How does Git actually work?

CB Bailey

@hashpling
they/them

Andy Balaam

artificialworlds.net

he/him
What does `git init` do?
What does `git init` do?

Before:

After:

- `.git/config`
- `.git/description`
- `.git/HEAD`
- `.git/hooks/`
- `.git/info/exclude`
What happens when I `git add`?
What happens when I `git add`?

Before:
- .git/config
- .git/description
- .git/HEAD
- .git/hooks/
- .git/info/exclude

After:
- ... all those, and:
- .git/index
- .git/3d/16dec17e094468d6...
What is a commit?
What is a commit?

Before:
.git/index
.git/3d/16dec17e094468d6...
.git/HEAD
...

After:
.git/index – updated
.git/COMMIT_EDITMSG
.git/logs/HEAD
.git/logs/refs/heads/master
.git/refs/heads/master
... all the others + more objects
Why does *git checkout* do so many different things?
Why does `git checkout` do so many different things?

Before:

.git/HEAD:
ref: refs/heads/master
.git/index
.git/logs/HEAD
hello.py

After:

.git/HEAD
27df28233d9239bdb7a3...
.git/index – updated
.git/logs/HEAD – updated
hello.py - updated
Is Git "secure"? What do you mean?
Which line-ending style is right?
Can you live-code a Git repo by hand?
Questions?

CB Bailey
@hashpling

Andy Balaam
artificialworlds.net