GW ACM Git Cheat Sheet

Setting Up Git for the First Time

COMMAND	WHY?
git config --global user.name "My Name"	Set the name associated with your commits
git config --global user.email "me@email.com"	Set the email associated with your commits (this should be the one you use for github)

Creating/Cloning a Repository

COMMAND	WHY?
git init project-name	Initialize the folder to now be a git repository. If you want to create a NEW repo from scratch, use this command
git clone url.git	If you need to download a git repo (from somewhere like github) then use this command! Clones the repo from url to the current directory.

Do Some Work!

COMMAND	WHY?
git add filename	When you've made some changes to a file, add it to the stage for the next commit
git status	This tells you what changes you've made to the repo. Useful for figuring out what you've added to the stage
git reset filename	If you want to take a file off the stage, without actually changing the contents, use this command.
git diff --staged	Shows the changes made to the files on the stage compared to the last commit
git commit -m "commit message"	This creates a commit (or snapshot) of the current status of all files on the stage. Commits are a history of all changes made to a project, so it is important to make a commit after every major change

Tell Git You Changed Files

COMMAND	WHY?
git rm filename	Deletes the file from the directory, and tells github to delete the record of the file
git mv file_original file-renamed	Changes the filename or location, and tells git to track the move

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Syncing With the Cloud

COMMAND	WHY?
git pull	“Pull” (download) any changes from github (or wherever you might have your repo online).
git push	“Push” changes to your remote source (e.g. github)

Branching

For new features! Don’t push everything to your master branch, only put code you’re confident in master. Instead, have a branch for experimental features, then merge the branch with master when you’re done!

COMMAND	WHY?
git branch	Lists all local branches in the current repo
git checkout -b branchname	Creates a **new** branch. As mentioned above, you should put a new major feature in a branch, so that you don’t put broken/experimental code in your master branch
git checkout branchname	Switch from the current branch to the specified branch. Will only work if there are no staged changes (so either run git commit or git stash)
git merge branch	Combines the specified branch’s history into the current branch
git branch -d branch	Deletes the specified branch

Merge Conflicts

- Happens when you merge branches that have competing commits or when people make different changes to the same line of the same file
- Git needs your help to decide which changes to incorporate in the final merge
- Avoid conflicts by using branches for new features/directions and talking to your contributors about when you’re making changes to the same repo/branch!
- To resolve, you must manually edit conflicted file(s) to select changes to keep in the final merge.

Merge / Status Git Workflow Commands

COMMAND	WHY?
git status	Shows the state of the working directory (local changes to files)
git checkout file.txt	Reverts file to last commit (delete local changes to file)
git rm --cached f.txt	Removes the file from git, but NOT from your computer
git log	Lists commits made in repository in reverse chronological order

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