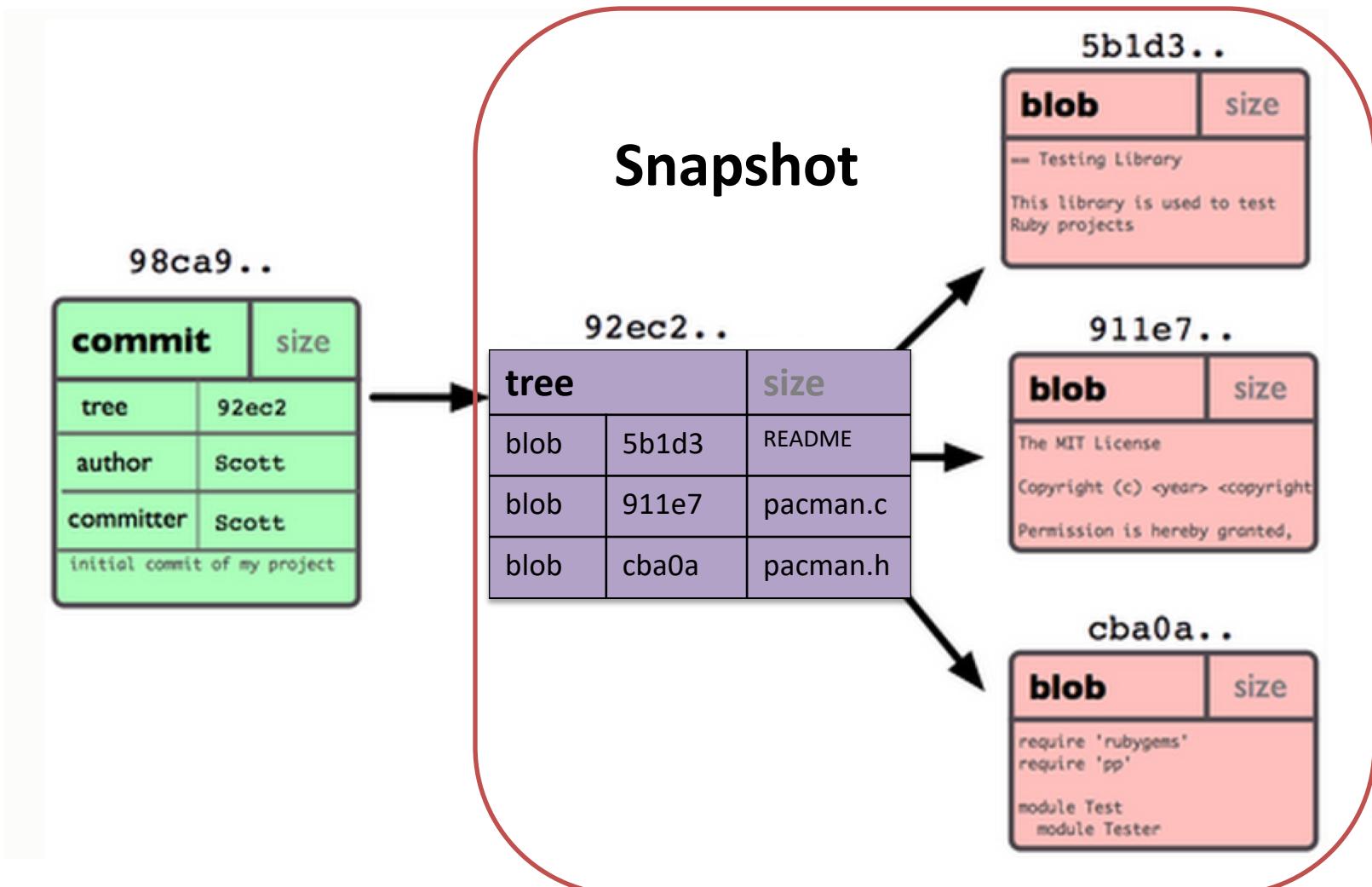


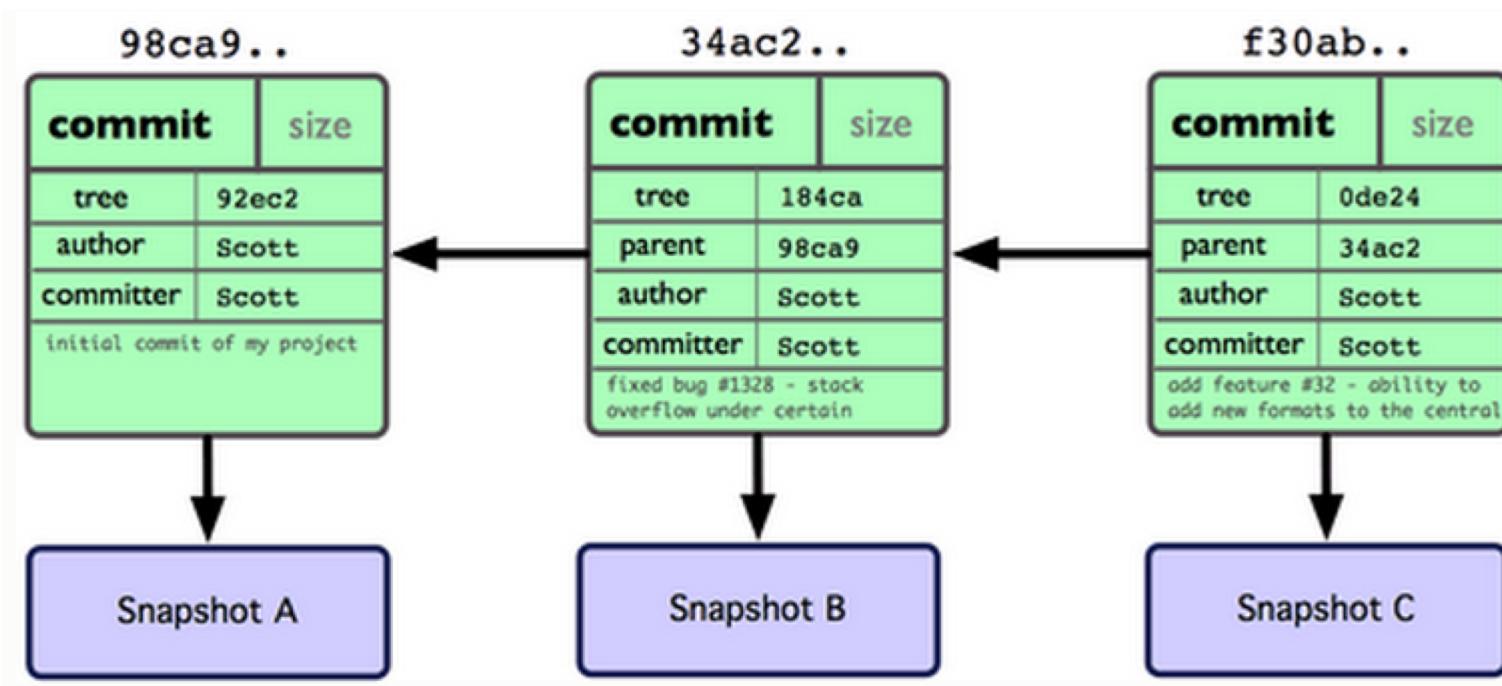
CS35L – Fall 2018

Slide set:	9.2
Slide topics:	Source control, Git
Assignment:	9

Git Repo Structure



After 2 More Commits...

