Blockchain Based Voting System

- Aim
- Objective
- Methodology
- Literature Survey
- UML Diagrams (Usecase, class)
- Proposed work

Introduction

- What is Blockchain?
  - Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system.
  - Consist of several blocks associated with each other and in sequence.

Continued…

- Why Blockchain based voting system?
  - Future election
  - Fair voting
  - Secure

Problem Statement

- By adopting blockchain in the distribution of databases on e-voting systems can reduce one of the cheating sources of database manipulation.
- Blockchain technology is one of solutions, because it embraces a distributed system and the entire database are owned by many users.
- Blockchain itself has been used in the Bitcoin, Ethereum, Ripple, Litecoin.

Aim

- Aims to building an voting system that satisfies the legal requirements of legislators has been a challenge for a long time.
- Distributed ledger technologies is an exciting technology world.
- Also aims to evaluate the application of blockchain as service to implement distributed electronic voting systems.

Objective

- The election system must be openly verifiable and transparent.
- The election system must ensure that the vote cast by the voter has been recorded.
- Only eligible voters must be allowed to vote.
- The election system should be tamper-proof.

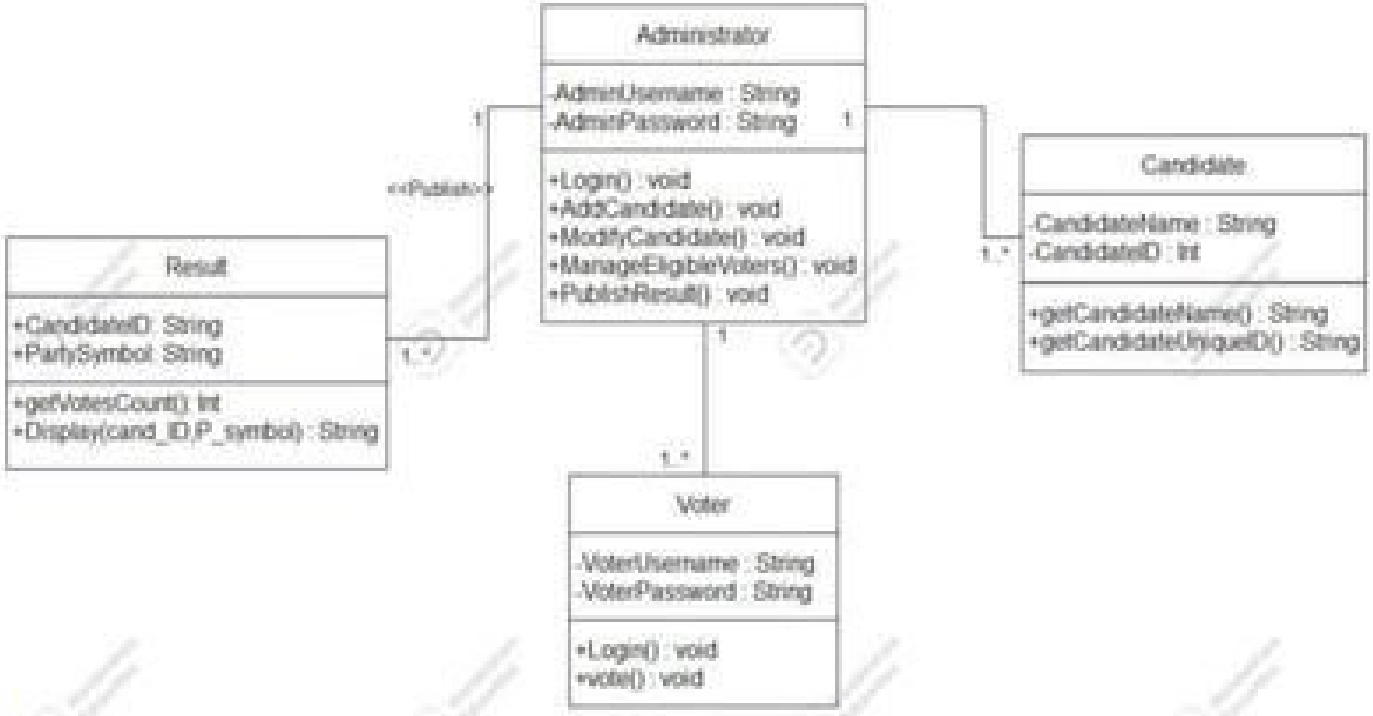
Methodology

- Open Block Chain
  - Record transactions in a permanent way.
- Closed Block Chain
  - A private network that maintains a shared record of transactions.
  - Those who have permission only they can access network.
- Cryptography
  - Symmetric Cryptography
  - Asymmetric Cryptography
- Proof of Work
  - Start >> Transaction >> Minors >> Block >> Block puzzle >> Proof of Work >> Broadcasted new block to n/w >> Verification of minors

