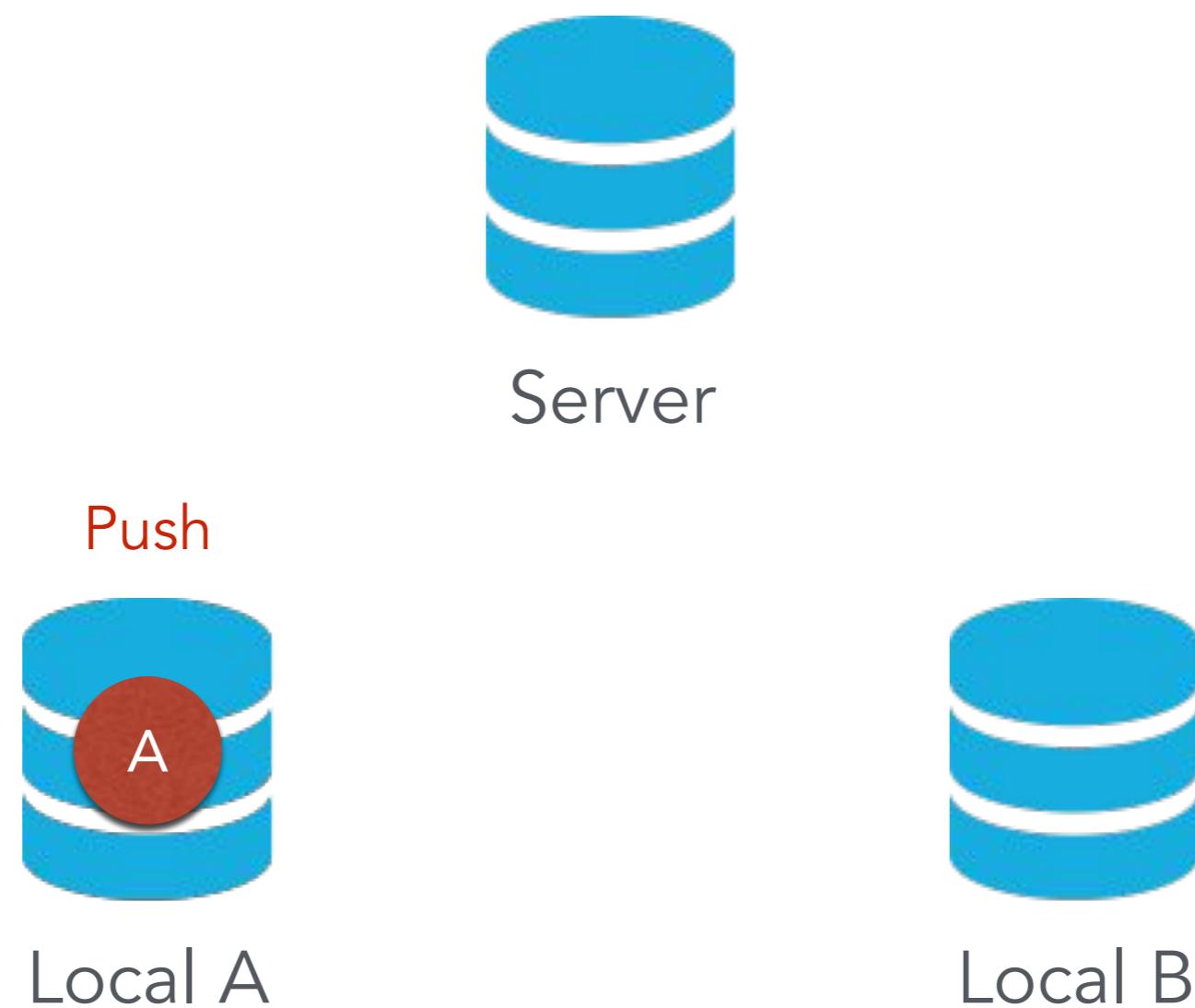
# Collaboration Workflows (2/2)



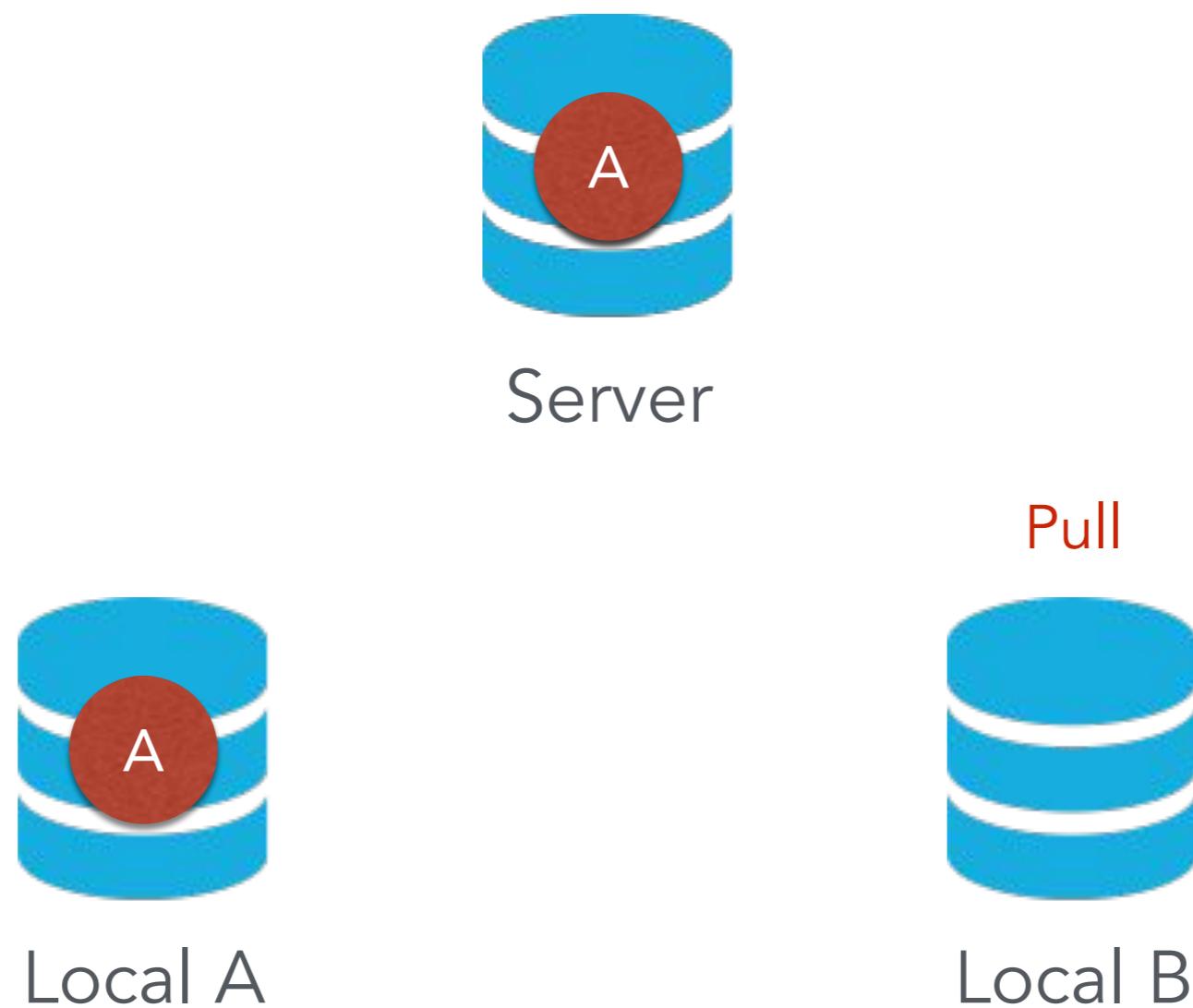
# Collaboration Workflows (2/2)



