Quick notes

❖ Check Piazza
❖ Reminders:
  ➢ Assign7 due 29th Nov
  ➢ Assign8 due 4th Dec
  ➢ Weekly quiz
❖ Assignment 10 starts TODAY!
  ➢ **Email me your topic**
  ➢ Create presentation (<10 min, semi-strict) + brief summary (<200 words)
    ■ Must present to class (email me if you're in a different timezone)
    ■ You can pre-record (e.g. youtube)
  ➢ Order is here (tentative), let me know ASAP if you are unable to present.
    ■ May have to shift up/down depending on time
  ➢ https://docs.google.com/spreadsheets/d/1rcPnnaa2zH8_3fi3qSLgCKRDdwKgqML32HocBnEv6q0/

Feedback / Office Hours / Other

- ❖ Tameez Latib
  - ➢ tameezlatib@gmail.com, please add "CS35L" to the subject line
  - ➢ Office Hours: Monday **5pm-7pm Nov 30** (or by appointment)
  - ➢ Feedback: https://forms.gle/6kcJ2aJtzAzFMhHQ7 (anonymous google form)
- ❖ If you guys are stressed out:
  - ➢ CAPS (https://www.counseling.ucla.edu/)
    - ■ Free with UC ship
- ❖ Week 8!
  - ➢ We're almost there...
  - ➢ Also have a happy thanksgiving!!

Git - merge demo

❖ For example in VS code:

❖ In test_branch:
   ➢ "This is test branch changes"

❖ In main:
   ➢ "This is main change
      I add more content"

❖ Since we branched out, there is two possibilities.

❖ When merging, we get to choose which we keep, or if we want to completely re-edit

❖ If you make a mistake and want to go back: git merge --abort

```
Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
1  <<<<<<< HEAD (Current Change)
2  this is test branch changes
3  =======
4  this is main change
5  I add more content
6  >>>>>>> main (Incoming Change)
7
```

Git - ranges, ..

❖ Double dot (get all commits reachable from one, but not the other)
  ➢ Git log master..experiment -> return D, C
  ➢ D, C are reachable from experiment, but not reachable from master
❖ git log origin/master..HEAD
  ➢ Reachable from HEAD but not from origin/master
    ■ Shows you what you have commited, but not pushed!
❖ git log experiment --not master
 ➢ Equivalent to double dot, and can use even more branch names if applicable
❖ https://git-scm.com/book/en/v2/Git-Tools-Revision-Selection
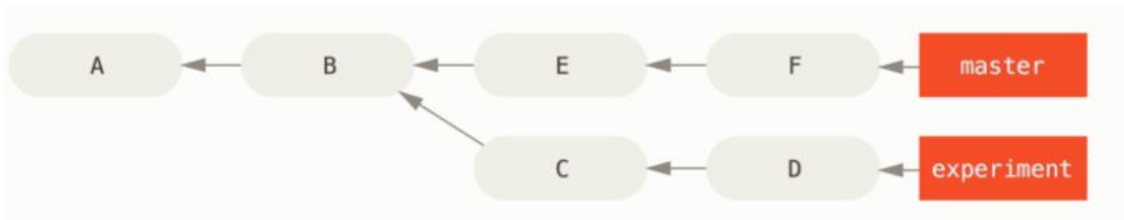
Git - ranges, ...

❖ Triple dot (get all commits reachable from either, but not both)
  ➢ Git log master...experiment -> return F, E, D, C
  ➢ Use --left-right so that output shows which branch each commit belongs to

```
$ git log --left-right master...experiment
< F
< E
> D
> C
```
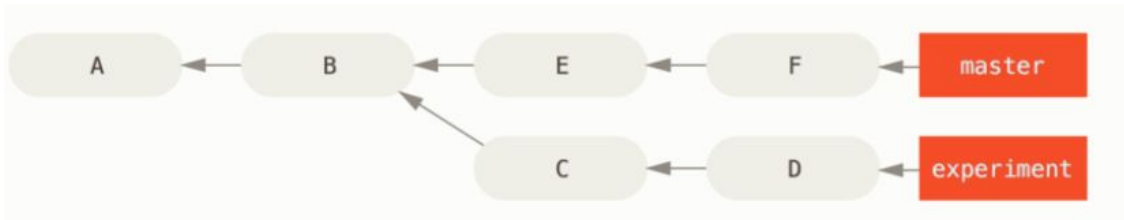
Git - commit syntax

