**Land Registry Application**

Land Registry Application using blockchain can build trust and transparency for Citizens while making the entire system more efficient. It provides security and verification through cryptographic proofs. In many countries land registries are not trusted or transparent if they exist at all in, 2017 the World Bank release the study stating that more than 70% of the global population lacks the legal claim to their land and 1/3 of countries do not digitally track property ownership Studies have resulted in increased uncertainty and friction in the marketplace that can often put a strain on governmental resources, especially in Judicial Systems for example in India, two-thirds of the legal dispute are related to land claims.

So keeping all these drawbacks of the present land registration in mind, I came with the idea of the land registry using secure blockchain architecture. This helps us to store the property records hashed and digitally signed. By doing this we can keep the registration process secure and trustworthy. So, we get the unique transaction details when one registers the land on his name or one transfers his existing land to the other person. So, first, we should develop a web app with all the features mentioned above in it and then integrate with the blockchain architecture.

To register the land, a citizen needs

1. A suitable device(Desktop/PC/Tablet/Mobile)
2. An Internet connection with at least 256kbps per second
3. In PC/Laptop, any of the modern browser

For the guarantee of the application’s security and fault-tolerance, the application will be built on a blockchain architecture where all the transactions are verified and validated by the participants on the network. By using the blockchain the authenticity of the property records will be secured. This application provides advantaged such as trusted data storage, prevents tampering with a history log.

Land registry app has the following feature:

* Helps to prevent the fraudulent transactions of property
* Authentication using the registration details
* The administrator can extract the property records with the hash value.

Increasing scams in the real estate have given the drive to make the land registration process digital where the property records are hashed and digitally signed.

In this project we have implemented the following things

1. We have hashed the land property transaction.
2. We have hashed the land transaction from one user to another.

BLOCK CHAIN IMPLEMENTATION

**Setup the environment to generate a Blockchain on Komodo platform**.

**Step1**: Download the executable files to your Windows computer and place the files in a new folder on the Desktop called Komodo.

**Step2**: Create komodo.conf file in the below path C:\Users\tadir\AppData\Roaming\komodo

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**Step3**: komodo.conf contains the following information.

rpcuser=roshinitadi

rpcpassword=Rosh@1996

daemon=1

rpcallowip=127.0.0.1

rpcbind=127.0.0.1

server=1

txindex=1

maxconnections=1

**Step4**: Create directory for Zcash Parameters. C:\Users\tadir\AppData\Roaming\ZcashParams

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**Step5:** Run Smart Chain Software **\Desktop\kmd\komodod.exe**

**Step6:** Verify syncing process **\Desktop\kmd\komodo-cli getinfo**

**Create an address, wallet and add funds to the same**. Initializing the blockchain

**komodod -regtest -ac\_name=VCOIN -ac\_supply=10000 &**

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**Displaying details of the chain generated.**

**Komodo-cli -regtest -ac\_name=VCOIN getinfo**

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**Generating blocks through cmd**

**Komodo-cli -regtest -ac\_name=VCOIN generate 5**

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**Displaying details of the 1st block using blockhash.**

**Komodo-cli -regtest -ac\_name=VCOIN getblock 040cf49c94db9e9b3f448b315d80f9578018b4164fe061f62a5138dbc6b0dc43**

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**Test coins are now added to the block**

**Komodo-cli -regtest -ac\_name=VCOIN getinfo**

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**Send a transaction between wallets on the Blockchain.**

Generate new address to demonstrate transaction between blocks

**Komodo-cli -regtest -ac\_name=VCOIN getnewaddress**

**RWtJrT4Gr4yrAX2WKrDqNkrVShfkNBXaoq**

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**Coin info before transaction**

**Komodo-cli -regtest -ac\_name=VCOIN getinfo**

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**Now send the coins to the address RWtJrT4Gr4yrAX2WKrDqNkrVShfkNBXaoq**

**Komodo-cli -regtest -ac\_name=VCOIN sendtoaddress RWtJrT4Gr4yrAX2WKrDqNkrVShfkNBXaoq 10**

**Hash 2939570d6edcfab720e369a89ad60cb7f9ae0b4527abd3f4b536102bb437e988**

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**Coin info after transaction**

**Komodo-cli -regtest -ac\_name=VCOIN getinfo – after deduction**

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**Land Register Application**

**A picture containing truck, sitting, computer, holding

Description automatically generatedHome screen**

**Available lands screen**

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**Available users**

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Generated Hash after the land transaction to user**

**A screenshot of a computer

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**Generated Hash after the land transaction from a user to another user**

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