



Basic Git Commands

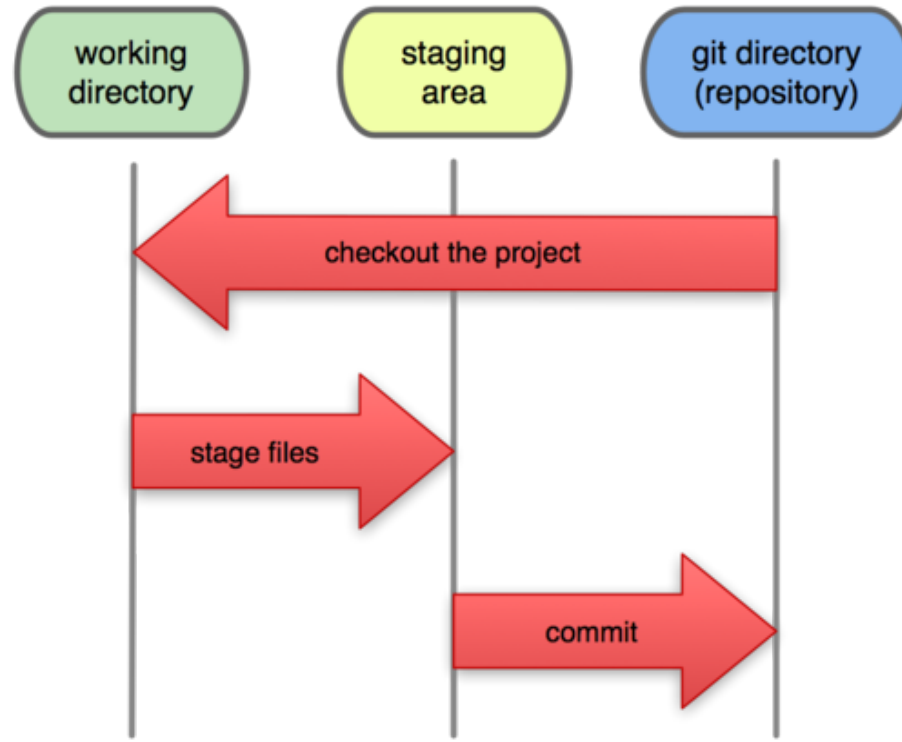
by Jonathan Miedel and Alvin Wang

Looking at changes

- `git status` Shows you what files in your repository have been changed, deleted, or added

