JSC270 Lab 3

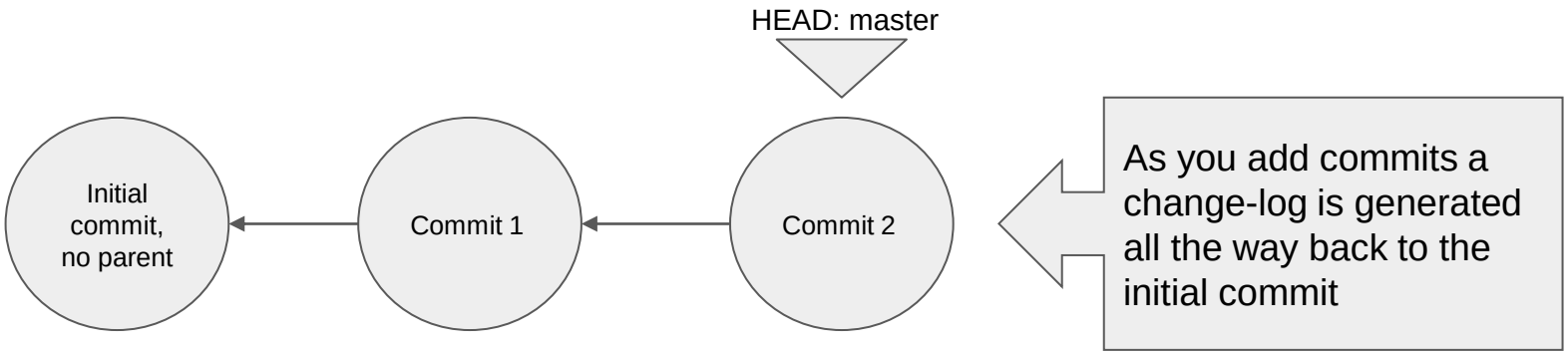
Lauren Erdman
January 27, 2021

GIT

Repository

1. Commit objects, each containing:
   - A set of files reflecting the project at the given point in time
   - References to the parent commit objects (unless it's the first commit)
   - A SHA1 name to has aspects of the commit (so an identical commit will have the same name)

1. References to commit objects (heads)
   - By default this will be master, we'll talk about changing it



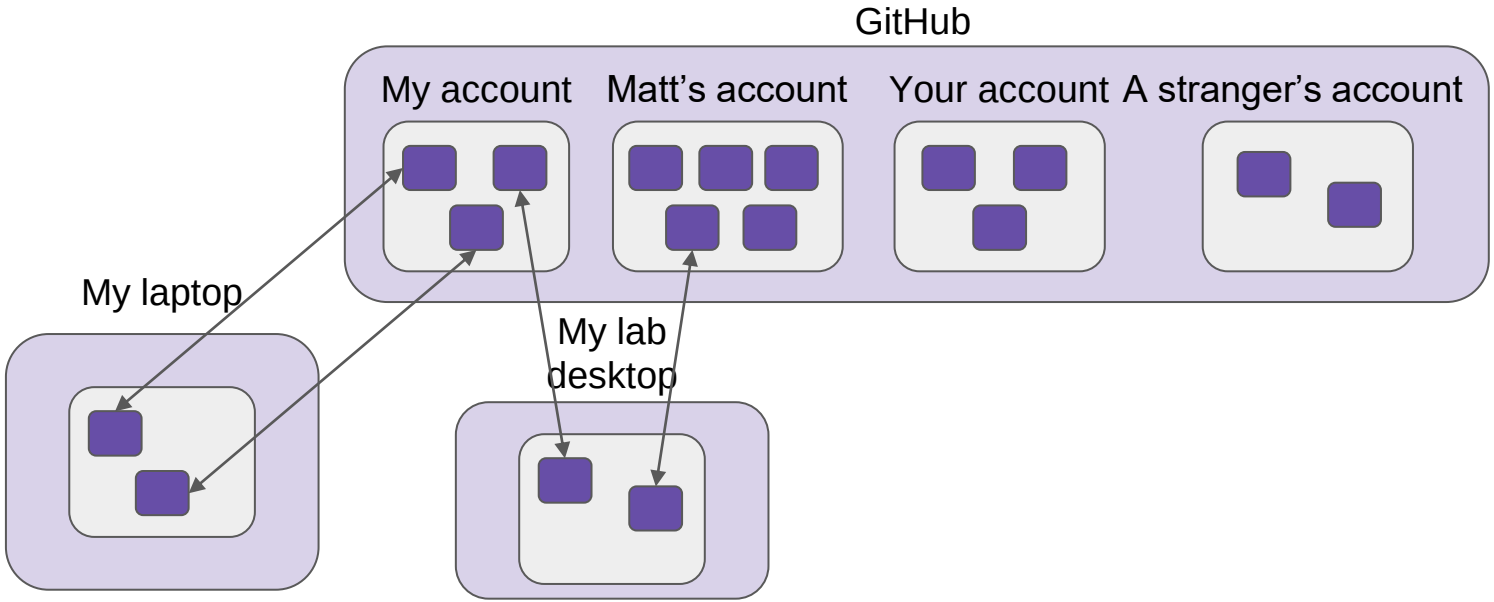
Reference: https://www.sbf5.com/~cduan/technical/git/git-1.shtml

