Git basics

- Git organizes project files in a repository (directory containing all the project files/subdirectories)

- We can turn a "regular" linux directory into a repo by going there and running command "git init", from that point on git can track files in the repo

- Can also create a local working copy of some existing repository by cloning it (see the session on git submit)

Tracking files

- Can tell git to start keeping track of a file using "git add *filename*"

- If we edit/save the file, and decide we like the changes, we again tell git to add those changes (git add *filename*)

- If we want to rename a file, we use git command to do so (git mv oldname newname)

- Also use git to remove files (git rm oldname newname)

Snapshots or checkpoints

- When we're happy with the current state of all the tracked files, we create a new checkpoint by "committing"

  git commit -m "message describing current state"

- Git assigns a unique id number to each commit, can use that (or many other attributes) to retrieve file contents from any commit

- Git creates hidden directory (.git) in the repo that contains all the admin details it needs to track everything

git status

- Command "git status" summarizes current state of repo
- Will tell you if you have edited but not done git add for files by saying "untracked files" (lists them)
- Will tell you if you haven't done a commit (changes to be committed)
- For repos cloned from elsewhere (e.g. your versions of something instructor provided) will tell you if you haven't pushed your local changes back to the original (ahead of origin/master by N commits) [Note: hopefully we can soon drop the "master" terminology in favour of something like primary or main]

Stashes: changes you may/may not keep

- You can temporarily store all file changes you haven't added yet (git stash), puts back the unchanged versions
- You can get them back out again (git stash pop), the stash acts like a stack
- You can throw away the top set of stashed changes (git stash drop)
- You can get a list of what you've stashed (git stash list)