❖ ~ refers to parent
❖ ^ refers to first parent
   ➢ E.g. merge, have two parents
❖ Git log branch...branch~~
   ➢ Gets the two previous commits (from branch)
   ➢ Git log master...master~3 -> returns F, E, B
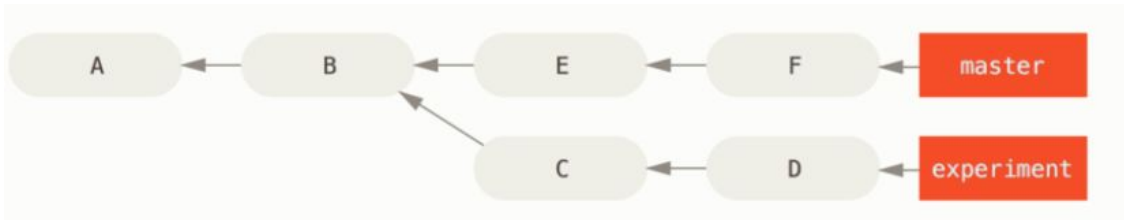
Git - commit syntax

❖ Git log looks ugly :(

❖ Git log --pretty=format:'%h %s' --graph

   ➢ %h = hash val (short), %s = message

   ➢ --pretty=oneline works too

   ➢ Better(?)

Git - refresher

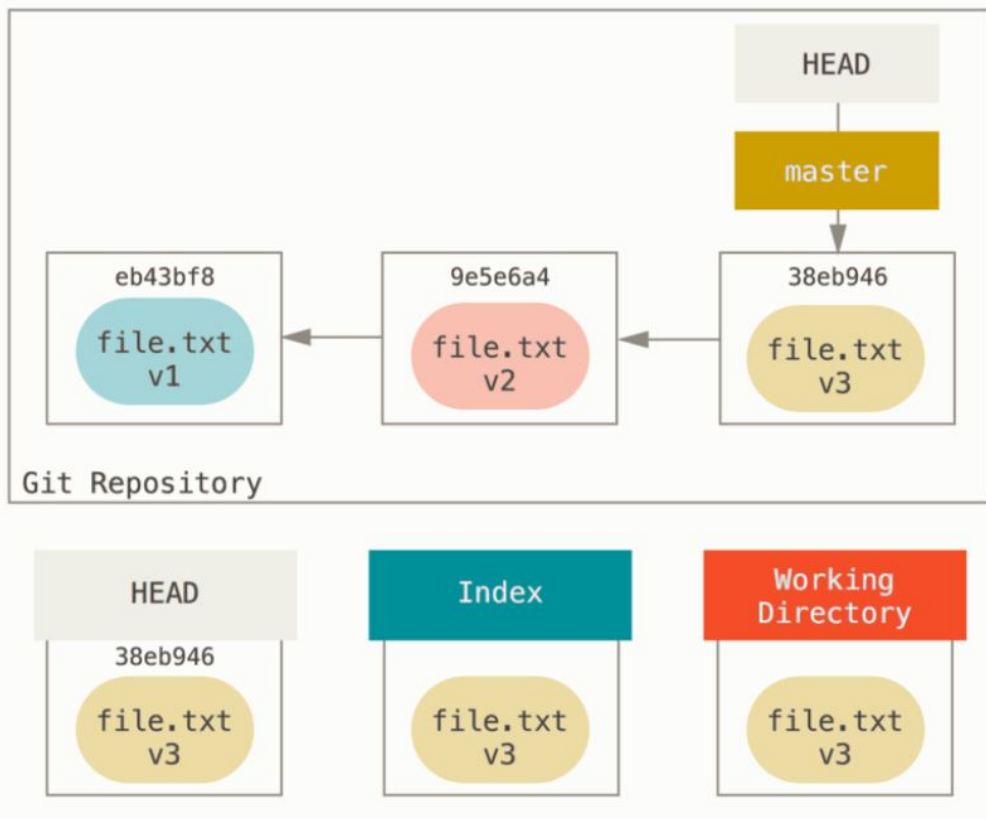

- ❖ Index = staging area
- ❖ Git add = stage files
- ❖ Git commit = commit
- ❖ Git checkout = checkout
- ❖ HEAD points to snapshot

