

# Git + Source Tree

## 入門教學

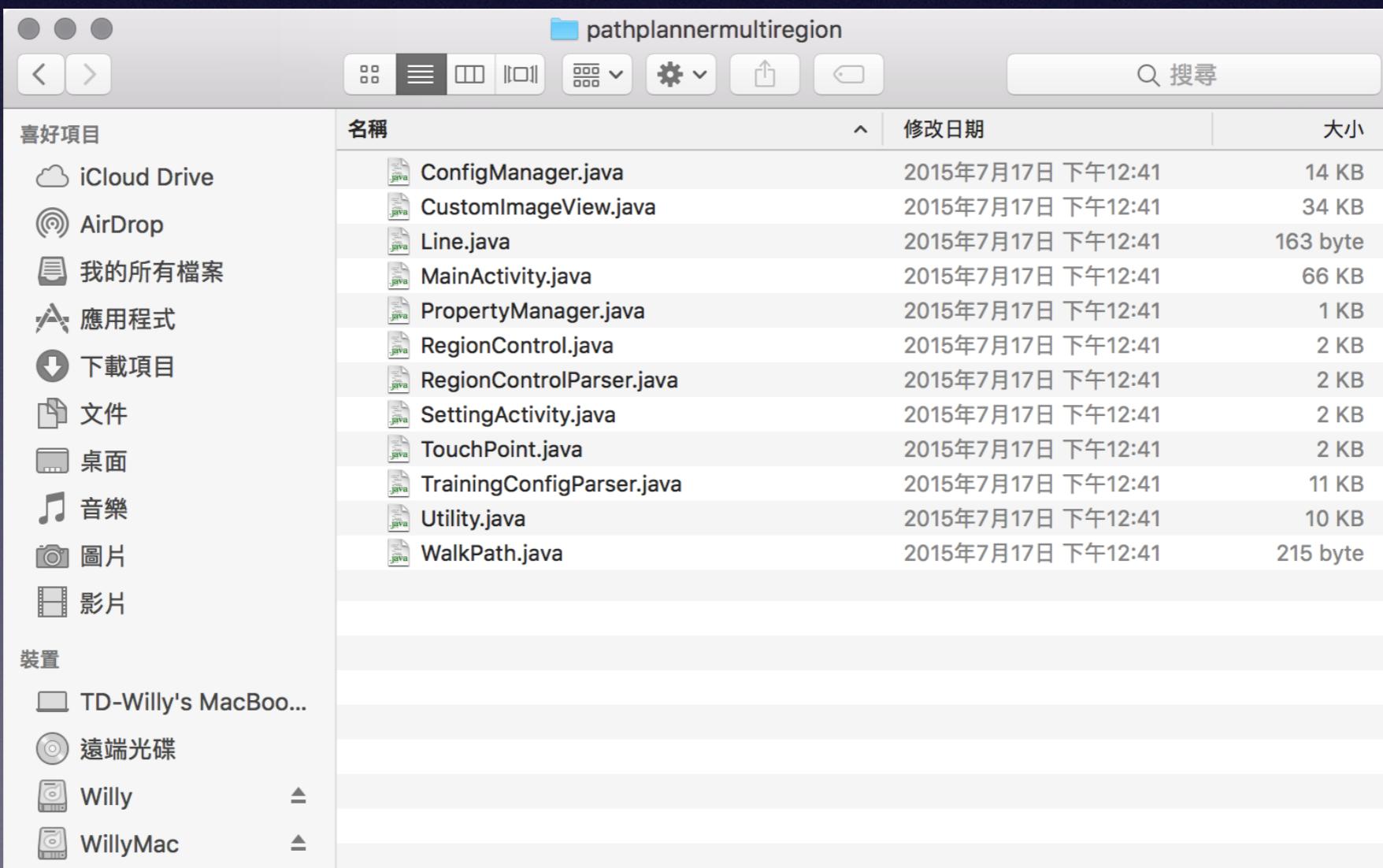
By 嘉偉



任何事情都是從一個故事開始的.....

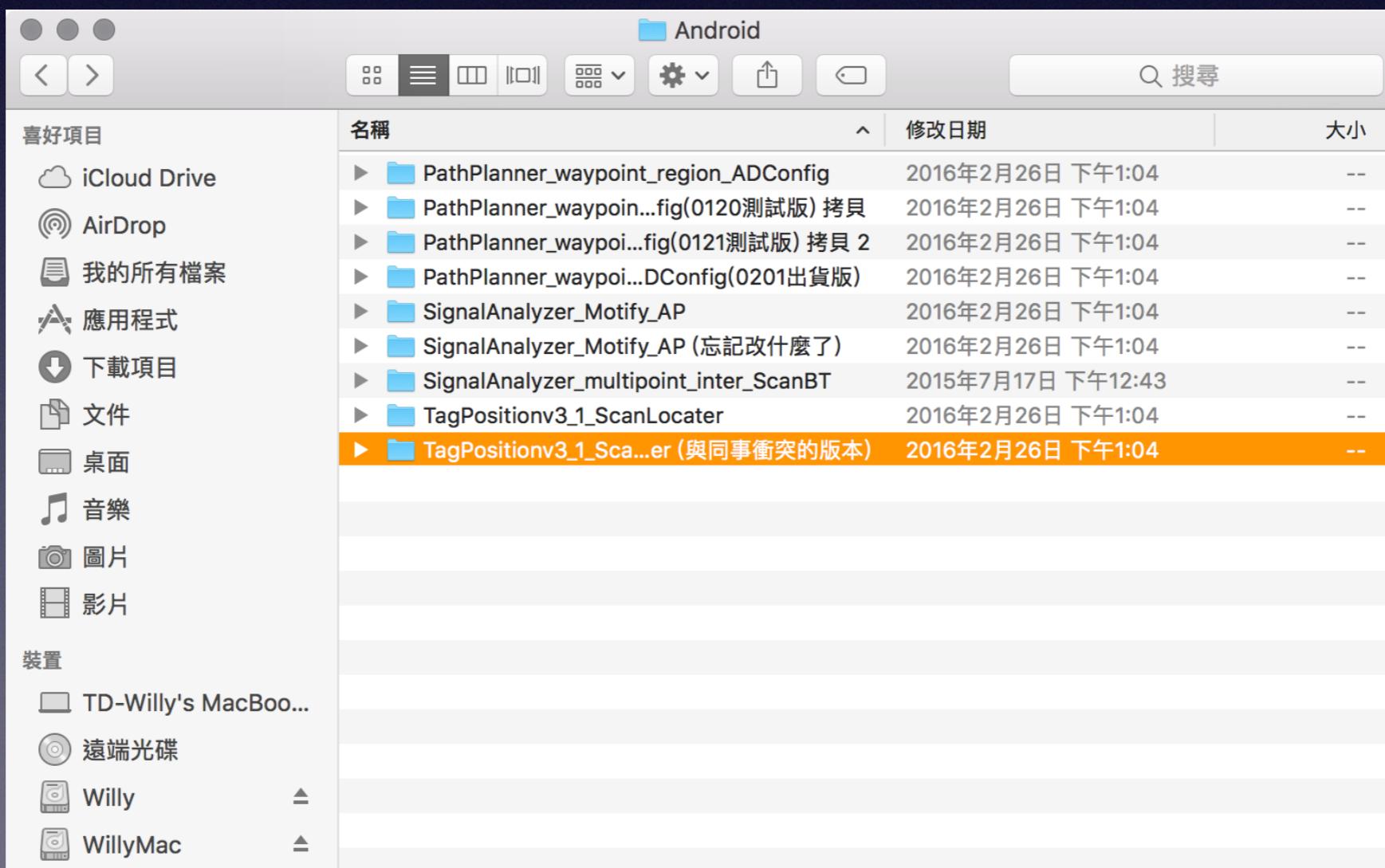
# 只有自己一個在寫Code

- 程式越寫越雜，檔案越來越多...



