git/github

Hello good people from Dry Lab,

This post is intended to get you comfortable with git/github and also for us to get your github accounts. If you already know most things about git/github, skip the instructions and proceed to the Practice Section.

LEARNING:

First of all, if you are completely new to git/github, and you were not present yesterday to go over some of the basics with me, you can watch the following video:
https://www.youtube.com/watch?v=HVsySz-h9r4
[If you were with me yesterday, you will notice that this video is different from what we watched. If you feel that you were confused about a few things or you want another refresher, feel free to watch this video.]

With that, you should know the basic git commands to work in your local repo and to update your own repos in github. However, we need to use github among other users. To do this, you need to fork a copy of the original repo to your own account. Follow these instructions:
https://help.github.com/articles/fork-a-repo/#platform-linux

Then you would want to clone the forked repo (from your account) to your computer, and create a branch to start making your own edits. If you know there has been changes to the original repo, you can sync your forked repo by follow these instructions (this is helpful when multiple people working on same project):
https://help.github.com/articles/syncing-a-fork/#platform-linux

Lastly, after you are done editing, you can merge your branch to your master branch. Then you can ask for a pull request, which is a way for the original owner to acknowledge your edits and bring in the changes you made in the original repo. Pull requests are done through github website as it is a github feature. You can follow these instructions for that:
https://help.github.com/articles/using-pull-requests/

PRACTICE:

To get you some practice with pull requests, I have opened a repo called "igem-test" in my own account at this address:
https://github.com/protoxpire0/igem-test

Follow the instructions in the previous section and do the following:
- Fork the repo to your own account.
- Create a branch and make the following edits
    o Add a file (use your first name as your filename) in folder "members". The content of the file doesn't matter.
    o Edit the file "memberList.txt" and add your name at the end.
- Check if there have been any changes in the original repo while you were making your edits. Use fetch and merge to get your master branch updated. Then you can merge your edits to your master branch and ask for pull request on the github website.
- Well done that is all. Now all you have to do is wait for me to accept your pull requests and then you can see your files and edits in the repo.

This should also give you plenty of practice for command line, which you should have in order to get working in COBRApy. We will also be collaborating for COBRApy simulations on github, for which I will be creating a new repo on my account soon.

Git commands that you definitely should know by the end:
- config, status, add, commit, diff
- clone, push, pull, remote
- checkout, branch, merge, fetch