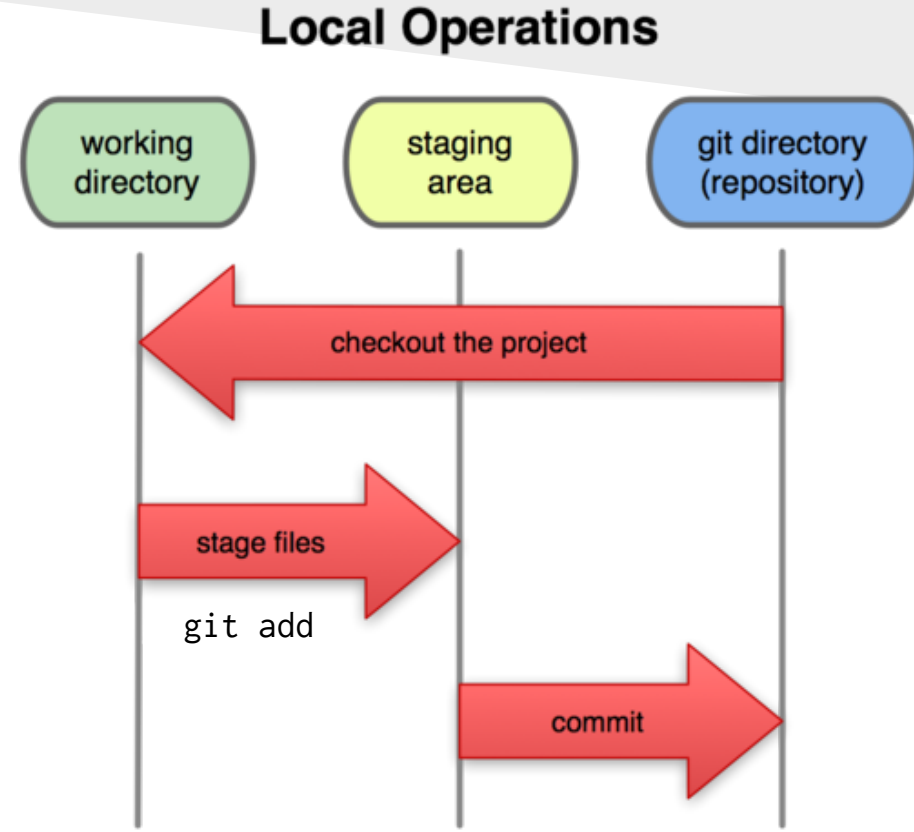
Workflow Diagram

Local Operations



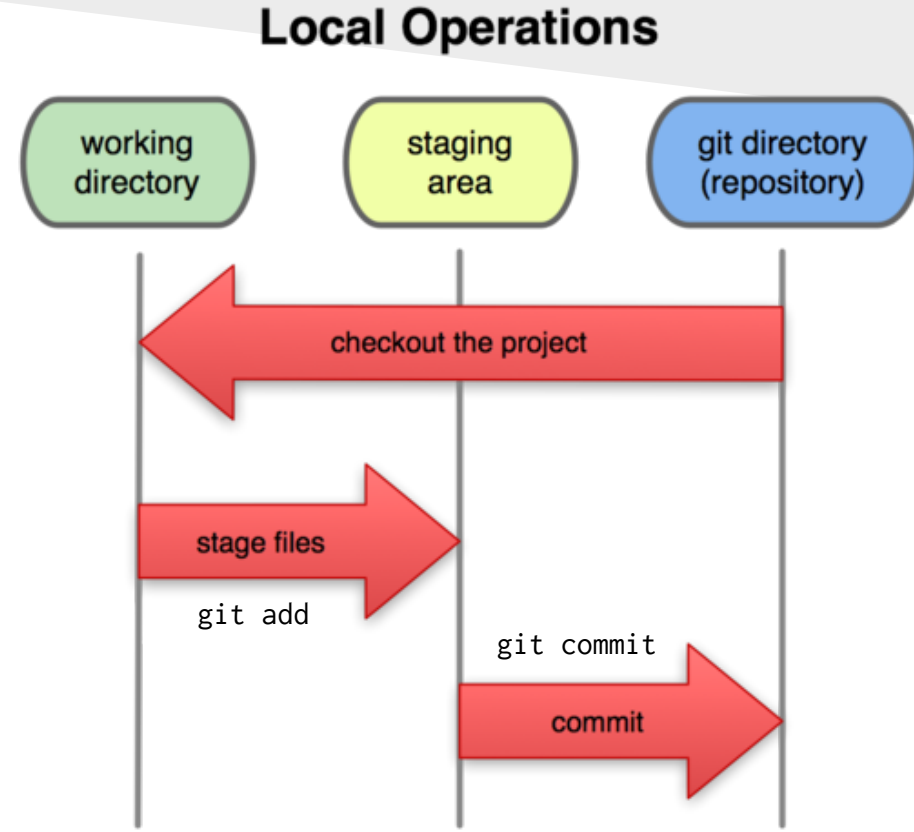
Recording Changes

- Takes a “snapshot” of your files and puts it in the staging area



Saving Snapshots

- Commits your staged (git add) changes to your repository



Git Add Examples

- `git add <filename>`
- `git add **/*.js` (adds only javascript files)
- `git add .` (adds all changes and additions in current folder + subdirectories and adds deletions in 2.0+)
- `git add -A` (same as `git add --all`, adds deletions too)
- In git 2.0, `git add -A` and `-u` will operate on the entire tree, rather than just the current directory and subdirectories

Ignoring Files (COME BACK)

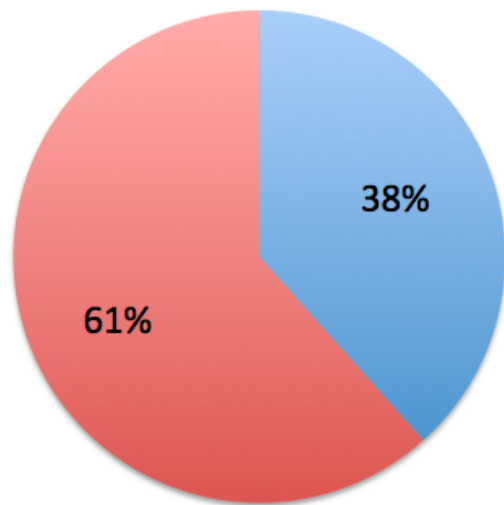
- create a .gitignore

Correction from Last Week

- Before git 2.0 git add . will not add deletions
- Now it does sorry

Survey

Prior Git Experience



- I've used Git on many occasions but I want to know MOAR
- I've heard about about Git, but no comprehendo

