

# Mac Build for Proto

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May 2024

## 1 Requirements and Steps

1. Install VisIt visualization package from
  - <https://visit-dav.github.io/visit-website/releases-as-tables/>
  - While installing, select the Applied Numerical Algorithms Group set of macros to make several prebuilt visualization pipelines preloaded.
2. Install XCode from Apple App Store (this is big and might take a while)
3. open up a Terminal. you find this in Applications/Utilities
4. `sudo xcodebuild -license`
5. `sudo xcode-select --install`
6. verify you have a working clang++ compiler in your path now `clang++ --version`
7. for homebrew users you will need the following packages: `cmake`, `git`, `open-mpi`, `hdf5`, `hdf5-mpi` (although XCode Command Line Tools now comes with git)
8. clone the Proto code base
  - `git clone https://github.com/applied-numerical-algorithms-group-lbnl/proto.git`
  - `cd proto`
  - `git checkout master`
  - `git submodule init`
  - `git submoudle update`
9. see if cmake works for you like magic right out of the gate
10. If you have HDF5 installed in some alternative place, then use `EXPORT HDF5_ROOT=/my/hdf5_directory`
  - `cd proto`

- `mkdir build`
- `cd build`
- `cmake ..`
- `make`

11. now a stronger smoke test, return to your proto directory, then

- `python proto_make -t TEST`

Hopefully you can make it as far as step 8 before Thursday, but if not we can help get past any issue when you arrive. The XCode and homebrew steps take a while to complete and uses up disk space and a lot of network so it would be nice to have that done ahead of time.