git != svn

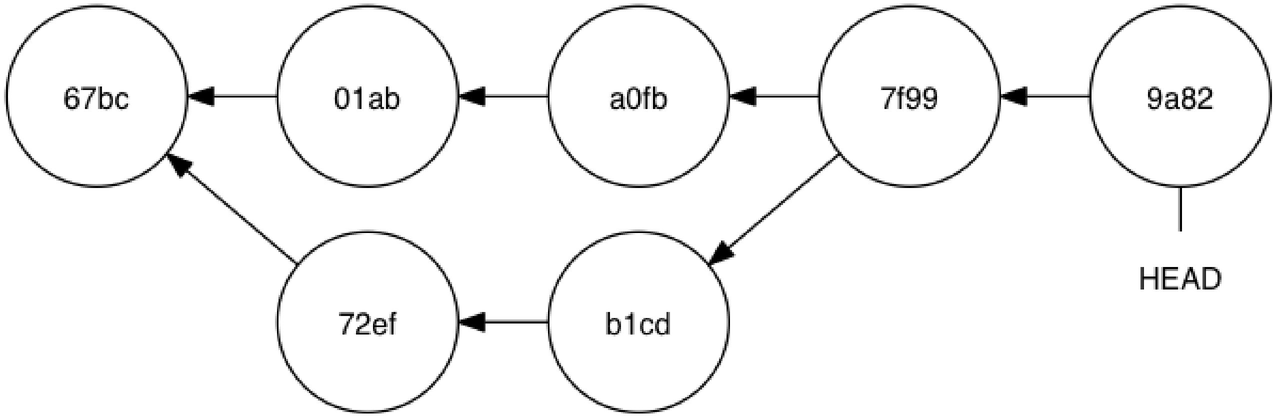
Edd Steel

@eddsteel

git != svn

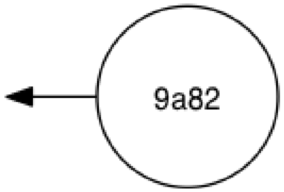
the git repo

- It's not a table
- It's a graph (DAG)
- Changing your repo and syncing with others are distinct operations

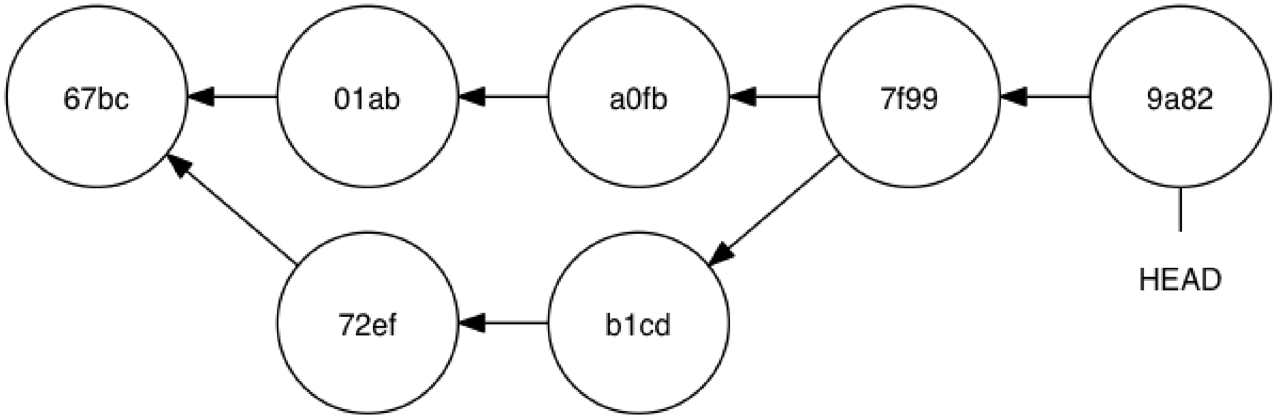


a git commit

- It is a message, file data, metadata and reference to parent commit(s)
- These are used to create the commit's checksum.