Review Quiz

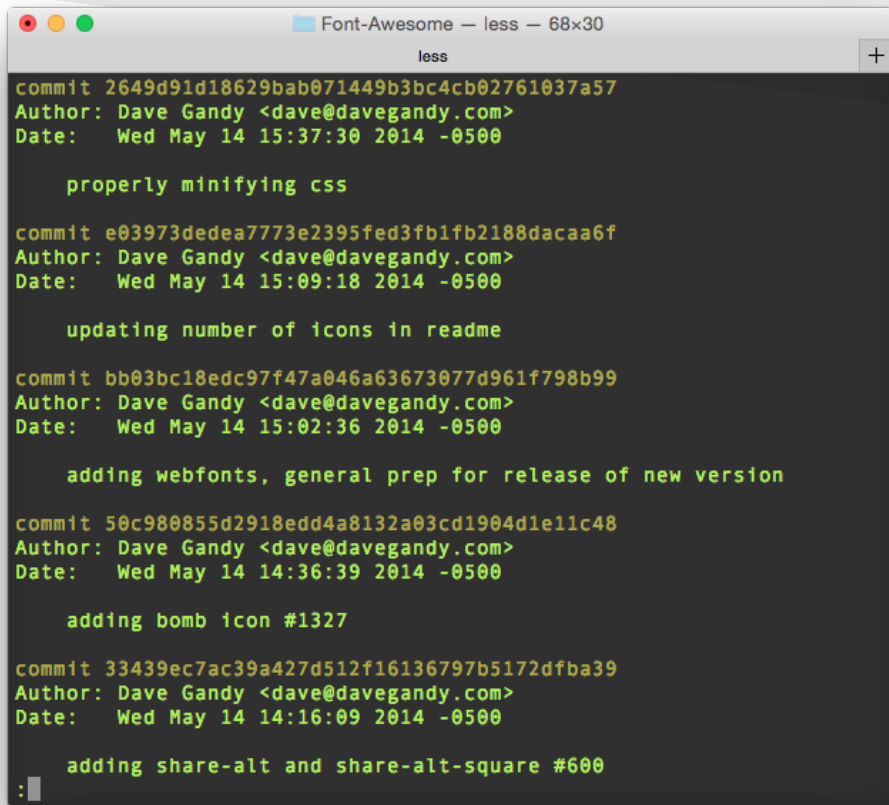
- What is git? Why would I want to use it?
- Explain the purpose of git status
- Difference between git add and git commit?
- Difference between git add -u and git add --all?
- How would one prevent git from tracking javascript (.js) files?
- What is the difference between the Staging area and the Index in Git?

Last time on Git

- Git is VCS software
- working directory/index(stage)/repository
- add files to the staging area
- viewing changes in your working directory

Viewing Repository Log

- `git log`
- shows a list of all your commits



A screenshot of a terminal window titled "Font-Awesome — less — 68x30". The window displays the output of the `git log` command, showing a list of commits. Each commit entry includes the commit hash, the author's name and email, the date, and a description of the changes. The commits are listed in reverse chronological order.

```
commit 2649d91d18629bab071449b3bc4cb02761037a57
Author: Dave Gandy <dave@davegandy.com>
Date:   Wed May 14 15:37:30 2014 -0500

    properly minifying css

commit e03973dedea7773e2395fed3fb1fb2188daca6f
Author: Dave Gandy <dave@davegandy.com>
Date:   Wed May 14 15:09:18 2014 -0500

    updating number of icons in readme

commit bb03bc18edc97f47a046a63673077d961f798b99
Author: Dave Gandy <dave@davegandy.com>
Date:   Wed May 14 15:02:36 2014 -0500

    adding webfonts, general prep for release of new version

commit 50c980855d2918edd4a8132a03cd1904d1e11c48
Author: Dave Gandy <dave@davegandy.com>
Date:   Wed May 14 14:36:39 2014 -0500

    adding bomb icon #1327

commit 33439ec7ac39a427d512f16136797b5172dfba39
Author: Dave Gandy <dave@davegandy.com>
Date:   Wed May 14 14:16:09 2014 -0500

    adding share-alt and share-alt-square #600
:
```

