

Git 與 GitHub

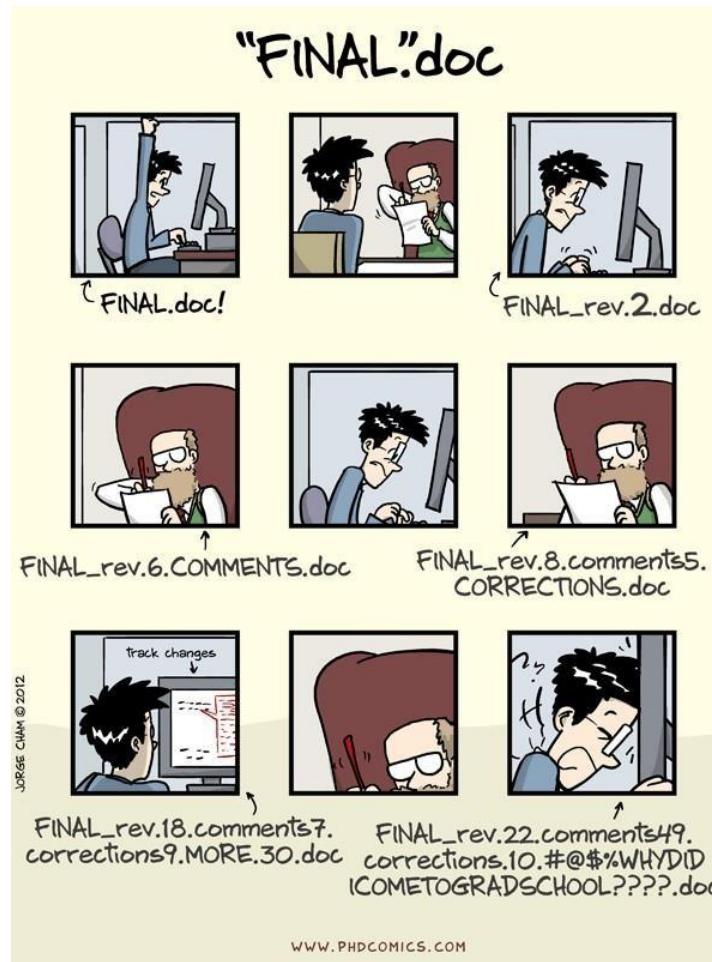
版本控制工具入門

以課程程式碼為範例

蔡東樟
輔仁大學 統計資訊學系

為什麼需要版本控制？

當你撰寫報告時，如果你想備份，你會怎麼做？



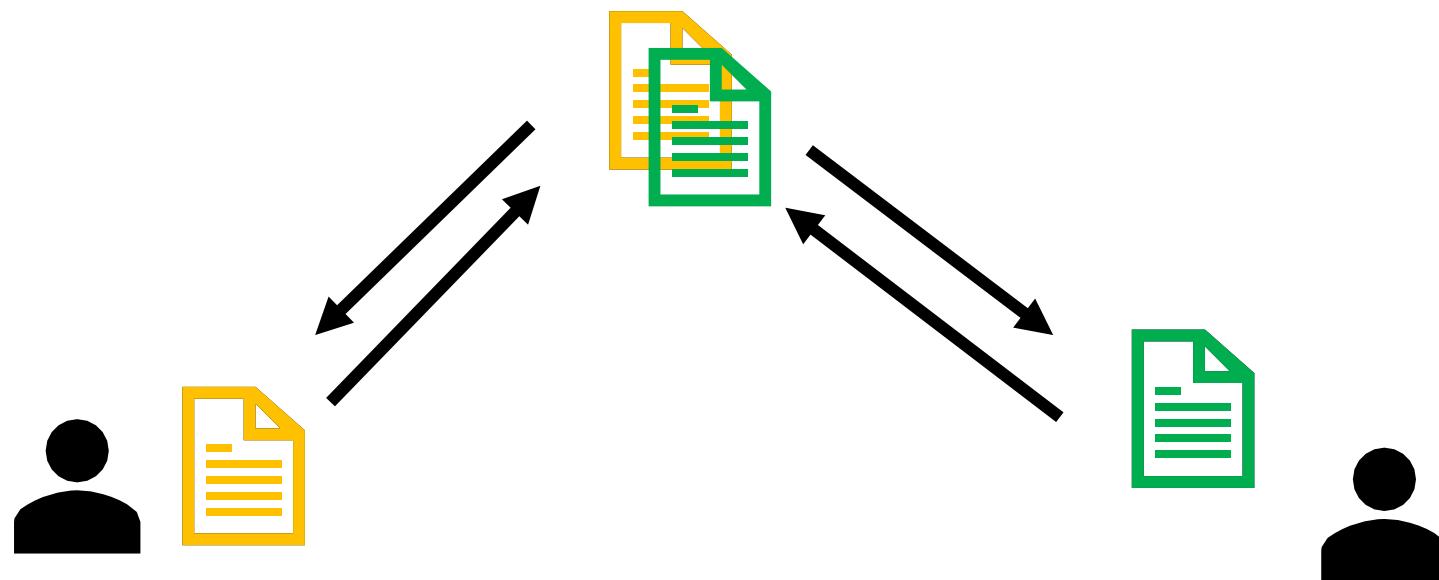
會發生什麼事？

- 很多版本檔案



會發生什麼事？

- 跟別人合作時.....

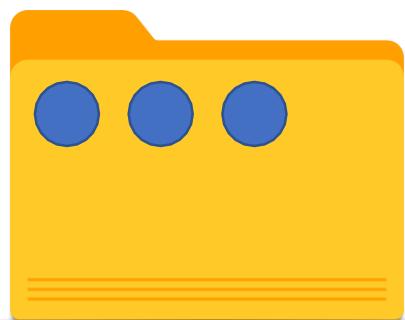


為什麼要版本控制

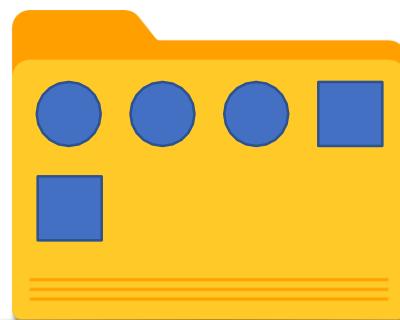
- 「凡走過必留下痕跡」
 - 追蹤歷程
 - 改了東西，不會改不回來
- 「三個臭皮匠勝過一個諸葛亮」
 - 大家一起改，不會互相干擾
 - 大家一起改，還能清楚知道對方改了什麼

什麼是「版本」？

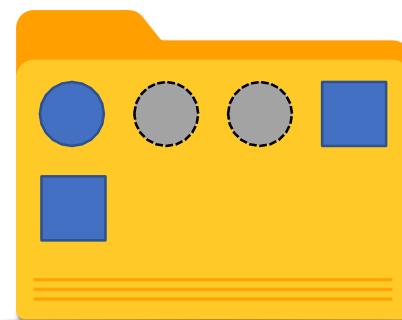
版本 1



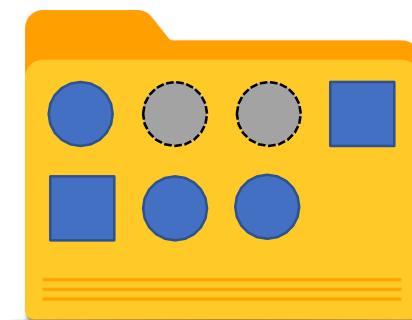
版本 2



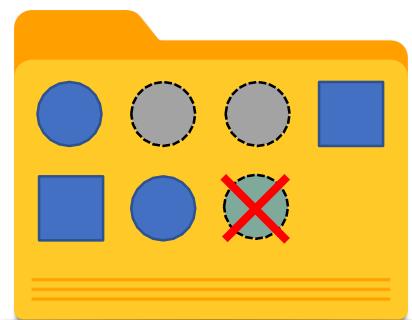
版本 3



版本 4



版本 5



Day 1

Day 2

Day 3

Day 4

Day 5

版本控制

- 什麼類型的內容適合版本控制
 - 程式原始碼
 - 測試程式碼
 - 伺服器的設定檔
 - 文件
 - 書籍
 - 網站內容



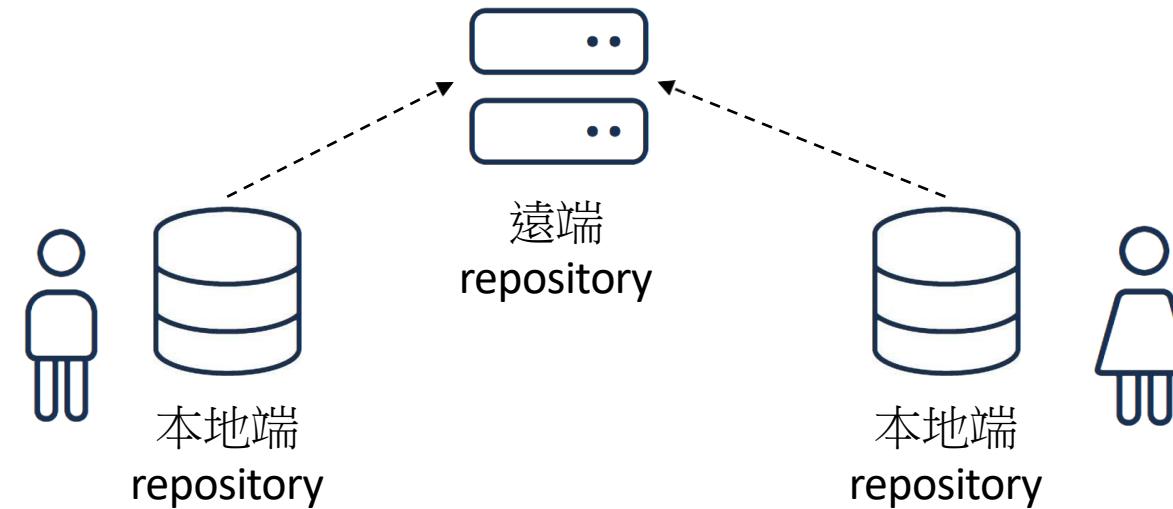
Git是什麼？

- 分散式的版本控制系統
- 開源軟體(open-source software)
 - 活耀的開源社群
 - 豐富的生態系支持
- 適合於多種不同類型的專案與工作流程
 - Linux作業系統開發即用Git管理



分散式版本控制系統

- 分散式版本控制系統具有三特性
 - 每一位使用者皆有自己本地端的專案歷程(repository)
 - 使用者可以離線使用版控系統
 - 可以方便地進行分散repository內容的同步工作



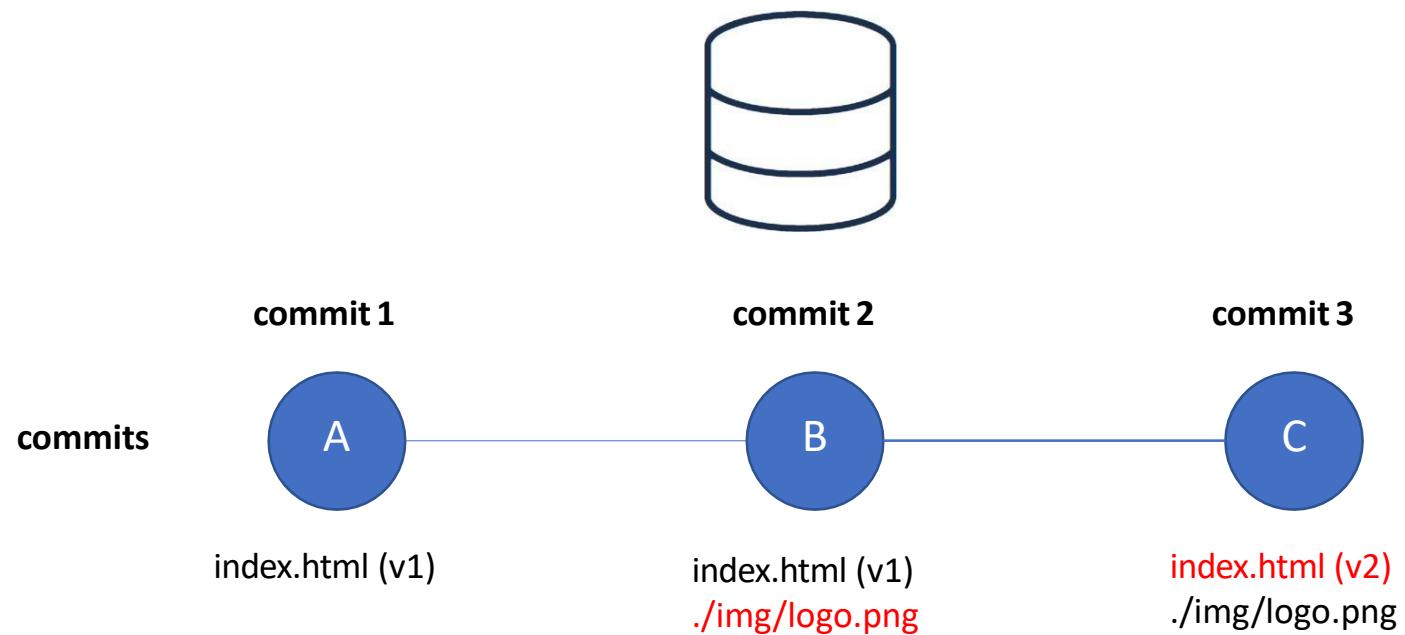
Git Commits

- Git記錄專案在不同時間的狀態，構成一個專案開發的**歷程**
- 專案中每個記錄版本稱為一個交付(commit)
- 每一次commit可視為專案在一個給定的時間點上的快照(snapshot)



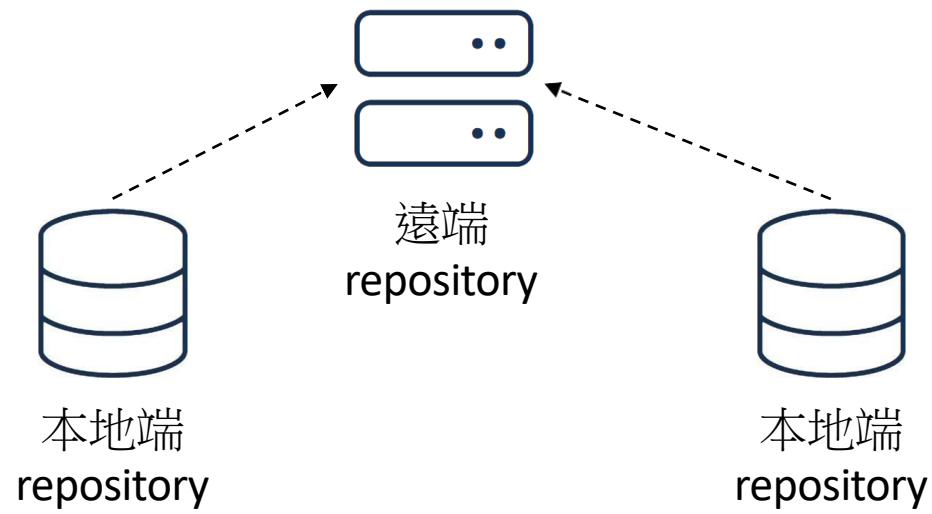
Git Repository是什麼？

- 一連串的專案快照(snapshot)或交付(commit)

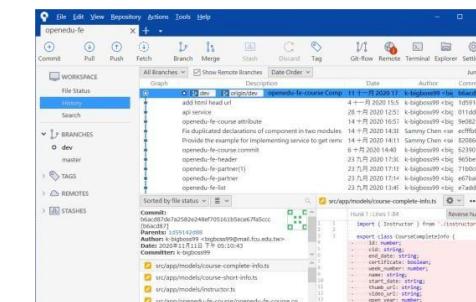


Git工具

- 指令(command line)模式與使用者介面(GUI)模式

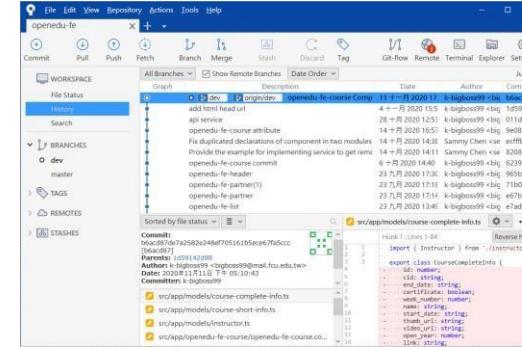


```
MINGW64/c/Users/sammy
$ git --version
git version 2.33.0.windows.2
$
```



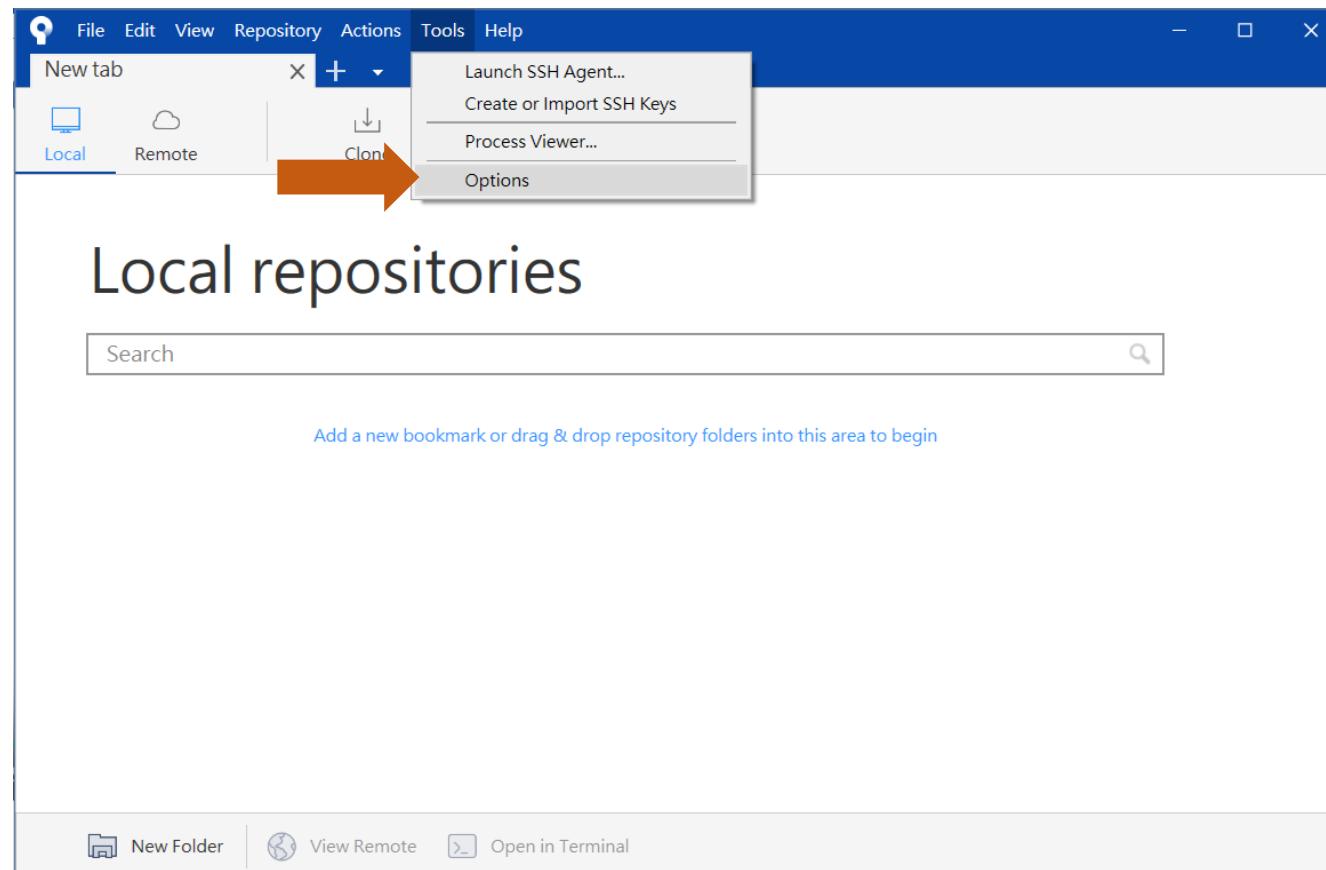
安裝SourceTree

- 圖形化Git客戶端工具
- 安裝SourceTree
 - <https://www.sourcetreeapp.com/>
- 其他圖形化Git客戶端工具
 - <https://git-scm.com/downloads/guis/>



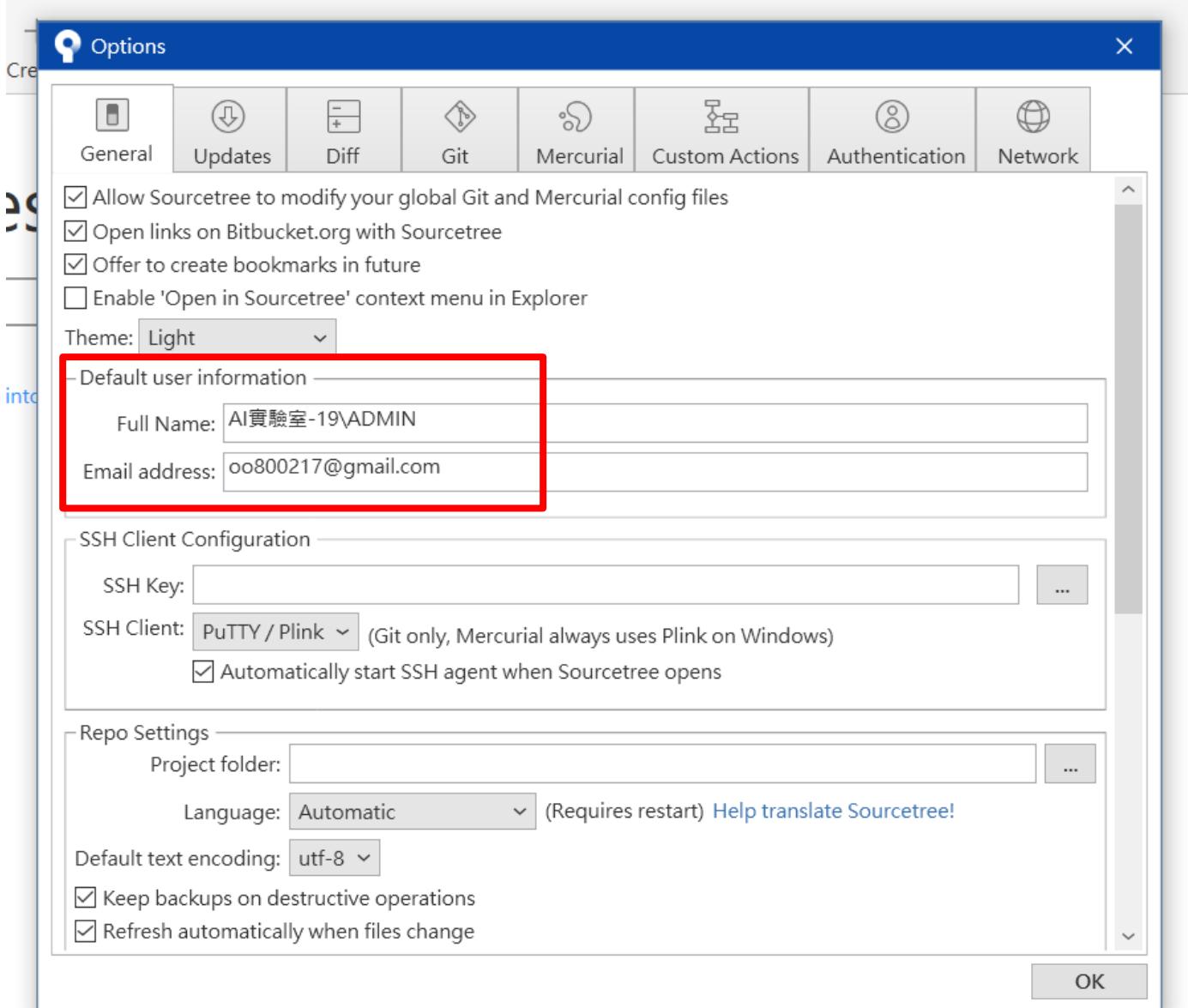
SourceTree

- 設定Git使用者資訊

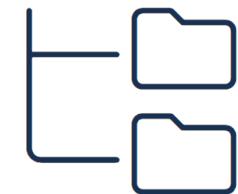


SourceTree

- 設定Git使用者資訊



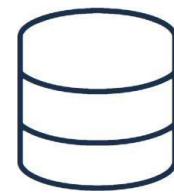
Git Locations



工作樹
(Working Tree)



待交付區域
(Stage Area/Index)



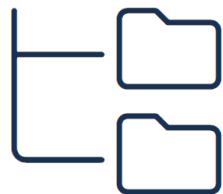
本地端儲存庫
(Local Repository)



遠端儲存庫
(Remote Repository)

單次交付(commit)
的檔案和目錄位置

Git Locations



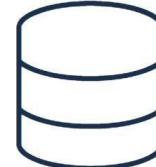
工作樹
(Working Tree)



待交付區域
(Stage Area/Index)



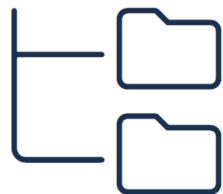
本地端儲存庫
(Local Repository)



遠端儲存庫
(Remote Repository)

預計下個交付
(commit)的
變更檔案群

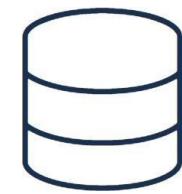
Git Locations



工作樹
(Working Tree)



待交付區域
(Stage Area/Index)



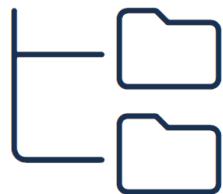
本地端儲存庫
(Local Repository)



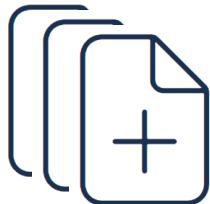
遠端儲存庫
(Remote Repository)

包含此專案的所有
交付(commit)歷程

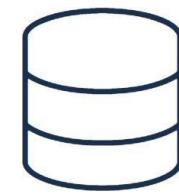
Git Locations



工作樹
(Working Tree)



待交付區域
(Stage Area/Index)



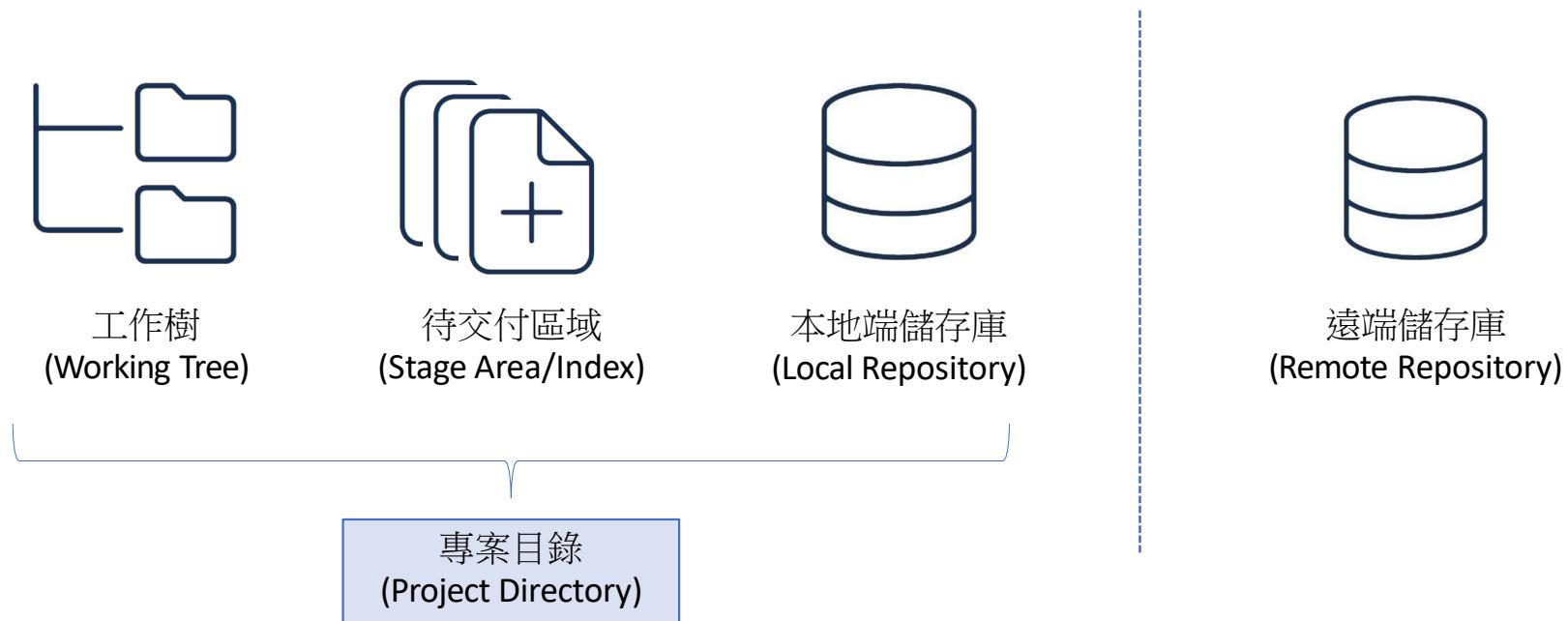
本地端儲存庫
(Local Repository)



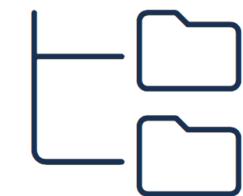
遠端儲存庫
(Remote Repository)

包含此專案的所有
交付(commit)歷程

Git Locations



Git Locations



工作樹
(Working Tree)



待交付區域
(Stage Area/Index)



本地端儲存庫
(Local Repository)



遠端儲存庫
(Remote Repository)

my-prj/
working tree
.git

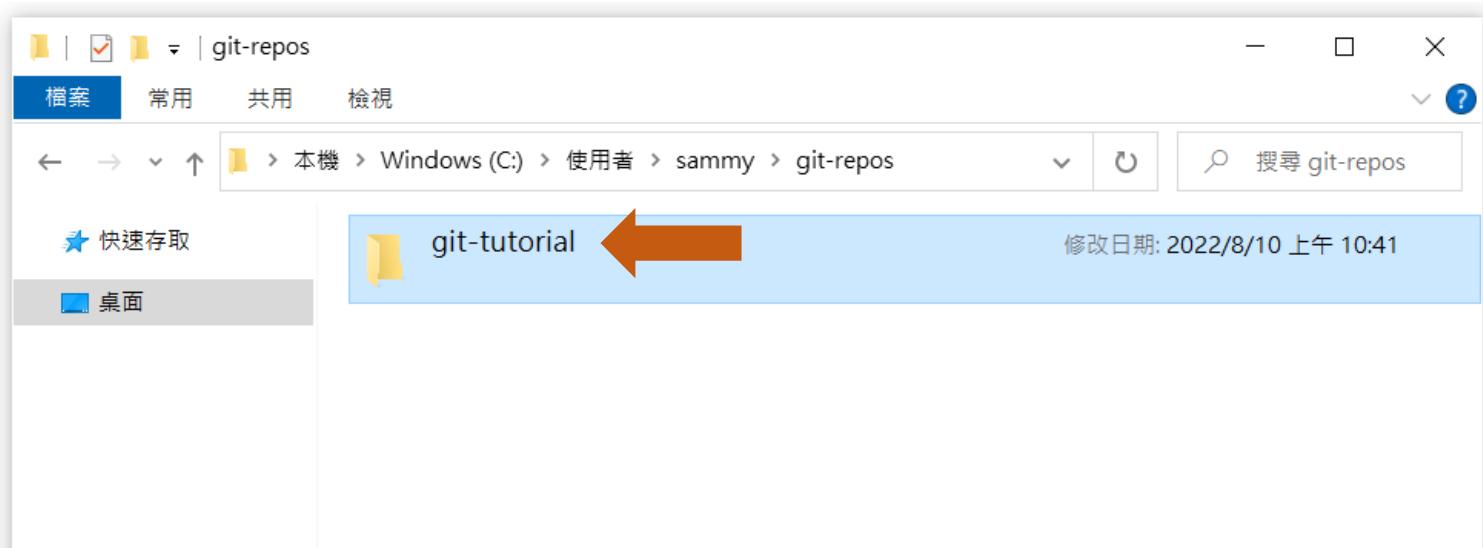
建立本地端儲存庫(local repository)

- 開啟檔案總管，建立版控專案**根**目錄
 - 用以管理所有的Git專案
 - e.g., 目錄名稱git-repos



建立本地端儲存庫(local repository)

- 開啟檔案總管，建立版控專案目錄(Working Tree)
 - e.g., 目錄名稱git-tutorial



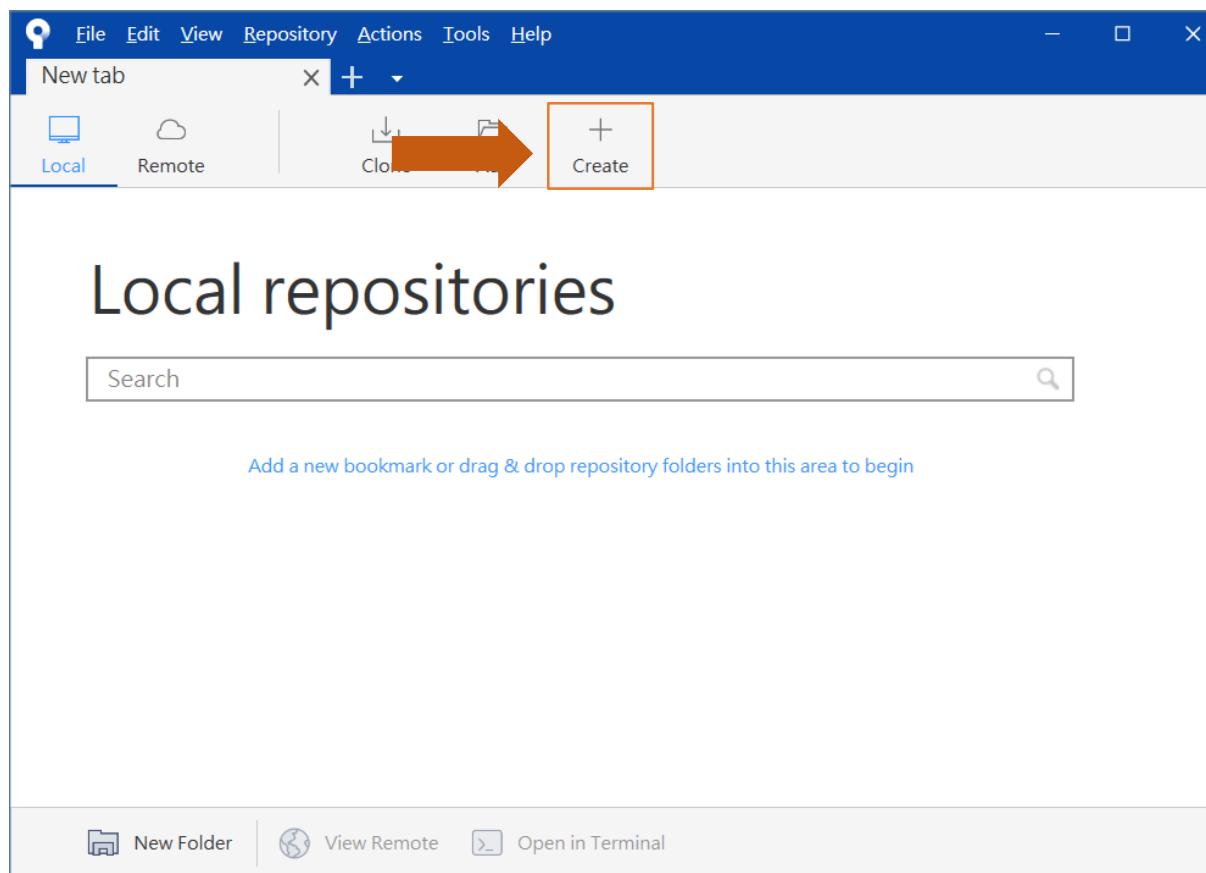
建立本地端儲存庫(local repository)