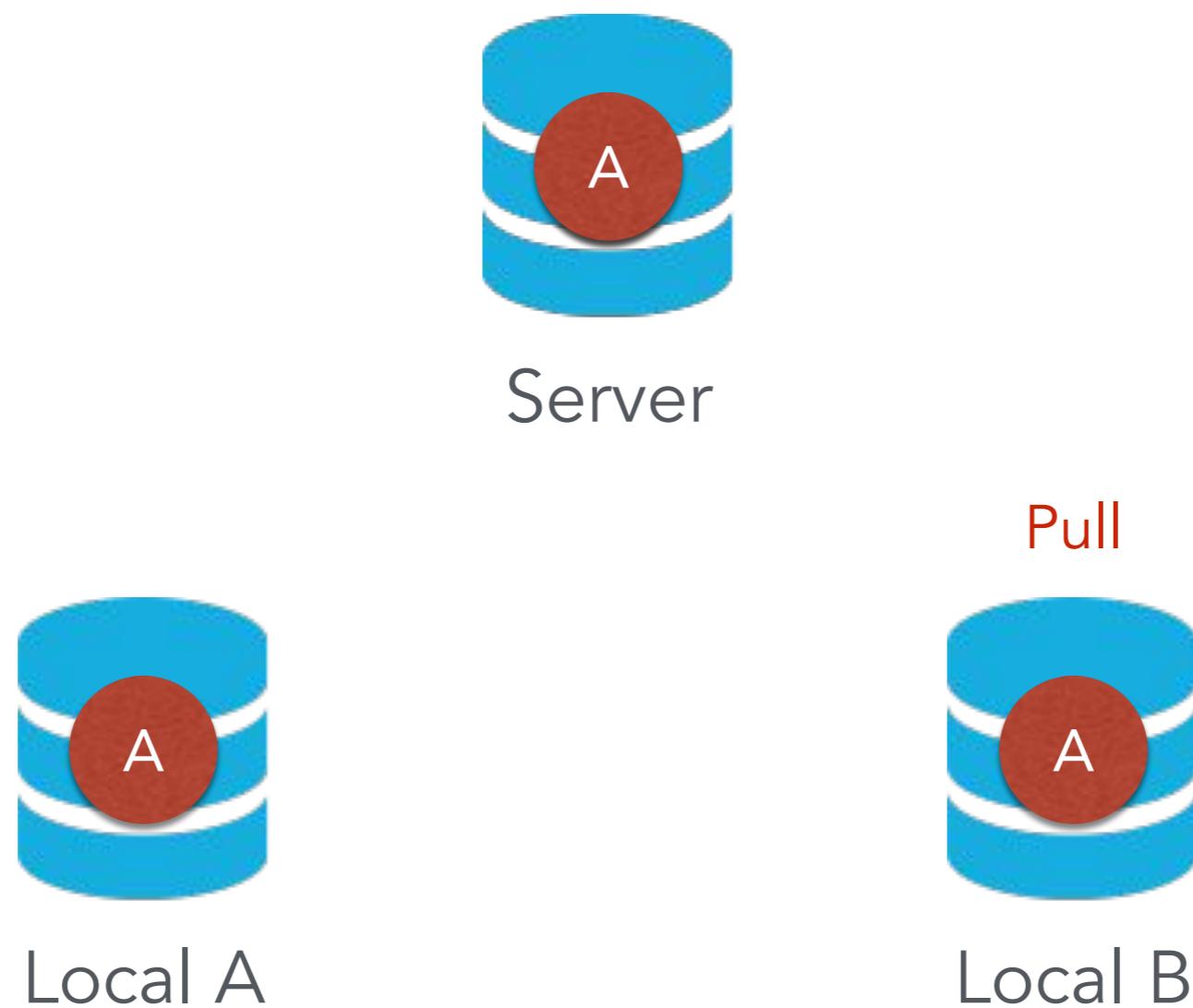
# Collaboration Workflows (2/2)



# Collaboration Workflows (2/2)



# Collaboration Workflows (2/2)



# Why Authentication Failed?

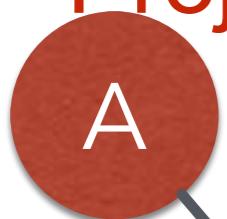
# Collaboration Workflow

- If you tried to clone the code template from a server and want to push the modified file.
  - You will get authentication failed.
  - It's because it was a project of others, which means you are not able to save the changes back to the server.
- So, how can I copy a project from others on a open source platform like Github?

