sijing's amateur guide to git

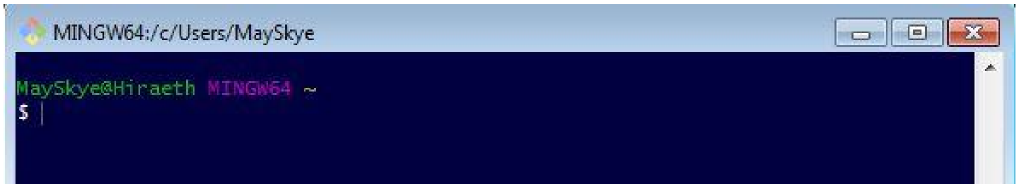
> download git <

table of contents:

to create a personal repo on your computer (aka local repo)

note: directory <=> folder

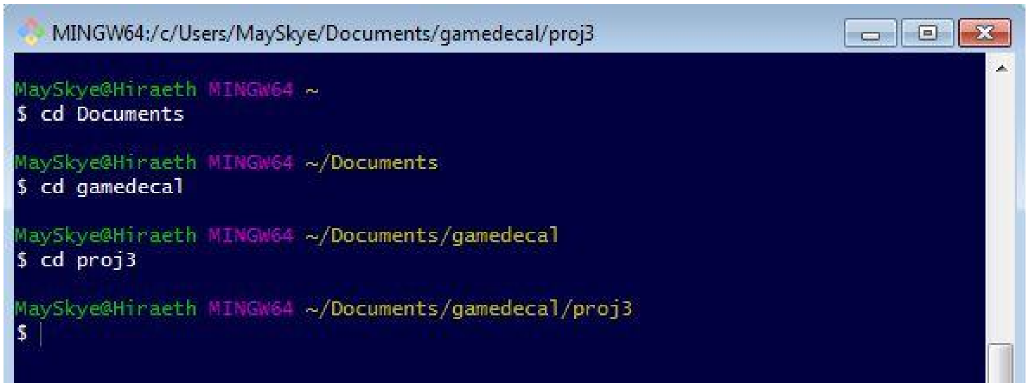
1. create a folder `folder` for the project somewhere on your computer
2. open git bash terminal. you should automatically be in your home directory (should be C: drive). see what's in this directory using the command `ls` (aka 'list')
   - mine looks like this:



MINGW64:/c/Users/MaySkye

```
MaySkye@Hiraeth MINGW64 ~
$ |
```

3. via git bash terminal, navigate into `folder` using the command `cd` (aka 'change directory')
   - my filepath looks like this:



MINGW64:/c/Users/MaySkye/Documents/gamedecal/proj3

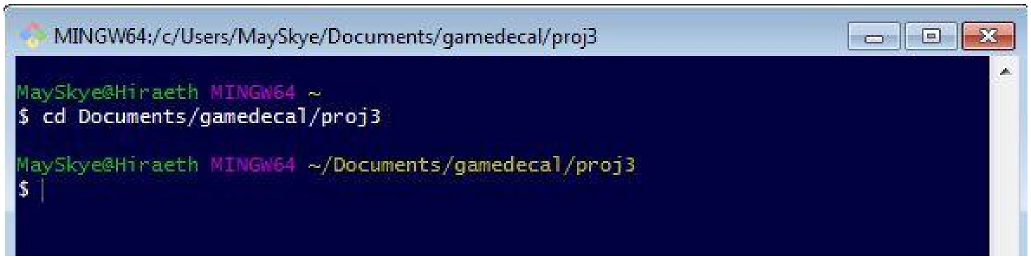
```
MaySkye@Hiraeth MINGW64 ~
$ cd Documents

MaySkye@Hiraeth MINGW64 ~/Documents
$ cd gamedecal

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal
$ cd proj3

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3
$ |
```

