

# Git和GitHub

# Git, GitHub是什麼

-  20190308\_v2 修改 BUG
-  20190307\_v1 上線版
-  20190306\_加入標題樣式
-  20190305\_插入 CSS
-  20190304\_新增網頁



- Git?

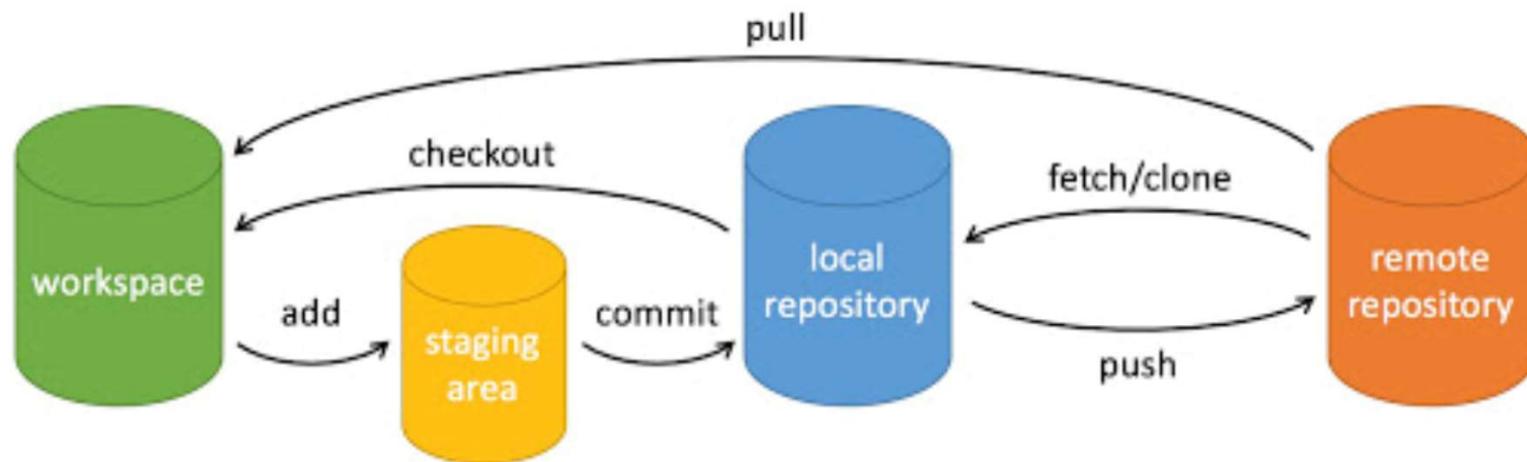
一種版本控制的工具，會記錄下程式開發的變化過程。控制文件在不同時候的內容，主要功能有儲存當前版本、恢復到特定版本、合併不同版本 ...

- GitHub?

Github是多人版本的**Git**平台。Github是基於**Git**，除了有**Git**的功能外，**Github**平台額外提供了**雲端空間**，容易看懂的**網頁介面**，讓成千上萬的開發人員在上面自己的**Repository**分享，**溝通**和**合作**寫程式完成產品。