GIT: Basic commands and concepts

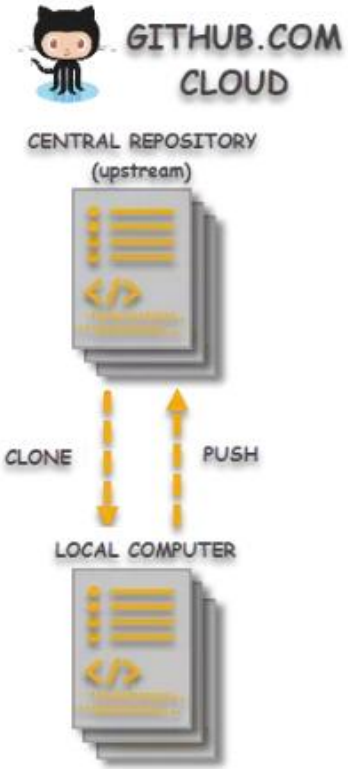
git add <files> ## add files to your repo

git commit -m “about my commit” ## commit the changes you’ve made

git push -u origin master ## push the changes you’ve made to a remote repository (i.e. GitHub)



GIT: Cloning



git clone <repo web address> ## create a local copy of a repo

git pull ## pull updates from central repo to local repo

Reference: https://www.toolsqa.com/git/difference-between-git-clone-and-git-fork

Typical Git workflow

git clone <repo web address> ## create a local copy of a repo

