INTRODUCTION TO DATA SCIENCE

TA class I - Git & GitHub

TA: Lee Chi-Hsuan

∖ Git & GitHub



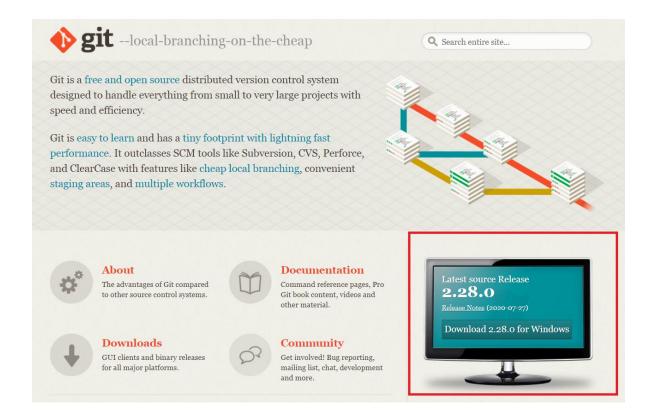


VCS

Version Control System

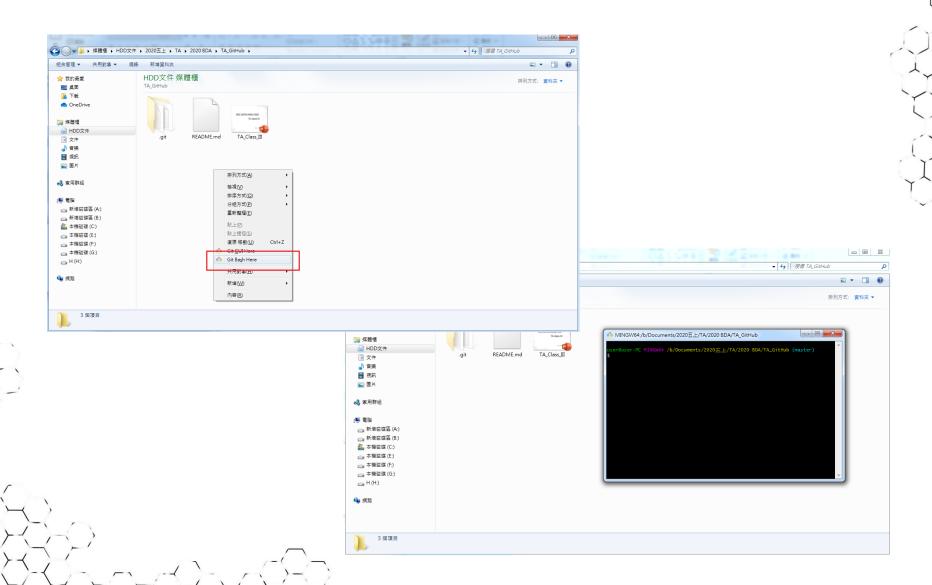
A system that records changes to files over time so that you can recall specific versions later.

