



&





# Saundra

@svcastaneda



# git

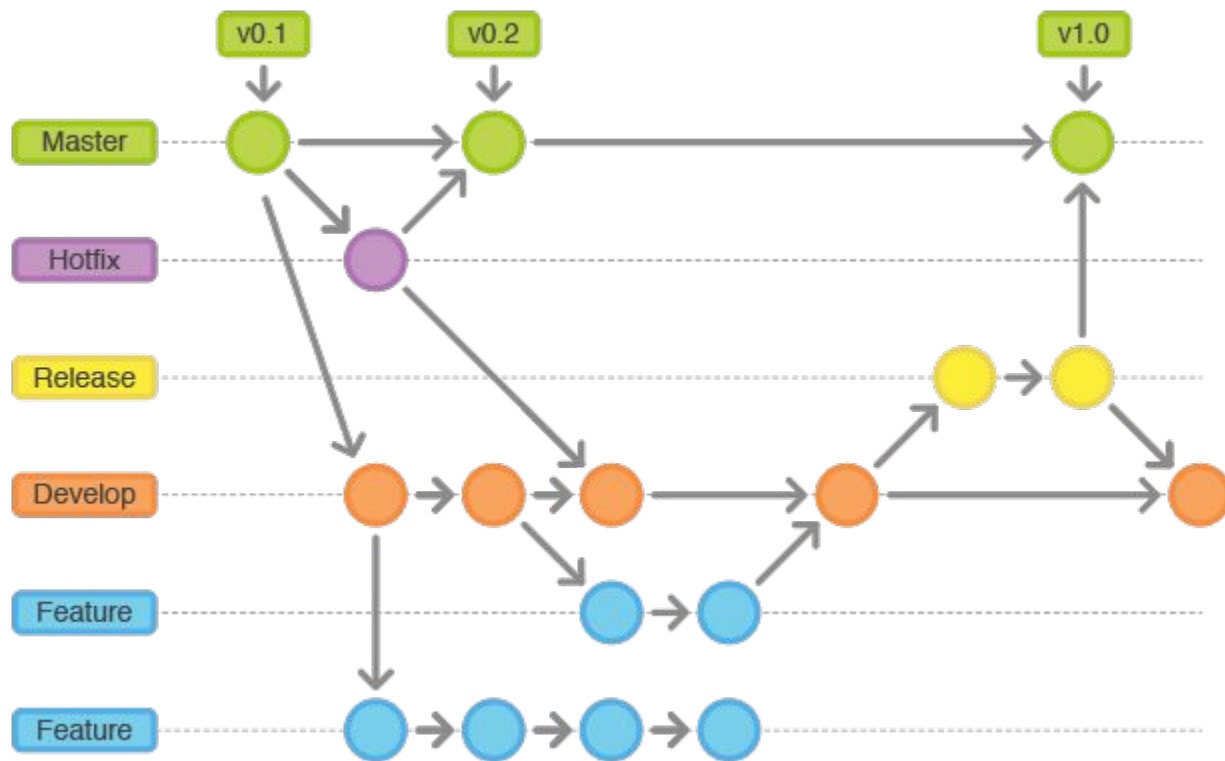
Version Control System (VCS)

full local history of  
changes made.

work offline.