# 有兩個人以上再寫code

- 那些年，一起挖洞的夥伴...



突然！有一天老闆要求你拿出某一天給某個客戶的版本出來~~

然後呢.....

然後你就死掉了

那你老闆呢？？



所以！  
你需要一個版本控制的工具

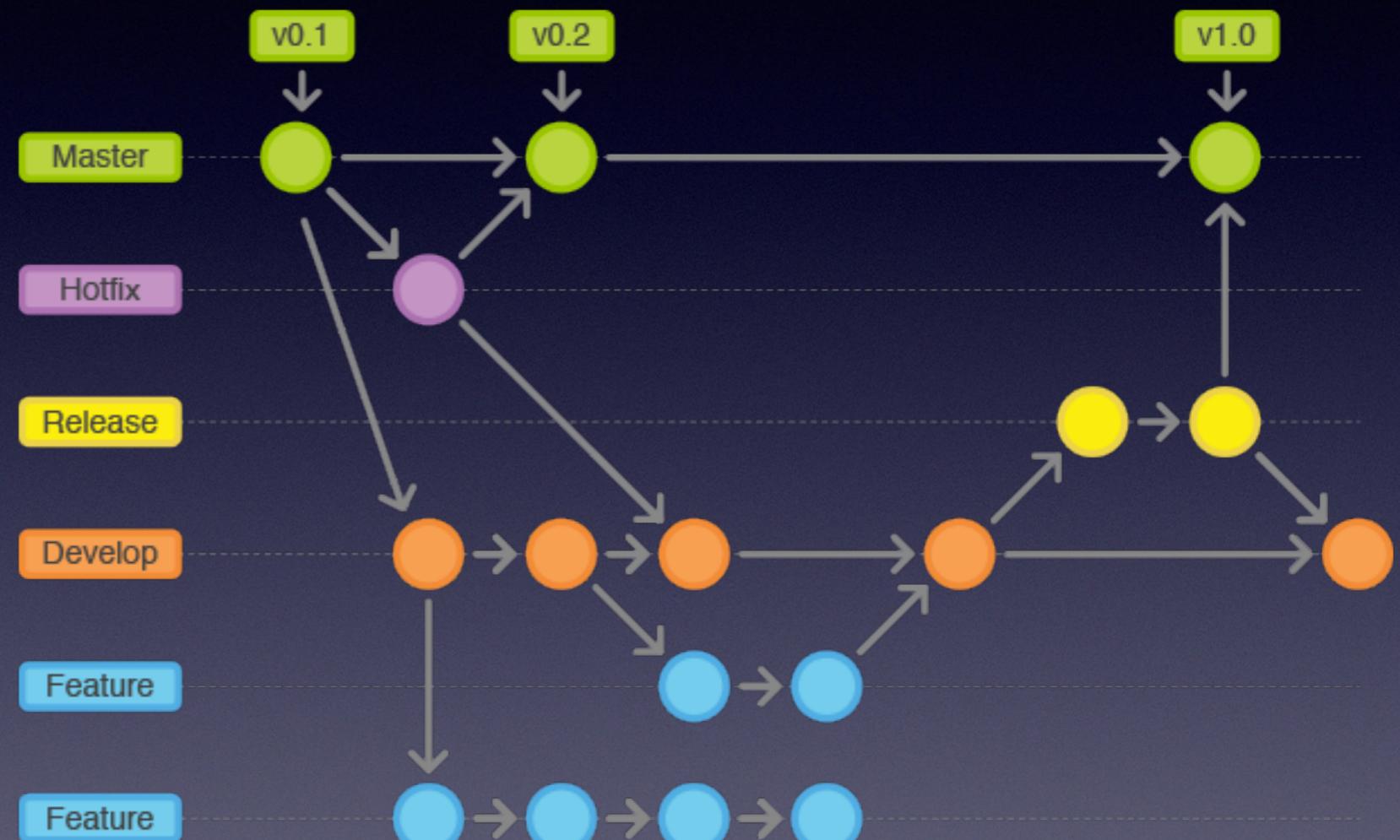
# 什麼是版本控制？

- 儲存進度
- 讀取進度
- 管理紀錄



# 版本控制可以幹嘛？

- 知道為何修改
- 知道何時修改
- 知道修改了什麼
- 知道是誰改的
- 切換到過去的進度
- 切換不同的branch
- 合併不同的branch



但其實……

# 我在打网游



不怕神一樣的對手，只怕豬一樣的隊友

在我們開始前需要準備的東西

# 申請Git帳號

- GitHub：需要付費才可以把專案設為private  
<https://github.com/>
- BitBucket：可以把專案設為private，五人協作內免費  
<https://bitbucket.org/product>



好了！讓我們開始吧～

在Github上建立專案

[Overview](#)[Repositories 9](#)[Stars 0](#)[Followers 1](#)[Following 0](#)[Type: All ▾](#)[Language: All ▾](#) [New](#)

## HelloWorld

Updated 2 days ago

建立新的專案

# Willy

WillyWu0201

Developed MacOS App

Taiwan

## ComputerSecurity2017Spring

Splinter implement

TeX Updated 24 days ago

# Create a new repository

A repository contains all the files for your project, including the revision history.

Owner



WillyWu0201 ▾

Repository name

你專案的名稱

HelloWorld



Great repository names are short and memorable. Need inspiration? How about **supreme-octo-spork**.

Description (optional)

免錢的你只能選擇Public



Public

Anyone can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

建立一個markdown的檔案

Initialize this repository with a README

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: None ▾

Add a license: None ▾



Create repository

多人協作

<> Code Issues 0 Pull requests 0 Projects 0 Wiki Settings Insights ▾

- Options
- Collaborators**
- Branches
- Webhooks
- Integrations & services
- Deploy keys

**Collaborators** Push access to the repository

This repository doesn't have any collaborators yet. Use the form below to add a collaborator.

點這邊加入

Search by username, full name or email address

You'll only be able to find a GitHub user by their email address if they've chosen to list it publicly. Otherwise, use their username instead.

