

EMILY XIE

@emilyxxie

DISSECTING GIT'S GUTS

OSCON 2016 Command Cheatsheets

DISSECTING GIT'S GUTS: EXERCISE #1

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git init

initialize a git repository

git hash-object -w [filename]

save given file to git database

git cat-file -p [SHA hash]

inspect git file. "p" stands for pretty, as in human readable

ls .git

see the contents of your .git directory

DISSECTING GIT'S GUTS: EXERCISE #2

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`git update-index --add [path to file]`

add a file to the index, aka the staging area

`git ls-files --stage`

examine all files in your staging area

`git write-tree`

write a tree object based on the index file, aka staging

`find .git/objects -type f`

list all of the objects in your git database

Note: if you are getting a message like: "fatal: This operation must be run in a work tree" it means that you are trying to run a command that requires you to be inside the working directory, but you have cd'ed into the .git folder. To fix this, cd back to your root directory and try running the command from there instead.

DISSECTING GIT'S GUTS: EXERCISE #3

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echo 'your commit message here' | git commit-tree [tree hash] write a commit msg, create a commit out of a tree object

find .git/objects -type f list all of the objects in your git database

git cat-file -p [SHA hash] inspect git file. "p" stands for pretty, as in human readable

git update-index - -add [path to file] add a file to the index, aka the staging area

git write-tree write a tree object using what's in the index file aka staging

echo 'your commit message here' | git commit-tree [tree hash] -p [previous commit hash]
write a commit msg, create a commit with it out of a tree object, and link it to a previous commit object. the -p stands for "parent"

git log --stat [SHA HASH] run a git log on a commit object

DISSECTING GIT'S GUTS: EXERCISE #4

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ls .git/heads/refs

list everything in your refs folder

git update-ref refs/heads/master [commit hash]

create a master branch and save it into your refs directory

cat .git/refs/heads/[branch name]

read a branch file

git add .

porcelain command to add a new git file to staging

git commit -m "your commit message here"

porcelain command to commit your changes

DISSECTING GIT'S GUTS: MISC COMMANDS

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```
git cat-file -t [SHA hash]
```

inspect git file type. the "t" here stands for type