Download the GO Ethereum Tool link is here: [link](https://columbia.bootcampcontent.com/columbia-bootcamp/cu-nyc-fin-pt-06-2020-u-c/blob/master/01-ClassFiles/18-Blockchain/Supplemental/blockchain-install-guide.md)

Create a new directory: C:\Users\james\Desktop\Homework\BlockChain\BC-ToolsHW

And Download the GO Ethereum Tool link is here: [link](https://columbia.bootcampcontent.com/columbia-bootcamp/cu-nyc-fin-pt-06-2020-u-c/blob/master/01-ClassFiles/18-Blockchain/Supplemental/blockchain-install-guide.md) into ^ directory

Open up a Gitbash (assuming u are using windows) and cd into BC-ToolsHW and create 2 new nodes and jot down the public key and secret key addresses.

./geth account new --datadir node1

Password: lala

Public address of the key: 0x16567359CF514fD011aa6F54F241C735bc42c4E6

Path of the secret key file: node1\keystore\UTC--2020-11-04T23-45-29.763790400Z--16567359cf514fd011aa6f54f241c735bc42c4e6

./geth account new --datadir node2

Password: lala

Public address of the key: 0x2E4616E7B34BF8A0B7eA6Be291Ed578277c3F9a3

Path of the secret key file: node2\keystore\UTC--2020-11-04T23-46-09.011600600Z--2e4616e7b34bf8a0b7ea6be291ed578277c3f9a3

Run: ./puppeth

Network name: vaultone

ne

Configure new genesis

Create new genesis from scratch

Choose POA consensus Algo

Paste both account addresses from the first step one at a time into the list of accounts to seal.

Paste them again in the list of accounts to pre-fund. There are no block rewards in POA, so you'll need to pre-fund.

You can choose no for pre-funding the pre-compiled accounts (0x1 .. 0xff) with wei. This keeps the genesis cleaner.

Chain/Network ID: 777

"Manage existing genesis"

Export genesis configurations.

Of the output Json files, keep only “vaultone.json”

Screenshot the workflow in the gitbash and save to screenshots in the project folder

Using Geth, initialize each node

./geth --datadir node1 init vaultone.json

./geth --datadir node2 init vaultone.json

Mine in node 1:

Kyle had me run first:

./geth --datadir node1 --mine --minerthreads 1

This was in istr:

./geth --datadir node1 --unlock "SEALER\_ONE\_ADDRESS" --mine --rpc --allow-insecure-unlock--rpc --allow-insecure-unlock

0x16567359CF514fD011aa6F54F241C735bc42c4E6

./geth --datadir node1 --unlock "0x16567359CF514fD011aa6F54F241C735bc42c4E6" --mine --minerthreads 1 --rpc --allow-insecure-unlock --syncmode fast

Copy down node 1’s Enode which u will see right after Started “P2P networking” as the mining starts.

self=enode://a93cef7b8ecf0e0f3b9b29686686315d2cf37b3c8704a0a5e4fa63ecc9a0e1a8ea1eac44bdc5a9d897f632a024589ee34a579de8e7cb84ccd2a386077ad1aecb@127.0.0.1:30303

same:

self=enode://a93cef7b8ecf0e0f3b9b29686686315d2cf37b3c8704a0a5e4fa63ecc9a0e1a8ea1eac44bdc5a9d897f632a024589ee34a579de8e7cb84ccd2a386077ad1aecb@127.0.0.1:30303

Mine in node 2:

In original instr:

./geth --datadir node2 --unlock "SEALER\_TWO\_ADDRESS" --mine --port 30304 --bootnodes "enode://SEALER\_ONE\_ENODE\_ADDRESS@127.0.0.1:30303" --ipcdisable --allow-insecure-unlock

Kyle had me add “--syncmode fast --minerthreads 1” at the end

./geth --datadir node2 --unlock "0x2E4616E7B34BF8A0B7eA6Be291Ed578277c3F9a3" --mine --port 30304 --bootnodes " enode://a93cef7b8ecf0e0f3b9b29686686315d2cf37b3c8704a0a5e4fa63ecc9a0e1a8ea1eac44bdc5a9d897f632a024589ee34a579de8e7cb84ccd2a386077ad1aecb@127.0.0.1:30303" --ipcdisable --allow-insecure-unlock --syncmode fast --minerthreads 1

Go into mycrypto and change network to “banksy”