

Lecture 6: git gud

"Boy I sure do love creating a merge commit every time I pull!"

Overview

1. Announcements
2. Review + Exercises
3. Q&A
4. Basic assignment

Announcements

- Regex survey closes tonight
- Assignment due dates pushed back!
- Basic, Advanced Shell due Oct 24
- Basic, Advanced Regex due Oct 31
- Basic, Advanced Git 2 due Nov 7

Review

git reset

- Allows you to move your HEAD (and current branch) to the specified commit
- Options regarding file states
 - `--soft`
 - `--mixed`
 - `--hard`

Exercise 1

- Download this file

```
https://www.eecs.umich.edu/courses/eecs201/fa2022/files/examples/git2
```

- Extract it, look at the `reset` directory
- Reset to the "Add another line" commit
 - `git log`

Review

git rebase

- Allows you to reapply your commits on top of another commit e.g.
 - Earlier commit in history
 - Further in history on top of another branch
- Allows you to perform various operations on the involved commits
- Specify a "base tip" to toss your commits onto
 - This base tip is not involved in any of the rebase operations: it serves as a parent

Exercise 2

- Check the **rebase** directory
- Note how we have a bunch of commits fixing tiny issues for the hello world printout
- Squash these changes into the "Add hello world printout" commit

Review Conflicts

- Fix the involved files
 - Put them into working condition
 - Reconcile ideas from both branches involved
 - Make sure to delete the version control markers!
- **git status** will give you instructions based on whether your conflict comes from a rebase or a merge

Exercise 3

- Check the `conflict` directory
- Merge `change-iterator` into `master` and resolve the conflict
- The `master` branch changes the iteration count from 10 to 20
- The `change-iterator` branch changes the variable from `n` to `i`

Activity - Pull request

- Create a fork
- Clone the fork
- Make a commit adding the file
- Push the commit to your remote branch
- Make a merge/pull request onto the original GitLab repository (the "upstream")
- Get the request reviewed and merged

Q&A

Basic assignment