



UNIVERSITY OF
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Assignment 2
KOMODO BLOCKCHAIN

Submitted To: -
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Setting the Komodo Blockchain

The steps and the commands that were executed to setup the komodo blockchain are shown in the image below: -

```
amank@amank-VirtualBox:~/komodo/src$ history
1 sudo apt-get update
2 sudo apt-get upgrade -y
3 sudo apt-get install build-essential pkg-config libc6-dev m4 g++-multilib autoconf libtool ncurses-dev unzip git python zlib1g-dev wget b
sdmainutils automake libboost-all-dev libssl-dev libprotobuf-dev protobuf-compiler libgtest-dev libqt4-dev libqrencode-dev libdb++-dev ntp ntpda
te software-properties-common curl libcurl4-gnutls-dev cmake clang libsodium-dev -y
4 cd ~
5 git clone https://github.com/nanomsg/nanomsg
6 cd nanomsg/
7 cmake . -DNN_TESTS=OFF -DNN_ENABLE_DOC=OFF
8 make -j2
9 sudo make install
10 sudo ldconfig
11 cd ~
12 git clone https://github.com/jl777/komodo
13 cd komodo
14 git checkout dev
15 ./zcutil/fetch-params.sh
16 ./zcutil/build.sh -j8
17 cd ~
18 mkdir .komodo
19 cd .komodo
20 nano komodo.conf
21 ls
22 la -ls
23 ls -la
24 cd ~
25 ls
26 cd komodo/
27 ls
28 cd src
29 ls
30 ./komodod -ac_name=AMANKCHAIN -ac_supply=2000000 -addnode=192.168.100.74:10880 &
31 ./komodod -ac_name=WALRUSCHAIN -ac_supply=2000000 -addnode=3.208.178.145:9731 -gen -genproclimit=$(nproc) &
32 cd..

Ubuntu [Running]
Sat 00:22
amank@amank-VirtualBox: ~/komodo/src

File Edit View Search Terminal Help
52 cd ~
53 cd ~/.komodo/
54 ls
55 cd WALRUSCHAIN/
56 ls
57 file wallet.dat
58 nano file wallet.dat
59 strings wallet.dat
60 cd ..
61 cd ~
62 cd ~/.komodo/src/
63 cd ~/.komodo/src/
64 ./komodo-cli -ac_name=AMANKCHAIN getnewaddress
65 ./komodo-cli -ac_name=AMANKCHAIN getnewaddress
66 ./komodo-cli -ac_name=AMANKCHAIN sendtoaddress "RSR6tffUaDM5JerbYrNdIMubVuZScfIEiV" 0.1
67 ./komodo-cli -ac_name=AMANKCHAIN sendtoaddress "RSR6tffUaDM5JerbYrNdIMubVuZScfIEiV" 0.0001
68 ./komodo-cli -ac_name=AMANKCHAIN listaddressgroupings
69 ./komodo-cli -ac_name=AMANKCHAIN getwalletinfo
70 ./komodo-cli -ac_name=AMANKCHAIN listaddressgroupings
71 ./komodo-cli -ac_name=AMANKCHAIN sendtoaddress "RSR6tffUaDM5JerbYrNdIMubVuZScfIEiV" 0.0001
72 ./komodo-cli -ac_name=AMANKCHAIN getwalletinfo
73 ./komodo-cli -ac_name=AMANKCHAIN getnewaddress
74 ./komodo-cli -ac_name=WALRUSCHAIN getwalletinfo
75 ./komodo-cli -ac_name=AMANKCHAIN getnewaddress
76 ./komodo-cli -ac_name=WALRUSCHAIN getwalletinfo
77 ./komodo-cli -ac_name=AMANKCHAIN listaddressgroupings
78 ./komodo-cli -ac_name=WALRUSCHAIN getwalletinfo
79 ./komodo-cli -ac_name=AMANKCHAIN listaddressgroupings
80 ./komodo-cli -ac_name=WALRUSCHAIN getnewaddress
81 ./komodo-cli -ac_name=WALRUSCHAIN getwalletinfo
82 ./komodo-cli -ac_name=WALRUSCHAIN listaddressgroupings
83 ./komodo-cli -ac_name=WALRUSCHAIN getwalletinfo
84 ./komodo-cli -ac_name=WALRUSCHAIN sendtoaddress "REH98k8DHxGkenQHe3RU9GFyEKPAjDiARB" 0.0678
85 ./komodo-cli -ac_name=WALRUSCHAIN gettransaction "4e71632b76632722b94afd353b468db17d6e726a0e4ca93b5106143afbd5ce81"
86 ./komodo-cli -ac_name=WALRUSCHAIN getnewaddress
87 ./komodo-cli -ac_name=WALRUSCHAIN validateaddress
88 ./komodo-cli -ac_name=WALRUSCHAIN validateaddress "RDAGmKnzDsQXrgsX38Q9DwbJ4BVF3kXNCo"
```

Creating an Address, Wallet and Adding funds

After setting up the environment we generate the blockchain on the komodo platform. Following to commands in the screenshot below shows the public address that is generated which can be shared with others to get the funds transferred into the wallet. The other command shows the information about the wallet such as its version, balance, unconfirmed balance and more as shown below.

