#1
https://code.visualstudio.com/docs/?dv=linux64_deb

#2
sudo apt update

sudo apt install python rename git software-properties-common libzmq3-dev libqrencode-dev libqt5gui5 libqt5core5a libqt5dbus5 qttools5-dev qttools5-dev-tools libprotobuf-dev protobuf-compiler build-essential libtool autotools-dev automake pkg-config libssl-dev libevent-dev bsdmainutils python3 libboost-system-dev libboost-filesystem-dev libboost-chrono-dev libboost-test-dev libboost-thread-dev libminiupnpc-dev -y

sudo add-apt-repository ppa:bitcoin/bitcoin

sudo apt update

sudo apt install libdb4.8-dev libdb4.8++-dev -y

#3
git clone https://github.com/bitcoin/bitcoin

#4
cd bitcoin

#5
git checkout 0.17

#6
./autogen.sh
./configure --disable-tests --disable-gui-tests --disable-bench

#7
make -j2

#8
./src/bitcoind -printtoconsole

#9
make clean

#10
cd ..
cp -R bitcoin altcoin

#11
rm -rf ./altcoin/.git
cd altcoin

#12
find . -type f -print0 | xargs -0 sed -i 's/bitcoin/altcoin/g'
find . -type f -print0 | xargs -0 sed -i 's/Bitcoin/Altcoin/g'
find . -type f -print0 | xargs -0 sed -i 's/BitCoin/AltCoin/g'
find . -type f -print0 | xargs -0 sed -i 's/BITCOIN/ALTCOIN/g'
find . -type f -print0 | xargs -0 sed -i 's/BTC/ATC/g'
find . -type f -print0 | xargs -0 sed -i 's/btc/atc/g'
find . -type f -print0 | xargs -0 sed -i 's/Btc/Atc/g'

```
#13
find . -exec rename 's/bitcoin/altcoin/' {} ";"
find . -exec rename 's/btc/atc/' {} ";"

#14
grep -ir bitc

#15
find . -type f -print0 | xargs -0 sed -i 's/Bitconi/Altconi/g'
find . -type f -print0 | xargs -0 sed -i 's/bitcon/altcon/g'

#16
find . -type f -print0 | xargs -0 sed -i '/opyright/ s/Altcoin/Bitcoin/'
sed -i 's/altcoin/bitcoin/g' doc/release-notes/*
sed -i 's/Altcoin/Bitcoin/g' doc/release-notes/*

#17
cp -R ../bitcoin/.git ./.git

#18
git config --global user.email "topoyr@gmail.com"
git config --global user.name "Satoshikun"

#19
git checkout -b altcoin

#20
git add .

#21
git commit -m "rename files, strings"

#22
code .

#23
src/chainparams.cpp

        consensus.BIP34Height = 227931;
        consensus.BIP34Hash =
uint256S("0x000000000000024b89b42a942fe0d9fea3bb44ab7bd1b19115dd6a759c0808b8");
        consensus.BIP65Height = 388381; //
000000000000000004c2b624ed5d7756c508d90fd0da2c7c679febfa6c4735f0
        consensus.BIP66Height = 363725; //
00000000000000000379eaa19dce8c9b722d46ae6a57c2f1a988119488b50931

        consensus.BIP34Height = 1000;
        consensus.BIP34Hash = uint256S("0x0");
        consensus.BIP65Height = 1; //
000000000000000004c2b624ed5d7756c508d90fd0da2c7c679febfa6c4735f0
        consensus.BIP66Height = 1; //
00000000000000000379eaa19dce8c9b722d46ae6a57c2f1a988119488b50931

#24
        consensus.powLimit = uint256S("00000000ffffffffffffffffffffffffffffffffffffffffffffffffffffffff");
```

```
        consensus.powLimit = uint256S("0000ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff");
```

#25
```
consensus.nPowTargetSpacing = 10 * 60;

consensus.nPowTargetSpacing = 3 * 60;
```