Git





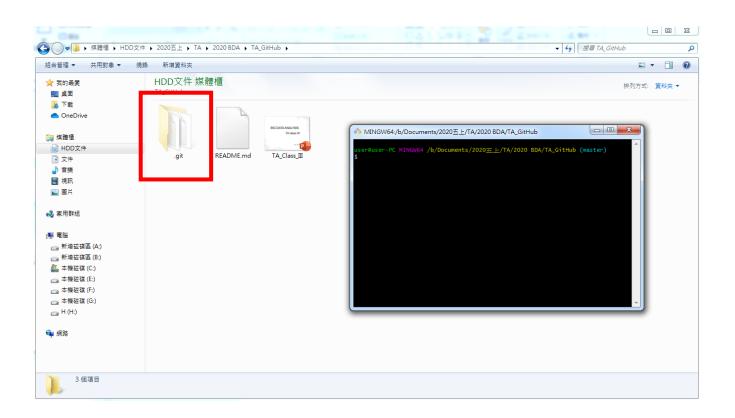
First Steps with Git



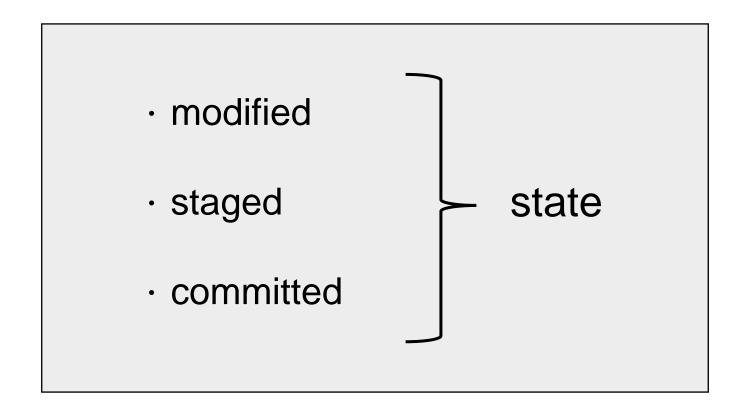
Your Identity

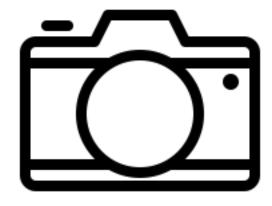
- · git config --global user.email "your_email_account.gmail.com"
- · git config --global user.name "your name"

· git init



Three state of tracking files:





· Snapshotting your repository

· git status

```
♦ MINGW64:/b/Documents/2020五上/TA/2020 BDA/TA_GitHub
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (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 restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
```

git add

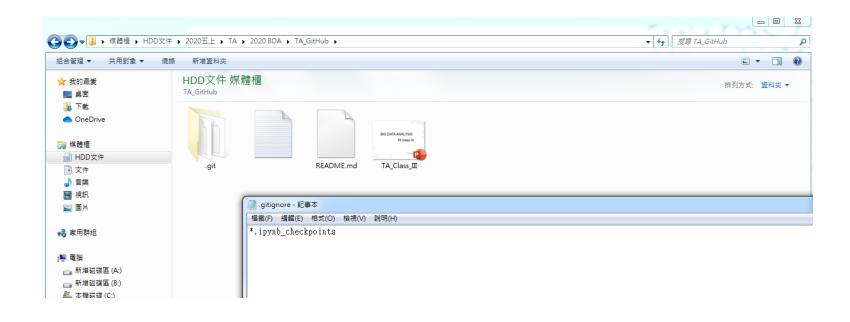
```
MINGW64:/b/Documents/2020五上/TA/2020 BDA/TA_GitHub
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
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user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
$ git add TA_Class_III.pptx
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
```

· git commit -m '...'

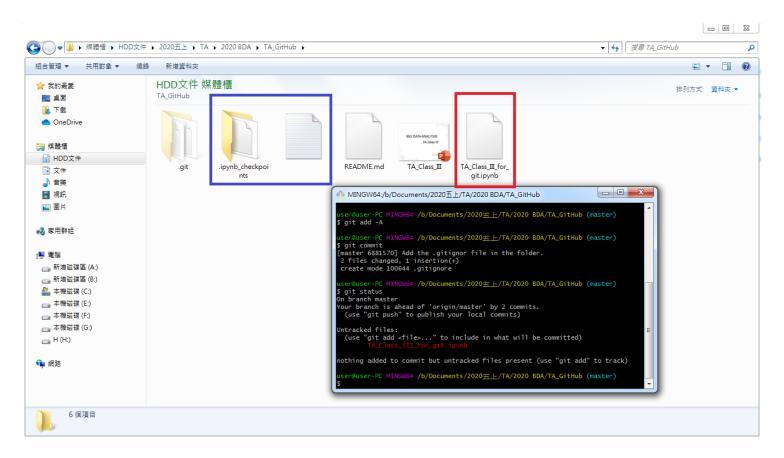
```
MINGW64:/b/Documents/2020五上/TA/2020 BDA/TA_GitHub

user@user-PC MINGW64 /b/Documents/2020开 ト/TA/2020 BDA/TA_GitHub (master)
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no changes added to commit (use "git add" and/or "git commit -a")
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
$ git add TA_Class_III.pptx
user@user-PC MINGW64 /b/Documents/2020<u>五上</u>/TA/2020 BDA/TA_GitHub (master)
$ git commit -m 'Modify the PPT'
[master 283eeeb] Modify the PPT
1 file changed, 0 insertions(+), 0 deletions(-)
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
```

