

A Brief Introduction to git and GitHub



git



GitHub

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Alts: Subversion/svn, Mercurial

Version Control



Alts: BitBucket, GitLab

Repository Hosting Service
repository = “repo”

"FINAL".doc



FINAL.doc!



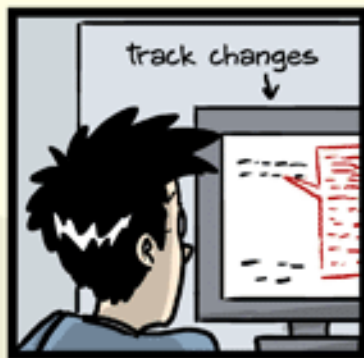
FINAL_rev.2.doc



FINAL_rev.6.COMMENTS.doc



FINAL_rev.8.comments5.
CORRECTIONS.doc



FINAL_rev.18.comments7.
corrections9.MORE.30.doc



FINAL_rev.22.comments49.
corrections.10.#@\$%WHYDID
ICOMETOGRADSCHOOL?????.doc



Goals

- Keep track of changes to files
- Revert back to old versions of files
- Test changes to code/files without losing original
- Synchronizes code between different people, facilitating collaborative work

git commands:

add

commit

push

```
git add <file>
```

```
git commit -m  
"<descriptive message>"
```

**Note: [blah] is optional, <blah> means fill in with your own text,
<<blah>> is a comment you should omit**

```
mkdir test-2020  
cd test-2020  
echo "# test-2020" >> README.md  
  
git init  
  
git add README.md  
git commit -m "first commit"
```

```
git status
```

```
git log [--oneline]
```


git reset

git reset --hard <hash>

git reset --soft <hash>

git reset --hard HEAD

(git revert)

git branch

```
git branch <new_branch>
```

```
git checkout <new_branch>
```

```
git checkout -b <new_branch>
```

```
git branch -D <branch>
```

`git merge`

Handling a dreaded merge conflict!

git push origin master

Remote Name

Remote Branch

```
git remote add origin https://github.com/<user>/<repo>.git  
git push --set-upstream origin master
```

In new directory:

```
git clone <repo url>
```

Or use GitHub Desktop

```
git clone https://github.com/<user>/<repo>.git
```

```
git clone https://github.com/ageller/CIERA_REU.git
```

More to come!

- Open source and collaborative workflows
- Intro to other useful GitHub features