some ground rules

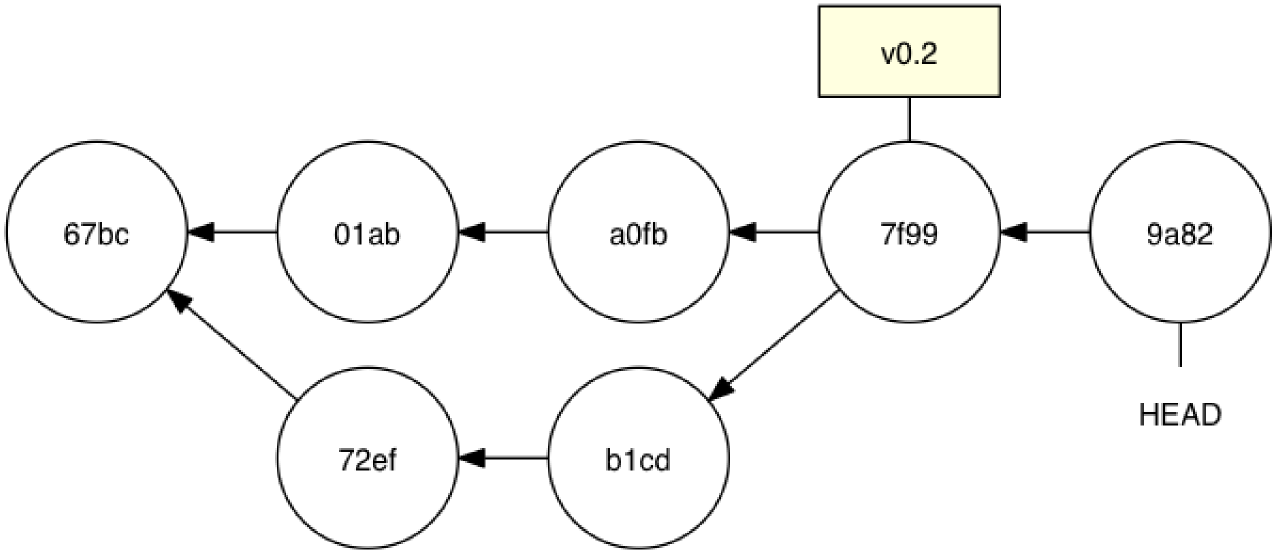


- a distributed system should avoid shared, mutable state.
- append to the tree
- mutate locally

the prime directive

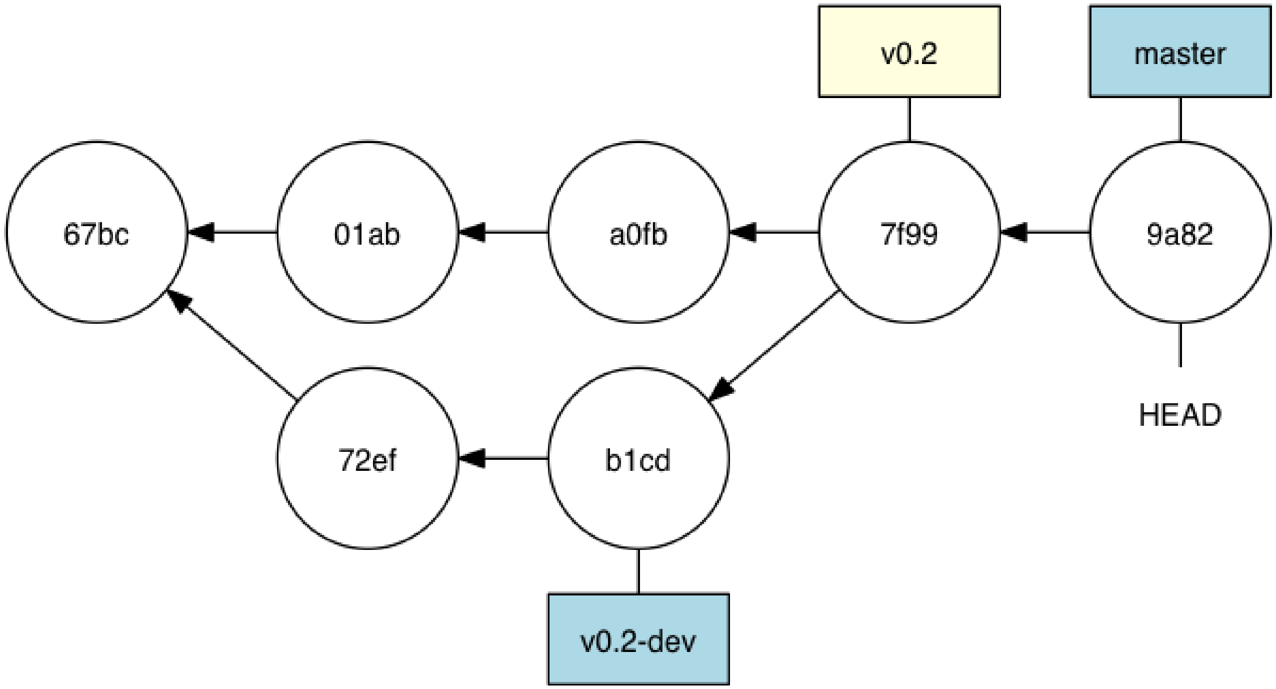
A developer will not interfere with the git repo of others.

