Git Commands

# Creating repos:

$ git init

Turn an existing directory into a git repository

$ git clone [url]

Clone (download) a repository that already exists on GitHub, including all of the files, branches, and commits

# Branches:

$ git branch [branch-name] Creates a new branch

$ git checkout [branch-name] Switches to the specified branch and updates the working directory

$ git branch -d [branch-name] Deletes the specified branch

$ git merge [branch] Combines the specified branch’s history into the current branch. This is usually done in pull requests, but is an important Git operation.

# Synchronize Changes:

$ git fetch Downloads all history from the remote tracking branches

$ git merge Combines remote tracking branch into current local branch

$ git push Uploads all local branch commits to GitHub

$ git pull Updates your current local working branch with all new commits from the corresponding remote branch on GitHub. git pull is a combination of git fetch and git merge

Undoing Changes:

$ git revert[commit] Create new commit that undoes all of the changes made in[commit] , then apply it to the current branch.

$ git reset[file] Remove file from the staging area, but leave the working directory unchanged. This unstages a file without overwriting any changes.

$ git reset [commit] Undoes all commits after [commit], preserving changes locally

$ git reset --hard [commit] Discards all history and changes back to the specified commit

$ git clean -n Shows which files would be removed from working directory. Use the -f flag in place of the -n flag to execute the clean

Rewriting Git History:

$ git commit --amend Replace the last commit with the staged changes and last commit combined. Use with nothing staged to edit the last commit’s message.

$ git rebase Rebase the current branch onto [base] .[base] can be a commit ID, a branch name, a tag, or a relative reference to HEAD.

Make Changes:

$ git log Lists version history for the current branch

$ git log --follow [file] Lists version history for a file, including renames

$ git diff Show unstaged changes between your index and working directory

$ git diff [first-branch]...[second-branch] Shows content differences between two branches

$ git show [commit] Outputs metadata and content changes of the specified commit

$ git add [file] Snapshots the file in preparation for versioning

$ git commit -m "[descriptive message]" Records file snapshots permanently in version history

# Remote Repos:

$ git remote add [name] [url] Create a new connection to a remote repo. After adding a remote, you can use as a shortcut for in other commands.

$ git fetch[remote] [branch] Fetches a specific[branch] , from the repo. Leave off [branch] to fetch all remote refs.

$ git pull [remote] Fetch the specified remote’s copy of current branch and immediately merge it into the local copy.

$git push [remote] [branch] Push the branch to [remote], along with necessary commits and objects. Creates named branch in the remote repo if it doesn’t exist.