Introducing  
**Fork**



Original  
Project



Forked  
Project



Forked from Red

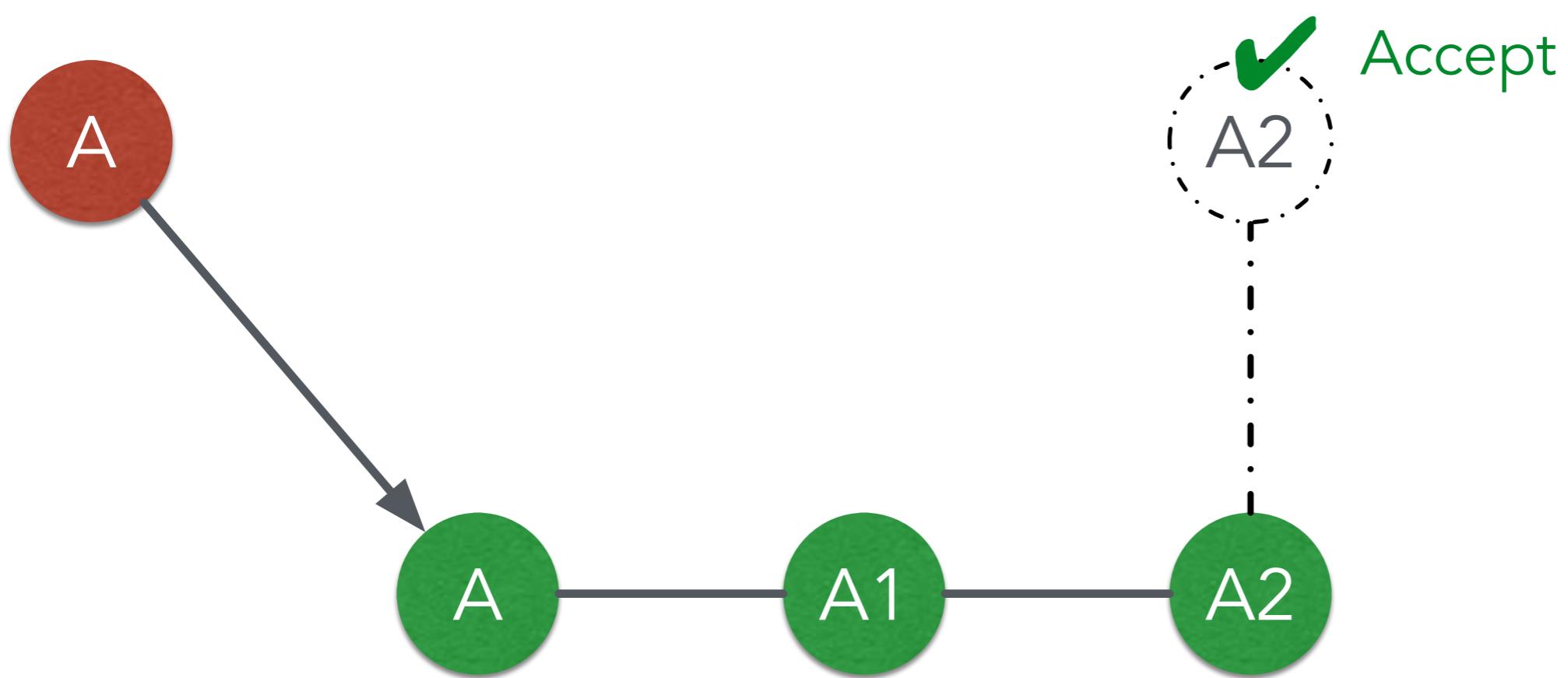


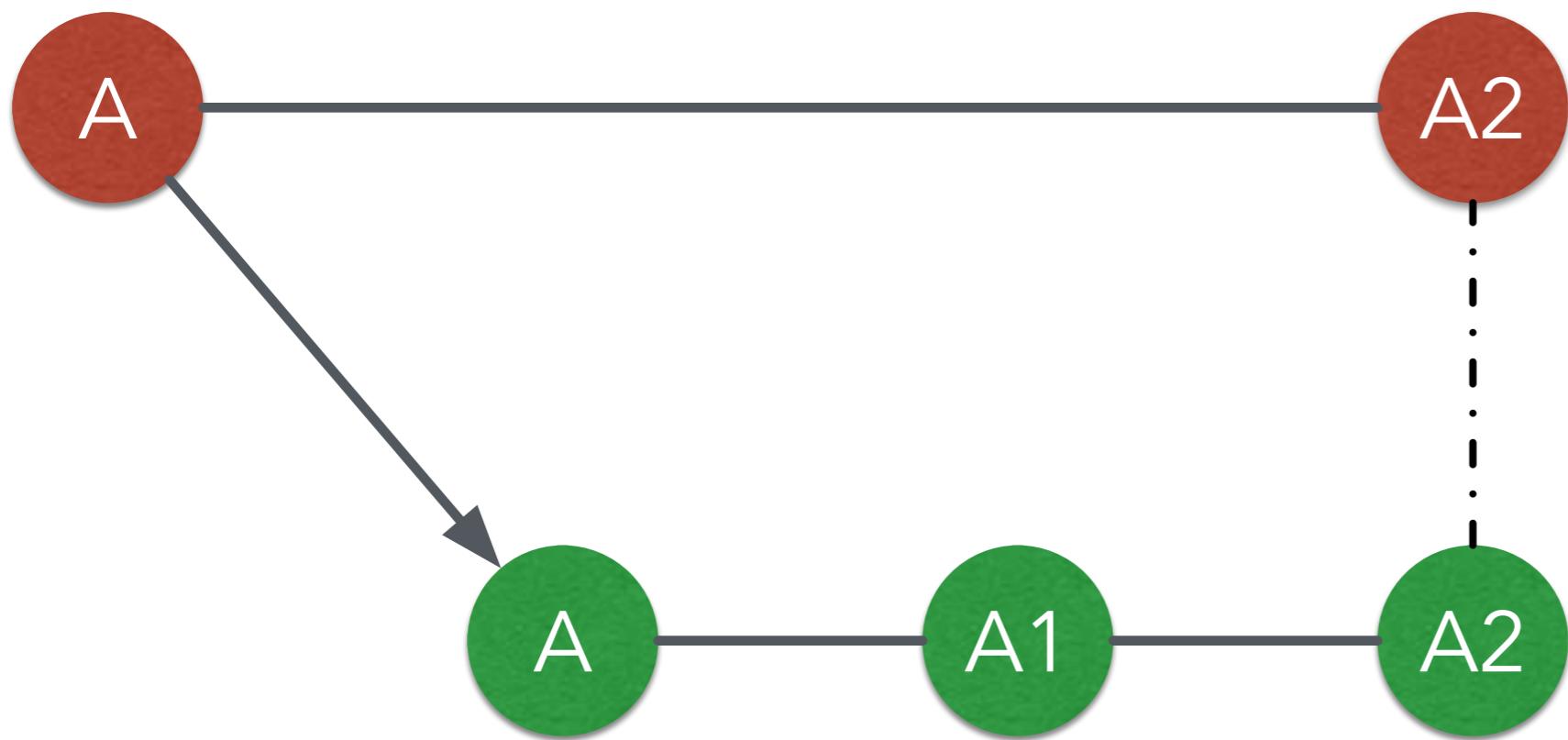
Commit

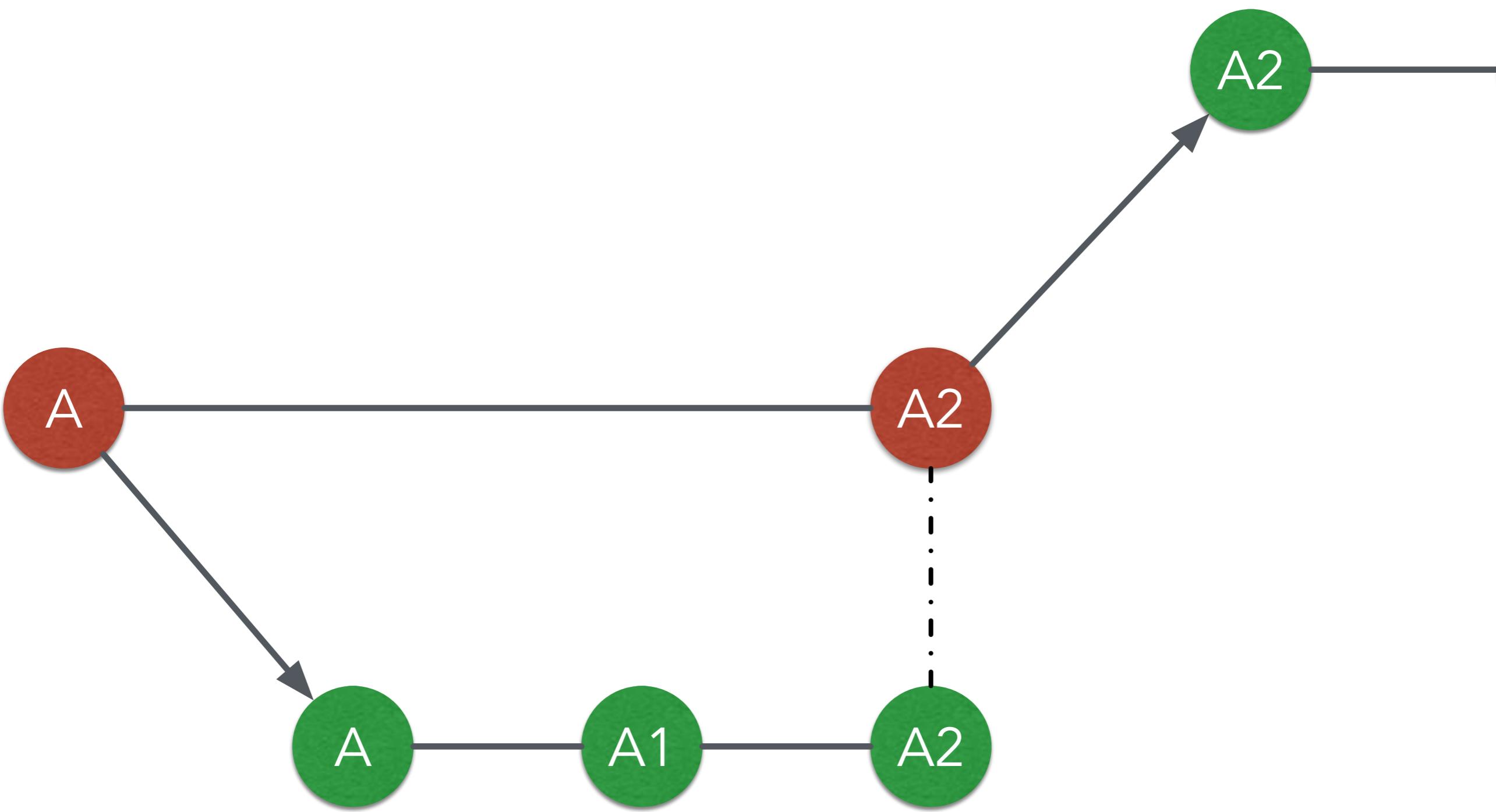


Commit

Open a Merge Request







# Git Collaboration Workflow

1. *Fork* a repository to make a copy of it.
2. *Clone* the repository you forked to your workspace.
3. Do your work and *commit* the changes in your workspace.
4. *Push* the repository to the server to synchronize them.
5. Open a *merge request* to origin repository .