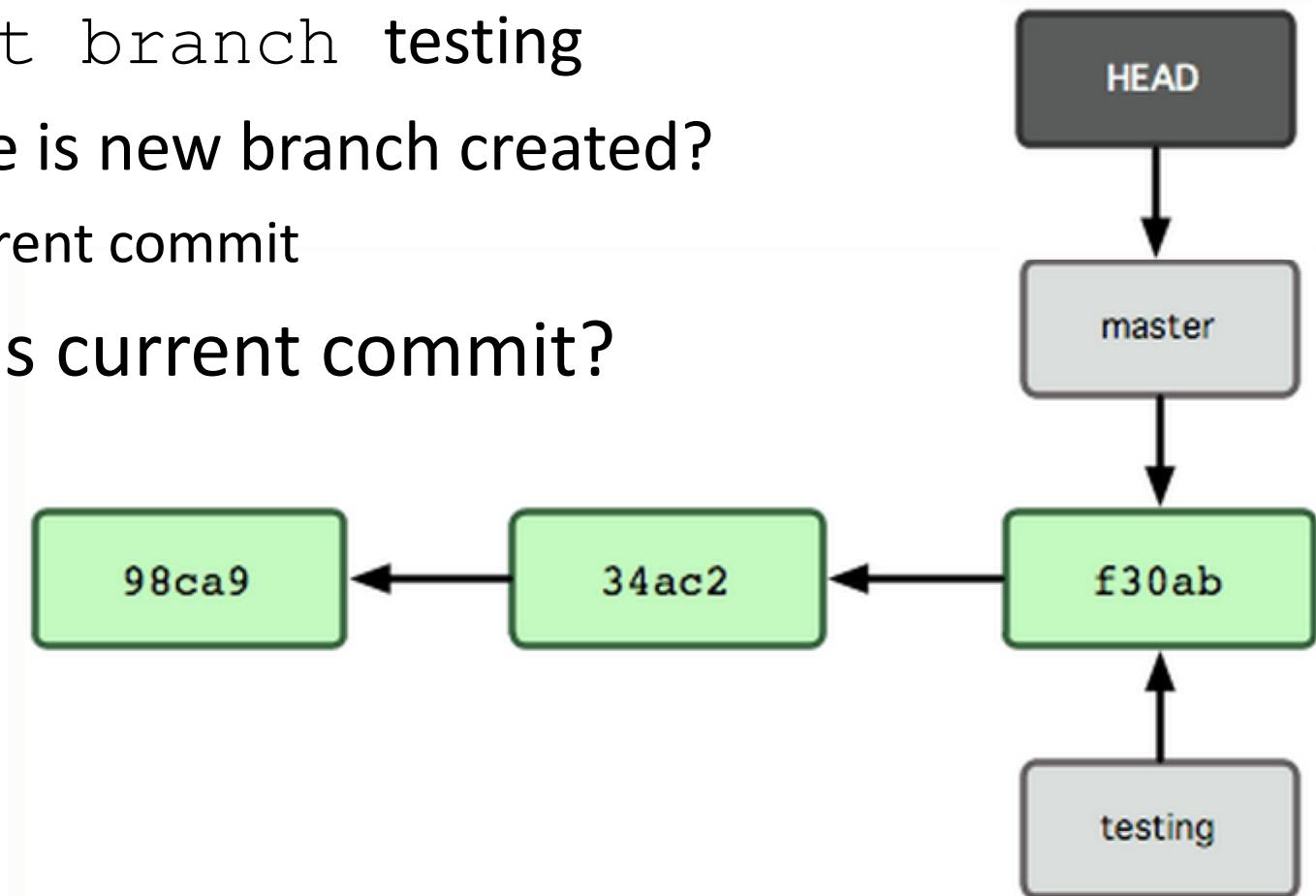


What Is a Branch?

- A pointer to one of the commits in the repo (head) + all ancestor commits
- When you first create a repo, are there any branches?
 - Default branch named ‘master’
- The default master branch
 - points to last commit made
 - moves forward automatically, every time you commit

