



- Remote Repository: This is in the cloud on github.com and is essentially a folder for storing and sharing code.
- Local Repository: This is on a personal computer and is a copy of the remote repo. Locally, you can edit and play with code without directly impacting the remote repo.
- Clone: Cloning is the act of copying a remote repo or branch to your local personal computer. Can be done using `git clone`.
- Pull: Pulling updates your local repo with any changes that have been made in the remote repo. Can be done using `git pull`.
- Fetch: Similar to pulling, except fetching pulls changes from the remote repo without merging the changes into the local branches. Prevents merge conflicts.
- Stage: Staging is choosing files you have changed that you are ready to commit to your repo. Since I use command line, I do `git add` to stage.
- Commit: This is a form of saving a file that has been edited. Commit are essentially a snapshot of your branch or repo. This also allows you to revert back to the latest commit if necessary. Can be done with `git commit`.
- Push: Once a file has been staged and committed, you can push the file. You must stage and commit FIRST. Pushing updates the remote repo with all of the changes that have been committed.
- Remote Branch: In github.com, you can create a branch off of the remote repo. The idea is to be able to edit code, fix bugs, etc., without it impacting the main remote repo. At NRL, we make a lot of branches of our main repos and we give each one a unique name and number.
- Branch: Similar to remote vs. local repo, you can clone your remote branch to your local computer. Here, you can pull and push specifically to your remote branch without it impacting your remote main repo.
- git checkout: This command allows you to change back and forth from your main repo to your branch. You should always remain aware of where you are working. Can be done with `git checkout branch_name`.
- Issue: An issue is created to track your work for a specific problem. If an issue is created, you can link the issue to branches and pull requests where you work on the specific problem.
- Pull Request: Once you have made all the changes you need to make in a branch and you have pushed it to your remote branch, you can create a pull request. This is what allows you to add the changes you've made in your branch to the remote repo. Before this can happen, your pull request must be approved by people in your organization. They can make comments of things you should change first and can see all the changes you have made in your code. At NRL, we require 2 ~~other~~ approvals to move forward.
- Merge: Once you have received the approvals on your pull request, you can merge your branch with the remote repo. If you are done making changes in that branch, you can close out the branch.
- Forking: A Fork is a new repo that is yours and is identical to the main remote repo. We don't do this at NRL because it can be difficult to keep track of.