

# Git Lab 簡易使用

彭敏君

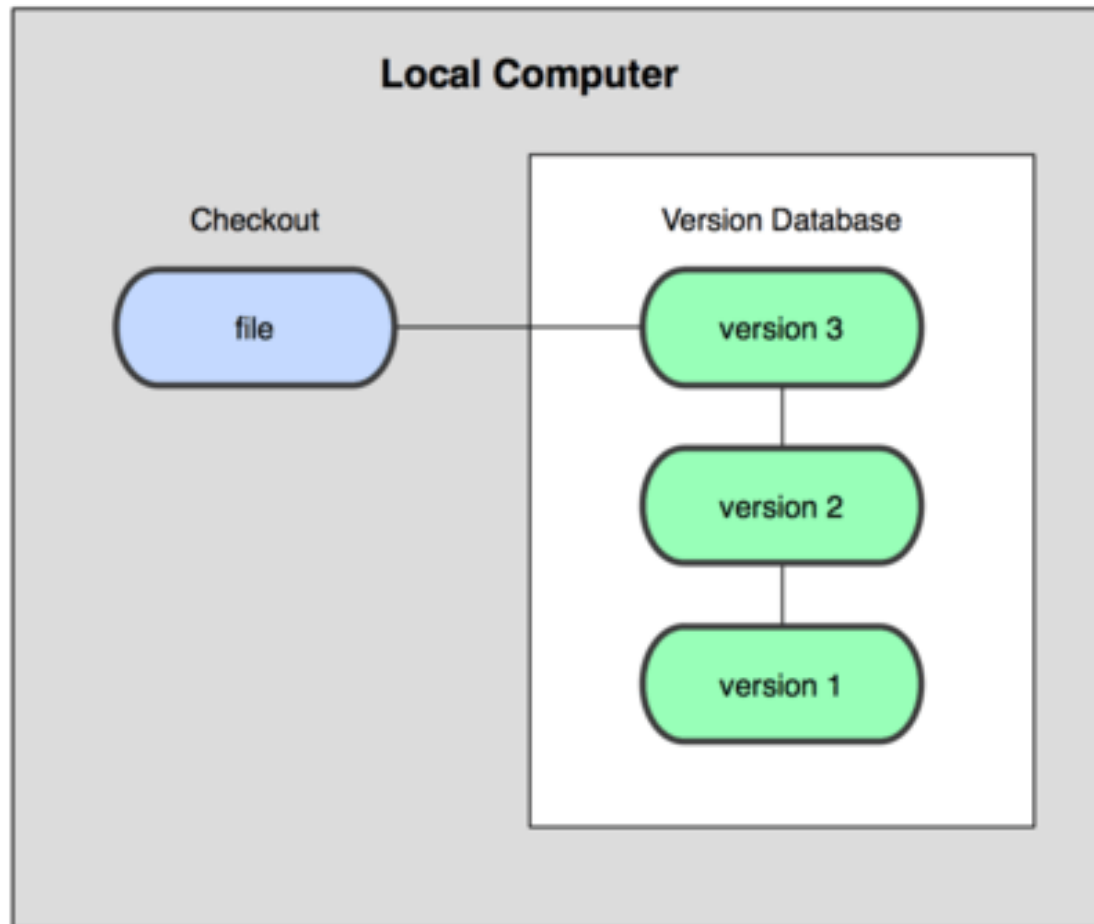
# What is Git

# 版本控制

- 版本控制（Revision control）是維護工程藍圖的標準作法，能追蹤工程藍圖從誕生一直到定案的過程。此外，版本控制也是一種軟體工程技巧，藉此能在軟體開發的過程中，確保由不同人所編輯的同一程式檔案都得到同步。