#26
```
        consensus.nMinimumChainWork =
uint256S("0x000000000000000000000000000000000000000000028822fef1c230963535a90d");
        consensus.defaultAssumeValid =
uint256S("0x0000000000000000002e63058c023a9a1de233554f28c7b21380b6c9003f36a8");

        consensus.nMinimumChainWork = uint256S("0x0");
        consensus.defaultAssumeValid = uint256S("0x0");
```

#27
```
hexdump -n 4 -e '4/4 "%08X" 1 "\n"' /dev/random
```

#28
```
        pchMessageStart[0] = 0xf9;
        pchMessageStart[1] = 0xbe;
        pchMessageStart[2] = 0xb4;
        pchMessageStart[3] = 0xd9;

        pchMessageStart[0] = 0xd8;
        pchMessageStart[1] = 0xd7;
        pchMessageStart[2] = 0x21;
        pchMessageStart[3] = 0x69;
```

#29
```
echo $RANDOM
```

#30
```
        nDefaultPort = 8333;

        nDefaultPort = 18245;
```

#31
```
        const char* pszTimestamp = "The Times 03/Jan/2009 Chancellor on brink of second
bailout for banks";

        const char* pszTimestamp = "Altcoin was born 2018!!!";
```

#32
```
openssl ecparam -genkey -name secp256k1 -out genesiscoinbase.pem
openssl ec -in genesiscoinbase.pem -text > genesiscoinbase.hex
cat genesiscoinbase.hex
```

#33
```
        const CScript genesisOutputScript = CScript() <<
ParseHex("04678afdb0fe5548271967f1a67130b7105cd6a828e03909a67962e0ea1f61deb649f
6bc3f4cef38c4f35504e51ec112de5c384df7ba0b8d578a4c702b6bf11d5f") << OP_CHECKSIG;
```

```
        const CScript genesisOutputScript = CScript() <<
ParseHex("0459df96237e67920e8b07d371f2a2820e6aee4c2dba4c611c6e811e6c74dc3d095a
245e9ae7836c086f16929ef82e3f78f91c75377d4fd72b58df27818f478ef6") << OP_CHECKSIG;
```

#34
```
date +%s
```

#35
```
        genesis = CreateGenesisBlock(1231006505, 2083236893, 0x1d00ffff, 1, 50 * COIN);

        genesis = CreateGenesisBlock(1535029814, 2083236893, 0x1f00ffff, 1, 50 * COIN);
```

#36
```
consensus.hashGenesisBlock = genesis.GetHash();
        if (true) {
        printf("Genesis mining started\n");
        genesis.nNonce = 0;
        consensus.hashGenesisBlock = uint256S("0x001");
        for(genesis.nNonce = 0; UintToArith256(genesis.GetHash()) >
UintToArith256(consensus.powLimit); genesis.nNonce++){  }
        printf("New genesis merkle root: %s\n", genesis.hashMerkleRoot.ToString().c_str());
        printf("New genesis nonce: %lu\n", (unsigned long)genesis.nNonce);
        printf("New genesis hash: %s\n", genesis.GetHash().ToString().c_str());
        printf("Now replace the values, reComment the Genesis mining code and reCompile.
\n");
        }
```

#37
```
#include <arith_uint256.h>
```

#38
```
        // vSeeds.emplace_back("seed.bitcoin.sipa.be"); // Pieter Wuille, only supports x1, x5,
x9, and xd
        // vSeeds.emplace_back("dnsseed.bluematt.me"); // Matt Corallo, only supports x9
        // vSeeds.emplace_back("dnsseed.bitcoin.dashjr.org"); // Luke Dashjr
        // vSeeds.emplace_back("seed.bitcoinstats.com"); // Christian Decker, supports x1 - xf
        // vSeeds.emplace_back("seed.bitcoin.jonasschnelli.ch"); // Jonas Schnelli, only supports
x1, x5, x9, and xd
        // vSeeds.emplace_back("seed.btc.petertodd.org"); // Peter Todd, only supports x1, x5,
x9, and xd
        // vSeeds.emplace_back("seed.bitcoin.sprovoost.nl"); // Sjors Provoost
```