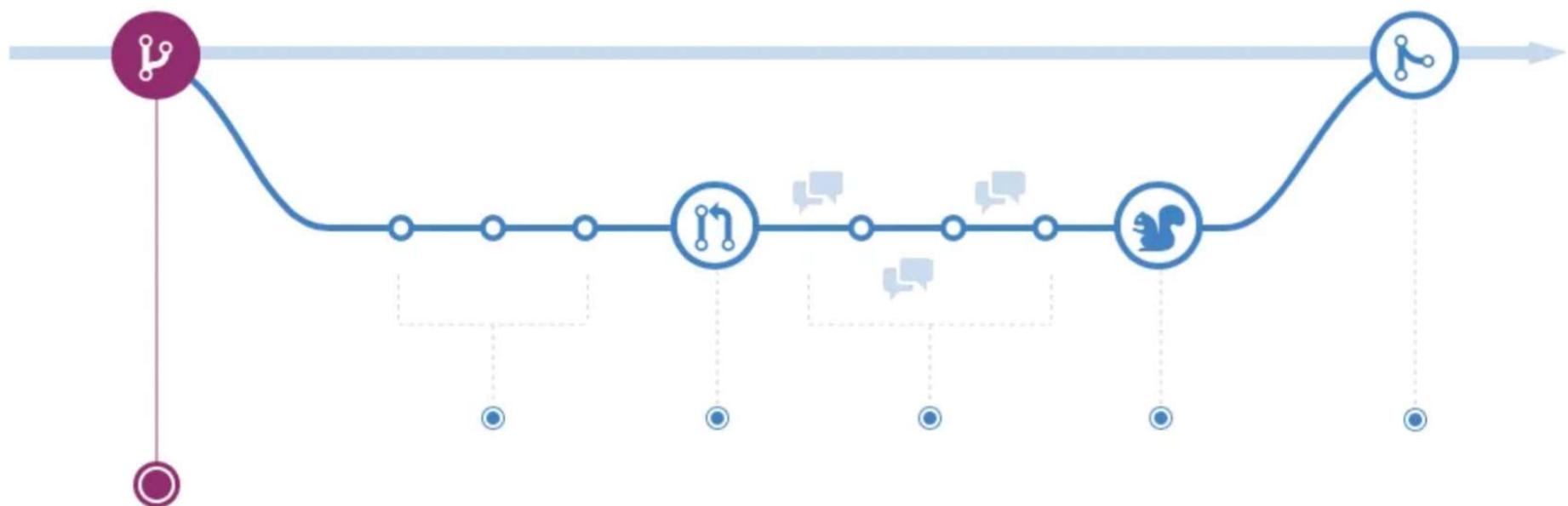
# Git 中有四個區域

- 工作區 Working Directory
- 暫存區 Staging Area
- 本地儲存庫 Local Repository
- 遠端儲存庫 Remote Repository