git tag



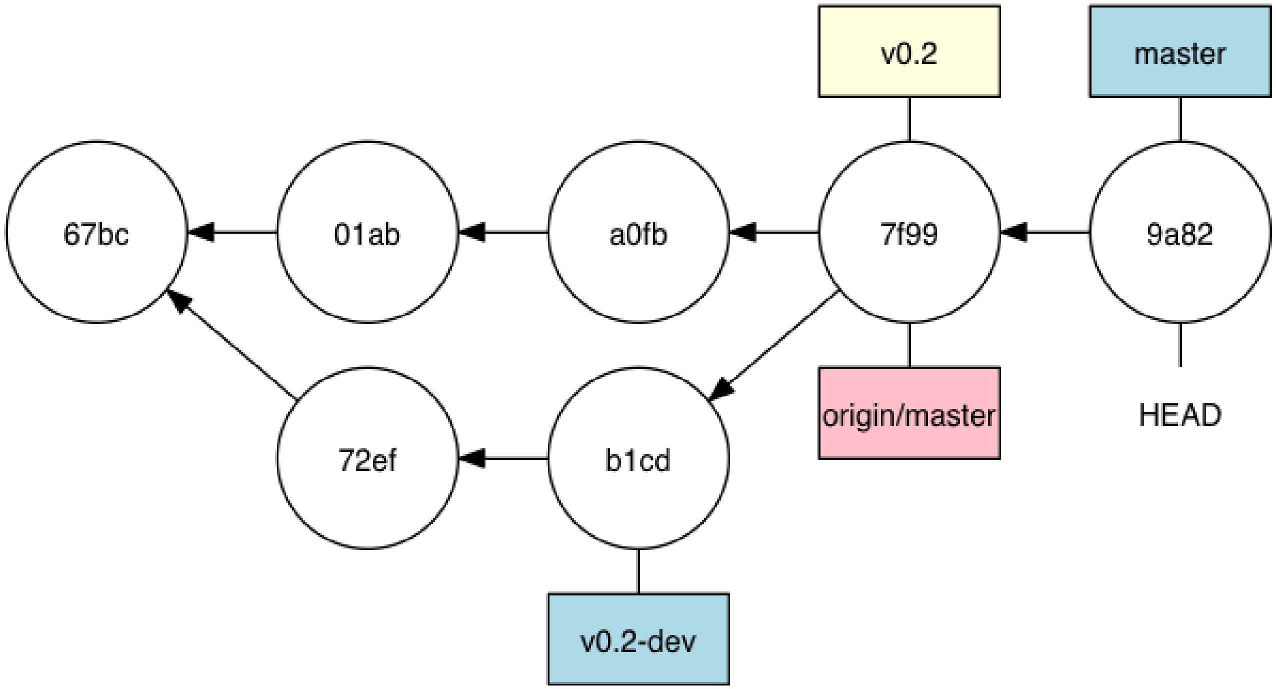
- It's not a static copy of the code base
- It's a label that points at a commit

git branch



- not an independent copy of the code base
- a label that automatically updates
- master isn't special