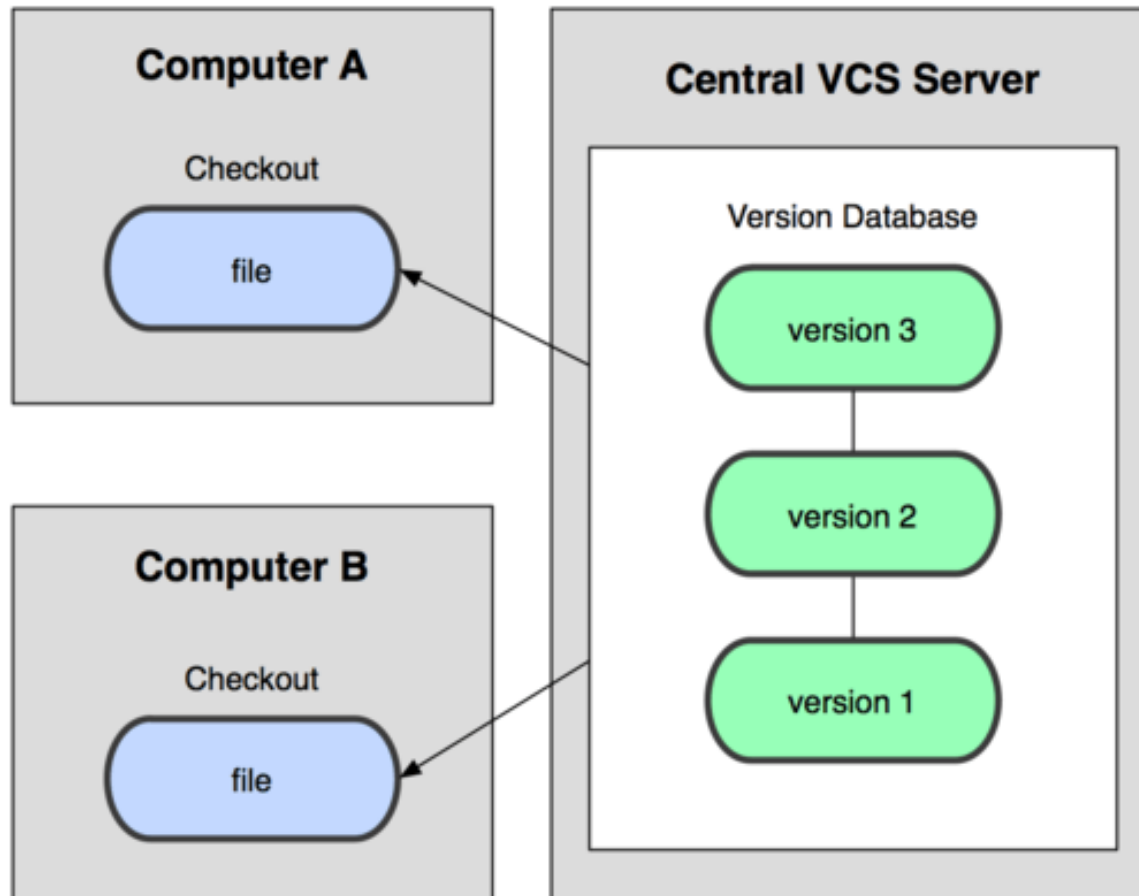
# 版本控制類型

- 本地端



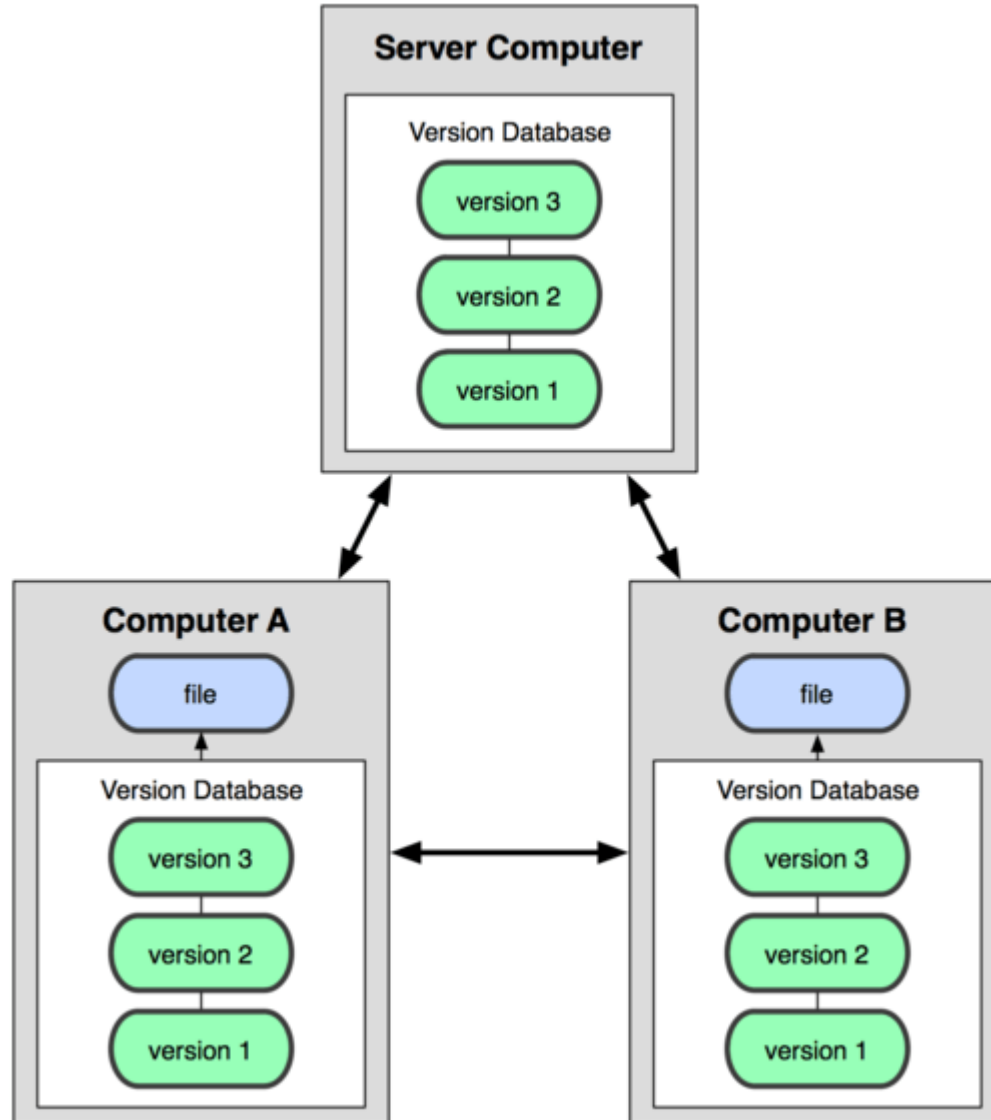
# 版本控制類型

- 集中式版本控制



# 版本控制類型

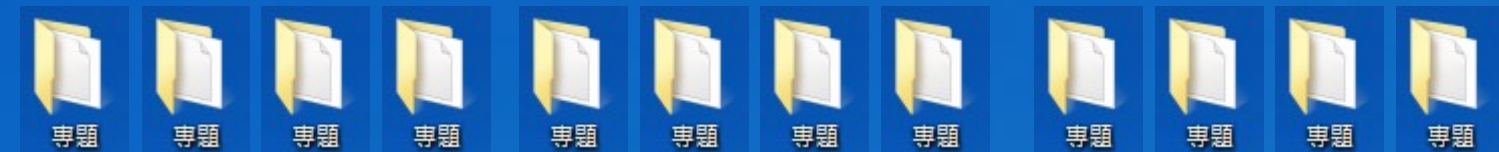
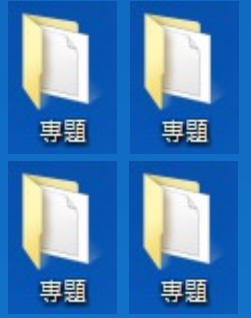
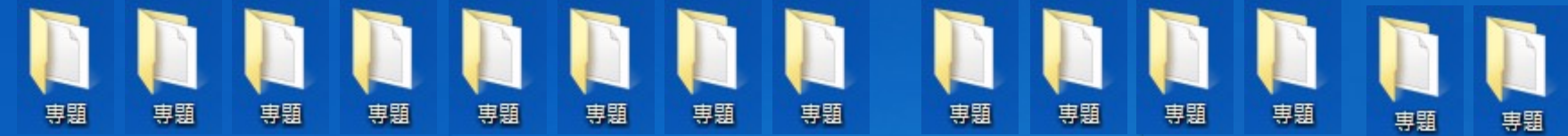
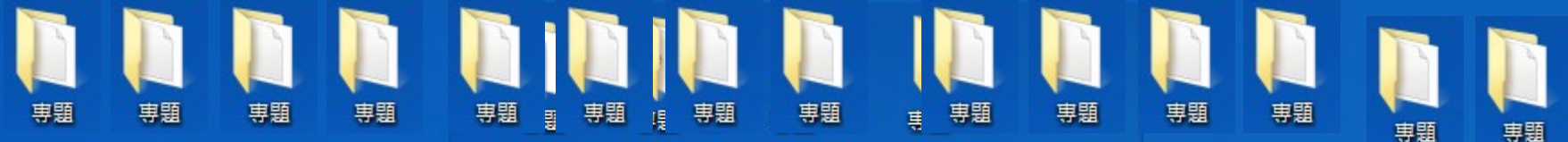
- 分散式



# Why Git

有開發專案（作業）的經驗嗎？

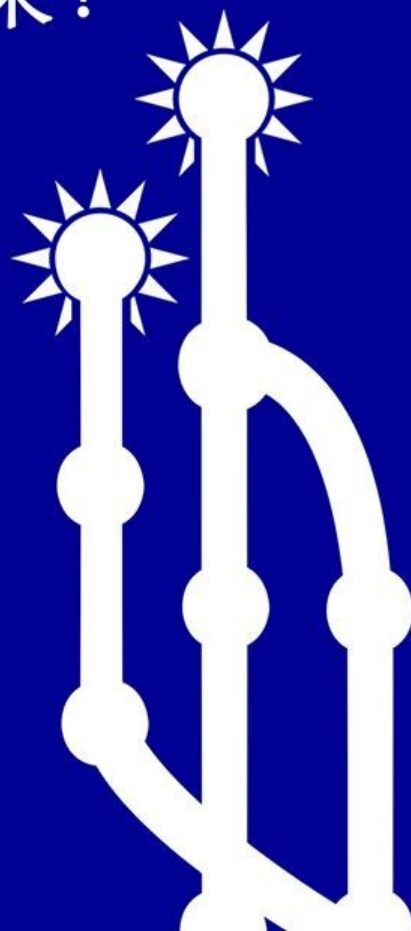




Git 的好處？



失去的正直和善良  
都能找回來！



10/23 (五) 18:30  
二活 606


取自  
NTU

# Out line

- 一、新增專案
- 二、共同維護專案
- 三、其他注意事項

GitLab

140.123.103.87:800/users/sign\_in



You need to sign in before continuing.

## GitLab Community Edition

Open source software to collaborate on code

Manage git repositories with fine grained access controls that keep your code secure. Perform code reviews and enhance collaboration with merge requests. Each project can also have an issue tracker and a wiki.

### Existing user? Sign in

maxati9600

.....|

☐ Remember me [Forgot your password?](#)

Sign in

### New user? Create an account

Name

Username

Email

Password

Sign up


[Did not receive confirmation email? Send again](#)









[Explore](#) [Documentation](#) [About GitLab](#)


Dashboard | GitLab

140.123.103.87:800

Dashboard








Signed in successfully.