- 目前專案目錄無任何版控檔案



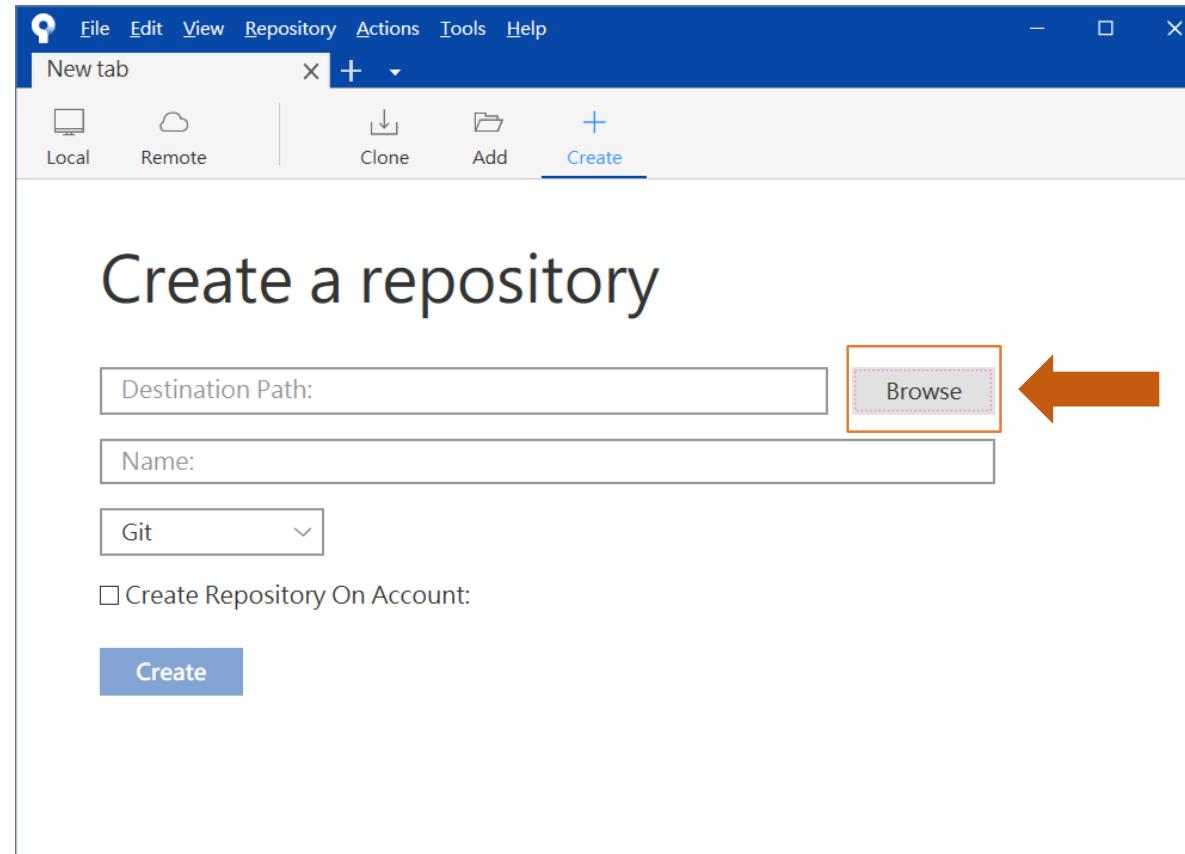
建立本地端儲存庫(local repository)

- 開啟SourceTree，建立本地端儲存庫



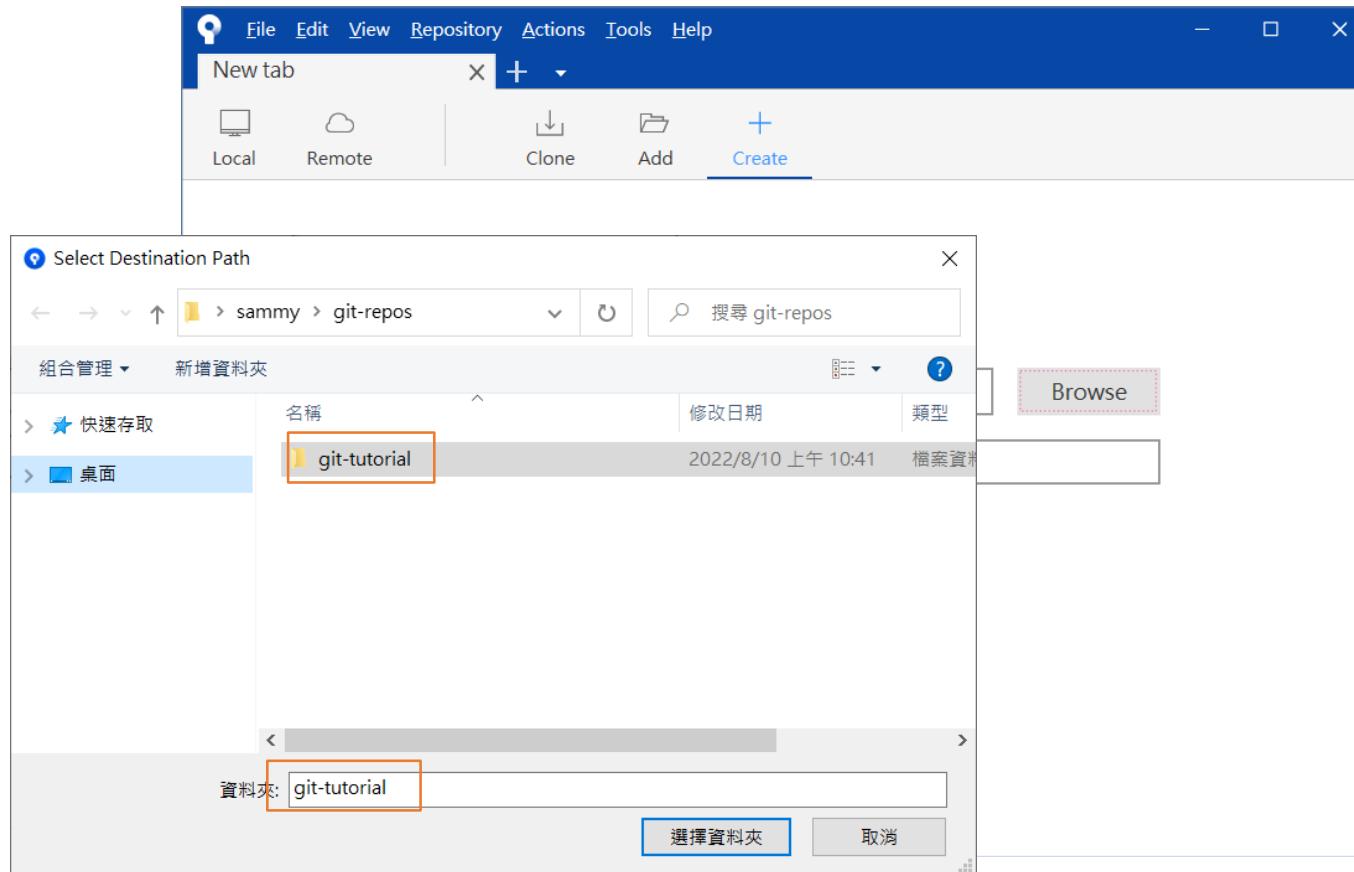
建立本地端儲存庫(local repository)

- 開啟SourceTree，設定版控工作目錄(working tree)



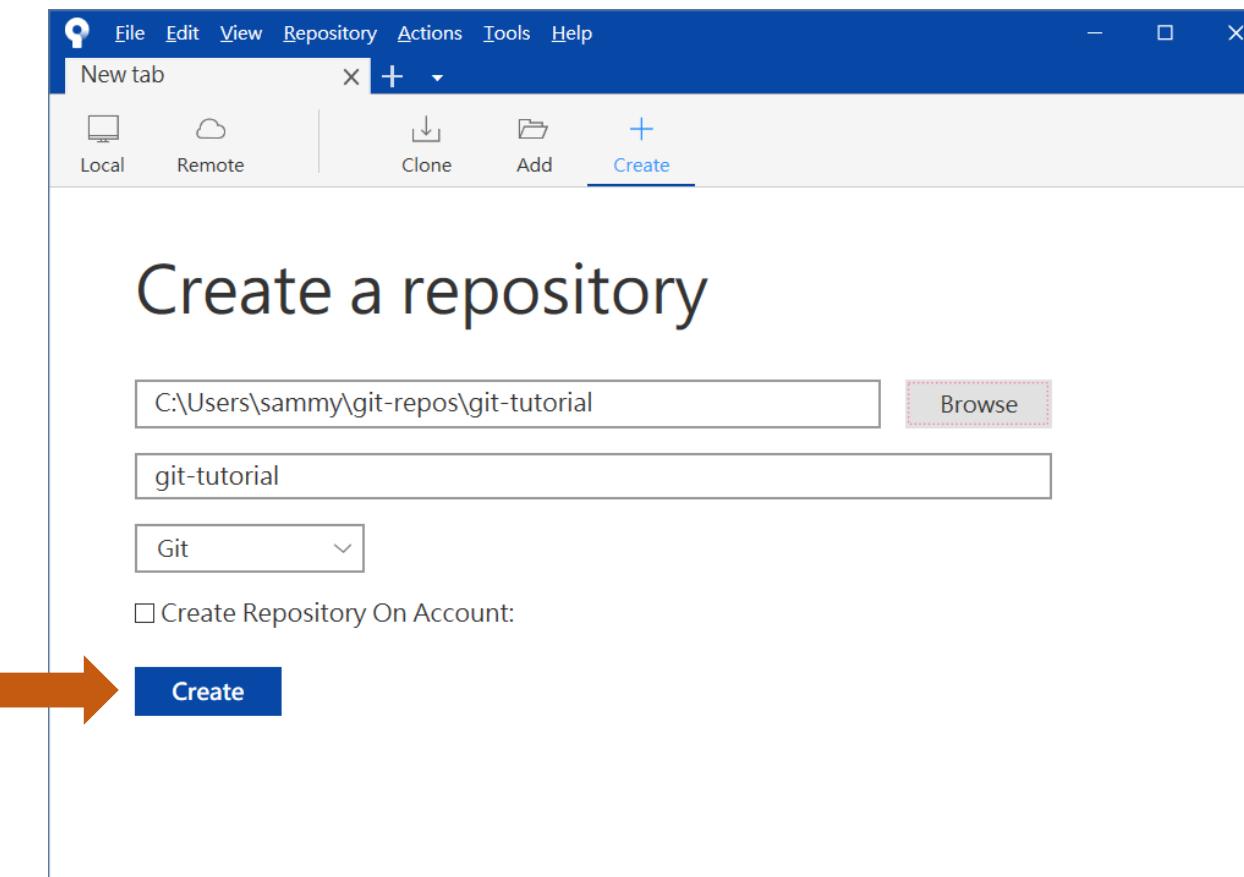
建立本地端儲存庫(local repository)

- 開啟SourceTree，選擇版控工作目錄



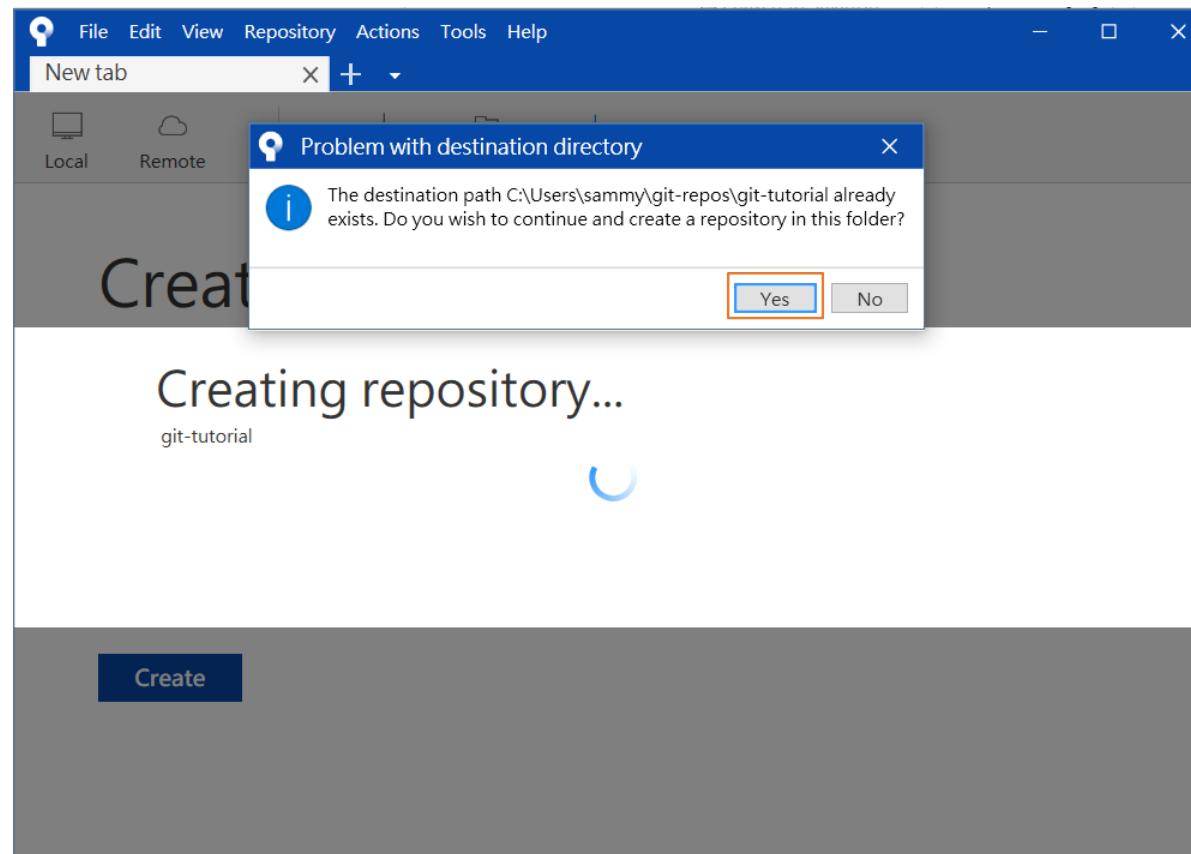
建立本地端儲存庫(local repository)

- 開啟SourceTree，建立本地端儲存庫



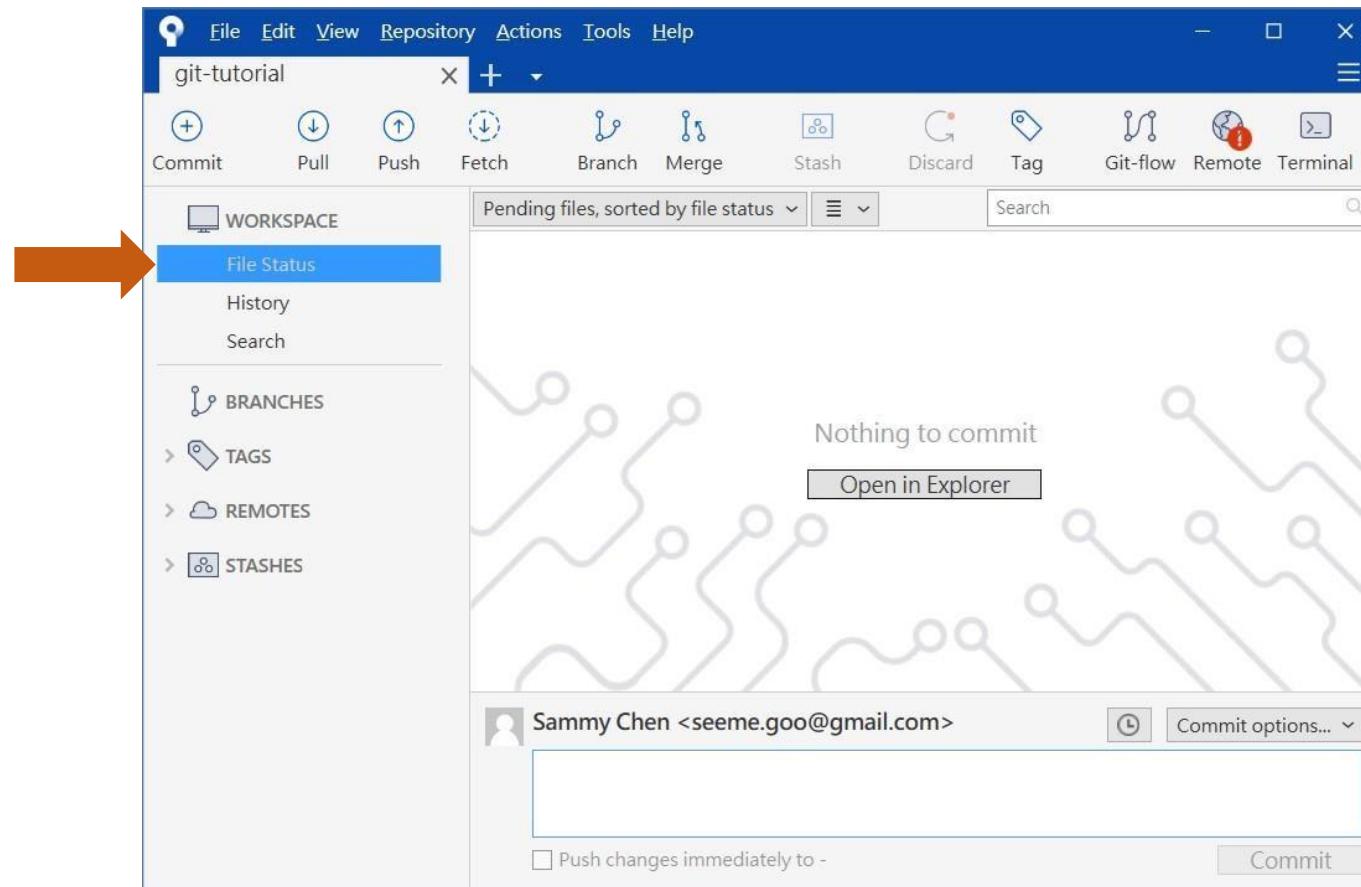
建立本地端儲存庫(local repository)

- 開啟SourceTree，建立本地端儲存庫



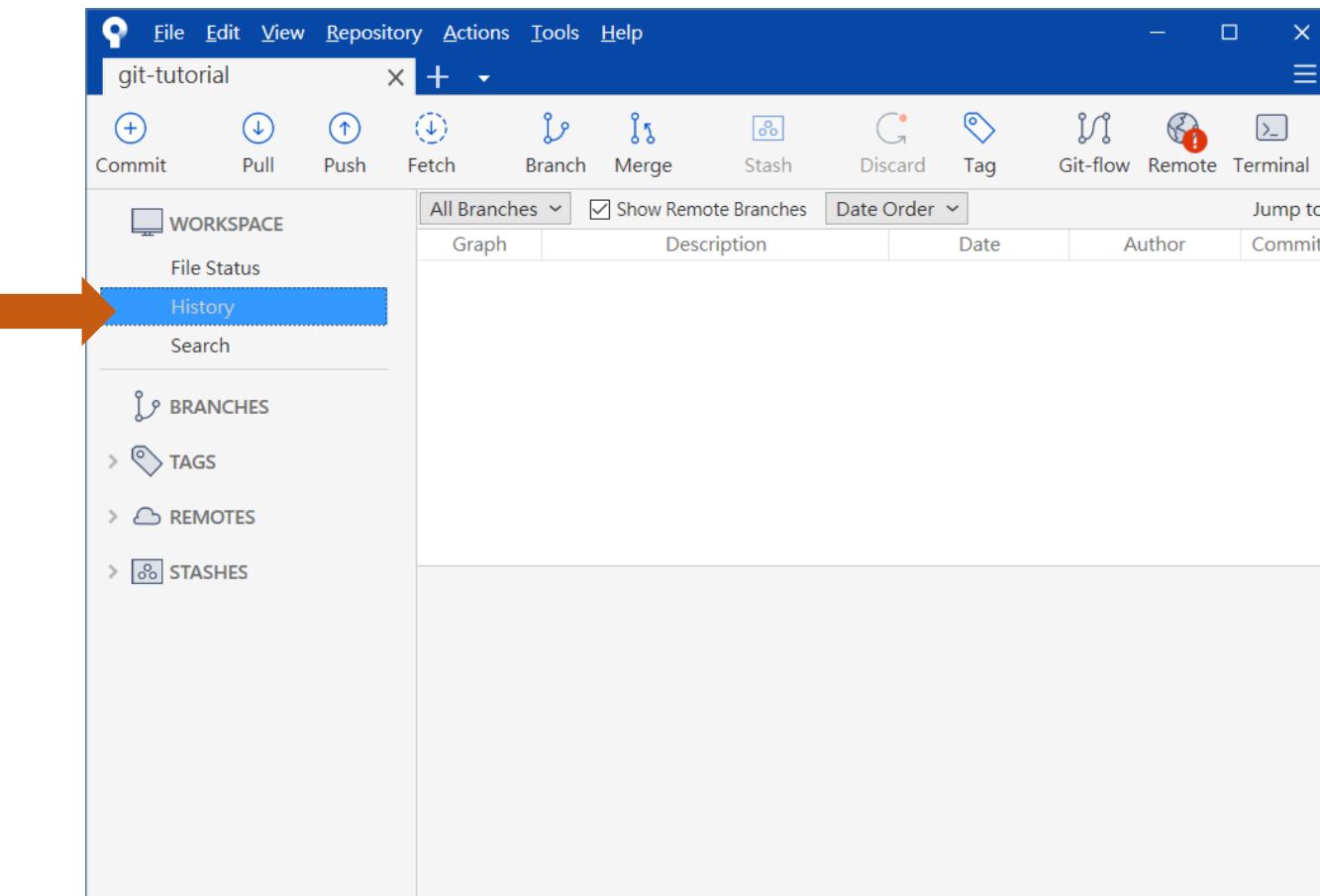
建立本地端儲存庫(local repository)

- 開啟SourceTree，成功建立本地端儲存庫



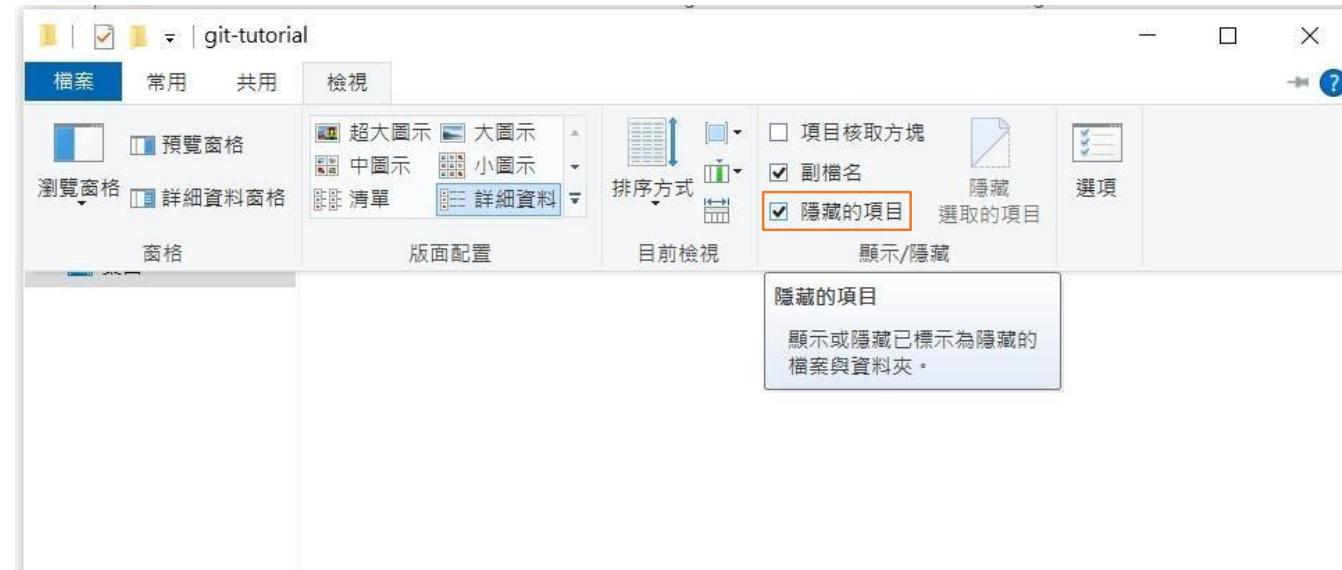
建立本地端儲存庫(local repository)

- 開啟SourceTree，成功建立本地端儲存庫



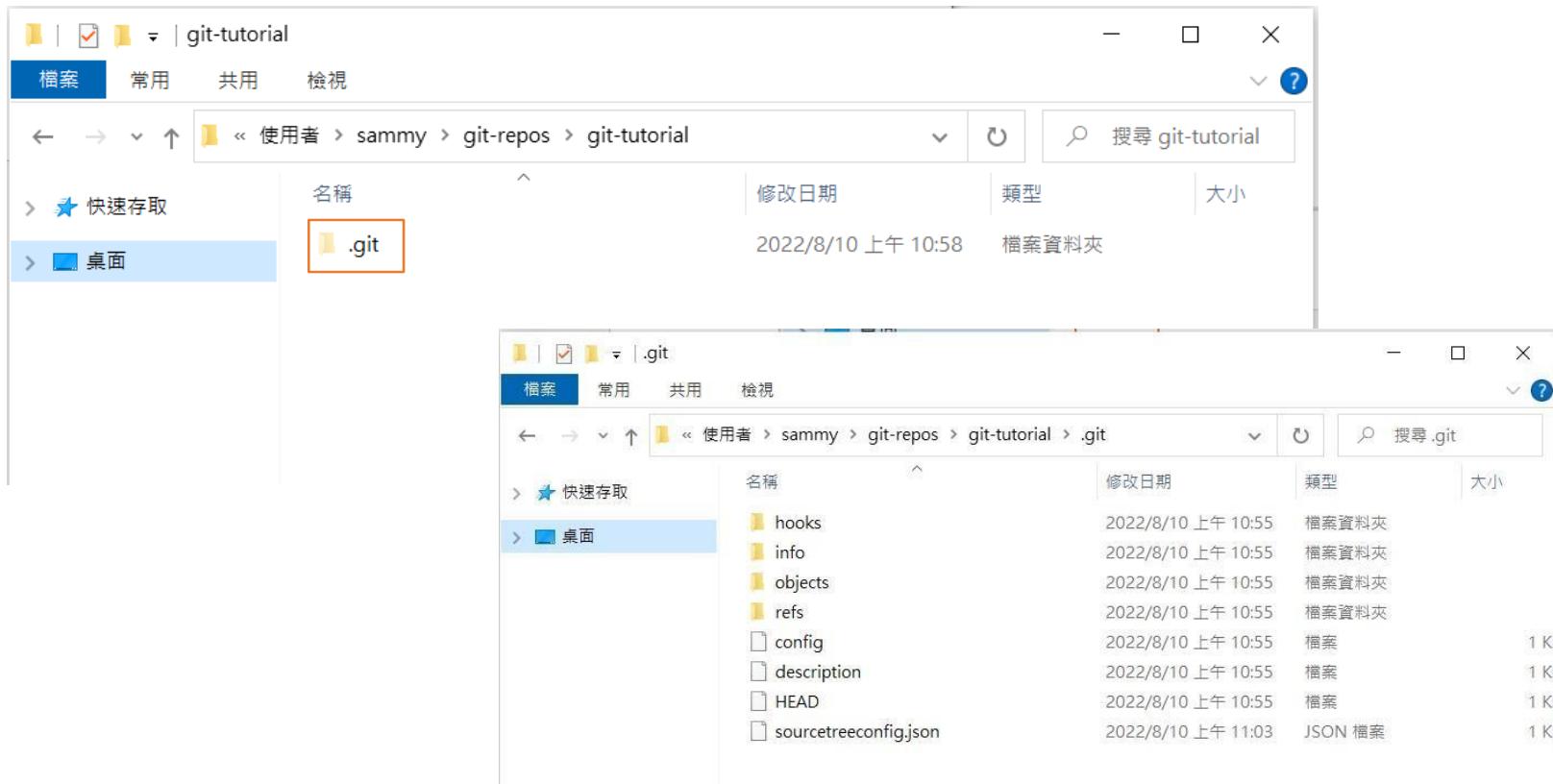
建立本地端儲存庫(local repository)

- 開啟檔案總管，開啟顯示隱藏項目

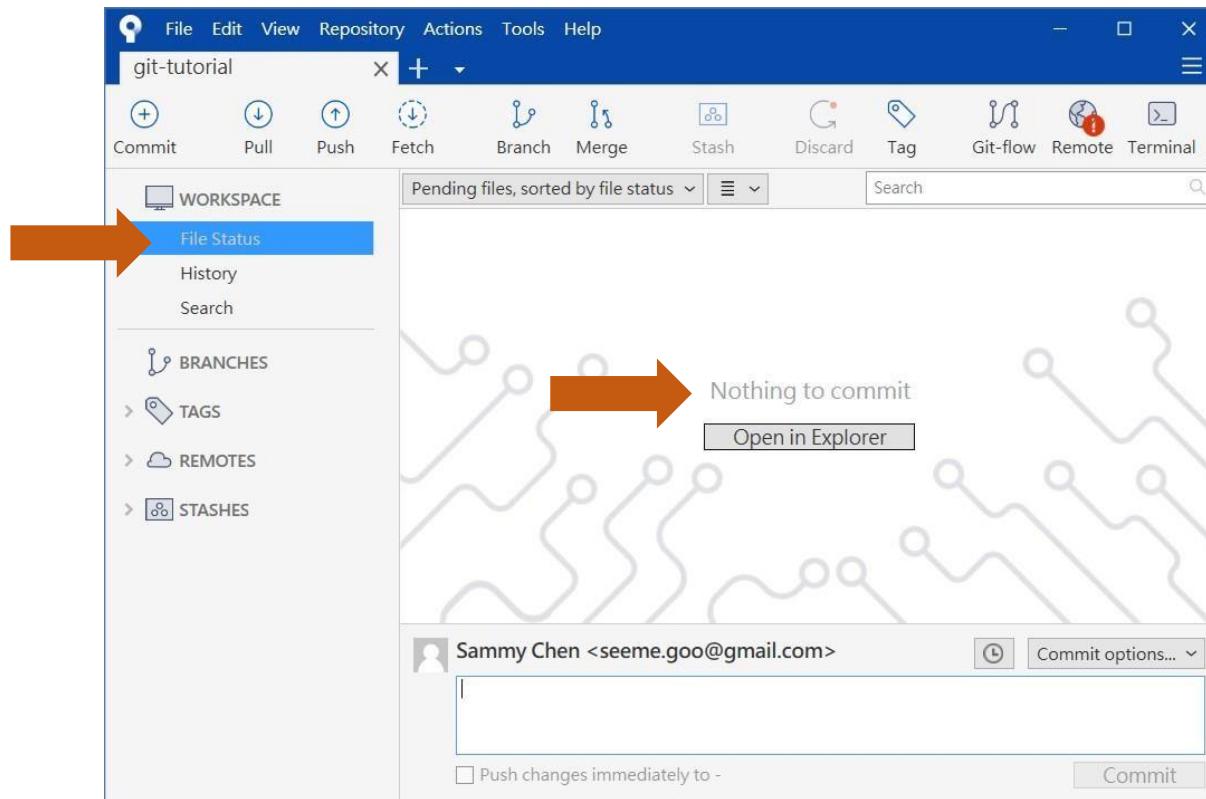
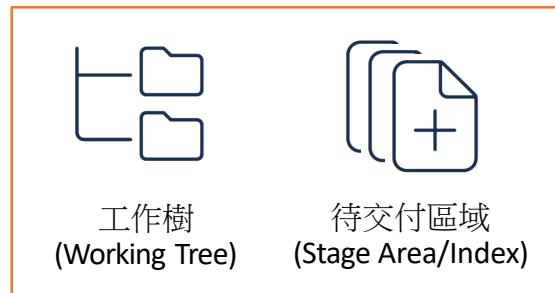


建立本地端儲存庫(local repository)

- 開啟檔案總管，查看本地端存庫(.git)