git remote

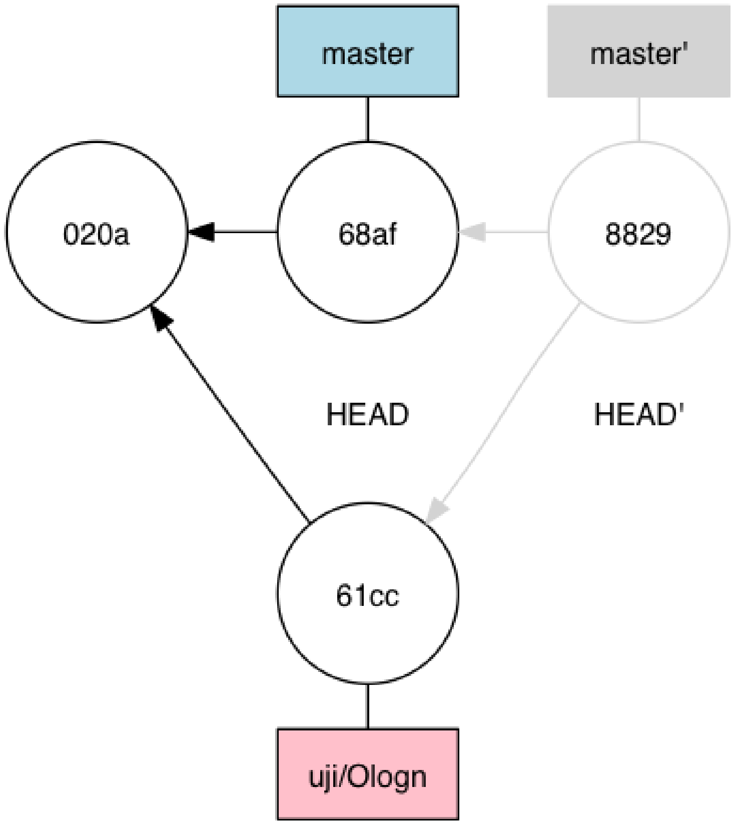


- not a master copy of the code base
- your view of a related code base (just another ref)
- pull: update my view, then integrate changes from there.
- push: update that code base with my changes (Once up to date here)

git merge

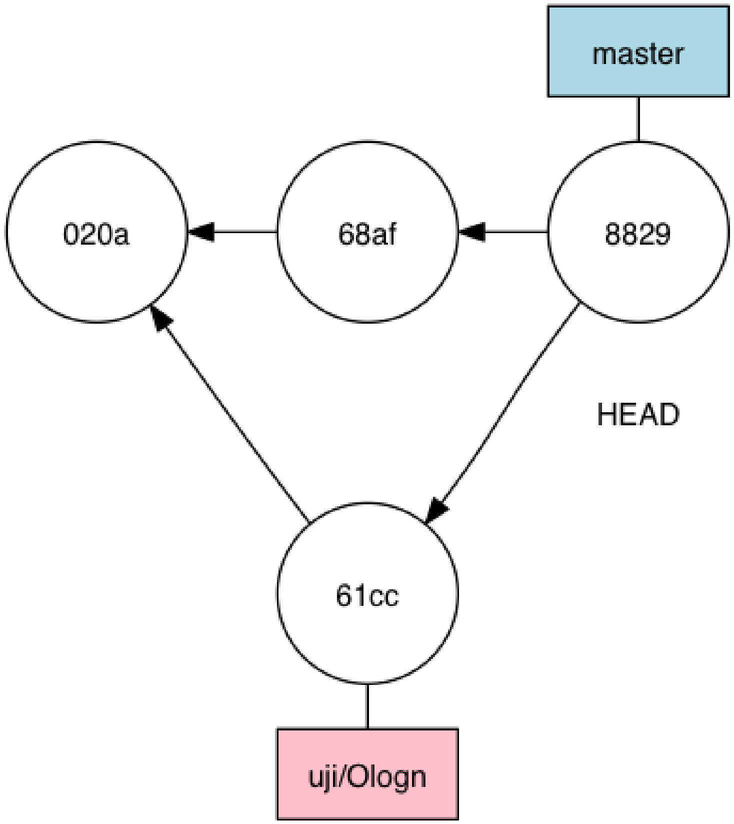
- not a large integration of two separate code bases
- a new commit based on two or more parents
- an append operation

