

Short introduction to Git Push

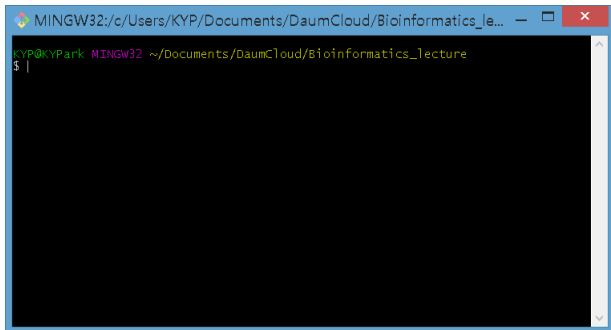
Kwang-Yeol Park

July 3, 2016

Introduction

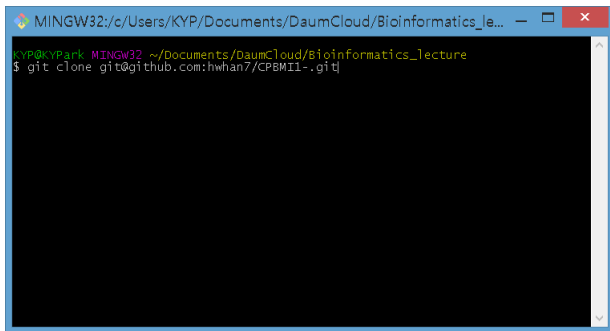
- 부족하지만 제가 아는대로 설명하겠습니다.
- 우선 git과 github은 다릅니다. git은 file의 변화를 추적하는 version control system을 말하는 것이고, github은 저장소의 일종으로 생각하시면 되겠습니다.
- 저는 Windows 8.1을 쓰고 git을 쓰기 위해서 msysGit을 설치하였습니다. 이의 설치는 검색을해보시면 쉽게 할 수 있습니다.
- git의 설정도 또한 필요합니다. 이름/메일주소를 git config 로 하시면 되겠습니다. 이에 대해서도 역시 검색을해보시면 쉽게 할 수 있습니다.
- 이 소개는 git이 설치되어 있고 github에 등록이 된 것으로 생각하고 추가로 file을 올리는 것에 대한 것입니다. 즉, hwhan7/CPBMI1-에 올라가 있는 file을 수정해서 다시 올리는 것을 해보려고 합니다.
- hwhan7/CPBMI1-은 자신의 github repository로 fork를 이미 하고 한현욱선생님께 수정 권한을 받은 상태로 간주합니다.

적당한 folder로 가서 마우스 우측 버튼을 누르면 **Git Bash Here**가 있습니다. 이를 선택하면 아래 화면과 같이 됩니다.

A screenshot of a Git Bash terminal window. The title bar at the top reads "MINGW32:/c/Users/KYP/Documents/DaumCloud/Bioinformatics_le...". The terminal content shows the prompt "KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture" followed by a new line with the prompt "\$ |". The terminal background is black, and the text is green. A vertical scrollbar is visible on the right side of the terminal area.

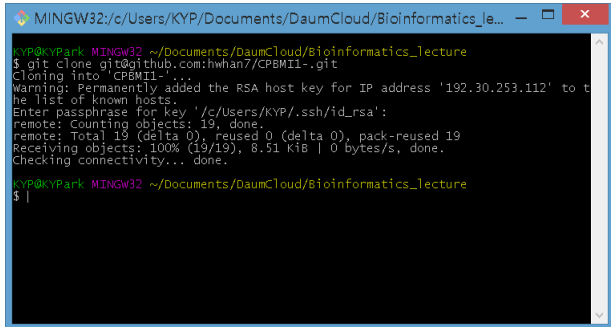
```
MINGW32:/c/Users/KYP/Documents/DaumCloud/Bioinformatics_le...
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture
$ |
```

아래 화면과 같이 **git clone git@github.com:hwhan7/CPBMI1-.git**을 입력하면 github의 자신의 repository에 있는 folder를 현재 directory로 가져오게 됩니다.

A screenshot of a MINGW32 terminal window. The title bar shows the path "MINGW32:/c/Users/KYP/Documents/DaumCloud/Bioinformatics_le...". The terminal content shows the prompt "KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture" followed by the command "\$ git clone git@github.com:hwhan7/CPBMI1-.git".

```
MINGW32:/c/Users/KYP/Documents/DaumCloud/Bioinformatics_le...  
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture  
$ git clone git@github.com:hwhan7/CPBMI1-.git
```