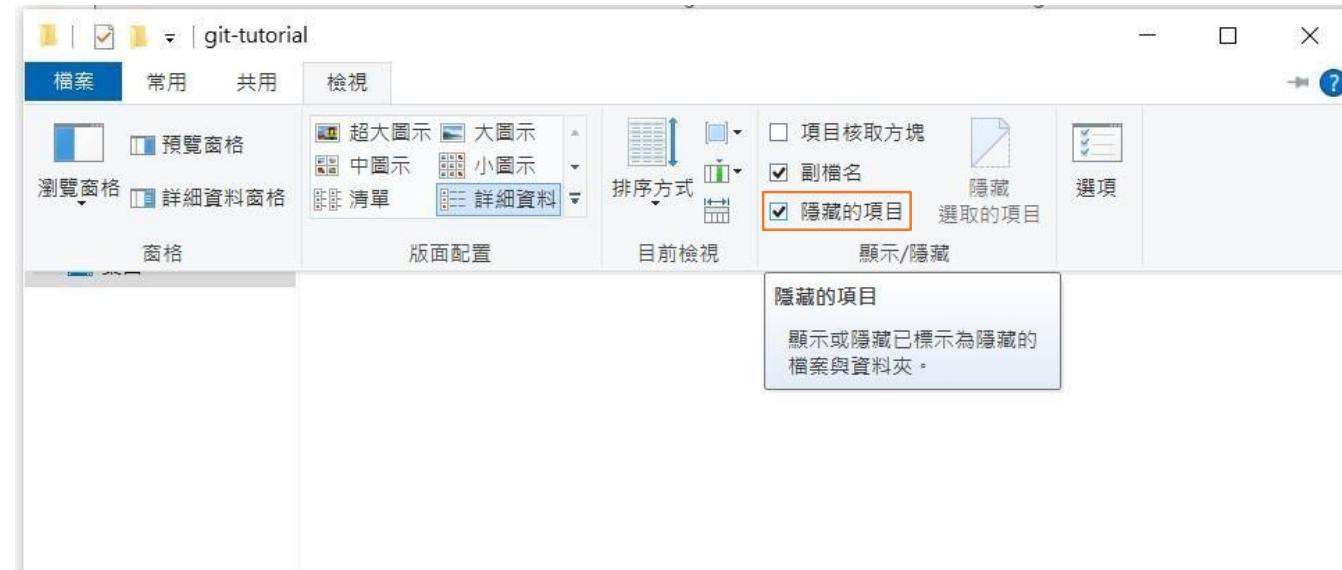


檢視檔案狀態



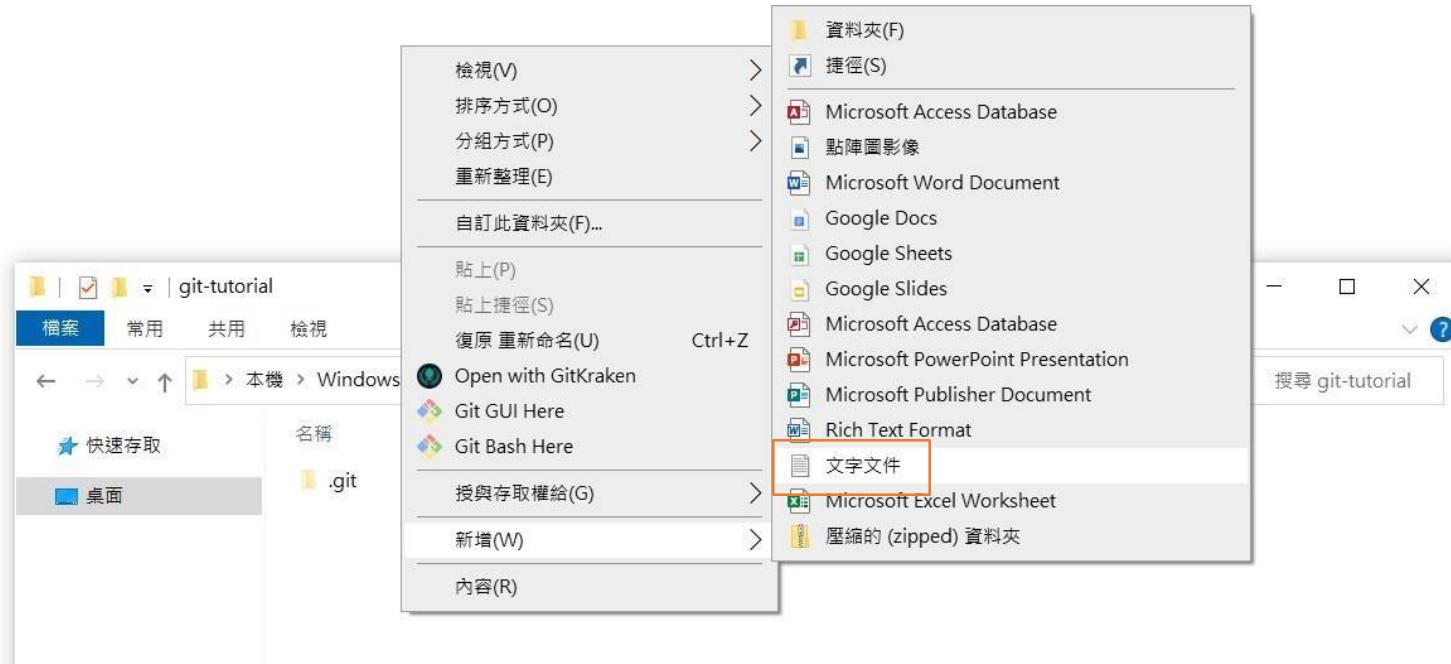
交付檔案至本地端儲存庫

- 開啟檔案總管，開啟顯示附檔名



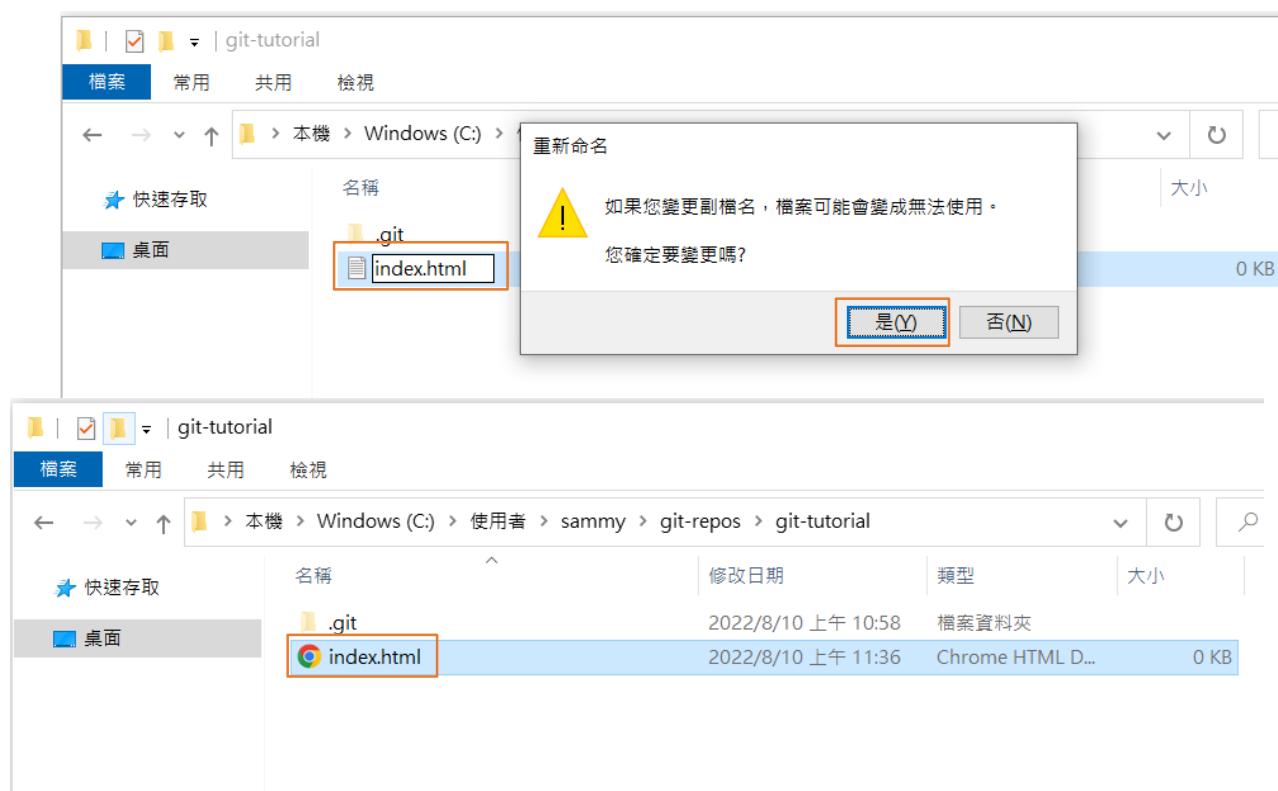
交付檔案至本地端儲存庫

- 加入未追蹤檔案至工作目錄
 - e.g., `index.html`

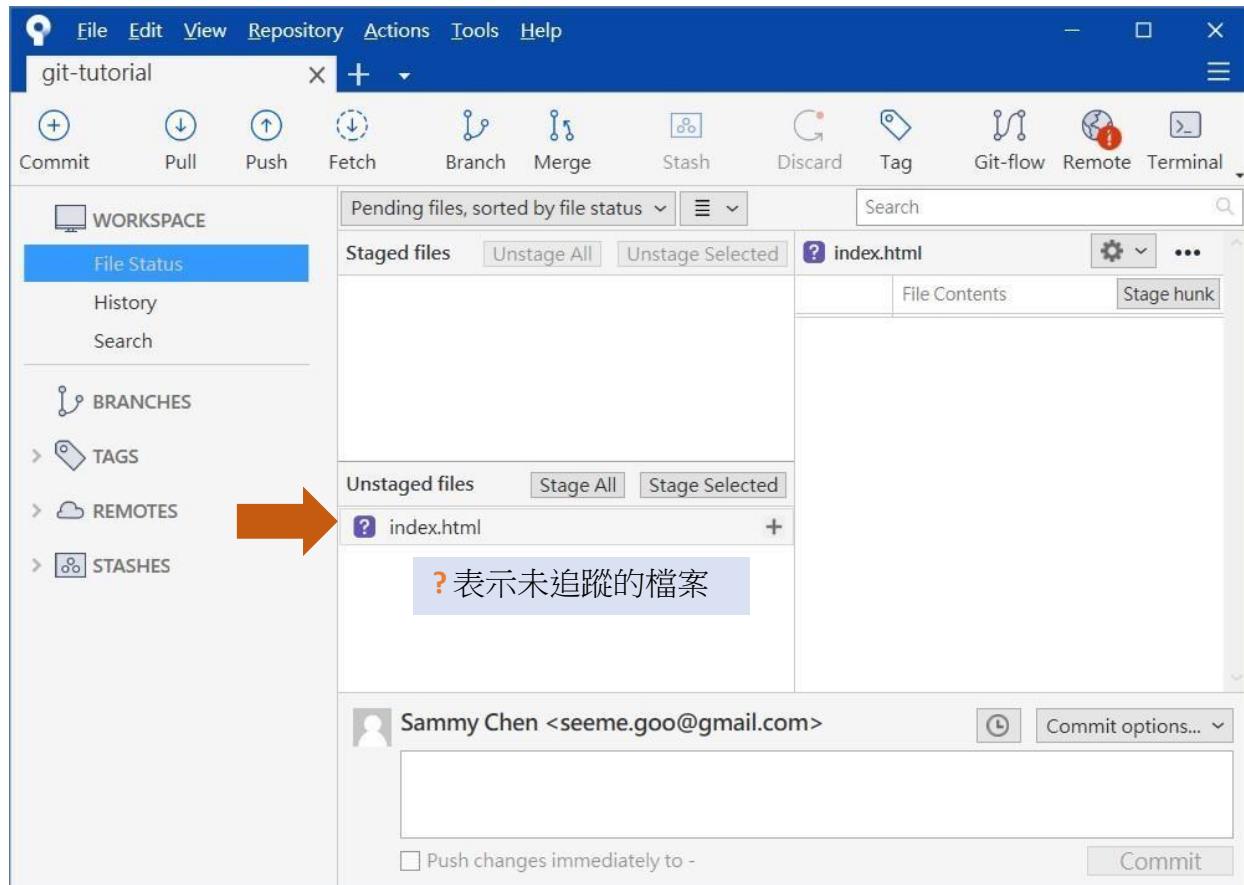
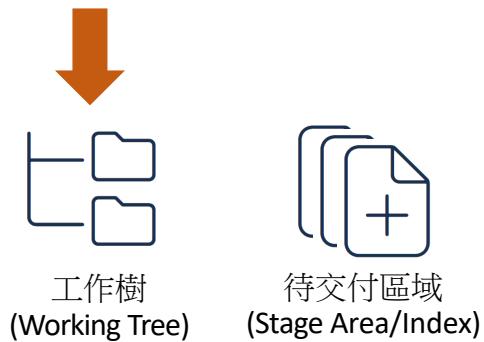


交付檔案至本地端儲存庫

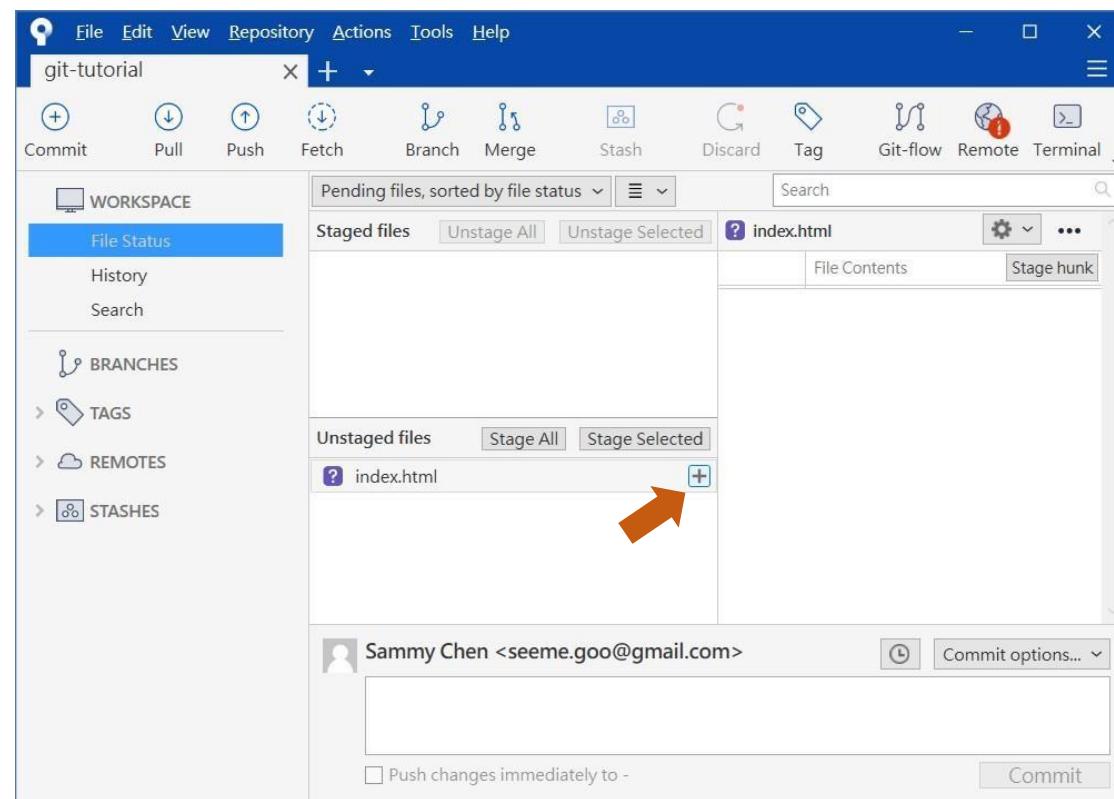
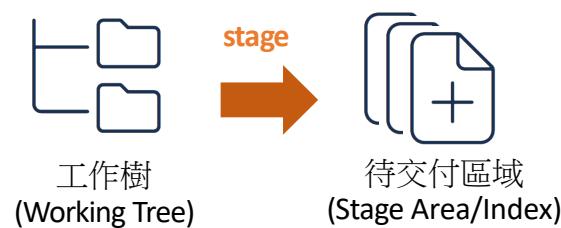
- 加入未追蹤檔案至工作目錄
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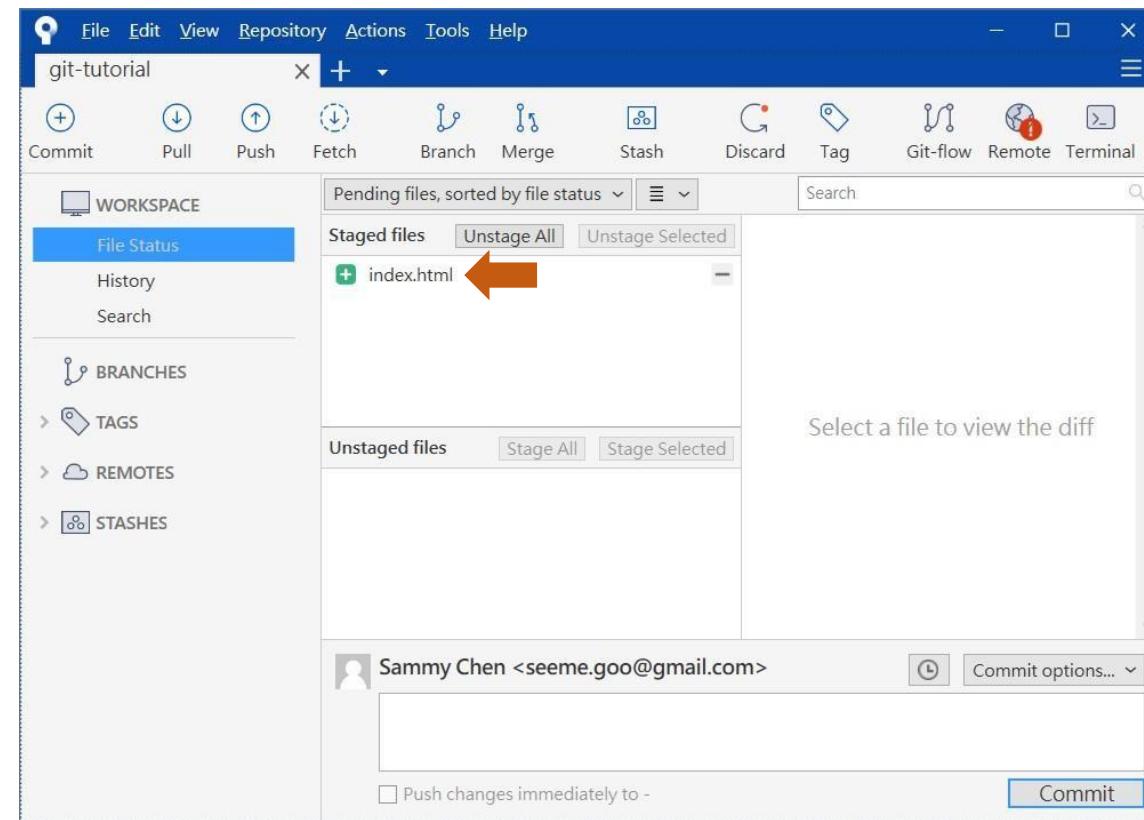
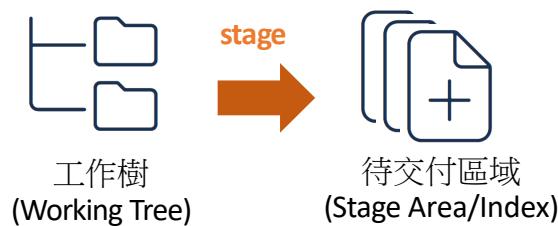
檢視檔案狀態



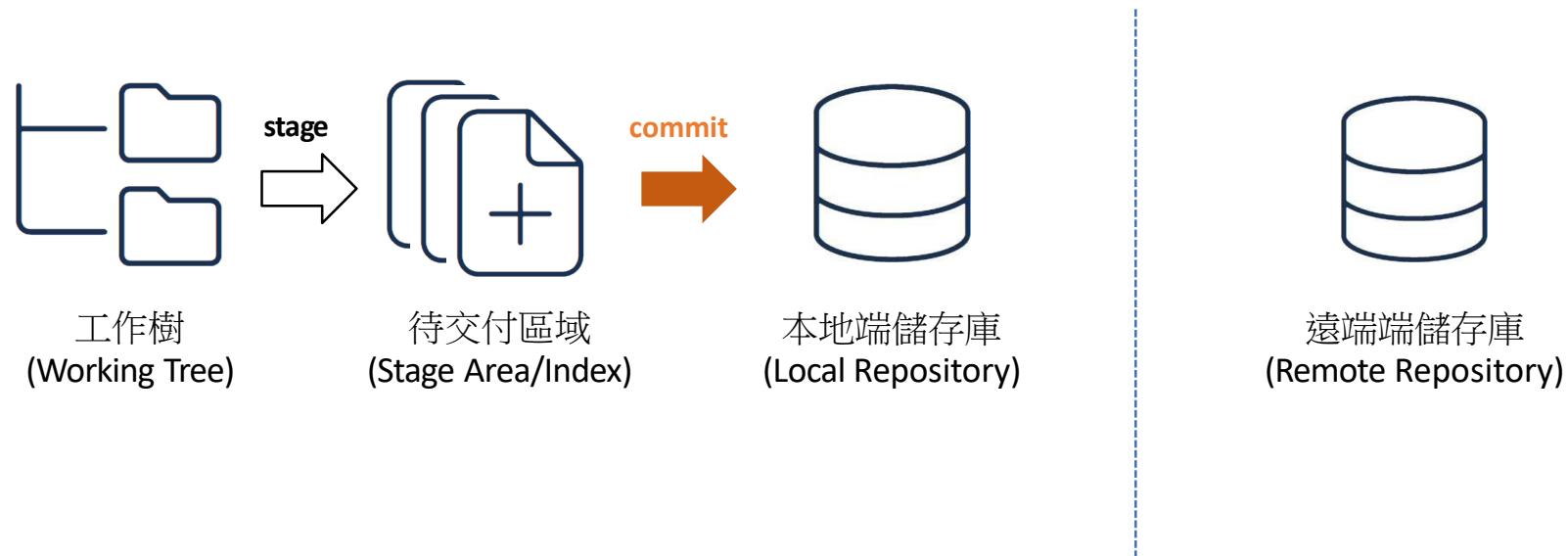
Stage未追蹤檔案



Stage未追蹤檔案

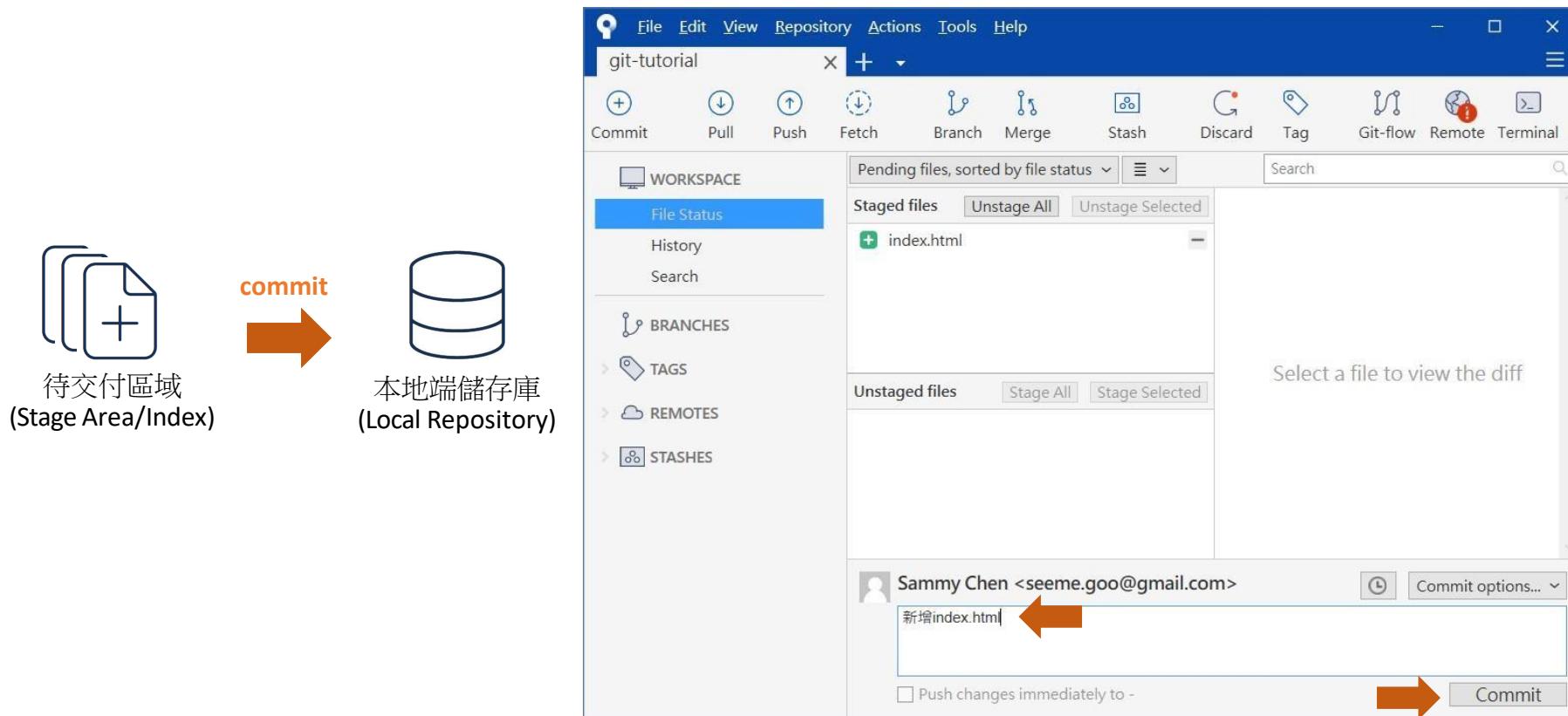


交付檔案至本地端儲存庫



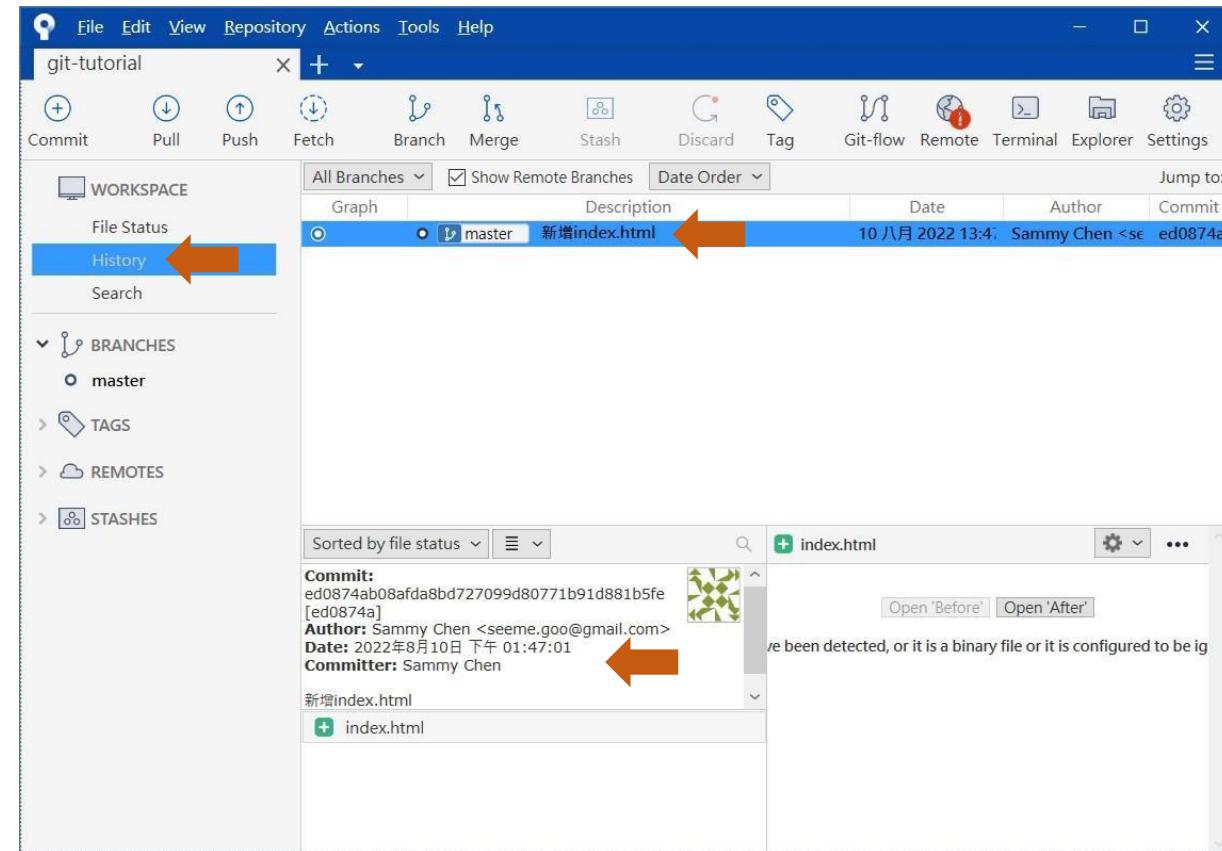
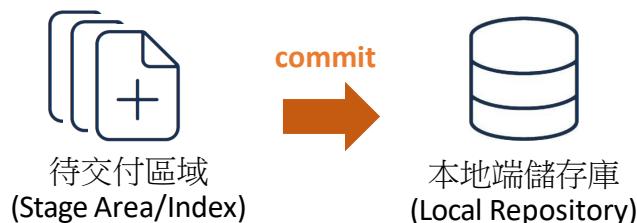
交付檔案至本地端儲存庫

- 撰寫交付訊息(commit message)