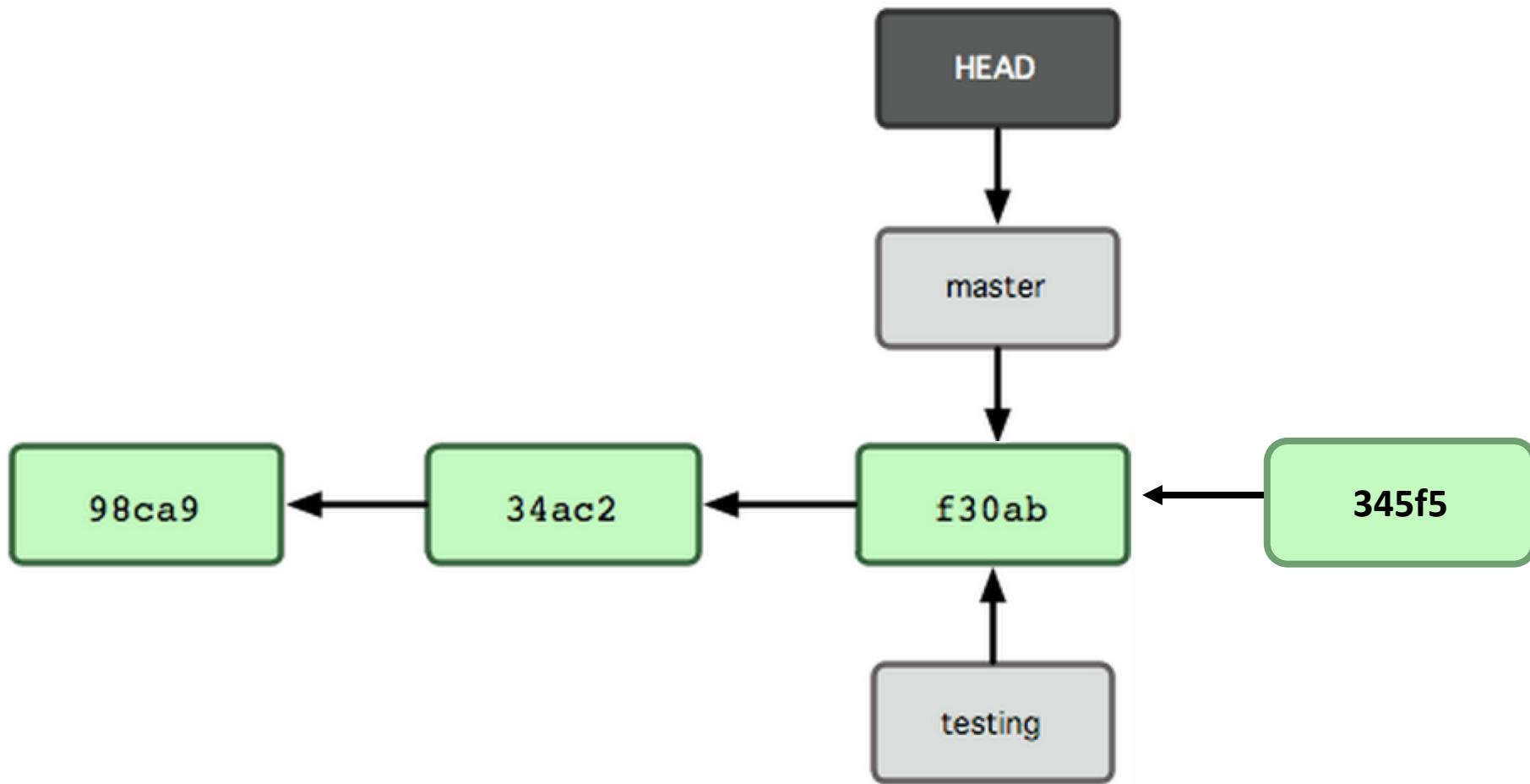
New Branch

- Creating a new branch = creating new pointer
 - \$ git branch testing
 - Where is new branch created?
 - Current commit
- Where is current commit?
 - HEAD



