Git教學

2023年1月13日 上午 10:43

Git 是一種分散式版本控制系統。

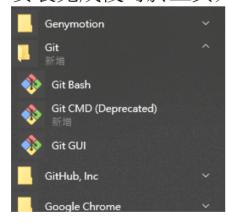
1. 安裝git與申請github帳號

https://gitforwindows.org/

https://github.com/



安裝完成後可於工具列發現程式列表



2. 使用Git Bash

指令與linux 雷同 git version 查詢版本已確認是否安裝成功

3. 開啟一個新專案

```
Richie@DESKTOP-4IDC14U MINGW64 /c/git/mytest ((886a3fe...))
$ mkdir c:/gitproject

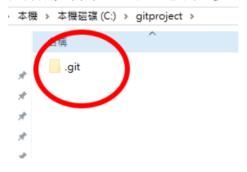
Richie@DESKTOP-4IDC14U MINGW64 /c/git/mytest ((886a3fe...))
$ cd c:/gitproject

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject
$ ls

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject
$ git init
Initialized empty Git repository in C:/gitproject/.git/

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)
$ |
```

對照資料匣可以發現多一個檔案(隱藏檔)



新增一個檔案 以git status 指令發現並沒有加入數據庫

```
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)
$ touch index1.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)
$ git status
On branch master

No commits yet
Untracked files:
   (use "git add <file>..." to include in what will be committed)
        index1.html

nothing added to commit but untracked files present (use "git add" to rack)

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

$ touch index1.html
```

利用 git add. 加入倒git 數據庫

使用 git commit -m 'update index1.html' 增加註解說明

```
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

git add .

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

git status
On branch master

No commits yet

Changes to be committed:
    (use "git rm --cached <file>..." to unstage)
        new file: index1.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

git commit -m 'uodate index1.html'

[master (root-commit) 78ec00d] uodate index1.html

1 file changed, 0 insertions(+), 0 deletions(-)
    create mode 100644 index1.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

$ |
```

git log 觀察更新紀錄

```
Changes to be committed:
    (use "git rm --cached <file>..." to unstage)
    new file: index1.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

git commit -m 'uodate index1.html'

[master (root-commit) 78ec00d] uodate index1.html

1 file changed, 0 insertions(+), 0 deletions(-)

create mode 100644 index1.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

git log

commit 78ec00db141af0e85cc6c02b3ee194bf533f4cf2 (HEAD -> master)

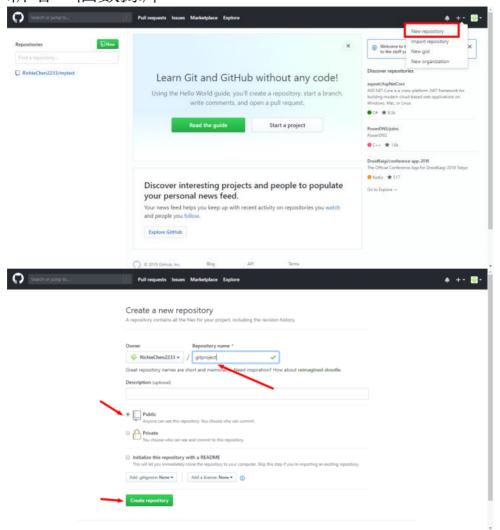
Author: minghong <minghong2233@gmail.com>
Date: Fri Feb 1 11:01:52 2019 +0800

uodate index1.html

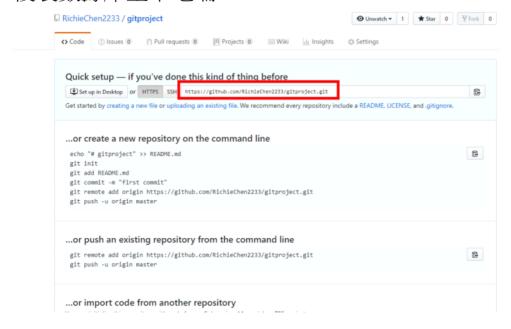
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)
```

4. 上傳至 github.com

新增一個數據庫



複製數據庫至本地端



```
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

$ git commit -m 'uodate index1.html'
[master (root-commit) 78ec00d] uodate index1.html
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 index1.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

$ git log
commit 78ec00db141af0e85cc6c02b3ee194bf533f4cf2 (HEAD -> master)
Author: minghong <minghong2233@gmail.com>
Date: Fri Feb 1 11:01:52 2019 +0800

uodate index1.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

$ git clone https://github.com/RichieChen2233/gitproject.git
cloning into 'gitproject'...
warning: You appear to have cloned an empty repository.

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)

$ |
```