#39
```
bech32_hrp = "bc";

bech32_hrp = "ac";
```

#40
```
        checkpointData = {
        {
                { 0, uint256S("0")}
        }
        };

        chainTxData = ChainTxData{
```

```
        /* nTime       */ 1535029814, // genesis time
        /* nTxCount */ 0,
        /* dTxRate  */ 0
        };
```

#41
testnet

#42
./autogen.sh
./configure --disable-tests --disable-gui-tests --disable-bench
make -j2

#43
./src/altcoind -printtoconsole

#44
```
        genesis = CreateGenesisBlock(1535029814, 2083236893, 0x1f00ffff, 1, 50 * COIN);

        genesis = CreateGenesisBlock(1535029814, 146791, 0x1f00ffff, 1, 50 * COIN);
```

#45
```
            consensus.defaultAssumeValid =
uint256S("0x00008b5abf7f1b1173d19b2c490ca9e268c5595d29065c58e4f0f9bdf9008c10");
```

#46
```
        checkpointData = {
        {
            { 0,
uint256S("00008b5abf7f1b1173d19b2c490ca9e268c5595d29065c58e4f0f9bdf9008c10")}
        }
        };
```

#47
remove genesis search code

#48
make -j2

#49
testnet

#50
cd ..

#51
mkdir n1 n2 n3

#52
code n1/altcoin.conf

#53
rpcuser=altcoinrpc
rpcpassword=altpass
server=1
listen=1

```
rpcallowip=127.0.0.1
```

#54
```
./altcoin/src/altcoind -printtoconsole -datadir=./n1 -server

./altcoin/src/altcoind -printtoconsole -datadir=./n2 -port=1112 -connect=127.0.0.1 -rpcport=2222

./altcoin/src/altcoind -printtoconsole -datadir=./n3 -port=1113 -connect=127.0.0.1 -rpcport=2223
```

#55
```
./altcoin/src/altcoin-cli -datadir=./n1 getpeerinfo
```

#56
```
./altcoin/src/altcoin-cli -datadir=./n1 getblocktemplate
```

#57
```
./altcoin/src/altcoin-cli -datadir=./n1 getnewaddress mine legacy
```

#58
```
git clone https://github.com/vsergeev/ntgbtminer
cd ntgbtminer/
```

#59
```
code ./ntgbtminer.py
```

#60
```
RPC_URL     = "http://127.0.0.1:8332"
RPC_USER  = "altcoinrpc"
RPC_PASS  = "altpass"
```

#61
```
        standalone_miner(bin2hex("Hello from vsergeev!"),
"15PKyTs3jJ3Nyf3i6R7D9tfGCY1ZbtqWdv")

        standalone_miner(bin2hex("New altcoin"),
"186NU1HNRPKvSYaBnatyBKbTWyvQ3QrV5w")
```

#62
```
python ntgbtminer.py
```

#63
kill first node ctrl+c

#64
```
./altcoin/src/qt/altcoin-qt -printtoconsole -datadir=./n1
```

#65
http://logomakr.com/95NFyc

#66
```
/altcoin/share/pixmaps
```

#67
```
convert logo.png -resize 16x16 altcoin16.png
convert logo.png -resize 16x16 altcoin16.xpm
convert logo.png -resize 32x32 altcoin32.png
```

```
convert logo.png -resize 32x32 altcoin32.xpm
convert logo.png -resize 64x64 altcoin64.png
convert logo.png -resize 64x64 altcoin.ico
convert logo.png -resize 64x64 altcoin64.xpm
convert logo.png -resize 128x128 altcoin128.xpm
convert logo.png -resize 128x128 altcoin128.png
convert logo.png -resize 256x256 altcoin256.xpm
convert logo.png -resize 256x256 altcoin256.png
convert logo.png -resize 256x256 altcoin.png
```

#68
/altcoin/src/qt/res/icons
altcoin.png
altcoin.ico

#69
make

fin!