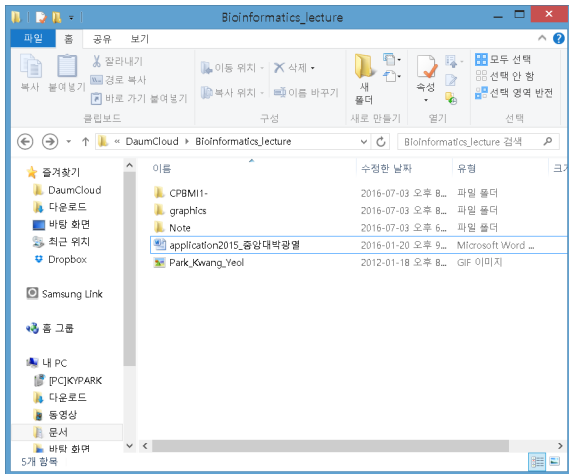
중간에 자신의 공개키 암호가 필요합니다.



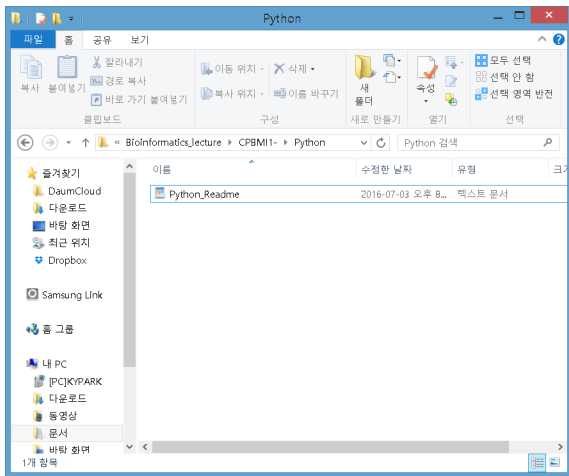
```
MINGW32:/c/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture
$ git clone git@github.com:hwhan7/CPBMII-.git
Cloning into 'CPBMII-'...
Warning: Permanently added the RSA host key for IP address '192.30.253.112' to the list of known hosts.
Enter passphrase for key '/c/Users/KYP/.ssh/id_rsa':
remote: Counting objects: 19, done.
remote: Total 19 (delta 0), reused 0 (delta 0), pack-reused 19
Receiving objects: 100% (19/19), 8.51 KiB | 0 bytes/s, done.
Checking connectivity... done.

KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture
$ |
```

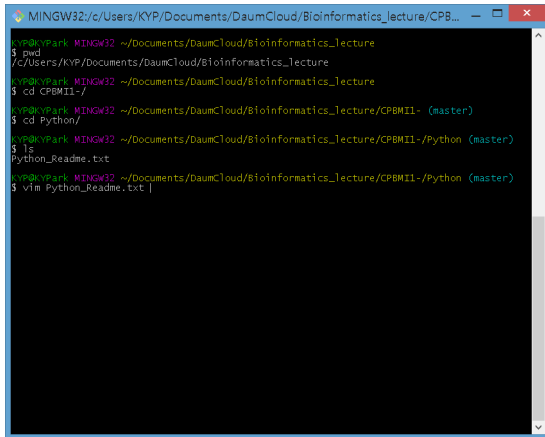
아래와 같이 CPBMI1- folder가 생겼습니다.



그 안에 python folder에 아래와 같이 readme file이 있습니다. 이것을 수정해서 올려보겠습니다.

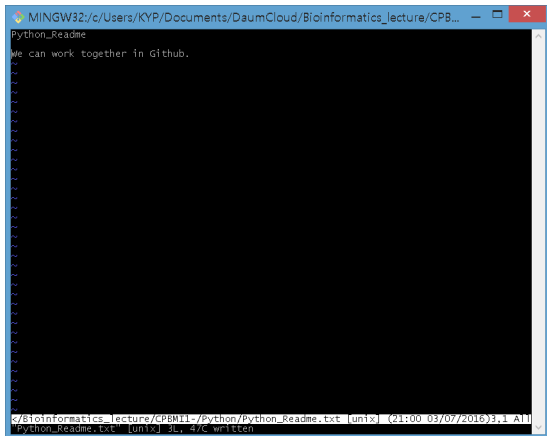


다시 Command line interface (CLI)로 돌아가서 directory를 **cd**명령을 이용해서 옮깁니다. editor를 이용해서 python_readme.txt file을 수정하는데 저는 vim을 사용합니다.



