

GitHub



Announcements

- Teams allocated
 - Announce teams
- Sprint 0 due this Friday

Key git concepts: quick overview

1. What is staging?
 1. What is the command you will use?
2. When you do a commit where are you “saving” your changes
3. Why would you create branches
 1. What is a master branch
4. What is a HEAD
5. Whats a “remote” repository
 1. What is origin?
6. Whats the difference between Pull and Push
7. When will you clone a repository vs pull changes

What is GitHub?

- Largest web-based git repository hosting service
 - Aka, hosts 'remote repositories'
- Allows for code collaboration with anyone online
- Adds extra functionality on top of git
- UI, documentation, issue tracking, code reviews, Pull Requests

Workflow with Branches

In Git, you can separate your changes by using branches

`git branch <name>` will create a new branch

Once the changes are done, you need to "push" those changes to GitHub

Update the team repo through a Pull Request (PR)

Delete the branch once your PR has been accepted



cs361fall2017/sprint1





cs361fall2017/sprint1



Fork





cs361fall2017/sprint1

Fork

student_repo master

Clone

local master



cs361fall2017/sprint1

Fork

student_repo master



local master

git branch is1



cs361fall2017/sprint1

Fork

student_repo master



local master

git checkout is1



cs361fall2017/sprint1

Fork

student_repo master

Commits by team member



local master

Commits by you



cs361fall2017/sprint1

Fork

student_repo master



local master

git checkout master

Commits



cs361fall2017/sprint1

Fork

student_repo master



git pull

local master

Commits



cs361fall2017/sprint1

Fork

student_repo master



