## How to Contribute to CPP Parking

https://tinyurl.com/h4tml4m

#### Step 0. Install Some Needed Software

- git
- java 8
- docker
- docker-compose

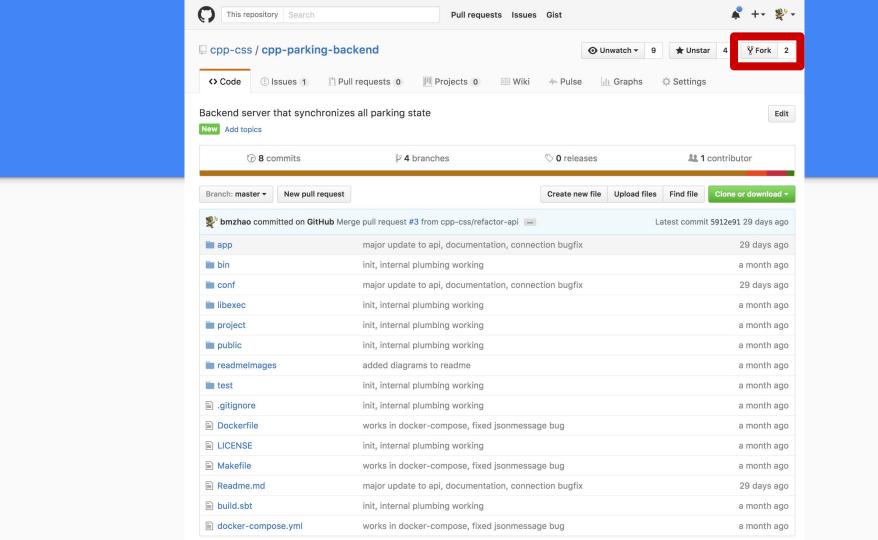
\*If you just want to run the backend, without the need to develop on it, you only need docker and docker-compose

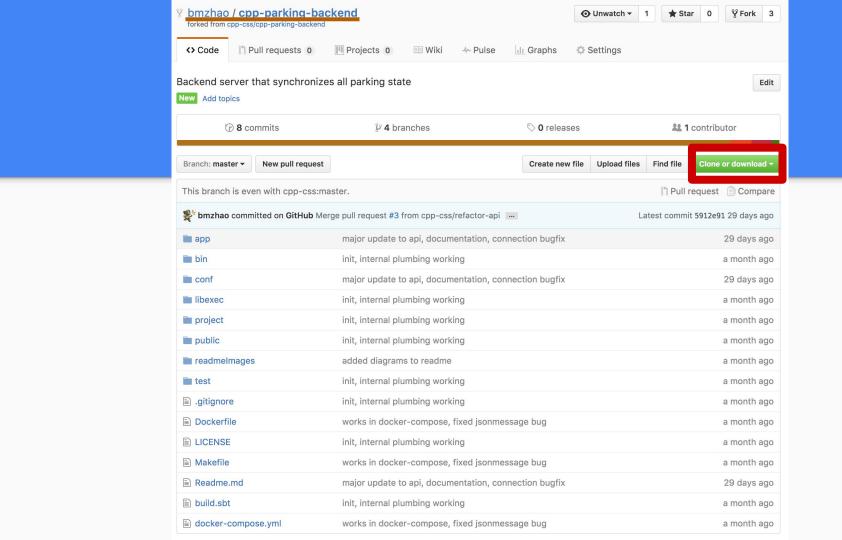
### Assuming you're on Ubuntu 16.04...

- To install java 8: <a href="http://tipsonubuntu.com/2016/07/31/install-oracle-java-8-9-ubuntu-16-04-linux-mint-18/">http://tipsonubuntu.com/2016/07/31/install-oracle-java-8-9-ubuntu-16-04-linux-mint-18/</a>
  - sudo add-apt-repository ppa:webupd8team/java
  - sudo apt update; sudo apt install oracle-java8-installer
  - o sudo apt install oracle-java8-set-default
- To install git: sudo apt-get install git
- To install docker: https://docs.docker.com/engine/installation/
  - also, if you don't want to keep on using sudo for every docker-related command: <a href="http://askubuntu.com/a/739861">http://askubuntu.com/a/739861</a>
- To install docker compose: <a href="https://github.com/docker/compose/releases">https://github.com/docker/compose/releases</a>

#### Step 1. Fork the project

- Our github is here: <a href="https://github.com/cpp-css">https://github.com/cpp-css</a>
- The backend repository is here:
  https://github.com/cpp-css/cpp-parking-backend
- Please Fork the repository:
  - click the fork button at the top right
  - o forking an open source project creates a copy of a repository under your account
  - this lets you make modifications to your version of the code, without directly affecting the upstream (original) repository
- you can merge your changes back upstream by pull requesting





#### Step 2. Clone the Project

- Copy the URL to your clipboard, then open a terminal in Linux or OSX (or either git-bash or Bash for windows on Windows)
- git clone <paste url here w/o greater than or less than signs>
  - o eg: git clone https://github.com/cpp-css/cpp-parking-backend.git
  - except don't copy and paste the above command's url because it's not your fork!
- the url is different for each person, because it's now a repo associated w/your github account

### If you want to run the entire project:

- execute "make run" in the directory you just cloned
- this will use docker-compose to run 2 docker containers, one for the backend server, and one for redis
- to check if everything works, go to your browser, and check localhost:9000/lots
  - you should see some json data
  - o to test out functionality, try executing: curl --header "Content-type: application/json" --request POST --data '{"lot": "A", "diff": 20}' http://localhost:9000/lots
  - then refresh the page; you should see lot A's occupancy increase

# If you want to actively develop on the backend:

- execute: "bin/activator compile" from the project root
- this will download all of the libraries needed to run the project
  - the very first time, this will take a long time, maybe 10-20 minutes
  - o afterwards, it will be much quicker
- change the redis.host field in application.conf from "redis" to "localhost"
- run redis on your machine with: "docker run --rm -p 6379:6379 redis redis-server --notify-keyspace-events AKE"
- then execute "bin/activator run", and check your browser at localhost:9000/lots

