ETHEREUM SEMINAR
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ALL SOURCE CODE

https://github.com/leejw51/MyCoin.git

CONNECT WITH GLOBAL COMPUTER ETHEREUM

make ehtereum private-net

PRE-REQUISITE OS

- windows: windows 10 64 bit recommended

- linux: ubuntu 64bit recommended

- mac : mac osx

- ram: 8 GB recommended

GETH DOWNLOAD

- https://geth.ethereum.org/downloads/

GETH COMPILE

- GIT

- golang

INSTALL GIT

- https://git-scm.com/download/win

INSTALL GO-LANG

- https://golang.org/dl/

DOWNLOAD ETHEREUM SOURCE-CODE

- https://github.com/ethereum/go-ethereum

- git clone git@github.com:ethereum/go-ethereum.git

COMPILE GETH

- make all

- that's all you need for ethereum!

GENESIS.TXT

genesis.json)

```
{
"config": {
"chainId": 33,
"homesteadBlock": 0,
"eip155Block": 0,
"eip158Block": 0
},
"nonce": "0x0000000000000033",
"timestamp": "0x0",
"parentHash": "0x0000000000000000000000000000000000000000000000000000000000000000",
"gasLimit": "0x8000000",
"difficulty": "0x100",
"mixhash": "0x0000000000000000000000000000000000000000000000000000000000000000",
"coinbase": "0x36991da59b9c95596a13bcc9103e9c5f572cdf84",
    "alloc": {
        "36991da59b9c95596a13bcc9103e9c5f572cdf84": { "balance": "100000010000000000000000000"},
        "3a10412c8931ea73f1f20c45bc72e6af774c9ed7": { "balance": "1000000000000000001" },
        "a8a4ed78f1d9a1d480ec893e4253618831b92720": { "balance": "1" },
        "b6934d667e8c069b3b6fd9d5d56d356cdd43b4a0": { "balance": "0" }
    }
}
```

MAKE PRIVATE ETHEREUM NETWORK

- .\geth --datadir G:\eth init G: \eth\genesis.txt

- .\geth --networkid 4649 --nodiscover -- maxpeers 0 --datadir g:\eth console

MAKE WALLET

- mkdir eth

- cd eth

- mkdir data

- geth --datadir ./data account new

- wallet created in data/keystroke
  {"address":"d38050b107835c1eafa6ac1c25cda47b2cd50efa","crypto":{"cipher":"aes-128-ctr","ciphertext":"cc884b0b4e7407eda08cc0ae1ab41c18b95680e7be9e44e2a80f1d4cd272044e","cipherparams":{"iv":"4085e9c8cf336b944294ea2e8565256b"},"kdf":"scrypt","kdfparams":{"dklen":32,"n":262144,"p":1,"r":8,"salt":"9f228c7b284c1e770ed2376a427961eaac7ae1f5568e48fa41dd2466c5b07db0"},"mac":"ca6116501e3d3167fa5ee4afa05f6497671ad79bf904664077d050089eae8552"},"id":"fc7058af-02dc-4b90-85d5-99713f4c77cd","version":3}

CONNECT ETHTEREUM API

- geth --networkid 4649 --nodiscover --maxpeers 0 --datadir ~data_test --mine --minerthreads 1 --rpc --rpcaddr "0.0.0.0" --rpcport 8545 --rpccorsdomain "*" --rpcapi "admin,db,eth,debug,miner,net,shh,txpool,personal,web3"

MAKE WALLETS

- personal.newAccount("pass0");

- personal.newAccount("pass1");

SET AS MAIN WALLET

- eth.setEtherbase(eth.accounts[0]);

- eth.coinbase = eth.accounts[0]

MINING

- miner.start(1);

- miner.stop();

DISPLAY INFORMATION

- eth.getTransaction("....")

- eth.pendingTransactions

- eth.blockNumber

- eth.mining

- eth.hashrate

ethereum

BASICS

generate transactions

ETHEREUM UNIT

1 eth= 100000000000000000 wei

CHECK BALANCES

- eth.getBalance(eth.accounts[0])

- web3.fromWei(eth.getBalance(eth.accounts[0]) , "ether")

- web3.fromWei(1)

  - "0.000000000000000001"

- web3.toWei(1)

  - "1000000000000000000"

TRANSFER AMOUNT

- personal.unlockAccount(eth.accounts[0])

- eth.sendTransaction({from:eth.accounts[0], to:eth.accounts[1], value:100});

CHECK BALANCE AFTER TRANSFER

- eth.getBalance(eth.accounts[0])

THANK YOU

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