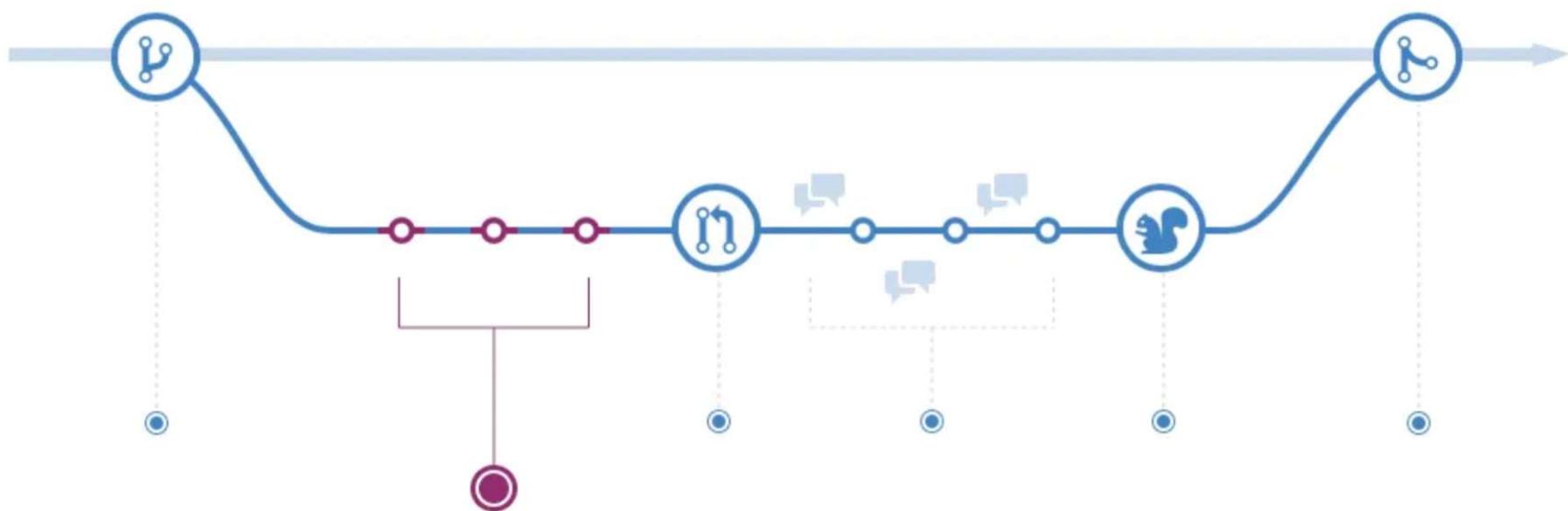


# GitHub 協作開發

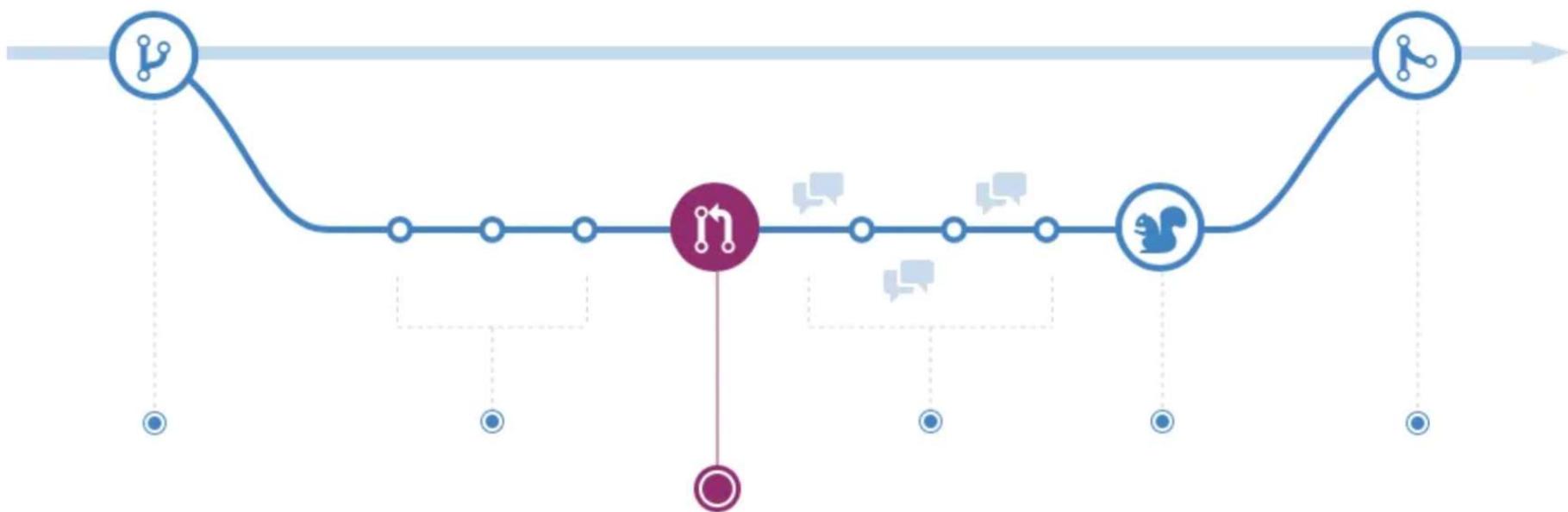
# 建立分支（Branch）



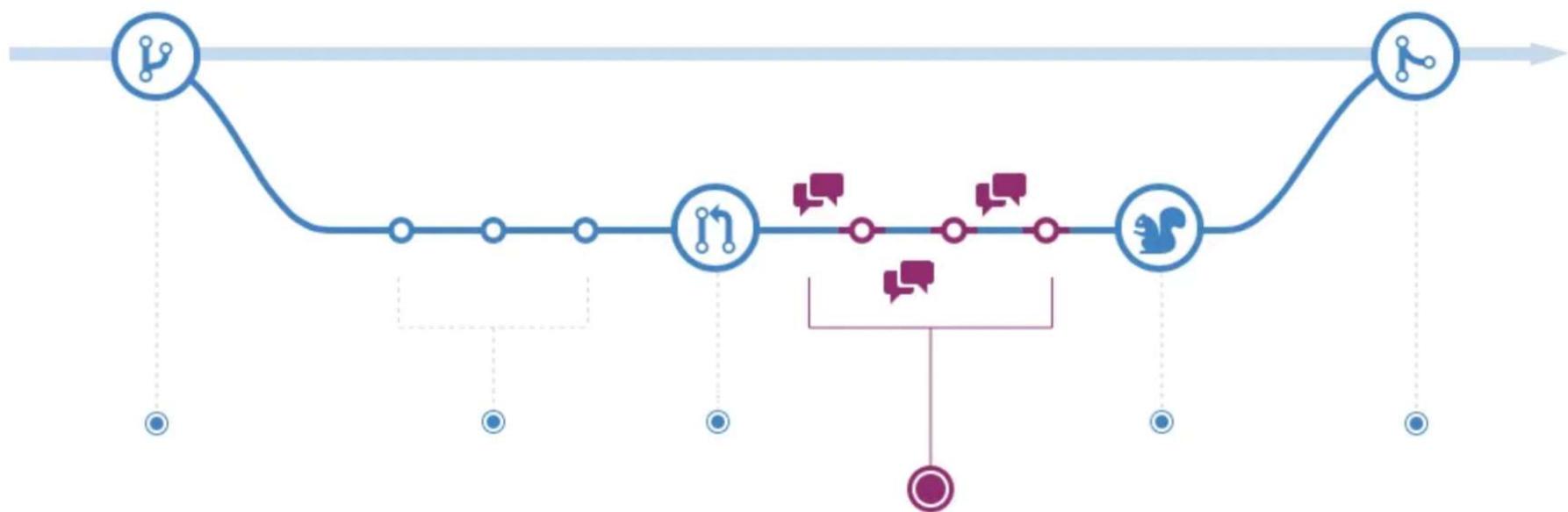