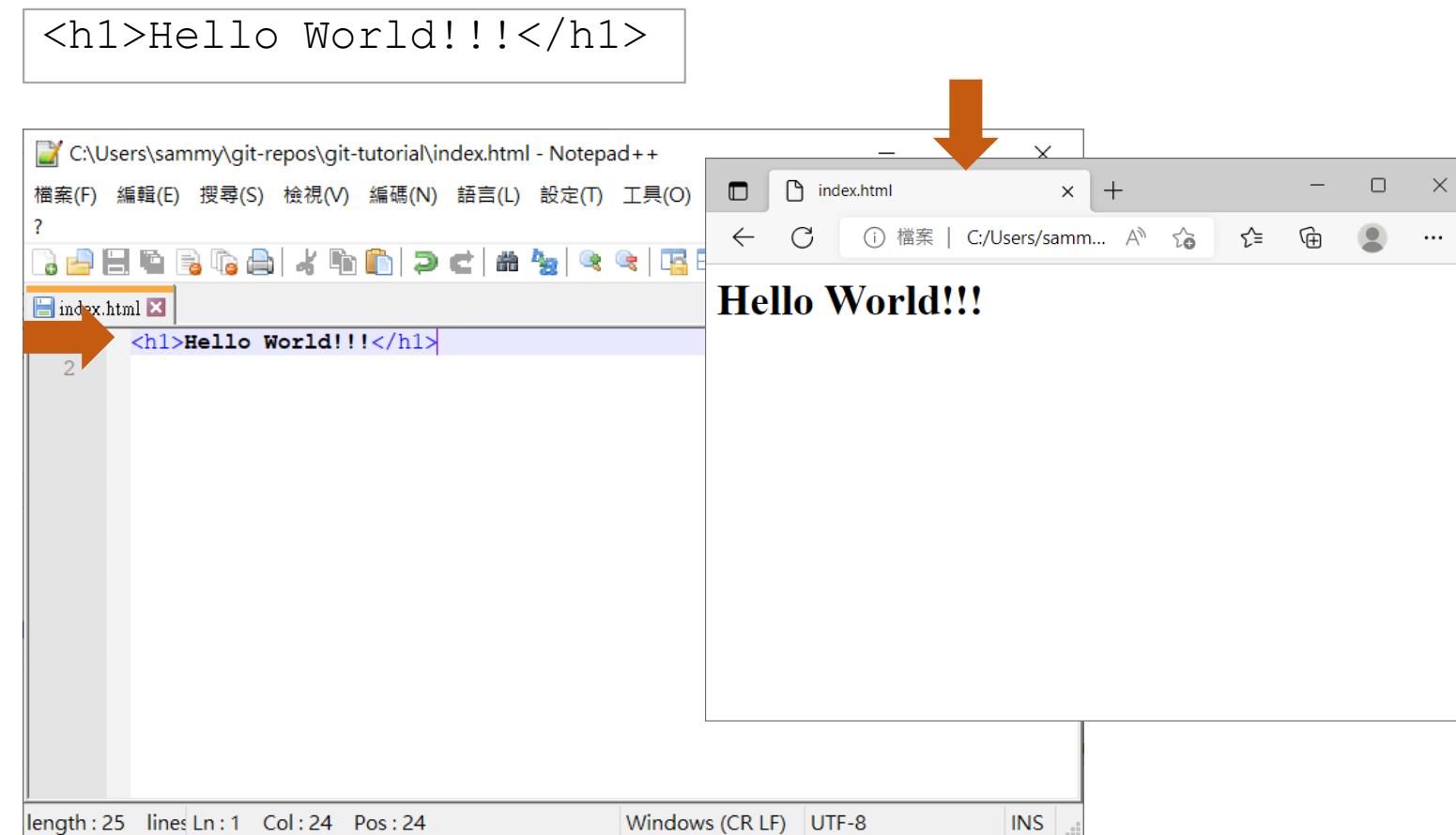
交付檔案至本地端儲存庫

- 檢視交付歷程



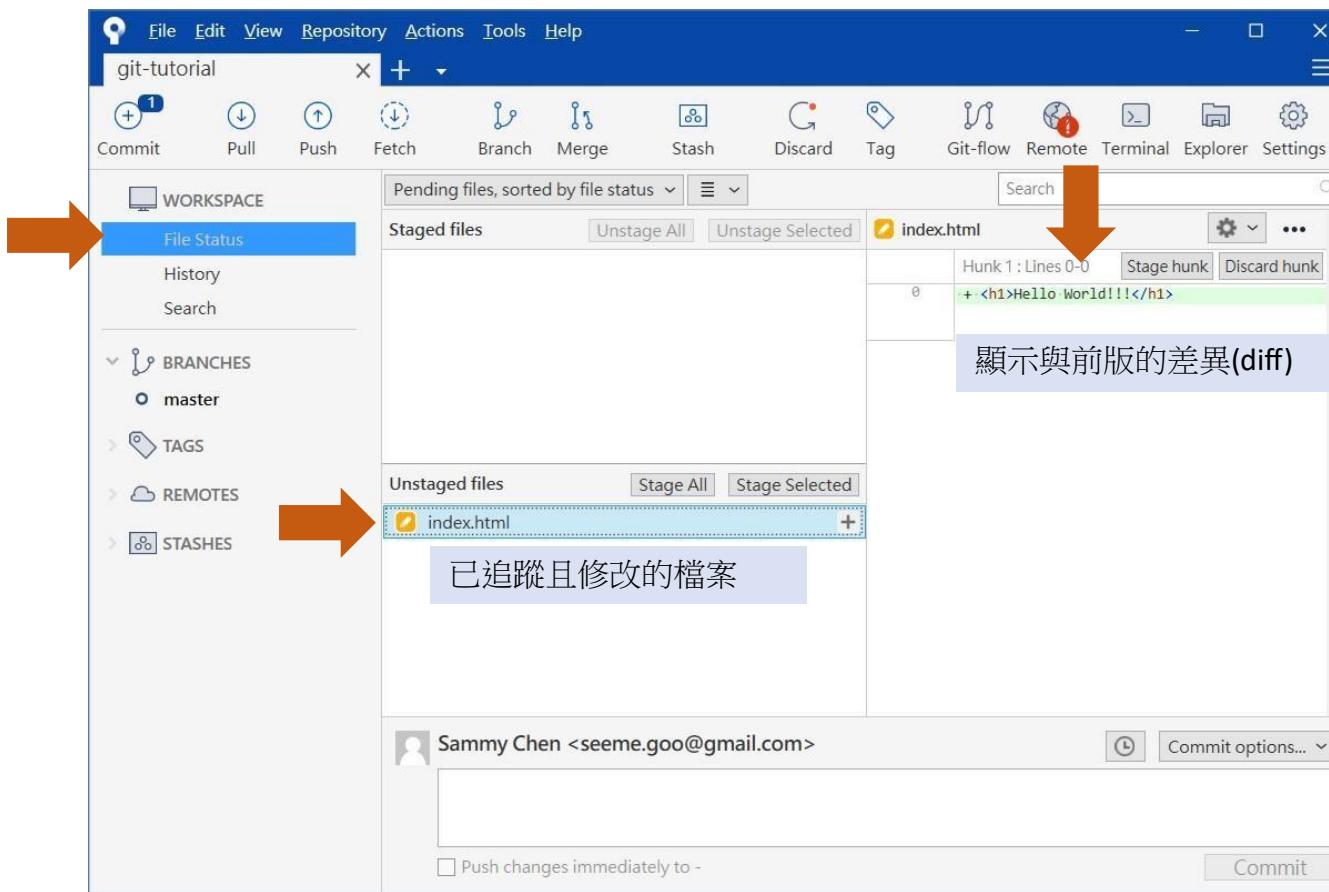
小量改進-修改內容

- 修改/變更工作目錄(working tree)中的index.html



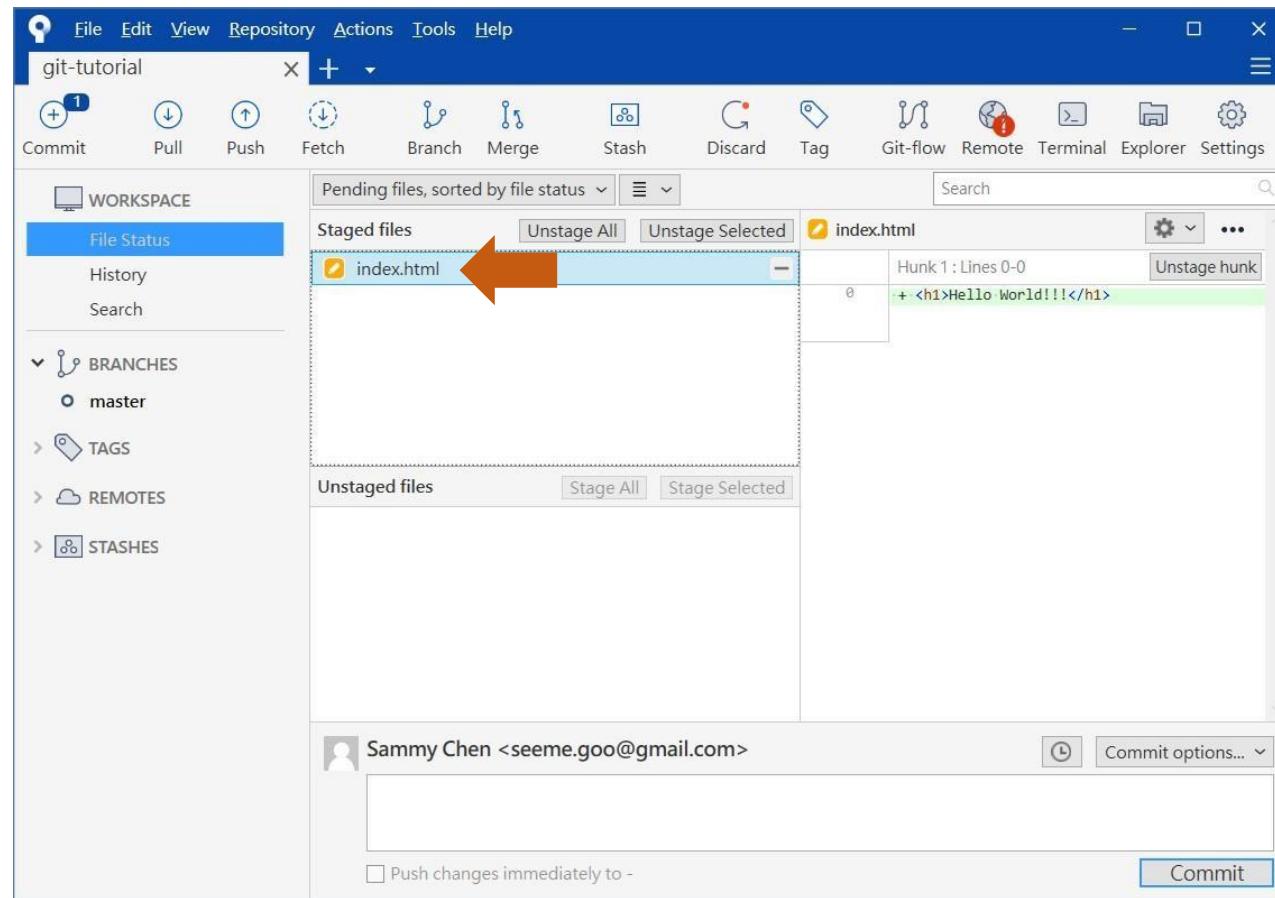
小量改進-修改內容

- 查看檔案狀態



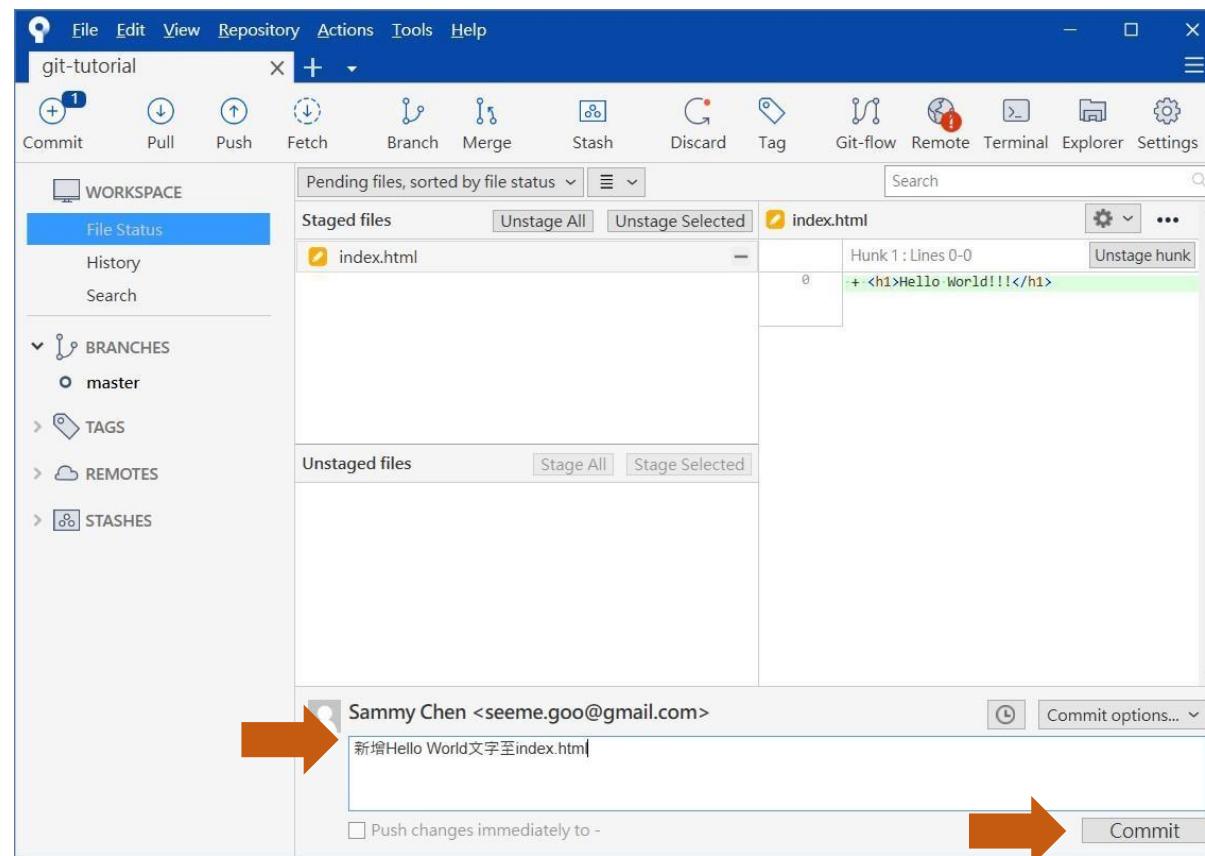
小量改進-修改內容

- Stage修改/變更的檔案



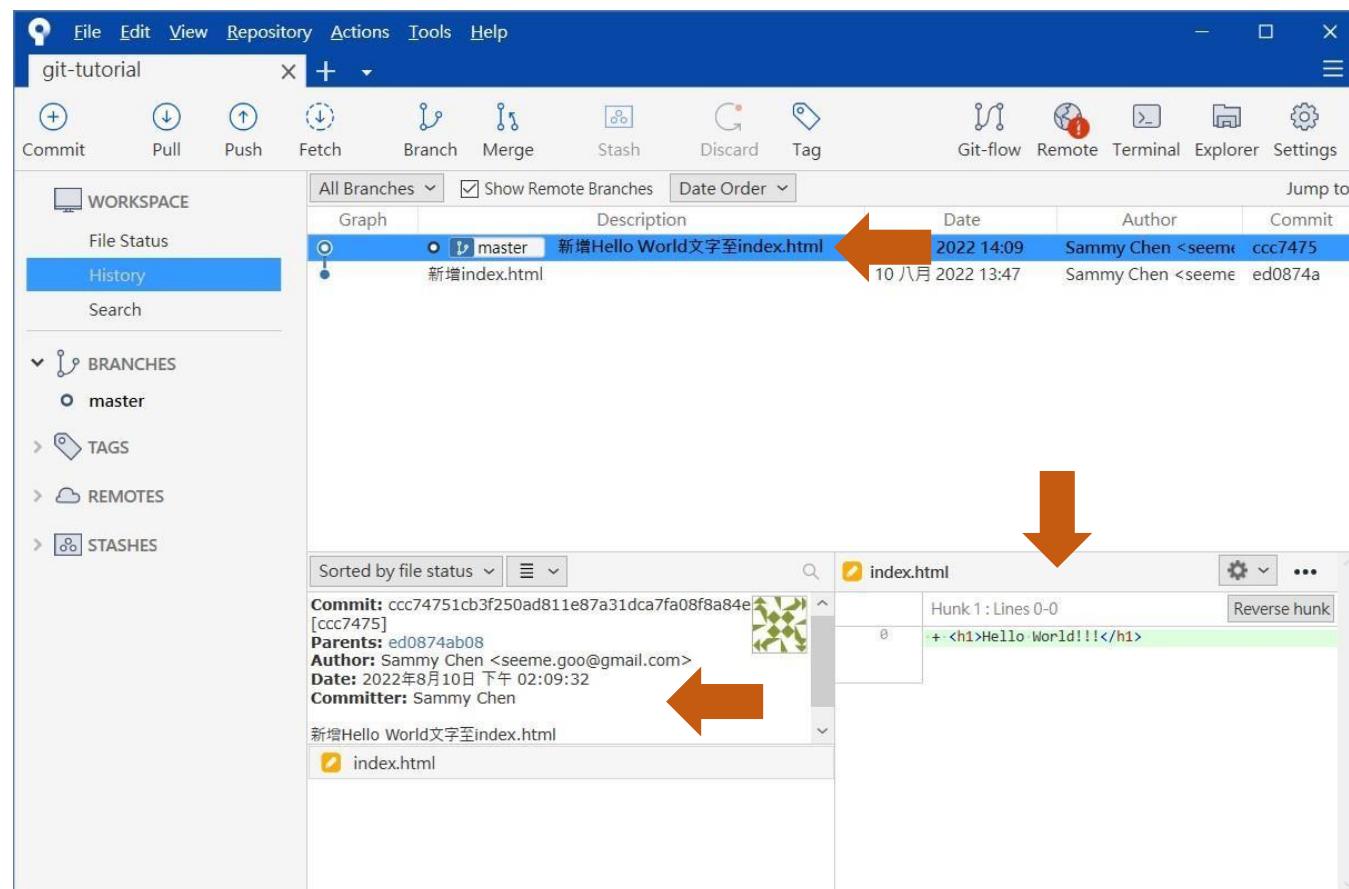
小量改進-修改內容

- 交付修改/變更的檔案



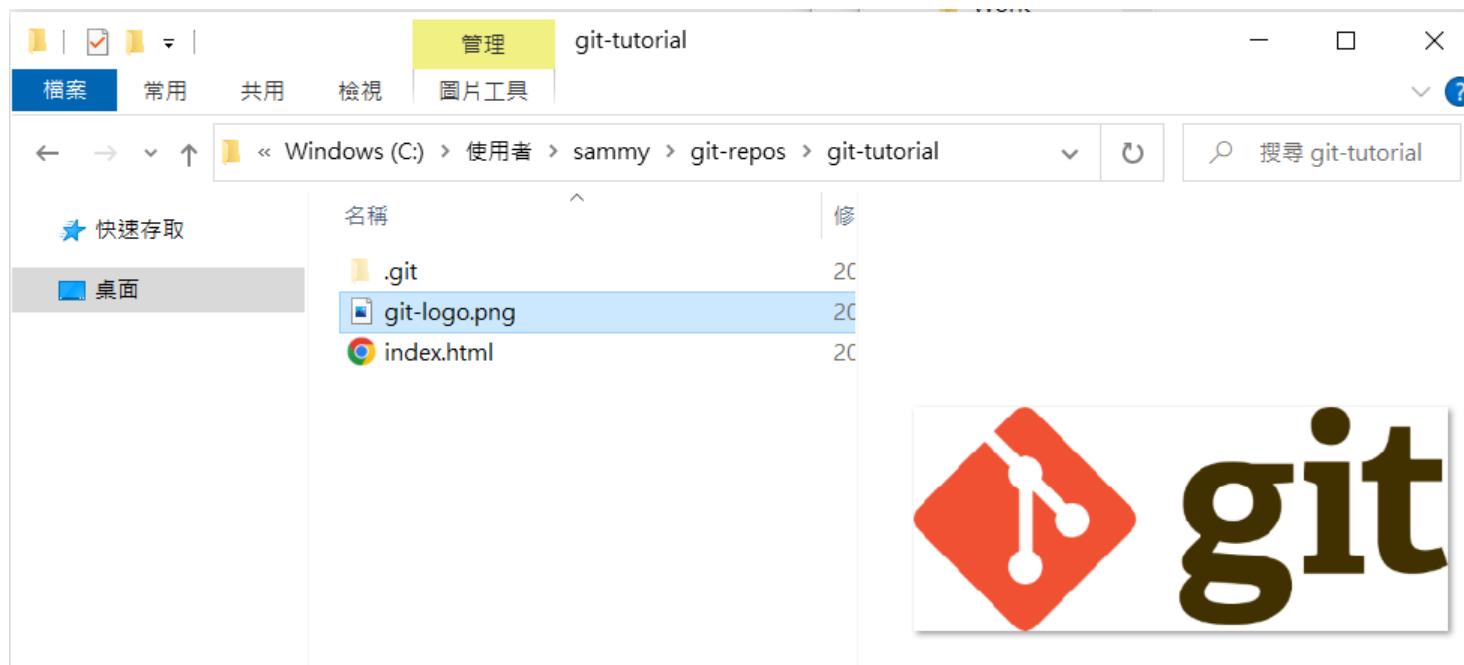
小量改進-修改內容

- 檢視交付歷程



小量改進-新增檔案

- 加入未追蹤圖片至工作目錄
 - e.g., git-logo.png

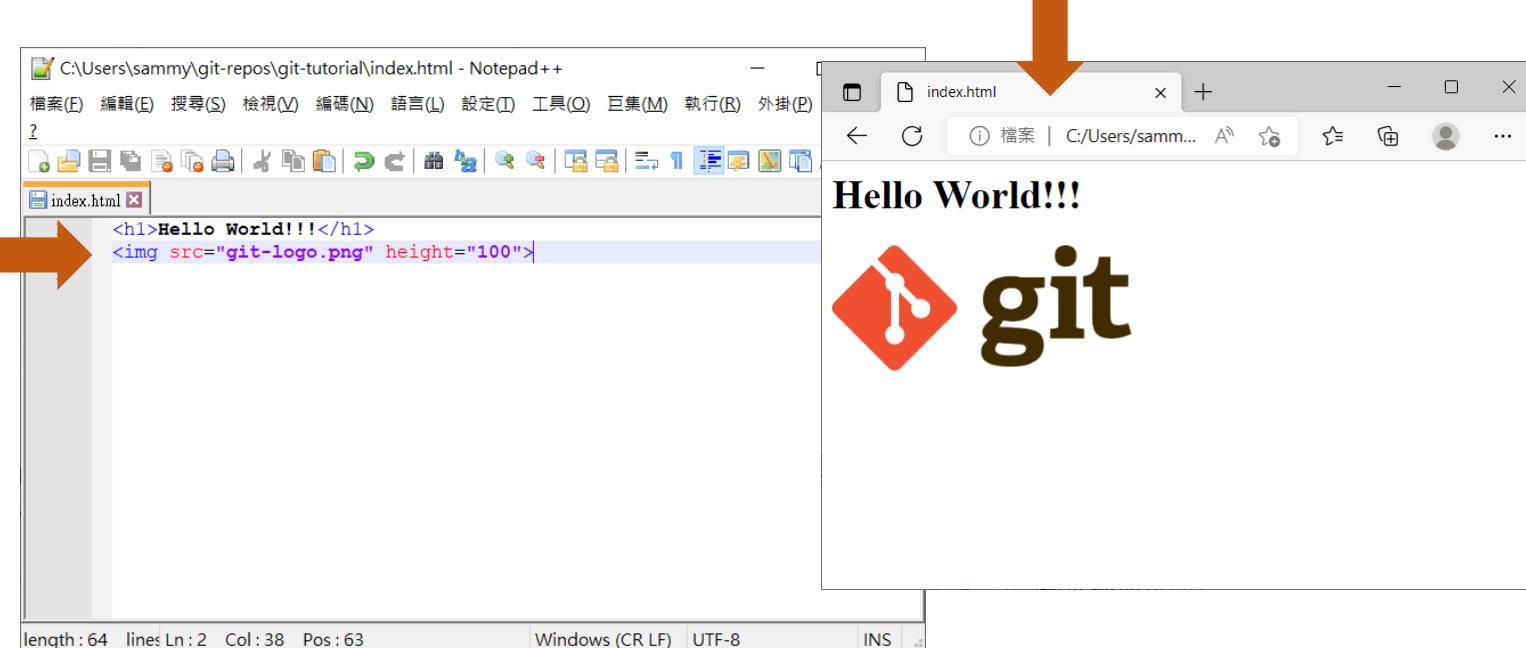


小量改進-新增檔案

- 修改/變更工作目錄中的index.html

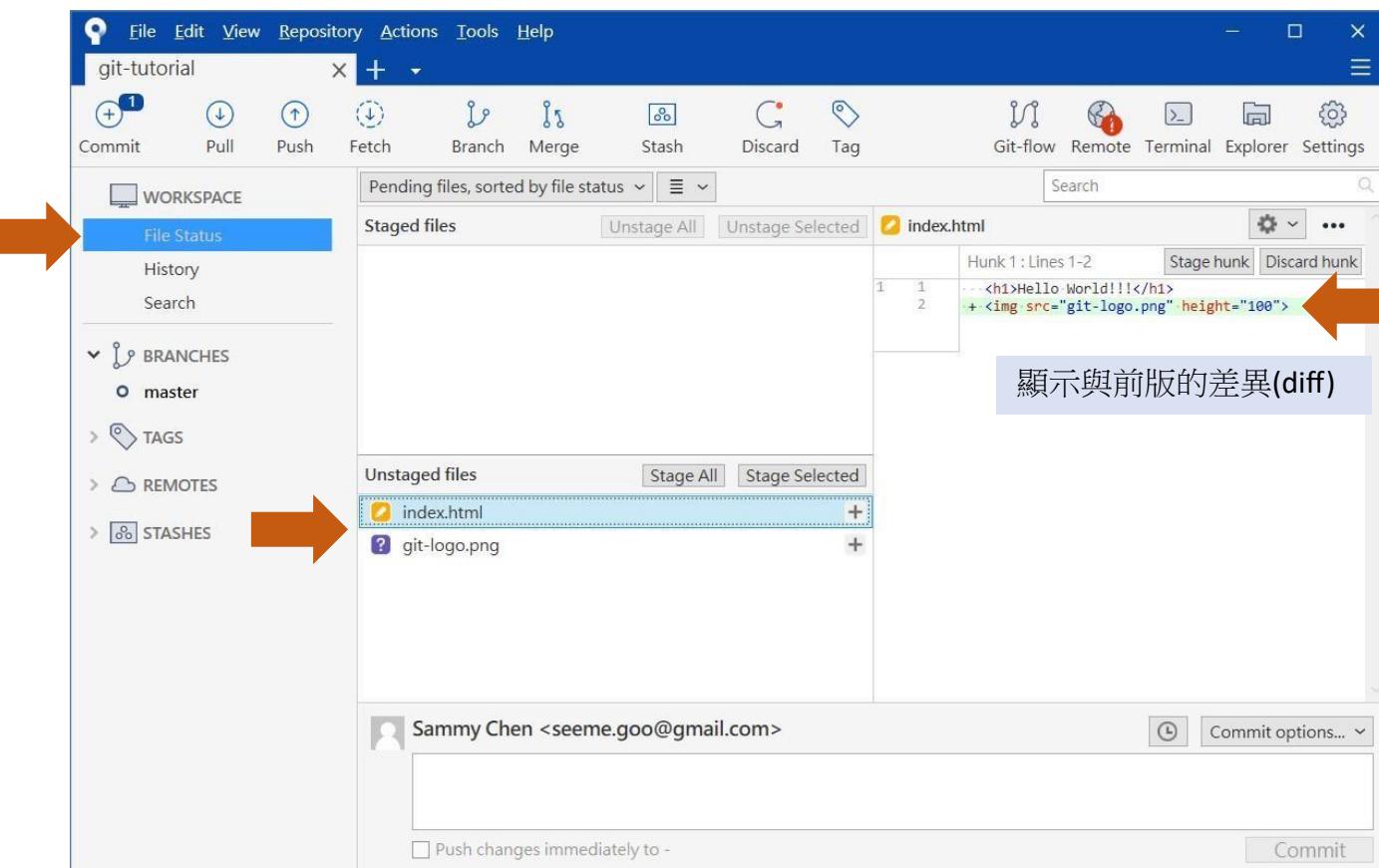
```
<h1>Hello World!!!</h1>

```



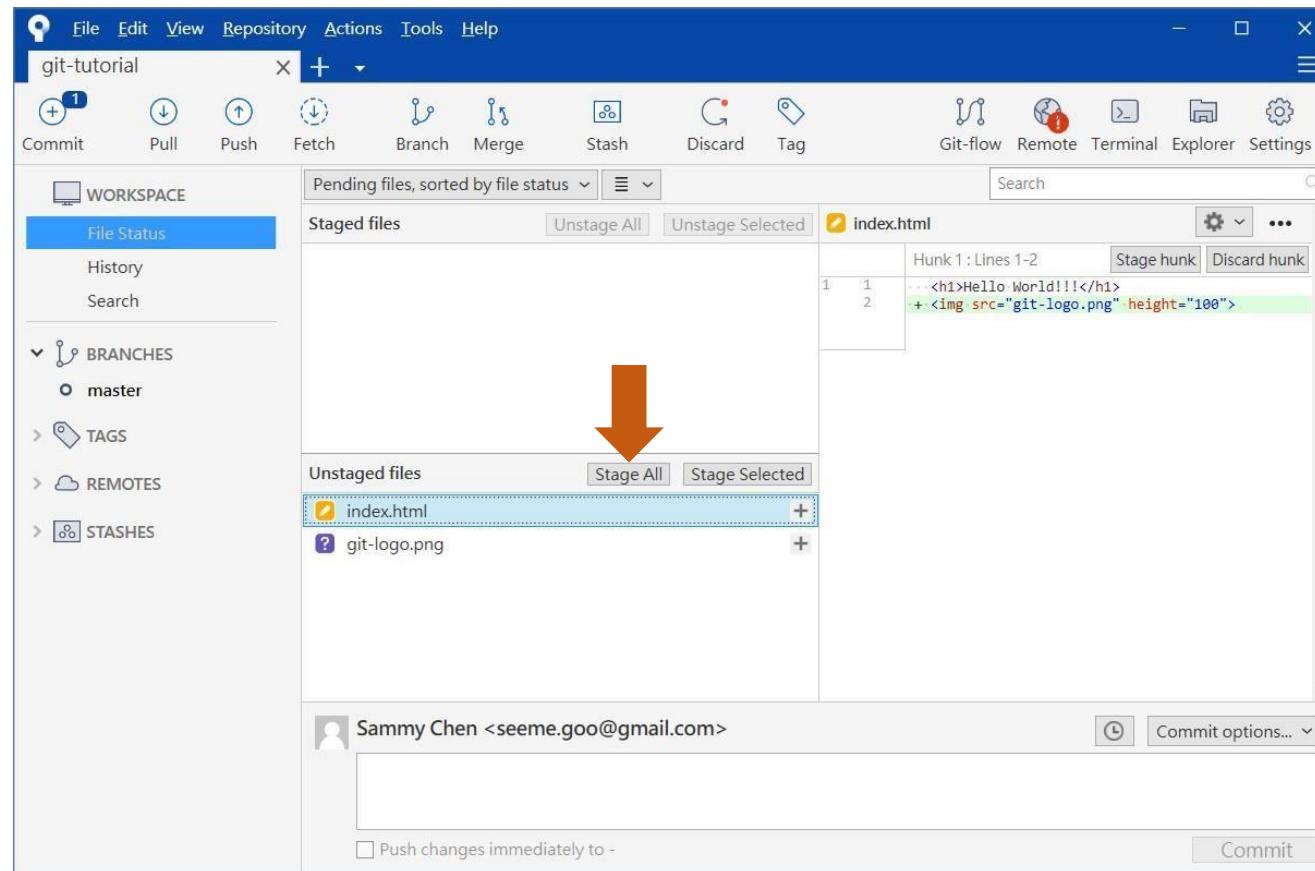
小量改進-新增檔案

- 查看檔案狀態



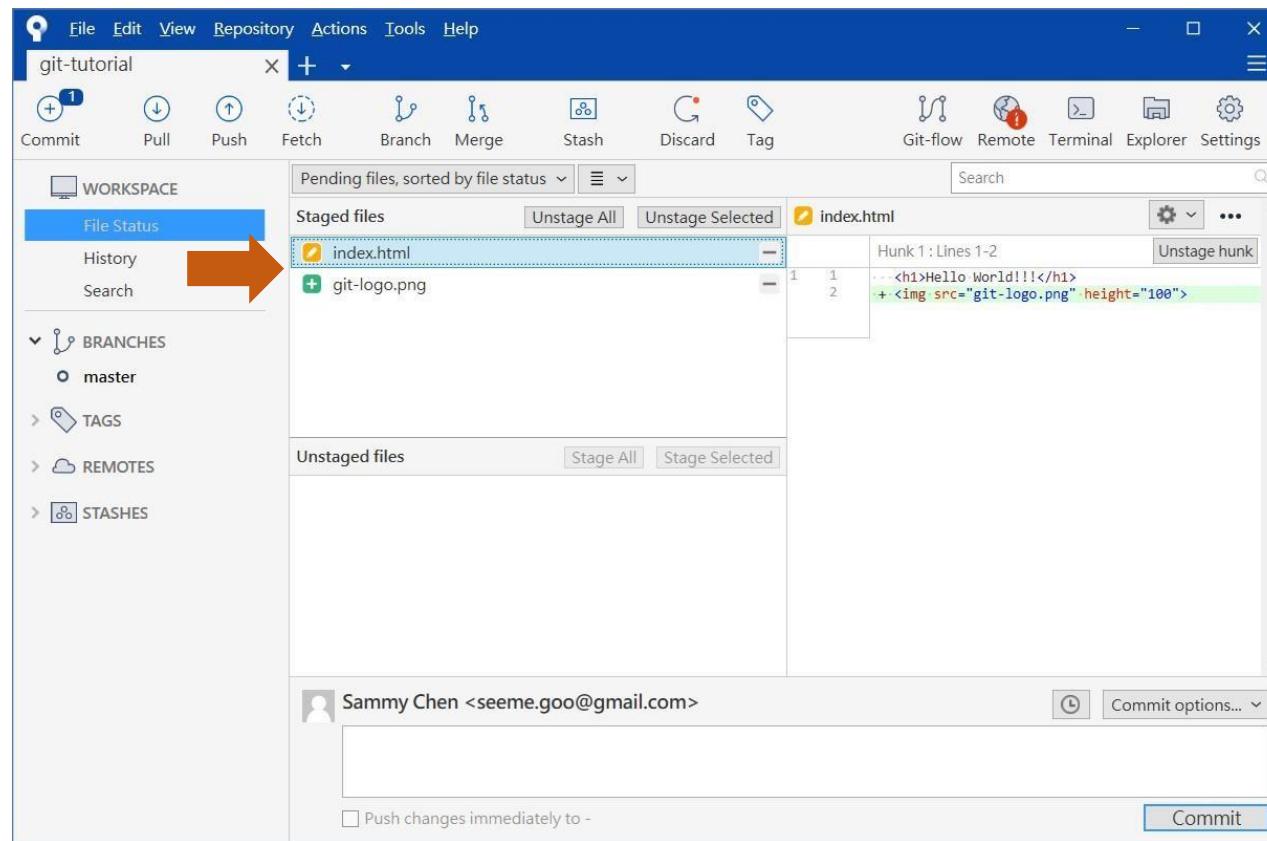
小量改進-新增檔案

- Stage修改/變更的檔案



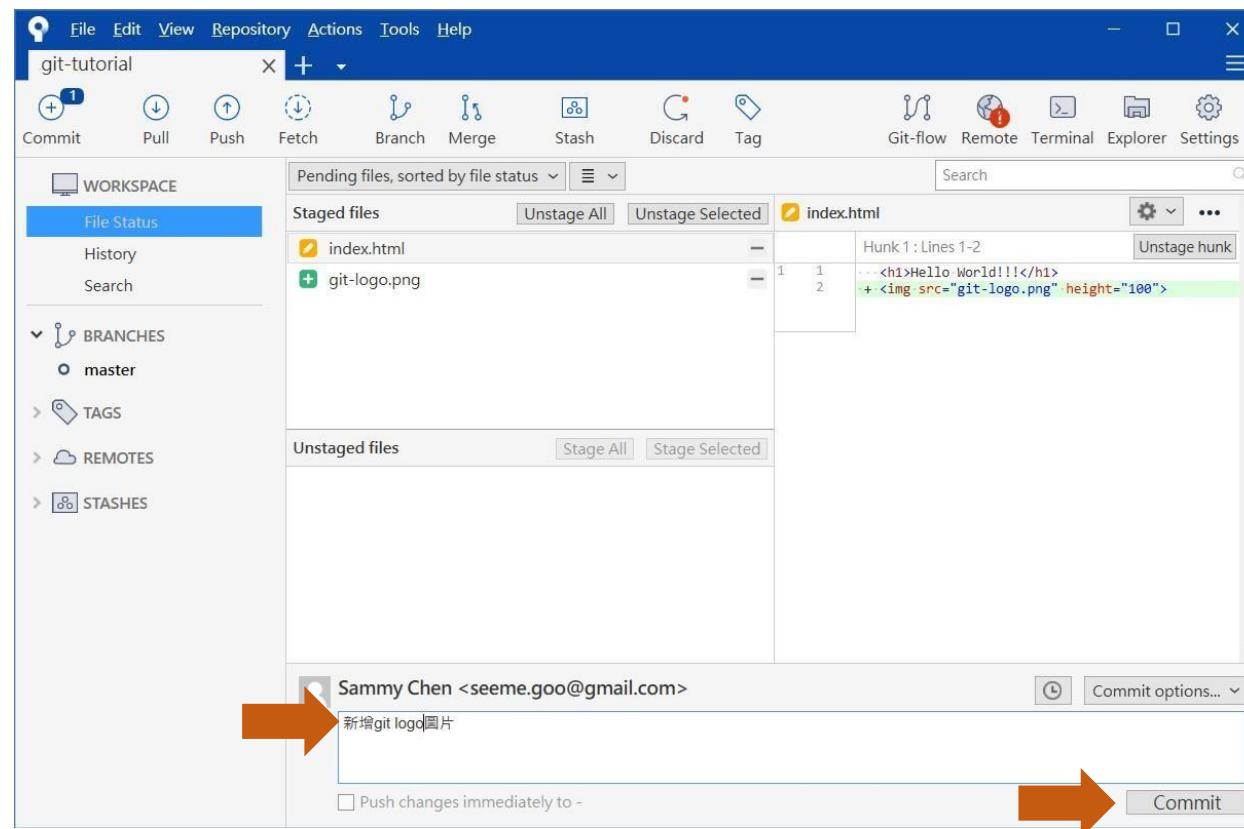
小量改進-新增檔案

- Stage修改/變更的檔案



小量改進-新增檔案

- 交付修改/變更的檔案



小量改進-新增檔案

- 檢視交付歷程

The screenshot shows the Git-Tutorial application interface. On the left, there's a sidebar with 'WORKSPACE' (Commit, Pull, Push, Fetch, Branch, Merge, Stash, Discard, Tag), 'BRANCHES' (master selected), 'TAGS', 'REMOTES', and 'STASHES'. The main area has tabs for 'All Branches' (selected), 'Show Remote Branches' (checked), and 'Date Order'. A table lists commits:

Graph	Description	Date	Author	Commit
●	master 新增git logo圖片	八月 2022 14:45	Sammy Chen <seeme...	20187a7
●	新增Hello World文字至index.html	10 八月 2022 14:09	Sammy Chen <seeme...	ccc7475
●	新增index.html	10 八月 2022 13:47	Sammy Chen <seeme...	ed0874a

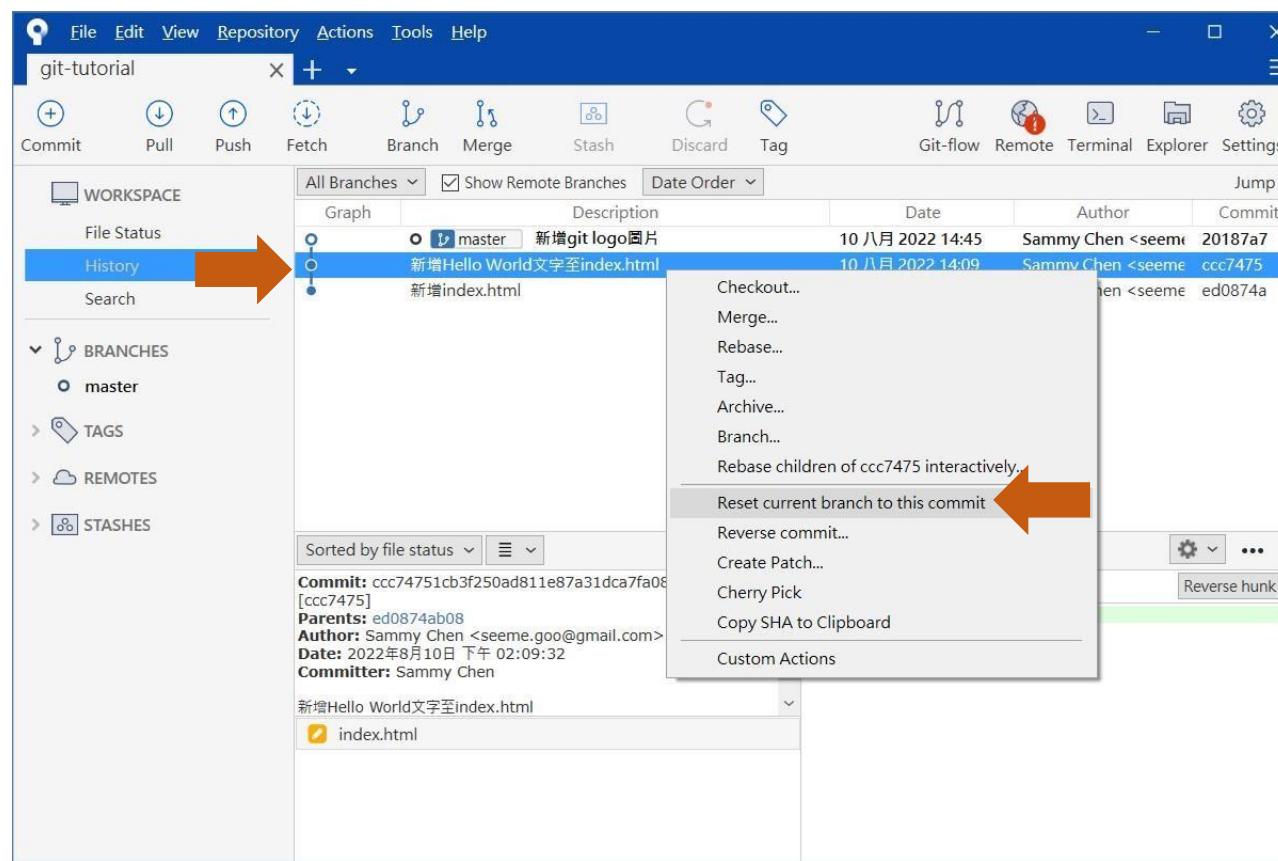
An orange arrow points to the 'History' tab in the sidebar. Another orange arrow points to the commit row for 'master' with the description '新增git logo圖片'. In the bottom right, a detailed view of the 'index.html' file shows a diff between lines 1 and 2. The first line is '

Hello World!!!

' and the second line is '+ '. A third orange arrow points to the '+' sign in the diff.