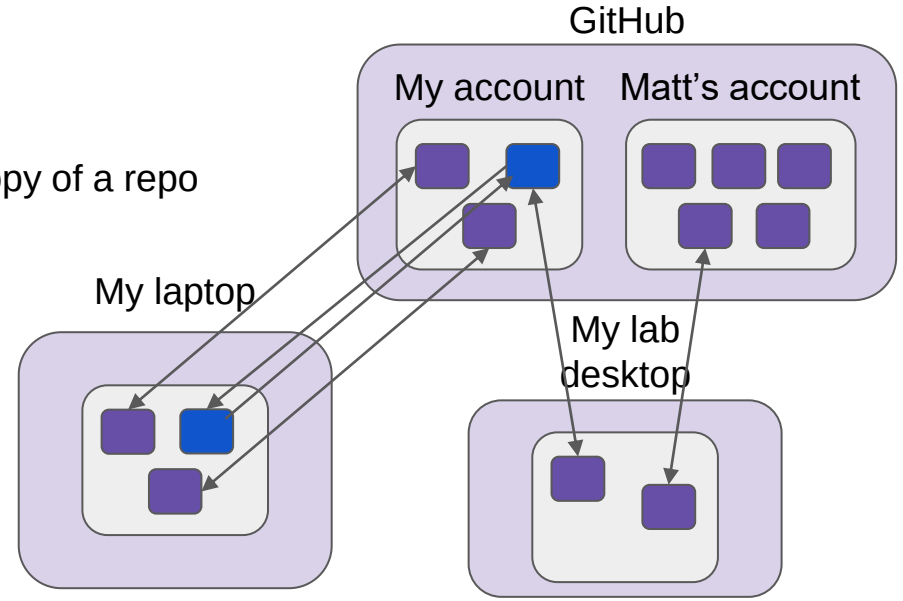
~Update and create some files~

git add –u

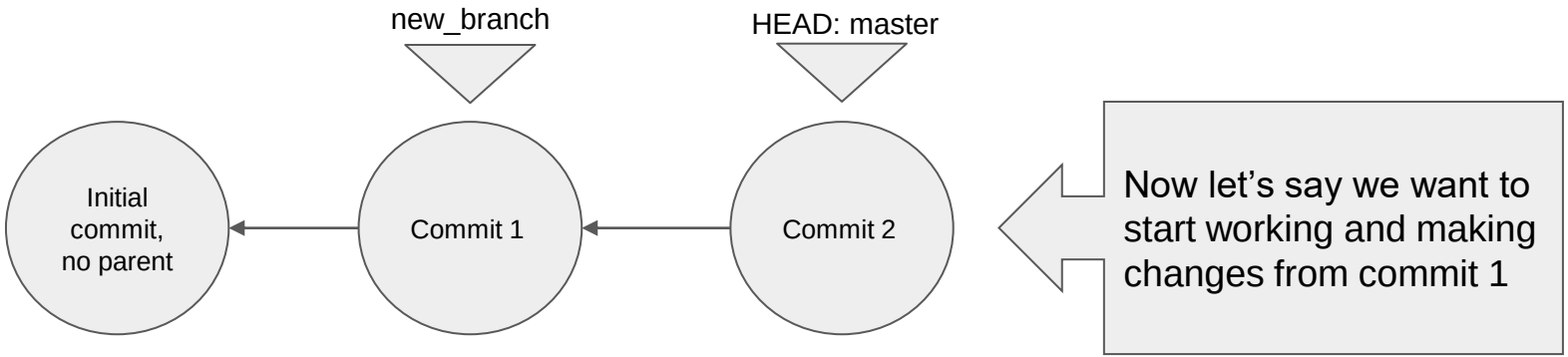
git commit –m “updated and created some files”

git push –u origin master

git pull



BRANCHES: creating a branch

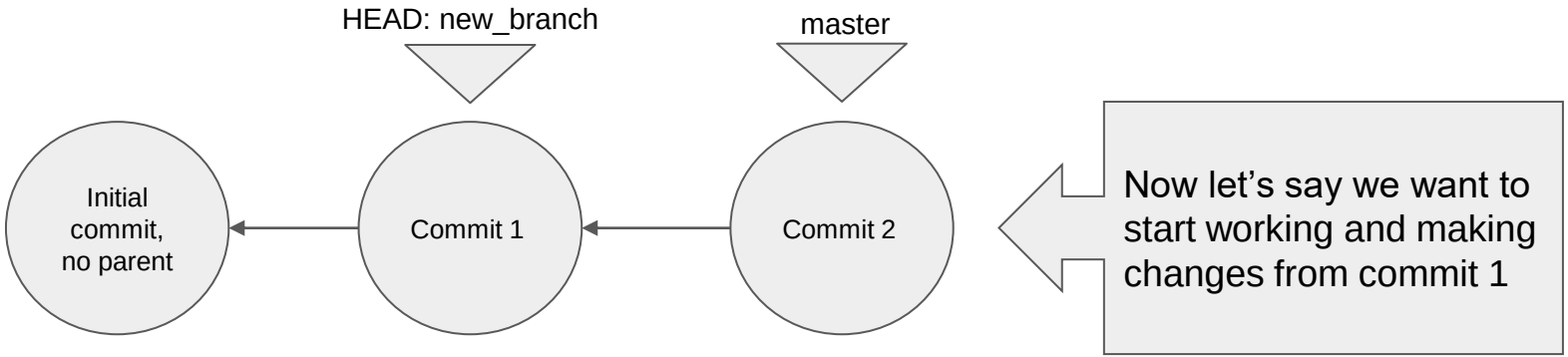


git branch new_branch HEAD^

You can reference commit1 by HEAD^ because it's the parent to the commit that HEAD is pointing to. Alternatively, you can include the hash (particularly if you want to point to a commit that isn't a parent of your current HEAD commit)