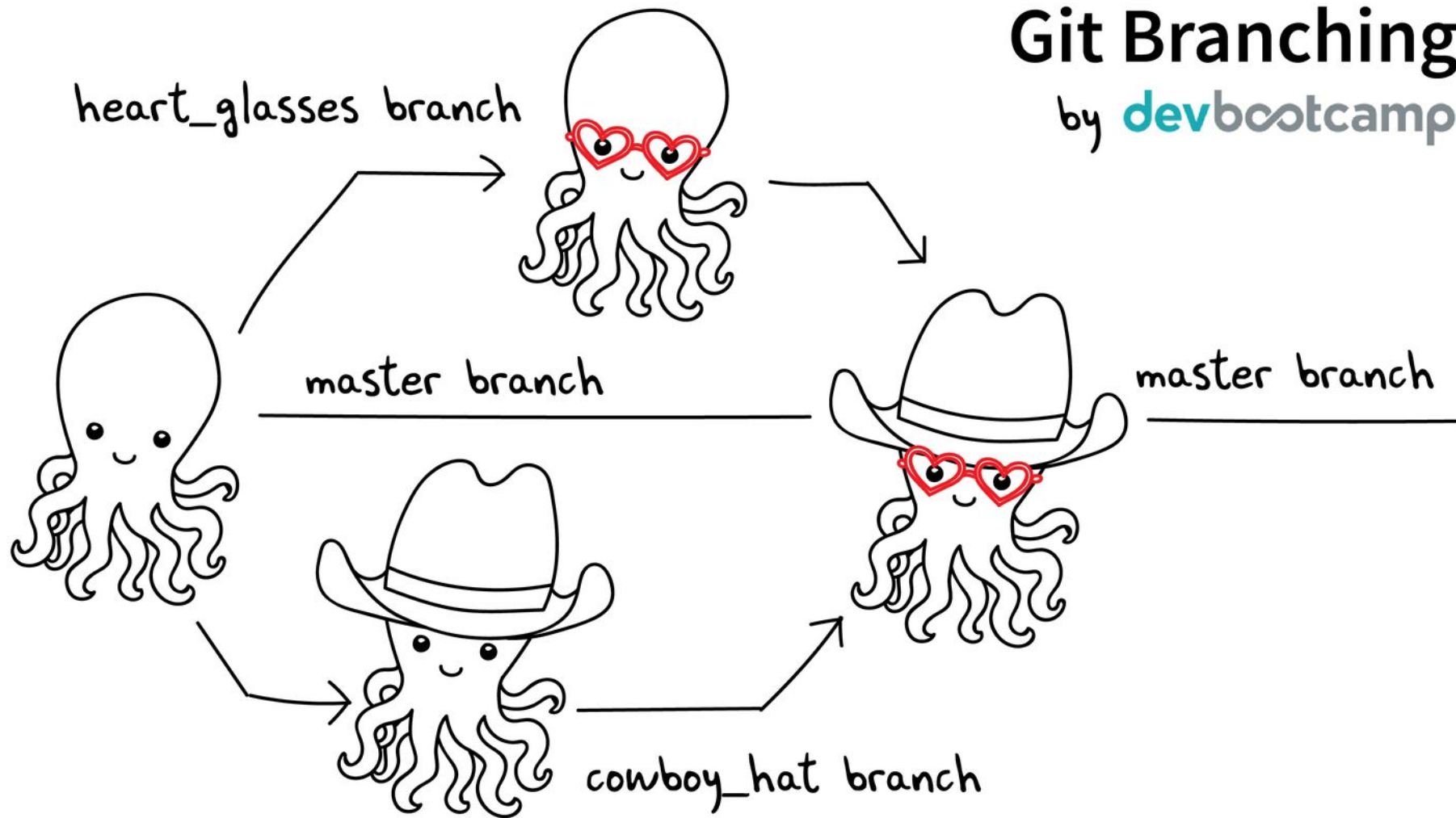
work without affecting the  
live/stable version.

# git workflow



# Git Branching

by **dev**bootcamp





# GitHub



online git repo hosting service

collaborate.

online secure backups.

open source community.

