

git pt. 2

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Quick Review

git: version control system
add, commit, branch, checkout

More on Undoing

Unstaged changes (before add)

```
git stash
```

or


```
git checkout <file name>
```

Staged changes (after add, before commit)

```
git reset HEAD <file name> (just unstages your changes)
```

or

```
git reset --hard (throws away all uncommitted changes)
```



more on merges

I want to merge changes from otherBranch into master:

```
git checkout master
```

```
git merge otherBranch
```

merge conflicts: when git doesn't know which changes to keep
luckily, you get to decide what to keep/discard!

stay tuned for a demo

Why GitHub?

(or any other repository management service really)

so you don't have to send code over
facebook messenger

... but seriously...

powerful collaboration &
development platform



Let's git technical



What is GitHub?

- centralized online repositories
- not the same as git



GitHub Repositories

pretty much the same as normal git repositories

- but on the c l o u d

can be viewed & edited on the web @ github.com

- can also be cloned and worked on locally
- **git clone <url of the repository>**

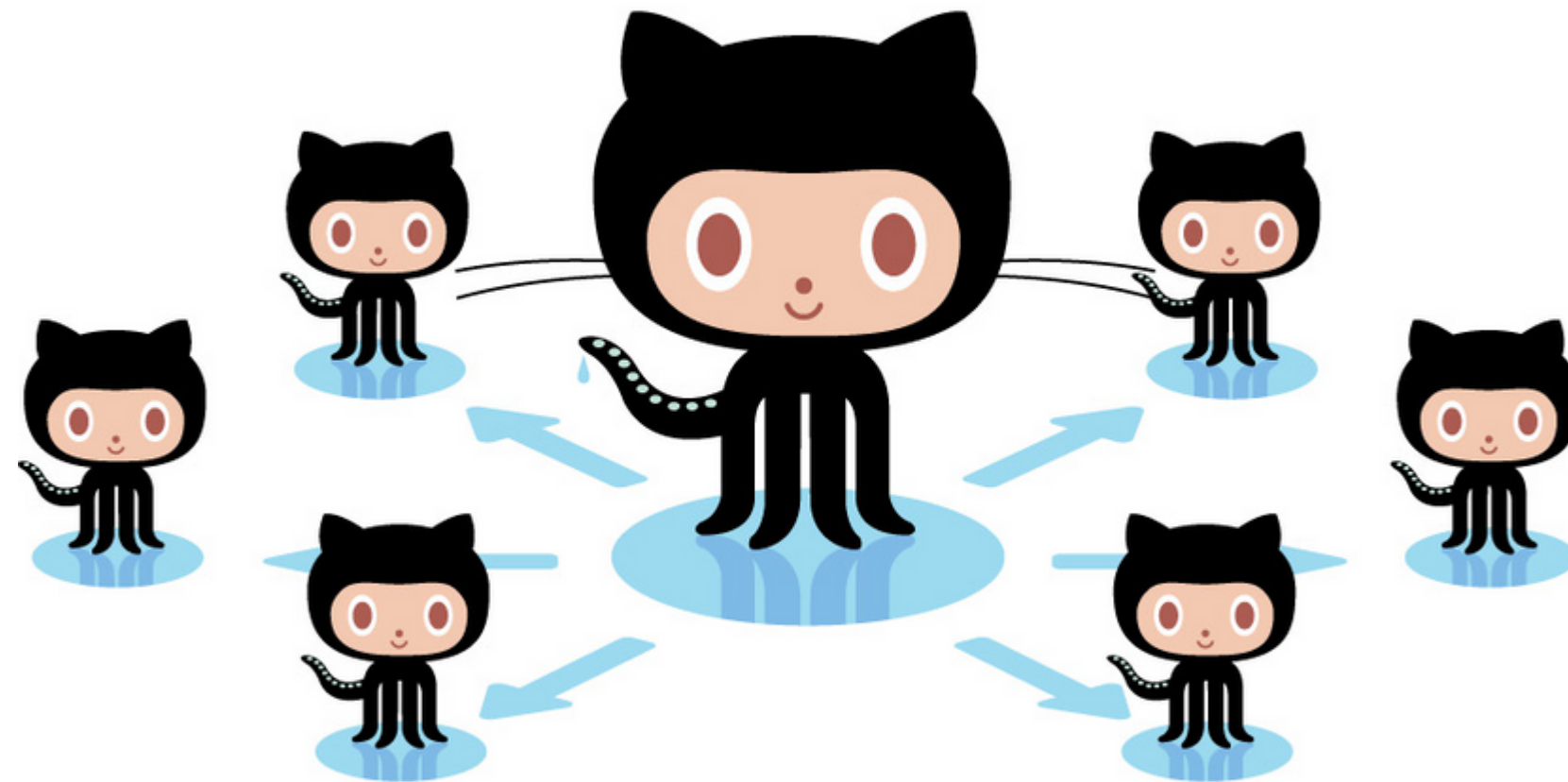
many large projects are on Github

- might not have access to edit directly, so make a "fork" of the repo before cloning



follow along!