.gitignor



...after adding an ipynb file(the ipynb_checkpoints is ignored)



· git add -A

```
MINGW64:/b/Documents/2020五上/TA/2020 BDA/TA_GitHub

$ git commit
[master 6881570] Add the .gitignor file in the folder.
2 files changed, 1 insertion(+)
 create mode 100644 .gitignore
user@user-PC MINGW64 /b/Documents/2020<u>五上</u>/TA/2020 BDA/TA_GitHub (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)
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 track)
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
$ git add -A
warning: LF will be replaced by CRLF in TA_Class_III_for_git.ipynb.
The file will have its original line endings in your working directory
 user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
```

· git commit

```
MINGW64:/b/Documents/2020五上/TA/2020 BDA/TA_GitHub
$ git commit
[master 6881570] Add the .gitignor file in the folder.
2 files changed, 1 insertion(+)
 create mode 100644 .gitignore
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)
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 track)
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
$ git add -A
warning: LF will be replaced by CRLF in TA_Class_III_for_git.ipynb.
The file will have its original line endings in your working directory
user@user-PC MINGW64 /b/Documents/2020五上/TA/2020 BDA/TA_GitHub (master)
  git commit
```

vim

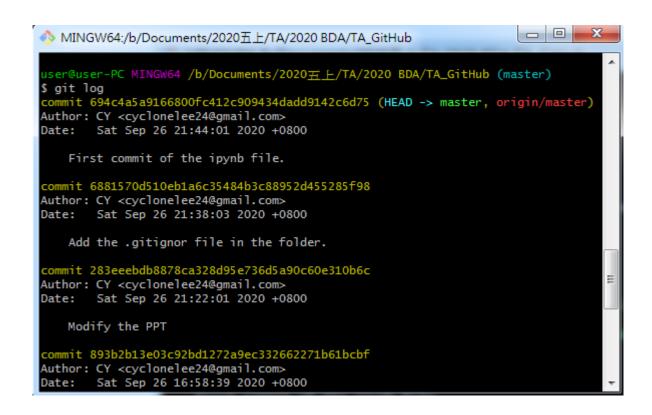
- · press 'i'
- · write your commit message
- · press 'Esc'
- type ':wq'

```
- - X

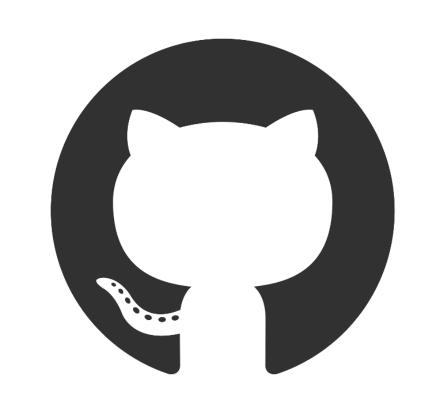
♦ MINGW64:/b/Documents/2020五上/TA/2020 BDA/TA_GitHub

Finish the 'status' part of the PPT.
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch master
# Your branch is up to date with 'origin/master'.
# Changes to be committed:
       modified: TA_Class_III.pptx
<TA/2020 BDA/TA_GitHub/.git/COMMIT_EDITMSG[+] [unix] (22:05 26/09/2020)1,36 全部</p>
```

· git log



GitHub



 A web-based Git repository hosting service.

