macOS ARM xv6-riscV Install

- **Prerequisite**
  - Xcode
  - Command Line Tools part of Xcode
  - Homebrew (https://brew.sh/)

    $ /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
- **Installing xv6-riscV**

Open the macOS terminal of your choice.
Note: Everything with $ just paste in your terminal do not include the $

Confirm home-brew is update:

```
$ brew update
$ brew upgrade
```

Install rosetta (probably don't need but idk)

```
$ softwareupdate —install-rosetta
```

Install qemu

```
$ brew install qemu
```

Get the riscv-toolchain (https://github.com/riscv-software-src/homebrew-riscv):

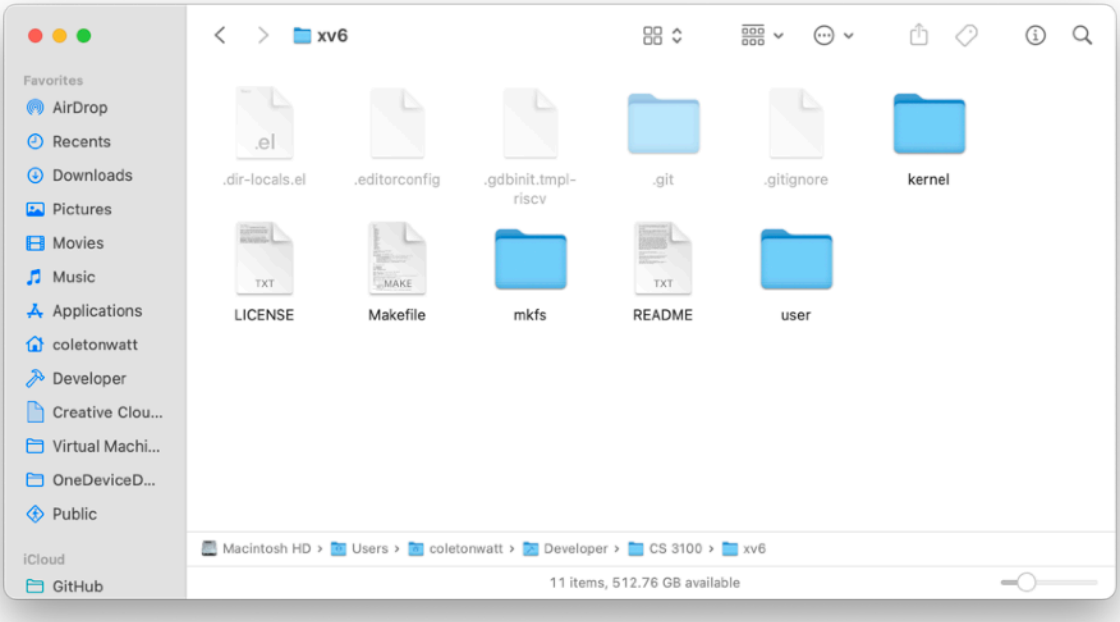
```
$ brew tap riscv-software-src/riscv
$ brew install riscv-tools
```

This install does take forever specially the make command (mine took like 20ish minutes)

```
$ brew install riscv-openocd
```

Test the install

```
$ brew test riscv-tools
```



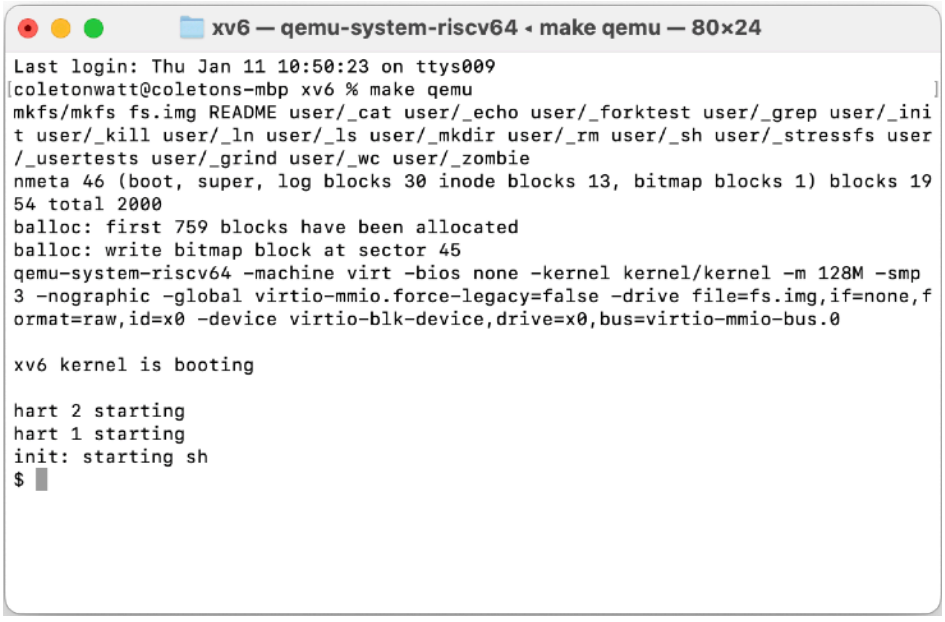
Download the xv6-riscv file how
and where you put is up to you I used GitHub Desktop

https://github.com/mit-pdos/xv6-riscv

Open the file location in terminal (if you have the bottom path bar ⌥⌘P you can right click the file and select Open in Terminal)

Run xv6

$ make qemu



You are now in xv6 congrats to exit press control+A, then X

Control+A, then C will open Qemu
$ make qemu clean will recompile all files of xv6

If you need help you can reach out to me in class or through Discord (eleninja102)

- **Optional**

Orbstack (https://orbstack.dev/) allows you to run linux commands in a linux machine similar to WSL for windows. Also is great if you are working with docker or Kubernetes

https://pdos.csail.mit.edu/6.S081/2020/xv6/book-riscv-rev1.pdf

Vargrant can emulate x86 and allow for xv6-x86, however, it is pretty unstable and laggy.