

# Knowledge Management Using Blockchain - Adhar Based Voting System

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**Abstract** - Online voting is a trend that's gaining instigation in ultramodern society. It has great implicit to drop organizational costs and increase name turnout. It eliminates the need to publish ballot papers or open polling stations choosers can bounce from wherever there's an Internet connection. Despite these benefits, online voting results are viewed with a great deal of caution because they introduce new pitfalls. Electronic voting systems must be licit, accurate, safe, and accessible when used for choices. Nevertheless, relinquishment may be limited by implicit problems associated with electronic voting systems. Block chain technology came into the ground to overcome these issues and offers decentralized bumps for electronic voting and is used to produce electronic voting systems substantially because of their end- to- end verification advantages. This technology is a beautiful relief for traditional electronic voting results with distributed, non-repudiation, and security protection characteristics.

**Key Words:** Knowledge management, Block chain, Electronic Voting System, Smart Contracts, Ethereum.

## 1. INTRODUCTION

Political voting strategies are important for the duration of this respect. From a central authority standpoint, electronic voting technologies can enhance voter participation and self assurance and re-ignite in the voting system. As an awesome approach of building democratic decisions, elections have lengthy been a social concern. Due to the fact the range of votes forged in actual lifestyles global increases, residents have become turning into greater alert to the significance of the electoral system.

The voting system is that the approach via which judges decide who will constitute in political and corporation governance. With the election upon us, the information is with the aid of using and with the aid of using buzzing approximately election tampering. Any election end results stands basically essential in forming the eventual destiny of country organization as well as characterizing the destiny of the political scene of a country for a long term to come. Therefore, elections should be sincere and ought to provide

deterministic outcomes. Claims of fraud or extortion and out of doors effect will preserve on rising, even in advanced

democracies in the event that they do now no longer leverage technology to remove of election tampering or altering. Every nation calls for a platform that ensures valid voter registration and recognizable proof. They must additionally embody an electoral platform that streamlines the manner of checking cast a ballot. In short, all while giving transparency and simplicity to the election outcomes.

## Technology of the system

This phase affords a few historical past statistics on digital vote casting methods. Electronic vote casting is a vote casting approach wherein votes are recorded or counted using digital equipment. Electronic vote casting is typically described as vote casting this is supported via way of means of a few digital hardware and software. Such regularities have to be in a position in supporting/enforcing numerous functions, starting from election setup thru vote storage. Kiosks at election offices, laptops, and, greater recently, cellular gadgets are all examples of gadget types. Voter registration, authentication, vote casting, and tallying should be integrated within side the digital vote casting structures. One of the regions in which block chain n may also have a large effect is digital vote casting.