local master

Commits



cs361fall2017/sprint1

Fork

student_repo master



local master

git checkout is1

Commits



cs361fall2017/sprint1

Fork

student_repo master



local master

git merge master

Commits

Merged change
Potential for conflicts



cs361fall2017/sprint1

Fork

student_repo master



local master

git push -u origin is1

Commits



cs361fall2017/sprint1

Fork

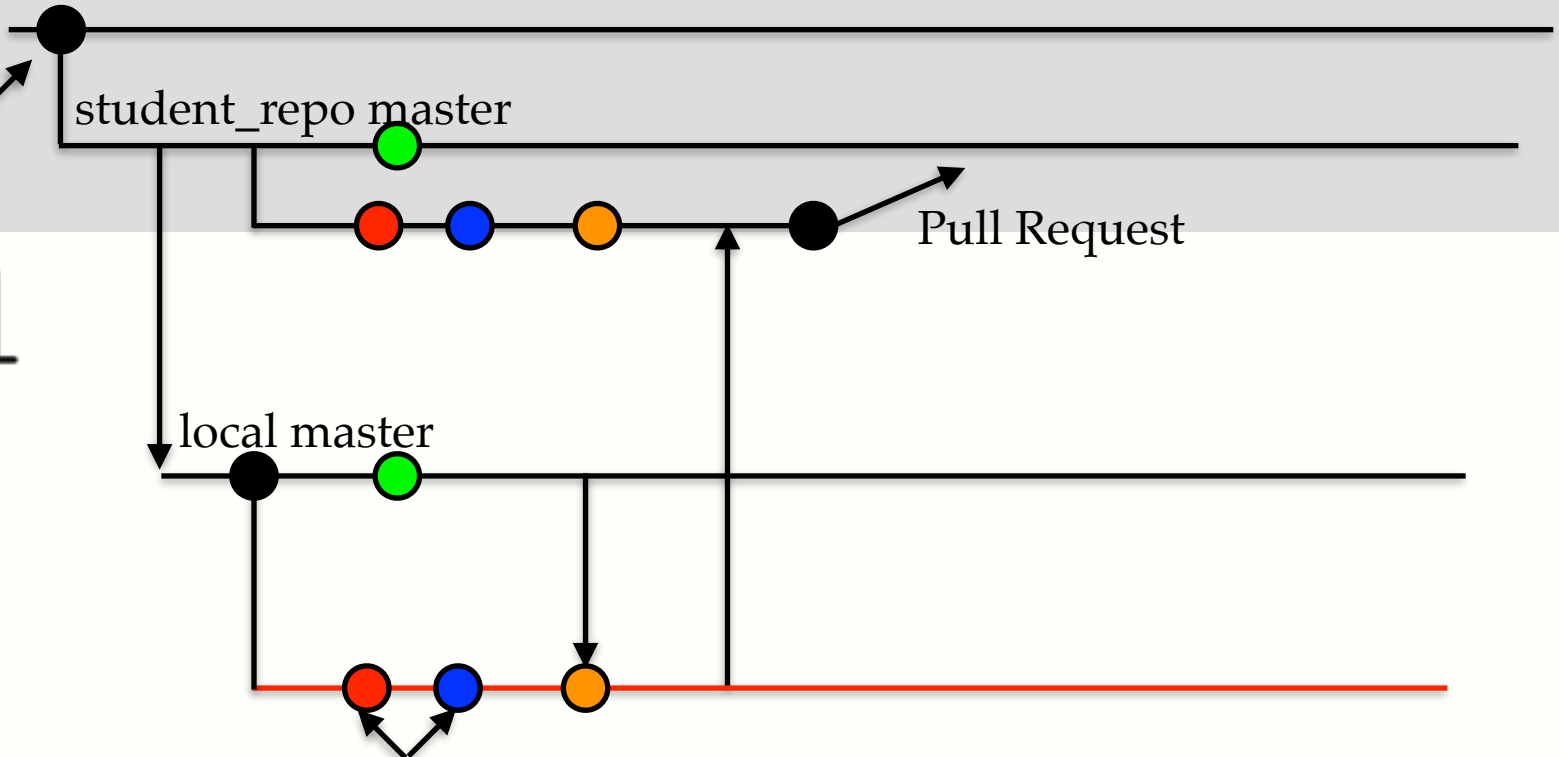
student_repo master

Pull Request



local master

Commits





cs361fall2017/sprint1

Fork

student_repo master

Pull request is merged



local master

Commits



cs361fall2017/sprint1

Fork

student_repo master

Pull request is merged



local master

git checkout master

Commits



cs361fall2017/sprint1

Fork

student_repo master

pull request is merged
Through GitHub UI

local master

Commits

git branch -d is1

Multiple active pull requests



cs361fall2017/sprint1

Fork

student_repo master



local master



cs361fall2017/sprint1

Fork

student_repo master



local master

git branch is2 & git checkout is2



cs361fall2017/sprint1

Fork

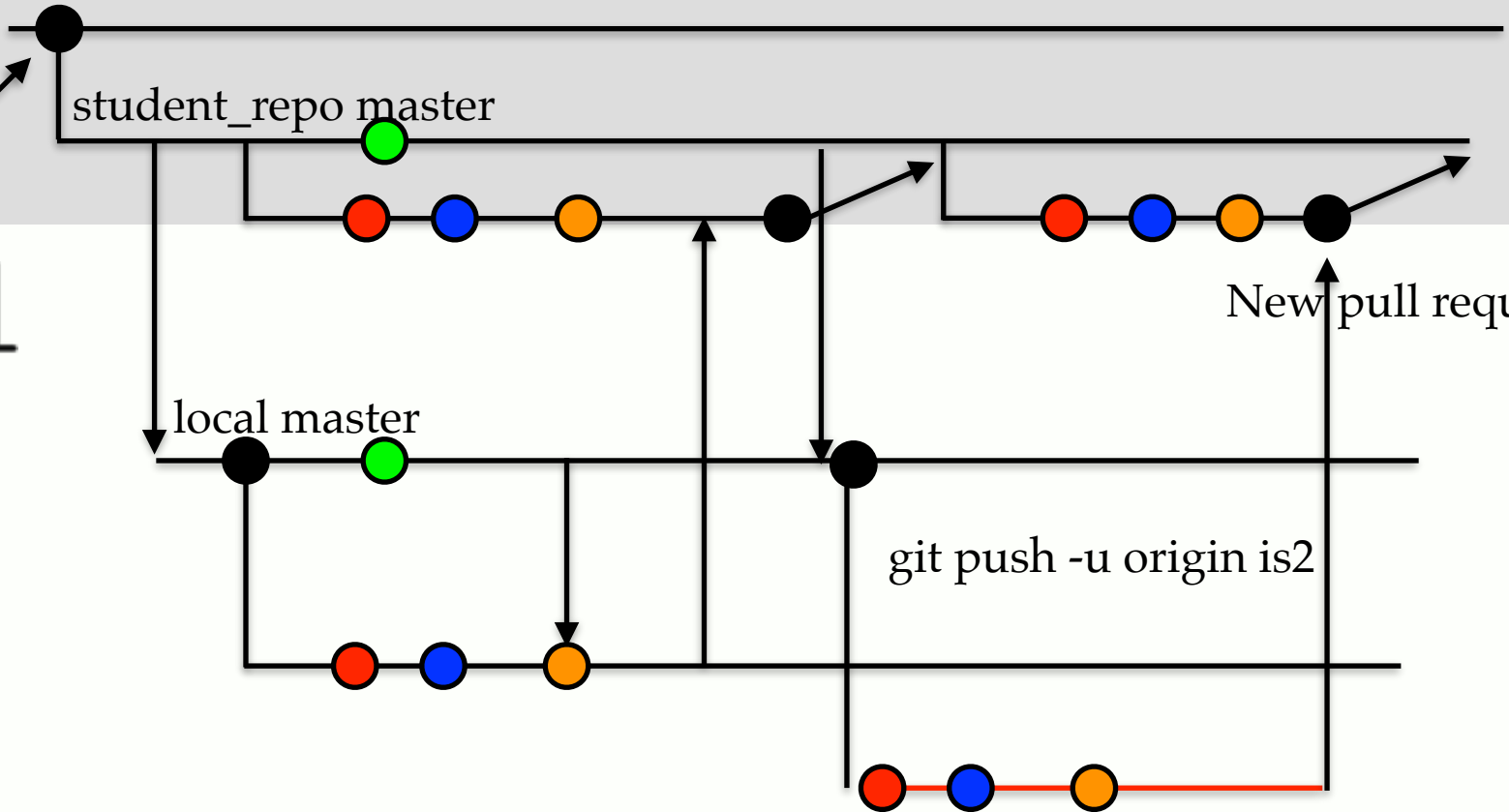
student_repo master



local master

git push -u origin is2

New pull request



Additional Resources

- Official git site and tutorial:
<https://git-scm.com/>
- GitHub guides:
<https://guides.github.com/>
- Command cheatsheet: <https://training.github.com/kit/downloads/github-git-cheat-sheet.pdf>
- Interactive git tutorial: <https://try.github.io/levels/1/challenges/1>
- Visual/interactive cheatsheet:
<http://ndpsoftware.com/git-cheatsheet.html>

Next week

- Software Development LifeCycle
- Generating requirements
 - User stories
- Discuss Sprint 1

Demo