Blockchain

for real estate transactions and land registry

Aayush Talreja (D17C / 56)





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INTRODUCTION

Background of Land Registration

- The current scenario of land registration processes
- Conventional process involves inefficient methods
- The labor-intensive nature of record-keeping

Challenges in Land Registration

- Issues related to data security
- Issues related to transparency
- The risk of fraudulent activities
- Existing systems often lack transparency, and are susceptible to fraudulent practices such as double-selling of land.







BLOCKCHAIN

1. Ability to provide transparent environment

- Transparency in a land registry process is crucial
- All transactions related to land registration are recorded on a public blockchain ledger
- Each entry on the blockchain is time-stamped and cryptographically secure
- Anyone with permission can view the entire history of land transactions
- Reduces the risk of fraudulent activities









BLOCKCHAIN

2. Secured Record-Keeping

- Processes involves sensitive and valuable information
- Blockchain employs strong encryption and hashing algorithms to secure data
- Each record on the blockchain is linked to the previous one
- Once entered, data cannot be deleted / modified
- Security ensures the integrity of land records









BLOCKCHAIN

3. Decentralization

- A blockchain-based land registry is distributed across a network of nodes (devices)
- Reduces the risk of a single point of failure or corruption.
- Eliminates the need for intermediaries (land registry offices)
- Once entered, data cannot be deleted / modified
- Transactions are verified by a network consensus









BLOCKCHAIN

4. Immutable Digital Ledger

- Once data is recorded, it cannot be altered or deleted without consensus from the network.
- Historical records of land transactions are preserved
- Immutability ensures the integrity and accuracy of land records







COMPARING LAND REGISTRY USING TRADITIONAL PROCESS & BLOCKCHAIN

	TRADITIONAL PROCESS	BLOCKCHAIN TECHNOLOGY
Centralization	Typically centralized with a government agency responsible for maintaining records	Decentralized across a network of nodes, eliminating the need for a single central authority.
Transparency	Limited transparency, with public access to records often restricted	Offers transparency by providing public access to a publicly accessible ledger of land transactions
Fraud Prevention	Vulnerable to fraud and land disputes due to potential manipulation of records	Enhances security and reduces fraud by making it extremely difficult to alter records without consensus
Speed + Efficiency	May involve time-consuming processes and manual paperwork, leading to delays	Reduces delays by automating verification and validation through smart contracts

"The old question 'Is it in the database?' will be replaced by 'Is it on the blockchain?'"

—William Mougayar