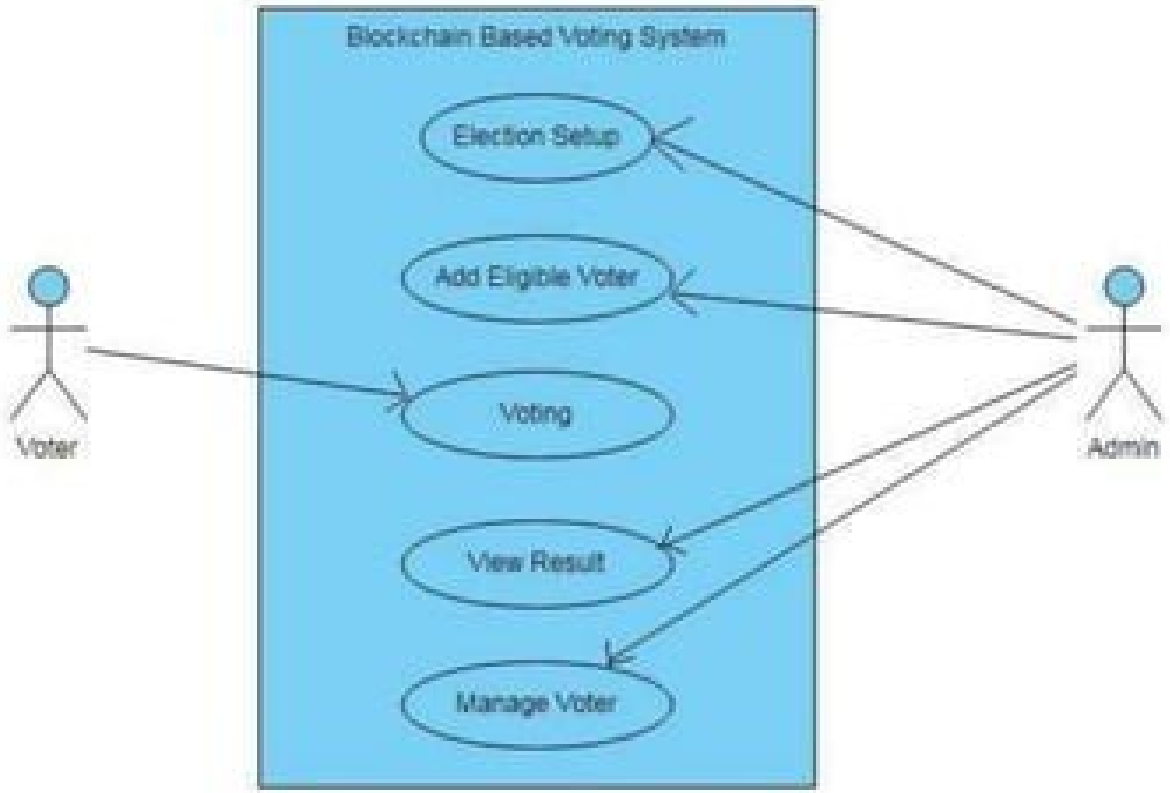
Literature Survey

Sr No.	Name of paper	Techniques
1	Survey on blockchain based e-voting recording system design in 2018.by G Bhavan.	1. AES Alogrithm
2	Online voting : voting system using blockachain in 2019.by Vaibhav anasune , Pradeep chodhari, Pranali shirke.	1. Cryptographic verification 2. Homomorphic encryption
3	Blockchain based voting system in 2018. by Friorik hjalmarson, Gunnlaugur K.	1. Quprum 2. Geth : Go etherum
4	Blockchain based e-voting system design in 2017.by Rifa hanifatunnisa and budi rahardjo	1. ECDSA 2. SHA256 Algorithm
5	Decentralized voting platform based on etherum blockchain in 2018.by David khoury,Elie f kfoury, Ali kaseem nad hazma harb.	1. HTML WEB-APP 2. Etherum netwok
6	Votereum : an etherum based voting system in 2019.by Dang-le-Bao and tam, Linh-vo-caothuy.	1. EOA 2. Contract account 3. votereum

Class Diagram



Use Case Diagram



Proposed Work

- Existing System:
  - Ballot system
  - Electronic Control System
  - Current Digital Voting System
- Proposed Work: As compared to the existing system
  - The voting is stored in the Blockchain which makes it tamper proof.
  - As there's no standing in queue for casting vote it'll save a lot of time and reduce the workload.

Conclusion

- A nation with less voting percentage will fight to develop as choosing a right front-runner for the nation is very essential. Our future system is designed to provide a secure data and dependable voting amongst the people of the equality. Block chain itself has been used in the Bitcoin scheme known as the dispersed bank system. By assuming blockchain in the distribution database on voting system one can reduce the double-dealing sources of database management. This project aims to voting effect using blockchain procedure from every place of election