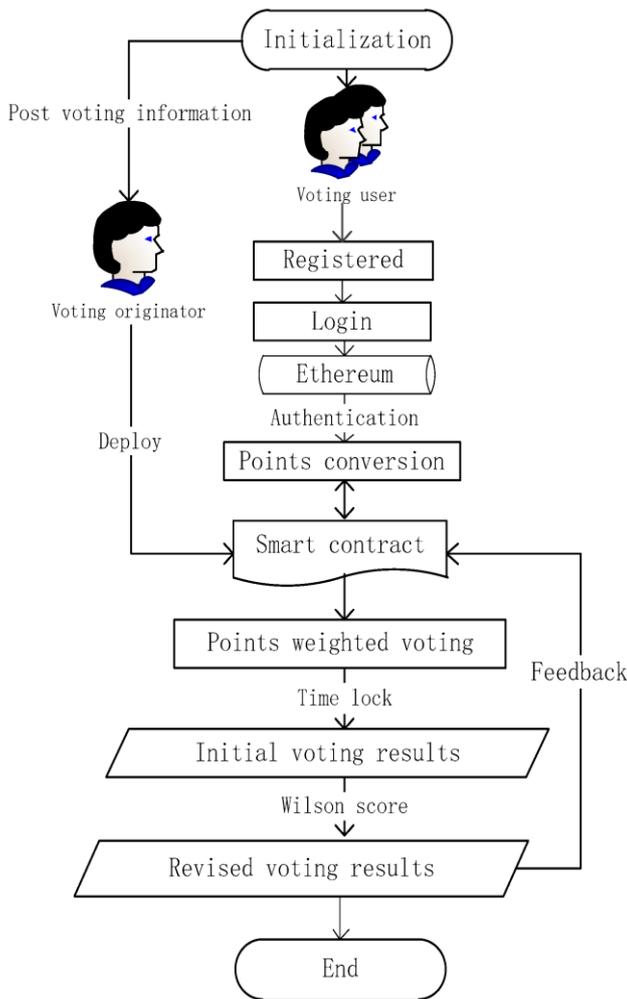


Fig 1:-Flowchart of the technology used

## 2. Regional Study of the System

The degree of danger is so first rate that digital vote casting by me isn't always a feasible option. If a digital vote casting gadget is hacked, the outcomes could be far-reaching. Because a block chain community is entire, centralized, open, and consensus-driven, the layout of a block chain-primarily based totally community ensures that fraud isn't always theoretically viable till appropriately implemented. As a result, the block chain's specific traits should be considered. There is not anything inherent approximately block chain generation that forestalls it from getting used to some other sort of cryptocurrency. The concept of making use of block chain generation to create a tamper-resistant digital/online vote casting community is gaining momentum. End customers might now no longer word a large distinction among a block chain-primarily based totally vote casting gadget and a conventional digital vote casting gadget.

### Security of the proposed system

Suitable electronic voting systems should meet the following electronic voting requirements.

#### ❖ Anonymity

Throughout the polling process, the voting turnout must be secured from external interpretation. Any correlation between registered votes and voter identities inside the electoral structure shall be unknown.

#### ❖ Auditability and Accuracy

Accuracy, also called correctness, demands that the declared results correspond precisely to the election results. It means that nobody can change the voting of other citizens, that the final tally includes all legitimate votes, and that there is no definitive tally of invalid ballots.

#### ❖ Democracy/Singularity

A "democratic" device is described if best eligible voters can vote, and best a single vote can be cast for every registered voter. Another characteristics is that no person else have to be capable to duplicate the vote.

#### ❖ Vote Privacy

After the vote is cast, no one should be able to attach the identity of a voter with its vote. Computer secrecy is a delicate kind of confidentiality, because of this that the voting relationship stays hidden for an extended period if the current rate continues to change with computer power and new techniques.

#### ❖ Robustness and Integrity

This situation method that a fairly massive institutions of electors or representatives can't disrupt the election. It guarantees that registered voters will abstain with out troubles or inspire others to cast their valid votes for themselves. The corruption of citizens and officials is prohibited from denying an election result by arguing that some

#### ❖ Lack of Evidence

While anonymous privacy guarantees electoral fraud safeguards, no approach may be confident that votes are positioned beneath neath bribery or election rigging in any way. This query has its root from the start.

### Implementation of the Technology

Customer launch would not happen until all the planned functions had been added. Multiple improvement cycles take place here, making the life cycle a "multi-waterfall" cycle. Cycles are divided up into smaller, more easily managed modules. Each module passes via the requirements, design, implementation and testing phases. A working version of software is produced during the first module, so you have working software early on during the software life cycle. Each subsequent release of the module adds function to the previous release. The process continues till the complete system is achieved.

## Flowchart of the System

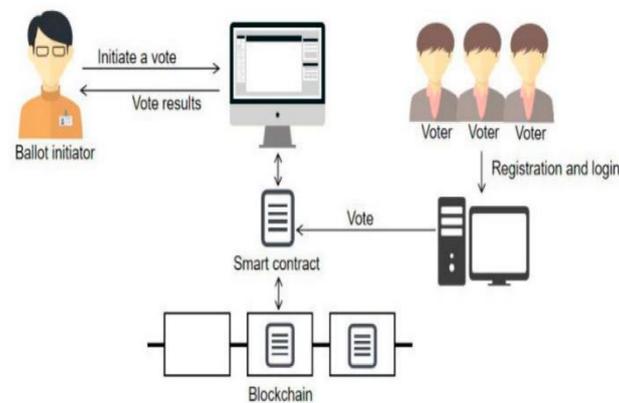


Fig 2- Voter to secure the vote

## 3. CONCLUSIONS

Conclusion From the design and implementation of the e-voting system based on the Ethereum Block chain, conclusions can be drawn including:

1. The e-voting system based on the Ethereum Block chain can work well.
2. This e-voting system can validate the voter's identity well and prevent repeating the election.
3. This e-voting system can store information safely and reliably.
4. By the use of this electoral system, the voting procedures might be lots quicker and safer.
5. The voting process and the calculation of the number of votes will be faster because the voting process is done in real-time.

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