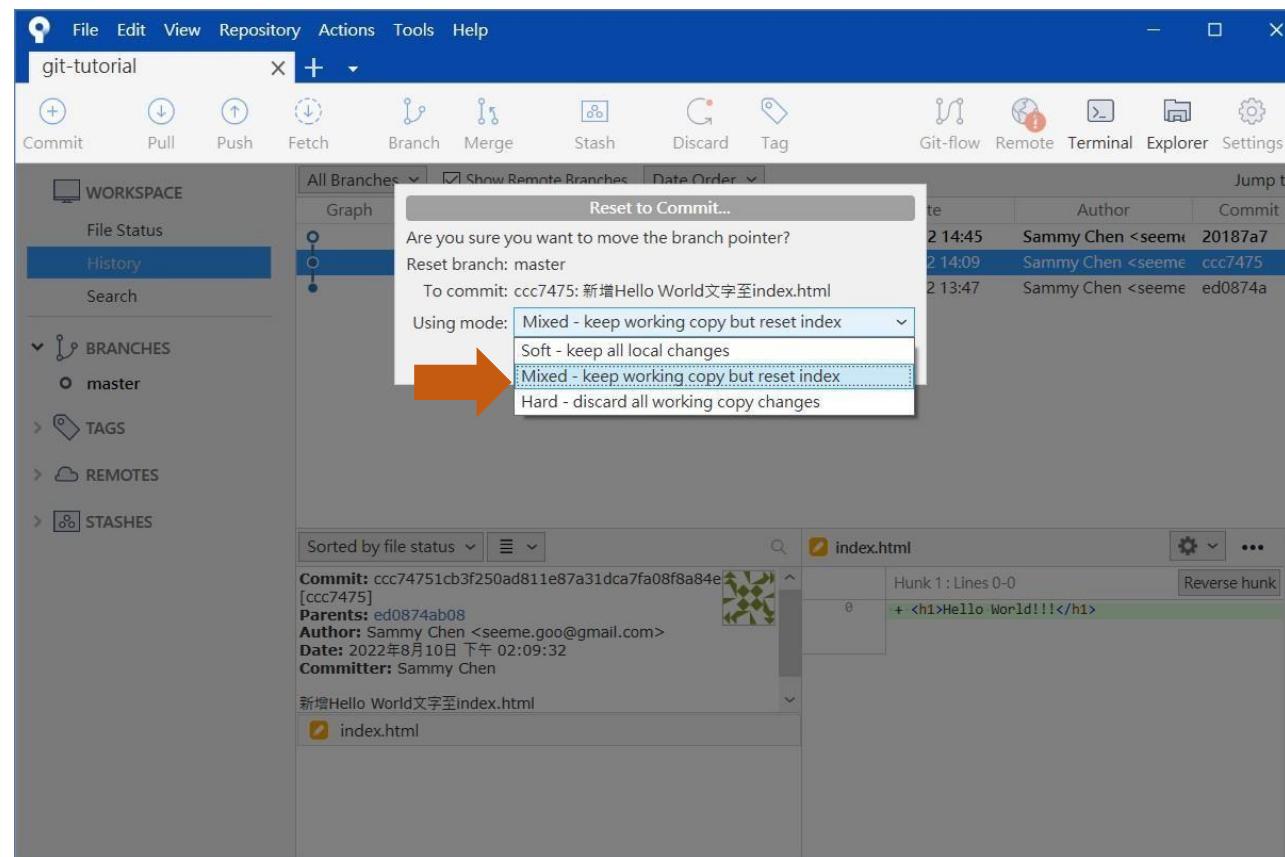
交付後，後悔了怎麼辦？

- 重置(reset)交付歷程



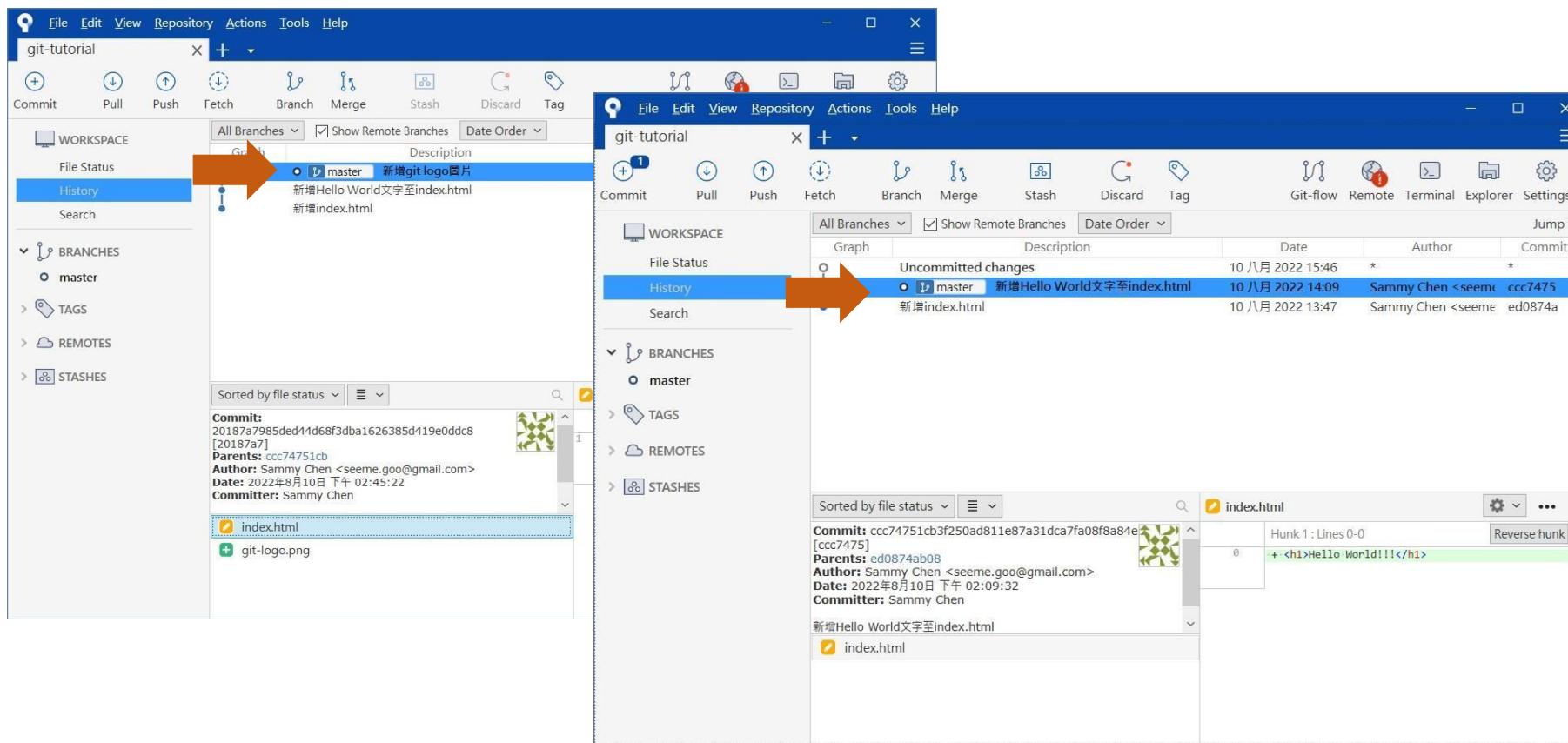
交付後，後悔了怎麼辦？

- 重置(reset)交付歷程



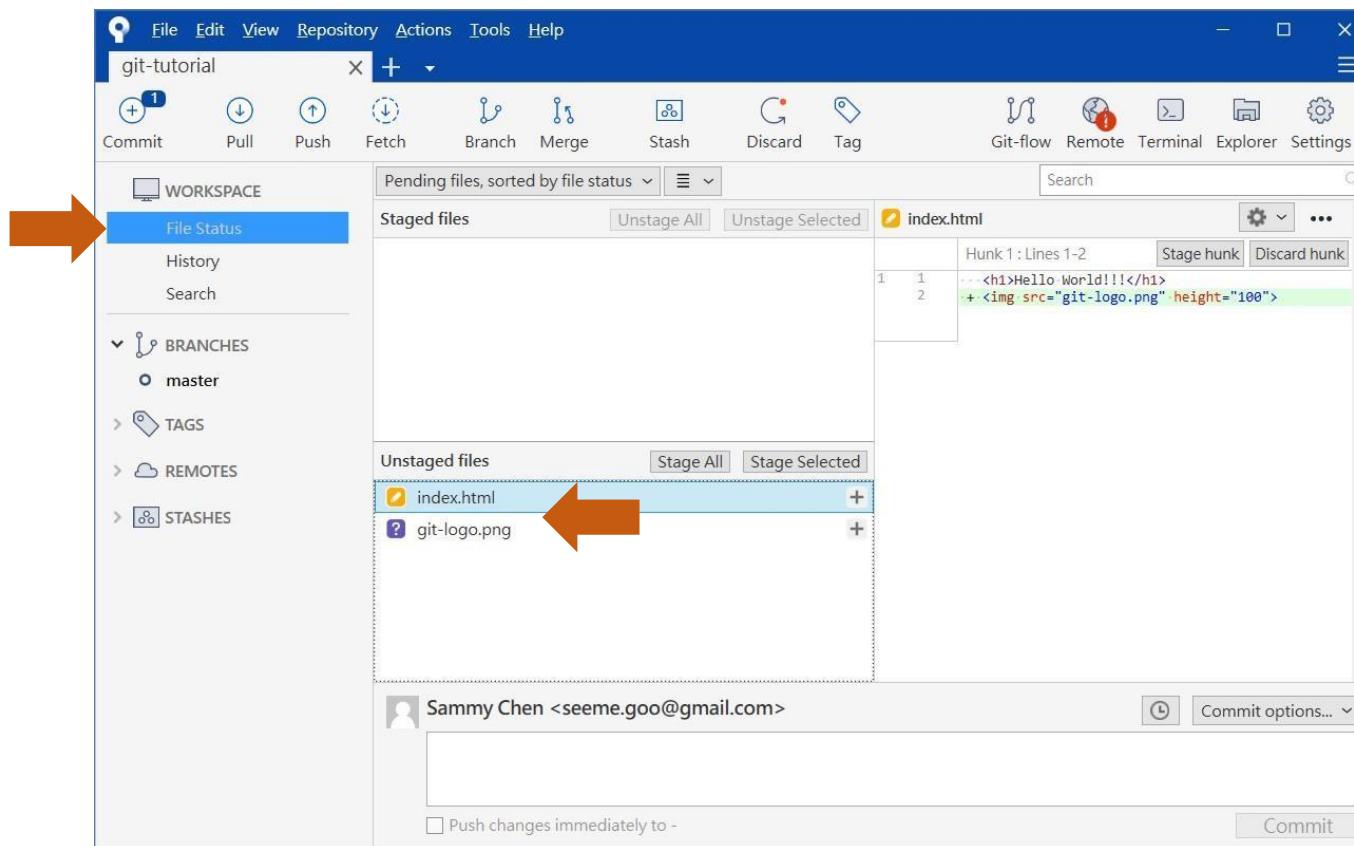
交付後，後悔了怎麼辦？

- 退回前一次交付



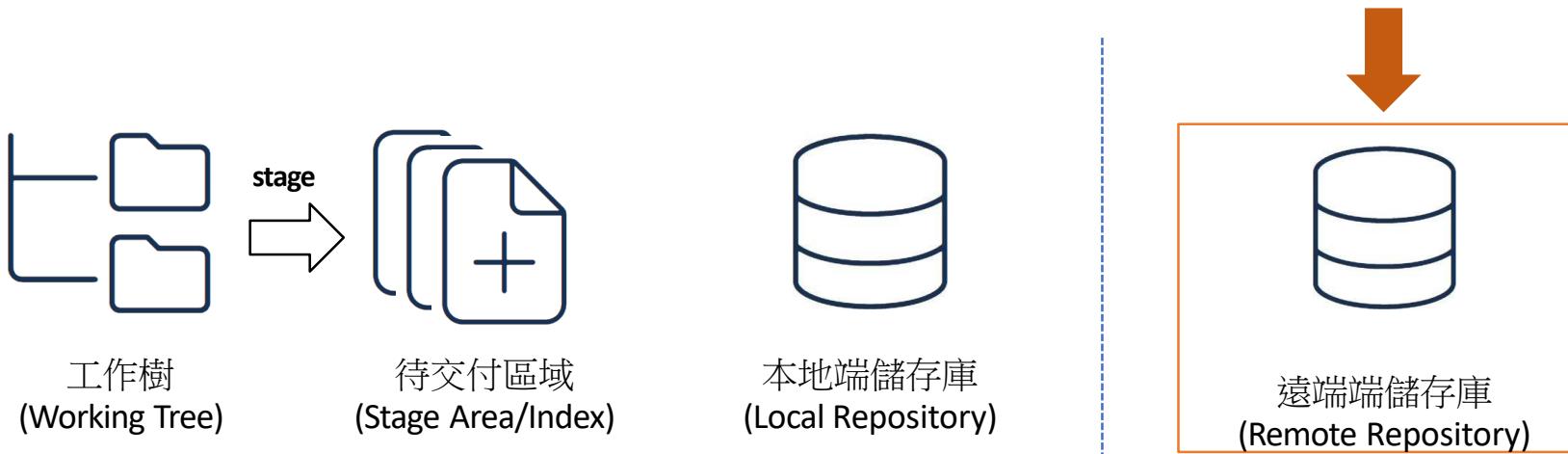
交付後，後悔了怎麼辦？

- 後悔交付的檔案會被退回至working tree



遠端儲存庫(remote repository)

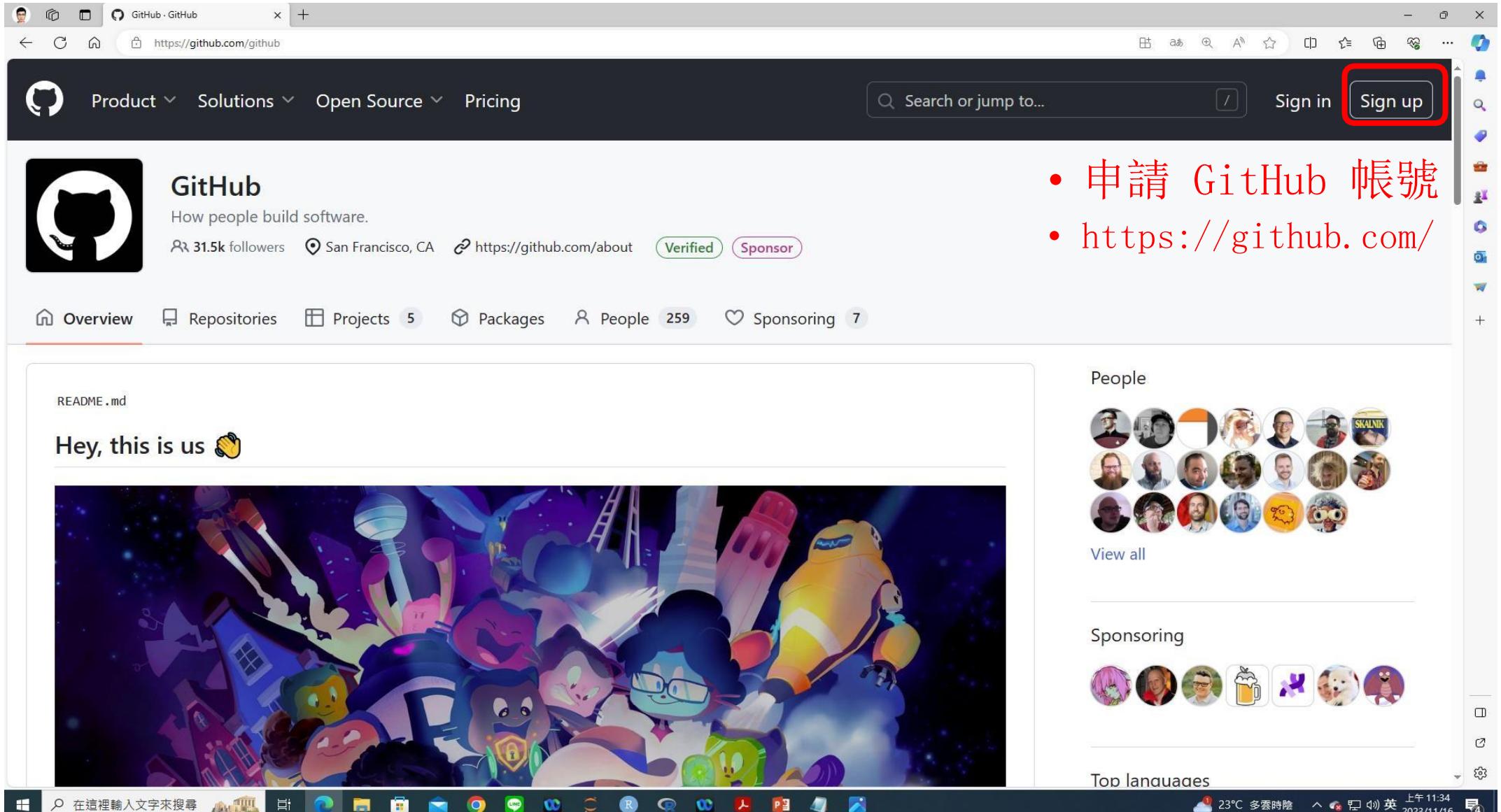
- 一個專業管理下的儲存庫
 - 為於數據中心或雲端
- 反映專案的官方狀態
 - 真實的核心程式碼
- 可與其他系統整合
 - 專案管理系統、議題追蹤系統等



遠端儲存庫(remote repository)

- 遠端儲存庫代管服務
 - GitHub
 - <https://github.com/>
 - GitLab
 - <https://about.gitlab.com/>
 - Bitbucket
 - <https://bitbucket.org/>
 -

建立 GitHub 遠端儲存庫



The screenshot shows the GitHub homepage in a web browser. The top navigation bar includes links for Product, Solutions, Open Source, Pricing, and a search bar. On the right side of the header, there are 'Sign in' and 'Sign up' buttons; the 'Sign up' button is highlighted with a red rectangle. Below the header, the GitHub logo and the tagline 'How people build software.' are displayed. It shows 31.5k followers from San Francisco, CA, and links to the About page, Verified status, and Sponsor button. The main navigation menu includes Overview, Repositories, Projects (5), Packages, People (259), and Sponsoring (7). A large image of a colorful cartoon illustration titled 'README.md' is prominently displayed. To the right, there are sections for People, Sponsoring, and Top languages, each featuring a grid of small profile pictures or icons.

- 申請 GitHub 帳號
- <https://github.com/>

建立 GitHub 遠端儲存庫

The screenshot shows the GitHub homepage with a dark background featuring abstract blue and purple shapes. At the top, there's a navigation bar with links for Product, Solutions, Open Source, and Pricing. A search bar is located at the top right. The main headline reads "Let's build from here" with the subtitle "The world's leading AI-powered developer platform." Below the headline are two buttons: "Email address" and "Sign up for GitHub". A yellow arrow points from the text "申請 GitHub 帳號" to the "Sign up for GitHub" button. Another yellow arrow points from the text "https://github.com/" to the "Sign in" link in the top right corner. The bottom of the page shows logos for various companies like 3M, KPMG, Mercedes-Benz, SAP, P&G, and TELUS, along with a Windows taskbar at the very bottom.

- 申請 GitHub 帳號
- <https://github.com/>

Let's build from here
The world's leading AI-powered developer platform.

Email address [Sign up for GitHub](#) [Start a free enterprise trial >](#)

Trusted by the world's leading organizations [▼](#)

3M KPMG Mercedes-Benz SAP P&G TELUS 改用 Windows 移至 [設定] 以啟用 Windows。

在這裡輸入文字來搜尋

21°C 多雲 上午 11:22 2023/11/26

建立 GitHub 遠端儲存庫

The screenshot shows the GitHub homepage with the URL <https://github.com> in the address bar. The main heading is "The home for all developers — including you." On the left, there's a "Create your first project" section with a "Create repository" button and an "Import repository" link. Below that is a "Recent activity" section with a "Create a new repository" button. The central area has sections for "Start writing code", "Start a new repository", "Create your profile README", and "Contribute to an existing repository". To the right, there are two notifications: one for "GitHub Copilot" and one for "Adding web cookies for enterprise users". The bottom left corner of the screenshot contains the red text "註冊成功" (Registration successful).

Create your first project

Ready to start building? Create a repository for a new idea or bring over an existing repository to keep contributing to it.

[Create repository](#)

Import repository

Recent activity

When you take actions across GitHub, we'll provide links to that activity here.

註冊成功

The home for all developers — including you.

Welcome to your personal dashboard, where you can find an introduction to how GitHub works, tools to help you build software, and help merging your first lines of code.

Start writing code

Start a new repository

Collaborate on code with others and track your work in a repository.

[Create a new repository](#)

Create your profile README

Create a file in a repository that tells the GitHub community who you are.

[Create a README](#)

Contribute to an existing repository

Find repos that need your help >

GitHub Copilot

Get suggestions for lines of code and entire functions in real-time

[Learn more](#)

PRIVACY STATEMENT UPDATES

Adding web cookies for enterprise users

In order to better reach and improve the web experience for enterprise users, we are adding non-essential web cookies to certain subdomains that specifically market our products to businesses. This change is only on subdomains that reach enterprise customers, and all other GitHub subdomains will

<https://github.com/pulls>

GitHub Profile

- GitHub Profile 是開發者在 GitHub 平台上的個人資料頁面
- 顯示自己的項目和貢獻，讓其他人了解你的工作和技能
 - ✓ 個人簡介
 - ✓ 頭像
 - ✓ 個人專案
 - ✓ 個人貢獻
 - ✓ 個人網站連結
 - ✓ 社交媒體連結

GitHub Profile

The screenshot shows the GitHub dashboard at github.com/dashboard. The top navigation bar includes icons for back, forward, search, and user profile. The main header "Home" is displayed above a "Updates to your homepage feed" section. This section contains a message about combining the Following and For you feeds, followed by a "Learn more" link. Below this is a "Trending repositories" section featuring two repos: "bgstaal/multipleWindow3dScene" (JavaScript, 5.9k stars) and "run-llama/rags" (Python, 1.2k stars). A sidebar on the right lists various GitHub features and links, with "Your profile" highlighted by a red rectangle. The bottom right corner shows a message in Chinese: "移至 [設定] 以啟用 Windows" (Move to [Settings] to enable Windows).

Dashboard

Type to search

oo800217 Dung-Jang Tsai

Set status

Your profile

Add account

Your repositories

Your projects

Your organizations

Your enterprises

Your stars

Your sponsors

Your gists

Upgrade

Try Enterprise

Copilot

Feature preview

Settings

Github Docs

GitHub Support 啟用 Windows

Sign out

Top Repositories

New

Find a repository...

oo800217/git-tutorial

oo800217/oo800217

oo800217/123

oo800217/MyBlog

Recent activity

When you take actions across GitHub, we'll provide links to that activity here.

Updates to your homepage feed

We've combined the power of the Following feed with the For you feed so there's one place to discover content on GitHub. There's improved filtering so you can customize your feed exactly how you like it, and a shiny new visual design.

Learn more

Trending repositories · See more

bgstaal/multipleWindow3dScene

A quick example of how one can "synchronize" a 3d scene across multiple windows using three.js and localStorage

JavaScript ⭐ 5.9k

run-llama/rags

Python ⭐ 1.2k

Send feedback Filter 8

GitHub Profile

oo800217

Overview Repositories 4 Projects Packages Stars



Dung-Jang Tsai
oo800217 (2) 編輯個人資料

Edit profile

Fu Jen Catholic University
Taiwan
11:40 (UTC +08:00)
157373@mail.fju.edu.tw

Popular repositories

MyBlog Public
git-tutorial HTML

oo800217 Public

Type to search

(3) 進入下個頁面

oo800217 / README.md

Hi there 🙌

專長
數據統計學、醫學資訊學、人工智慧、機器學習、遺傳流行病學、資料視覺化

現職
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經歷
三軍總醫院 人工智慧計物聯網發展中心 資料科學家

Popular repositories

MyBlog Public
git-tutorial HTML

oo800217 Public

Set status

Your profile (1) 查看Profile

Add account

Your repositories

Your projects

Your organizations

Your enterprises

Your stars

Your sponsors

Your gists

Upgrade

Try Enterprise

Copilot

Feature preview

Settings

GitHub Docs

GitHub Support 啟用 Windows

Sign out

GitHub Profile-email

Screenshot of GitHub Public profile settings page.

Left Sidebar:

- Public profile (selected)
- Account
- Appearance
- Accessibility
- Notifications
- Access
- Billing and plans
- Emails
- Password and authentication
- Sessions
- SSH and GPG keys
- Organizations
- Enterprises
- Moderation
- Code, planning, and automation
- Repositories
- Codespaces

Right Content Area:

Public profile

Name: Dung-Jang Tsai (oo800217)
Your personal account

Profile picture: A circular profile picture of Dung-Jang Tsai, a man with short dark hair, wearing a dark suit jacket, a light blue shirt, and a patterned tie. There is a small "Edit" button below the picture.

Public email: A dropdown menu showing "Select a verified email to display". A note below states: "You have set your email address to private. To toggle email privacy, go to [email settings](#) and uncheck 'Keep my email address private.'"

Bio: A text input field placeholder: "Tell us a little bit about yourself". Below it: "You can @mention other users and organizations to link to them."

Pronouns: A dropdown menu showing "Don't specify".

URL: A text input field containing "157373@mail.fju.edu.tw".

Social accounts: A section showing icons for GitHub, LinkedIn, and other social media platforms.

Top Bar:

- Settings icon
- Search bar: Type / to search
- More options: >-, +, ○, ll, envelope, user icon

Bottom Right:

啟用 Windows
移至 [設定] 以啟用 Windows。

GitHub Profile-email

This email will not be used as the 'from' address for web-based Git operations, e.g., edits and merges. We will instead use 59278976+oo800217@users.noreply.github.com.

- Receives notifications
This email address is the default used for GitHub notifications, i.e., replies to issues, pull requests, etc.

Add email address

Email address Add

Primary email address

Because you have email privacy enabled, oo800217@gmail.com will be used for account-related notifications as well as password resets. 59278976+oo800217@users.noreply.github.com will be used for web-based Git operations, e.g., edits and merges.

oo800217@gmail.com

Backup email address

Your backup GitHub email address will be used as an additional destination for security-relevant account notifications and can also be used for password resets.

Allow all verified emails

Please add a verified email, in addition to your primary email, in order to choose a backup email address.

Keep my email addresses private
We'll remove your public profile email and use 59278976+oo800217@users.noreply.github.com when performing web-based Git operations (e.g. edits and merges) and sending email on your behalf. If you want command line Git operations to use your private email you must [set your email in Git](#).
Commits pushed to GitHub using this email will still be associated with your account.

Block command line pushes that expose my email
When you push to GitHub, we'll check the most recent commit. If the author email on that commit is a private email on your GitHub account, we will block the push and warn you about exposing your private email.

把打勾取消即可顯示信箱

啟用 Windows
移至 [設定] 以啟用 Windows。

GitHub Profile

oo800217

Overview Repositories 4 Projects Packages Stars



Dung-Jang Tsai
oo800217

Edit profile

Fu Jen Catholic University Taiwan 11:40 (UTC +08:00) 157373@mail.fju.edu.tw

oo800217 / README.md

Hi there 🤝

💻 專長
數據統計學、醫學資訊學、人工智慧、機器學習、遺傳流行病學、資料視覺化

🌐 現職
輔仁大學 統計資訊學系 助理教授

🎓 學歷
輔仁大學 公共衛生學系 學士 國防醫學院 公共衛生研究所 碩士 國防醫學院 生命學研究所 博士

🌱 經歷
三軍總醫院 人工智慧計物聯網發展中心 資料科學家

Popular repositories

MyBlog Public

git-tutorial HTML

oo800217 Public

Type ⌂ to search

(3) 編輯 README.md

oo800217 Dung-Jang Tsai

Set status

Your profile

Add account

Your repositories

Your projects

Your organizations

Your enterprises

Your stars

Your sponsors

Your gists

Upgrade

Try Enterprise

Copilot

Feature preview

Settings

GitHub Docs

GitHub Support 啟用 Windows

Sign out

GitHub Profile

github.com/oo800217

oo800217

Overview Repositories 4 Projects Packages Stars

 Dung-Jang Tsai
oo800217

Edit profile

Fu Jen Catholic University
Taiwan
11:51 (UTC +08:00)
oo800217@gmail.com
<https://www.stat.fju.edu.tw/tw/prof/detail/Faculty>

Type ⌘ to search

New repository (highlighted)

Import repository

New codespace

New gist

New organization

New project

oo800217 / README.md

Hi there 🤝

💻 專長
數據統計學、醫學資訊學、人工智慧、機器學習、遺傳流行病學、資料視覺化

👩‍💻 現職
輔仁大學 統計資訊學系 助理教授

👨‍🎓 學歷
輔仁大學 公共衛生學系 學士 國防醫學院 公共衛生研究所 碩士 國防醫學院 生命學研究所 博士

🌱 經歷
三軍總醫院 人工智慧計物聯網發展中心 資料科學家

Popular repositories

MyBlog Public

git-tutorial Public

HTML

Customize your pins

啟用 Windows
移至 [設定] 以啟用 Windows。

<https://github.com/new>

GitHub Profile

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere?

[Import a repository.](#)

Required fields are marked with an asterisk (*).

Owner *  oo800217 / Repository name * 建立同名Repository

⚠ The repository oo800217 already exists on this account.

 oo800217/oo800217 is a   special  repository that you can use to add a README.md to GitHub profile. Make sure it's public and initialize it with a README to get started.

Great repository names are short and memorable. Need inspiration? How about [bookish-enigma](#) ?

Description (optional)

 Public

Anyone on the internet can see this repository. You choose who can commit.

 Private

You choose who can see and commit to this repository.

Initialize this repository with:

Add a README file

This is where you can write a long description for your project. [Learn more about READMEs.](#)

oo800217 Public  Pin  Unwatch 1

 main  1 branch  0 tags [Go to file](#) [Add file](#) [Code](#)

oo800217 Update README.md d603d4e 24 minutes ago 5 commits

 README.md  Update README.md 24 minutes ago

[README.md](#)

README.md

Hi there 

 專長

數據統計學、醫學資訊學、人工智慧、機器學習、遺傳流行病學、資料視覺化

 現職

輔仁大學 統計資訊學系 助理教授

 學歷

輔仁大學 公共衛生學系 學士 國防醫學院 公共衛生研究所 碩士 國防醫學院 生命學研究所 博士



編輯 README

建立GitHub遠端儲存庫

github.com/oo800217

oo800217

Overview Repositories 4 Projects Packages Stars

Type / to search

New repository (highlighted with red box)

Import repository

New codespace

New gist

New organization

New project

oo800217 / README.md

Hi there 🎉

專長

數據統計學、醫學資訊學、人工智慧、機器學習、遺傳流行病學、資料視覺化

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經歷

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Dung-Jang Tsai
oo800217

Edit profile

Fu Jen Catholic University
Taiwan
11:51 (UTC +08:00)
oo800217@gmail.com
<https://www.stat.fju.edu.tw/tw/prof/detail/Faculty>

Popular repositories

MyBlog Public

git-tutorial Public

HTML

Customize your pins

啟用 Windows
移至 [設定] 以啟用 Windows。

<https://github.com/new>

建立 GitHub 遠端儲存庫

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere?
[Import a repository.](#)

Required fields are marked with an asterisk ().*

Owner *



oo800217

Repository name *

git-tutorial

git-tutorial is available.

Great repository names are short and memorable. Need inspiration? How about [bug-free-robot](#) ?

Description (optional)

Public

Anyone on the internet can see this repository. You choose who can commit.

Private

You choose who can see and commit to this repository.

Initialize this repository with:

Add a README file

This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore

.gitignore template: None ▾

Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

建立 GitHub 遠端儲存庫

✓ 建立遠端儲存庫完成(目前遠端儲存庫無任何交付歷程)

oo800217 / git-tutorial

Type to search

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

git-tutorial Public

Pin Unwatch 1 Fork 0 Star 0

Set up GitHub Copilot
Use GitHub's AI pair programmer to autocomplete suggestions as you code.
Get started with GitHub Copilot

Add collaborators to this repository
Search for people using their GitHub username or email address.
Invite collaborators

Quick setup — if you've done this kind of thing before

Set up in Desktop or HTTPS SSH https://github.com/oo800217/git-tutorial.git

Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.