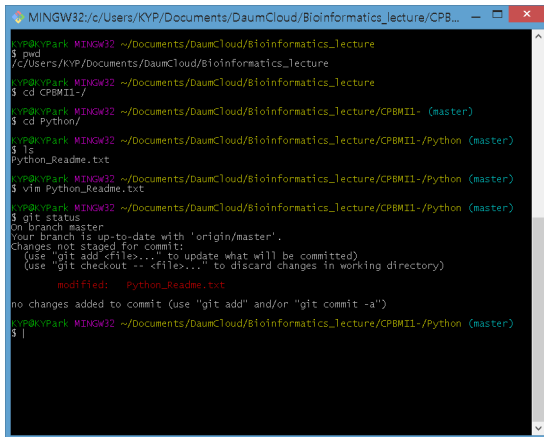
```
MINGW32/c/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CPB...
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture
$ pwd
/c/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture
$ cd CPBMII-/
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII- (master)
$ cd Python/
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ ls
Python_Readme.txt
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ vim Python_Readme.txt |
```


vim안에서 We can work together in Github.을 추가하였습니다. 다른 editor를 사용해서 수정해도 됩니다.



The screenshot shows a Windows command prompt window with the title bar "MINGW32:/c:/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CP8...". The window contains a text editor session. The first line is "Python_Readme". The second line is "We can work together in Github.". Below this, there are several lines of tilde characters (~). At the bottom of the window, the status bar shows the file path "c:/Bioinformatics_lecture/CP8M11-/Python/Python_Readme.txt [unix] (21:00 03/07/2016)3,1 All" and the file size "Python_Readme.txt" [unix] 3L, 47C written.

파일을 수정한 후에 **git status**를 치면 파일이 수정되었다고 (빨간 글자)로 나옵니다.

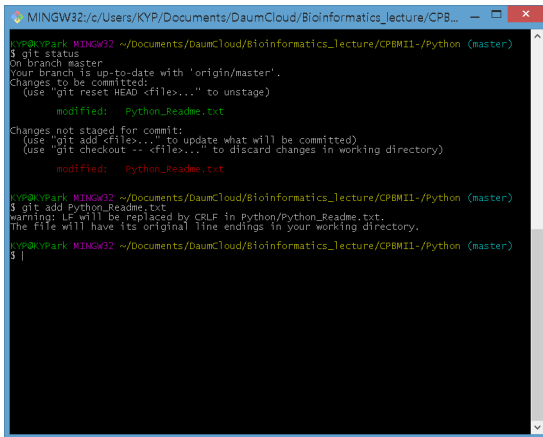
A screenshot of a Windows command prompt window titled "MINGW32: c:/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-". The window shows a series of commands and their outputs. The user navigates to the directory ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master) and runs 'git status'. The output indicates that the branch is up-to-date with 'origin/master' and that the file 'Python_Readme.txt' has been modified, shown in red text. The prompt ends with a cursor on a new line.

```
MINGW32: c:/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture
$ pwd
/c/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture
$ cd CPBMII-/
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII- (master)
$ cd Python/
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ ls
Python_Readme.txt
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ vim Python_Readme.txt
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (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 directory)

        modified:   Python_Readme.txt

no changes added to commit (use "git add" and/or "git commit -a")
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ |
```

git add Python_Readme.txt를 쳐서 add합니다.

A screenshot of a Windows command prompt window titled "MINGW32: c:/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CP8...". The prompt shows the user is in the directory ~/Documents/DaumCloud/Bioinformatics_lecture/CP8M11-/Python (master). The user enters '\$ git status', and the output shows that 'Python_Readme.txt' is modified and staged for commit. The user then enters '\$ git add Python_Readme.txt', and the output shows the file is now committed. The prompt ends with '\$ |'.

```
MINGW32: c:/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CP8...
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CP8M11-/Python (master)
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

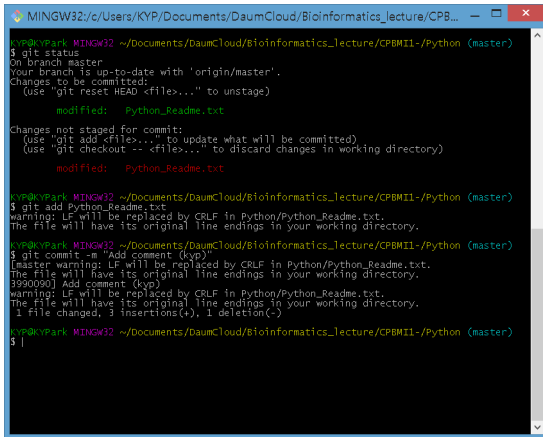
    modified:   Python_Readme.txt

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

    modified:   Python_Readme.txt

KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CP8M11-/Python (master)
$ git add Python_Readme.txt
warning: LF will be replaced by CRLF in Python/Python_Readme.txt.
The file will have its original line endings in your working directory.
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CP8M11-/Python (master)
$ |
```

git commit -m '적당한 메시지'로 commit합니다. 메시지는 이 경우에는 Add comment (kyp)로 하였습니다.



```
MINGW32; c:/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   Python_Readme.txt

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Python_Readme.txt

KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ git add Python_Readme.txt
warning: LF will be replaced by CRLF in Python/Python_Readme.txt.
The file will have its original line endings in your working directory.

KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ git commit -m "Add comment (kyp)"
[master warning: LF will be replaced by CRLF in Python/Python_Readme.txt.
The file will have its original line endings in your working directory.
3990090] Add comment (kyp)
warning: LF will be replaced by CRLF in Python/Python_Readme.txt.
The file will have its original line endings in your working directory.
 1 file changed, 3 insertions(+), 1 deletion(-)

KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ |
```