# Basic Git Commands (2/2)

- **git clone [url]**
  - Clone a repository from remote server
- **git push [url] [branch-name]**
  - Push committed file to remote server

# Outline

- General Rule
- Introduction to Git
  - Version control
  - Git Basics
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References



# Gitlab

- We have created account for you
- Account: student ID (e.g. 106012345)
- Password: student ID (e.g. 106012345)

# Gitlab



# Gitlab

Confirmation instructions 收件匣 ×



GitLab <gitlab@shwu10.cs.nthu.edu.tw>

寄給我 ▾

下午8:11 (2分鐘前)



英文 ▾ > 中文 (繁體) ▾ 翻譯郵件

關閉下列語言的翻譯功能：英文 ×



Welcome, TA\_ACCOUNT!

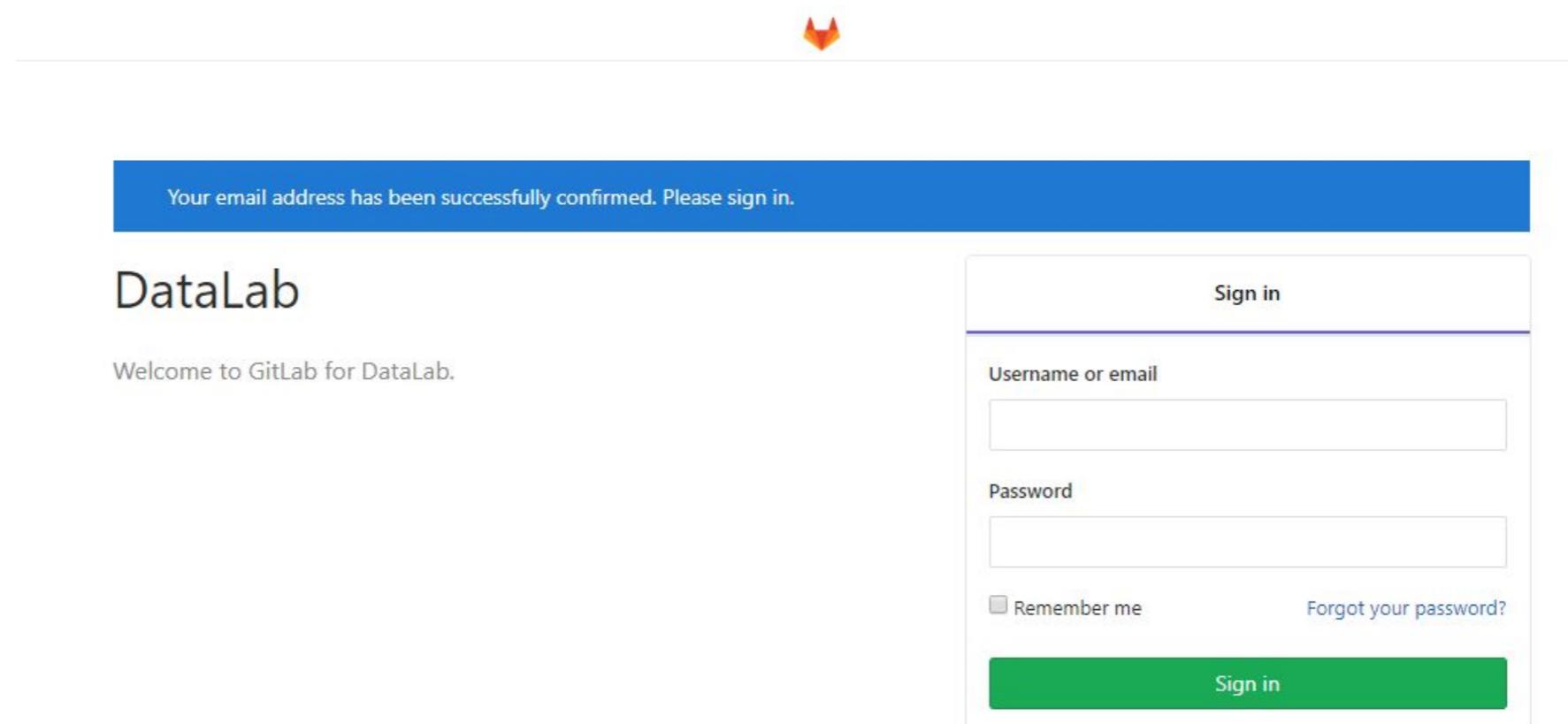
To get started, click the link below to confirm your account.

[Confirm your account](#)



You're receiving this email because of your account on [shwu10.cs.nthu.edu.tw](http://shwu10.cs.nthu.edu.tw). [Manage all notifications](#) · [Help](#)

# Gitlab



The image shows the GitLab sign-in page for a project named "DataLab". At the top, there is a blue header bar with the text "Your email address has been successfully confirmed. Please sign in." Below the header, the project name "DataLab" is displayed in large, bold, dark gray letters. To the right of the project name is a sign-in form. The form has a white background and a thin gray border. It features a "Sign in" button at the top, followed by input fields for "Username or email" and "Password". Below these fields are two links: "Remember me" and "Forgot your password?". At the bottom of the form is a large green "Sign in" button.

Your email address has been successfully confirmed. Please sign in.

DataLab

Welcome to GitLab for DataLab.

Sign in

Username or email

Password

Remember me      [Forgot your password?](#)

Sign in

# Workflow

- For each lab, you should follow the workflow below
  1. Fork our template repository on Gitlab
  2. Clone the **forked** repository to your computer
  3. Finish your lab
  4. Commit in your computer
  5. Push to Gitlab
  6. Send merge request of **your branch** to our template repository

# Workflow

- For each lab, you should follow the workflow below
  1. Fork our template repository on Gitlab
  2. Clone the **forked** repository to your computer
  3. Finish your lab
  4. Commit in your computer
  5. Push to Gitlab
  6. Send merge request of **your branch** to our template repository

# You can access course projects in [this group](#)

The screenshot shows the 'Details' page for the '2020-spring' group on GitLab. The left sidebar has '2020-spring' selected. The main area shows the group's name, a React icon, and options to 'Leave group' or 'New project'. Below are tabs for 'Subgroups and projects', 'Shared projects', and 'Archived projects', with 'Subgroups and projects' being active. A search bar and a dropdown for sorting by 'Last created' are also present. Three projects are listed: 'lab-css-blog' (created 6 hours ago), 'submission-exercise' (created 6 hours ago), and 'hello-html-master' (created 6 hours ago). The sidebar on the left includes links for Overview, Details, Activity, Issues (0), Merge Requests (0), Kubernetes, Members, and Settings.

courses > ... > 2020-spring > Details

**2020-spring** Group | Leave group

Subgroups and projects Shared projects Archived projects

Search by name Last created

lab-css-blog submission-exercise hello-html-master

Issues 0 Merge Requests 0 Kubernetes Members Settings

GitLab Projects Groups Activity Milestones Snippets

The project was successfully forked.

**submission-exercise** Project ID: 9564

Add license 0 Commits 1 Branch 0 Tags 0 Bytes Files

Forked from courses / software-studio / 2020-spring / submission-exercise

master submission-exercise / + History Find file Web IDE

Add README.md alan0313 authored 6 hours ago 8bb12aa3

README Add CHANGELOG Add CONTRIBUTING Auto DevOps enabled

Name	Last commit	Last update
README.md	Add README.md	6 hours ago

README.md

## Practice Submission

This repository is built for practicing submissions for assignments and projects. You can follow the instructions below in order to know the whole workflow for submitting a lab or a project.

