

# git

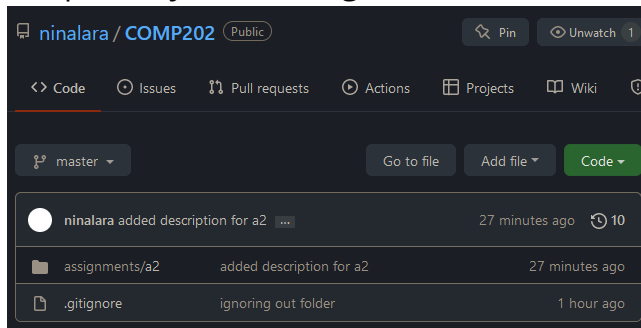
## COMP 202 - Foundations of Programming

### table of contents

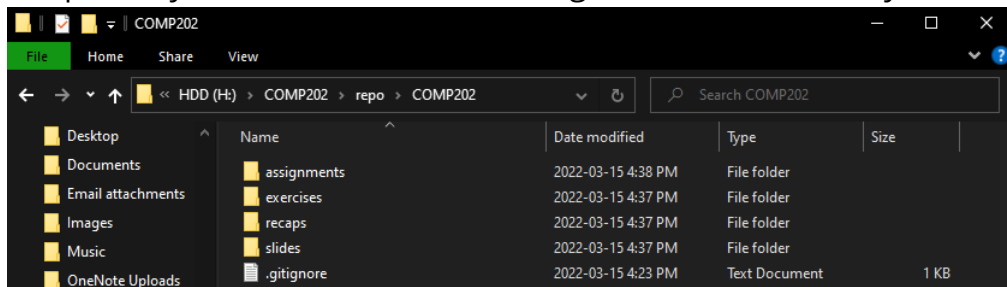
to fork a repository from github .....	2
to update a forked repository from github .....	2
to download a repository from github .....	3
to add your code to github .....	4
useful git commands .....	5

### some definitions

- repository:  
files that are uploaded to github
- remote repository:  
a repository that is on github.com



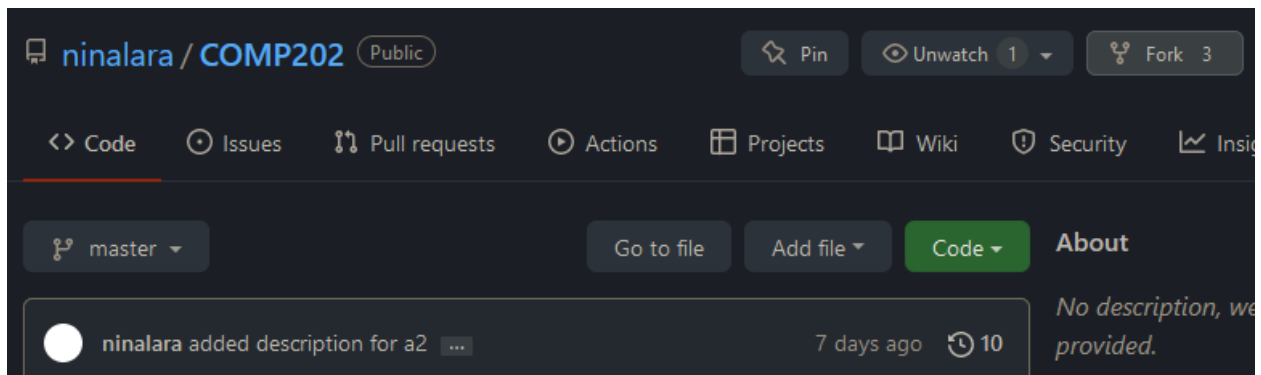
- local repository:  
a repository that is downloaded from github.com but is on your PC



- fork a repository:  
copying a repository to your list of remote repositories on github
- clone a repository:  
downloading a repository to your computer as a local repository