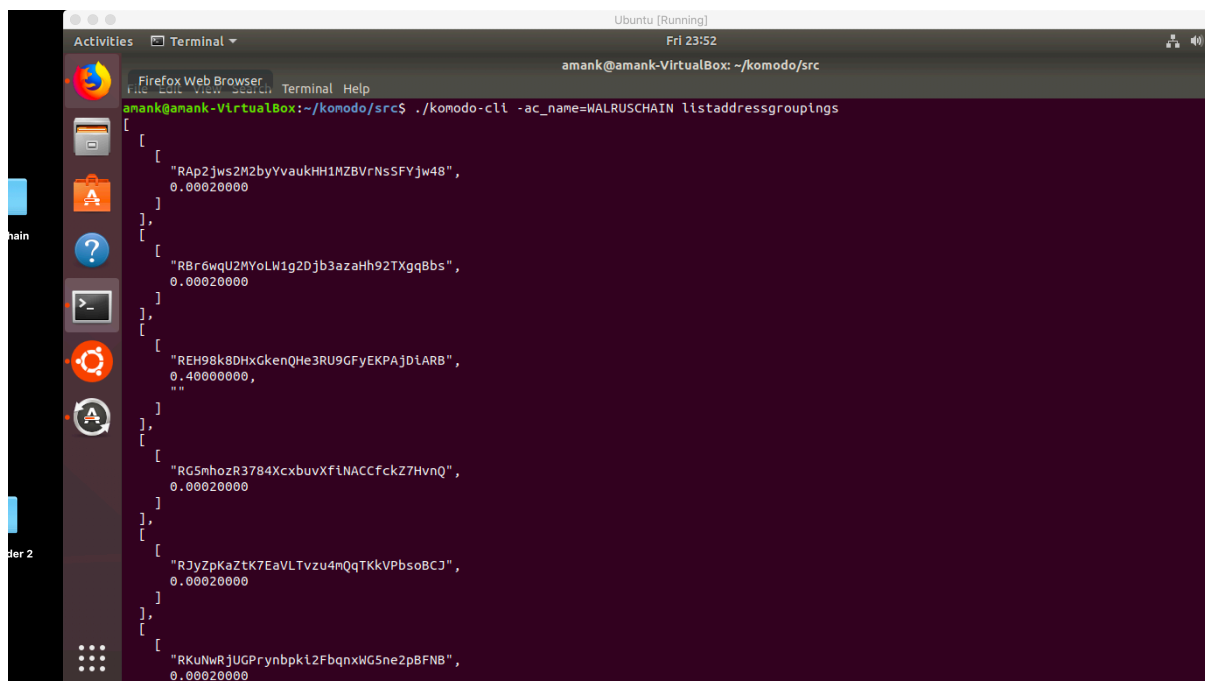
```

amank@amank-VirtualBox:~/komodo/src$ ./komodo-cli -ac_name=WALRUSCHAIN getnewaddress
REH98k8DHxGkenQHe3RU9GFyEKPAjD1ARB
amank@amank-VirtualBox:~/komodo/src$ WALRUSCHAIN vouts.1 mining.187 vs 128

amank@amank-VirtualBox:~/komodo/src$ ./komodo-cli -ac_name=WALRUSCHAIN getwalletinfo
{
  "walletversion": 60000,
  "balance": 0.00100000,
  "unconfirmed_balance": 0.40000000,
  "immature_balance": 0.00000000,
  "txcount": 9,
  "keypoololdest": 1550894846,
  "keypoolsize": 101,
  "paytxfee": 0.00000000,
  "seedfp": "2f4f43b1df81c89714d250aa3c1480de89f2c5b07f30adcfdfdc686a1a7a16c2"
}
amank@amank-VirtualBox:~/komodo/src$ WALRUSCHAIN vouts.1 mining.188 vs 128

