



Computer Engineering Department

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UNIVERSITY OF MUMBAI

Academic Year 2019-2020

A Project Report on
Decentralized Real Estate Application Using Blockchain

Submitted in partial fulfillment of the degree of
Bachelor of Engineering(Sem-7)

in

Computer Engineering

By

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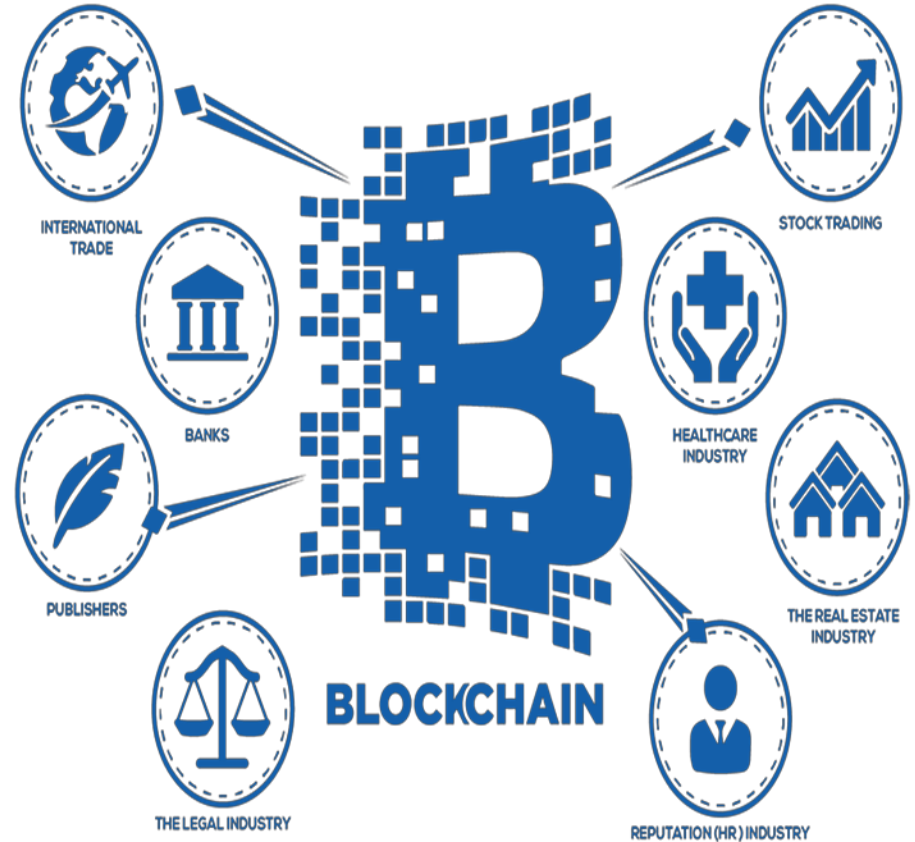
Under the Guidance of

Prof.Sachin Malve

1. Project Conception and Initiation

1.1 Abstract

- Massive Momentum
- Distributed Ledger
- Real estate Transparency



1.2 Objectives

- Trust between the parties.
- Transparency in the system.
- To reduce paperwork and its related costs.

1.3 Literature Review

- Self-Managing Real Estate - [10.1109/MC.2018.1151007](#)
- Blockchain-Enabled Smart Contracts: Architecture, Applications, and Future Trends
- [10.1109/TSMC.2019.2895123](#)
- Commercial Property Tokenizing With Smart Contracts-[10.1109/IJCNN.2018.8489534](#)

1.4 Problem Definition

- Title Duplicacy
- Increasing frauds in land registrations
- Fraud Realtors

1.5 Scope

- Blockchain based website.
- Establish registration transparency.
- Use of ERC20 token.

Blockchain

Could Change the Real Estate
Investment Landscape



1.6 Technology stack

- Ethereum
- NodeJs
- Solidity
- Ethers.js
- TestNets
- MetaMask
- React.js

1.7 Benefits for environment & Society

- Curbs fraudulent registration
- Establishes trust between the parties
- Reduces registration cost