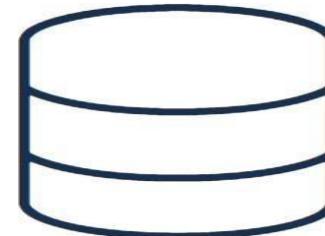
...or create a new repository on the command line

```
echo "# git-tutorial" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/oo800217/git-tutorial.git
git push -u origin main
```

啟用 Windows
移至 [設定] 以啟用 Windows。

遠端儲存庫(remote repository)

- 遠端儲存庫為一個簡化版(bare)的儲存庫
 - ✓ 不與使用者互動
 - ✓ 沒有working tree與stage area
- 依照慣例，遠端儲存庫的**名稱**都以**.git**做為後綴

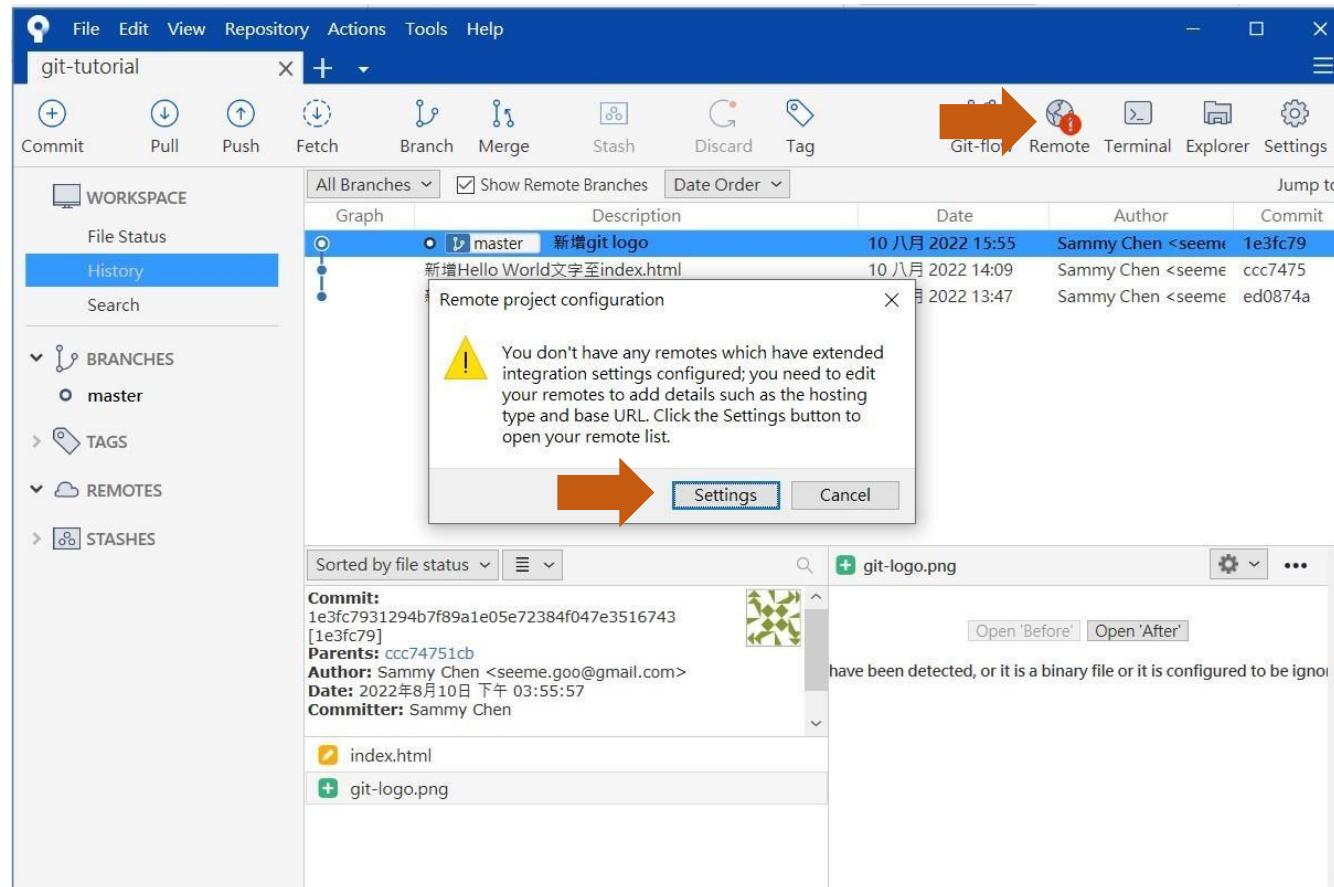


遠端端儲存庫
(Remote Repository)

<https://github.com/<username>/<repo-name>.git>

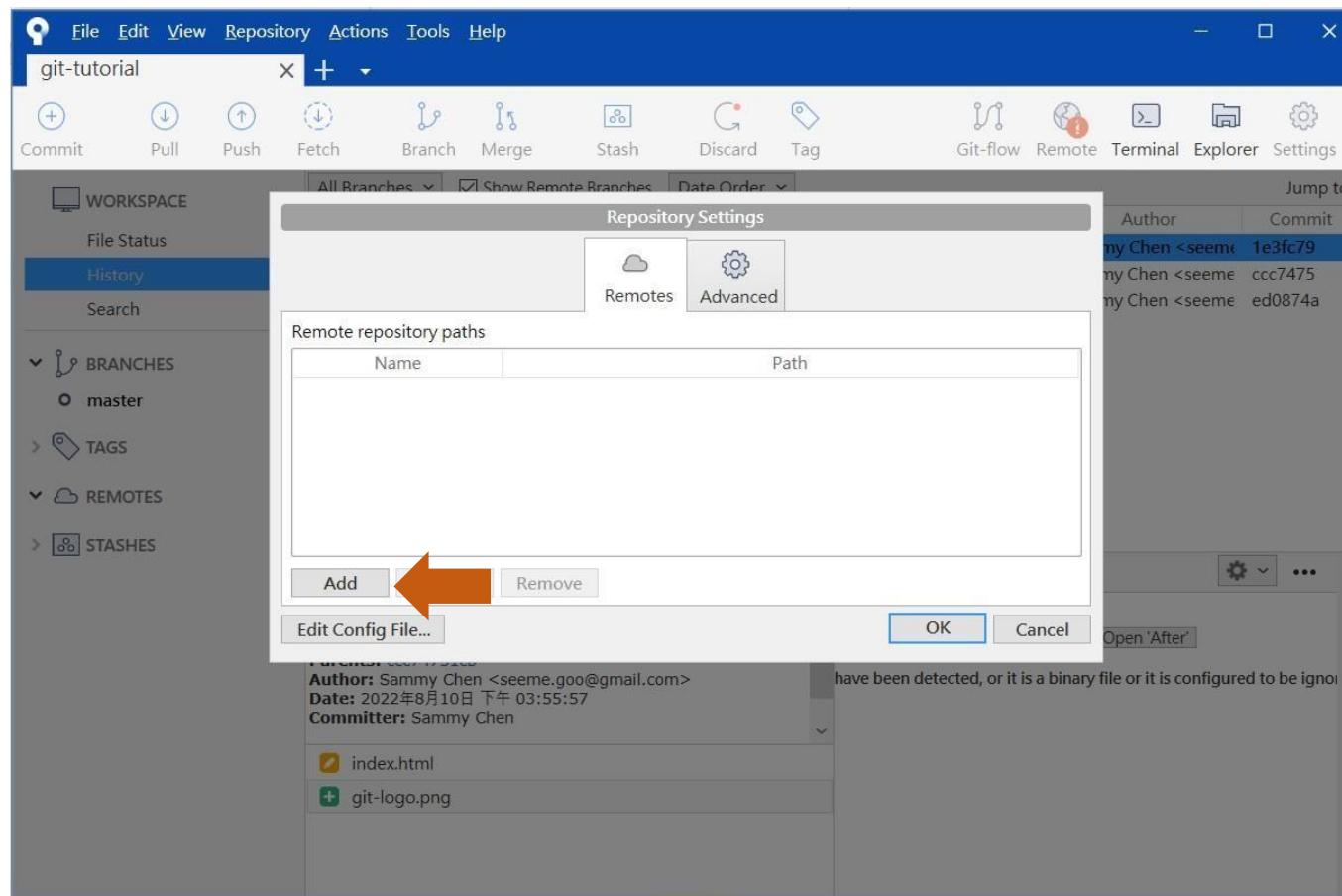
同步遠端儲存庫

- 將本地端儲存庫交付歷程同步至遠端儲存庫



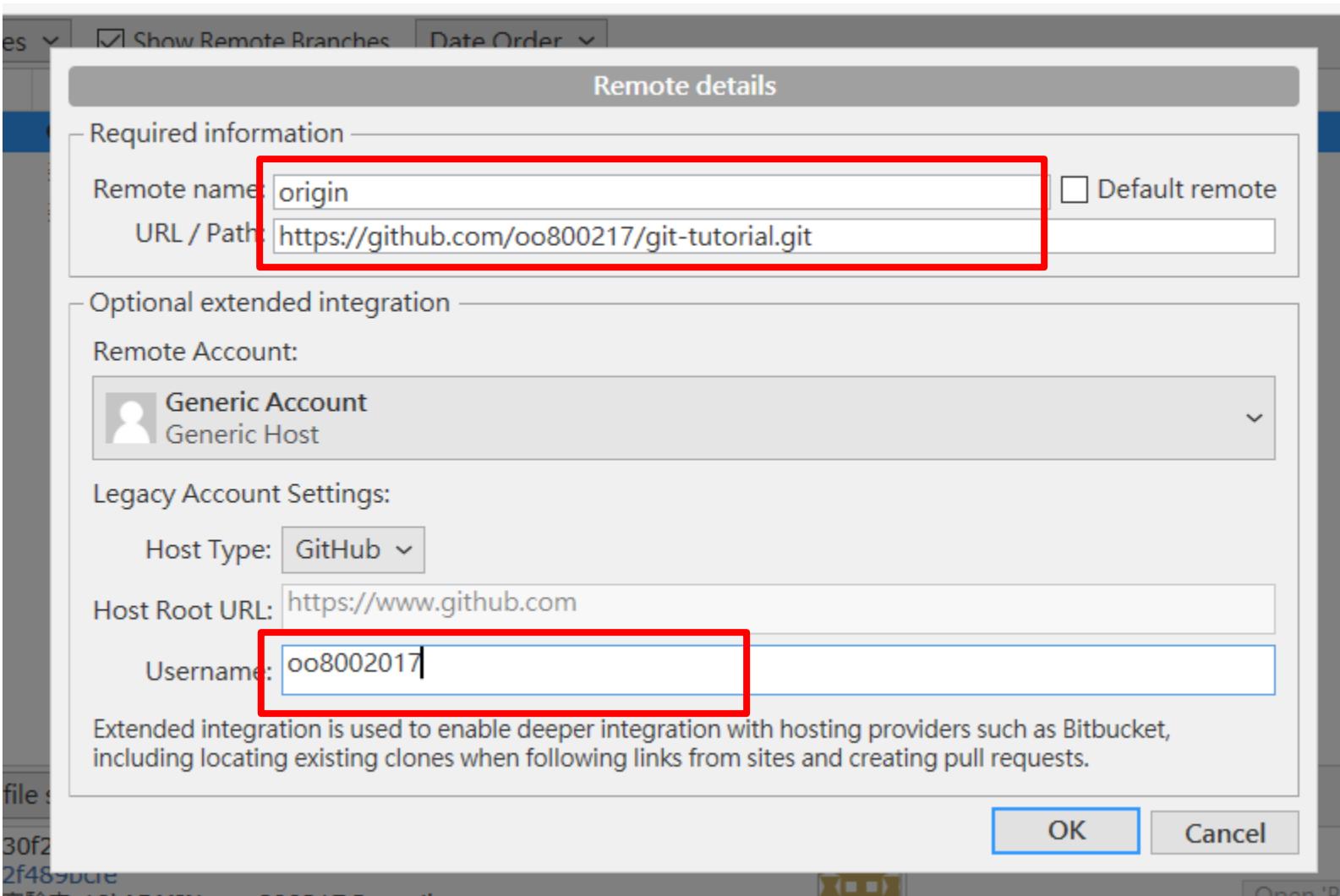
同步遠端儲存庫

- 設定遠端儲存庫



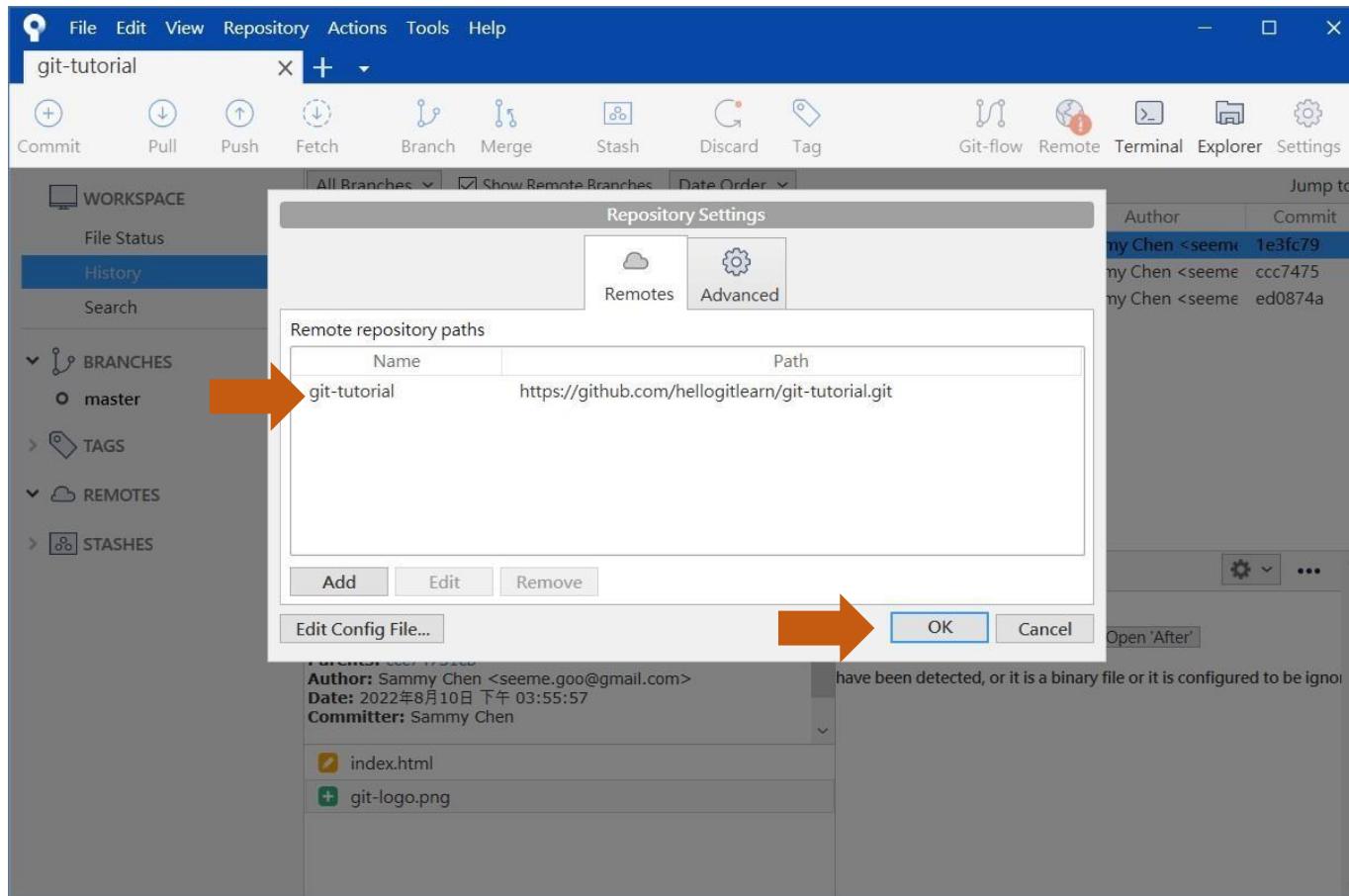
同步遠端儲存庫

- 設定遠端儲存庫



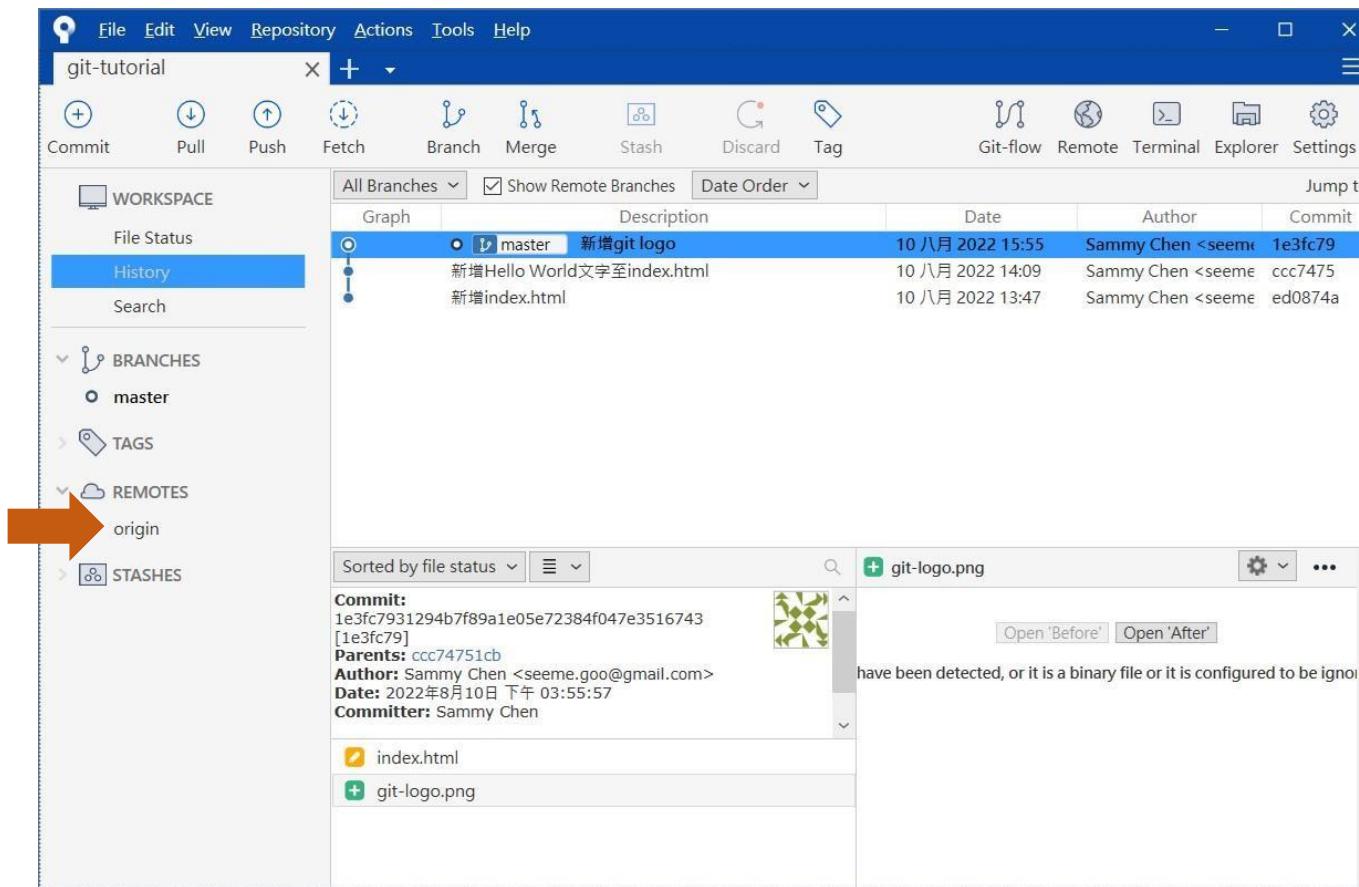
同步遠端儲存庫

- 完成遠端儲存庫設定



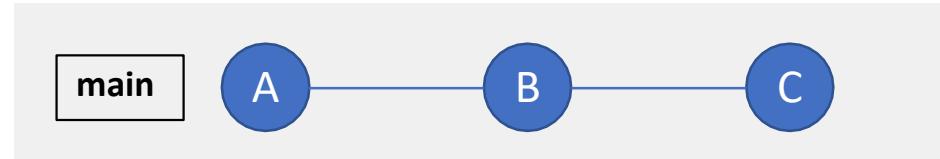
同步遠端儲存庫

- 本地端儲存庫已關聯至遠端儲存庫



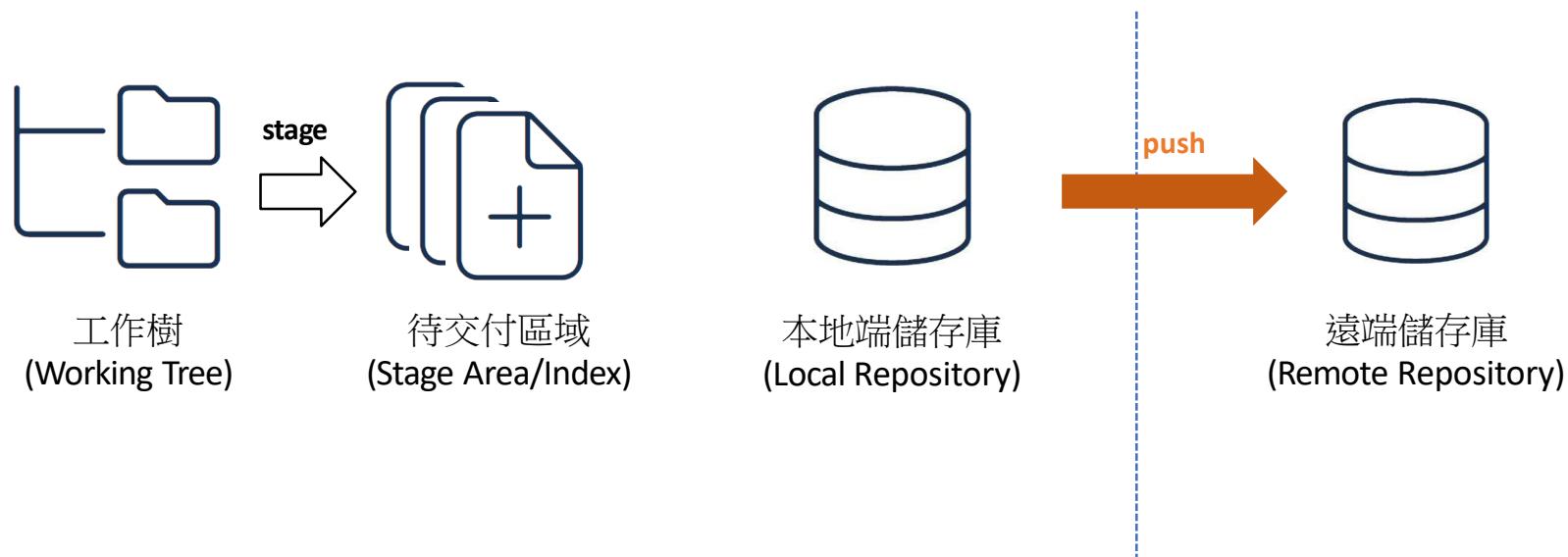
分支(Branch)

- 一個軟體專案存在一個或一個以上的分支
- 所有的commit都屬於分支(branch)
 - 一個分支可視為專案的獨立開發支線
- 每個軟體專案會有一個預設分支稱為(main/master)



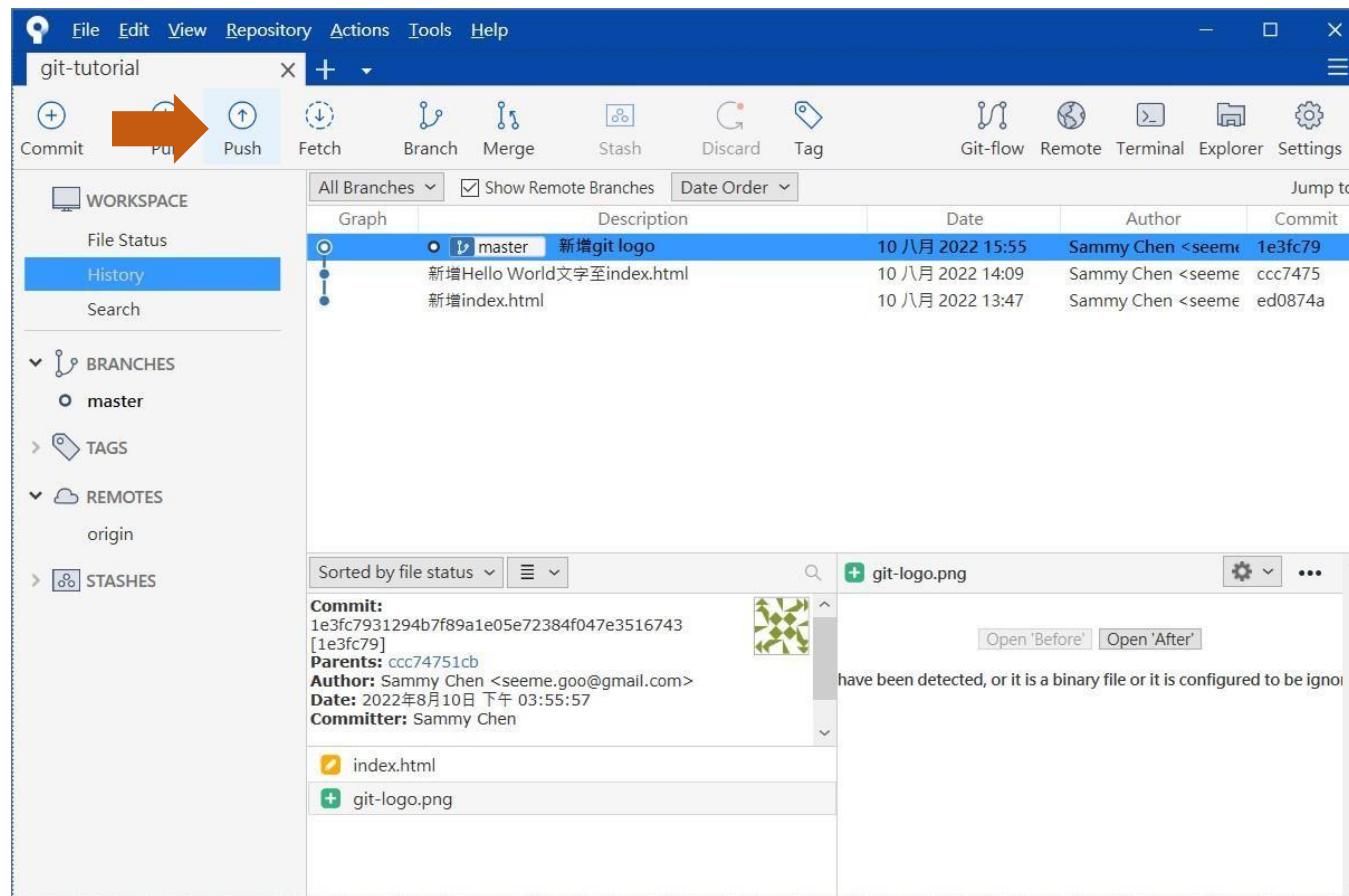
同步遠端儲存庫

- 將本地端儲存庫的一個分支交付歷程**推上(push)**遠端儲存庫



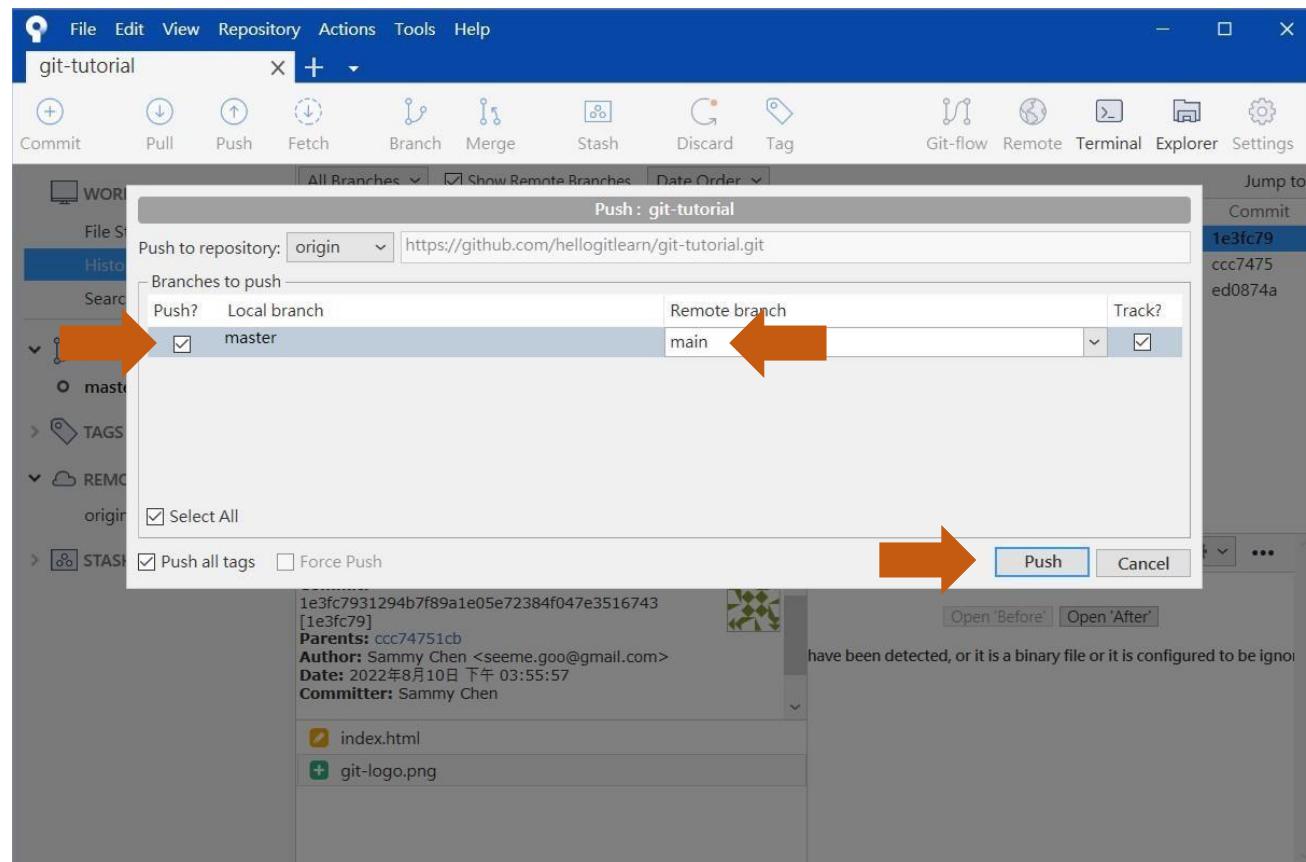
同步遠端儲存庫

- push



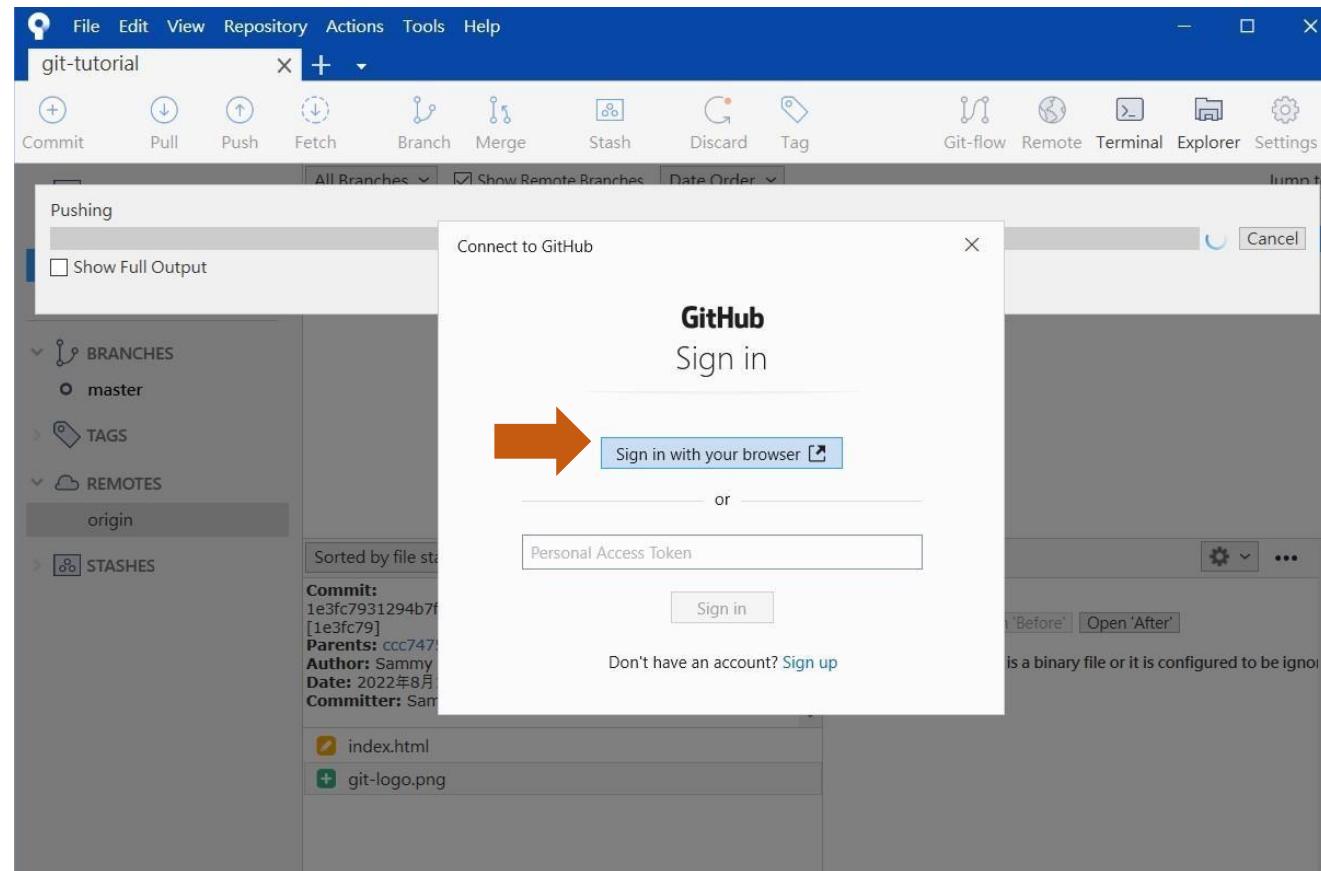
同步遠端儲存庫

- GitHub預設分支名稱已改為main

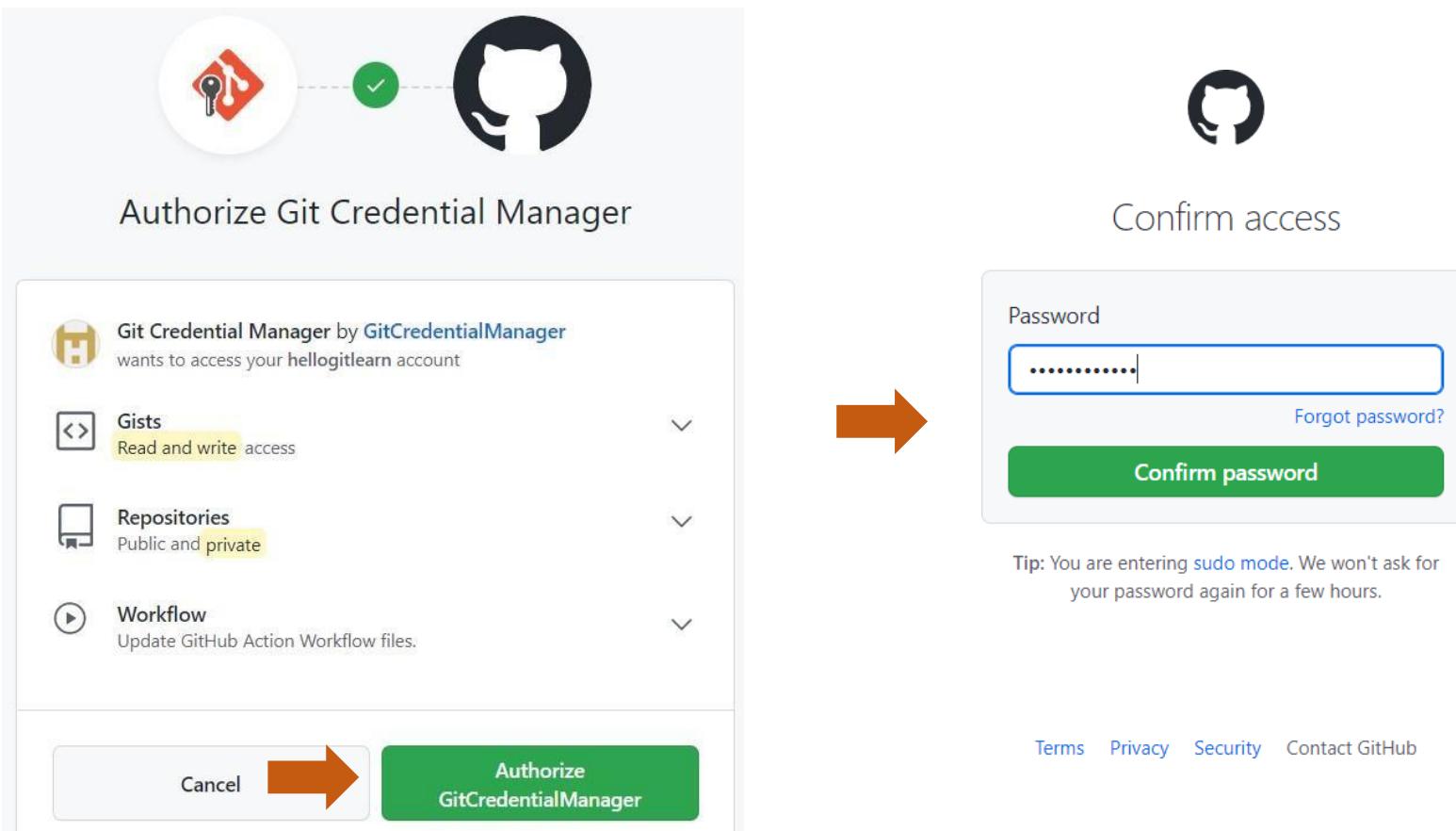


同步遠端儲存庫

- 登入GitHub



同步遠端儲存庫(授權)



完成遠端儲存庫同步

- 重整遠端儲存庫

oo800217 / git-tutorial

Type ⌘ to search

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

git-tutorial Public

Pin Unwatch 1

master 1 branch 0 tags

Go to file Add file ▾ Code ▾

oo800217 新增git.jpg	630f205 1 hour ago	3 commits
git.jpg	新增git.jpg	1 hour ago
index.html	新增git.jpg	1 hour ago

Help people interested in this repository understand your project by adding a README.

Add a README

查看遠端儲存庫上的交付歷程

The screenshot shows a GitHub repository page for 'oo800217 / git-tutorial'. The 'Code' tab is selected. The repository is public and has 1 branch and 0 tags. The commit history shows three commits from 'oo800217' made 1 hour ago. The third commit, which added 'index.html', is highlighted with a red box around the '3 commits' link.

oo800217 / git-tutorial

Type / to search

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

git-tutorial Public

Pin Unwatch 1

master 1 branch 0 tags

Go to file Add file ▾ Code ▾

Commit	File	Message	Date
630f205	oo800217 新增git.jpg	1 hour ago	3 commits
	git.jpg	新增git.jpg	1 hour ago
	index.html	新增git.jpg	1 hour ago

Help people interested in this repository understand your project by adding a README.