# repos/remotes

`git init`

creates a new git repo for that folder

`git clone <url>`

create a copy of a repo in a new directory

`git remote`

lists all remote git repos

`git remote add <name> <git-url>`

adds a remote

`git rename <old-name> <new-name>`

renames a remote

`git remote remove <name>`

removes a remote

`git remote show <name>`

shows details for a remote

# branches

`git branch`

lists all local branches

`git branch -a`

lists all local ***and*** remote branches

`git branch -d <branch-name>`

deletes a branch

`git branch -m <old-name> <new-name>`

renames a branch

`git checkout <branch-name>`

switch to a different branch

`git checkout -b <new-branch-name>`

create a new branch & switch to it

# file changes

**git status**

show differences between index and current HEAD commit

**git diff**

show changes between commits

**git reflog**

lists all of the commit history

**git log**

detailed version of the commit history

# commits

`git add <name>`

stage new file for new commit

`git commit -m <message>`

add snapshot of code

`git reset [<type>] [<commit>]`

unstage file & discard uncommitted changes

`git revert [<type>] [<commit>]`

undo commits

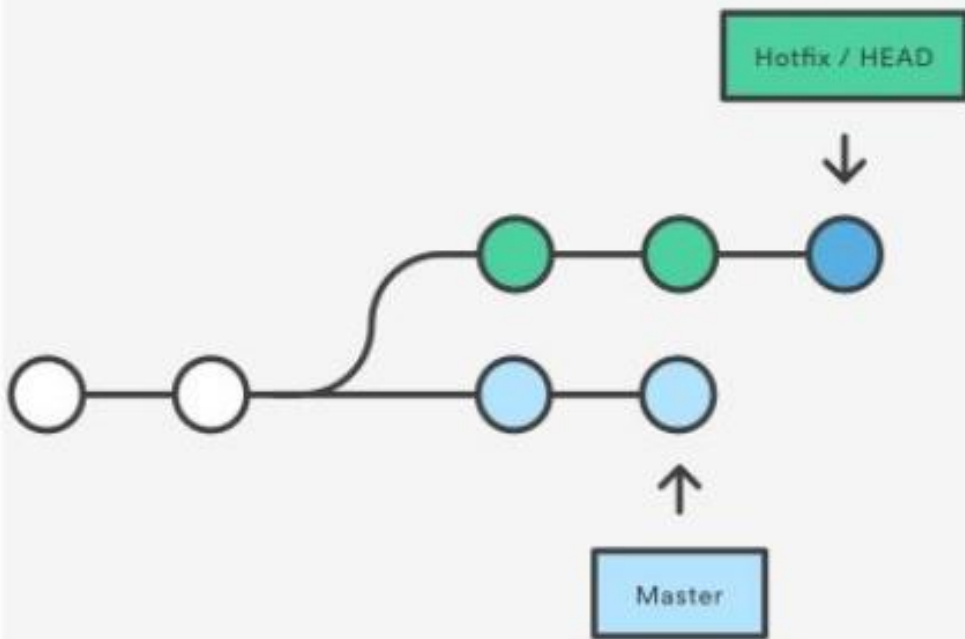
Types:

- soft : keeps changes made since last commit & resets current branch to **<commit>**
- hard : discards changes made since last commit & resets current branch to **<commit>**