在本地端資料匣會發現相對應的檔案

此專案跟原本的上述練習是不一樣的數據庫必須分開討論



新增檔案並將檔案同步到github

```
warning: You appear to have cloned an empty repository.
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)
$ 1s
gitproject/ index1.html
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject (master)
$ cd gitproject/
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)
$ touch index002.html
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)
$ git status
On branch master
No commits yet
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to t
rack)
Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)
```

```
Untracked files:

(use "git add <file>..." to include in what will be committed)

index002.html

nothing added to commit but untracked files present (use "git add" to t rack)

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)

§ git add .

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)

§ git commit -m 'update index002.html'

[master (root-commit) e555731] update index002.html

1 file changed, 0 insertions(+), 0 deletions(-)

create mode 100644 index002.html

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)

§ git push

Enumerating objects: 3, done.

Counting objects: 100% (3/3), done.

Writing objects: 100% (3/3), 220 bytes | 73.00 KiB/s, done.

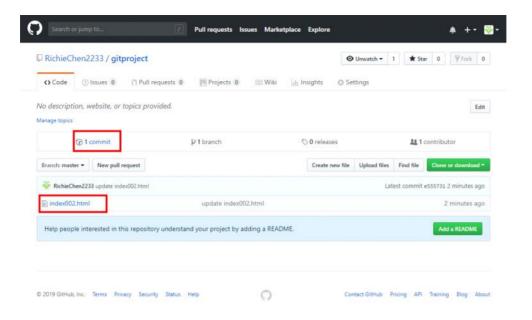
Total 3 (delta 0), reused 0 (delta 0)

To https://github.com/RichieChen2233/gitproject.git

* [new branch] master -> master

Richie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)
```

從github可以發現同步成功



在測試更新另一個檔案(修改index002.html) 從status 可發現檔案被修改但沒未加入commit

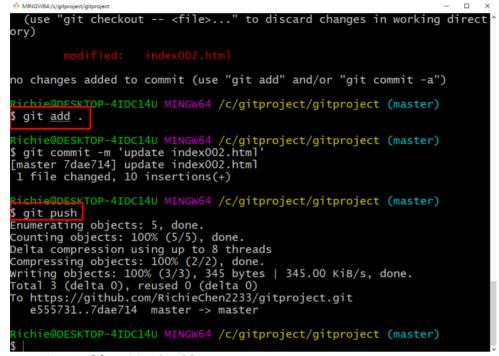
```
-4IDC14U MINGW64 /c/gitproject/gitproject (master)
 git push
Enumerating objects: 3, done.

Counting objects: 100% (3/3), done.

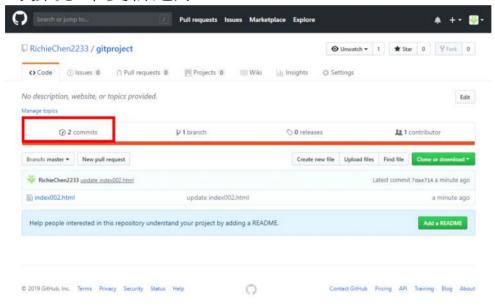
Writing objects: 100% (3/3), 220 bytes | 73.00 KiB/s, done.

Total 3 (delta 0), reused (delta 0)
To https://github.com/RichieChen2233/gitproject.git
   [new branch]
                           master -> master
 ichie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)
 git status
On branch master
Your branch is up to date with 'origin/master'.
Changes not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git checkout -- <file>..." to discard changes in working direct
ory)
no changes added to commit (use "git add" and/or "git commit -a")
 dichie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)
 git add .
 ichie@DESKTOP-4IDC14U MINGW64 /c/gitproject/gitproject (master)
```

加入 commit 並發布到github



可發現2筆更新紀錄



5. GitHub Pages

Changing project visibility

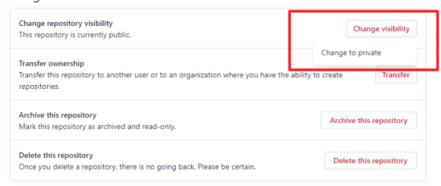
- 1. Navigate to your project.
- 2. In the top-right, click to open the menu.
- 3. In the menu, click Settings to access the project settings.
- 4. Next to Visibility in the "Danger zone", select Private or Public.

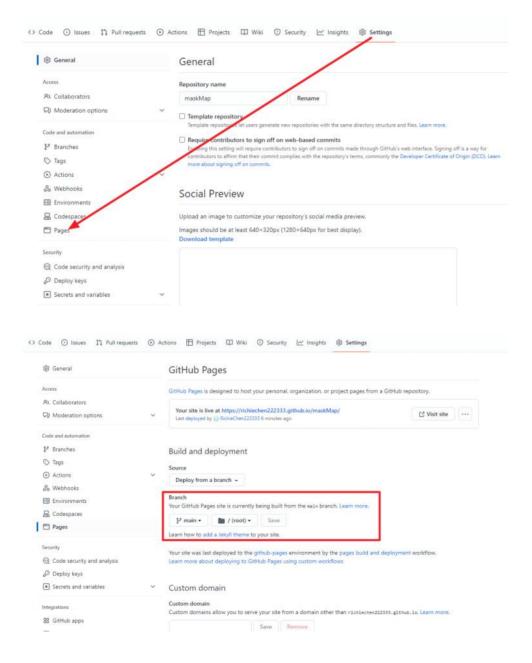
來自 < https://www.google.com/search?q=github+private+to+public&rlz=1C1CHZN_zh-twTW1038TW1038