git merge



git merge uji/Ologn

git merge

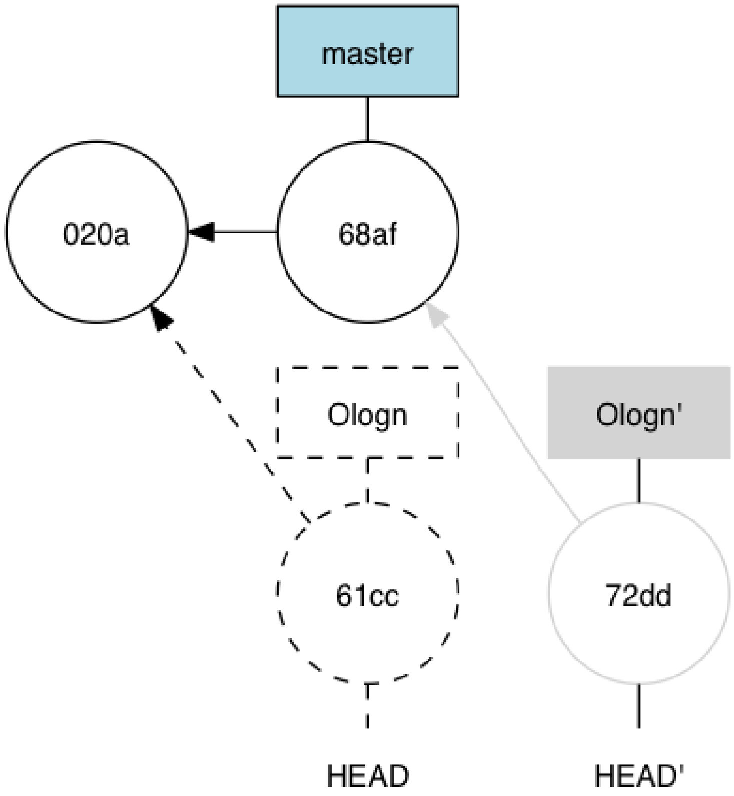


git merge uji/Ologn

git rebase

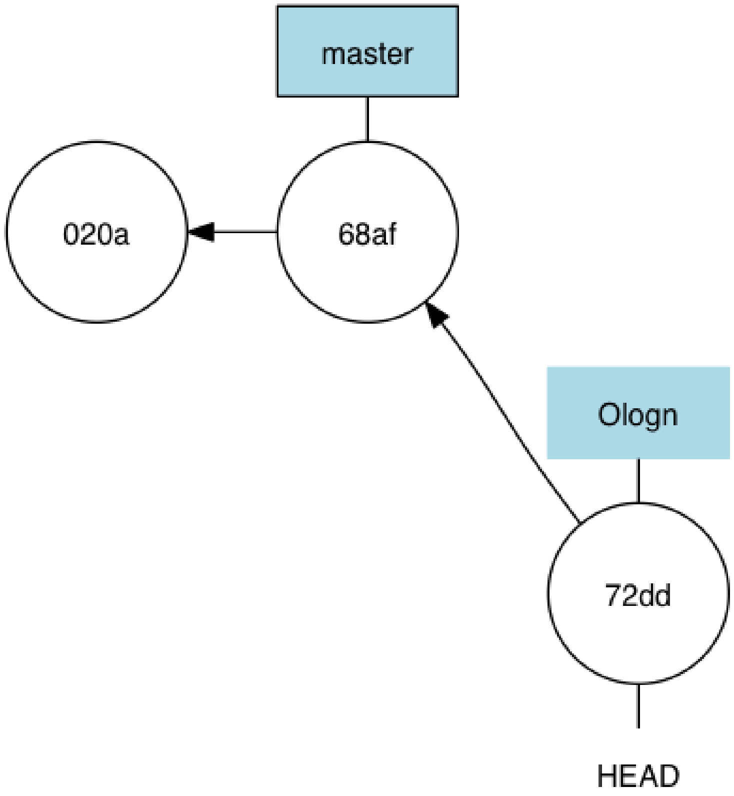
- Sounds scary
- a natural operation for a tree: a graft.
- useful to make history linear, avoid merges