### Try It !!

1. Fork this project.
2. Clone the repository. Open it in your favorite IDE.
3. Make changes to the code.
4. Commit your changes.
5. Push your changes to the repository.
6. Create a pull request.

1. Click to fork

GitLab Projects Groups Activity Milestones Snippets

alan0313 > submission-exercise > Details

## 2. Check if this repository is under your account

**submission-exercise** Project ID: 9564

Add license 0 Commits 1 Branch 0 Tags 0 Bytes Files

Forked from courses / software-studio / 2020-spring / submission-exercise

master submission-exercise / + History Find file Web IDE

Add README.md alan0313 authored 6 hours ago 8bb12aa3

README Add CHANGELOG Add CONTRIBUTING Auto DevOps enabled

Name	Last commit	Last update
README.md	Add README.md	6 hours ago

README.md

### Practice Submission

This repository is built for practicing submissions for assignments and projects. You can follow the instructions below in order to know the whole workflow for submitting a lab or a project.

#### Try It !!

1. Fork this project.
2. Clone the forked project to your local machine.
3. Make changes to the codebase.
4. Commit your changes.
5. Push your changes to the forked repository.
6. Create a pull request to merge your changes into the main repository.

Collapse sidebar

GitLab Projects Groups Activity Milestones Snippets  

Search or jump to...     

S submission-exercise

Project Repository Issues Merge Requests Wiki Snippets Settings General Members Integrations Repository

alan0313 > submission-exercise > General Settings

## General project

Update your project name, description, avatar, and other general settings.

## Permissions

Enable or disable certain project features and choose access levels.

**Project visibility**  Private

The project is accessible only by members of the project. Access must be granted explicitly to each user.

**Issues** Only Project Members

**Repository** Only Project Members

**Merge requests** Only Project Members

**Pipelines** Enable feature to choose access level 

**Git Large File Storage** 

Manages large files such as audio, video, and graphics files

**4. Set project to private**

GitLab Projects Groups Activity Milestones Snippets  Search or jump to...

S submission-exercise

Project Repository Issues Merge Requests Wiki Snippets

0 0 0 0

Settings General Members Integrations Repository

Wiki  
Pages for project documentation  
Only Project Members

Snippets  
Share code pastes with others out of Git repository  
Only Project Members

Save changes

5. Scroll down and save changes

Merge request  
Customize your merge request restrictions.  Expand

Badges  
Customize your project badges. [Learn more about badges.](#)  Expand

Export project  
Export this project with all its related data in order to move your project to a new GitLab instance. Once the export is finished, you can import the file from the "New Project" page.  
 General  Expand

Advanced  
Perform advanced options such as housekeeping, archiving, renaming, transferring, or removing your project.  Advanced  Expand

<< Collapse sidebar

# Workflow

- For each lab, you should follow the workflow below
  1. Fork our template repository on Gitlab
  2. Clone the **forked** repository to your computer
  3. Finish your lab
  4. Commit in your computer
  5. Push to Gitlab
  6. Send merge request of **your branch** to our template repository

The screenshot shows a GitLab project named "submission-exercise". The left sidebar contains project navigation links: Project, Details, Activity, Releases, Cycle Analytics, Repository, Issues (0), Merge Requests (0), Wiki, Snippets, and Settings. The main content area displays the project's details, including its name, ID, and a message indicating it was forked from another repository. A red callout bubble points to the "Clone with HTTPS" link, which is highlighted in white text. Another red callout bubble points to the "Clone with SSH" link.

1. Choose HTTPS

2. Copy the link

alan0313 > submission-exercise > Details

**submission-exercise** Project ID: 9564

Add license 0 Commits 1 Branch 0 Tags 0 Bytes Files

Forked from courses / software-studio / 2020-spring / submission-exercise

master submission-exercise / +

Add README.md alan0313 authored 6 hours ago

8bb12aa3

README Add CHANGELOG Add CONTRIBUTING Auto DevOps enabled

Name	Last commit	Last update
README.md	Add README.md	6 hours ago

README.md

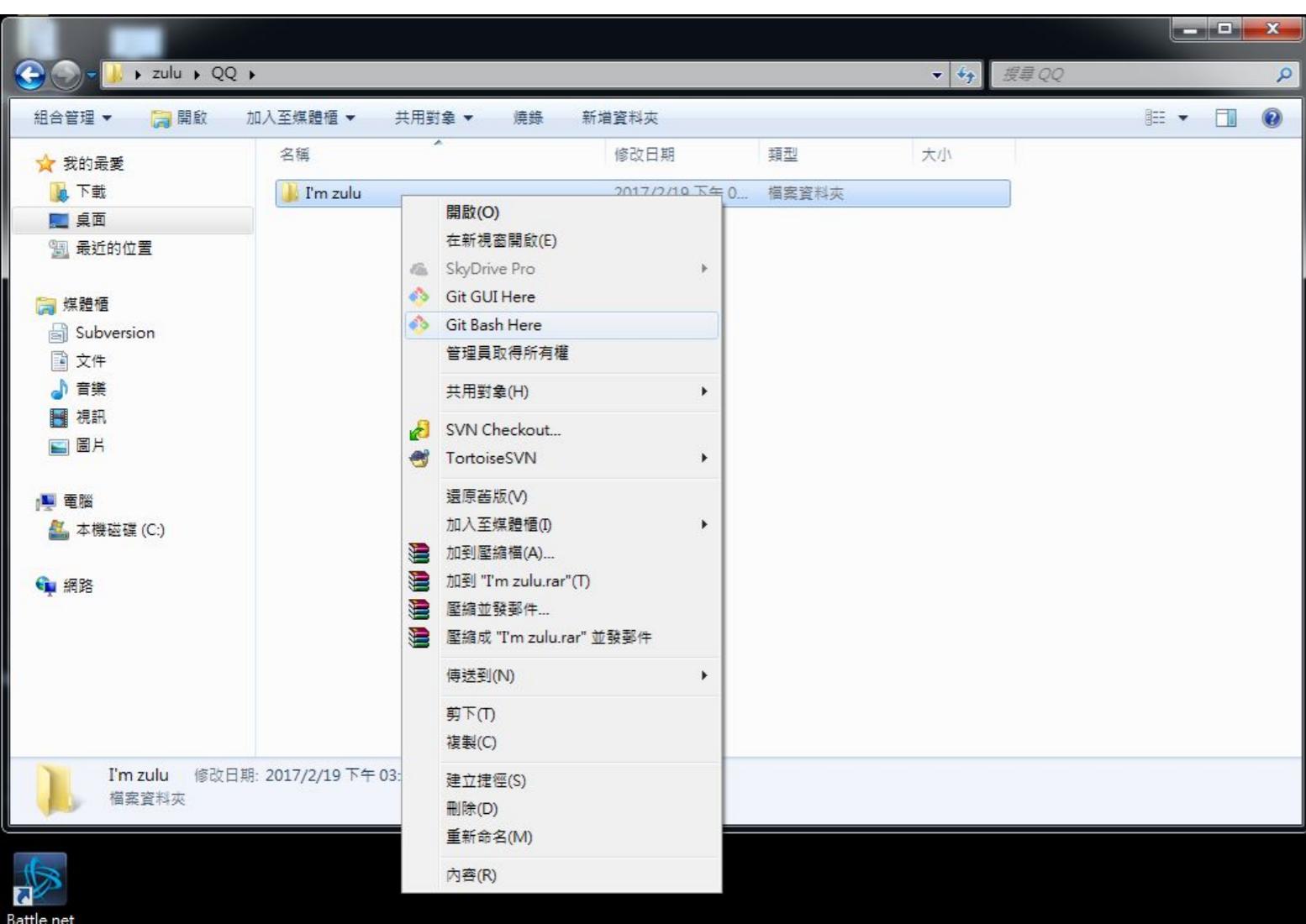
## Practice Submission

This repository is built for practicing submissions for assignments and projects. You can follow the instructions below in order to know the whole workflow for submitting a lab or a project.