輸入對方的github ID

Add collaborator

-  Said Özcan
-  mariusddnet s
-  MintBIRDIE69 s
-  S7S8 S

# 刪除專案

## Danger Zone

### Make this repository private

Please [upgrade your plan](#) to make this repository private.

### Transfer ownership

Transfer this repository to another user or to an organization where you have the ability to create repositories.

[Transfer](#)

### Delete this repository

Once you delete a repository, there is no going back. Please be certain.

[Delete this repository](#)

Are you ABSOLUTELY sure?



Unexpected bad things will happen if you don't read this!

This action **CANNOT** be undone. This will permanently delete the **WillyWu0201>HelloWorld** repository, wiki, issues, and comments, and remove all collaborator associations.

Please enter your repository name to confirm deletion

HelloWorld



I understand the consequences, delete this repository

# Git command

# Git Status, Commit

- git status # 目前的狀態
- git commit # 提交
- git commit -m 'commit message' # 快速提交
- git commit -a # 所有修改的檔案都 commit，但是 untracked file 還是得要先 add
- git commit -v # 加入比對結果
- git commit —amend # 修改前一次提交



**ARE YOU SERIOUS?**

# Git Branch

- `git branch #` 列出目前有多少 branch
- `git branch new-branch #` 產生新的 branch (名稱: new-branch), 若沒有特別指定, 會由目前所在的 branch / master 直接複製一份.
- `git branch new-branch master #` 由 master 產生新的 branch(new-branch)
- `git checkout -b new-branch test #` 產生新的 branch, 並同時切換過去 new-branch
- `git branch -r #` 列出所有 Repository branch
- `git branch -a #` 列出所有 branch



其實還有很多其他功能的command....

以下介紹正常人類的用法

# 安裝Source Tree

- Source Tree  
<https://www.sourcetreeapp.com/>



把專案加到Source Tree

1 commit

1 branch

0 releases

1 contributor

Branch: master ▾

New pull request

Create new file

Upload files

Find file

Clone or download ▾

 WillyWu0201 Initial commit

 README.md

Initial commit

 README.md

Clone with HTTPS ⓘ

Use SSH

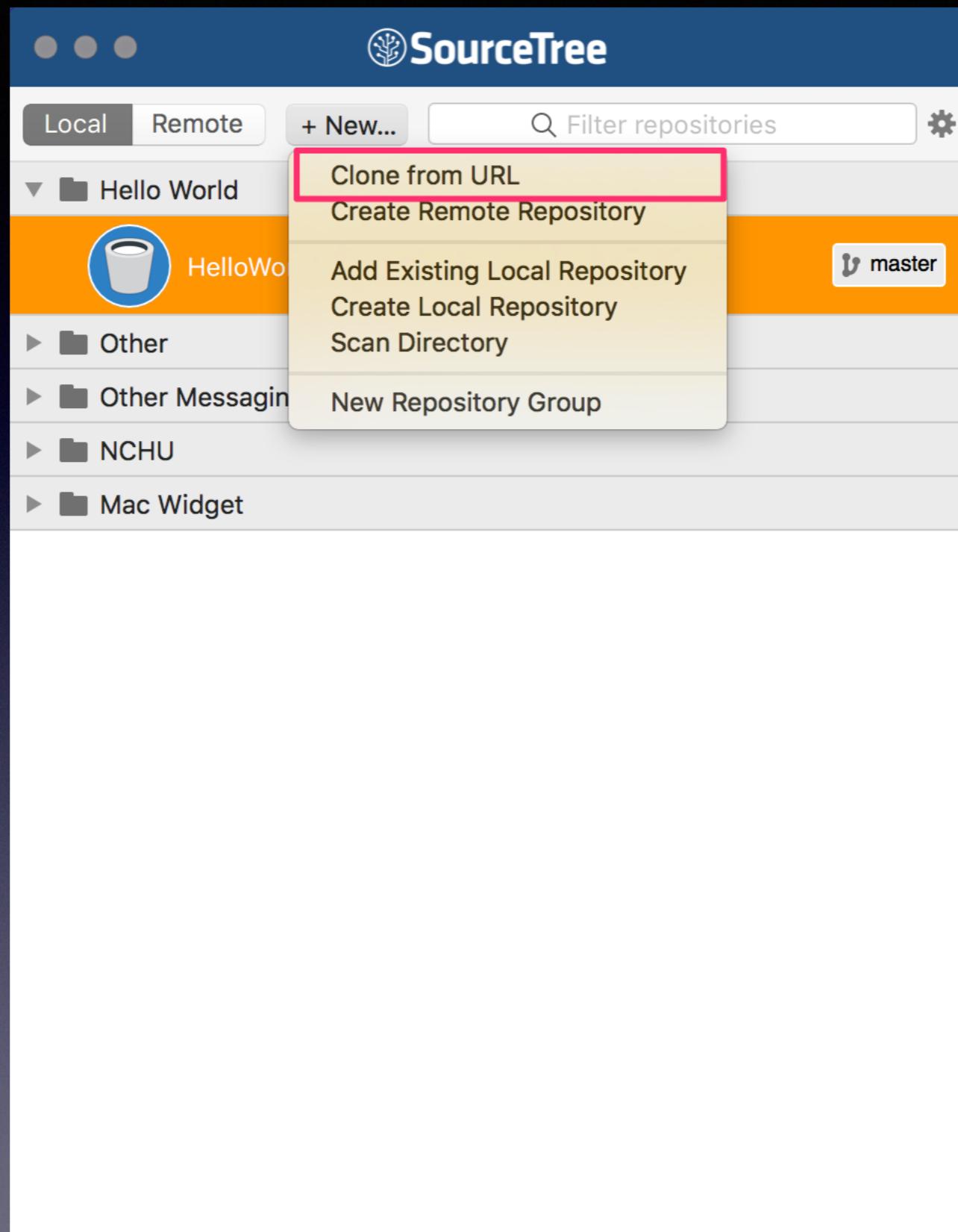
Use Git or checkout with SVN using the web URL.