Add a README

查看遠端儲存庫上的交付歷程

The screenshot shows a GitHub repository interface for the repository `oo800217 / git-tutorial`. The navigation bar includes links for Code (highlighted in red), Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings.

The main content area displays the commit history under the heading "Commits". A dropdown menu for the branch "master" is open, with "master" selected. Below it, a list of commits is shown for "Commits on Nov 26, 2023".

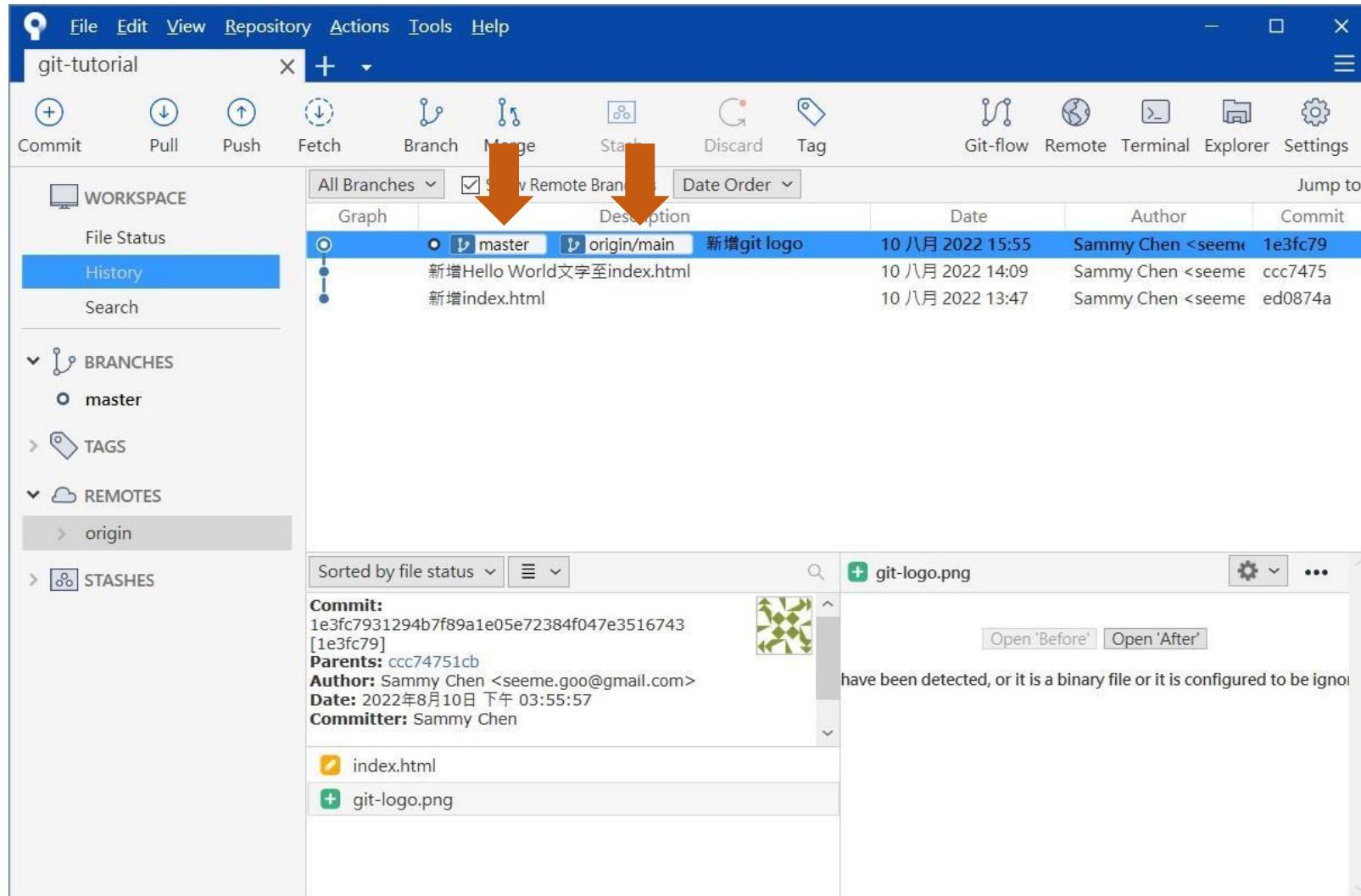
The commits listed are:

- 新增git.jpg (commit `630f205`)
- 新增 Hello World!!! (commit `b2f489b`)
- 新增index.html (commit `63766e0`)

Each commit entry includes a small profile picture of the author, the commit message, the author's name, the time since commit, and three action icons: copy, diff, and pull request.

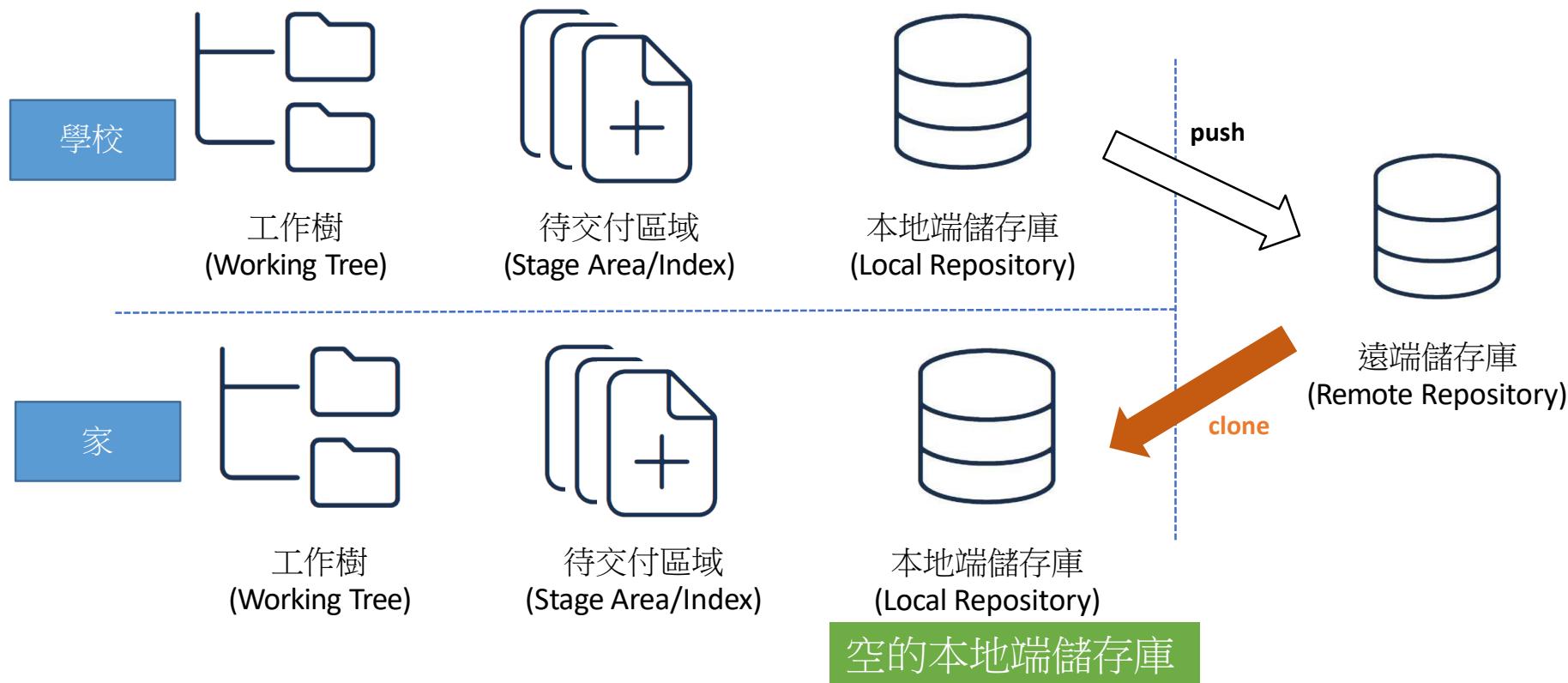
At the bottom of the commit list, there are "Newer" and "Older" buttons.

完成遠端儲存庫同步



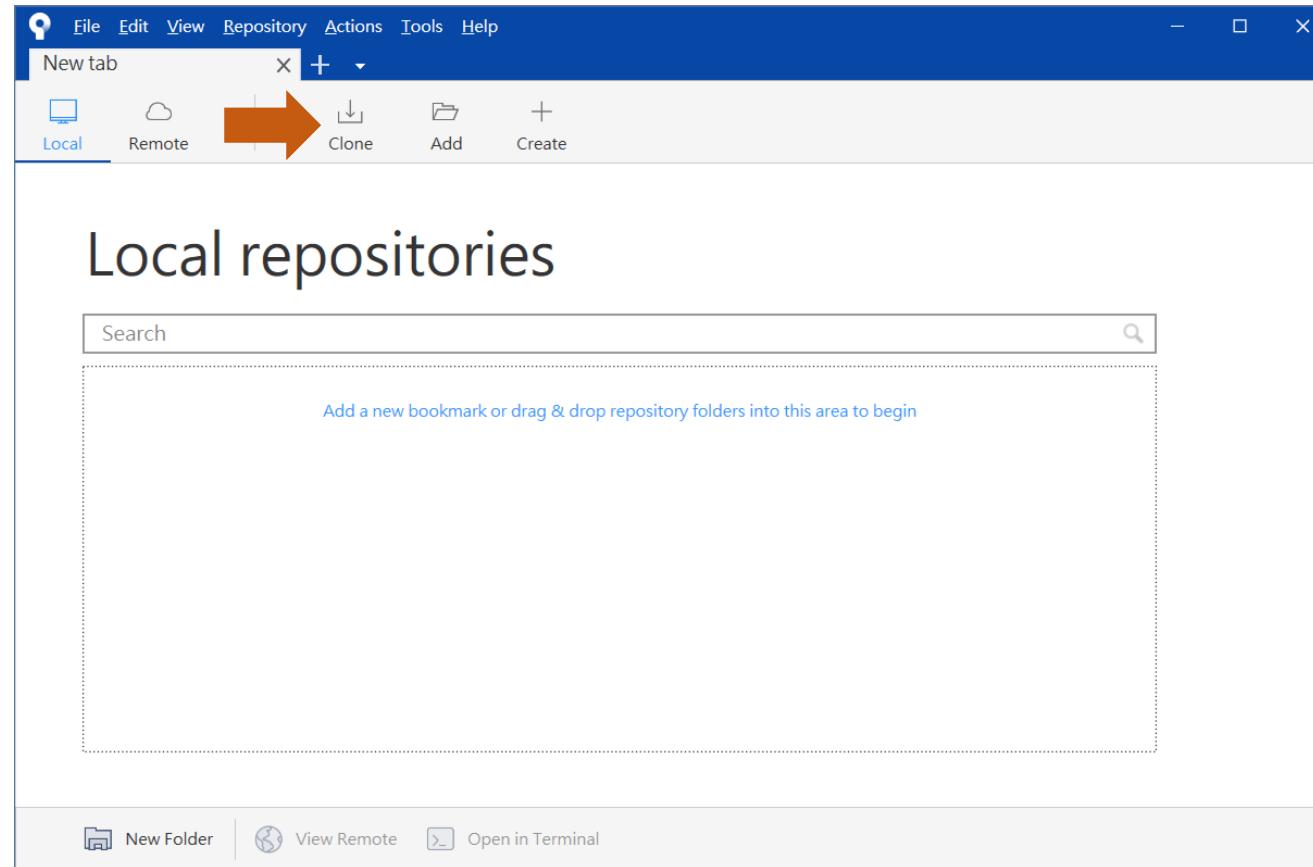
同步本地端儲存庫

- 將遠端儲存庫一個分支的交付歷程複製(clone)到本地端儲存庫



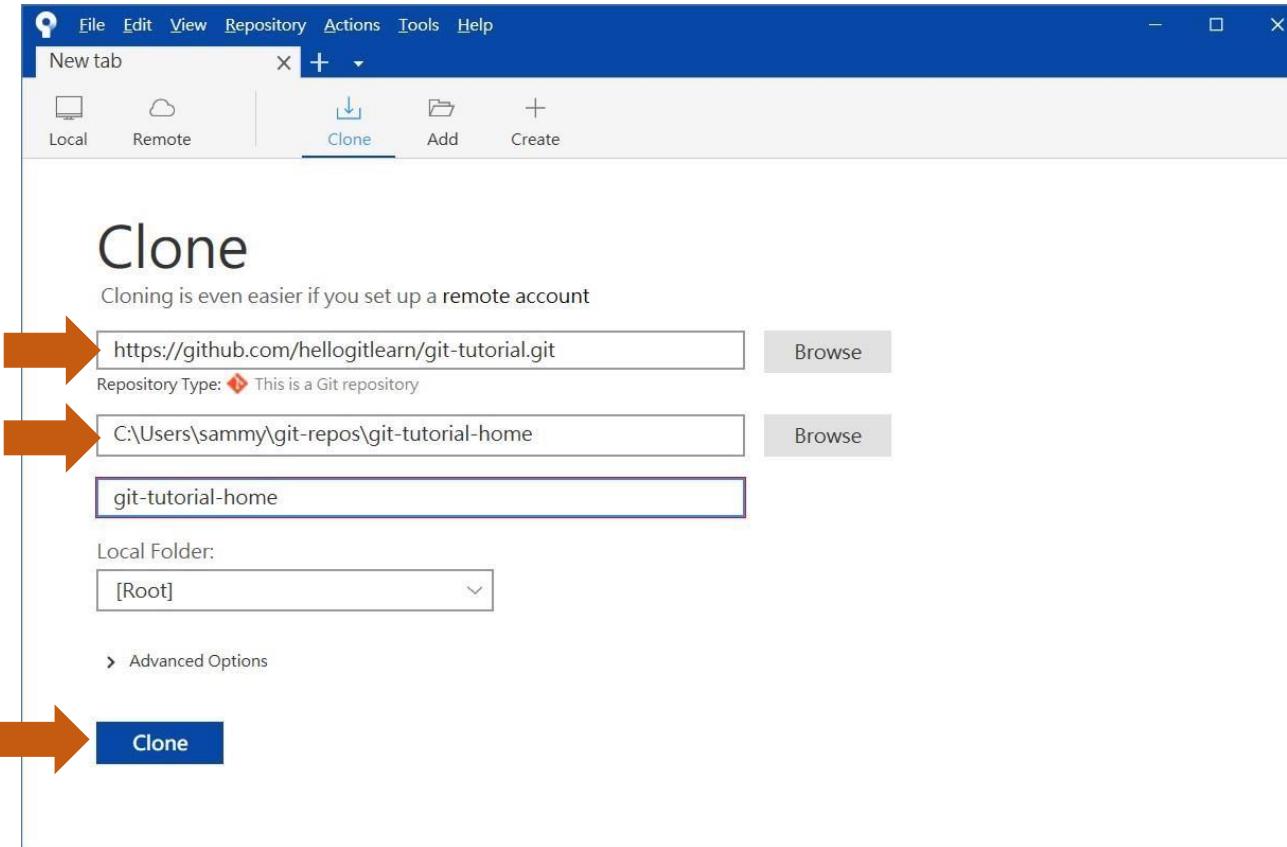
同步本地端儲存庫

- 開啟SourceTree，建立遠端儲存庫副本

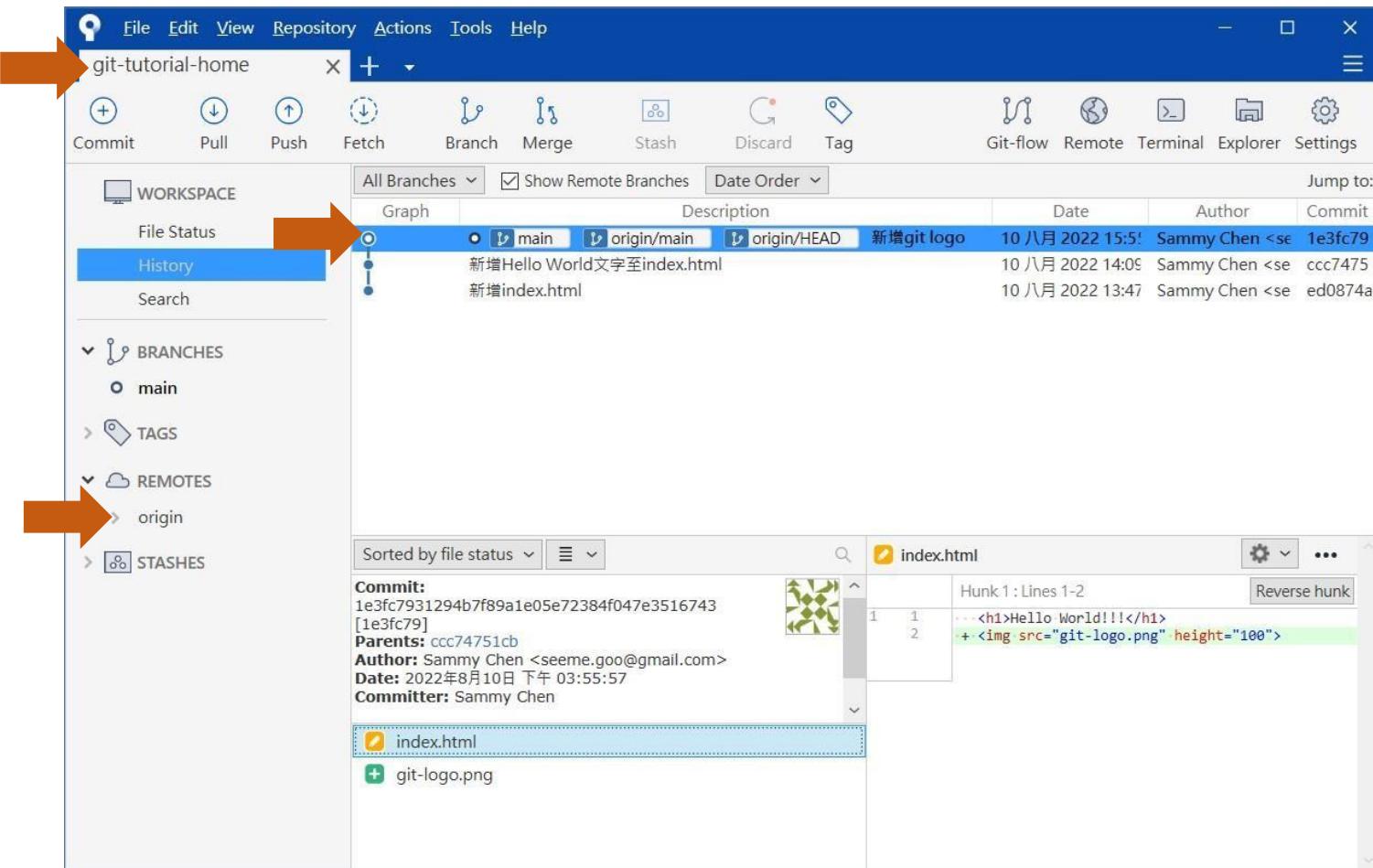


同步本地端儲存庫

- 設定遠端儲存庫網址與本地端工作目錄(working tree)