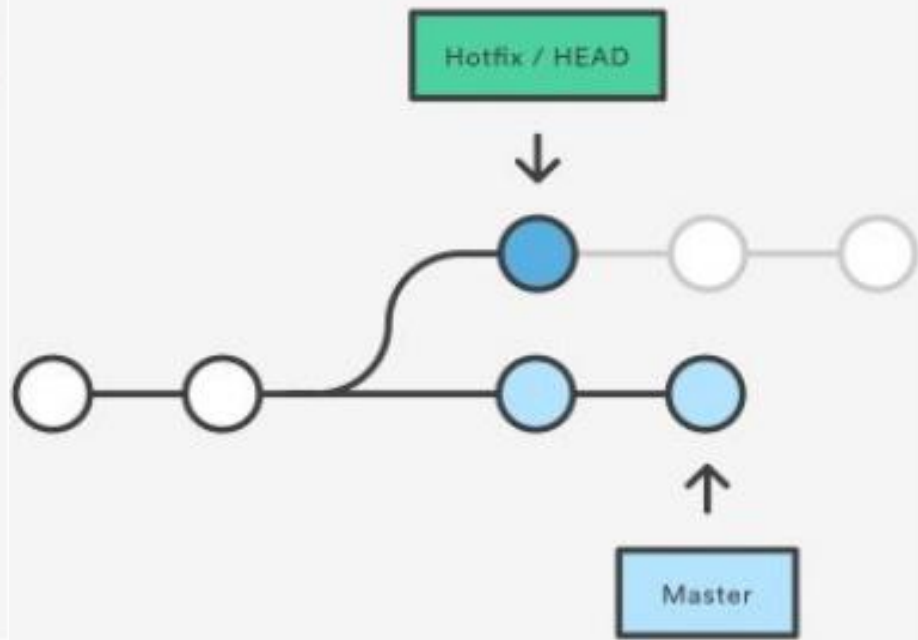


git reset HEAD~1  
git reset <hash>

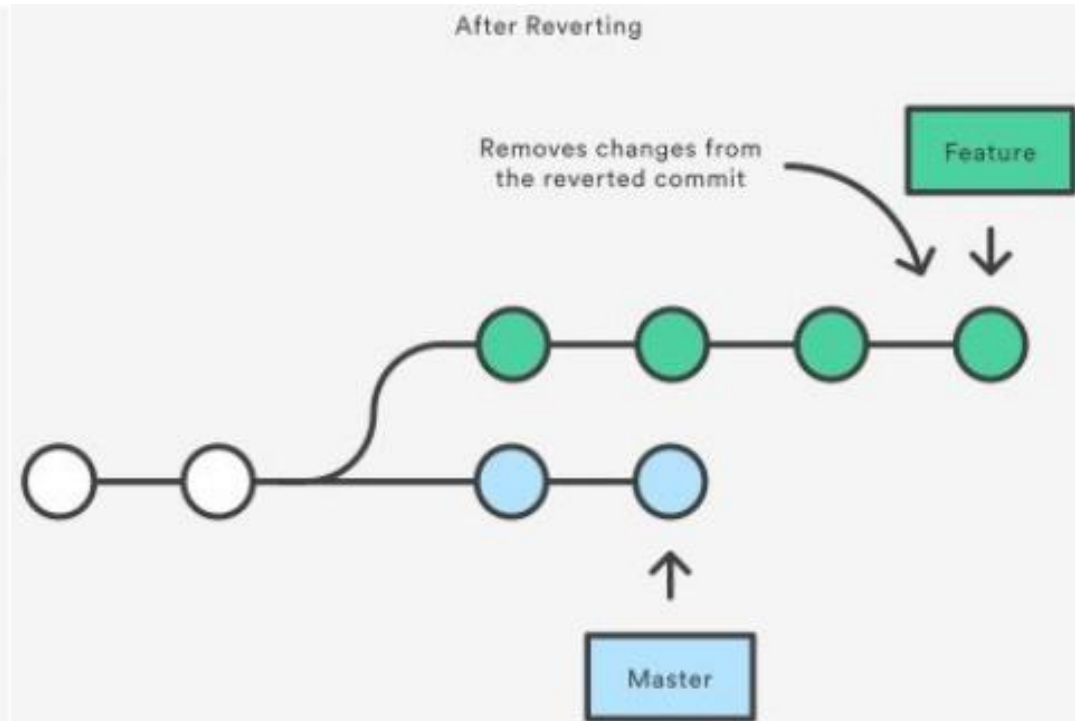
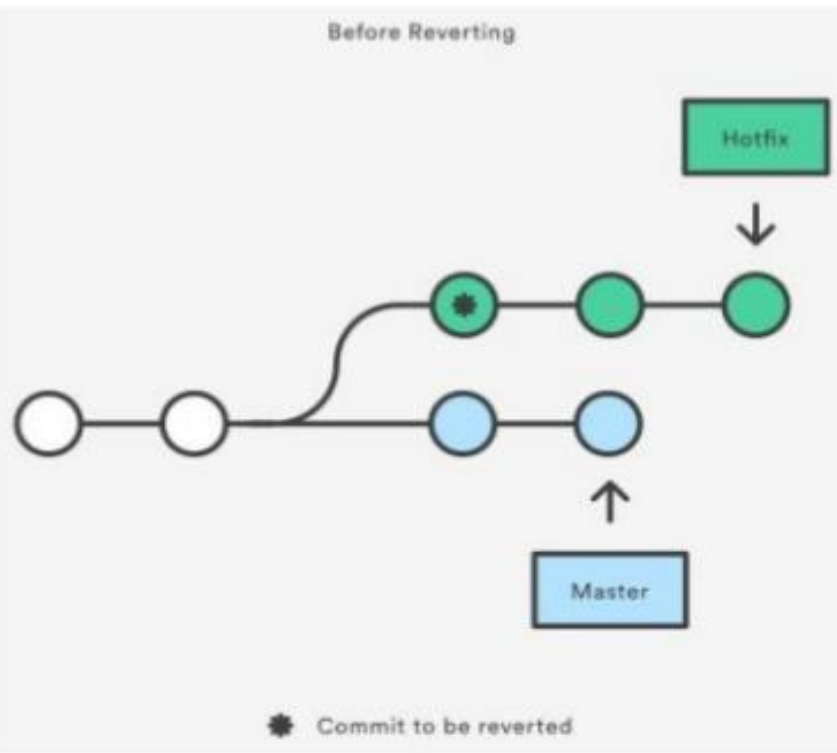
Before Resetting



