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Git Setup

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Git ...

❑ Do you git?

- ✓ Open a Terminal / Command Prompt
- ✓ Check: > which git
- ✓ If you see a response, then you are all set
- ✗ If no response or error, download and install git.

❑ Why git?

- ✓ Version control (**text files** only!!!)
- ✓ Distribution, publishing, sharing.
- ✓ Agile design paradigm
 - Spread to many different area: lean startup, etc...

GitHub ...

❑ How do you git?

- ✔ Github (now owned by Microsoft)
- ✔ Command-line-interface (CLI) or desktop app
- ✔ Others such as BitBucket (by Atlassian) are compatible with GitHub Desktop as well

❑ Fork or no fork?

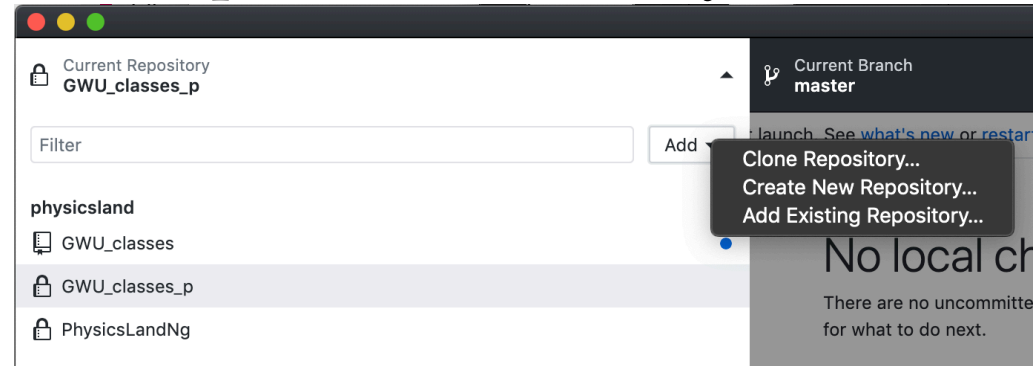
- ✔ Read only, no sync/updates – no fork
- ✔ A copy of your own and continue to get newer pulls/updates – fork it!

Fork none ...

❑ Let's try not to fork first? You have two options:

Option 1:

- ✅ If you have the Github Desktop installed already, click on the dropdown from Current Repository, Select "Add", then "Clone Repository"



- ✅ Select the "URL" tab,
url: `https://github.com/physicsland/GWU_classes`
local path: `/Users/username/path/a_new_folder_name`
- ✅ All set. You can now pull/fetch from origin.

Fork none ...

☐ Continue...

Option 2:


- ✓ From Terminal / Command Prompt window,
> git clone https://github.com/physicsland/GWU_classes
/Users/your/path/a_new_folder_name
- ✓ Done
- ✓ You can always control this new git folder with the
Desktop app: click “Add” → “Add Existing Repository”

☐ Whichever option you choose, the HEAD of the repo is at https://github.com/physicsland/GWU_classes. That is the master branch. Since you are not a collaborator, you can only fetch/pull but not push or commit to the master.

☐ Without the fork, it's difficult to sync with upstream/master

Finally ...

❑ Fork it if you have a github a/c (recommended)

- ✓ Click on the upper right to fork the repo. 
- ✓ You will get a fork linked to your account
- ✓ Use either option as before to set it up on your local computer. When “Add” → “Clone Repository”, you should see it under your github.com a/c
- ✓ Create a branch right away (say EL_190902)
- ✓ That way, your master branch can be kept in sync with the upstream/master (physicsland)
- ✓ Use `git pull upstream/master` (and `git commit`, `vi`, etc)

continue ...

- ❑ To sync with upstream/master, start from a terminal:
 - ✓ Make sure you are on your local master branch
> git branch
 - ✓ Assuming you indeed have not made any/much changes to the master branch, conflicts should be minimal and straight forward.
> git pull upstream master -f
 - ✓ You will be asked to confirm a commit for merging the diffs. And to commit, it is also required to add a comment. As a result, you might be prompted with a simple text editor screen on the terminal to edit the comment.

The End of a Beginning

- ✓ On top of the terminal, you might see “vi ...”. That’s the good ‘ol unix vi text-editor. It’s light weight, but needs to get used to from today’s standard. Find a cheatsheet online, and check with me if you want to know more.
- ✓ For here, you need to save the file and quit the editor to proceed. Press Shift-colon, then wq-enter for write the file and quit the editor in one step.
- ✓ Almost there. Commit the change. All synced.