```

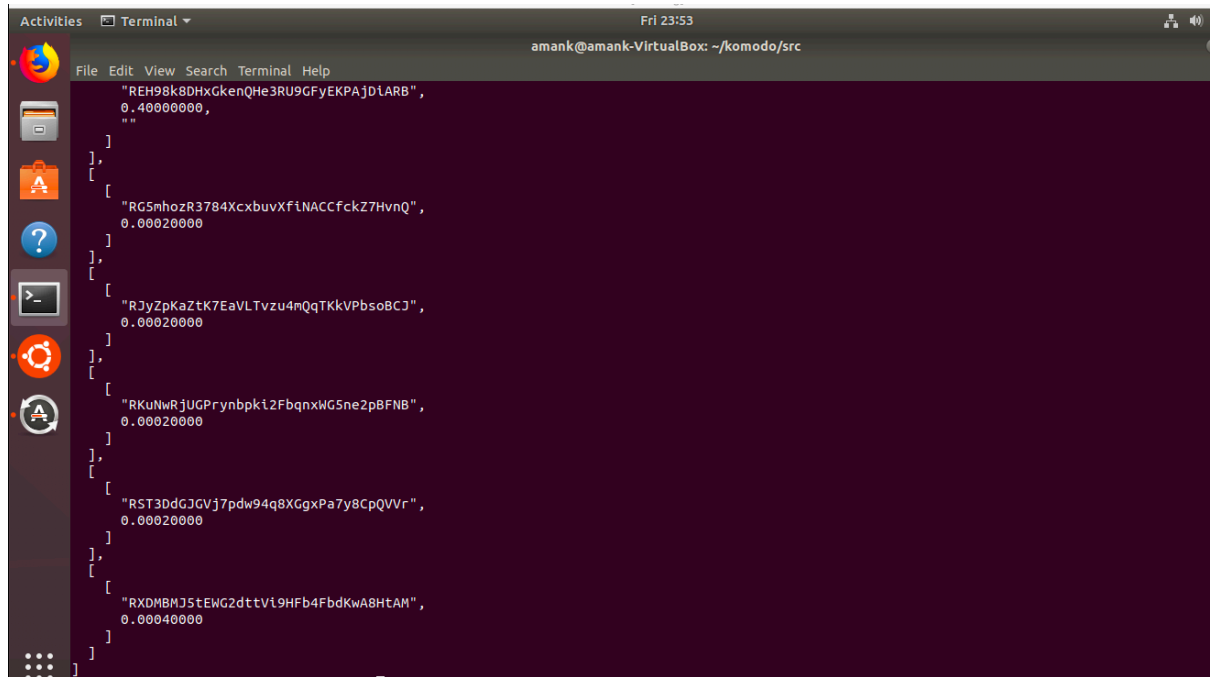
For getting the information of the various addresses and the amount associated with them in our blockchain we make use of the command shown in the image below and obtain the desired information.



```

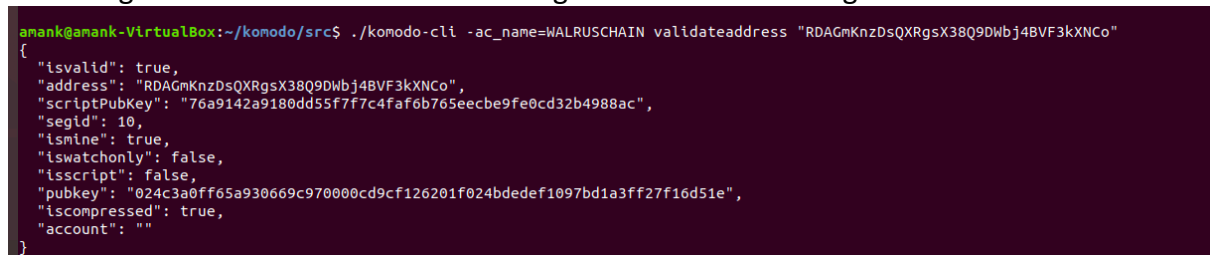
amank@amank-VirtualBox:~/komodo/src$ ./komodo-cli -ac_name=WALRUSCHAIN listaddressgroupings
[
  [
    "RAP2jws2M2byYvaukHH1MZBvNrNsSFYjw48",
    0.00020000
  ],
  [
    "RBr6wqU2MYoLW1g2Djb3azaH92TXgqBbs",
    0.00020000
  ],
  [
    "REH98k8DHxGkenQHe3RU9GFyEKPAjD1ARB",
    0.40000000,
    ""
  ],
  [
    "RG5mhozR3784XcxbuvXf1NACCfckZ7HvnQ",
    0.00020000
  ],
  [
    "RJyZpKaZtk7EaVLTvzu4nQqTKkVPbso8CJ",
    0.00020000
  ],
  [
    "RKuNwRjUGPrynbpk12FbqnxWG5ne2pBFNB",
    0.00020000
  ]
]