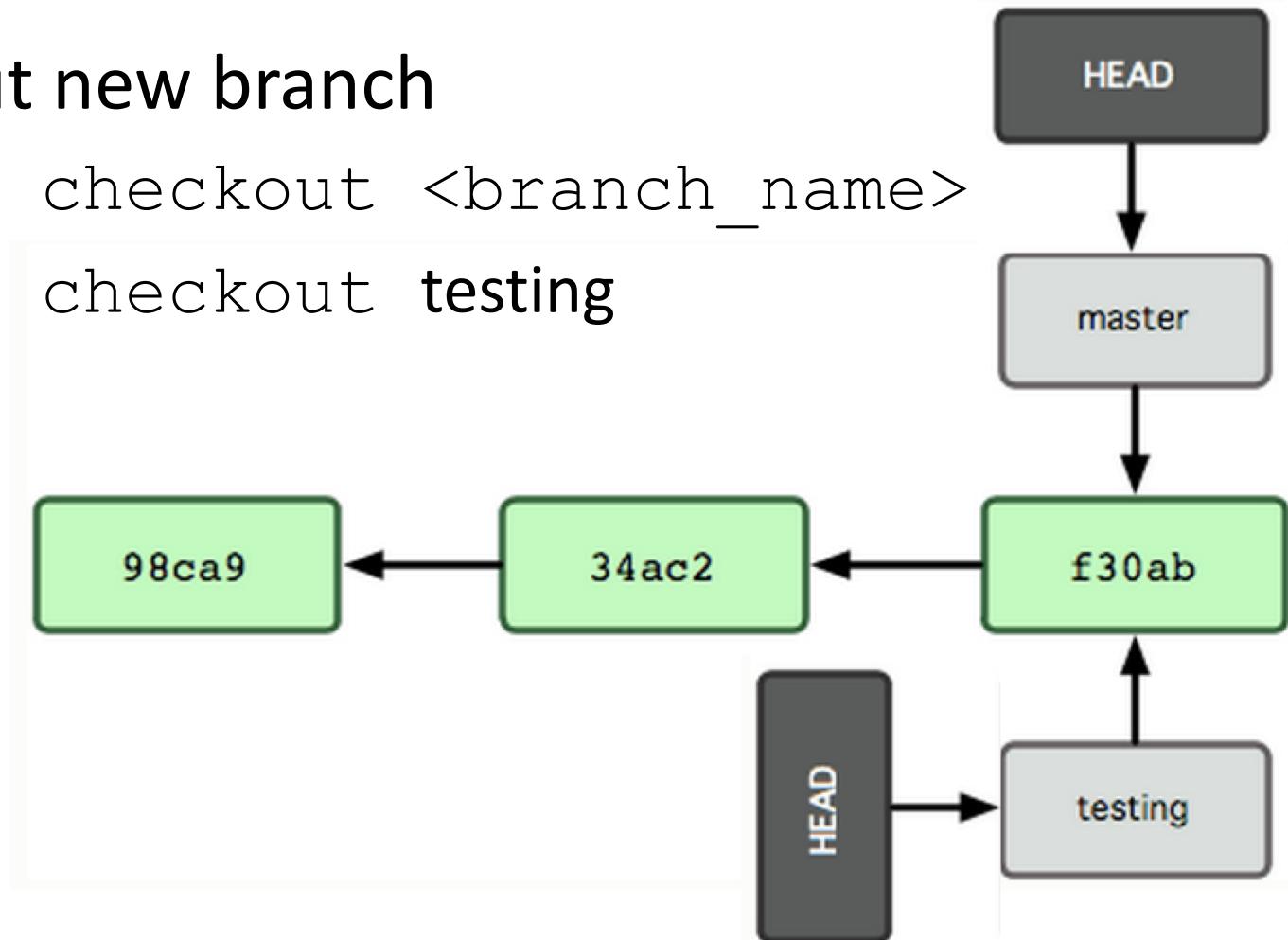
New Commit

- What happens if we make another commit?

