



EVM using Blockchain

Presented By:

Group 9 Members:
Anirudh Behara
Anuphari Singh
Nitin Chauhan
Nipun Allurwar
Sandip Ganguly

Problem Statement

To ensure a smooth, fair, and democratic election process through the implementation of **blockchain technology in electronic voting machines** by completely eradicating illegal voting, strengthening the data protection, and more accurate verification of the polling outcomes.

Whether talking about traditional paper-based voting, voting via digital voting machines, or an online voting system, several conditions need to be satisfied:

- **Eligibility:** Only legitimate voters should be able to take part in voting
- **Unreusability:** Each voter can vote only once
- **Privacy:** No one except the voter can obtain information about the voter's choice
- **Fairness:** No one can obtain intermediate voting results
- **Soundness:** Invalid ballots should be detected and not taken into account during tallying
- **Completeness:** All valid ballots should be tallied correctly

Issues with Current Voting System



1

EVM Tampering

EVM Can be tampered easily, resulting unfair election and repetitive election

2

Duplicate votes

Duplicate votes can be casted using multiple voter ids

3

Counting issues

Issues in vote counting and time consuming process

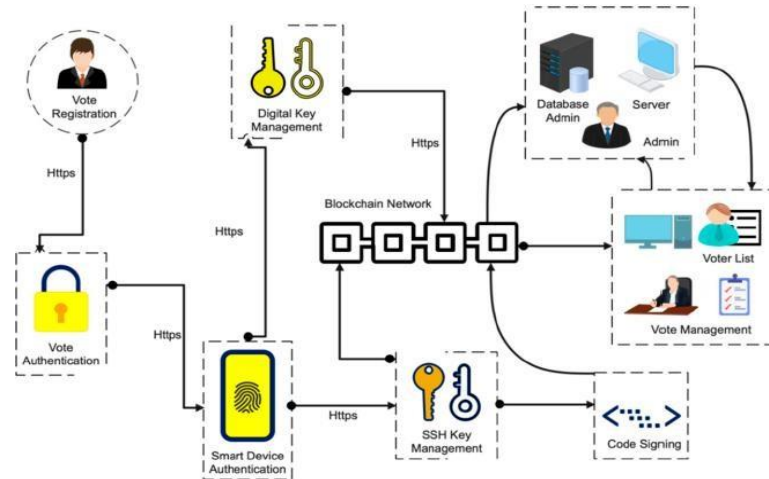
4

Privacy issues

External parties can obtain information about the voter's choice

Proposed Solution

The blockchain is a digital, decentralized, encrypted, transparent ledger that can withstand manipulation and fraud. Because of the distributed structure of the blockchain, a electronic voting system reduces the risks involved with electronic voting and allows for a tamper-proof for voting system. A blockchain-based electronic voting system requires a wholly distributed voting infrastructure



Conclusion

- The blockchain network has massive scope in the electronic voting process as it helps prevent all kinds of frauds- large as well as a small scale because it is an inherently entire, centralized, open, and consensus-driven technology.
- Since the majority of the implementation takes place at the back end, end users would not notice a significant difference between a blockchain-based voting system and a traditional electronic voting system. Thus, the audience acceptability of this technology can be assumed to be quite high.