```



```
amank@amank-VirtualBox: ~/komodo/src
[
  [
    [
      "REH98k8DHxGkenQHe3RU9GFyEKPAjDlARB",
      0.40000000
    ],
    [
      "RG5mhozR3784XcxvuvXfIACCfckZ7HvnQ",
      0.00020000
    ],
    [
      "RJyZpKaZtK7EaVLTvzu4mQqTKkVPsoBCJ",
      0.00020000
    ],
    [
      "RKuNwRjUGPrnbpki2FbqnxHG5ne2pBFNB",
      0.00020000
    ],
    [
      "RST3DdGJGVj7pdw94q8XGgxPa7y8CpQVvr",
      0.00020000
    ],
    [
      "RXDMMBMJ5tEWG2dttVi9HfB4FbdKwA8HtAM",
      0.00040000
    ]
  ]
]
```

Also, we can verify if the generated public address in the blockchain is legitimate or not by executing the command shown in the image below and obtaining the result.



```
amank@amank-VirtualBox:~/komodo/src$ ./komodo-cli -ac_name=WALRUSCHAIN validateaddress "RDAGmKnzDsQXRgsX38Q9DWbj4BVF3kXNCo"
{
  "isvalid": true,
  "address": "RDAGmKnzDsQXRgsX38Q9DWbj4BVF3kXNCo",
  "scriptPubKey": "76a9142a9180dd55f7f7c4faf6b765eecbe9fe0cd32b4988ac",
  "segid": 10,
  "ismine": true,
  "iswatchonly": false,
  "isscript": false,
  "pubkey": "024c3a0ff65a930669c97000cd9cf126201f024bdedef1097bd1a3ff27f16d51e",
  "iscompressed": true,
  "account": ""
}
```

The result obtained for the public address shown above is true thus verifying that the address is valid.

Further, we play the Ticktacktoe game which, makes use of the Walruschain to play and win coins against other players. The coins earned after playing and winning the game got transferred in the wallet and balance for the wallet got increased as shown below: -

```
Ubuntu [Running]
Fri 23:53
amank@amank-VirtualBox: ~/komodo/src

[
  [
    "R3yZpKaZtK7EaVLTvzu4mQqTKkVPbsoBCJ",
    0.00020000
  ],
  [
    "RKuNwRjUGPrynbpki2FbqnxWG5ne2pBFNB",
    0.00020000
  ],
  [
    "RST3DdGJGVj7pdw94q8XGgxPa7y8CpQVVr",
    0.00020000
  ],
  [
    "RXDMBMJ5tEWG2dttVi9HFb4FbdKwA8HTAM",
    0.00040000
  ]
]

amank@amank-VirtualBox:~/komodo/src$ ./komodo-cli -ac_name=WALRUSCHAIN getwalletinfo
{
  "walletversion": 60000,
  "balance": 0.40160000,
  "unconfirmed_balance": 0.00000000,
  "immature_balance": 0.00000000,
  "txcount": 11,
  "keypoololdest": 1550894846,
  "keypoolsize": 101,
  "paytxfee": 0.00000000,
  "seedfp": "2f4f43b1df81c89714d250aa3c1480de89f2c5b07f30adcfdfdc686a1a7a16c2"
}
```

Sending Transaction between wallets

The coins were transferred to the address provided by the friend and the following command was executed to make the transaction and on executing it, it provides the transaction id.

```
amank@amank-VirtualBox:~/komodo/src$ ./komodo-cli -ac_name=WALRUSCHAIN sendtoaddress "REH98k8DHxGkenQHe3RU9GFyEKPAjDiARB" 0.0678
4e71632b76632722b94afd353b468db17d6e726a0e4ca93b5106143afbd5ce81
amank@amank-VirtualBox:~/komodo/src$ WALRUSCHAIN vouts.1 mining.189 vs 128
```

Now further we use gettransaction command to get to know about all the information that is related to the transaction id passed along with it.


```
}
amank@amank-VirtualBox:~/komodo/src$ ./komodo-cli -ac_name=WALRUSCHAIN listaddressgroupings
[
  [
    "RAp2jws2M2byYvaukHH1MZBvNrNsSFYjw48",
    0.00020000
  ],
  [
    "RBr6wqU2MYoLW1g2Djb3azaHh92TXgqBbs",
    0.00020000
  ],
  [
    "RDAGmKnzDsQXRgsX38Q9DWbj4BVF3kXNCo",
    0.10000000,
    ""
  ],
  [
    ]
  ]
]
```