



# Computer Engineering Department

A.P. Shah Institute of Technology

— G.B.Road,Kasarvadavli, Thane(W), Mumbai-400615

UNIVERSITY OF MUMBAI

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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

Siddhant Bhadsavle(16202038)

Himanshu Malhotra(17202006)

Under the Guidance of  
Prof.Sachin Malve

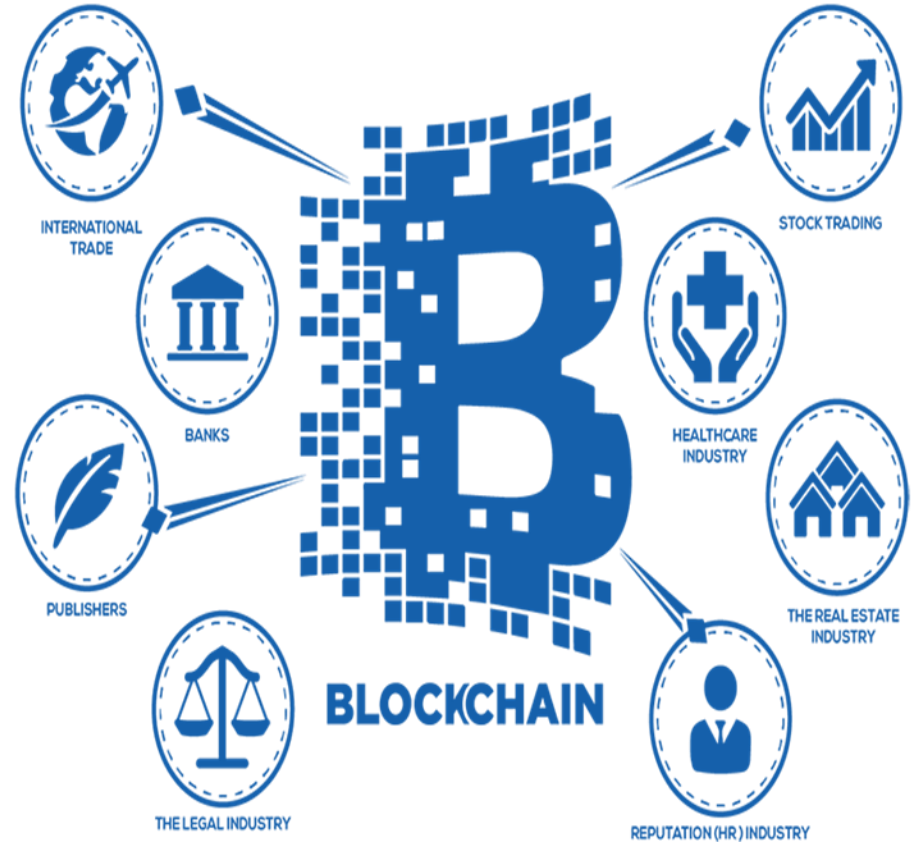
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# 1. Project Conception and Initiation

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# 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

- Transparent Record Keeping
- One of the easiest explanation is that we could define blockchain as a trusted network for keeping and managing the records.

# 1.4 Problem Definition

Problems arised due to loopholes in law

Increasing frauds in land registrations

# 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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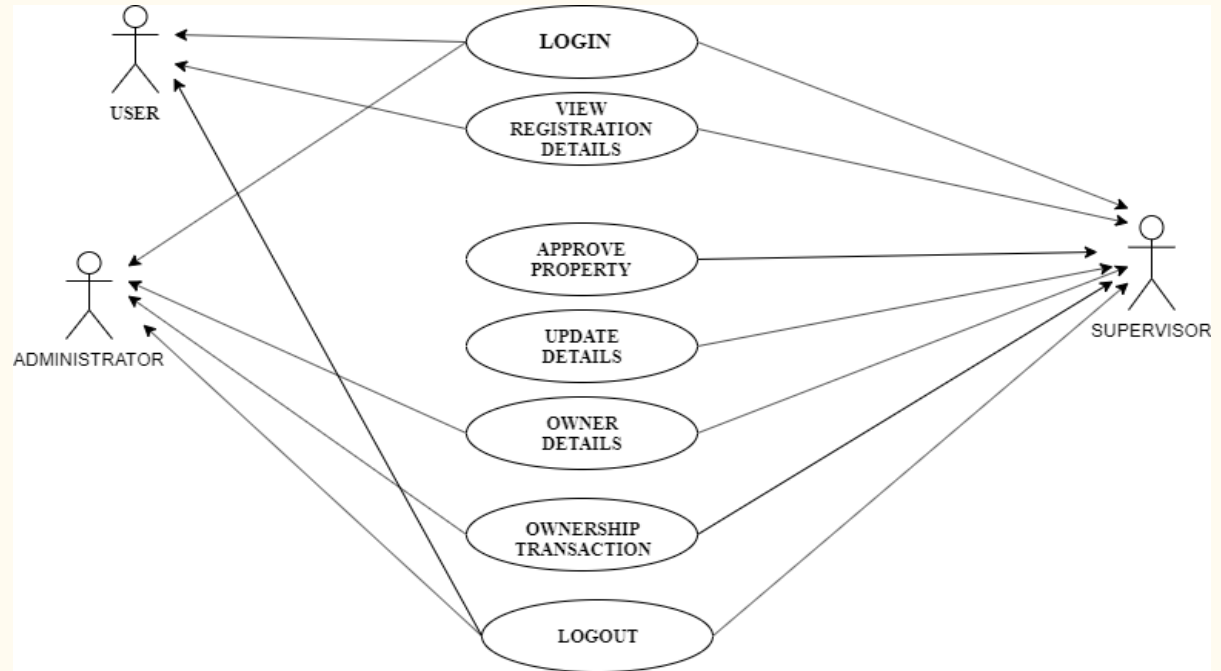
## 2.1 Proposed System

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

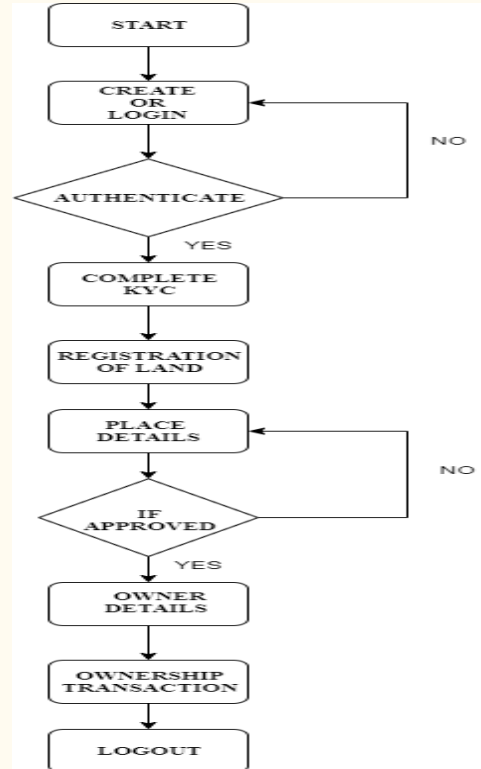
## 2.2 Design(Flow Of Modules)

- 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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