이어서 다음과 같이 **git push**하면 commit한 file이 github로 올라갑니다.

```
MINGW32/c/Users/KYP/Documents/DaumCloud/Bioinformatics_lecture/CP8...
Your branch is up-to-date with 'origin/master'.
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

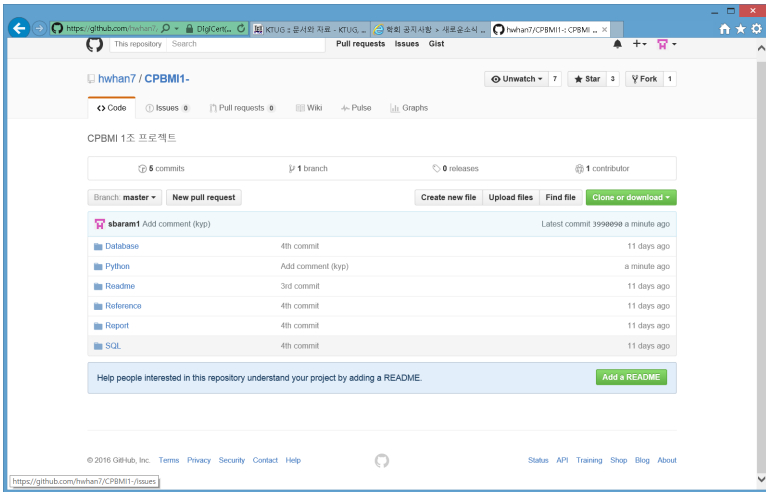
    modified:   Python_Readme.txt

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

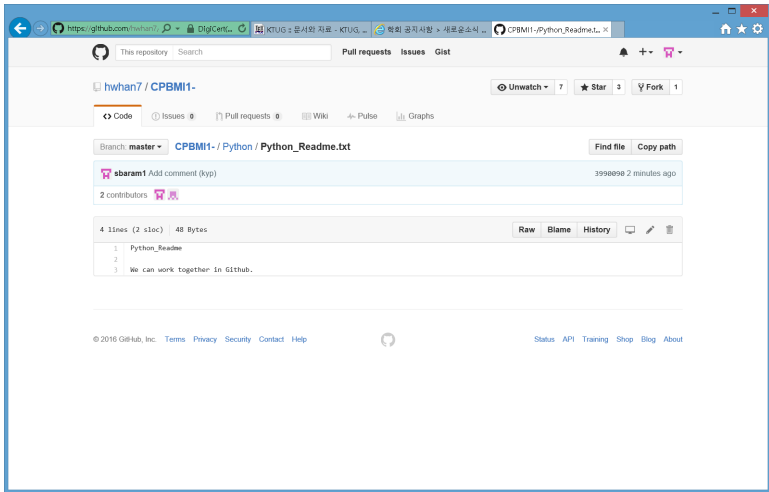
    modified:   Python_Readme.txt

KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ git add Python_Readme.txt
warning: LF will be replaced by CRLF in Python/Python_Readme.txt.
The file will have its original line endings in your working directory.
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ git commit -m "Add comment (kyp)"
[master warning: LF will be replaced by CRLF in Python/Python_Readme.txt.
The file will have its original line endings in your working directory.
3990090] Add comment (kyp)
warning: LF will be replaced by CRLF in Python/Python_Readme.txt.
The file will have its original line endings in your working directory.
1 file changed, 3 insertions(+), 1 deletion(-)
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ git push
Warning: Permanently added the RSA host key for IP address '192.30.253.113' to the list of
known hosts.
Enter passphrase for key '/c/Users/KYP/.ssh/id_rsa':
Counting objects: 4, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 378 bytes | 0 bytes/s, done.
Total 4 (delta 1), reused 0 (delta 0)
To git@github.com:hwahn7/CPBMII-.git
 345a93b..3990090 master -> master
KYP@KYPark MINGW32 ~/Documents/DaumCloud/Bioinformatics_lecture/CPBMII-/Python (master)
$ |
```

github로 가보니 python folder가 변경되었다고 되어 있습니다.



파일의 내용이 변경되었음을 알 수 있습니다.



마침.

- 도움이 되었는지 모르겠습니다.
- 잘 되지 않으시면 다음주에 제가 아는 한도내에서 도와드리겠습니다.