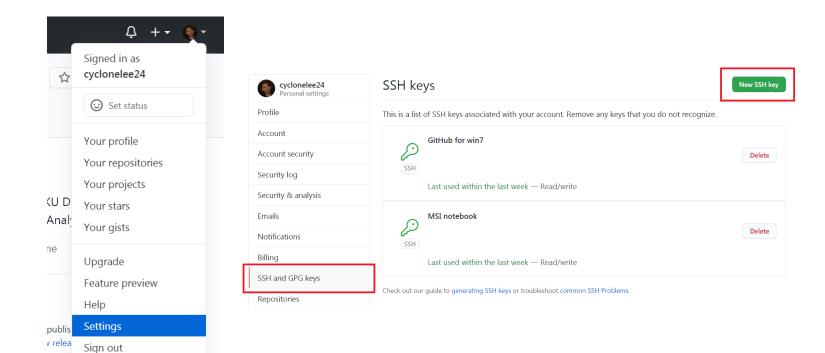
On top of Git's functions,
 it includes extra features.



Adding ssh-key

- ssh-key: let GitHub know your identity
- · \$ ssh-keygen
- you can skip entering the passphrase
- \$ cat /directory of your key/id_rsa.pub

copy from ssh-rsa... to ...@gmail.com(or to ...@pc-name)



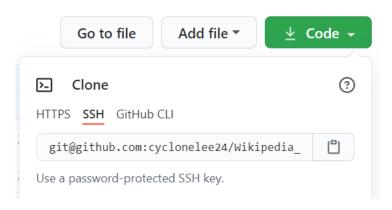
Identify yourself with id_rsa.pub to GitHub

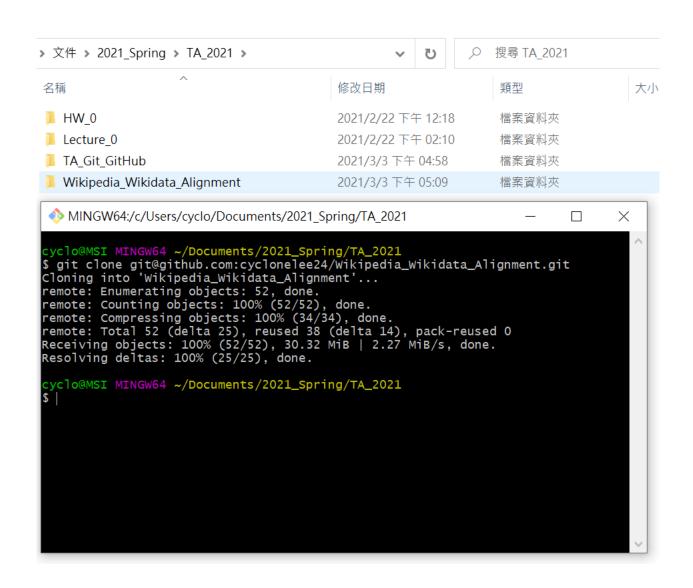
SSH keys / Add new
Title
Key
Begins with 'ssh-rsa', 'ssh-ed25519', 'ecdsa-sha2-nistp256', 'ecdsa-sha2-nistp384', or 'ecdsa-sha2-nistp521'

Add SSH key

· Adding SSH key steps reference

· git clone





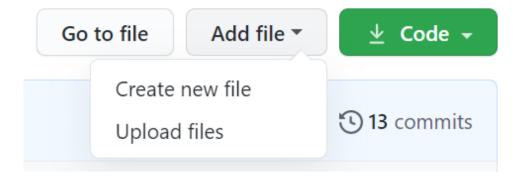
2021 > Wikipedia_Wikidata_Alignment >	▼ 複尋 Wikipedia_Wikidata_Alignment		
名稱 ^	修改日期	類型	大小
.git	2021/3/3 下午 05:10	檔案資料夾	
📙 data	2021/3/3 下午 05:10	檔案資料夾	
gitignore	2021/3/3 下午 05:09	文字文件	1 KB
README.md	2021/3/3 下午 05:09	MD 檔案	1 KB
Wikidata_Coattention_NSMN.ipynb	2021/3/3 下午 05:09	IPYNB 檔案	46 KB
Wikidata_pretrained_BERT.ipynb	2021/3/3 下午 05:09	IPYNB 檔案	51 KB
Wikidata_pretrained_BERT_unlabel.ipynb	2021/3/3 下午 05:09	IPYNB 檔案	42 KB