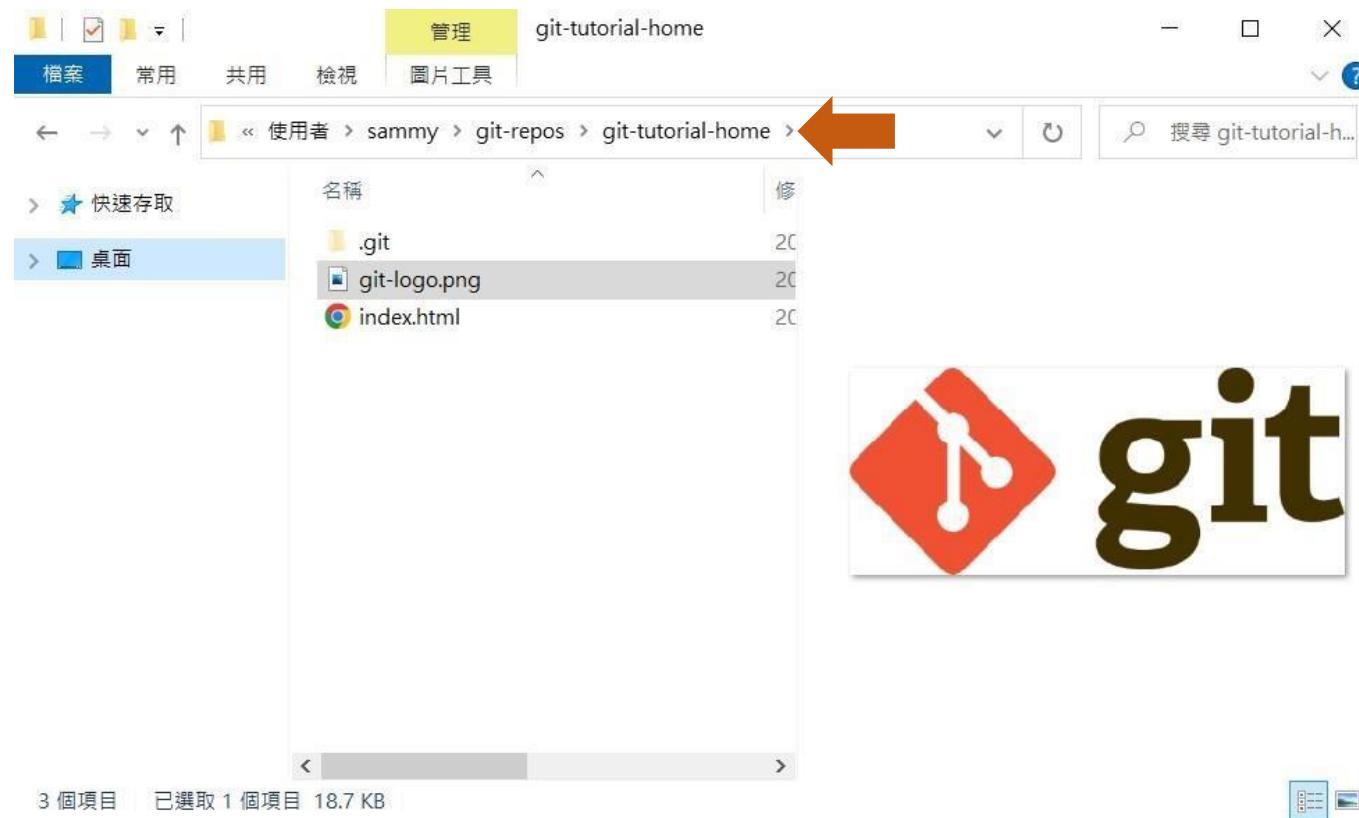


完成本地端儲存庫同步



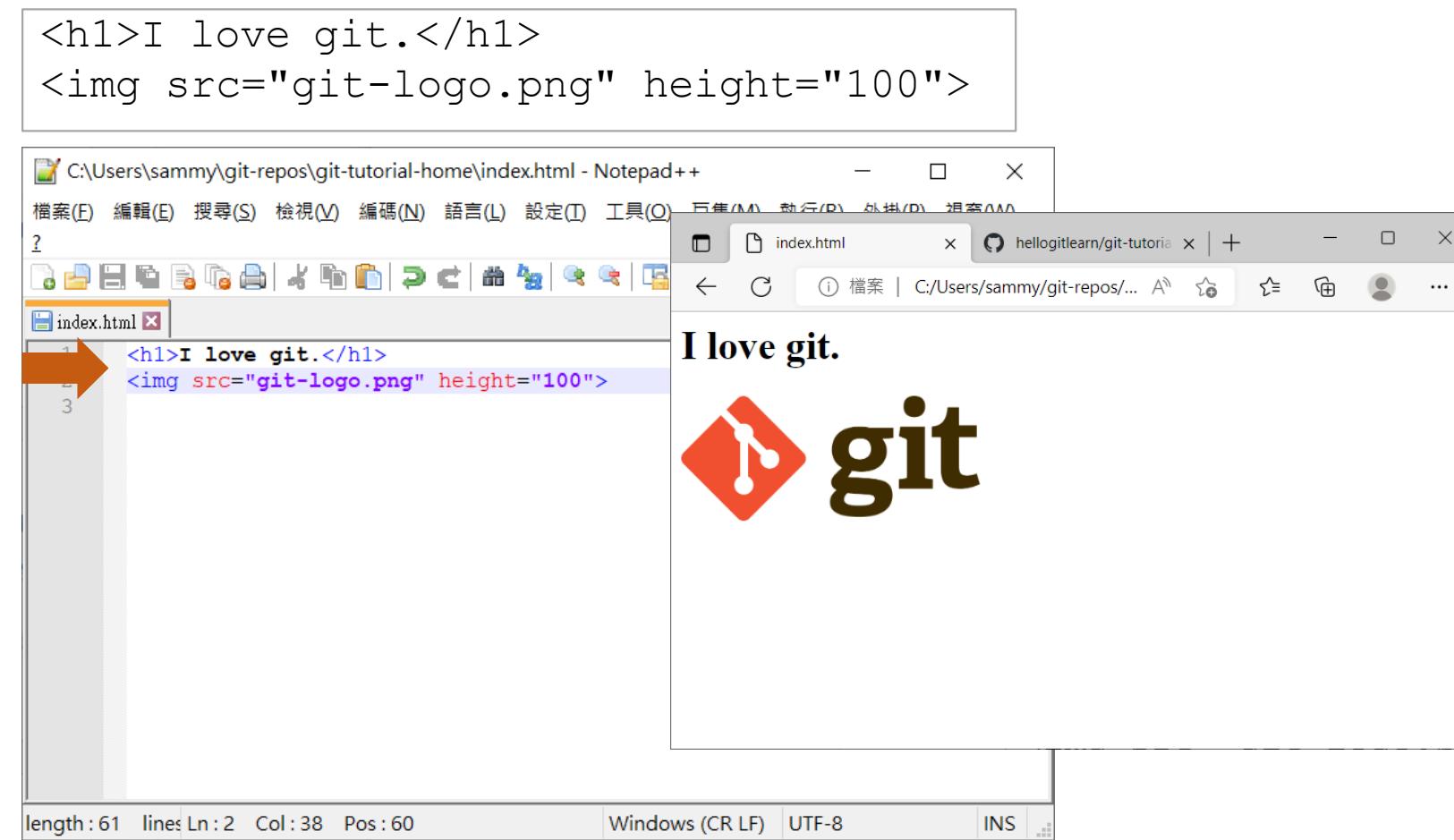
完成本地端儲存庫同步

- 開啟檔案總管，檢視工作目錄內容



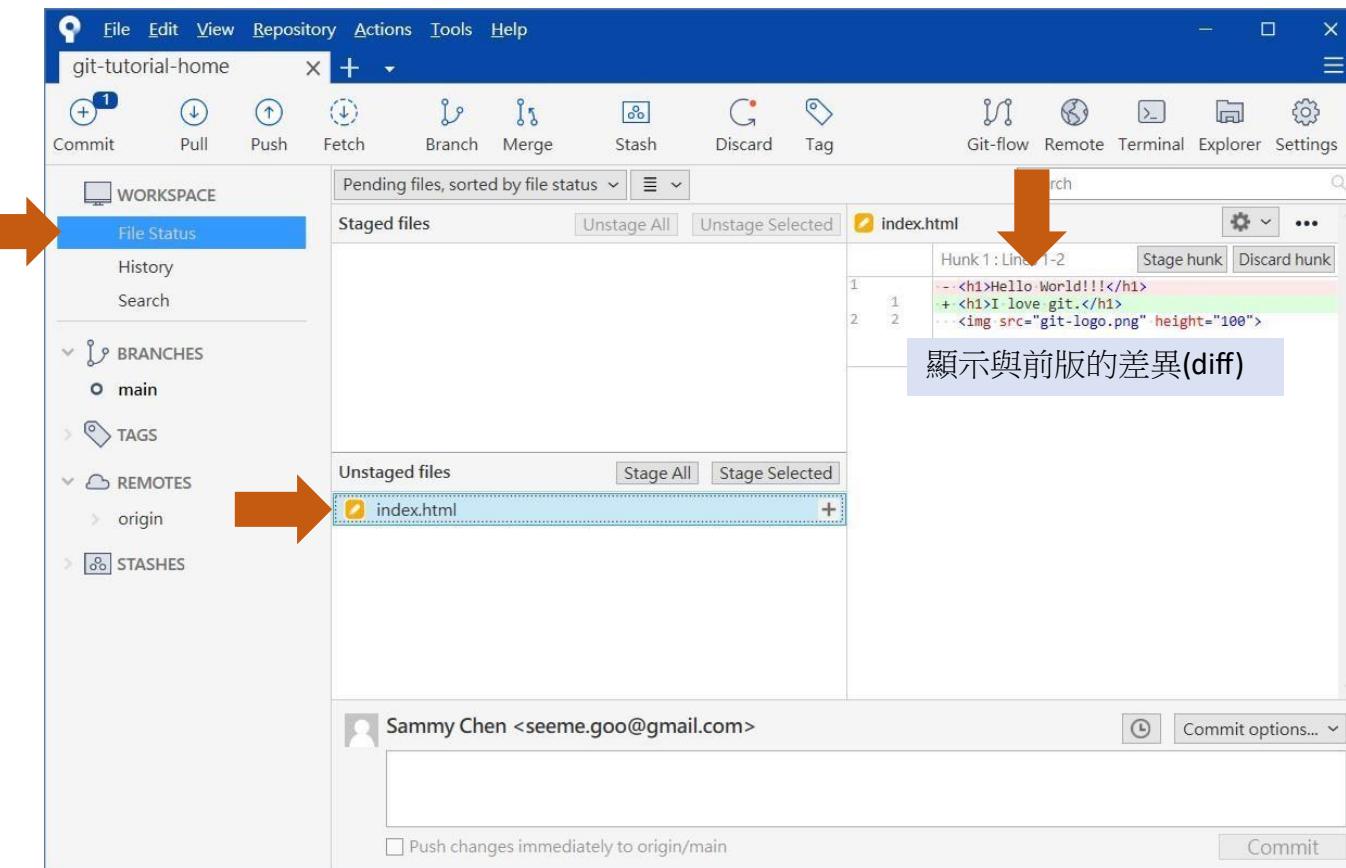
小量改進-修改內容

- 修改/變工作目錄(working tree)中的index.html



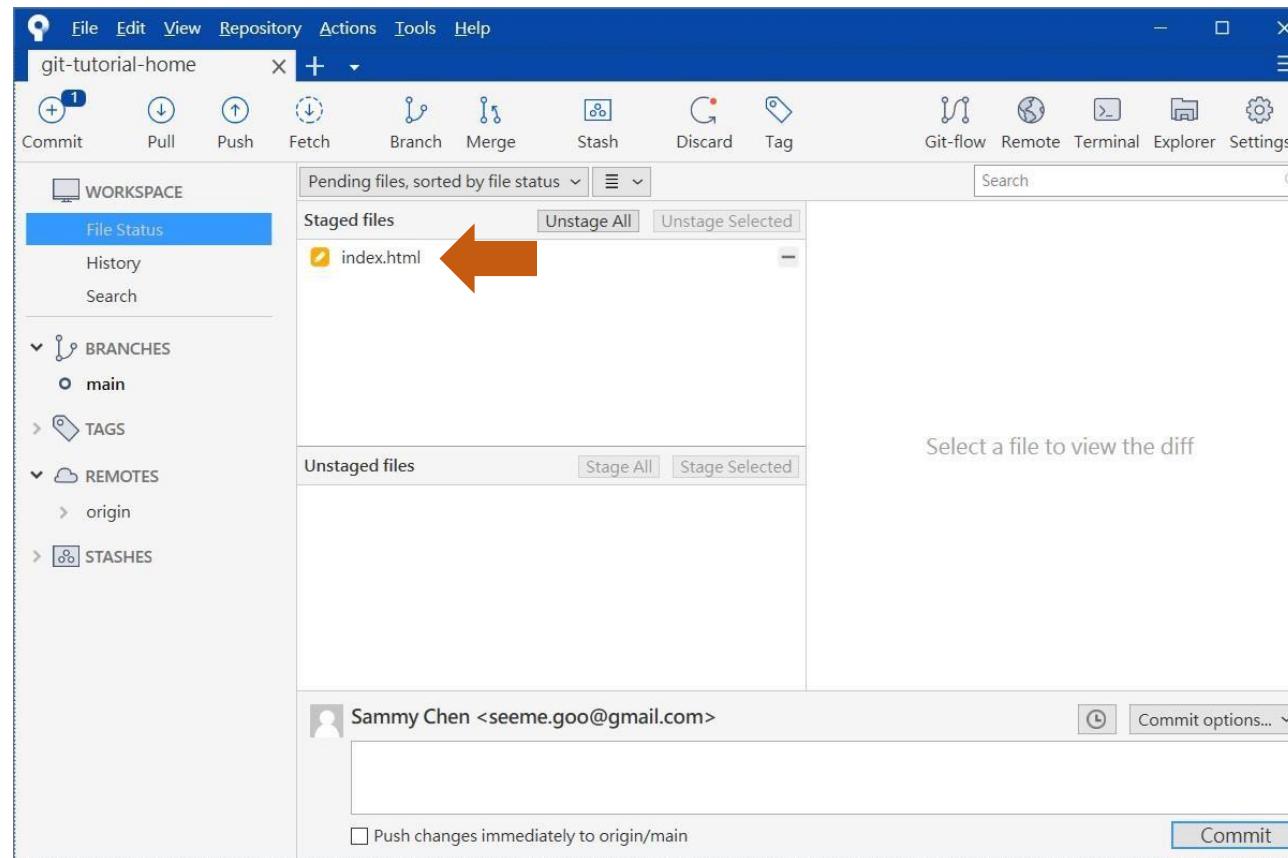
小量改進-修改內容

- 查看檔案狀態



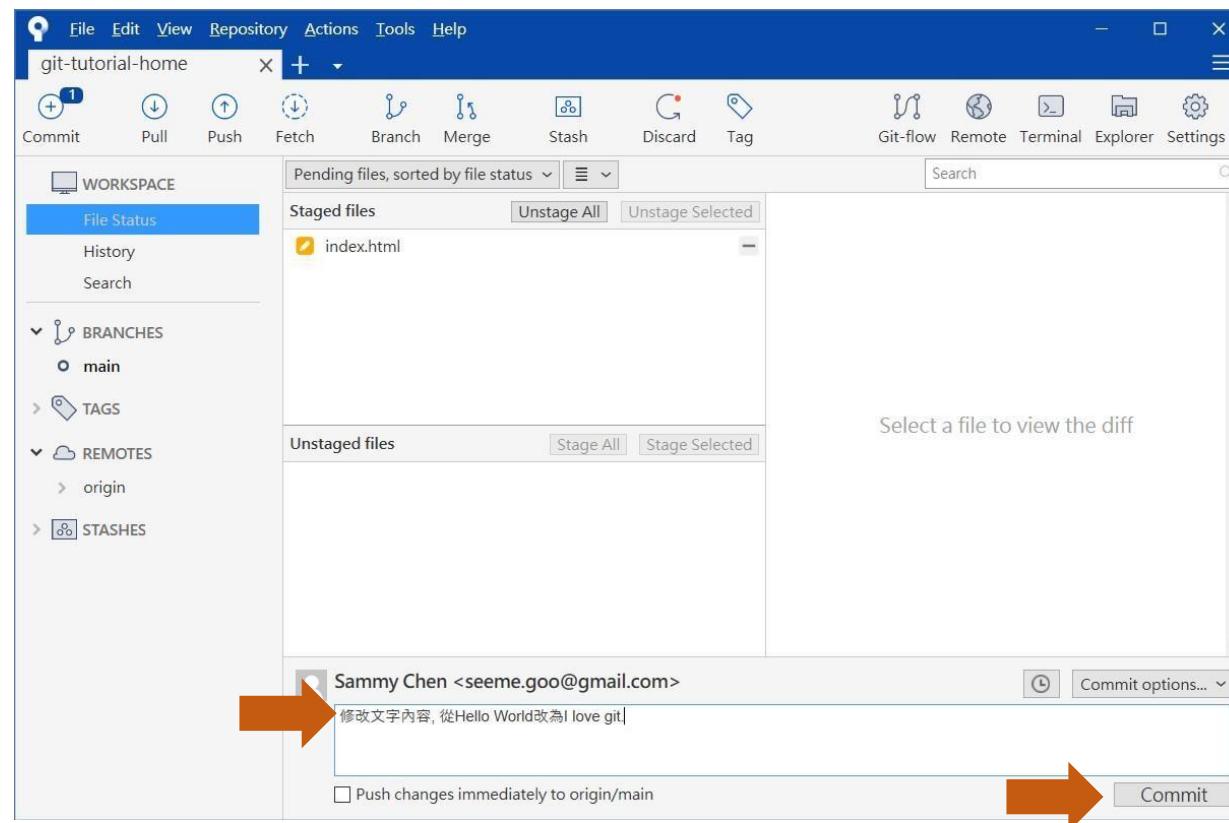
小量改進-修改內容

- Stage修改/變更的檔案



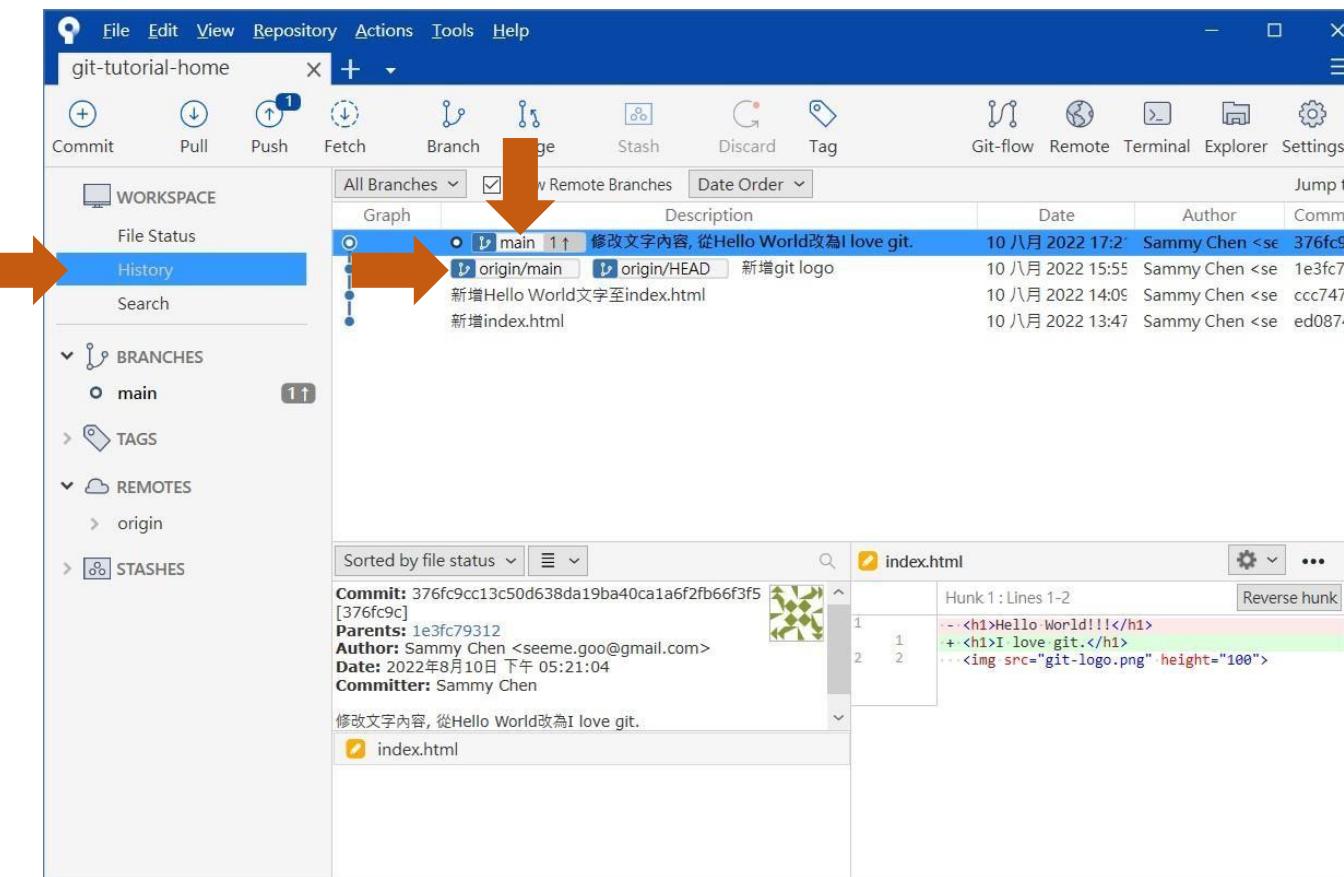
小量改進-修改內容

- 交付修改/變更的檔案



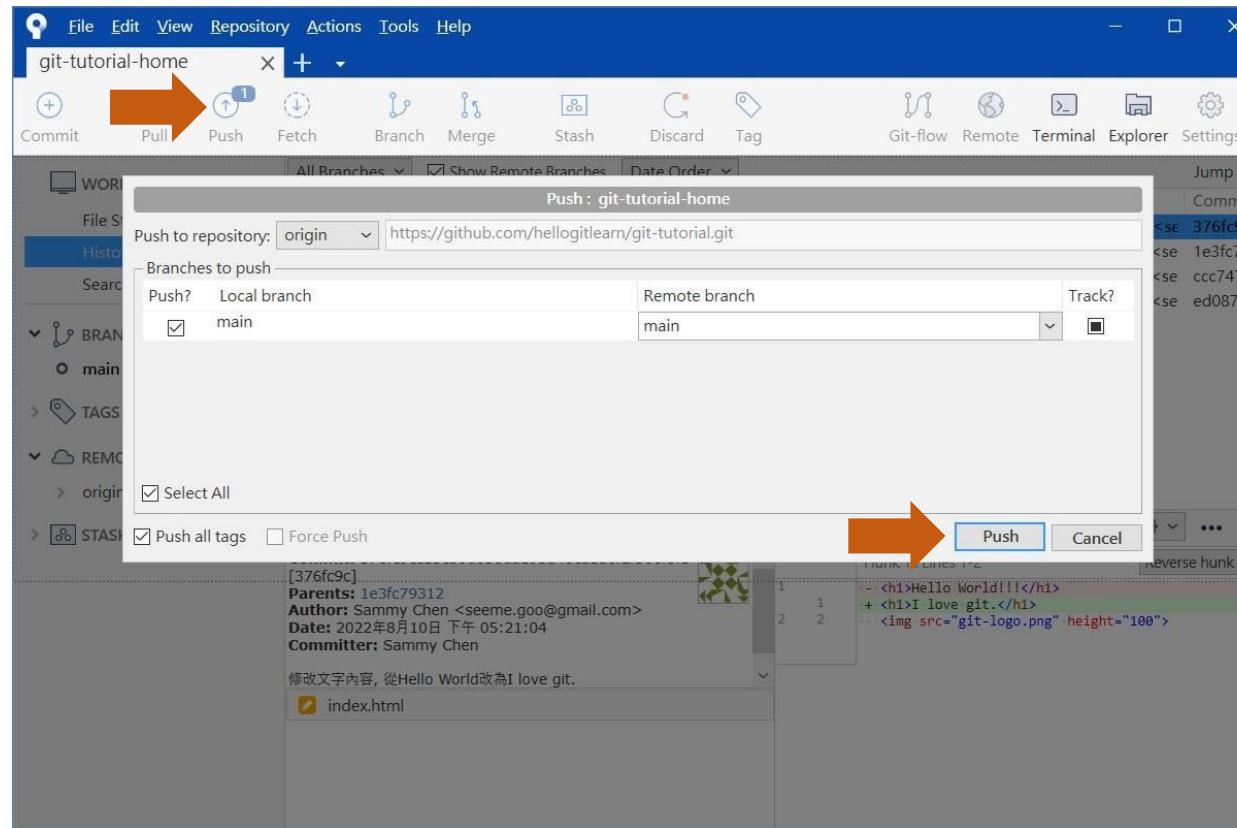
小量改進-修改內容

- 檢視交付歷程



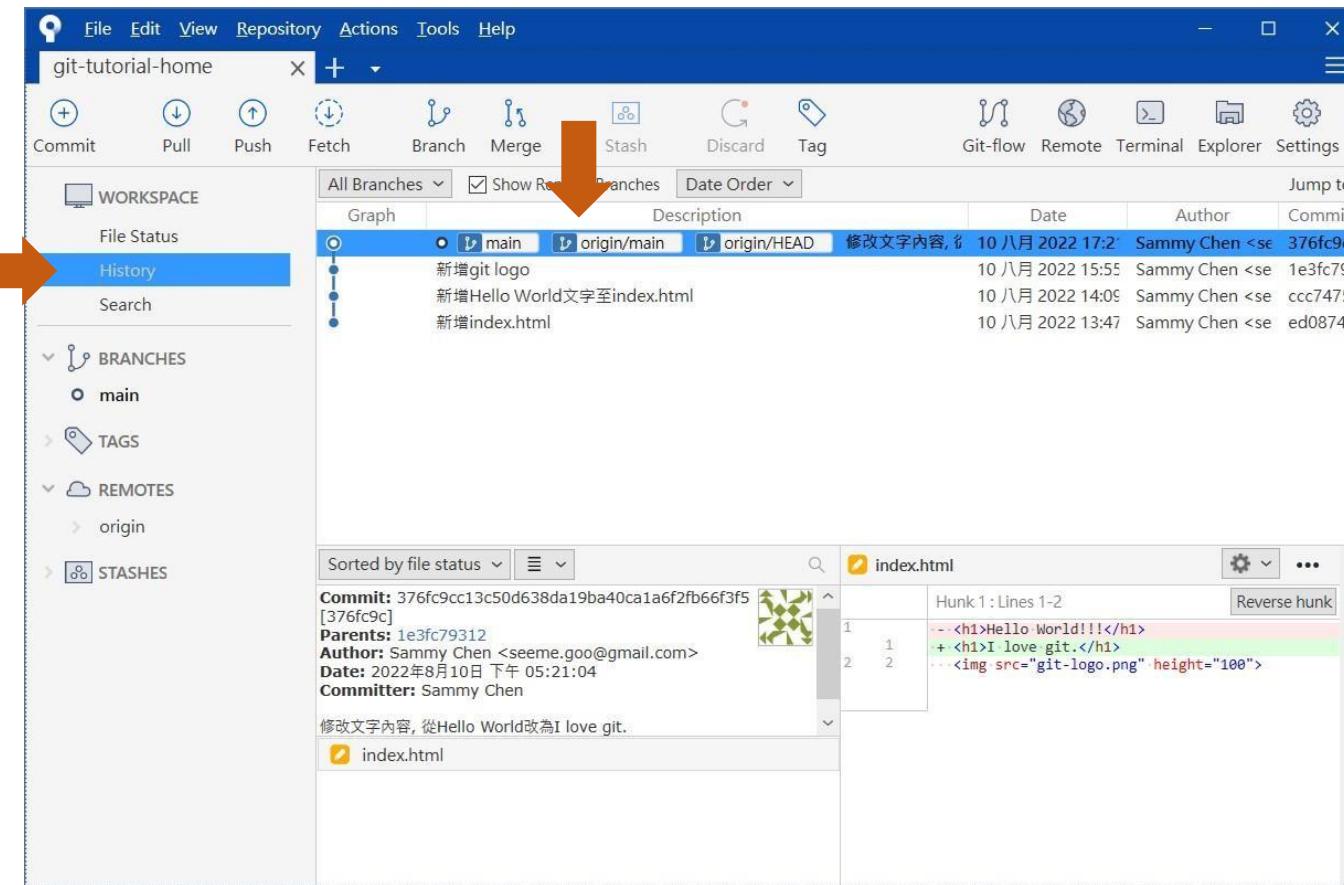
同步遠端儲存庫

- 透過push將新的交付同步至遠端儲存庫



同步遠端儲存庫

- 完成遠端儲存庫同步



同步遠端儲存庫

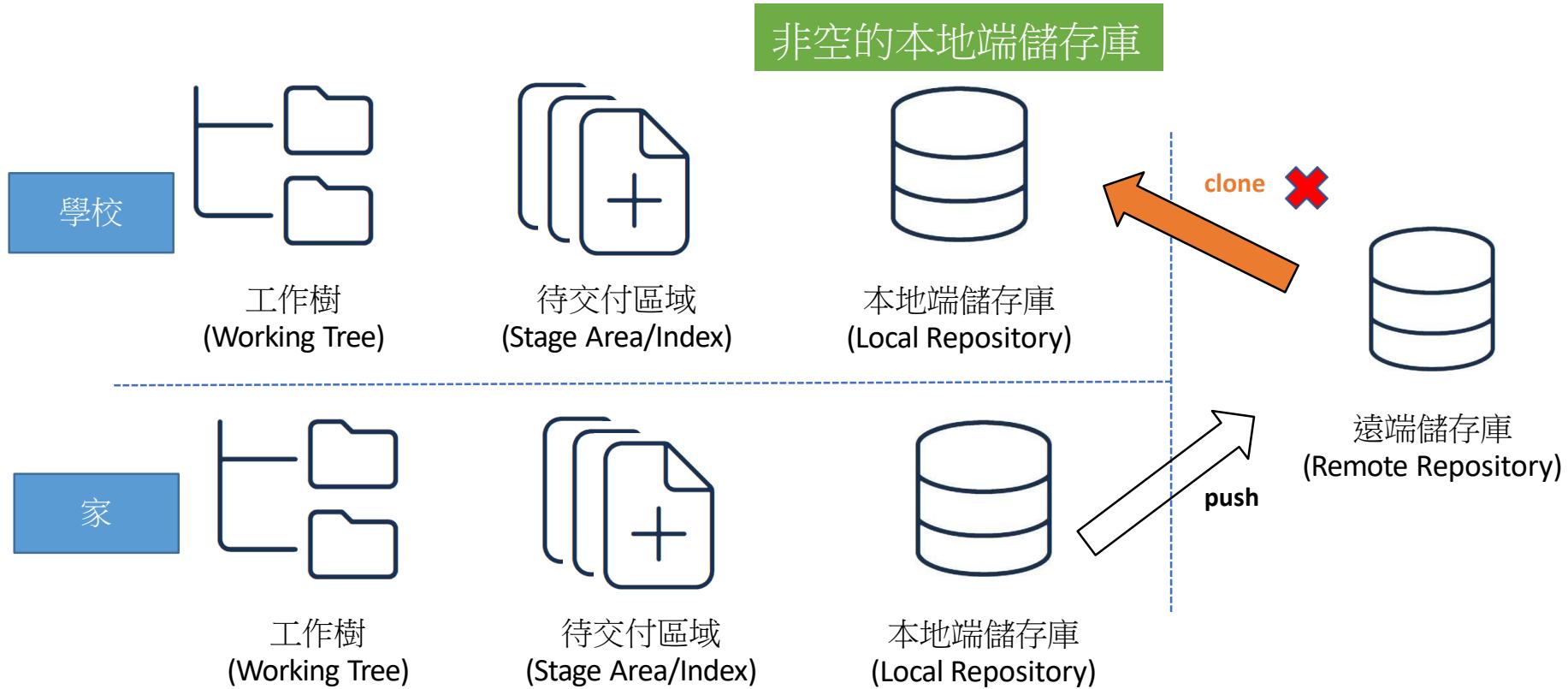
- 檢視遠端儲存庫

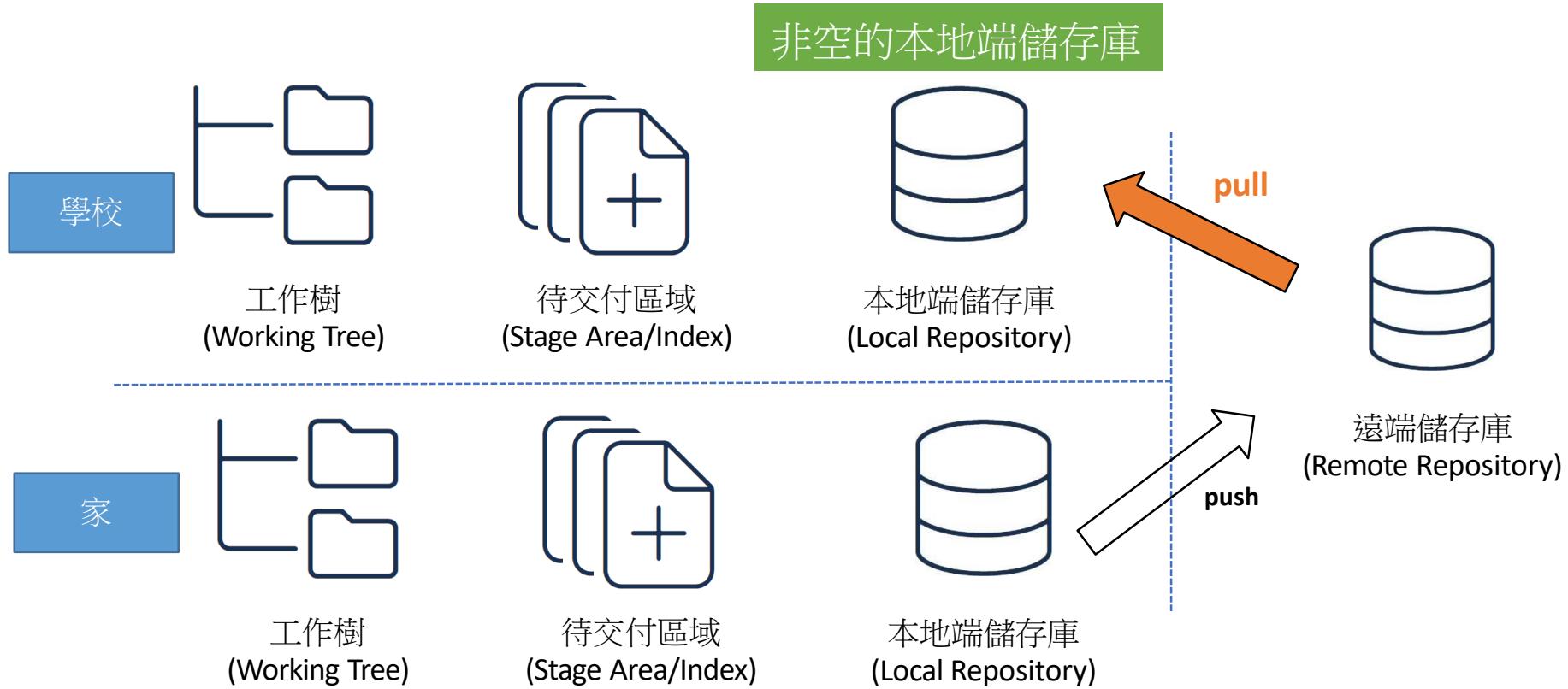
The screenshot shows a GitHub repository interface. At the top, there's a navigation bar with icons for repository management, a search bar, and user profile. Below the bar, a menu bar includes links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The 'Code' link is underlined, indicating the current view.

The main content area is titled 'Commits'. It displays a list of commits for the 'master' branch. One commit is highlighted with a red box:

- Commits on Nov 26, 2023**
- 把hello world 改成i love git**
oo800217 committed now
- 新增git.jpg
oo800217 committed 1 hour ago
- 新增 Hello World!!!
oo800217 committed 1 hour ago
- 新增index.html
oo800217 committed 1 hour ago

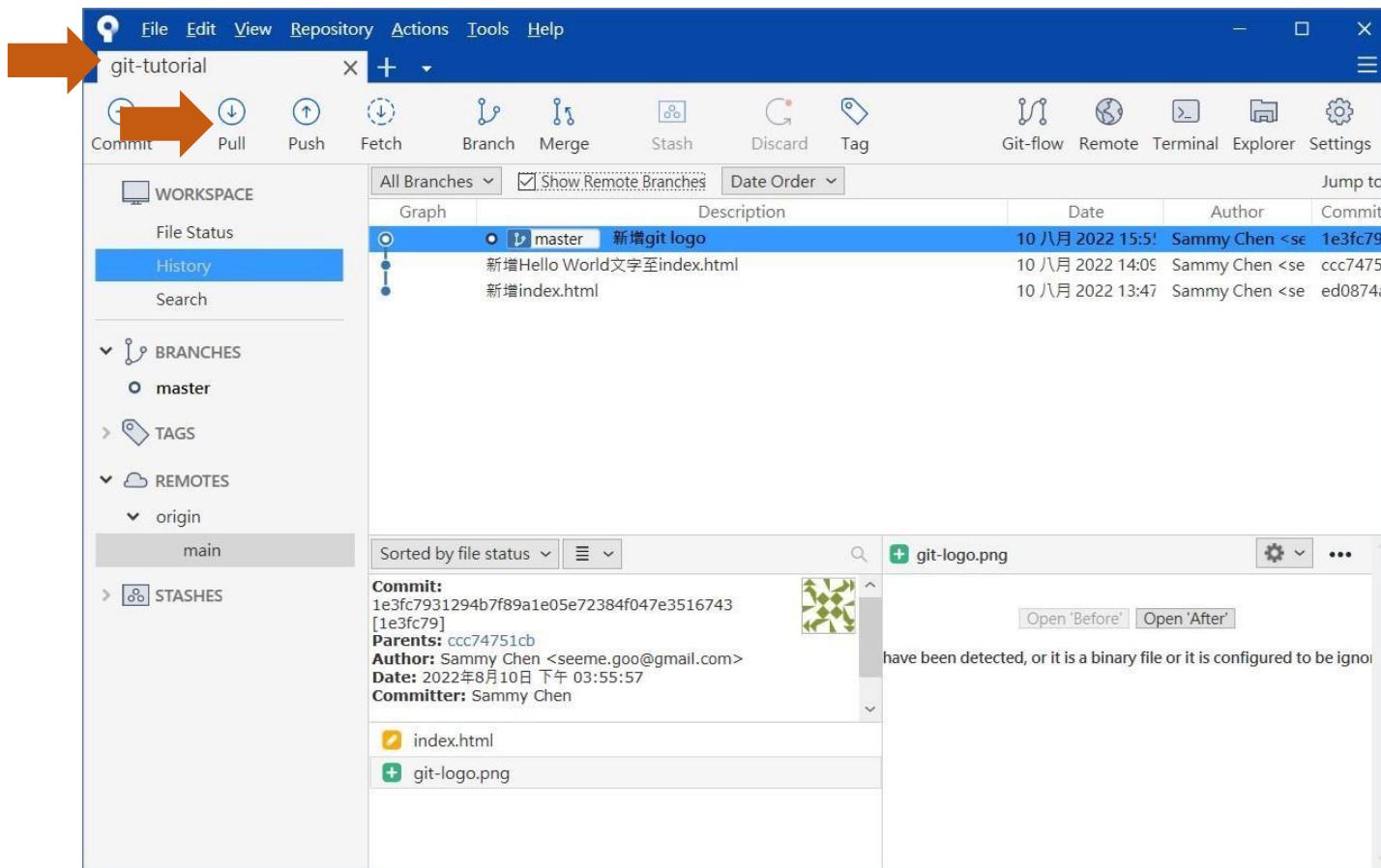
Each commit entry includes a copy icon, a commit hash (e.g., a29b76c, 630f205, b2f489b, 63766e0), and a diff icon. At the bottom, there are 'Newer' and 'Older' buttons.





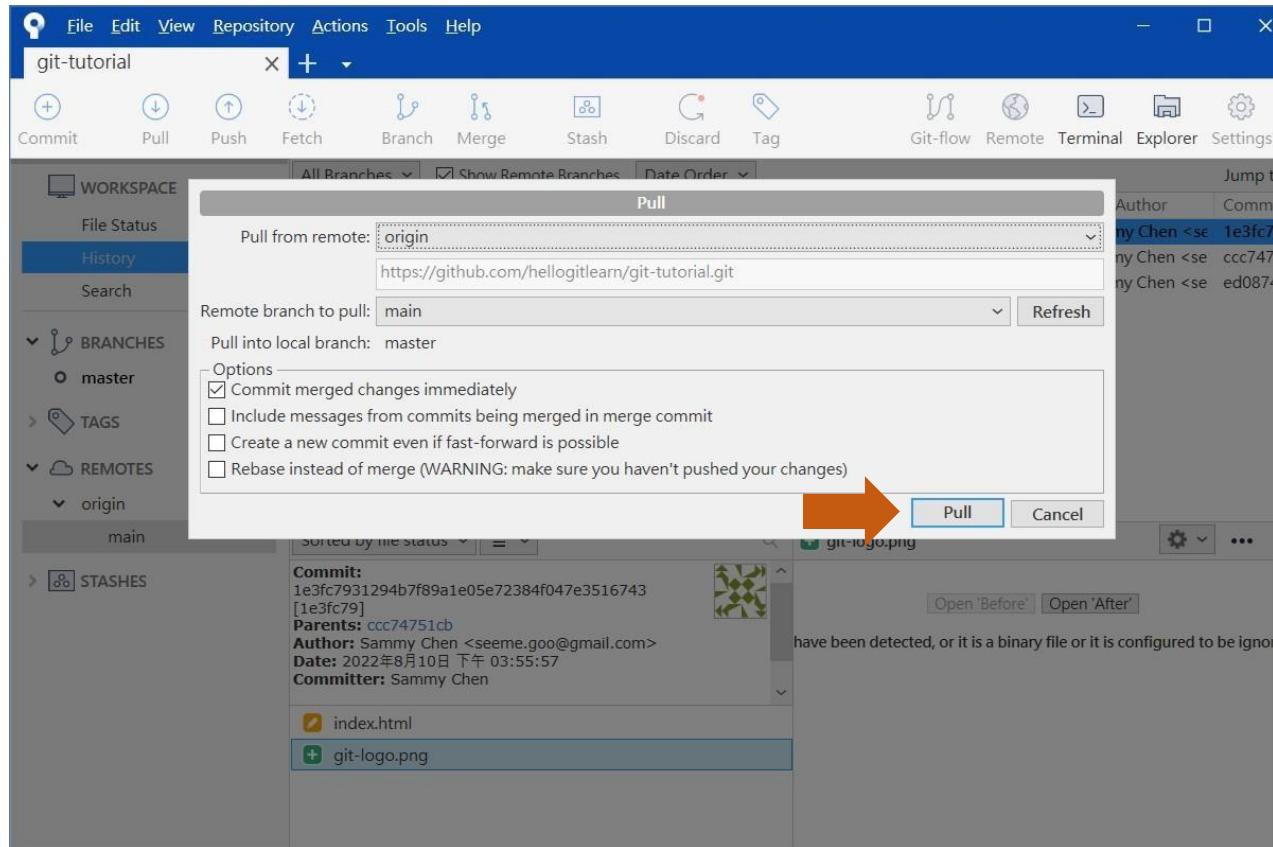
同步遠端儲存庫

- pull



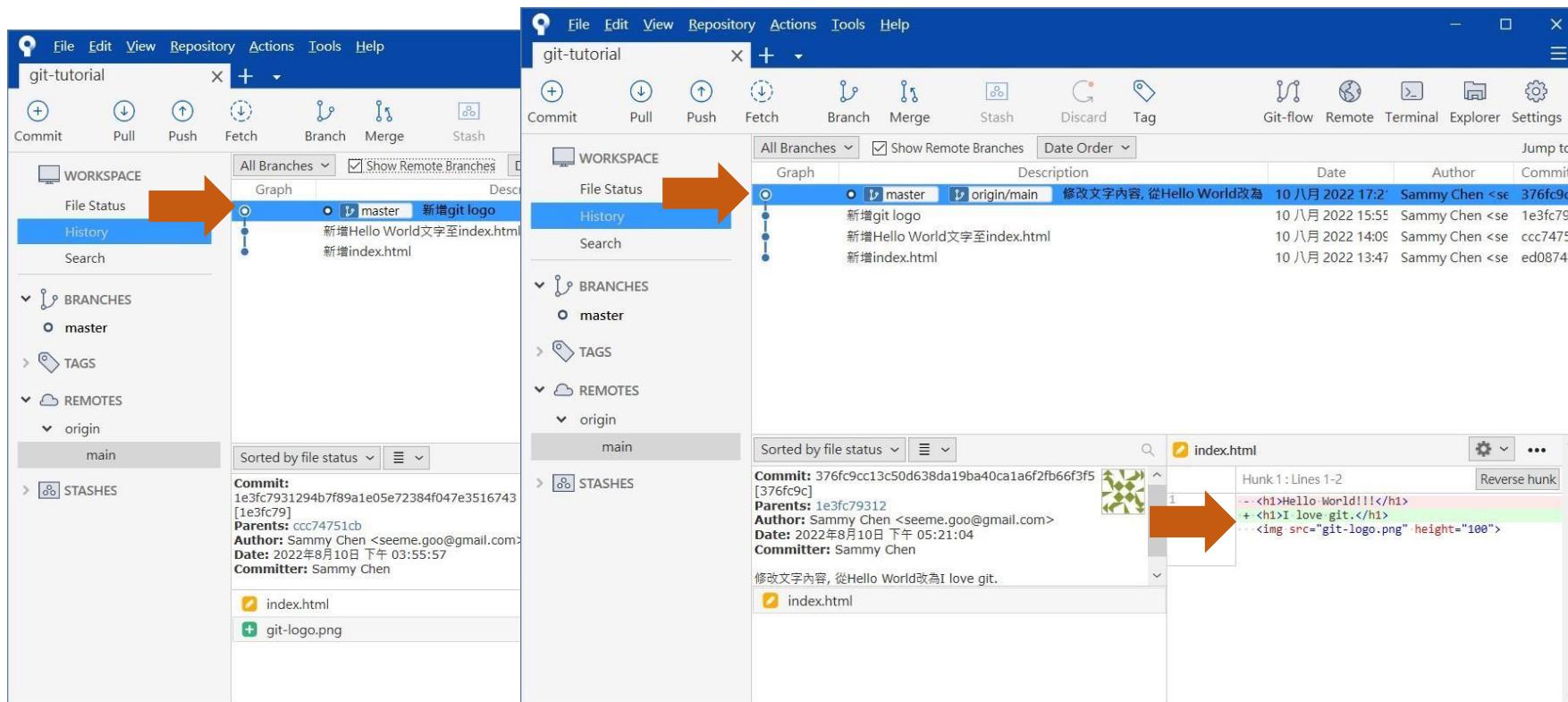
同步遠端儲存庫

- pull



同步遠端儲存庫

- pull同步完成



練習題

請將之前Lesson9講義的程式碼

- ① 在git-repos創一個R Project
- ② 將source tree連結到Project資料夾
- ③ 每做一件事情後提交一步COMMIT
- ④ 在git hub中創Project資料夾的repository
- ⑤ 將source tree連結到git hub repository
- ⑥ 將source tree 的commit push至git hub的repository中
- ⑦ 最後請將source tree、 git hub的profile及R Project repository Commits，3個畫面截圖貼至word中另存成pdf上傳至tronclass中

第一節：基礎繪圖函數簡介-I(I)

- 同樣的資訊，使用圖像相呈現較於表格/文字，通常能讓閱讀者更快的獲得資訊。
- 在R裡面，我們能夠畫出任何統計圖！
 - 請至[這裡](#)下載本週的範例資料

```
dat = read.csv("Example_data.csv", header = TRUE)
head(dat)
```

```
##      eGFR Disease Survival.time Death Diabetes Cancer      SBP      DBP
## 1 34.65379     1   0.4771037    0      0      1 121.2353 121.3079
## 2 37.21183     1   3.0704424    0      1      1 122.2000 122.6283
## 3 32.60074     1   0.2607117    1      0      0 118.9136 121.7621
## 4 29.68481     1       NA     NA      0      0 118.2212 112.7043
## 5 28.35726     0   0.1681673    1      0      0 116.7469 115.7705
## 6 33.95012     1   1.2238556    0      0      0 119.9936 116.3872
##   Education Income
## 1          2      0
## 2          2      0
## 3          0      0
## 4          1      0
## 5          0      0
## 6          1      0
```

範例

(1) source tree畫面

The screenshot shows the SourceTree interface. On the left, the 'History' tab is selected in the workspace sidebar. A commit list is displayed, with one commit highlighted and a red box around its details. The commit details show the author as 'AI實驗室-19\ADMIN <oo800217@gmail.com>', date as '2023年11月26日 下午 12:38:12', and message as '練習2 自己手刻圖'. Below this, a code diff view for 'Data visualization code.R' is shown, comparing two versions of the file. The commit message '練習2 自己手刻圖' is also visible in the code diff.

Date	Description	Author
26十一月 2023 12:57	Uncommitted changes	*
26十一月 2023 12:38	master FJU_class/master 練習2 自己手刻圖	AI實驗室-19\ADMIN <oo800217@gmail.com>
26十一月 2023 12:36	畫直方圖 盒鬱圖 圓餅圖 長條圖	AI實驗室-19\ADMIN <oo800217@gmail.com>
26十一月 2023 12:35	讀檔案 example data	AI實驗室-19\ADMIN <oo800217@gmail.com>
26十一月 2023 12:34	新增Data visualization project	AI實驗室-19\ADMIN <oo800217@gmail.com>

```
Commit: 567f505d60fb1b5269b218b64ca9d553d1591dae2 [567f505]
Parents: 7176b7c521
Author: AI實驗室-19\ADMIN <oo800217@gmail.com>
Date: 2023年11月26日 下午 12:38:12
Committer: AI實驗室-19\ADMIN

練習2 自己手刻圖
```

Data visualization code.R

```
7 7
8 ...
9 ...
10 - pie(table(dat[, "Education"]))
  \ No newline at end of file
11 + barplot(table(dat[, "Education"]))
12 +
13 +
14 +
15 + #####... 練習2
16 +
17 + m0 = 33.2
18 + s0 = 6.4/sqrt(sum(dat[, "Disease"] == 0, na.rm = TRUE))
19 + m1 = 34.4
20 + s1 = 7.2/sqrt(sum(dat[, "Disease"] == 1, na.rm = TRUE))
21 +
22 + XXX = c(m0, m1)
23 + barplot(XXX, col = c("gray50", "white"), xlab = "Disease", ylab =
24 + lines(c(1.9, 1.9), c(m1 - qnorm(0.975) * s1, m1 + qnorm(0.975) * s1),
25 + lines(c(1.75, 2.05), c(m1 + qnorm(0.975) * s1, m1 + qnorm(0.975) * s1))
```

(2) git hub的profile

The screenshot shows a GitHub profile page for user 'oo800217'. The profile includes a circular photo of a man, a bio section with 'Hi there', '專長' (Skills), '現職' (Current Position), '學歷' (Education), and '經歷' (Experience). Popular repositories listed are 'MyBlog' and 'git-tutorial'. The main area displays a list of recent commits:

R Project repository Commits

Commits

master

Commits on Nov 26, 2023

- 練習2 自己手刻圖 [567f505](#)
- 畫直方圖 盒鬱圖 圓餅圖 長條圖 [7176b7c](#)
- 讀檔案 example data [8a6dee1](#)
- 新增Data visualization project [dbebf53](#)

Newer Older

Before 😊 😊 😞

69 contributions in the last year



After 💪 😊 ❤️ 😎 🐾 😊 🔥 🎅 🎉 🍒

1,761 contributions in the last year