- ❖ https://git-scm.com/book/en/v2/Git-Tools-Reset-Demystified
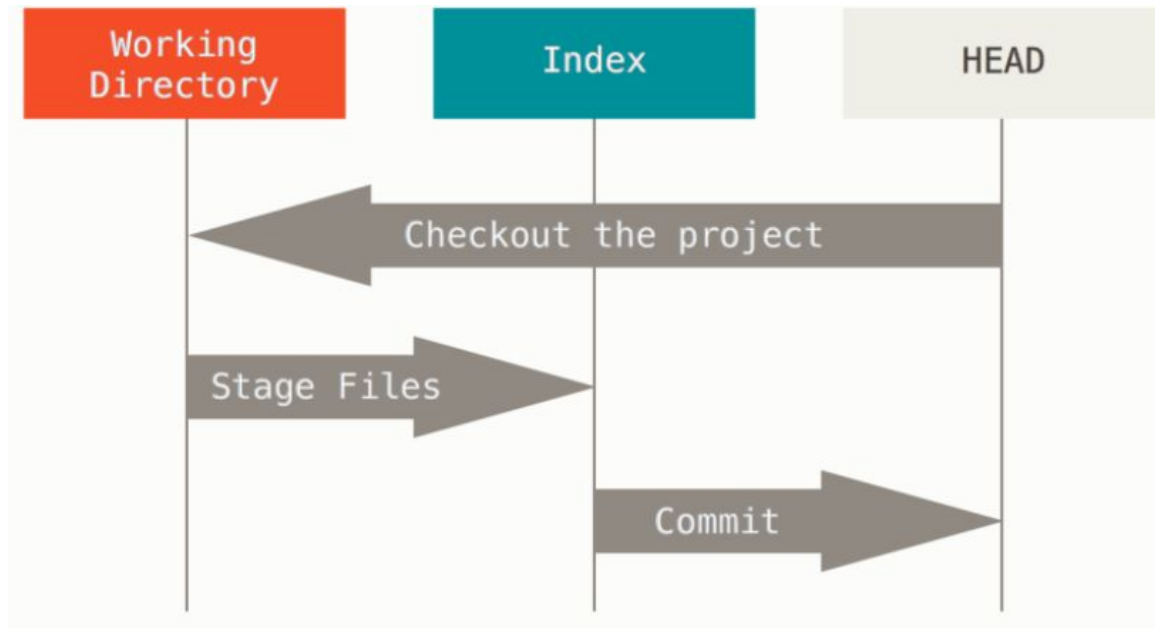
Git - reset

❖ Context: we made 3 commits
❖ Each time we
  ➢ Git add, git commit
  ➢ HEAD->master pointer moves
  ➢ New commit created, and points
   To previous commit
❖ 3 types of reset
  ➢ Soft, mixed, hard