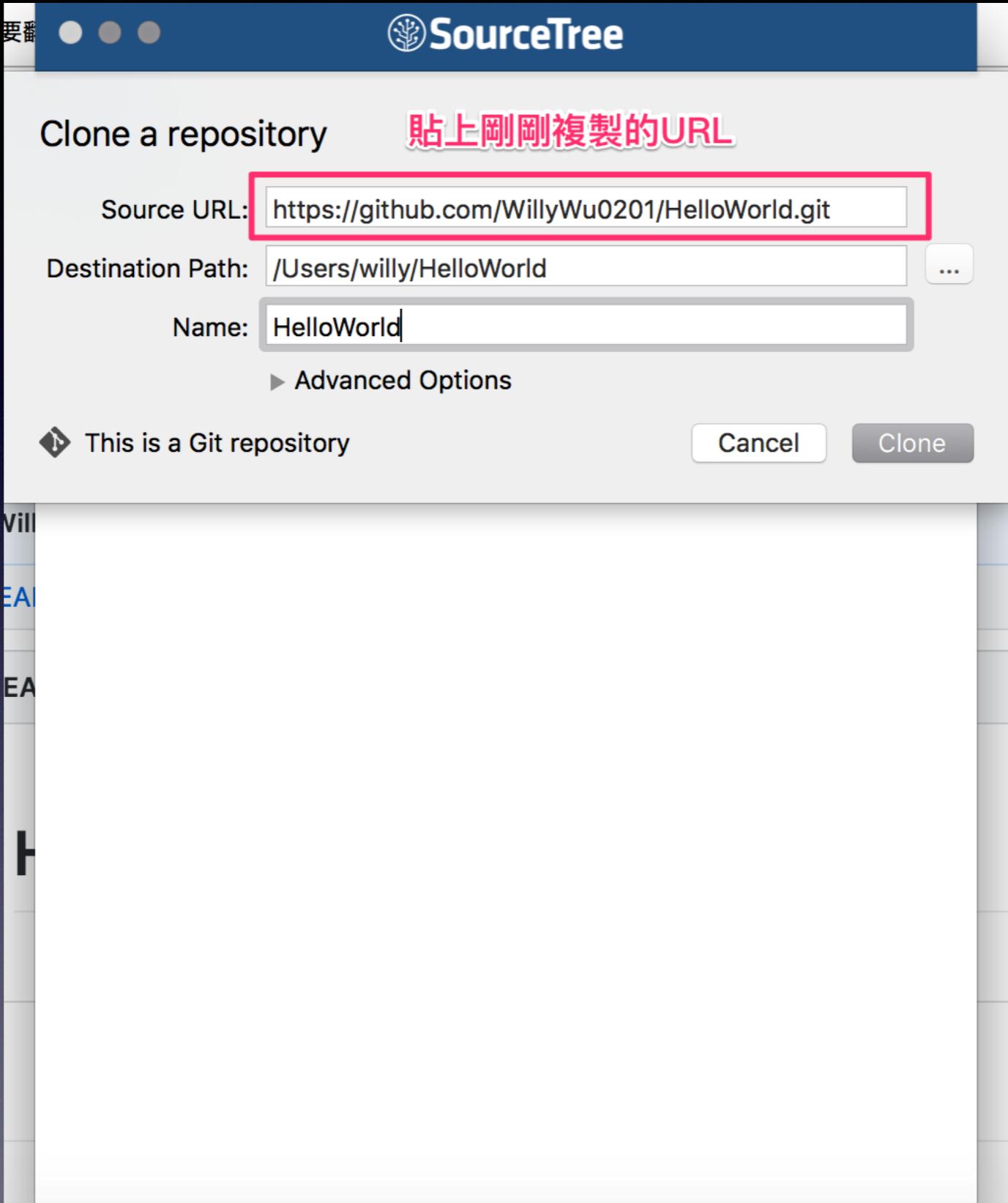
<https://github.com/WillyWu0201>HelloWorld>



[Open in browser](#) [複製這邊的網址](#) [Download ZIP](#)

# HelloWorld







Local Remote + New...

Filter repositories



▼ Hello World



HelloWorld

master

HelloWorld (Git)



Commit



Pull



Push



Fetch



Branch



Merge



Stash



Show in Finder



Terminal



Search



WORKSPACE

Pending files, sorted by path



Search



File status

History

Search

BRANCHES

master

TAGS

REMOTES

origin

STASHES

SUBMODULES

SUBTREES

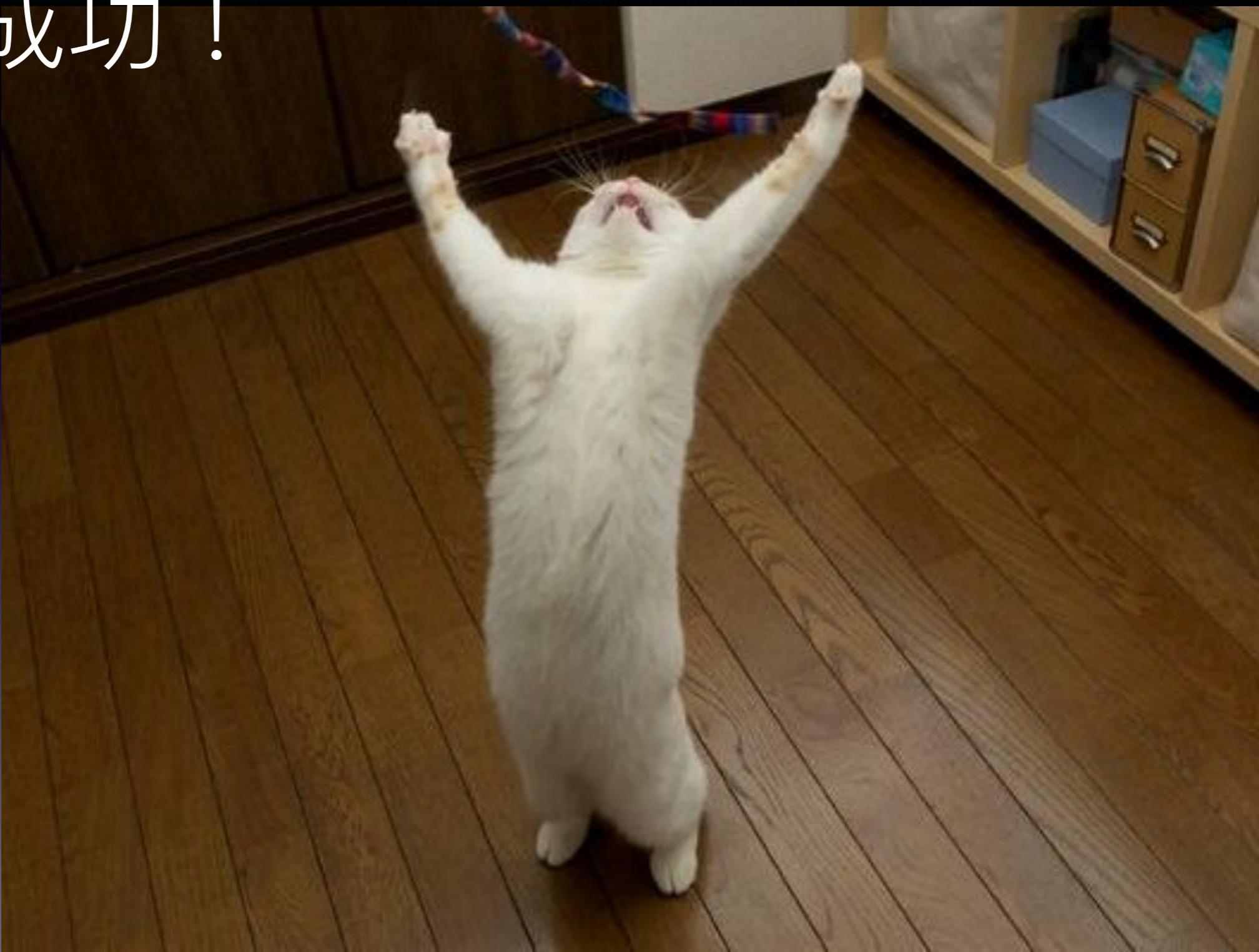
Nothing to commit

Open in Finder



Commit message

成功！



介紹Source Tree的介面

ComputerSecurity2017Spring (Git)

