

Intro to Git and GitHub

Branching and Merging

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How we'll work together today

Pairing
Drawing
Hacking

Revision Control System: What is it?

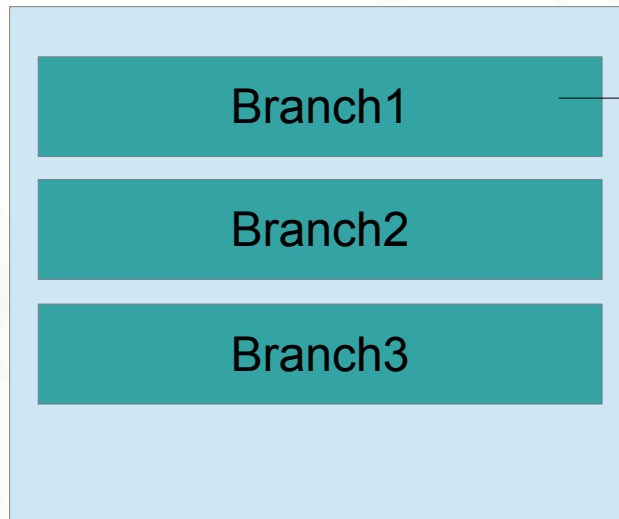
“A process for managing
changes.”

Google Docs, autosave and Revision Control

<https://docs.google.com/document/>

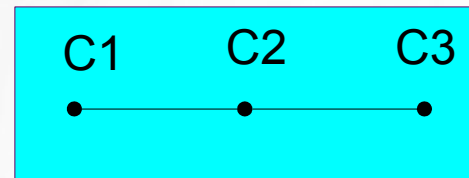
Commit
Checkout
Undo

REPO



contains

Branch1



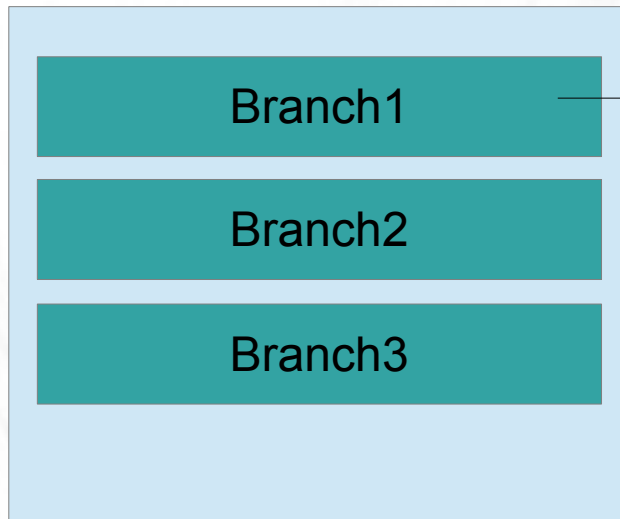
git checkout branch1

WORKING COPY

myrepo/
README.txt
helloworld.py

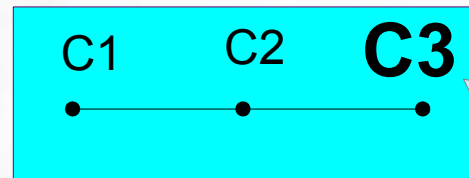
Repo
Branch
Working copy
Directory
Files
HEAD

REPO



contains

Branch1



HEAD

git checkout branch1

WORKING COPY

myrepo/
README.txt
helloworld.py

Creating and managing
files in a repo

Investigation tools:

```
git status
```

```
git log
```

```
git branch
```

```
git show
```

Undo tools:

```
git reset HEAD
```

```
git checkout [file]
```

```
mkdir myrepo  
cd myrepo  
git init  
touch README.md  
git add README.md  
git commit -m \  
    "Adding a README"
```

DEMO

Now you try it!

Branching!

```
git checkout -b \
    Testbranch
# EDIT THE FILE
git add README.md
git commit -m \
    "Added my name"
git checkout master
git merge testbranch
```

Now you try it!

Investigation tools:

```
git status
```

```
git log
```

```
git branch
```

```
git show
```

Pair up!

Person 1: Use index cards to make changes to your repo.

Person 2: Try to figure out what changed.

What does 'git branch' show?

What does 'git status' show?

What does 'git log' show?

What does 'git show' show?

HEAD / Index / Working copy

Fetch a repo from Github:

Fork

<https://github.com/pyladiespdx/gitbranching>

```
git clone \  
git@github.com:yourname/gitbranching.git
```

```
git checkout -b [branch]  
git add README.md  
git commit -m \  
    "Adding a README"
```

Fetch a repo from Github:

```
git add README.md
git commit -m \
    "Adding my name"
git push origin \
    [branch]:[branch]
```

Go to Github and open a pull request.

Add a remote:

```
git remote add [name] [URL]  
git fetch [name]
```

```
git checkout \  
    [name]/[branch] -b [branch]
```

```
git push origin \  
    [branch]:[branch]
```