Git - reset soft

❖ Note that we moved HEAD
❖ HEAD~
  ➢ Refers to previous commit
❖ staging area + working dir
  ➢ Same as before
❖ Why soft reset?
  ➢ Maybe check diffs,
  ➢ Checkout individual files,
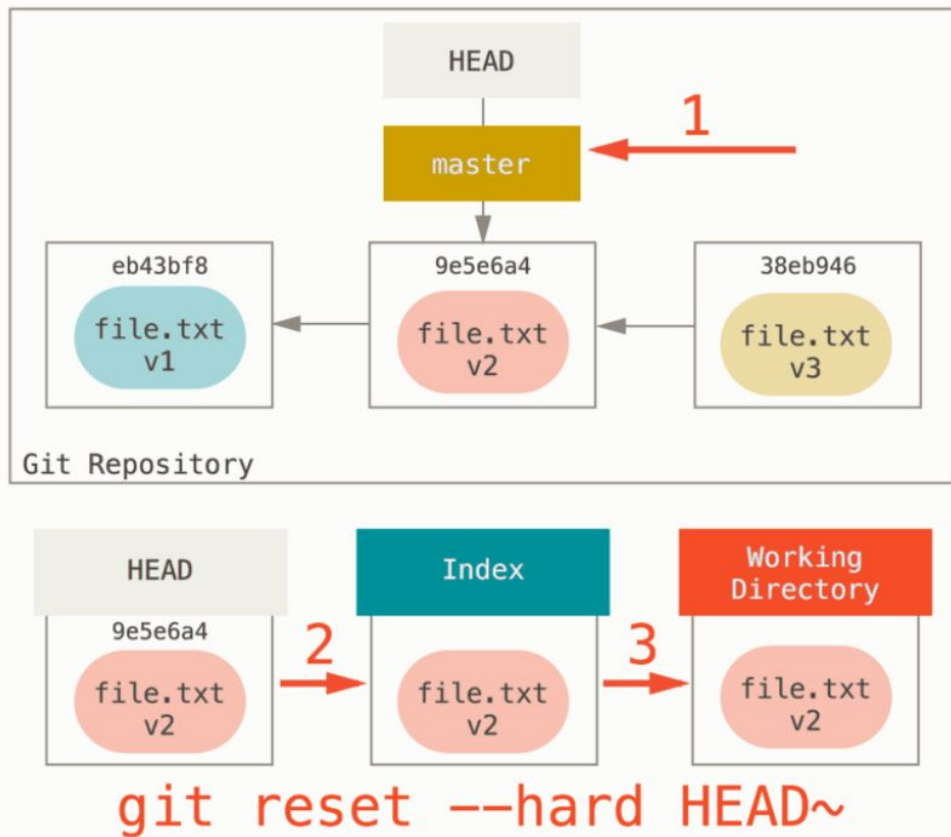 ➢ Be sure of where pointer is
    ■ Branch?
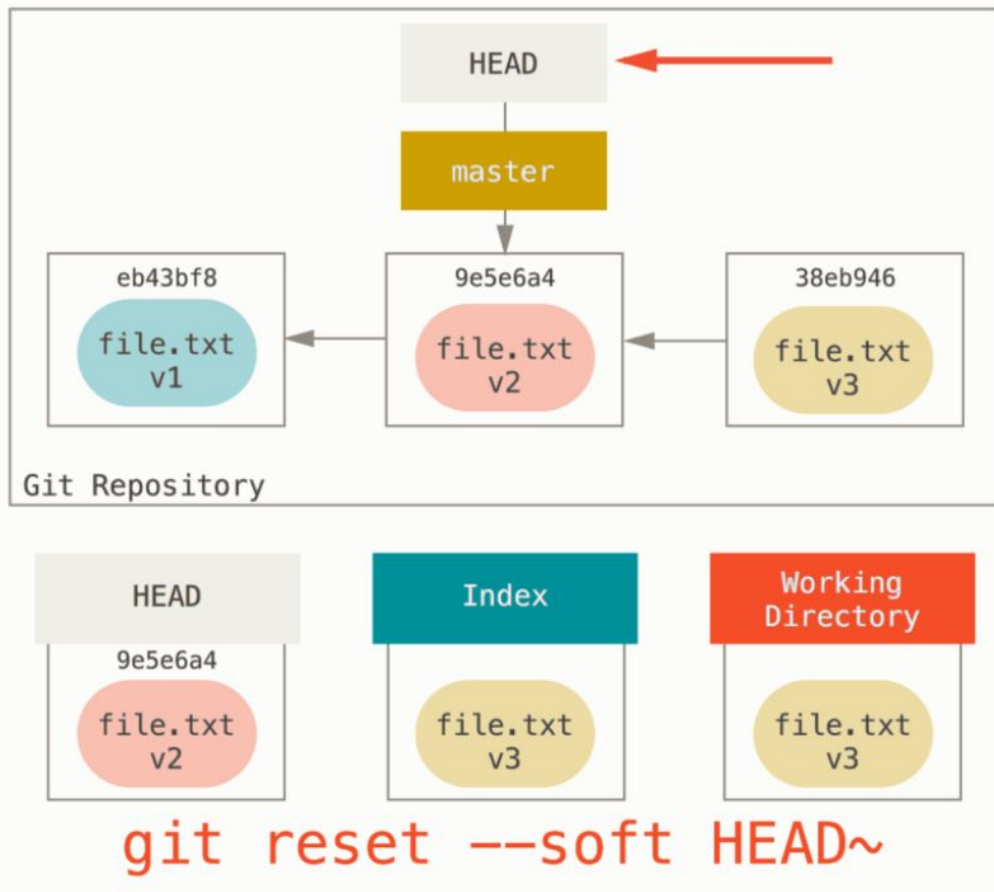
Git - reset mixed