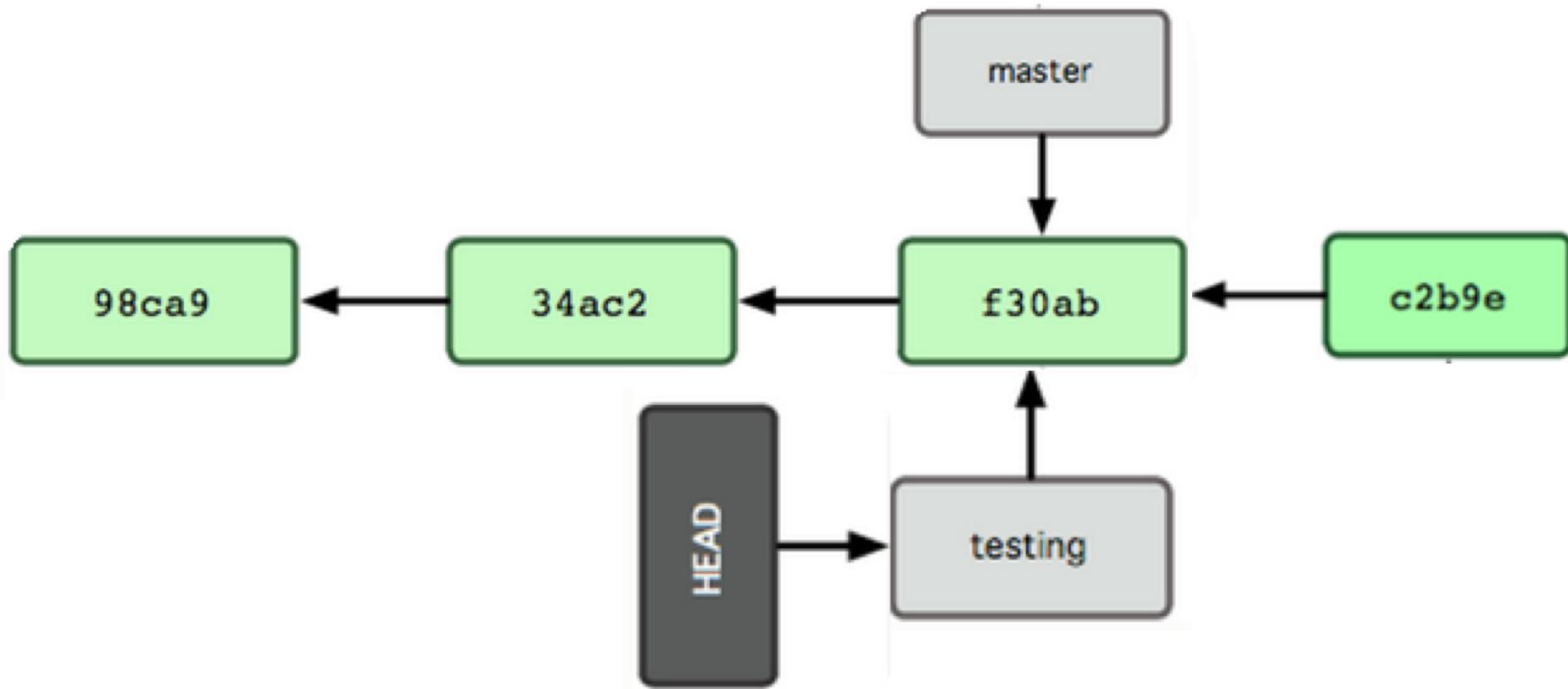


Switching to New Branch

- Check out new branch
 - \$ git checkout <branch_name>
 - \$ git checkout testing



Commit After Switch



Why Branching?