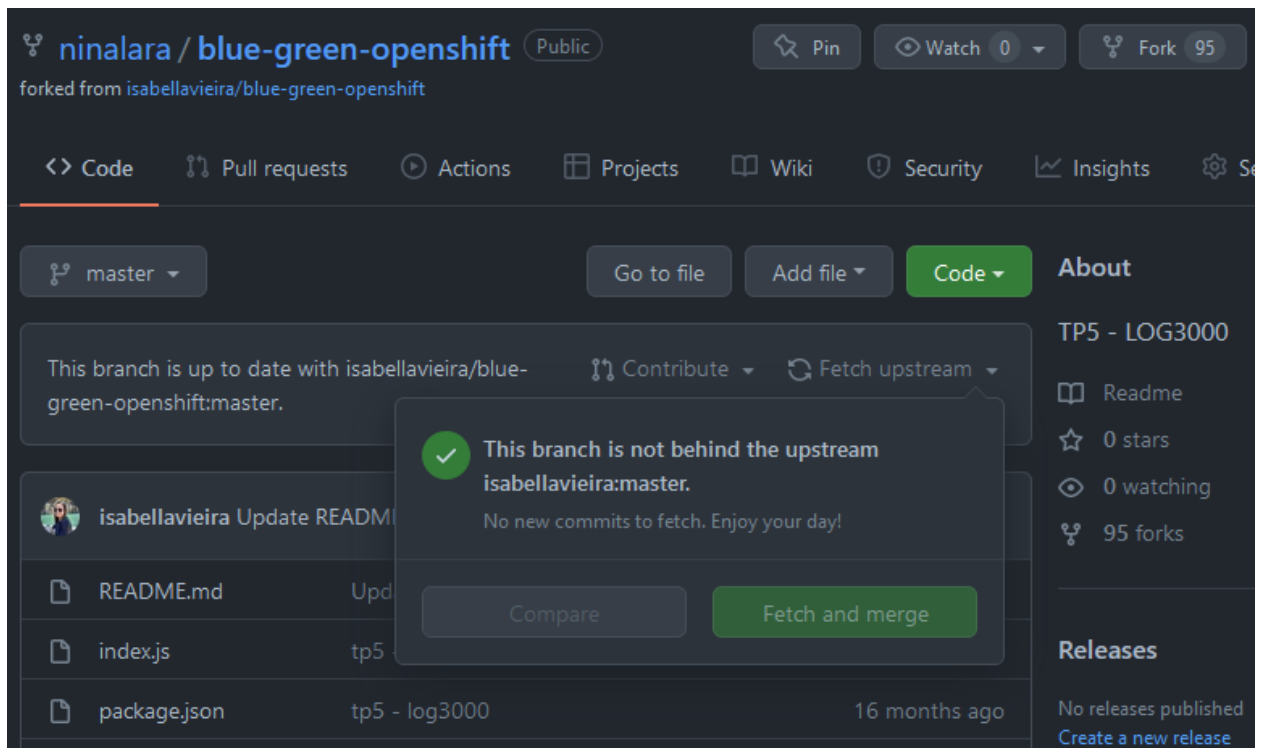
## to fork a repository from github

click on the *Fork* button on the top right corner



## to update a forked repository from github

click on the *Fetch upstream* button below the green *Code* button

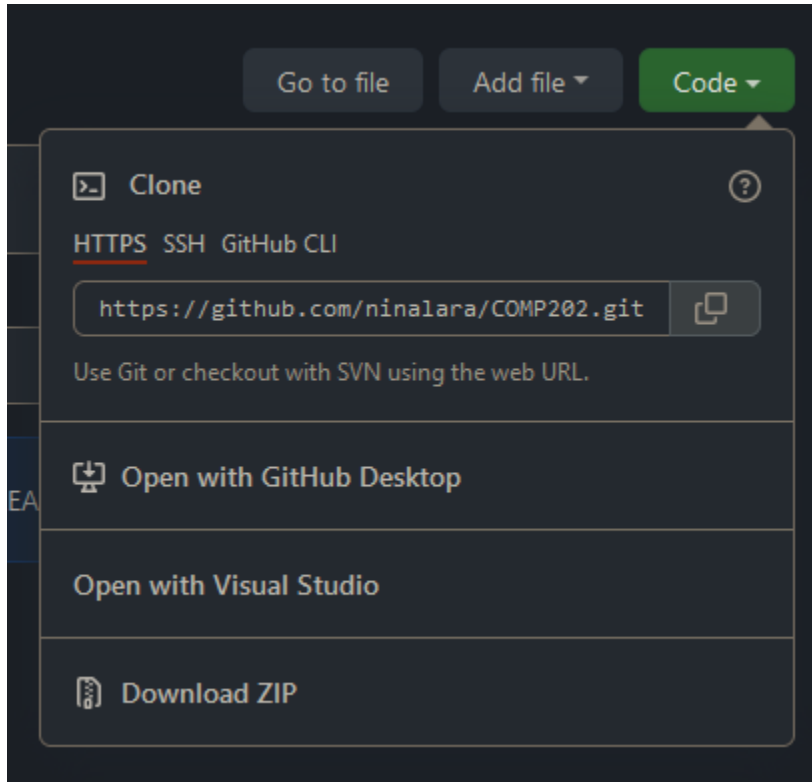


## to download a repository from github

git clone + (git URL)

example:

git clone <https://github.com/ninalara/COMP202.git>



```
test@DESKTOP-02KSELR MINGW64 ~ (master)
$ git clone https://github.com/ninalara/COMP202.git
Cloning into 'COMP202'...
remote: Enumerating objects: 77, done.
remote: Counting objects: 100% (77/77), done.
remote: Compressing objects: 100% (42/42), done.
remote: Total 77 (delta 15), reused 63 (delta 6), pack-reused 0
Unpacking objects: 100% (77/77), 7.81 KiB | 12.00 KiB/s, done.
```

## to add your code to github

step 1: git add .

step 2: git commit -m "(description of the code you're adding)"

step 3: git push

example:

git add .

git commit -m "created the alphaString method"

git push

```
test@DESKTOP-02KSELR MINGW64 /h/COMP202/repo/COMP202 (master)
$ git add .

test@DESKTOP-02KSELR MINGW64 /h/COMP202/repo/COMP202 (master)
$ git commit -m"added description for a2"
[master a3865ef] added description for a2
1 file changed, 30 insertions(+), 1 deletion(-)

test@DESKTOP-02KSELR MINGW64 /h/COMP202/repo/COMP202 (master)
$ git push
Enumerating objects: 15, done.
Counting objects: 100% (15/15), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (8/8), 1.04 KiB | 531.00 KiB/s, done.
Total 8 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/ninalara/COMP202.git
