

**To follow along, download:**  
**[bit.ly/git-down](https://bit.ly/git-down)**

# Advanced Git

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**If I See You Fix Merge Conflicts  
In A Text Editor I Will Lose All  
Respect For You As A Developer  
And As A Human Being**

**Joe Constantakis**

# Assumed Knowledge

```
> git commit [--amend]
> git pull
> git status
> git branch #list/create/delete branches
> git checkout #switch branches
```

# Initial Commands To Know

- > git **reset** #reset to an earlier state
- > git **clean** #delete untracked files
- > git **reflog** #local "undo" history
- > git **log --oneline --graph --decorate --all**  
#pretty network graph (make an alias)

# A Problem

```
makegameswithuss-MacBook-Air:git-test mgwu$ git pull
remote: Counting objects: 9, done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 5 (delta 4), reused 0 (delta 0)
Unpacking objects: 100% (5/5), done.
From https://bitbucket.org/DesaiAshu/git-test
   3e69a2b..0b171d3  master    -> origin/master
Auto-merging TestingGit/ViewController.m
CONFLICT (content): Merge conflict in TestingGit/ViewController.m
Automatic merge failed; fix conflicts and then commit the result.
```

# git mergetool

#fix merge conflicts with  
precision and ease



# A Problem

You noticed something is broken, but you're not sure when it broke.

# git bisect

#find where you screwed up  
in  $\log(n)$  time using  
binary search

# Problems

You need to:

- Edit a previous commit you've made. It's not your most recent commit, so `commit --amend` won't work
- Squash multiple commits into one
- Split up a large commit into multiple

# git rebase -i

#apply history from one  
state to another (without  
merging)

# A Problem

You've been teleported back in time to 2006 before Github was created and you need to email a commit to someone.

# git format-patch

#save the contents of a commit to a patch file, and optionally email it

# git am

#apply a patch

# A Problem

You made a commit to the wrong branch, or you want to add a commit from another branch to the current one.

# git cherry-pick

#apply a single commit to a  
different branch



# Other Useful Commands

- > git **diff** #what does commit x change?
- > git **revert** #make a new commit that undoes  
an older commit
- > git **pull --rebase** #pull without creating a  
merge commit
- > git **filter-branch** #rewrite branch history  
using some shell code

*The End*