GitHub Cheat Sheet

GitHub important Vocabulary:

Branch
: A branch is a parallel version of a repository. It is contained within the repository, but does not affect the primary or master branch allowing you to work freely without disrupting the "live" version. When you've made the changes you want to make, you can merge your branch back into the master branch to publish your changes.

checkout
: The action of updating all or part of the working tree with a tree object or blob from the object database, and updating the index and HEAD if the whole working tree has been pointed at a new branch.

Collaborator
: A collaborator is a person with read and write access to a repository who has been invited to contribute by the repository owner.

Fetch
: Fetching refers to getting the latest changes from an online repository without merging them in. Once these changes are fetched you can compare them to your local branches (the code residing on your local machine).

Merge
: Merging takes the changes from one branch (in the same repository or from a fork), and applies them into another. This often happens as a pull request (which can be thought of as a request to merge), or via the command line. A merge can be done automatically via a pull request via the GitHub web interface if there are no conflicting changes, or can always be done via the command line. For more information, see "Merging a pull request."

Pull
: Pull refers to when you are fetching in changes and merging them. For instance, if someone has edited the remote file you're both working on, you'll want to pull in those changes to your local copy so that it's up to date.

Pull request
: Pull requests are proposed changes to a repository submitted by a user and accepted or rejected by a repository's collaborators. Like issues, pull requests each have their own discussion forum. For more information, see "About pull requests."

Push
: Pushing refers to sending your committed changes to a remote repository, such as a repository hosted on GitHub. For instance, if you change something locally, you'd want to then push those changes so that others may access them.

Remote
: This is the version of something that is hosted on a server, most likely GitHub. It can be connected to local clones so that changes can be synced.

Setup:

1. Create your first github account in the github website: www.github.com
2. Configuring user information used across all local repositories

```
git config --global user.name “[username]”
git config --global user.email "[email address]"
```

Some important Git commands:

Command	Function
git init	initialize an existing directory as a git repository
git clone [url]	clone an entire repository from the url
git status	modified files in working directory, staged for your next commit
git add [file]	add a file as it looks now to your next commit (stage).
git add .	Add everything in this location to your next commit
git reset [file]	unstage a file while retaining the changes in working directory
git diff	diff of what is changed but not staged
git diff --staged	diff of what is staged but not yet commited
git commit -m “[descriptive message]”	commit your staged content
git branch	list your branches. a * will appear next to the currently active branch
git branch [branch-name]	create a new branch at the current commit
git checkout	switch to another branch and check it out into your working directory
git merge [branch]	merge the specified branch’s history into the current one
git log	show all commits in the current branch’s history
git rm [file]	delete the file from project and stage the removal for commit[be careful to use]
$ git mv [file_from] [file_to]	Move file to another location