After adding new files or making any change :

REMEMBER the following steps!

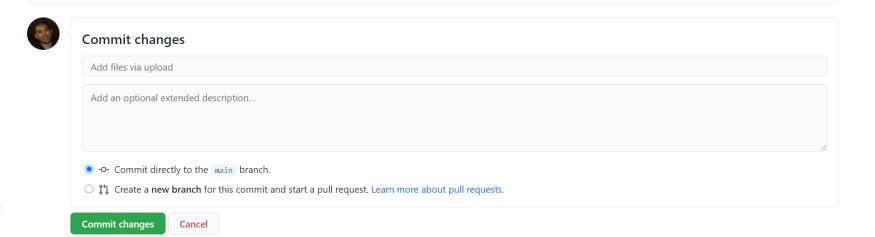
- 1. git add
- 2. git commit
- 3. git push

· other method to upload your homework

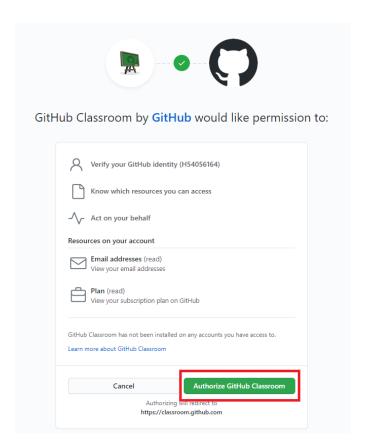


Drag files here to add them to your repository

Or choose your files



Accept your homework step by step



Click the

"homework 0 submission"

And click the

"Authorize GitHub classroom"

Find your student ID

Join the classroom:

NCKU-IDS-2021

To join the GitHub Classroom for this course, please select yourself from the list below to associate your GitHub account with your school's identifier (i.e., your name, ID, or email).

Can't find your name? Skip to the next step →

Identifiers	
C14056251	>
C54061123	>
C64079102	>
D54051234	>
D54051373	> _

Click it



To join the GitHub Classroom for this course, please select yourself from the list below to associate your GitHub account with your school's identifier (i.e., your name, ID, or email).

Can't find your name? Skip to the next step →



Accept this assignment

Your account is linked to H54056164 on the roster. If this is wrong, please reach out to your instructor.

NCKU-IDS-2021

Accept the assignment — 2021-NCKU-IDS-HW0

Once you accept this assignment, you will be granted access to the 2021-ncku-ids-hw0-H54056164 repository in the NCKU-IDS-2021 organization on GitHub.

Accept this assignment

×

If you see this, you're on the right track

GitHub Classroom

GitHub Education



You accepted the assignment, **2021-NCKU-IDS-HW0**. We're configuring your repository now. This may take a few minutes to complete. Refresh this page to see updates.

Refresh the page after few seconds, And click the link below



You're ready to go!