## Welcome to GitLab!


Self hosted Git management application.



You don't have access to any projects right now.

You can create up to **10 projects**.


+ New Project



You can create a group for several dependent projects.

Groups are the best way to manage projects and members.

+ New Group



There are **1** public projects on this server.

Public projects are an easy way to allow everyone to have read-only access.

Browse public projects

New Project | GitLab

140.123.103.87:800/projects/new

New Project

Project path

HowDoYouTurnThisOn

.git

Namespace

彭敏敏

Import existing repository by URL

Import projects from GitHub

Import projects from GitLab.com

Import projects from Gitorious.org

Description  
(optional)

這是一個有可怕的傳說  
傳說系主任用asm寫河內塔....

Visibility Level  
(?)

☐ Private  
Project access must be granted explicitly for each user.

☒ Internal  
The project can be cloned by any logged in user.

☐ Public  
The project can be cloned without any authentication.

Create project

Need a group for several dependent projects? [Create a group](#)



Project was successfully created.

You won't be able to pull or push project code via SSH until you [add an SSH key](#) to your profile[Don't show again](#) | [Remind later](#)

H

這是一個有可怕的傳說 傳說系主任用asm寫河內塔... - Edit

★ Star 0

SSH

HTTP

git@140.123.103.87:maxati9600/HowDoYouTurnThisOn.git

internal

The repository for this project is empty

You can [add a file](#) or do a push via the command line.

### Command line instructions

#### Git global setup

```
git config --global user.name "彭敏敏"
git config --global user.email "maxati9600@gmail.com"
```

#### Create a new repository

```
mkdir HowDoYouTurnThisOn
cd HowDoYouTurnThisOn
git init
touch README.md
git add README.md
git commit -m "first commit"
git remote add origin git@140.123.103.87:maxati9600/HowDoYouTurnThisOn.git
git push -u origin master
```



#### Push an existing Git repository

```
cd existing_git_repo
git remote add origin git@140.123.103.87:maxati9600/HowDoYouTurnThisOn.git
git push -u origin master
```



# SSH key

- Oop!!



You won't be able to pull or push project code via SSH until you [add an SSH key](#) to your profile

[Don't show again](#) | [Remind later](#)



彭敏敏 / HowDoYouTurnThisOn



Project was successfully created.

You won't be able to pull or push project code via SSH until you [add an SSH key](#) to your pr

H

這是是一個有可怕的傳說 傳說系主任用asm寫河內塔.... – [Edit](#)

SSH

HTTP

git@140.123.103.87:maxati9600/HowDoYouTurnThisOn.

The repository for this project is

You can

[add a file](#)

or do a push via the co



## My SSH keys (0)

Add SSH Key



SSH keys allow you to establish a secure connection between your computer and GitLab  
Before you can add an SSH key you need to [generate it](#)



There are no SSH keys with access to your account.

- Ssh-keygen -t rsa -C “你的帳號”

```
root@LiteWebServerPi:~/.ssh# ssh-keygen -t rsa -C "maxati9600@gmail.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa): /root/.ssh/id_rsa_Github
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /root/.ssh/id_rsa_Github.
Your public key has been saved in /root/.ssh/id_rsa_Github.pub.
The key fingerprint is:
f9:31:fa:24:eb:1b:ff:3e:4e:a7:7c:44:36:a8:4a:80 maxati9600@gmail.com
The key's randomart image is:
+--[ RSA 2048 ]-----+
|
|      .      .
|    E .    . +
|      .S o. o .
|      .o.o .
|      .+.o ...
|      .B o.o.
|      .+.o+*o
+-----+
root@LiteWebServerPi:~/.ssh#
```

- `cat ~/.ssh/id_rsa_Github.pub`

```
root@LiteWebServerPi:~/.ssh# cat id_rsa_Github.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCSl9cXL5njyJn7sj14gl2JNwNeMBGond2qOsGowMmcBlZyuxOhYiGw
9KBSTgVDVOYASs1tNfg3YEQDUspSA5LKcHKSPp8vNU5SCs5UHVhOJX32Sf1re761Xwx0lkGyc6+8b0U95kPiO5umQ81F
rjgONgWwU3Fn4Mktyz4enQQVvWMPGNOKNLIdITXrfWPCCreh8OuVnRZcHyVbt5QYKO9ytSOMToaNTZaBOxu5EpBJXpp3
I6NcYbZPTys9v3oxx+GRlwbJb/1wCfFZQss4RAbt0uDLHONoBDgKTyEh91GKsJBQD9wWEiJX/HyA4RsVdhd/2lSG8FJC
5S0h9rzS8IbL maxati9600@gmail.com
root@LiteWebServerPi:~/.ssh#
```



## Add an SSH Key

Paste your public key here. Read more about how to generate a key on the [SSH help page](#).