After Resetting



git revert HEAD~1  
git revert <hash>



# merging objects

`git push <remote> <branch>`

adds objects to merge the diffs in the remote git repo

`git pull <remote> <branch>`

gets objects from the remote repo and merges the diffs

`git fetch [<remote>]`

gets objects from remote repo, but doesn't merge in the diffs

# GitHub



[graphql](#) to [arthurnn/graphql](#) 15 hours ago

[erai/contract](#) a day ago

[ler](#) to [arthurnn/handler](#) 2 days ago

go

pository [DanielSaldivarSalas/data\\_visualization](#) 3 days ago

x 3 days ago

[rkr/georuby](#) 3 days ago

## Repositories

 [nchambe](#)

6 ★

 [SubSever](#)

0 ★

 [githubschool/open-enrollment...](#)

149 ★

 [campus-experts/being-an-exp...](#)

6 ★

 [alcastaneda/alcastaneda.githu...](#)

0 ★

[Show 1 more repository...](#)

New repository

Import repository

New gist

New organization

Your repositories **43**

New repository

Find a repository...

All

Public

Private

Sources


Forks



## Create a new repository

A repository contains all the files for your project, including the revision history.

Owner

 svcastaneda ▾

Repository name

hackillinois17 ✓

Great repository names are short and memorable. Need inspiration? How about **sturdy-carnival**.

Description (optional)



**Public**

Anyone can see this repository. You choose who can commit.



**Private**

You choose who can see and commit to this repository.

☒ **Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▾

Add a license: **None** ▾



Create repository



This repository Search

Pull requests Issues Gist



svcastaneda / hackillinois17

Watch 0

Star 0

Fork 0

Code

Issues 0

Pull requests 0

Projects 0

Wiki

Pulse

Graphs

Settings

No description, website, or topics provided.

Edit

New Add topics

1 commit

1 branch

0 releases

1 contributor

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

svcastaneda Initial commit

README.md

Initial commit

README.md

# hackillinois17

Clone with HTTPS

Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/svcastaneda/hackillinoi



Copy to clipboard

Open in Desktop

Download ZIP

```
[stuff:> ls
```

```
[stuff:> git clone https://github.com/svcastaneda/hackillinois17.git
```

```
Cloning into 'hackillinois17'...
```

```
remote: Counting objects: 3, done.
```

```
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
```

```
Unpacking objects: 100% (3/3), done.
```

```
Checking connectivity... done.
```

```
[stuff:> ls
```

```
hackillinois17
```

```
stuff:> 
```



```
[hackillinois17 [master]:> git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
```

```
[hackillinois17 [master]:> git co -b fix-typo
Switched to a new branch 'fix-typo'
```

```
[hackillinois17 [fix-typo]:> git status
On branch fix-typo
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)
```

```
        modified:   README.md
```

```
no changes added to commit (use "git add" and/or "git commit -a")
```

```
[hackillinois17 [fix-typo]:> git commit -am "Change title of README file"
[fix-typo de12439] Change title of README file
1 file changed, 1 insertion(+), 1 deletion(-)
```

```
[hackillinois17 [fix-typo]:> 
```

```
[hackillinois17 [fix-typo]:> git push origin fix-typo  
Counting objects: 3, done.  
Writing objects: 100% (3/3), 273 bytes | 0 bytes/s, done.  
Total 3 (delta 0), reused 0 (delta 0)  
To https://github.com/svcastaneda/hackillinois17.git  
* [new branch]      fix-typo -> fix-typo
```

```
hackillinois17 [fix-typo]:> 
```

```
[hackillinois17 [fix-typo]:> git push origin fix-typo
Counting objects: 3, done.
Writing objects: 100% (3/3), 273 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/svcastaneda/hackillinois17.git
 * [new branch]      fix-typo -> fix-typo
```

```
[hackillinois17 [fix-typo]:> git co master
Switched to branch 'master'
Your branch is up-to-date with 'origin/master'.
```

```
[hackillinois17 [master]:> git merge fix-typo
Updating 01ff815..de12439
Fast-forward
 README.md | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
hackillinois17 [master]:> 
```

```
[hackillinois17 [fix-typo]:> git push origin fix-typo
Counting objects: 3, done.
Writing objects: 100% (3/3), 273 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/svcastaneda/hackillinois17.git
 * [new branch]      fix-typo -> fix-typo
```

```
[hackillinois17 [fix-typo]:> git co master
Switched to branch 'master'
Your branch is up-to-date with 'origin/master'.
```

```
[hackillinois17 [master]:> git merge fix-typo
Updating 01ff815..de12439
Fast-forward
 README.md | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
hackillinois17 [master]:> 
```



This repository

Search

Pull requests

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svcastaneda / hackillinois17

Watch

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Code

Issues 0

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Projects 0

Wiki

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Graphs

Settings

No description, website, or topics provided.