**與Local端互動**

**與remote端互動**

**Local端檔案的狀態**

**Local存在的branches**

**Remote端所有的branches**

**Commit過的歷史資料**

**修改檔案暫存區**

**每一個commit的內容**

Commit

Pull Push Fetch

Branch Merge Stash

Show in Finder Terminal Settings

Jump to:

WORKSPACE

File status

History

Search

BRANCHES

fss\_2party\_pf

fss\_util

master

ReprotDocument

TAGS

REMOTES

origin

fss\_2party\_pf

fss\_util

HEAD

master

ReprotDocument

STASHES

On fss\_util: test

SUBMODULES

SUBTREES

Graph Commit Author Description Date

a952261 [update] 6.3 程式截圖說明 附上github連結 Jun 23, 2017, 10:23...

eb80d1c [update] autor priority and report date Jun 23, 2017, 9:56 PM

d718a4b [update] Reference Jun 23, 2017, 9:46 PM

1f7f8f1 [update] Implementation 段落跟圖片 Jun 23, 2017, 7:43 PM

8bcc537 [update] Case Studies Jun 23, 2017, 7:33 PM

8c7a214 [update] Experimental Result Jun 23, 2017, 10:48...

caca269 [update] Reference Jun 23, 2017, 12:59...

6ab93ef [update] Conclusion Jun 23, 2017, 12:32...

36ccf2f [update] Related Work Jun 23, 2017, 12:10 A...

2eaac15 [update] Threat Model Jun 23, 2017, 12:02...

29682d2 [update] Merge branch 'ReprotDocument' into fss\_util Jun 22, 2017, 11:54 P...

a4e302e [update] Case Studies Jun 22, 2017, 11:15 PM

be4999c [update] Experimental Result Jun 22, 2017, 12:32...

91dca81 [update] Reference Jun 22, 2017, 12:11 AM

7e62970 [update] Conclusion Jun 22, 2017, 12:07...

614164f [update] Related Work Jun 22, 2017, 12:19 A...

4f57b93 [update] Threat Model Jun 21, 2017, 11:58 PM

[update] no change Jun 21, 2017, 11:39 PM

document/Final Project.pdf

document/Final Project.tex

document/.texpadttmp/Final Project.aux

[update] autor priority and report date

Commit: d718a4be99f5f4a566961fefe89648d970444a9d [c]

Parents: 1f7f8f14ea

Date: 2017年6月23日 GMT+8 下午9:46:36

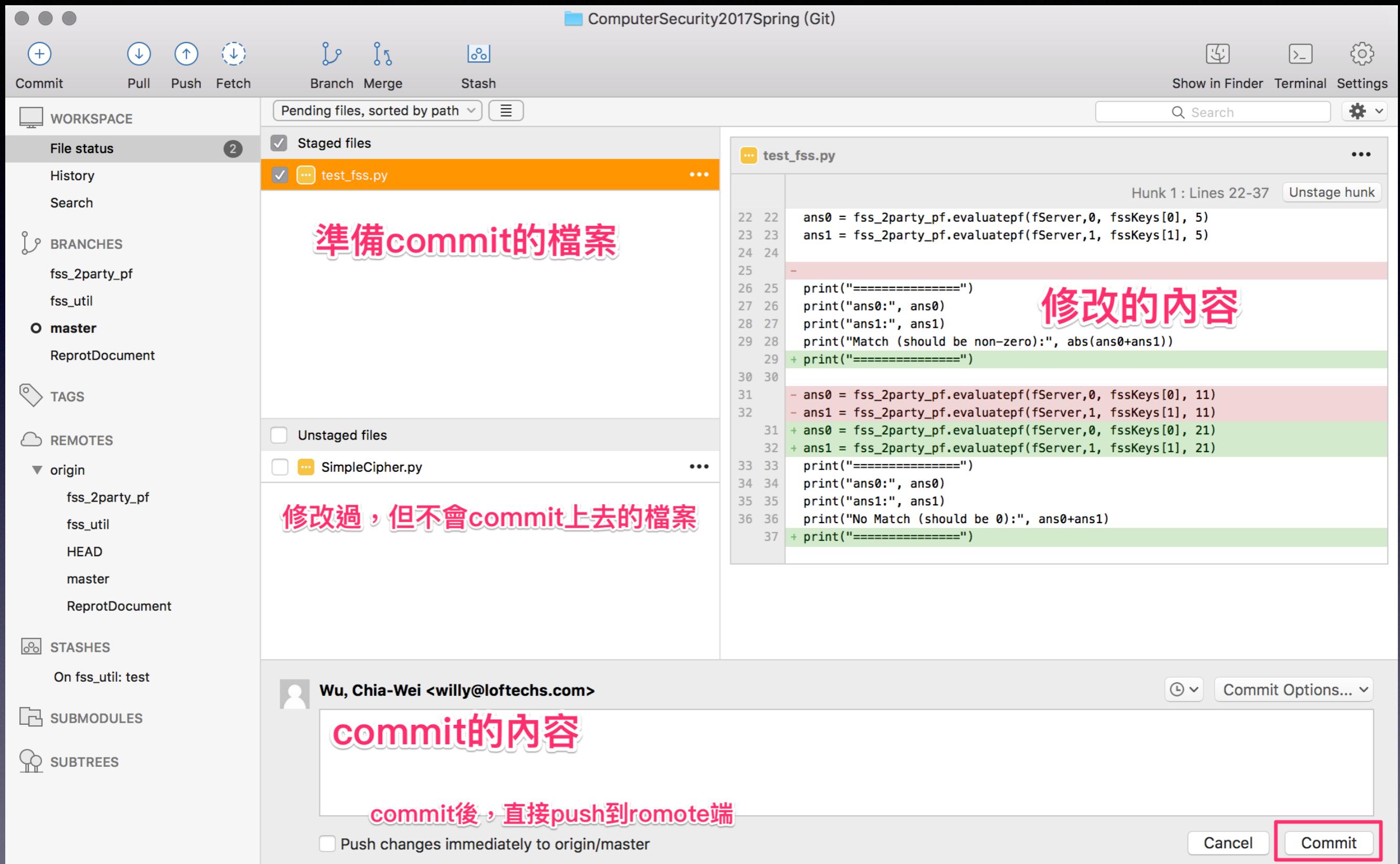
document/Final Project.pdf

Modified binary file

Before

After

開始寫點code吧...