Title

test key

Key

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQCSi9cXL5nJyJn7sj14gl2JNwNeMBGond2qOsGowMmcBIZyuxOhYiGw9
KBSTgVDVOYASs1tNfg3YEQDUspSA5LKcHKSPp8vNU5SCs5UHVhOJX32Sf1re761XwxO1kGyc6+8b0U95kPiO5u
mQ81FrjgONgWwU3Fn4Mktyz4enQQVvWMPGNOKNLIdITXrfWPCCreh8OuVnRZcHyVbt5QYKO9ytSOMToaNTZaB
Oxu5EpBJXpp3l6NcYbZPTys9v3oxx+GRlwbJb/1wCfFZQss4RAbt0uDLHONoBDgKTyEh91GKsJBQD9wWEiJX/Hy
A4RsVdhd/2ISG8FJC5S0h9rzS8lL maxati9600@gmail.com
```

Add key

Cancel



## Profile



### SSH Key



Title: **test key**



Created on: Oct 24, 2015



Fingerprint: **f9:31:fa:24:eb:1b:ff:3e:4e:a7:7c:44:36:a8:4a:80**



```
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCS19cXL5njyJn7sj14g12JNwNeMBGond2qOsGowMmcB1Zyux0hYiGw9KBSTgVDVOYASs1tNfg3YEQDUspSA5LKc
HKSPp8vNU5SCs5UHVh0JX32Sf1re761Xwx01kGyc6+8b0U95kPi05umQ81FrjgONglwU3Fn4Mktyz4enQQVvwMPGNOKNLIdITXrfWPCCreh80uVnRZcHyVbt5QYKO
9ytSOMToaNTZaB0xu5Ep8JXpp3I6NcYbZPTys9v3oxx+GRlwbJb/1wCfFZQss4RAbt0uDLHONoBDgKTyEh91GKsJBQD9wWEiJX/HyA4RsVdhd/21SG8FJC5S0h9rz
S8IbL maxati9600@gmail.com
```



Remove

# 貼心的指令提示

## Command line instructions

### Git global setup

---

```
git config --global user.name "彭敏敏"  
git config --global user.email "maxati9600@gmail.com"
```

### Create a new repository

---

```
mkdir HowDoYouTurnThisOn  
cd HowDoYouTurnThisOn  
git init  
touch README.md  
git add README.md  
git commit -m "first commit"  
git remote add origin git@140.123.103.87:maxati9600/HowDoYouTurnThisOn.git  
git push -u origin master
```

### Push an existing Git repository

---

```
cd existing_git_repo  
git remote add origin git@140.123.103.87:maxati9600/HowDoYouTurnThisOn.git  
git push -u origin master
```





# 所以我們就照打..... ..

```
root@LiteWebServerPi:/var/www# git config --global user.name "彭敏敏"
root@LiteWebServerPi:/var/www# git config --global user.email "maxati9600@gmail.com"
root@LiteWebServerPi:/var/www# mkdir HowDoYouTurnThisOn
root@LiteWebServerPi:/var/www# cd HowDoYouTurnThisOn
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git init
Initialized empty Git repository in /var/www/HowDoYouTurnThisOn/.git/
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# touch README.md
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git add README.md
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git commit -m "first commit for README.md"
[master (root-commit) 1520d4a] first commit for README.md
 0 files changed
 create mode 100644 README.md
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git remote add origin git@140.123.103.87:ma
axati9600/HowDoYouTurnThisOn.git
```



- `git push -u origin master`

```
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git push -u origin master
ssh: connect to host 140.123.103.87 port 22: No route to host
fatal: The remote end hung up unexpectedly
```

# Fata l

什麼 !??!!  
沒開 SSH…..



Oh!

還有 HTTP 可以用 !!



- git remote rm origin
- git remote add origin URL

```
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git remote rm origin
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git remote add origin http://140.123.103.87:8000/maxati9600/HowDoYouTurnThisOn.git
```



你怎麼知道 HTTP 網址 der





這是是一個有可怕的傳說 傳說系主任用asm寫河內塔.... - Edit

★ Star 0

- `git push -u origin master`

