

Lab 5 - CSC 317 & INF 307

Connecting GitHub to Local Git Repo

Part 1 – From a clean slate

1. Log in to your GitHub account.
2. Click the + button in the top-right corner, and click on [New repository](#)
3. Provide a name for the repo, and make it public. Leave other options as they are.
4. Click the create repository button
5. Now we are ready to clone (copy) this online repo to our local machine. Go to any folder on your machine into which you want to copy this online repo.
6. Open your terminal and make sure you are in this folder (from 5). Use the `cd` command when necessary.
7. Clone the GitHub repository using this command
`git clone https://github.com/YOUR-USERNAME/YOUR-REPOSITORY.git`
The exact url can be seen in the address bar of your repository. Make sure you enter the username and repository name exactly as it appears
8. `cd` into the created local repository (it would be a folder with the same name as the online repo)
9. use `git status` to verify that the repo is created successfully
10. Add a new txt file with some content to the repo, stage the changes, and commit
11. Now we are ready to push (send) our local changes to the online repo. Run the `git push` command
 - If you're a new GitHub user and using HTTPS, you might be asked for your username and password.
 - When asked for a username and password, type in your GitHub username and password and press enter after each. Don't be alarmed if you can't see the characters you are typing, they are intentionally hidden as a security measure.
12. Go back to your online repository and refresh the page.
13. Edit the README.md file on GitHub and commit changes (all should be done on GitHub)
14. Run the `git fetch` command. What do you observe?
15. Run the `git status` command. Can you interpret the message provided?
16. Now run `git pull`, followed by a `git status`. What do you observe now?
17. What is the difference between fetch and pull?

Optional

18. If you receive an error message like this “[remote: Support for password authentication was removed on August 13, 2021. Please use a personal access token instead. ...](#)”
 - Go to <https://github.com/settings/tokens> and click “Generate token”.
 - Look over the scopes; I recommend selecting “repo”, “user”, and “workflow”
 - Click “Generate new token (classic)”.
 - Copy the generated token and save in a safe place
 - Provide this token the next time a Git operation asks for your password.

Part 2 – Using an existing local repo

1. Repeat steps 1-4 from the previous exercise to create a new repository
2. Now, instead of cloning to our machine, we would connect an existing local repo to this new online repository.
3. Locate a local repository from our previous labs
4. Open your terminal. As usual, make sure you are in your local repo folder (else `cd` to the local folder)
5. Run this command to link your local repo to the new online repo

`git remote add origin https://github.com/YOUR-USERNAME/YOUR-REPOSITORY.git`

6. Checkout your main/master branch
7. Push the code in the main/master branch to the online repo (`git push -u origin main`)
8. Refresh the online repository. Do you see your files? What about your previous commits?
9. The same process can be used to push branches from the local to the remote repo.
10. Now practice pushing and pulling changes back and forth between the local and remote repositories.