   - could also consolidate into one step using `cd Documents/gamedecal/proj3`

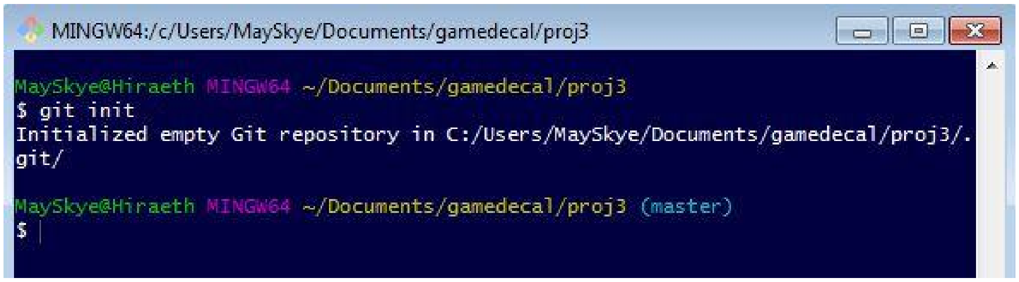


MINGW64:/c/Users/MaySkye/Documents/gamedecal/proj3

```
MaySkye@Hiraeth MINGW64 ~
$ cd Documents/gamedecal/proj3

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3
$ |
```

4. initialize git with the command `git init`



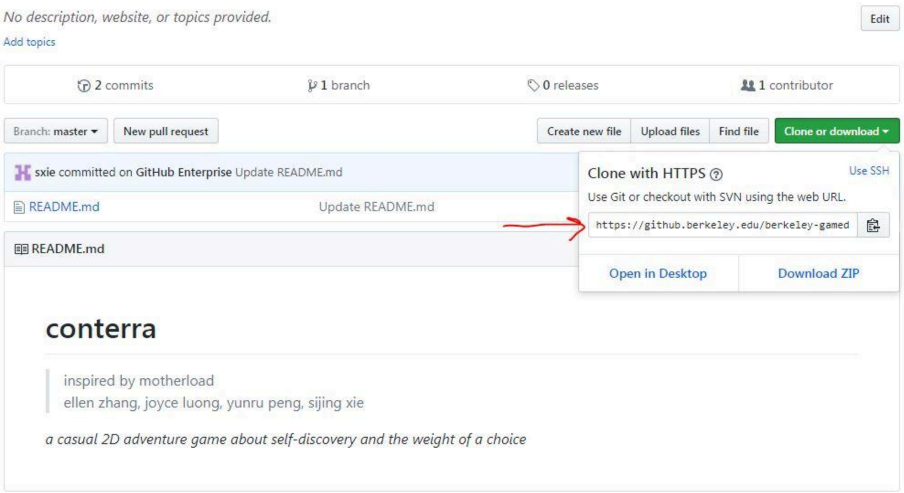
MINGW64:/c/Users/MaySkye/Documents/gamedecal/proj3

```
MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3
$ git init
Initialized empty Git repository in C:/Users/MaySkye/Documents/gamedecal/proj3/.
git/

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ |
```

5. add the remote repo that has all our files (the one on github) with `git remote add origin <link>`
   - 'origin' is the name we're giving the remote; it can be anything, but it's conventional to use 'origin' because it's descriptive

- find the <link> from the repo online;
  this is ours: https://github.berkeley.edu/berkeley-gamedev/conterra.git



No description, website, or topics provided.

Use Git or checkout with SVN using the web URL.

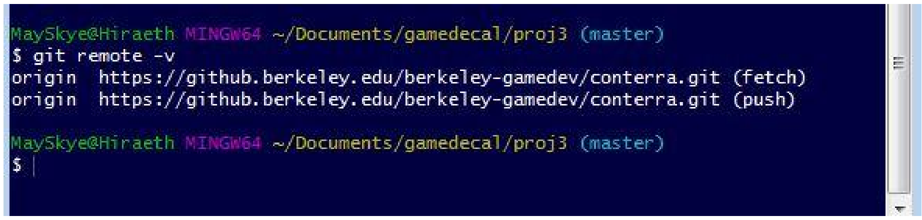
```
https://github.berkeley.edu/berkeley-gamed
```