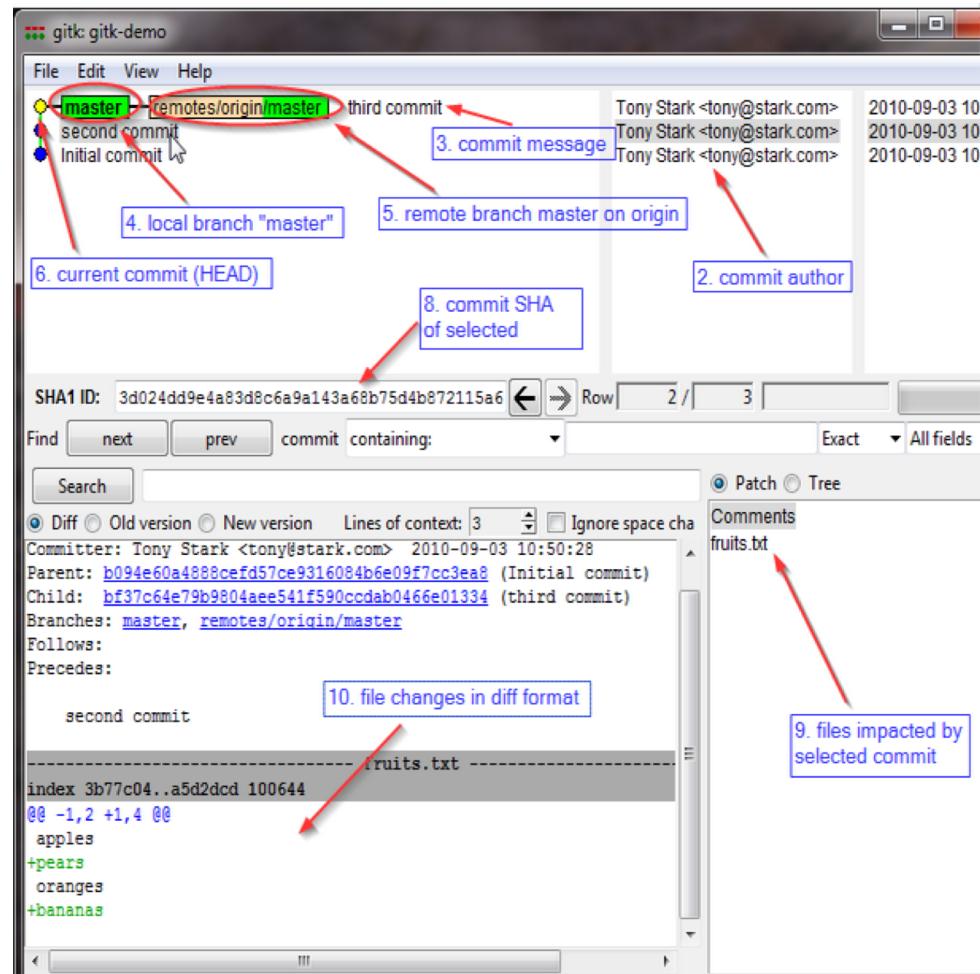
- Experiment with code without affecting main branch
- Separate projects that once had a common code base
- 2 versions of the project

Homework 9

- Publish patch you made in lab 9
 - Create a new branch “quote” of version 3.0
 - Branch command + checkout command (**git branch quote v3.0; git checkout quote**)
 - \$ git checkout v3.0 -b quote
 - Use patch from lab 9 to modify this branch
 - Patch command
 - \$ patch -pnum < quote-3.0-patch.txt
 - Modify ChangeLog file in diffutils directory
 - Add entry for your changes similar to entries in ChangeLog
 - Commit changes to the new branch
 - \$ git add . \$ git commit -F <Changelog file>
 - Generate a patch that other people can use to get your changes
 - \$ git format-patch -[num] --stdout > formatted-patch.txt
 - Test your partner’s patch
 - Check out version 3.0 into a temporary branch `partner`
 - Apply patch with `git am` command: \$ git am < formatted-patch.txt
 - Build and test with `$ make check`
 - Make sure partner’s name is in HW9.txt for #8

Gitk

- A repository browser
 - Visualizes commit graphs
 - Used to understand the structure of the repo
 - Tutorial:
<http://lostechies.com/joshuaflanagan/2010/09/03/use-gitk-to-understand-git/>



Gitk

- SSH into the server with X11 enabled
 - ssh -X for OS with terminal (OS X, Linux)
 - Select “X11” option if using putty (Windows)
- Run gitk in the ~eggert/src/gnu/emacs directory
 - Need to first update your PATH
 - \$ export PATH=/usr/local/cs/bin:\$PATH
 - Run X locally before running gitk
 - Xming on Windows, Xquartz on Mac