### Try It !!

1. Fork this project.
2. Clone the project from GitLab to your local environment.
3. Add a new file and write something.
4. Commit your work.

# If You use Windows



```
EdwinYeh@NetDb_EdwinYeh MINGW64 ~/QQ/I'm zulu  
$ ...
```

### 3. Create a folder to put your repos

```
~/SS-Projects ➔ git clone https://shwu10.cs.nthu.edu.tw/ss-student/submission-exercise.git  
Cloning into 'submission-exercise'...  
remote: Counting objects: 3, done.  
remote: Compressing objects: 100% (2/2), done.  
remote: Total 3 (delta 0), reused 3 (delta 0)  
Unpacking objects: 100% (3/3), done.  
~/SS-Projects ➔ ls  
submission-exercise  
~/SS-Projects ➔
```

### 4. Type "git clone {URL}"

### 5. The repo has been successfully cloned

# Workflow

- For each lab, you should follow the workflow below
  1. Fork our template repository on Gitlab
  2. Clone the **forked** repository to your computer
  3. Finish your lab
  4. Commit in your computer
  5. Push to Gitlab
  6. Send merge request of **your branch** to our template repository

```
~/SS-Projects/submission-exercise master vim lab1.js
~/SS-Projects/submission-exercise master git add -A
~/SS-Projects/submission-exercise master + git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    new file:   lab1.js
```

1. -A means all files

```
~/SS-Projects/submission-exercise master + git commit -m "Finish lab1"
[master c1acaf4] Finish lab1
 1 file changed, 1 insertion(+)
 create mode 100644 lab1.js
~/SS-Projects/submission-exercise master
```

2. Check if your file is added to git

3. Commit your changes

```
~/SS-Projects/submission-exercise ➤ master ➤ vim lab1.html
~/SS-Projects/submission-exercise ➤ master ➤ git add -A
~/SS-Projects/submission-exercise ➤ master + ➤ git commit -m "Finish lab1"
[master 8a603d9] Finish lab1
Committer: Real Wei <realwei@Realweis-MBP.local>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:
git config --global user.name "Your Name"
git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with
git commit --amend --reset-author

1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 lab1.html
~/SS-Projects/submission-exercise ➤ master ➤
```

If you see these message, type  
git config --global user.name "{name}"  
git config --global user.email "{email}"

{email} is the email you use on gitlab

# Workflow

- For each lab, you should follow the workflow below
  1. Fork our template repository on Gitlab
  2. Clone the **forked** repository to your computer
  3. Finish your lab
  4. Commit in your computer
  5. Push to Gitlab
  6. Send merge request of **your branch** to our template repository

```
~/SS-Projects/submission-exercise ➜ master ➜ git push -u origin master  
Counting objects: 6, done.  
Delta compression using up to 4 threads.  
Compressing objects: 100% (4/4), done.  
Writing objects: 100% (6/6), 497 bytes | 0 bytes/s, done.  
Total 6 (delta 1), reused 0 (delta 0)  
To https://shwu10.cs.nthu.edu.tw/ss-student/submission-exercise.git  
  b1e0571..8a603d9  master -> master  
Branch master set up to track remote branch master from origin.  
~/SS-Projects/submission-exercise ➜ master ➜
```

Type "git push -u origin master"

# Workflow

- For each lab, you should follow the workflow below
  1. Fork our template repository on Gitlab
  2. Clone the **forked** repository to your computer
  3. Finish your lab
  4. Commit in your computer
  5. Push to Gitlab
  6. Send merge request of **your branch** to our template repository

The screenshot shows a GitLab project page for 'submission-exercise'. The left sidebar contains navigation links: Project, Details, Activity, Releases, Cycle Analytics, Repository, Issues (0), Merge Requests (0), Wiki, Snippets, and Settings. The main content area displays project details: Project ID: 9564, 0 Commits, 1 Branch, 0 Tags, 0 Bytes Files, Forked from courses / software-studio / 2020-spring / submission-exercise. A red callout box with the text '1. Click Merge Requests' and a red arrow points to the 'Merge Requests' link in the sidebar.

## 1. Click Merge Requests

**submission-exercise** Project ID: 9564

Add license · 0 Commits · 1 Branch · 0 Tags · 0 Bytes Files

Forked from courses / software-studio / 2020-spring / submission-exercise

master / submission-exercise / +

History Find file Web IDE

**Add README.md** alan0313 authored 6 hours ago 8bb12aa3

Name	Last commit	Last update
README.md	Add README.md	6 hours ago

**Practice Submission**

This repository is built for practicing submissions for assignments and projects. You can follow the instructions below in order to know the whole workflow for submitting a lab or a project.

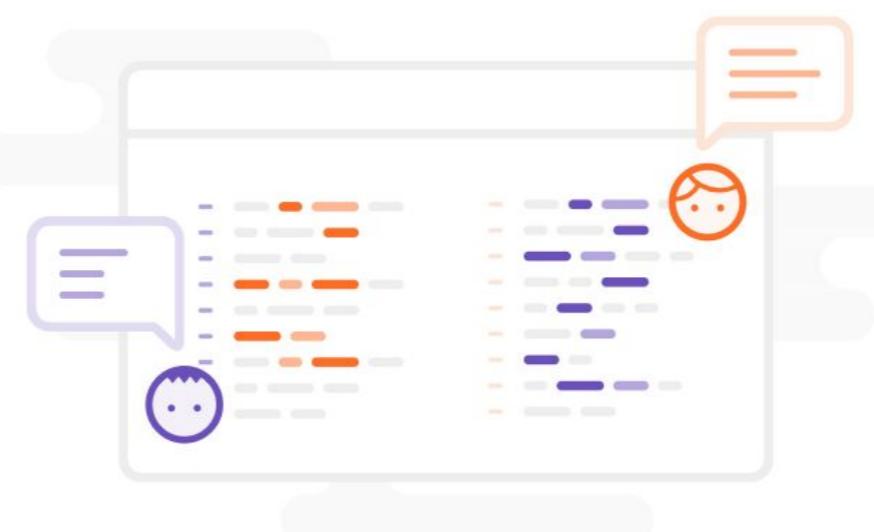
**Try It !!**

1. Fork this project.
2. Clone the project from GitLab to your local environment.
3. Add a new file and write something.
4. Commit your work.

GitLab Projects Groups Activity Milestones Snippets + This project Search

S submission-exercise

Project Repository Issues Merge Requests 0 Wiki Snippets Settings



Merge requests are a place to propose changes you've made to a project and discuss those changes with others  
Interested parties can even contribute by pushing commits if they want to.

New merge request

New merge request

2. New merge request

« Collapse sidebar

[https://shwu10.cs.nthu.edu.tw/103060010/submission-exercise/merge\\_requests/new](https://shwu10.cs.nthu.edu.tw/103060010/submission-exercise/merge_requests/new)

The screenshot shows the GitLab interface for creating a new merge request. On the left, there's a sidebar with project navigation. The main area displays a 'New Merge Request' form.

**3. Choose the branch you pushed in your repo**

The 'Source branch' dropdown is highlighted with a red box. It shows 'alan/submission-exercise' and 'master' as options. Below the dropdown is a commit card for 'Add README.md' by 'alan0313'.

**4. Choose the branch named after your ID**

The 'Target branch' dropdown is highlighted with a red box. It shows 'courses/software-studio/2020-spring...' and 'master'. A modal window titled 'Select target branch' is open, containing a search bar and a list with 'master' checked.