2. Project Design

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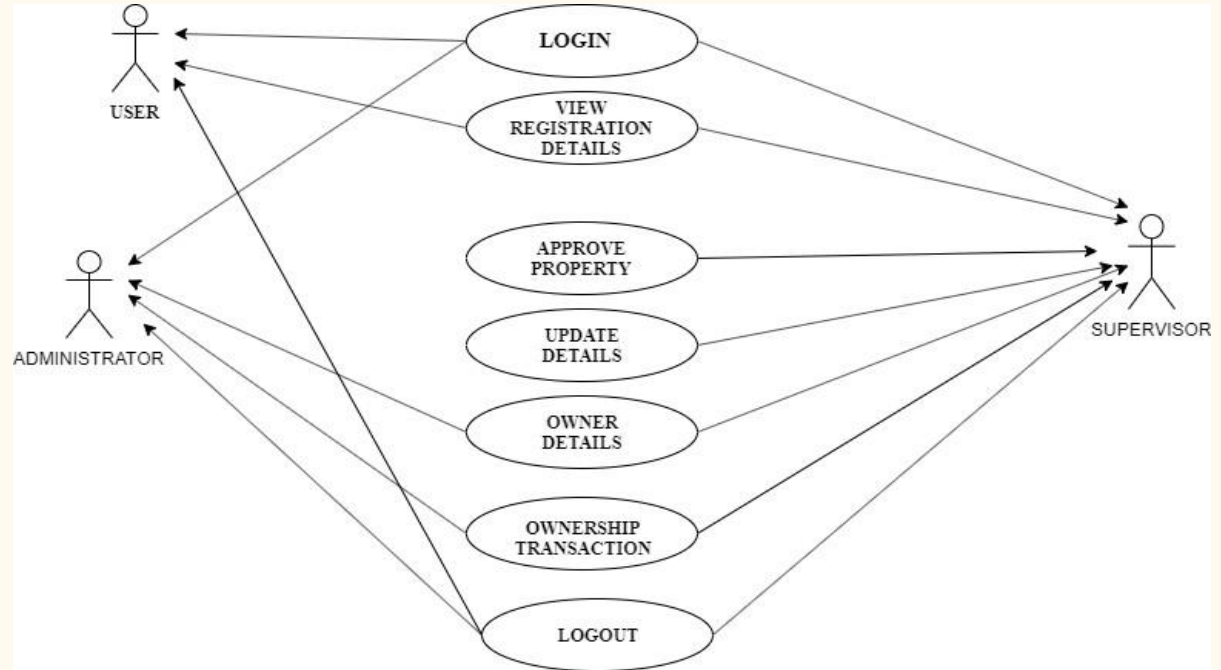
2.1 Proposed System

- Real estate on decentralized network
- Transparency in ownership
- Reduction in paperwork

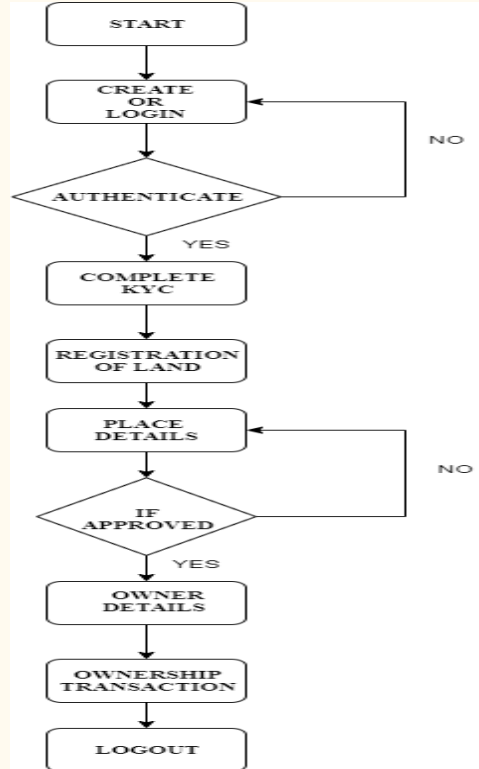
2.2 Design(Flow Of Modules)

- Module 1:- Ethereum Wallet
- Module 2:- KYC
- Module 3:- Land Registration
- Module 4:- Ownership Transaction

2.3 Description Of Use Case



2.4 Activity diagram



2.6 Module-1

Ethereum Wallet:

- What is Ethereum wallet?
- How to create a Ethereum wallet?

Module-2

KYC:

- KYC means ‘Know Your Customer’.
- It is the process of a business verifying the identity of its clients and assessing their suitability, along with the potential risks of illegal intentions towards the business relationship.

Module-3

Land Registration:

- The land registration module is the key module of the entire project
- The user can actually register his/her land on an authenticated person's name without actually involving any of the intermediaries like lawyer.

Module-4

Ownership Transaction

- The seller can give the ownership to the buyer and at that moment ownership transaction will take place in the form of token .
- The seller in a very authenticate way gives the land ownership to the buyer using a blockchain platform.

2.7 References

[1]Nathan Shedroff “Self-Managing Real Estate”, IEEE 2018.

[2]Shuai Wang , Liwei Ouyang, Yong Yuan , Senior Member, IEEE, Xiaochun Ni, Xuan Han,and Fei-Yue Wang ”Blockchain-Enabled Smart Contracts: Architecture, Applications, andFuture Trends”

[3]Alex Norta, Chad Fernandez and Stefan Hickmott “Commercial Property Tokenizing With Smart Contracts”, IEEE 2018

3.Planning for next semester

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Planning

- Wallet
- Land Registration
- Ownership Transaction

Thank You

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