conterra

> inspired by motherload
> ellen zhang, joyce luong, yunru peng, sijing xie

a casual 2D adventure game about self-discovery and the weight of a choice

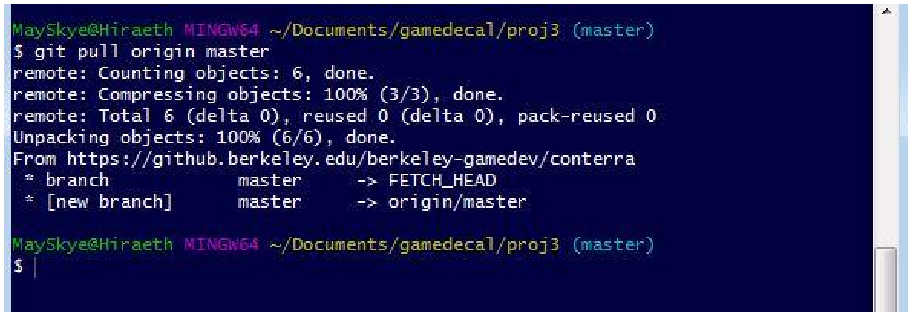
- then use `git remote -v` and it should look like this:



```
MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ git remote -v
origin  https://github.berkeley.edu/berkeley-gamedev/conterra.git (fetch)
origin  https://github.berkeley.edu/berkeley-gamedev/conterra.git (push)

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$
```

6. download all of the repo's contents with `git pull origin master`



```
MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ git pull origin master
remote: Counting objects: 6, done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), done.
From https://github.berkeley.edu/berkeley-gamedev/conterra
 * branch            master     -> FETCH_HEAD
 * [new branch]      master     -> origin/master

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$
```

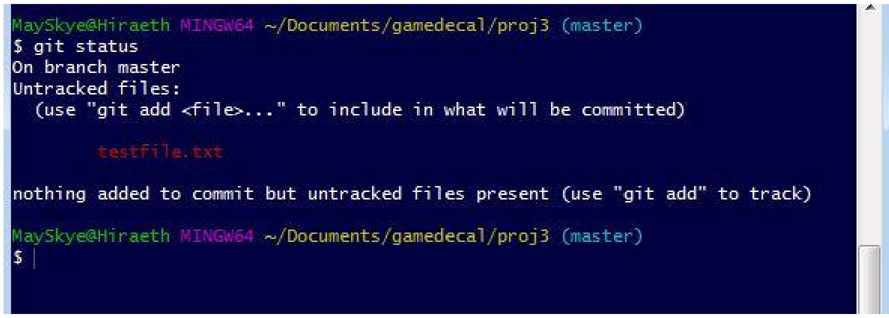
- it may prompt you to login to github in the terminal or in a new window, don't be alarmed, just use your github login

to upload your edits to the remote repo on github (aka origin)

note: ideally you should use `git pull origin master` *every time* ***before*** *you make any edits to ensure you're up-to-date with everything online but it's not disastrous if you don't*

1. use `git status` to check which files have been edited but not tracked (i.e. ready to be committed)

    - untracked files will be red



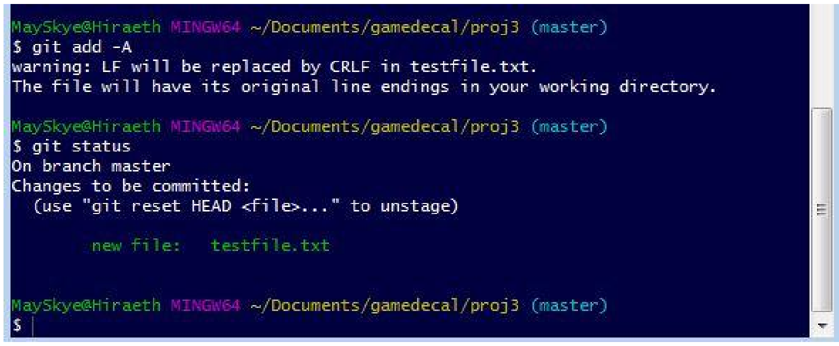
```
MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)

        testfile.txt

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

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ |
```

