

Github for Dummies and Professors

Prof Bill - May 2016

My quest - describe Github/git usage as simply as possible for a small team of developers.

Clone - Get a copy of your team's repo. The Github URL is on the team repo page. Copy-paste.

```
# clone copies the remote team repo to your local machine;  
# it creates a folder for the repo  
git clone <github-url>
```

Basic workflow using git - branch, code, add/commit, pull (to merge), push... rinse and repeat

```
# 1. pull (get) the latest version of code from remote repo;  
# unnecessary if you just did a clone  
git pull origin master  
  
# 2. create a new branch for your work  
git checkout -b <branch-name>  
  
# 3. work. code. work. code. etc.  
  
# 4. add and commit all changes to your local repo  
git add -A  
git commit -m <your-message>  
  
# 5. pull down current repo code and merge them into your branch  
# Fix any merge problems/erros here!  
git pull origin master  
  
# 6. push your work up to the Github repo; origin is the default  
# Github asks for your user name and password here.  
git push origin <branch-name>  
  
# 7. return to master branch  
git checkout master
```

Github Pull - The last step is to "pull" your changes into the team repo from your branch. This is a Github operation. Goto Github and your team's repo, open a "Pull Request" for your branch. The request is sent to a repo "owner" who accept your request. If you're an owner, you can accept your own request.

Last step - That's it. Loop back to step 1.

Setup - You'll probably do these things once.

- Get a Github account: www.github.com
- Get invited to your team's Github repo. Talk to your team's owner/admin to get access.
- Download git to your local machine [except on cloud9]: git-scm.com/downloads
- Configure git with some global settings you'll need.

```
# use your Github email and user name
git config --global user.email <your-email>
git config --global user.name <your-name>
git config --global push.default simple
```

More depth - Here's a little more depth in a couple of areas.

Yes, the verb pull is used twice in our basic methodology. 1) Pull files from the team repo to your local machine, and 2) Open a "pull request"

- `git branch -a` - Shows your current git branches: local and remote
- `git status` - Report files that haven't been added to git yet and other stuff.
- `git remote -v` - Shows all remote repos, like the one you have cloned!
- `git reset` - This is (sort of) a git undo command. Google them for more info.

Resources - other places for intro information.

- ❖ rogerdudler.github.io/git-guide/ - a good github intro... his "Cheat Sheet" is pretty nice.
- ❖ try.github.io/levels/1/challenges/1 - This is an interactive demo where you enter git commands and see the result of their execution. It's just OK.

More coming soon... or is there?

yow, bill