# 新增提交（Commits）



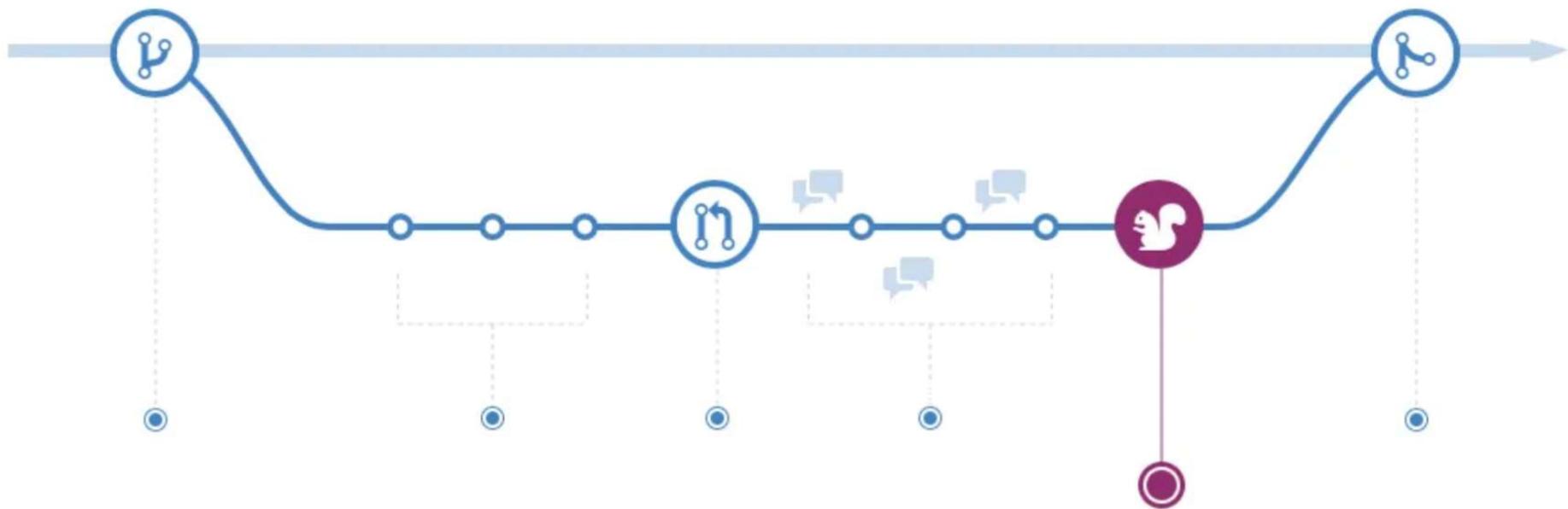
# 開啟 Pull Request



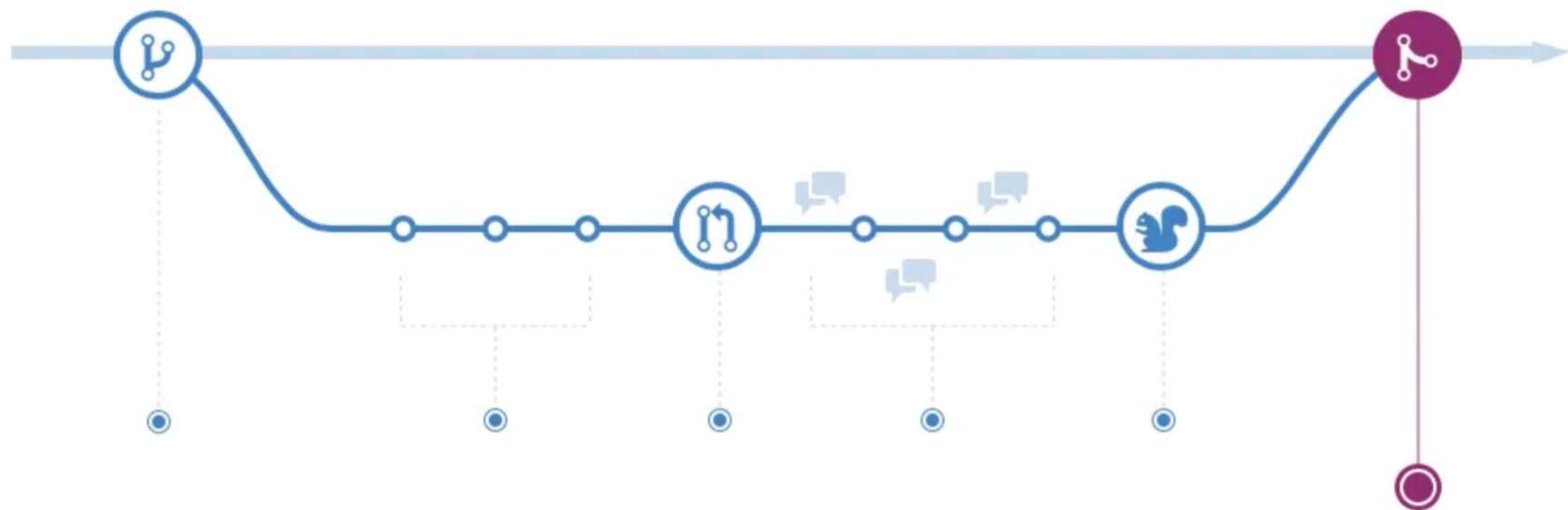
# 討論與審查你的程式碼



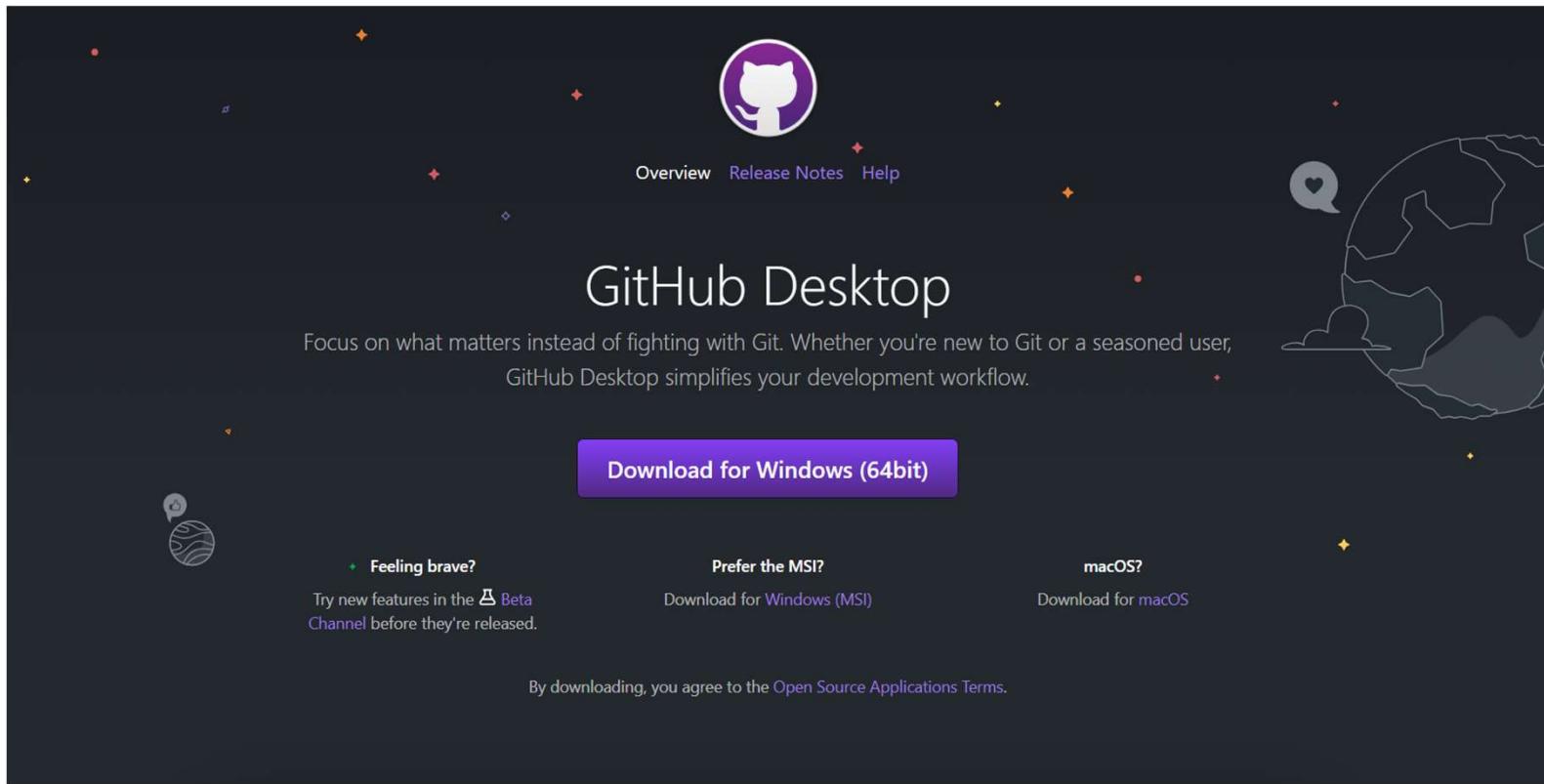