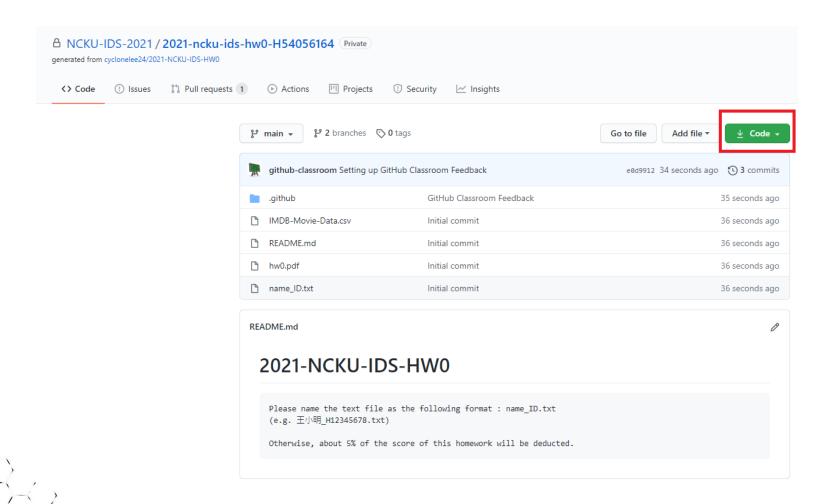
You accepted the assignment, 2021-NCKU-IDS-HW0.

Your assignment repository has been created:

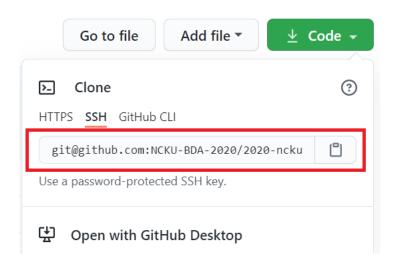
https://github.com/NCKU-IDS-2021/2021-ncku-ids-hw0-H54056164

We've configured the repository associated with this assignment (update).

Your repository is ready, click the green button to clone the repo. into your PC



Copy the link below, and use the Git Bash to clone the repo.



Start the Git Bash in the folder you want to save the repo.

Then use git clone to clone the repo.

```
MINGW64:/c/Users/cyclo/Documents

- CycleGMSI MINGW64 /Decuments

git clone git@github.com:NCKU-BDA-2020/2020-ncku-bda-hw2-jil.git
Cloning into 2020-ncku-bda-nw2-jil ...
remote: Enumerating objects: 18, done.
remote: Counting objects: 100% (18/18), done.
remote: Compressing objects: 100% (14/14), done.
remote: Total 18 (delta 5), reused 6 (delta 1), pack-reused 0
Receiving objects: 100% (18/18), 3.13 MiB | 1.52 MiB/s, done.
Resolving deltas: 100% (5/5), done.

cyclo@MSI MINGW64 ~/Documents

$
```

The repository you clone is already a Git repository.

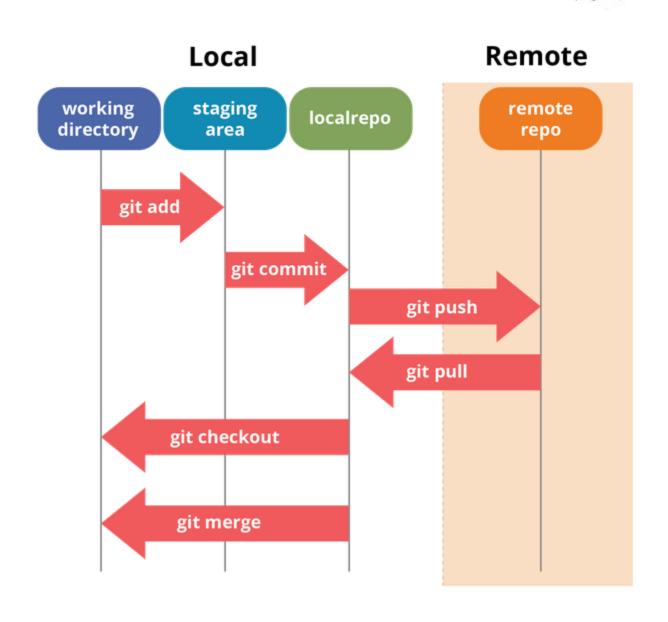
"git add" & "git commit"

any change you make

"git push" those changes to the remote

(GitHub) repository

Then your works are successfully submitted



More questions?