```
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn/.git# git push -u origin master
Username for 'http://140.123.103.87:800': maxati9600
Password for 'http://maxati9600@140.123.103.87:800':
Counting objects: 3, done.
Writing objects: 100% (3/3), 233 bytes, done.
Total 3 (delta 0), reused 0 (delta 0)
To http://140.123.103.87:800/maxati9600/HowDoYouTurnThisOn.git
 * [new branch]      master -> master
Branch master set up to track remote branch master from origin.
```



彭敏敏 / HowDoYouTurnThisOn



master



HowDoYouTurnThisOn / +



Name

Last Update

Last Commit

History



README.md

21 minutes ago

彭敏敏 first commit for README.md



README.md



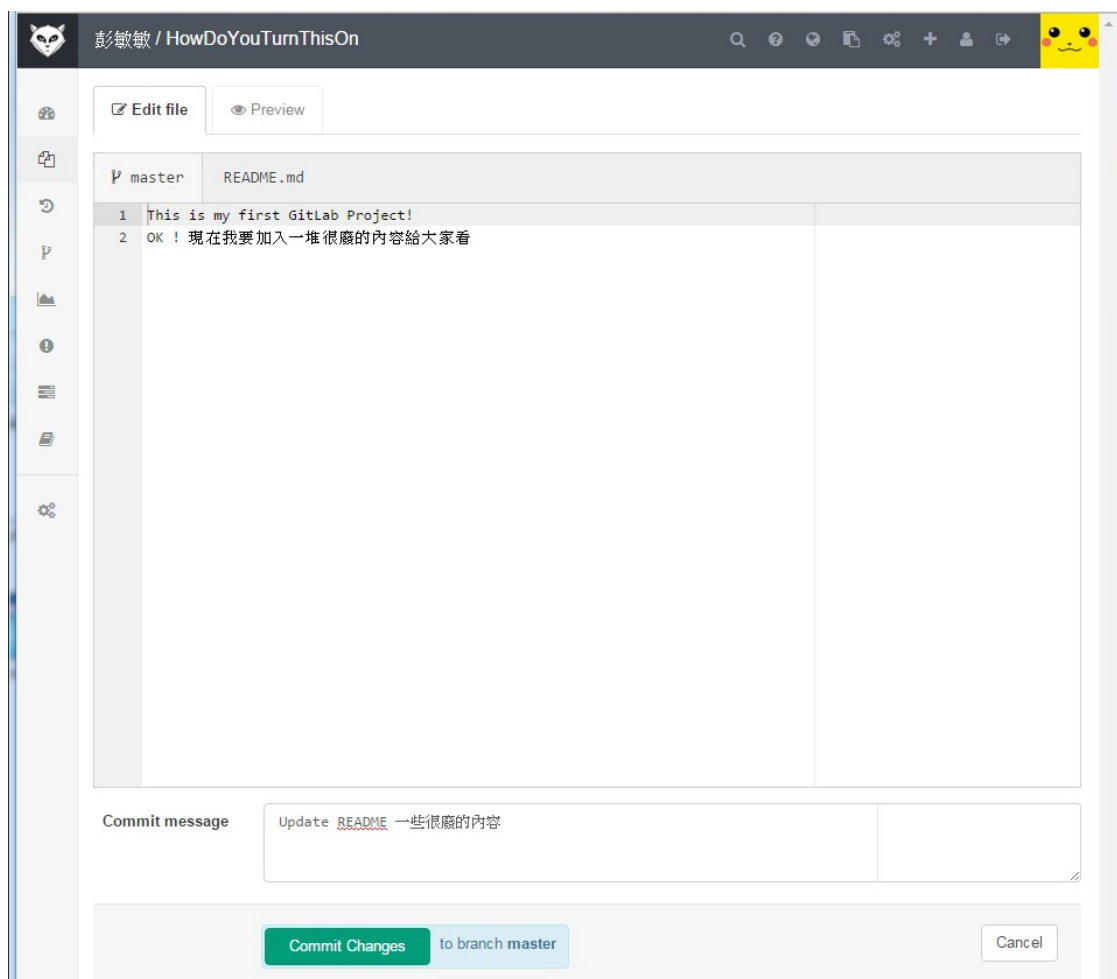
# Git Lab 初學就上手



真的很簡單的

# 小華 -web

- 小華新增 README 的內容



# 小明 - Linux

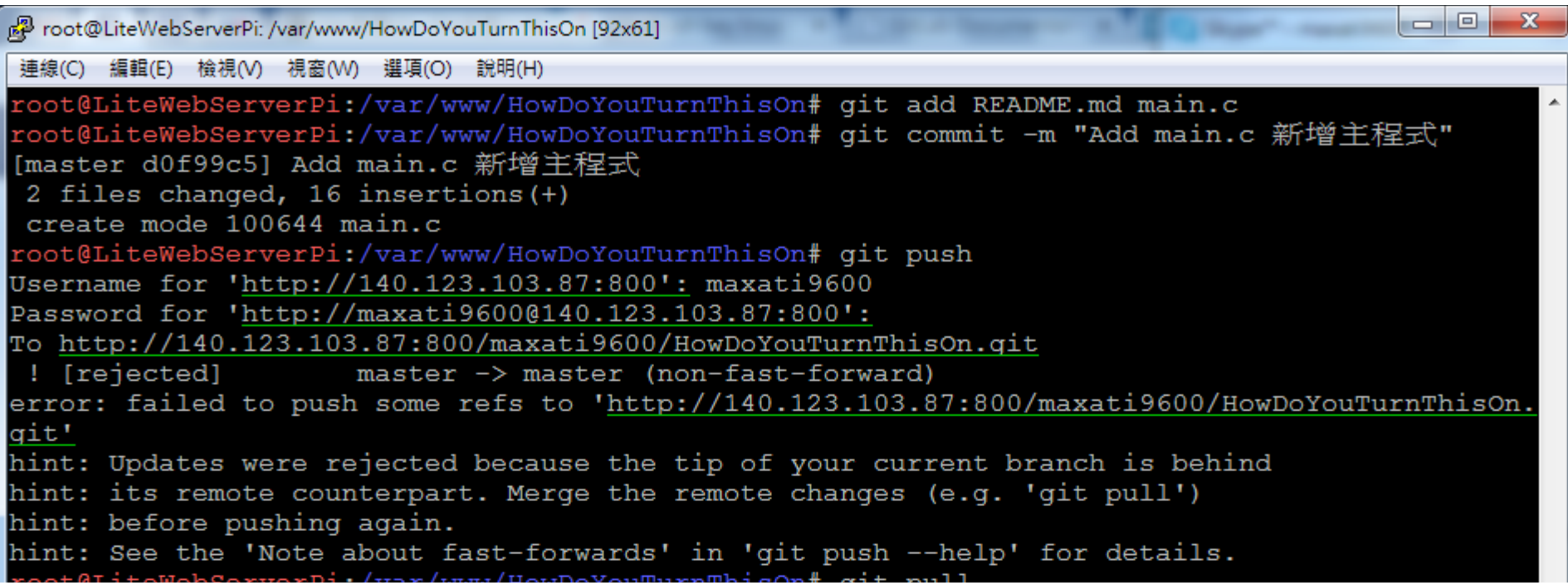
- 小明更新了 README 的內容與新增 main.c 檔案