# 部署（Deploy）(暫時不會用到)



# 合併 (Merge)



# 下載GitHub Desktop



# 協作練習

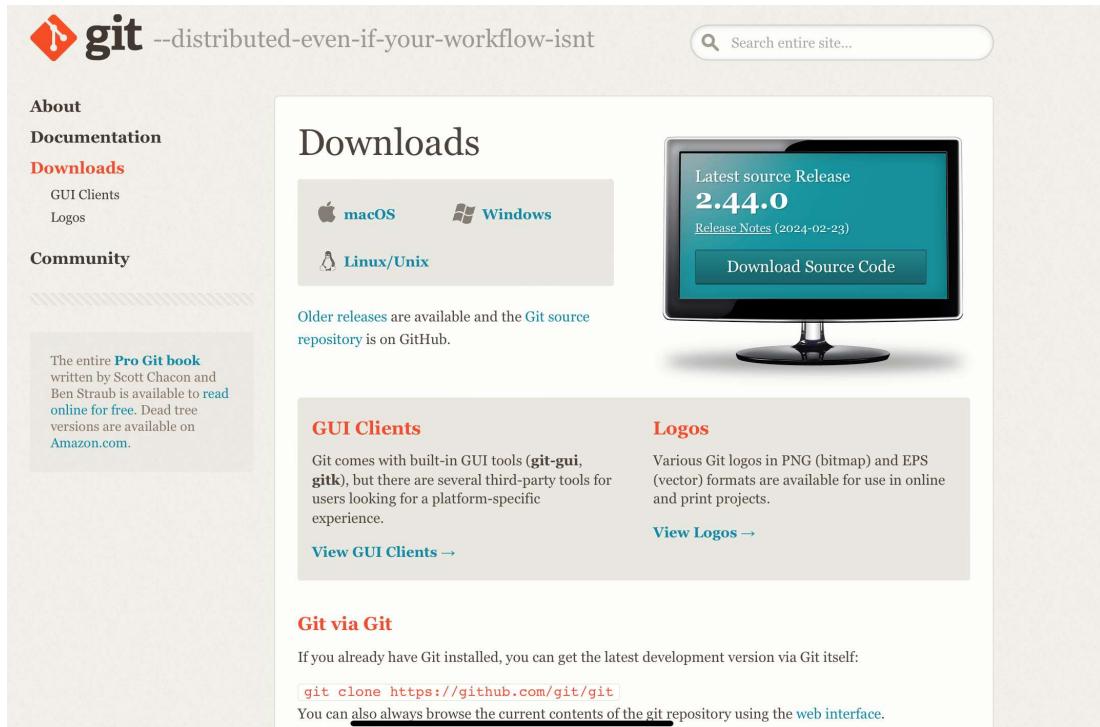
- 1.clone 儲存庫Practice
- 2..新增一個branch，publish分支，添加一個文件"姓名.txt"，完成commit、push
- 3.將branch hello merge進你的分支，發起pull request，讓main分支合併你的的分支，並指定你左邊那位為reveiwer
- 4.審查你右邊那位的pull request，並合併進main