github.com/cmugpi/Github-Demo



~push~ git to the limit



GitHub

`git pull`
Remote changes
need to be pulled

`git push`
Local changes need
to be synced



`add / commit`

~branch~ing out

Remote/local branches are tracked separately

See all branches:

```
git branch -a
```

If you create a new branch locally, remote repo doesn't know it exists until you push

```
git push --set-upstream origin <branch name>
```

"origin" refers to the remote repository

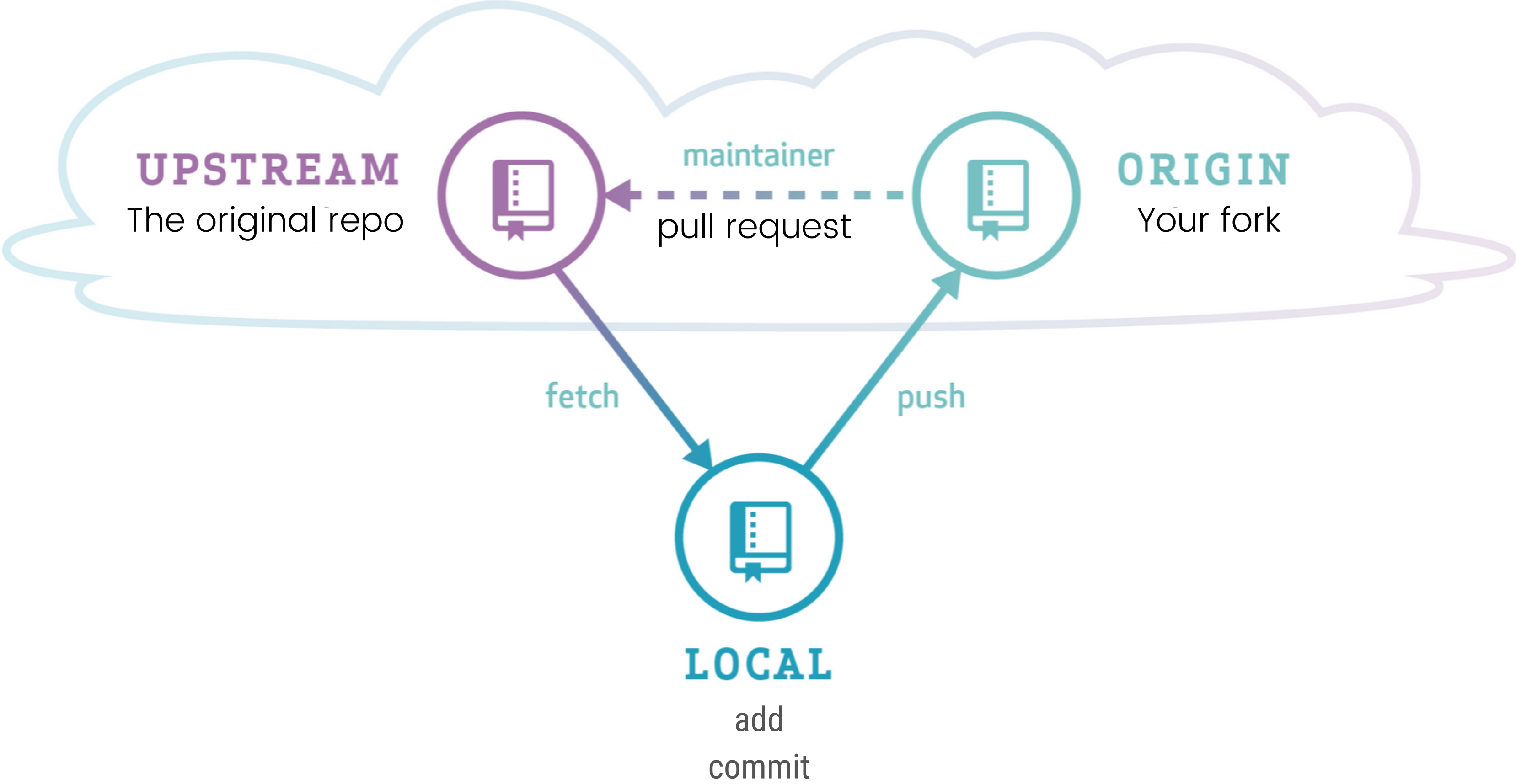
oh, ~fork~

Recall: we fork a repo when we don't have permissions to push directly to it
How can I get changes from the original repository into my forked repository?

```
git remote add upstream <url to original repo>  
git fetch upstream  
git checkout <your local branch>  
git merge upstream/master
```

side note:

```
git pull = git fetch + git merge
```



pull requests

Often, certain branches on GitHub repositories are protected

- Only certain users can push commits to them
 - e.g. large open source projects

GitHub's WebUI allows for moderated branch merges

- Pull Requests
 - Repo owners/moderators review and (hopefully) approve your changes
 - May need to resolve merge conflicts
- Repositories forked from larger projects can also be merged by a pull request

**walk through of some
legit repos on GitHub**

puLL rEqUeStS

When you merge your own pull request