```
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# ls
README.md
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# vi README.md
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# touch main.c
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# vi main.c
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# cat main.c
#include "everything"
mian() {
    printf("ZZZZZZZZ");
}
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# cat README.md
This is my first GitLab Project!

很廢很廢很廢很廢很廢很廢很廢很廢
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root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn#
```

# 小明 -Linux

- git add
- git commit -m “更新理由”
- git push

A terminal window titled 'root@LiteWebServerPi: /var/www/HowDoYouTurnThisOn [92x61]' with standard window controls. The terminal shows the execution of git commands. First, 'git add README.md main.c' is run. Then, 'git commit -m "Add main.c 新增主程式"' is run, resulting in a commit message '[master d0f99c5] Add main.c 新增主程式' and showing '2 files changed, 16 insertions(+)' and 'create mode 100644 main.c'. Next, 'git push' is run, prompting for a username ('maxati9600') and password. The push attempt fails with the message '! [rejected] master -> master (non-fast-forward)' and 'error: failed to push some refs to 'http://140.123.103.87:800/maxati9600/HowDoYouTurnThisOn.git''. A hint is provided: 'Updates were rejected because the tip of your current branch is behind its remote counterpart. Merge the remote changes (e.g. 'git pull') before pushing again.' and a reference to the 'Note about fast-forwards' in 'git push --help'. The final line shows 'root@LiteWebServerPi: /var/www/HowDoYouTurnThisOn# git pull'.

# 小明 -Linux

- 居然有新版本 !!!!!





# 小明 - Linux

- git pull

```
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git pull
Username for 'http://140.123.103.87:800': maxati9600
Password for 'http://maxati9600@140.123.103.87:800':
remote: Counting objects: 3, done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0)
Unpacking objects: 100% (3/3), done.
From http://140.123.103.87:800/maxati9600/HowDoYouTurnThisOn
   3121c73..5c7d214  master      -> origin/master
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
Automatic merge failed; fix conflicts and then commit the result.
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn#
```

# 小明 -Linux

- vim README.md

連線(C) 編輯(E) 檢視(V) 視窗(W) 選項(O) 說明(H)

This is my first GitLab Project!

<<<<< HEAD

很廢很廢很廢很廢很廢很廢很廢很廢  
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=====  
OK ! 現在我要加入一堆很廢的內容給大家看

>>>>>> 5c7d214a6361ddf47b6d8076c2a307e1ea3b40a5

# 小明 - Linux

- 修改後就可以存檔上傳了

[illegible]

# 小明 -Linux

- 完成後重新 add、commit、push 就可以  
搜

```
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# vi README.md
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# vi main.c
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git add README.md main.c
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git commit -m "Add main.c 新增主程式"
[master 7918070] Add main.c 新增主程式
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git push
Username for 'http://140.123.103.87:800/': maxati9600
Password for 'http://maxati9600@140.123.103.87:800/':
Counting objects: 11, done.
Delta compression using up to 3 threads.
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 785 bytes, done.
Total 7 (delta 1), reused 0 (delta 0)
To http://140.123.103.87:800/maxati9600/HowDoYouTurnThisOn.git
 5c7d214..7918070  master -> master
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn#
```

# 密技

- git log

```
root@LiteWebServerPi:/var/www/HowDoYouTurnThisOn# git log
commit 7918070d2773142b5b713523d525aabec818a8bc
Merge: d0f99c5 5c7d214
Author: 彭敏敏 <maxati9600@gmail.com>
Date: Sat Oct 24 23:25:28 2015 +0800

    Add main.c 新增主程式

commit d0f99c52bcb523f0f55a03918c7b20b6aa20d284
Author: 彭敏敏 <maxati9600@gmail.com>
Date: Sat Oct 24 23:05:05 2015 +0800

    Add main.c 新增主程式

commit 3121c73964c0803178022d6c6504d92346f6a822
Author: 彭敏敏 <maxati9600@gmail.com>
Date: Sat Oct 24 22:52:12 2015 +0800

    Update for README.md 新增專案敘述

commit 1520d4a30387f4e39b8e1f7b6edc22a9a21d0884
Author: 彭敏敏 <maxati9600@gmail.com>
Date: Sat Oct 24 22:44:24 2015 +0800

