

Github tutorial

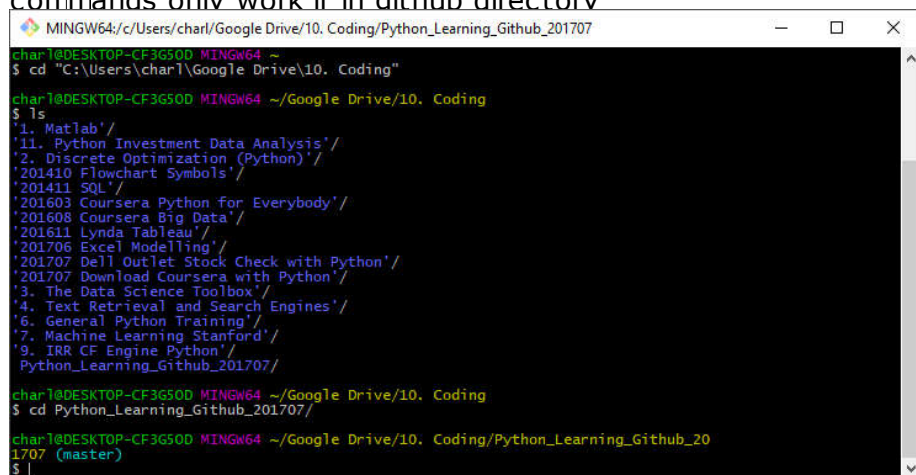
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Github tutorial

- download github desktop
- (may need to download git separately)
- create new repository (ie new project)
 - check option for including readme file, enable immediate clone of repository
- use the clone URL
- run cmd in windows
 - cd change directory
 - cd .. one level up
 - cd ~ home directory
 - ls list files
-
- git command
 - high level
 - pull
 - change
 - add
 - commit
 - push
 - Git bash (cmd for github)
 - similar to command line, but in unix style
 - commands only work if in github directory



```
MINGW64/c:/Users/charl/Google Drive/10. Coding/Python_Learning_Github_201707
charl@DESKTOP-CF3G50D MINGW64 ~
$ cd "C:\Users\charl\Google Drive\10. Coding"
charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding
$ ls
1. Matlab'/
11. Python Investment Data Analysis'/
2. Discrete Optimization (Python)'/
201410 Flowchart Symbols'/
201411 SQL'/
201603 Coursera Python for Everybody'/
201608 Coursera Big Data'/
201611 Lynda Tableau'/
201706 Excel Modelling'/
201707 Dell Outlet Stock Check with Python'/
201707 Download Coursera with Python'/
3. The Data Science Toolbox'/
4. Text Retrieval and Search Engines'/
6. General Python Training'/
7. Machine Learning Stanford'/
9. IRR CF Engine Python'/
Python_Learning_Github_201707/
charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding
$ cd Python_Learning_Github_201707/
charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ |
```

- **git clone (clone URL)**
 - git clone https://github.com/ccz245/Python_Learning_Github_201707.git
 - clone the repository to local
 - (add the cloned repository as project folder)
 - untracked files are new files not online yet
- **git status**
 - shows difference between local and online repositories
 - what changed
- **git add (file name)**

- add any changes to the staging area (in between local and online repository)
 - **git add .**
 - add all from directory
 - **git add -A**
 - do it for all
 - **git add -u**
 - remove deleted files
- **git commit -m "added changes"**
 - add to the change a message (-m) "added changes"
 - used for documentation
 - can go back to previous commit versionsgit
- **git log**
 - show previous commits
 -
- **git push**
 - sync all from local to online
 - git push -u origin master
 -
- **git pull**
 - sync all from online to local
 - git pull origin master
- **git remote add origin (online repository link)**
 - git remote add origin
https://github.com/ccz245/Python_Learning_Github_201707.git
 - if origin/master (ie the online repository) already exists, then will error
 -
- **git**
 - show all comments and purposes
- **touch (new file name)**
 - create new file locally
- fix detached head (ie no longer on branch)
 - <https://stackoverflow.com/questions/5772192/how-can-i-reconcile-detached-head-with-master-origin>
 - HEAD is the current commit, normally it's attached to a branch
 - git branch temp
 - git checkout temp
 - git branch -f master temp
 - git checkout master
 - git branch -d temp
 - git push origin master --force
 -
 -
 - <https://stackoverflow.com/questions/10228760/fix-a-git-detached-head>
 - If you have changed files you don't want to lose. you can push them. I have committed them in the detached mode and after that you can move to a temporary branch to integrate later in master.


```
git commit -m "....."
git branch mv-temporary-work
git checkout master
git merge my-temporary-work
```

examples

```
MINGW64/c/Users/charl/Google Drive/10. Coding/Python_Learning_Github_201707
9. IRR CF Engine Python//
Python_Learning_Github_201707/

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding
$ cd Python_Learning_Github_201707/

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_20
1707 (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:   README.md

no changes added to commit (use "git add" and/or "git commit -a")

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git add
Nothing specified, nothing added.
Maybe you wanted to say 'git add .'

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git add .

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ clear

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (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:   README.md

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git add .

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git commit -m "changed read me to test uploading changes to online repository"
[master 7b20126] changed read me to test uploading changes to online repository
1 file changed, 2 insertions(+)

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git log
commit 7b20126d6c335f7404fd565c1f63c33fe86f8134 (HEAD -> master)
Author: ccz245 <charleszhao@hotmail.co.uk>
Date:   Wed Jul 26 10:08:14 2017 +0100

    changed read me to test uploading changes to online repository

commit 90e0f56bc568f97698ca72f8203694a832fcb9 (origin/master, origin/HEAD)
Author: ccz245 <charleszhao@hotmail.co.uk>
Date:   Wed Jul 26 09:57:52 2017 +0100

    Initial commit

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)
nothing to commit, working tree clean

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git push
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 414 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/ccz245/Python_Learning_Github_201707.git
   90e0f56..7b20126  master -> master

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ touch new_file
```

```
MINGW64/c/Users/charl/Google Drive/10. Coding/Python_Learning_Github_201707
charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)
nothing to commit, working tree clean

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git push
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 414 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/ccz245/Python_Learning_Github_201707.git
90e0f56..7b20126 master -> master

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ touch new_file

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git add .

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (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)

        new file:   new_file

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git commit -m "added a new file into repository"
[master 61786a1] added a new file into repository
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 new_file

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git log
commit 61786a1cf8719545650a3881f56181de36e5cde3 (HEAD -> master)
Author: ccz245 <charleszhao@hotmail.co.uk>
Date:   Wed Jul 26 10:34:29 2017 +0100

    added a new file into repository

commit 7b20126d6c335f7404fd565c1f63c33fe86f8134 (origin/master, origin/HEAD)
Author: ccz245 <charleszhao@hotmail.co.uk>
Date:   Wed Jul 26 10:08:14 2017 +0100

    changed read me to test uploading changes to online repository

commit 90e0f56bc568f97698ca72f8203694a832fceb9
Author: ccz245 <charleszhao@hotmail.co.uk>
Date:   Wed Jul 26 09:57:52 2017 +0100

    Initial commit

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git sttus
git: 'sttus' is not a git command. See 'git --help'.

Did you mean this?
    status

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git push
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 326 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/ccz245/Python_Learning_Github_201707.git
7b20126..61786a1 master -> master

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ git pull
Already up-to-date.

charl@DESKTOP-CF3G50D MINGW64 ~/Google Drive/10. Coding/Python_Learning_Github_201707 (master)
$ |
```