More Git Stuff

Shannon Lee, Jonathan Miedel, Alvin Wang

✦ Last Time

- git revert
- git filter-branch
- git daemon
- submodules

✦ Today

- git apply
- git format-patch
- git send-email
- git instaweb
- octopus merge

Patch Workflow

- Patch files represent a set of changes; essentially a **patch file is a commit**.

- This allows you to apply changes across different repositories.

git apply [patch file]

- Given a patch file, apply the changes onto your repository.

- Does not create commits.

- Useful options:
  - `--check` allows you to see if a conflict would occur.
  - `--stat` shows the statistics on additions/deletions.

✦ git am [patch files…]

- Applies the patch(es), but additionally creates commits for the patches.

- Useful options:

  - `--signoff` adds a `Signed-off-by:` line to the commit message.

git format-patch [sha1]

Creates patch file(s) for the changes since the specified commit(s).

✦ git send-email [sha1]

- To specify who you are sending this to, use `--to` and `--cc`.

- Useful options:
    - `--annotate` lets you edit the email before sending.
    - `--dry-run` doesn't actually send the email.

git instaweb

- Spins up a server allowing you to browse your working directory.

- Useful options:
  - -d sets the HTTP command line daemon.
  - -p sets the port used.

Octopus Merge

- more than 2 parents
- simply specify multiple commits to merge
- git merge <commits...>
- useful if you have many fairly independent topics

Signing Commits

- Signing commits helps insure integrity of the content in the commit
- Lets others know that you created this commit/tag and not someone else masquerading as you

Signing Commits cont.

- Requires a GPG Key
- Create/Add GPG Key
  - `gpg --gen-key`
  - `git config --global user.signingkey XXXXXXXX`
- Sign Tag
  - `git tag -s vx.x.x`
- Sign Commit
  - `git commit -S -m "Test"`

Next Week in Git Stuco