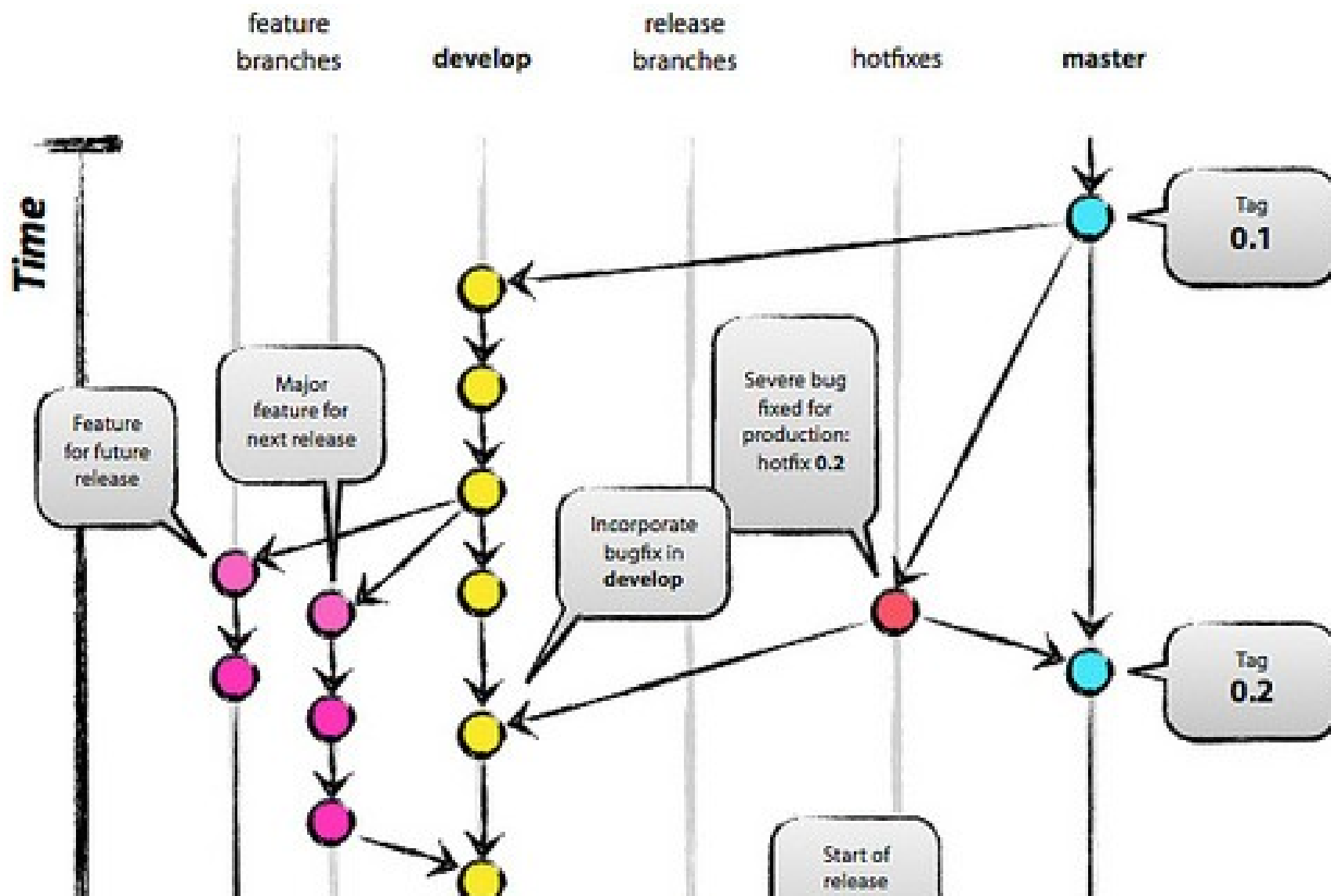
    first commit for README.md

commit 5c7d214a6361ddf47b6d8076c2a307e1ea3b40a5
```

# 密技

- `git reset --hard HEAD~1` // 回復前一次版本
- `git reset --hard HEAD~2` // 回復前兩次版本
- `git reset --hard HEAD~3` // 回復前三次版本

# 分支



# 其他指令 - 分支

- `git branch -b 敏敏的分支`
  - `git branch 敏敏的分支`  
// 開啟支線任務 “敏敏的分支”
  - `git checkout 敏敏的分支`  
// 切換到支線任務 “敏敏的分支”



# 其他指令 - 合併

- git checkout master  
// 切換到要被保留的主線 (master)
- git merge 敏敏的分支  
// 合併支線任務 ( 敏敏的分支 )

# 其他注意事項

- 帳號密碼不要備份在公開的 git
- 別直接在 web 資料夾做 git 備份

End

# Ref

- Git 使用教學 Part 1 -- 新手上路
  - <http://disp.cc/b/546-3iO2>
- Git 使用教學 Part 2 -- 控制版本
  - <http://disp.cc/b/546-3iGz>
- Git 使用教學 Part 3 -- 多人作業
  - <http://disp.cc/b/546-3j0H>
- Git 簡易教學 ( 含相關參考文件 )
  - [git url](#)

# Ref

- 進階操作

<http://denny.one/SITCON-Workshop-2015-Apr-git>

- 學習 Git Branch

<http://pcottle.github.io/learnGitBranching/>