git rebase



git rebase master ologN

git rebase

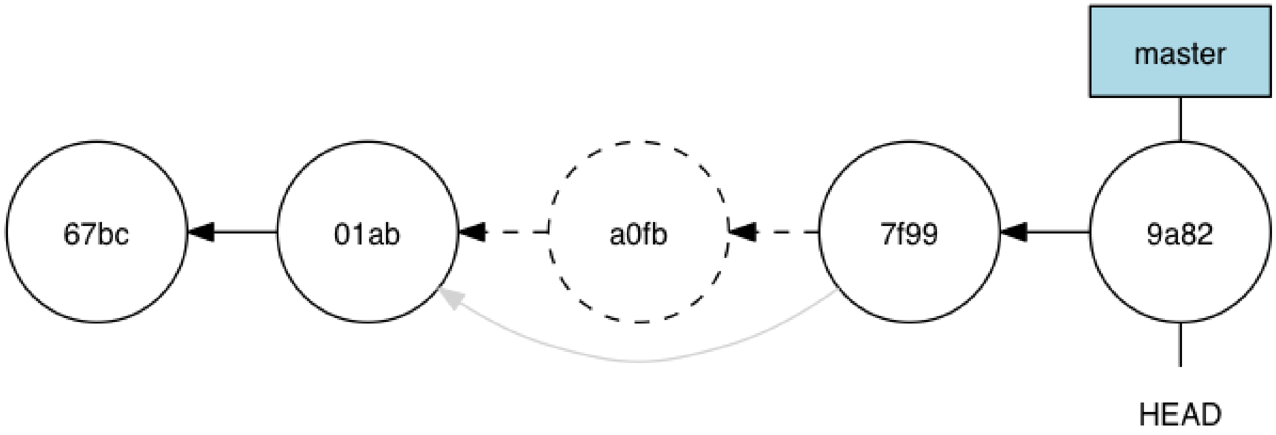


git rebase

git rebase

- Potentially destructive
- use it on local commits only
- pull –rebase is almost always fine.