2. use `git add <filename>` to track files
    - in practice, you should use `git add .` or `git add -A` or `git add --all` for convenience
    - then `git status` again just to be sure (tracked files will be green)



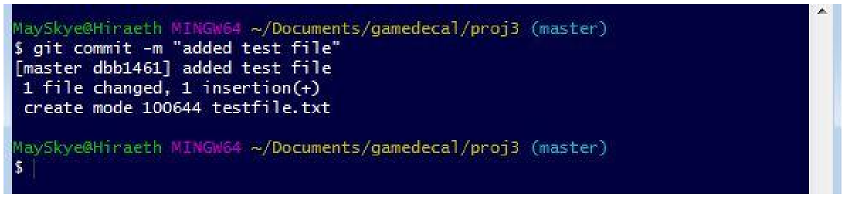
```
MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ git add -A
warning: LF will be replaced by CRLF in testfile.txt.
The file will have its original line endings in your working directory.

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   testfile.txt


MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ |
```

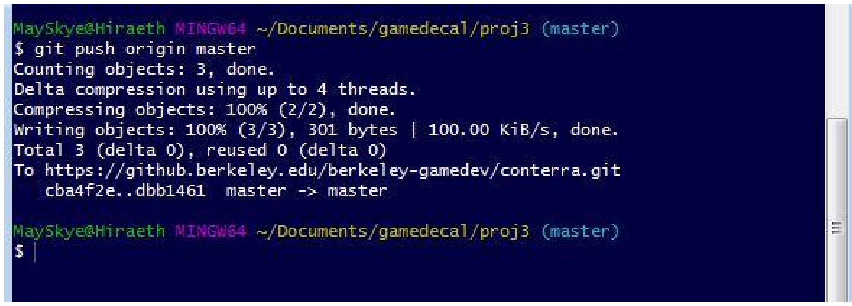
3. save this round of edits permanently with `git commit -m “<msg>”`



```
MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ git commit -m "added test file"
[master dbb1461] added test file
 1 file changed, 1 insertion(+)
 create mode 100644 testfile.txt

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ |
```

    - **VERY IMPORTANT STEP!!! NEVER FORGET!!!**
    - i mean you can’t do the next step without this step so i guess you can’t forget lol
    - always use -m flag because it necessitates a message
    - succinctly describe your edits and bugs in the message for collaborators
    - message **must** be in double quotes!!!
4. *(optional)* if you didn’t `git pull origin master` before you started editing, do it now and pray there are no merge conflicts because they are extremely annoying and confusing
    - if there are merge conflicts, tell sijing
5. upload your commit to origin with `git push origin master`



```
MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ git push origin master
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 301 bytes | 100.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.berkeley.edu/berkeley-gamedev/conterra.git
   cba4f2e..dbb1461  master -> master

MaySkye@Hiraeth MINGW64 ~/Documents/gamedecal/proj3 (master)
$ |
```

    - again, may or may not prompt you to login to github

index of commands + more that can be useful

- `cd <folder name>` : ‘change directory’ = move into the specified folder
  - `cd ..` : return to parent folder
  - `cd ~` : return to C: drive
- `ls` : ‘list’ = list all contents of current folder
  - `ls -a` : list all contents **including** hidden files (usually don’t need this, but in case there’s an error in some file and you’re like “i don’t even have that file”)
- `git status` : check tracked and untracked files
- `git pull <remote> <branch>` : download all changes from online repo to local repo
- `git push <remote> <branch>` : upload your changes from local repo to online repo
- `git commit -m “<msg>”` : ‘permanently’ save all your edits and prepare for upload
- `git add [-A|--add|.]` : track all file changes
  - use whichever flag calls to you, all 3 do the same thing though i recommend `-A` for safety
- `git log` : shows you the list of origin’s commits, starting with the most recent
  - use `Ctrl + C` to exit log