取消修改的內容  
Discard File

ComputerSecurity2017Spring (Git)

Commit Pull Push Fetch Branch Merge Stash Show in Finder Terminal Settings

WORKSPACE File status 1

History Search

BRANCHES fss\_2party\_pf fss\_util

master ReproDocument test

TAGS

REMOTES origin fss\_2party\_pf fss\_util HEAD master ReproDocument

STASHES On fss\_util: test

SUBMODULES

SUBTREES

Pending files, sorted by path ⚡

Staged files

test\_fss.py

Hunk 1 : Lines 2-26

2 2 import fss\_initialize  
3 3 import fss\_2party\_pf  
4 4  
5 - #Generate fss Keys on client  
6 - #fClient's format = type Fss struct { @fss\_util  
7 + # Generate fss Keys on client  
8 fClient = fss\_initialize.ClientInitialize(6)  
9  
10 #Test with if x = 5, evaluate to 1  
11 + # Test with if x = 5, evaluate to 1  
12 - fssKeys = fss\_2party\_pf.generatetreepf(fClient,5, 1)  
13 + fssKeys = fss\_2party\_pf.generatetreepf(fClient, 11, 1)  
14  
15 - #Simulate server  
16 + # Simulate server  
17  
18 fServer = fss\_initialize.ServerInitialize(fClient.PrfKeys, fClient.NumBit  
19  
20 - #Test 2-party Equality Function  
21 + # Test 2-party Equality Function  
22 ans0 = 0  
23 ans1 = 0  
24  
25 - ans0 = fss\_2party\_pf.evaluatepf(fServer,0, fssKeys[0], 5)  
26 - ans1 = fss\_2party\_pf.evaluatepf(fServer,1, fssKeys[1], 5)  
27 + ans0 = fss\_2party\_pf.evaluatepf(fServer, 0, fssKeys[0], 5)  
28 + ans1 = fss\_2party\_pf.evaluatepf(fServer, 1, fssKeys[1], 5)  
29  
30 print("=====")