Edit

New

Add topics

1 commit

1 branch

0 releases

1 contributor

Your recently pushed branches:

fix-typo (less than a minute ago)

Compare & pull request

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download



svcastaneda Initial commit

Latest commit 01ff815 an hour ago



README.md

Initial commit

an hour ago



README.md

# hackillinois17



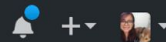
This repository

Search

Pull requests

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svcastaneda / hackillinois17

Watch 0

Star 0

Fork 0

Code

Issues 0

Pull requests 0

Projects 0

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Settings

## Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).



base: master

...

compare: fix-typo

✓ Able to merge. These branches can be automatically merged.



Change title of README file

Write

Preview

AA B i

“ < > ↻

☰ ☰ ☰

↶ @ ★

HackIllinois wasn't spelled correctly in the autogenerated README.

Attach files by dragging & dropping, [selecting them](#), or pasting from the clipboard.

Styling with Markdown is supported

Create pull request

Reviewers



No reviews—request one

Assignees



No one—assign yourself

Labels



None yet

Milestone



No milestone





This repository

Search

Pull requests

Issues

Gist



svcastaneda / hackillinois17

Watch

0

Star

0

Fork

0

Code

Issues 0

Pull requests 1

Projects 0

Wiki

Pulse

Graphs

Settings

# Change title of README file #1

Edit



svcastaneda wants to merge 1 commit into master from fix-typo

Conversation 0

Commits 1

Files changed 1

+1 -1



svcastaneda commented just now

Owner



HackIllinois wasn't spelled correctly in the autogenerated README.

Change title of README file

de12439

Add more commits by pushing to the **fix-typo** branch on **svcastaneda/hackillinois17**.



**This branch has no conflicts with the base branch**

Merging can be performed automatically.

Merge pull request

You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Reviewers



No reviews—request one

Assignees



No one—assign yourself

Labels



None yet

Projects

None yet

Milestone



No milestone



Write

Preview

AA B i







This repository

Search

Pull requests

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svcastaneda / hackillinois17

Watch 0

Star 0

Fork 0

Code

Issues 0

Pull requests 1

Projects 0

Wiki

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Graphs

Settings

# Change title of README file #1

Edit

**Merged** svcastaneda merged 1 commit into master from fix-typo just now

Conversation 0

Commits 1

Files changed 1

+1 -1



svcastaneda commented just now

Owner



HackIllinois wasn't spelled correctly in the autogenerated README.

Change title of README file

de12439



svcastaneda merged commit b033660 into master just now

Revert



**Pull request successfully merged and closed**

You're all set—the fix-typo branch can be safely deleted.

Delete branch



Write

Preview

AA B i



Reviewers



No reviews—request one

Assignees



No one—assign yourself

Labels



None yet

Projects

None yet

Milestone



No milestone





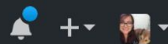
This repository

Search

Pull requests

Issues

Gist



svcastaneda / hackillinois17

Watch

0

Star

0

Fork

0

Code

Issues 0

Pull requests 0

Projects 0

Wiki

Pulse

Graphs

Settings

No description, website, or topics provided.

Edit

New Add topics

3 commits

1 branch

0 releases

1 contributor

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download



svcstaneda committed on GitHub Merge pull request #1 from svcstaneda/fix-typo

Latest commit b033660 10 seconds ago



README.md

Change title of README file

27 minutes ago

README.md

# HackIllinois '17

```
[hackillinois17 [master]:> git pull origin master
remote: Counting objects: 1, done.
remote: Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (1/1), done.
From https://github.com/svcastaneda/hackillinois17
 * branch                master      -> FETCH_HEAD
    01ff815..b033660      master      -> origin/master
Updating de12439..b033660
Fast-forward
```

```
hackillinois17 [master]:> 
```

questions?

# Interactive Git Tutorial

<https://try.github.io/>

# Git Cheatsheet

<https://goo.gl/OS9aab>