Commit Messages

- Explain your changes (feature-based commits)
- `git add --patch`
- How the change works
- Side effects
- Be concise

Bad Messages

- fixed stuff
- better
- changed line 88 in program.txt from $x=2y$ to $x=3y$
- Inappropriate language
- bill broke it so I fixed it
- <http://www.commitlogsfromlastnight.com/>

Good Commit Messages

Commits on Jun 15, 2014



Build: Update commitplease dev dependency

markelog authored on Jun 15



39b7606



Build: Move test to appropriate module

markelog authored on Jun 14



fbdbb6f



Effects: Improve raf logic ...

markelog authored on May 12



708764f



Effects: Reintroduce use of requestAnimationFrame ...

markelog authored on May 8



72119e0



Ajax: Always use script injection in globalEval ...

markelog authored on Nov 29, 2013



bbdfbb4



CSS: Do not throw on frame elements in FF ...

markelog authored on May 18



e488d98



Commits on Jun 10, 2014



Support: clean up comments and Support notation ...

dmethvin authored on Apr 25



d837f11



Commits on Jun 07, 2014



Tests: Clean up isNumeric tests ...

gibson042 authored on Jun 7



ff9dcfb



Core: Work around loss of precision from parseFloat ...

gibson042 authored on Jun 7



e1192af



Comparing Changes

- `git diff`
- Allows you to see what you have changed in your working tree
- `git diff` vs `git status`
 - `git diff` compares the differences at the line-level
 - `git status` compares the differences at the file-level

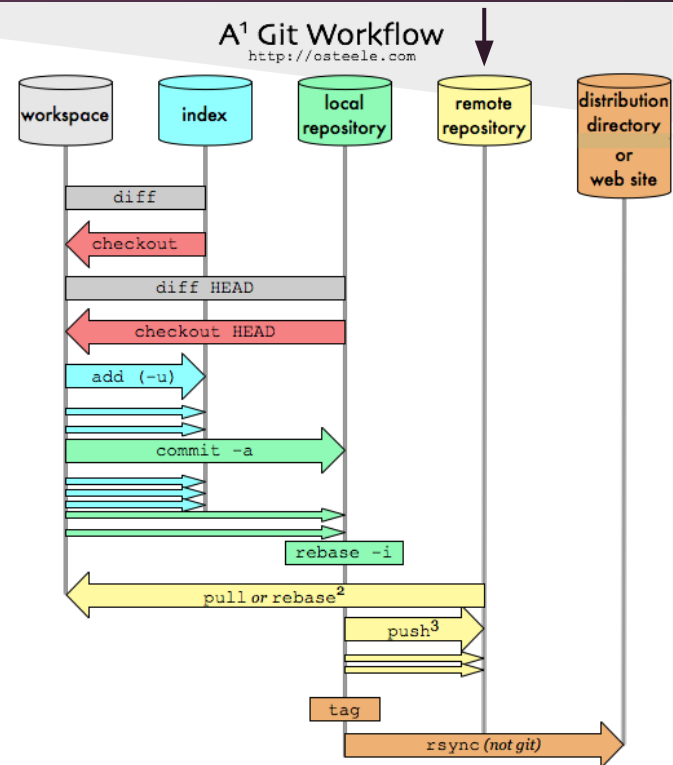
Changing Messages

- `git commit --amend`
 - Try not to amend things that have been pushed

Publishing Changes



- `git push`
- Push your changes to a remote server (ie. Github)



¹ Git is a workflow construction toolkit. This is just one of many possible workflows.

² With git-svn: "git svn rebase". With git-p4: "git p4 rebase"

³ With git-svn: "git svn dcommit"

Working with Remotes

- Remotes are essentially servers where your repository is hosted

Setting Remote

- `git remote`
 - `git remote -v` will show all remotes
 - `git remote add <url>`
 - `git rm <remote_name>`

Homework 2

- Download the .zip from the website, unzip it
- Add a text (.txt) file with your andrew id
 - ex. alvinw.txt
- Commit the changes with an appropriate message
- Set your remotes
- Push the changes
- Due before the **start** of next class

Questions