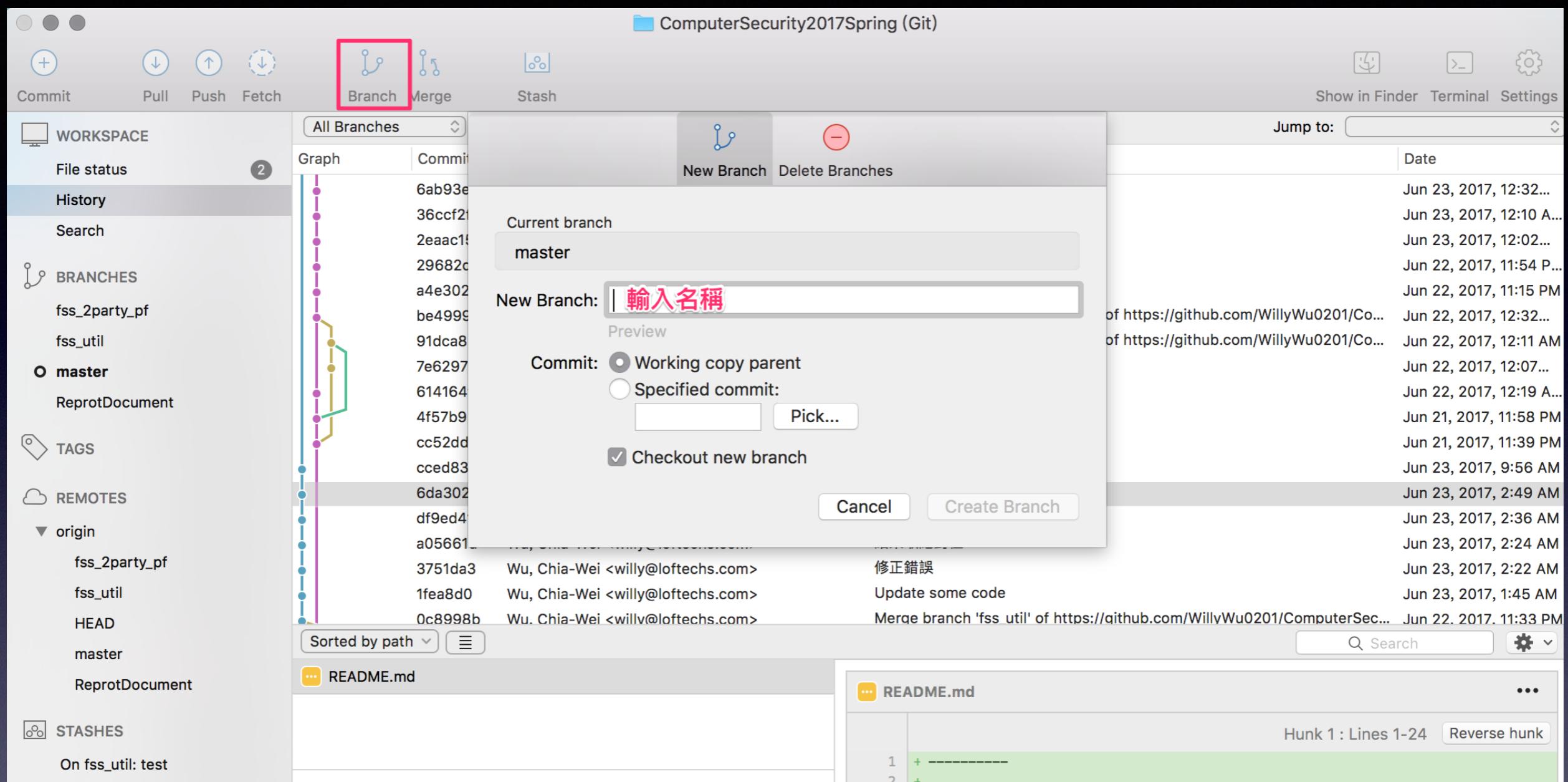
點要刪除的檔案後選擇Discard file

Stage file Discard file Remove file Ignore file Show in Finder

Commit message

# 建立新的branch

當你要開發新功能，或要release給某個客戶時



你可以用"/"來新增資料夾  
像是feature/test/0724\_improveUI

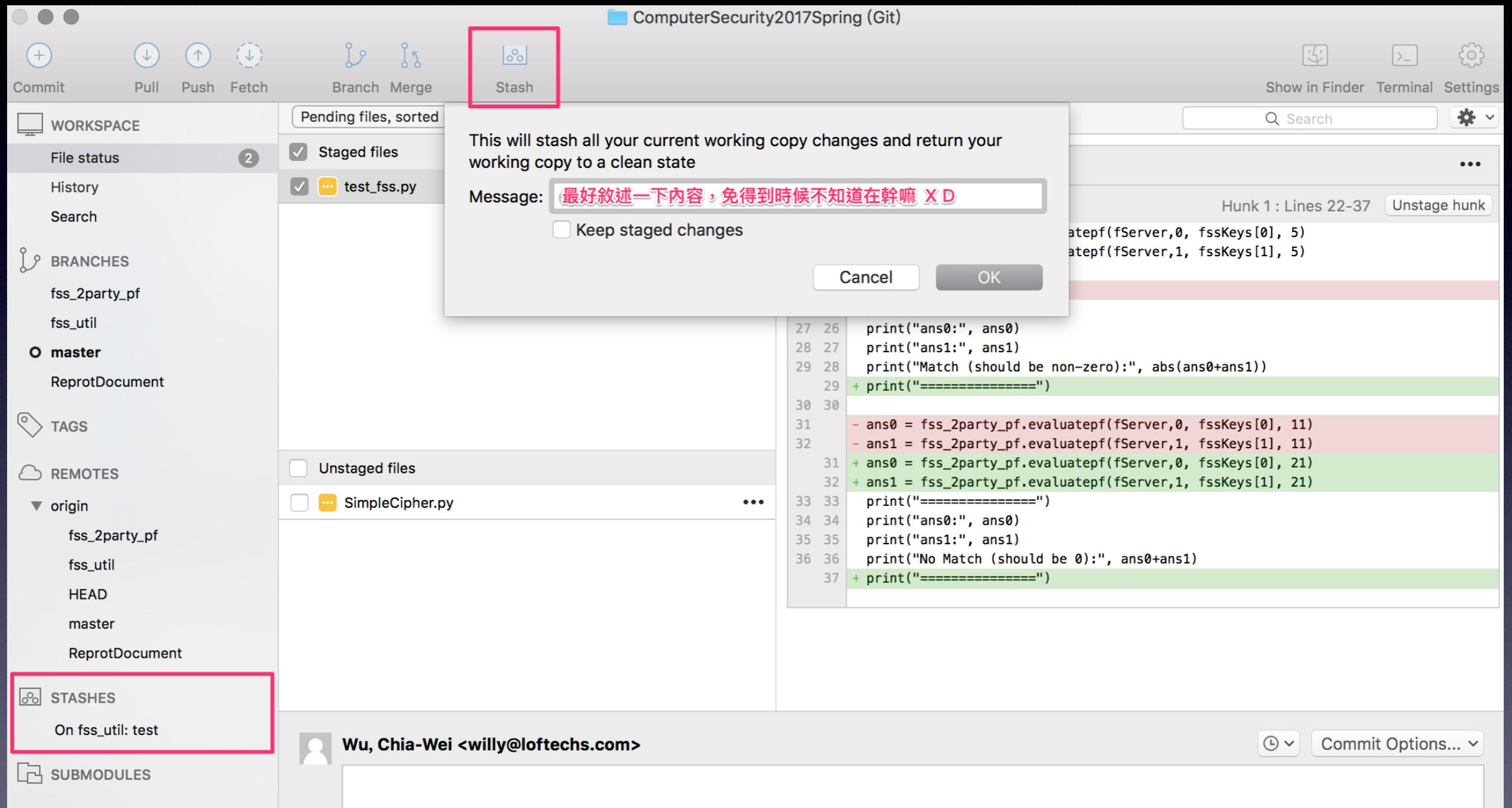
切換branches

阿就在你要的  
branches 點兩下  
就好了～



# Stash

當你開發到一半，被叫去處理bug或者被插件新功能時



# 合併 Merge

把別的branch的功能吃進來自己的branch

The screenshot shows the SourceTree application interface. The top navigation bar includes 'Commit', 'Pull', 'Push', 'Fetch', 'Branch', 'Merge', and 'Stash'. The main area displays a 'WORKSPACE' sidebar with 'File status', 'History', and 'Search' options, and a 'BRANCHES' section where 'master' is selected. A context menu is open over the 'willy' branch entry, listing options: 'Checkout 丟資料進去分析', 'Merge 丟資料進去分析 into master', and 'Rebase current changes onto 丟資料進去分析'. The 'Merge 丟資料進去分析 into master' option is highlighted with a red box. The background shows a commit history table with columns for 'Graph', 'Commit', 'Author', and 'Description', listing commits from 'edb64c' to 'b0032ed'. A file named '告內容2版.docx' is visible in the bottom right corner.

Graph	Commit	Author	Description
	edb64c	Wu	補上4個參
	49e0a19	Wu	新版test2
	793f65a	Wu	圖檔和數據
	ebb3659	Wu	SO2的圖可
	16ad5d0	Wu	丟資料進去
	122449c	Wu	origin/w
	906d58c	Wu	畫出4個參
	a967068	Wu	畫SO2的曲
	b0032ed	Wu	上傳CSV檔
			Merge bran
			Merge bran
			加入2017的
			抓到欄位後
			合併成一個
			顯示2010~

因為是把別的branch吃進來，所以一定要確認你所在的branch

# 解衝突

當別的branch修改的地方跟你自己branch修改的地方有相同時



當衝突發生時，你要自行判斷哪一段才是你要的code

ComputerSecurity2017Spring (Git)

WORKSPACE

File status 1

History

Search

BRANCHES

fss\_2party\_pf

fss\_util

master

ReprotDocument

test

TAGS

REMOTES

origin

fss\_2party\_pf

fss\_util

HEAD

master

ReprotDocument

STASHES

On fss\_util: test

SUBMODULES

SUBTREES

Pending files, sorted by path

Staged files

SimpleCipher.py

Hunk 1 : Lines 14-24 Stage hunk Discard hunk

```
14 14     y[i] = l - 1 - int(x[i])
15 15     return y
16 16 + <<<<<< HEAD
17 17 + =====
18 18 + aa = [0,0,0,0,0,0,0]
19 19 + >>>>> fss_util
20 20
21 21
22 22
23 23
24 24
```

Hunk 2 : Lines 26-33 Stage hunk Discard hunk

```
21 26     test[i] = str(i + 54)
22 27
23 28 # 0-255
24 29 + <<<<<< HEAD
25 30     print(encrypt(test, 256))
26 31 + =====
27 32 + print(encrypt(aa,256))
28 33 + >>>>> fss_util
29 34
30 35
```

Commit message

# Cherry Pick

當你只需要別的branch某一個commit時

ComputerSecurity2017Spring (Git)