Reference: https://www.sbf5.com/~cduan/technical/git/git-1.shtml

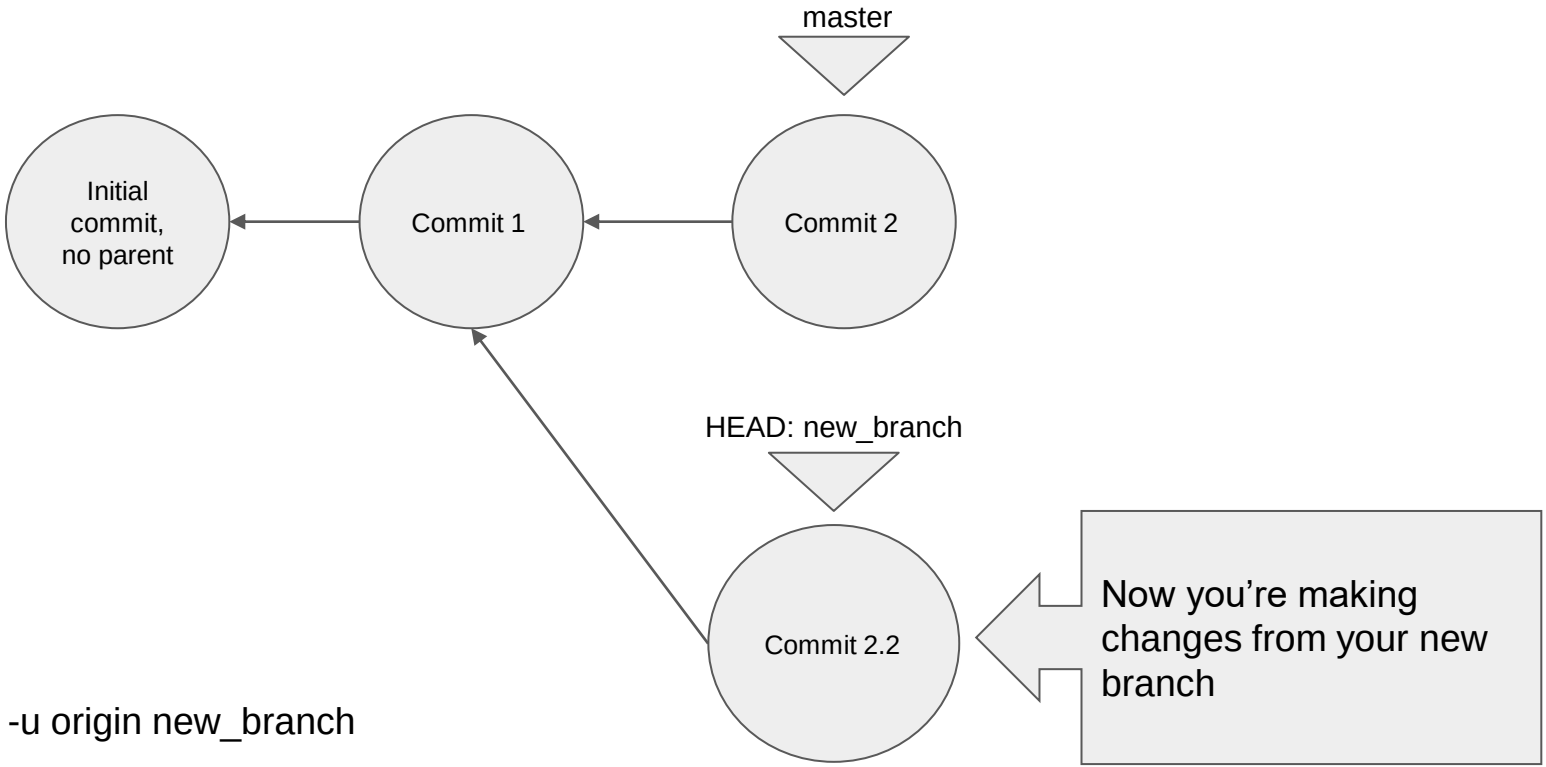
BRANCHES: switching between branches



git -b checkout new_branch

Reference: https://www.sbf5.com/~cduan/technical/git/git-1.shtml

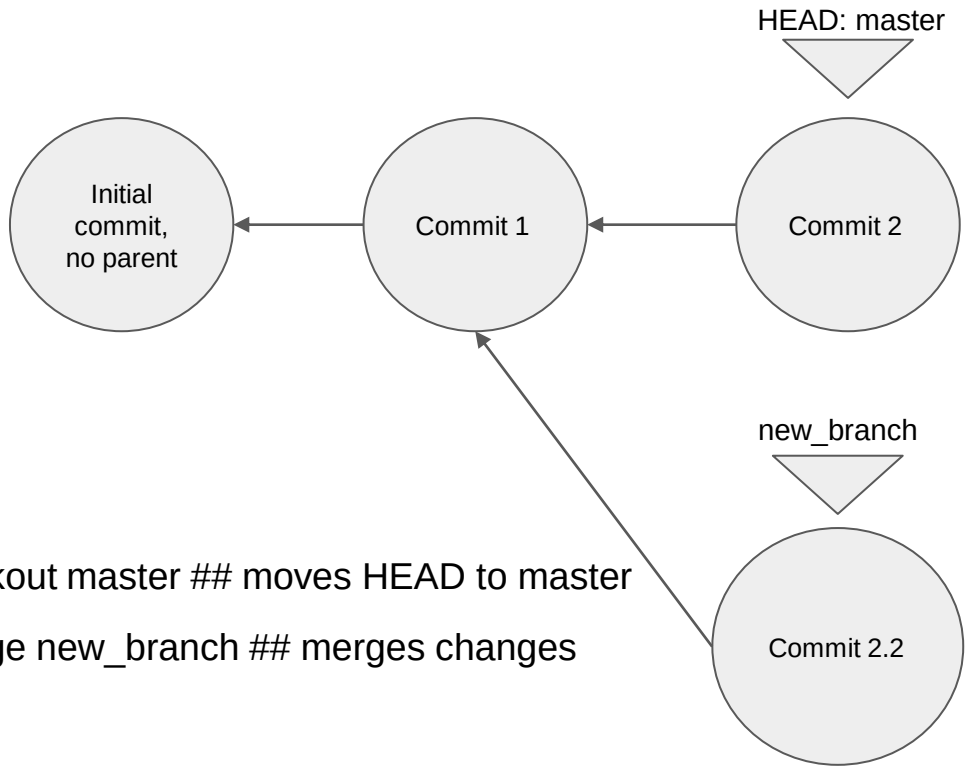
BRANCHES: new commit



git push -u origin new_branch

Reference: https://www.sbf5.com/~cduan/technical/git/git-1.shtml

BRANCHES: merging branches