a896772..a3865ef master -> master

test@DESKTOP-02KSELR MINGW64 /h/COMP202/repo/COMP202 (master)
$
```

## useful git commands

- pwd (present working directory):

tells me which folder I'm in

```
test@DESKTOP-02KSEL MINGW64 ~/COMP202 (master)
$ pwd
/c/Users/test/COMP202
```

- ls (list):

view the list of files and folders in the current directory

```
test@DESKTOP-02KSEL MINGW64 ~/COMP202 (master)
$ ls
assignments/
```

- cd + name of a folder (change directory):

go into a folder

```
test@DESKTOP-02KSEL MINGW64 ~/COMP202 (master)
$ cd assignments

test@DESKTOP-02KSEL MINGW64 ~/COMP202/assignments (master)
$
```

- cd .. (change directory):

go into the previous folder

```
test@DESKTOP-02KSEL MINGW64 ~/COMP202 (master)
$ cd assignments

test@DESKTOP-02KSEL MINGW64 ~/COMP202/assignments (master)
$ cd ..

test@DESKTOP-02KSEL MINGW64 ~/COMP202 (master)
$ |
```

- git status:

shows you a list of files that you added, deleted or modified in your repository

```
test@DESKTOP-02KSEL MINGW64 /h/COMP202/repo/COMP202 (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
```

- git log:

shows you a list of commits that you've done on the repository

```
test@DESKTOP-02KSEL MINGW64 /h/COMP202/repo/COMP202 (master)
$ git log
commit 56c1afd953a62bc4c3799aca8b84963c6e4c715f (HEAD -> master)
Author: nina <liliamnina@gmail.com>
Date:   Tue Mar 22 17:22:55 2022 -0400

    added git cheat sheet

commit a3865ef3d6108dfbdb7bd5cc5de30491526569aa (origin/master, origin/HEAD)
Author: nina <liliamnina@gmail.com>
Date:   Tue Mar 15 17:01:41 2022 -0400

    added description for a2
```