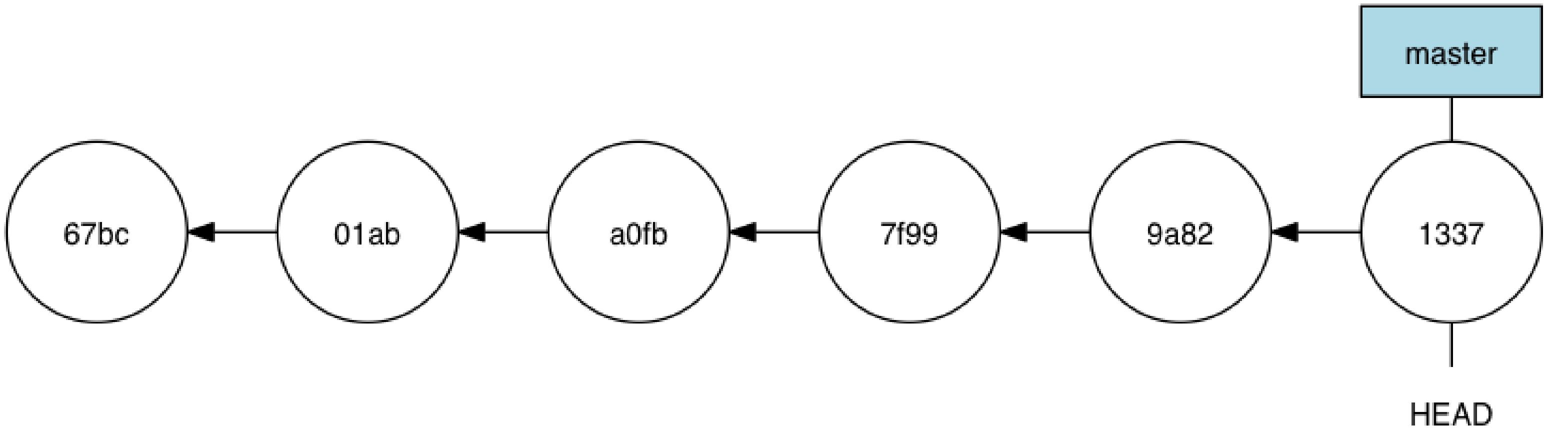
git revert



```
git revert a0fb
```

git revert

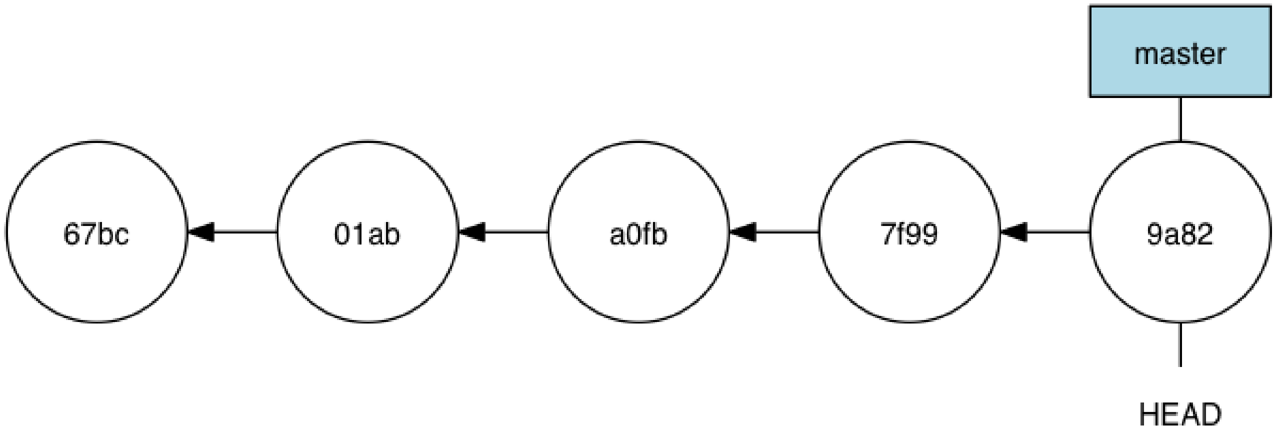
- doesn't change the named commit
- **appends** a new commit that reverses the change