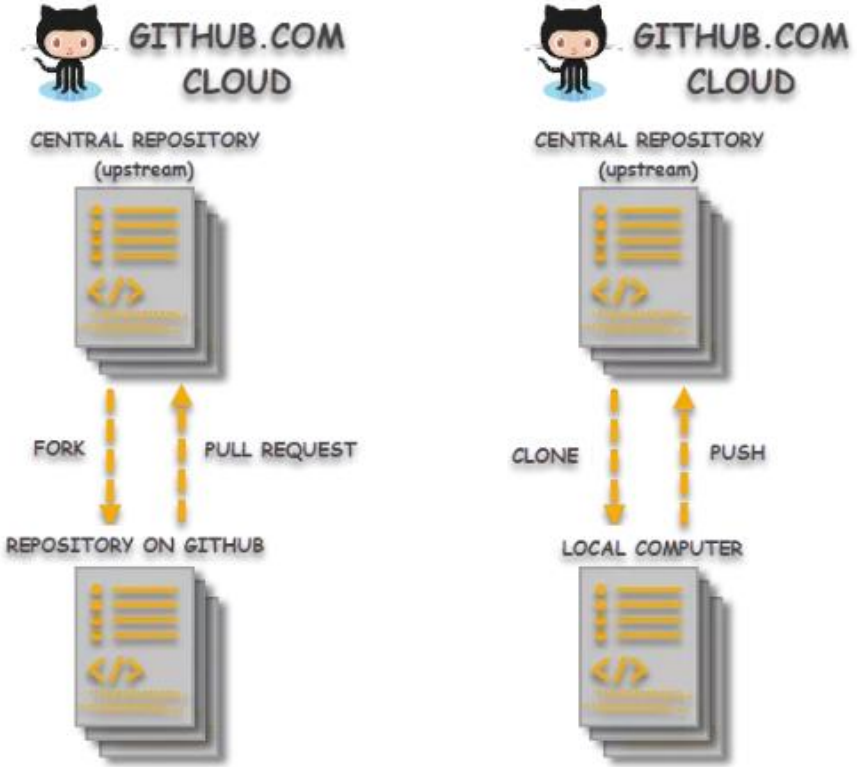
Now suppose you'd like to merge the work you did in commit 2.2 with the work you did in commit 2 and leave no more branches.

git checkout master ## moves HEAD to master

git merge new_branch ## merges changes

Reference: https://www.sbf5.com/~cduan/technical/git/git-1.shtml

CLONING vs FORKING



Reference: https://www.toolsqa.com/git/difference-between-git-clone-and-git-fork