❖ Reset soft, and then
❖ Change staging area
❖ Working directory
   ➤ Same as before
❖ Why mixed reset?
   ➤ Undo all git adds
   ➤ + reasons for soft reset
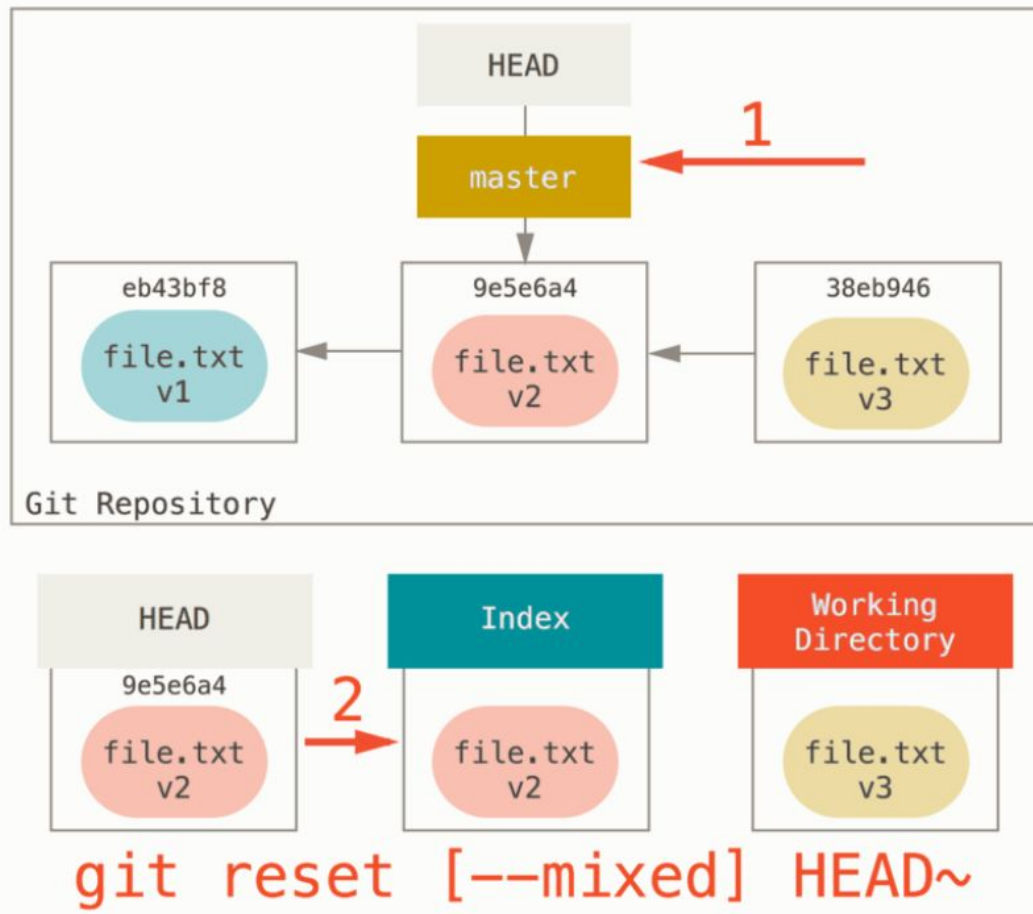
Git - reset hard

- ❖ Reset mixed, and then
- ❖ Change working directory
- ❖ **Lose all progress!!!**
- ❖ Why hard reset?
  - ➢ Hard reset
  - ➢ Start from beginning

Questions??

Have a great thanksgiving break (please be safe!)

On monday we talk about something fun (topological sort / algorithms!)