Commit Pull Push Fetch Branch Merge Stash

WORKSPACE  
File status  
History  
Search

BRANCHES  
fss\_2party\_pf  
fss\_util  
**master**  
ReprotDocument

TAGS

REMOTES  
origin  
fss\_2party\_pf  
fss\_util  
HEAD  
master  
ReprotDocument

STASHES

All Branches Show Remote Branches Ancestor Order

Graph Commit Author Description

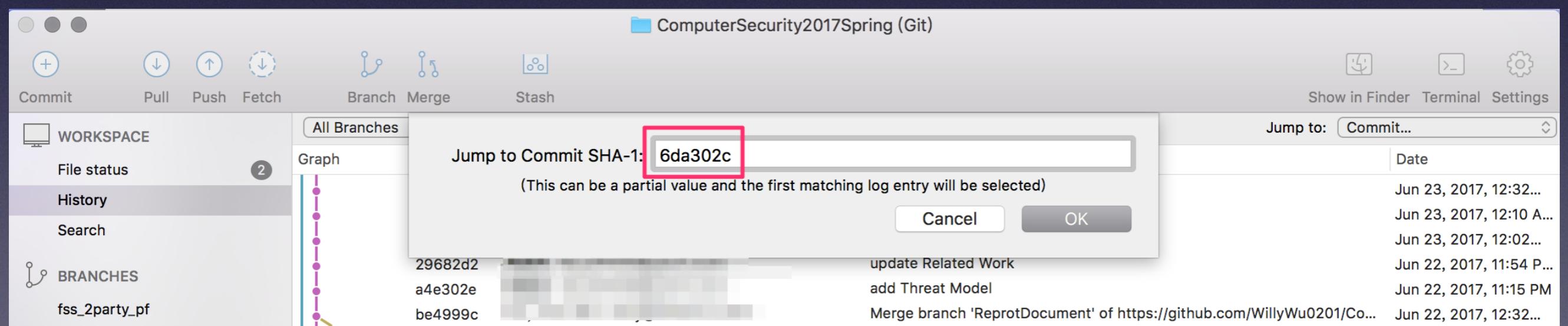
Graph	Commit	Author	Description
6da302c	6da302c	[REDACTED]	加上簡單的程式說明
df9ed41	df9ed41	[REDACTED]	加上截圖說明
a05661d	a05661d	[REDACTED]	結果取絕對值
3751da3	3751da3	[REDACTED]	
1fea8d0	1fea8d0	[REDACTED]	
0c8998b	0c8998b	[REDACTED]	
f93d590	f93d590	[REDACTED]	
b89a8a9	b89a8a9	[REDACTED]	
415feac	415feac	[REDACTED]	
42f6e79	42f6e79	[REDACTED]	
d02244f	d02244f	[REDACTED]	
ac7fdcf	ac7fdcf	[REDACTED]	
88b6c9c	88b6c9c	[REDACTED]	
44e11b0	44e11b0	[REDACTED]	
c1dcdee	c1dcdee	[REDACTED]	
fa652ea	fa652ea	[REDACTED]	
e83681e	e83681e	[REDACTED]	
4c95aa9	4c95aa9	[REDACTED]	

Sorted by path fss\_2party\_pf.py fss\_initialize.py

Checkout...  
Push revision...  
Merge...  
Rebase...  
Rebase children of 3751da3 interactively...  
Tag...  
Sign...  
Bookmark...  
Archive...  
Branch...  
Reset master to this commit  
Reverse commit...  
Create Patch...  
**Cherry Pick**  
Copy SHA-1 to Clipboard  
Custom Actions

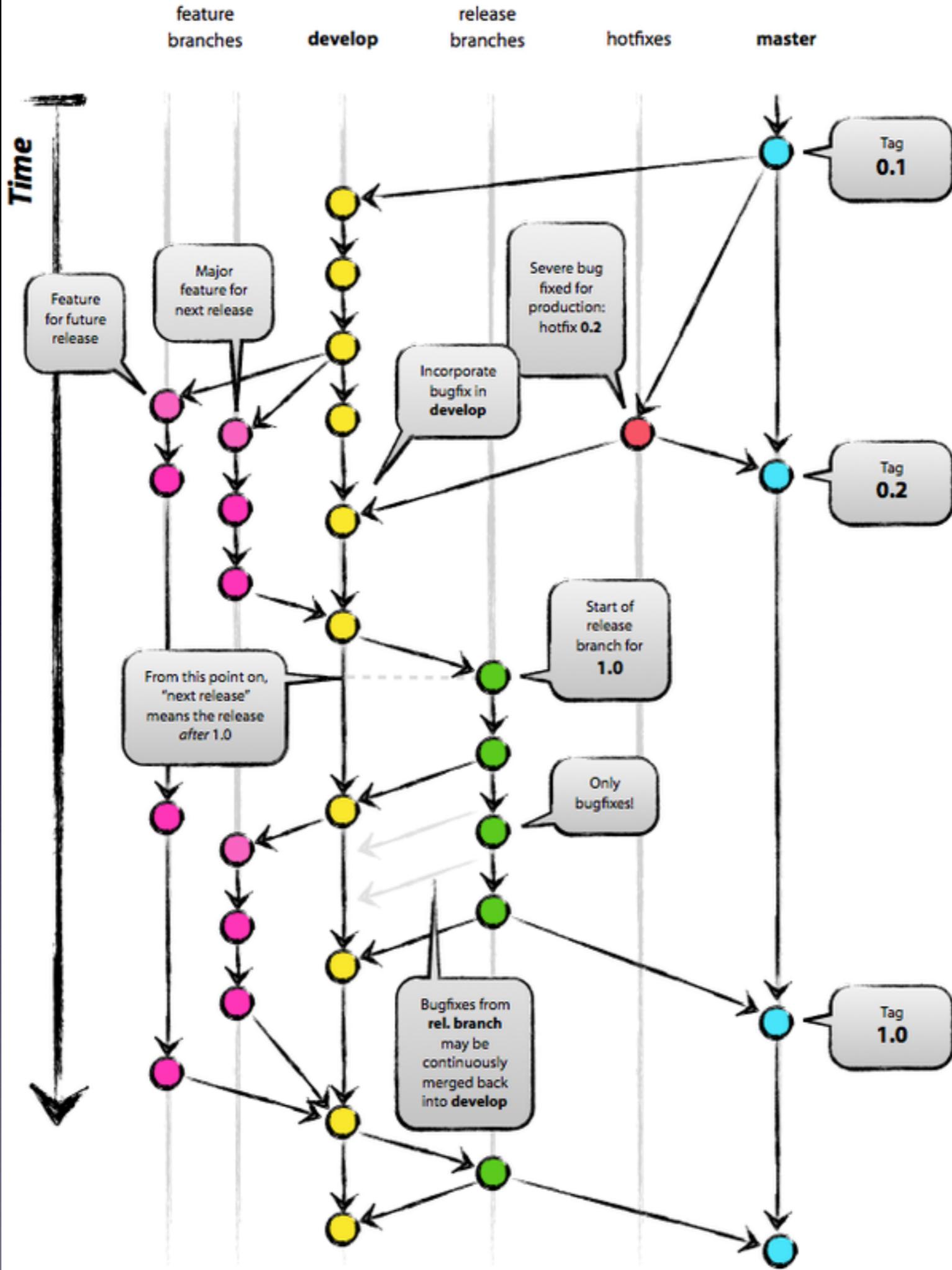
找出某次的commit

抓兇手？！



# Git Flow

為了你我的方便，請盡量照這方式實作



# Q&A

我其實已經沒什麼能教你了，所以別問太困難的！拜託...