# GitHub 發 issue

- 發一個issue，標注一個人和你剛剛發的pull request

# Git Download

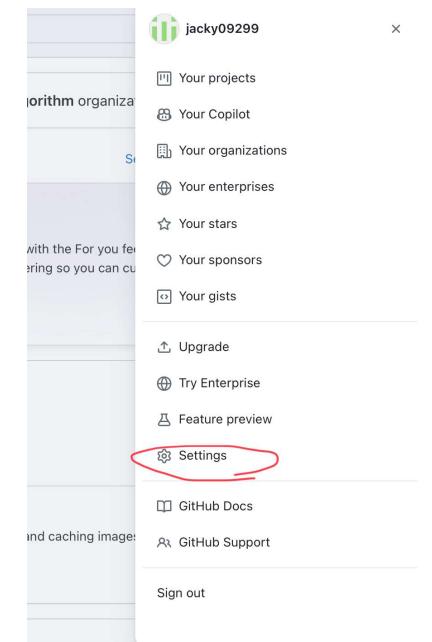
- <https://git-scm.com/downloads>



The screenshot shows the 'Downloads' section of the official Git website. At the top, there's a search bar labeled 'Search entire site...'. On the left, a sidebar includes links for 'About', 'Documentation', 'Downloads' (which is highlighted in red), 'GUI Clients', 'Logos', and 'Community'. A note about the 'Pro Git book' is also present. The main content area features a large image of a computer monitor displaying the latest source release version 2.44.0. Below the monitor, there's a summary of older releases and a link to the GitHub repository. The 'Downloads' section is divided into three main categories: 'macOS', 'Windows', and 'Linux/Unix'. Under 'macOS', there's a link to 'View GUI Clients →'. Under 'Logos', there's a link to 'View Logos →'. At the bottom, there's a section for 'Git via Git' with a command-line clone link and a note about browsing the repository via the web interface.

# 設定ssh key

- 打開cmd
- 輸入ssh-keygen
- 進入settings -> SSH and GPG keys -> New SSH key
- 進入.ssh資料夾，打開xxx.pub，複製裡面的文字
- 貼到Key方塊中，Title自訂



SSH and GPG keys

New SSH key

Add new SSH Key

Title:

Key type: Authentication Key

Key: 

```
Begins with 'ssh-rsa', 'ecdsa-sha2-nistp256', 'ecdsa-sha2-nistp384', 'ecdsa-sha2-nistp521', 'ssh-ed25519', 'sk-ecdsa-sha2-nistp256@openssh.com', or 'sk-ssh-ed25519@openssh.com'
```

Add SSH key

- 打開git bash
- git config --global user.name [Your Name]
- git config --global user.email [[you@example.com](mailto:you@example.com)]
- cd [路徑] ex: cd C:/Users/Jacky/Documents
- mkdir git\_test
- cd git\_test

# Git練習

- git clone <git@github.com:WingSyncAlgorithm/Practice.git>
- cd Practice
- git checkout [branch-name1] 切換到自己建的分支(以下簡稱分支1)
- git branch [branch-name2] 新建一個分支(以下簡稱分支2)
- vim hello\_world.py
- 按i，接著就可以編輯文件，打print("hello world")
- 按esc，輸入「:wq」，就生成了一個文件
- dir 檢查是否生成了一個hello\_world.py
- git add hello\_world.py
- git commit -m "create a python file"
- git push [remote-name] [branch-name2] 註:remote-name預設會是origin
- git checkout [branch-name1] 回到分支1
- git merge [branch-name2] 將分支2合併進分支1