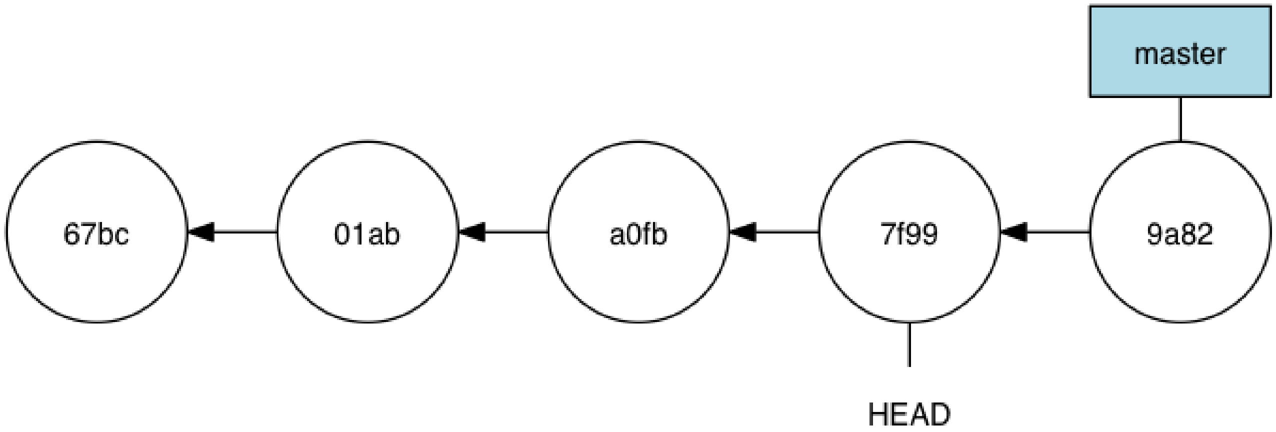
git revert a0fb

git checkout/git reset

git checkout

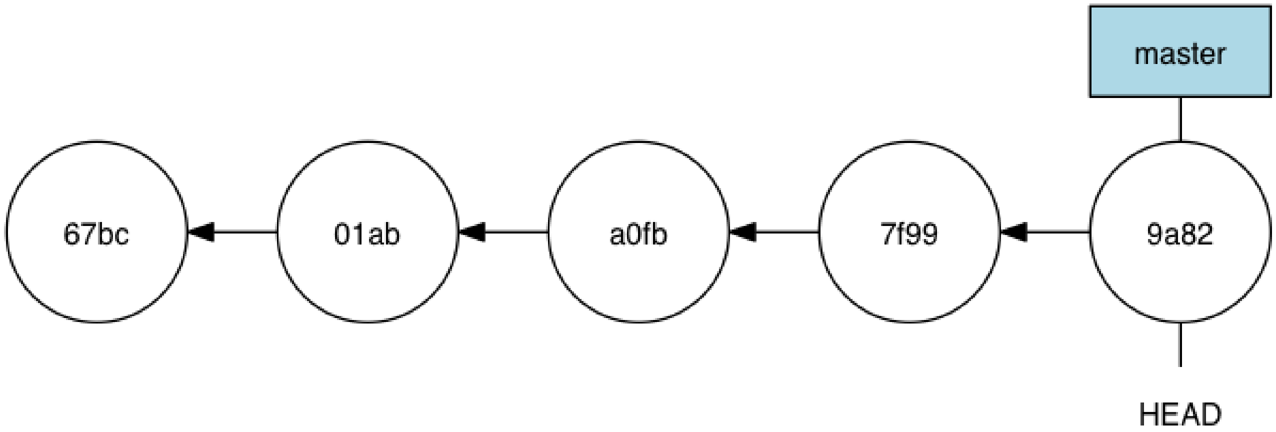


- just moves HEAD to the commit or ref
- (with no arg, drops changes)

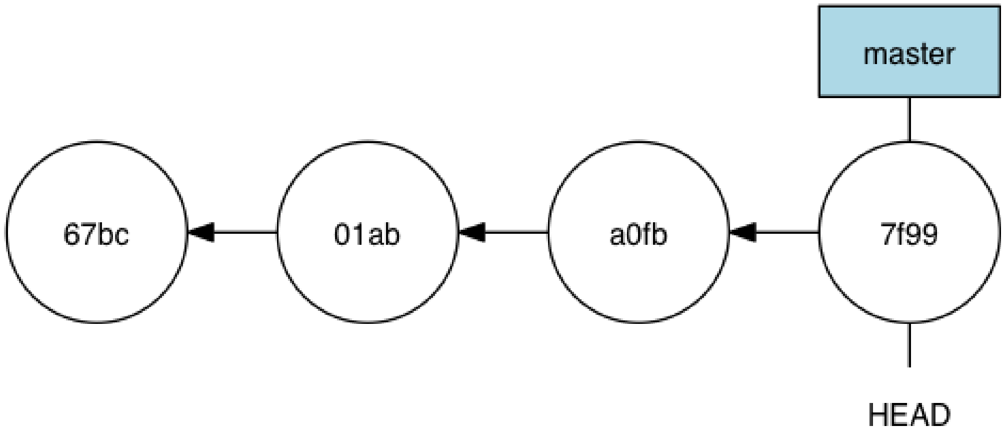


git checkout HEAD^

git reset



- moves our branch label (commit is still there, but not referenced)
- (with no arg, unstages changes)
- can leave work-in-progress unaffected or affected



git reset HEAD^

Neat stuff to google

- git for computer scientists (if this wasn't technical enough)
- the index (why add and commit are distinct)
- add –patch/ reset –patch
- rebase –interactive
- bisect
- commit –amend –reuse-message=HEAD
- reset –hard/–soft
- log's many options
- insteadOf config option
- cherry-pick

Questions?