**5. Compare branches**

A green button labeled 'Compare branches and continue' is at the bottom of the merge request form.

GitLab Projects Groups Activity Milestones Snippets + This project Search

S submission-exercise 江秉翰 > submission-exercise > Merge Requests

New Merge Request From 103060010/submit... exercise:103011228 Change branches

Title 103060010 Submission  
Start the title with **WIP:** to prevent a **Work In Progress** merge request from being merged before it's ready.

Description Write Preview  
Write a comment or drag your files here...  
Markdown and quick actions are supported Attach a file

Source branch master  
Target branch 103011228 Change branches  
 Squash commits when merge request is accepted. [About this feature](#)

Project Repository Issues Merge Requests Wiki Snippets Settings

Collapsible sidebar

A red callout bubble with the text "6. Set title to '{ID} Submission'" points to the title input field.

GitLab Projects Groups Activity Milestones Snippets + This project Search

S submission-exercise

Project Repository

Markdown and quick actions are supported

Attach a file

Issues 0

Merge Requests 0

Source branch master

Target branch 103011228 Change branches

Squash commits when merge request is accepted. [About this feature](#)

Snippets

Settings

Contribution  Allow commits from members who can merge to the target branch. [About this feature](#)  
Not available for private projects

Submit merge request

Cancel

7. If everything is OK, submit your merge request

There are no commits yet.

<< Collapse sidebar

# Notice



gitlab



Google 搜尋

好手氣



gitlab



全部

圖片

影片

新聞

書籍

更多

設定

工具

約有 8,300,000 項結果 (搜尋時間 : 0.45 秒)

## GitLab

<https://gitlab.com/> ▾ 翻譯這個網頁

這項網站搜尋結果說明因為網站的 robots.txt 而無法提供  
瞭解詳情

## GitLab.com | GitLab

<https://about.gitlab.com/gitlab-com/> ▾ 翻譯這個網頁

GitLab.com. unlimited free repositories and collaborators. Sign Up. Free public & private repositories  
and unlimited collaborators. Runs GitLab Enterprise Edition ...

## GitLab介紹— Practical guide for git users 0.1 文档

<git-tutorial.readthedocs.io/zh/latest/gitlab.html> ▾

GitLab介紹¶. 目前最流行的線上Git專案管理系統可以說是非GitHub 莫屬，對於一般OpenSource的專案  
選擇使用GitHub做為線上Git專案管理系統即可，也免收任何 ...

## GitHub - gitlabhq/gitlabhq: GitLab CE | Please open new issues in our ...

<https://github.com/gitlabhq/gitlabhq> ▾ 翻譯這個網頁

README.md. GitLab. Build status CE coverage report Code Climate Core Infrastructure Initiative Best  
Practices. Canonical source. The canonical source of ...

## Gitlab - 維基百科，自由的百科全書 - Wikipedia

<https://zh.wikipedia.org/zh-tw/Gitlab> ▾

GitLab是一個利用Ruby on Rails開發的開源應用程式，實現一個自代管的Git專案倉庫，可通過Web介面  
進行存取公開的或者私人專案。它擁有與GitHub類似的功能， ...



# GitLab.com

GitLab.com offers free unlimited (private) repositories and unlimited collaborators.

- [Explore projects on GitLab.com](#) (no login needed)
- [More information about GitLab.com](#)
- [GitLab.com Support Forum](#)

By signing up for and by signing in to this service you accept our:

- [Privacy policy](#)
- [GitLab.com Terms](#).

[Sign in](#)    [Register](#)

Username or email

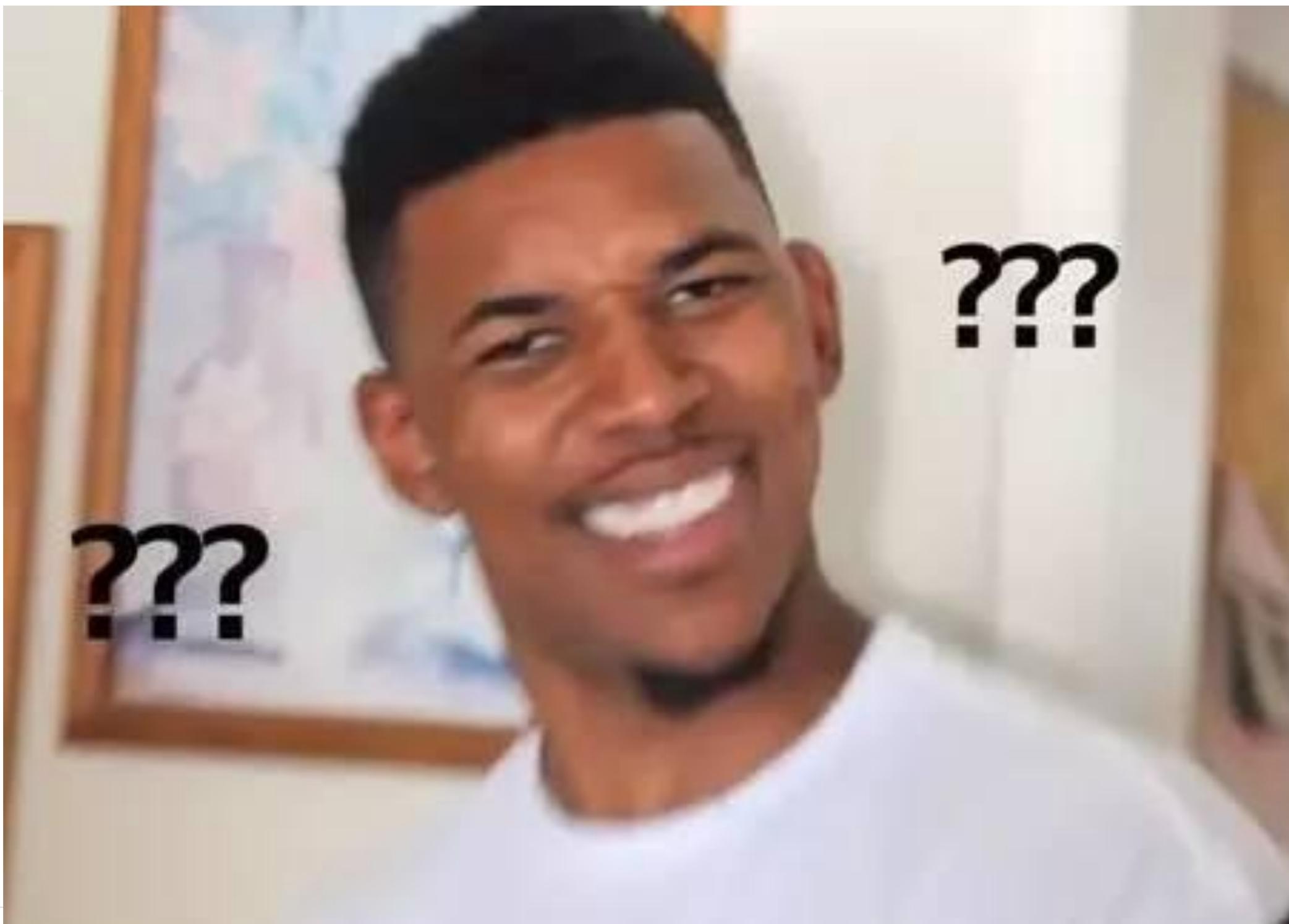
Password

Remember me    [Forgot your password?](#)

[Sign in](#)

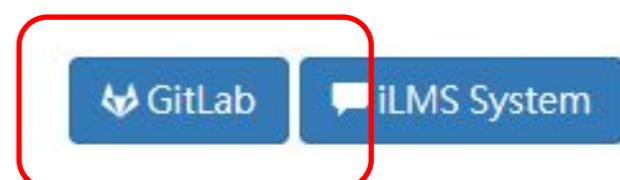
Didn't receive a confirmation email? [Request a new one.](#)

Sign in with



# Resources

Here are some course materials and resources related to this course. For code and its details (such as assigned reading, project links, quiz, etc.) please refer to the GitLab. For online forum please refer to the iLMS system.



