

GIT basics

Overview

1. What is git?
2. Why git?
3. How does git work?
4. Installing git
5. What is GitHub?



What is git?

And version control

What is git?

Started in 2005 by Linus Torvalds

Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.

Basically, a better way for you to pass code easily and efficiently

If you f*ck up,

<https://ohshitgit.com>

Or just go to StackOverflow :)

A large black circle is centered on a solid yellow background. Inside the circle, the text "Why git?" is written in a bold, black, sans-serif font.

Why git?

How does git work?

And how can I use it
for my project

How does git work?

Git can be very intimidating at the start especially if you don't know what you're doing.

There are several concepts that you have to be familiar with:

add

clone

push

pull

commit

checkout

merge

Git flow

Clone repository from github

Modify and create additional code

Add the files to the repository

Commit the files by using git add to add the files you want to commit and use git commit to commit the files to the repository

Pull the existing files in the repository to make sure there are no conflicts with your code and the other codes uploaded

Push the files to the repository

Commit

Checkpoint in your code

Think of this as your last save. If you screw up in your code you can go back to this

```
Antons-MacBook-Pro% git commit -m "added new feature on player. fixed walking bugs"
```

Add

Command to add the files you want to put to the checkpoint (commit)

```
Antons-MacBook-Pro% git add .
```

Clone

Command to clone the **repository** (folder of code) from github to your local drive

```
Antons-MacBook-Pro% git clone https://github.com/benitzen/CSCI152
```

Push

Command to upload the checkpoints you have saved to github/the online drive

```
Antons-MacBook-Pro% git push origin master
```

Pull

Command to download the checkpoints other people have saved to github/the online drive

```
Antons-MacBook-Pro% git pull origin master
```

Checkout

Command to branch out of the existing branch (so you won't ruin the existing working main code with your added features)

```
Antons-MacBook-Pro% git checkout -b branchName
```

Merge

Command to merge branches. You usually use this if you've finished the work you need to do in the branch you created and you now want to add that feature to the main branch for everyone to build on top of

```
Antons-MacBook-Pro% git merge upstream/master
```

Installing git

Installing git

<https://git-scm.com/downloads>

Then install

What is github?

How is it different
from git?

Git vs Github

Git is a revision control system, a tool to manage your source code history.

GitHub is a hosting service for Git repositories.

So they are not the same thing: **Git** is the **tool**, **GitHub** is the **service for projects that use Git**.