&oq=github+pr&aqs=chrome.1.69i57j69i59j0i512l4j69i60l2.8501j0j7

&sourceid=chrome&ie=UTF-8>

Danger Zone

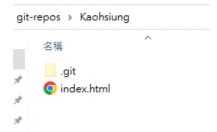




https://richiechen222333.github.io/maskMap/

6. 專案例子

創建資料夾



- (1) git init (初始化)
- (2) code. (呼叫vscode開啟專案)
- (3) 撰寫專案程式
- (4) git add . (將程式加入git資料庫)
- (5) git commit -m "註解··· 修改背景圖"
- (6) git status
- (7) github創新一樣名稱的專案並參考上傳的指令

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

```
echo "# XXXXXX" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/RichieChen222333/XXXXXXX.git
git push -u origin main
```

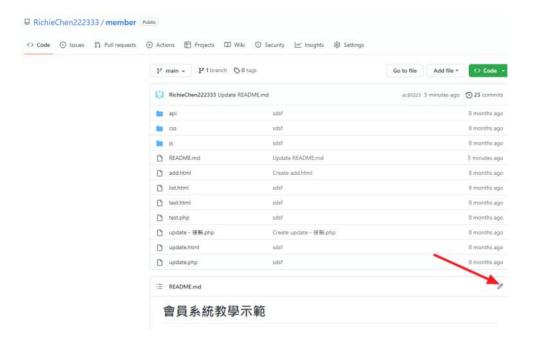
...or push an existing repository from the command line

```
git remote add origin https://github.com/RichieChen222333/XXXXXX.git git branch -M main git push -u origin main
```

- (8) 將repository設定GitHub Pages
- (9) https://richiechen222333.github.io/Kaohsiung/

7. README.md撰寫

附檔名的.md其實就是markdown的縮寫 https://zh.wikipedia.org/zh-tw/Markdown

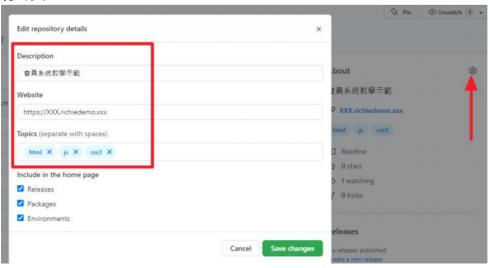


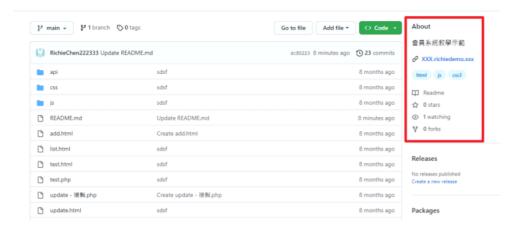
markdown語法類似HTML

https://markdown.tw/



修改about





8. 常用指令

基礎設定

查詢版本 git version

查詢設定列表 git config --list

輸入姓名

git config --global user.name "你的名字"

輸入email

git config --global user.email "你的email"

新增本地/遠端數據庫

在本地資料夾新增數據庫 git init

複製遠端數據庫 git clone 遠端數據庫網址

增加/刪除檔案

增加檔案進入索引 git add 檔案名稱

增加全部檔案進入索引

git add.

查詢狀態 git status

顯示歷史紀錄 git log

將索引提交到數據庫 git commit -m '更新訊息'

還原指令

還原工作目錄與索引,會跟最後一次 commit 保持一樣 git reset --hard

全部檔案取消索引 git reset HEAD

單一檔案取消索引 git reset HEAD 檔案名稱

恢復單一檔案到最新 commit 狀態 git checkout 檔案名稱

刪除最近一次 commit git reset --hard "HEAD^"

上面語法如果刪除錯了可以再用此語法還原git reset --hard ORIG_HEAD

刪除最近一次 commit,但保留異動內容 git reset --soft "HEAD^"

commit 後發現有幾個檔案忘了加入進去,想要補內容進去時 git commit --amend

分支

顯示所有本地分支 git branch

新增分支 git branch 分支名稱

切換分支 git checkout 分支名稱

合併指定分支到目前的分支 git merge 分支名稱

刪除分支 git branch -d 分支名稱

遠端數據庫操作

複製遠端數據庫 git clone 遠端數據庫網址

查詢遠端數據庫 git remote

將本地分支推送到遠端分支 git push 遠端數據庫名稱 遠端分支名稱

將遠端分支拉下來與本地分支進行合併 git pull

標籤

查詢標籤 git tag

查詢詳細標籤 git tag -n

刪除標籤

git tag -d 標籤名稱

新增輕量標籤 git tag 標籤名稱

新增標示標籤 git tag -am "備註內容" 標籤名稱

暫存

暫時儲存當前目錄 git stash

瀏覽 stash 列表 git stash list

還原暫存 git stash pop

清除最新暫存 git stash drop

清除全部暫存 git stash clear