Here!!!!

# Outline

- General Rule
- Introduction to Git
  - Version control
  - Git Basics
  - Try Git!
  - Remote Repositories
- How to Submit Your Code to Gitlab
- Tools & References

# Tools

- Git GUI
  - GitKraken
- Editor / IDE
  - Visual Studio Code
  - Atom
  - Sublime Text
  - Brackets
  - Notepad++
  - Webstorm



axosoft  
**GitKraken**

Viewing 112/151 Show All

LOCAL (7/11)

- fancier-refbar-changes
- fancy-responsive-refbar-it... 42 ↗ 99+
- graph-color-test
- hopscotch 24 ↗ 99+
- init-repo-gitignore-typeahead
- invite-system 6 ↗ 99+
- jars-view-file-history
- master 5 ↗
- remote-panel-redesign 15 ↗ 13+
- settings-theme-styling
- view-file-history 24 ↗ 99+

REMOTE (6/41)

- Jeff-Schinella (0/1)
- Jordan-Wallet (0/7)
- Justin-GK (0/1)
- Ken-Price (0/2)
- Kyle-Smith (2/8)
- Max-Korp (0/2)
- Sjepan-Rajko (0/8)
- ayresa (0/3)
- cbargen (0/5)
- origin (4/4)
- TAGS (99/99)

Fix un/stageall and stashing  
Keep rename detection stage/unstage all  
Bump to version 0.1.40  
Merge pull request #597 from johnhaley81/fix-dispatcher...  
Merge pull request #594 from Mr-Wallet/nicer-ref-nam...  
Fix `waitFor` bug in dispatcher  
Merge pull request #596 from johndavidsparrow/gh-p...  
Revised custom variable script and switch  
Merge pull request #595 from johndavidsparrow/gh-p...  
Resolved edge case where RefNodes could overlap  
/universe removal of in-app invite wording  
Bump to version 0.1.39  
Merge pull request #591 from Mr-Wallet/fix-graph-ref...  
Merge pull request #590 from srajko/div-be-gone  
Merge pull request #588 from Mr-Wallet/friendlier-app...  
Merge pull request #568 from Mr-Wallet/nicer-ref-nam...  
Merge pull request #589 from johndavidsparrow/gh-p...  
Merge pull request #592 from implausible/FixNSFW  
JS tidy up in form-validation.js  
Javascript update for /universe  
/universe page  
added maxwait to updateworkdir debounce  
Update NSFW for memory leak  
Fix NSFW segfault  
Fix flickering GraphRefColumn every time ... 6 days ago  
Preventing page reload on default pull click  
Eliminate console spam when conflicts exist in a statel...  
Upgrading to react-bootstrap v0.24.5

Commit: cca151e6b9e32c3f9209c25131706740050  
Parent: 8efe30a11761983173f844900fa5ec5c6be2  
Author: John Haley <johnh@axosoft.com>  
Author Date: September 30th 2015, 2:54 pm

Bump to version 0.1.40

+ 0 added - 0 deleted ⚡ 2 modified

npm-shrinkwrap.json

```
@@ -1,6 +1,6 @@
 1 | 1 |
 2 | 2 "name": "gitkraken",
-3 | "version": "0.1.39",
+3 | "version": "0.1.40",
 4 | 4 "dependencies": {
 5 | 5   "atom-keymap": {
 6 | 6     "version": "5.1.11",
```

package.json

```
@@ -1,7 +1,7 @@
 1 | 1 |
 2 | 2 "name": "gitkraken",
 3 | 3 "productName": "GitKraken",
-4 | "version": "0.1.39",
+4 | "version": "0.1.40",
 5 | 5 "description": "An intuitive git cli
 6 | 6 "main": "./src/appBootstrap/main.js"
```

Provide Feedback



VS Code

EXPLORE

WORKING FILES

- 03.jpg img
- TBL-STYLES

  - css
  - img
  - js
    - hoverIntent.js
    - jquery.dropdown.js
    - jquery.more.js
    - jquery.more.min.js
    - jquery.plugin.js
    - jquery.plugin.min.js
    - mapper.js
    - maputil.js
    - navigation.js**
    - smoothscroll.js
    - tabs.js

```
navigation.js js
1 var scriptbase = _spPageContextInfo.webServerRelativeUrl + "/_layouts/15/";
2
3 $(document).ready(function () {
4     $.getScript(scriptbase + "SP.Runtime.js", function () {
5         $.getScript(scriptbase + "SP.js", function () {
6             $.getScript(scriptbase + "SP.Taxonomy.js", function () {
7                 context = SP.ClientContext.get_current();
8                 //Call your code here.
9                 console.log("Navigation - ready to rock.");
10
11                 // Get default termstore
12
13                 session = SP.Taxonomy.TaxonomySession.getTaxonomySession(context);
14                 termStore = session.getDefaultSiteCollectionTermStore();
15                 context.load(session);
16                 context.load(termStore);
17                 context.executeQueryAsync(
18                     function () {
19                         console.log('Got default term store');
20                     },
21                     function(sender, args) {
22                         console.log('Could not get default term store. ' + args.get_message());
23                     }
24                 );
25
26
27             });
28         });
29     });
30 });
31
32 var topnavbar;
33
34 topnavbar += '<div class="tbl-site-navigation">';
35 topnavbar += '    <ul class="dropdown">';
36 topnavbar += '        <li class=""><a href="#">The Brand Code - a</a></li>';
37 topnavbar += '        <li class="dropdown1">';
38 topnavbar += '            <ul class="sub_menu" style="visibility: hidden;">';
39 topnavbar += '                <li class="large">';
40 topnavbar += '                    <div class="dropdownbox">';
41 topnavbar += '                        <div class="dropdownbox-title">Welcome to the Brand Code</div>';
42 topnavbar += '                        <ol>';
43 topnavbar += '                            <li><a href="">The importance of Brand Building</a></li>';
44 topnavbar += '                            <li><a href="">Introduction to the Brand Code</a></li>';
45 topnavbar += '                            <li><a href="">You and the Brand Code</a></li>';
46 topnavbar += '                        </ol>';
47 topnavbar += '                    </div>';

```

Ln 38, Col 72   UTF-8   CRLF   JavaScript



A hackable text editor  
for the 21st Century

The screenshot shows the Atom code editor interface. On the left is a sidebar with a tree view of project files, including build, docs, dot-atom, exports, keymaps, menus, node\_modules, resources, script, spec, src (which is selected), and static. The main editor area displays the file atom.coffee with the following content:

```
18
19 # Essential: Atom global for dealing with packages, themes, menus, and the window system.
20 #
21 # An instance of this class is always available as the `atom` global.
22 module.exports =
23   class Atom extends Model
24     @version: 1 # Increment this when the serialization format changes
25
26     # Load or create the Atom environment in the given mode.
27     #
28     # Returns an Atom instance, fully initialized.
29     @loadOrCreate: (mode) =>
30       startTime = Date.now()
```

The status bar at the bottom indicates the file is 18 lines long.

# Reference

- Learn Git branching (interactive)
  - <http://pcottle.github.io/learnGitBranching/>
- Pro Git
  - <http://git-scm.com/book/>
- 寫給大家的 Git 教學
  - <http://www.slideshare.net/littlebtc/git-5528339>

# Today's exercise

- Install Git command line tool in your computer.
  - Follow appendix A.
- Try to submit in GitLab.