
INTEGRATED ADVANCE AND SECURE VOTING SYSTEM

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Abstract

The Voting System is the cornerstone of Indian democracy in which electors cast their ballots to select their representatives to demonstrate their participation in order to supervise them. Computers, networking systems and internal online voting infrastructures are being improved worldwide. On-line casting votes are a software system that allows a voter to cast his votes by registering himself on the voting website. The e-Voting method, which is the key functional property of the electronic voting system, must fulfill various basic non-functional requirements. Most important are the requirements for security, correctness, consistency, robustness and coherence. The proposed system provides security and voter verifies the accuracy of their cast vote by retaining the hardcopy of cast vote. The proposed system solves the problem of security and transparency.

Keywords: *Voting System, Election, EVM, Safety, Security, Accuracy, Influence, Impact, Guidelines.*

I. INTRODUCTION

The Voting System is the foundation of Indian democracy in which electors cast their ballots to select their representatives to demonstrate their participation in order to supervise them. In olden days, voting schemes have progressed from counting by hands to systems that involve records, optical scanning devices, punch cards, and mechanical levers, i.e. to the e-voting method. This conventional voting system consumes more time, so due to their busy schedule, the maximum population of India cannot cast their vote. Safe and stable e-voting is a voting system in which election data is easily stored, registered and processed as digital information and needs to be addressed, marked, delivered and balloted using computers. Therefore, for a more safe and secure platform to resolve the susceptibility of the server used by the voter to cast his vote, identification and authentication techniques for voters are essential. The registered voters' voting process is very inconvenient [1].

The online voting system is a form of online voting. Individuals approved by the admin may cast their/her vote online in this system without going to any physical polling station. There are many voting processes that are used for voting purposes, such as ballot paper, EVM computer, but all these processes need more time and more manpower, so we have an online voting system that provides features such as precision, convenience, flexibility, privacy and verifiability to remove all these disadvantages. In recent times, a lot of online voting literature has been created. While online voting has been an area of study in recent years, efforts are being made to make the online voting system safer. The use of the vulnerable Internet and the subsequent security breaches has recently been published. So, the biggest challenge now is addressing these security breaches, such as denial of service attacks [2].

Device, networking systems and internal infrastructures are being improved worldwide and online voting is no longer a North American or Western phenomenon. This complex technical method of casting votes with a vote has spread well beyond the United States, spreading all over the world. With its benefits, Electronic Voting will now spread from the developed countries of Europe to the developing countries of Asia and South America. Since the creation of the state over 80 years ago, the implementation of electronic voting has been the biggest change to the Irish electoral system. Electronic Voting may soon become a global nightmare. Besides effective e-Voting technologies, there is a dire need for international standards to govern the technology, the software reliability and accuracy, the processes and algorithms designed within the technology, and the verification of all hardware, software and protocols involved. Such standards will eventually allow elections to proceed in any part of the world without the need for monitoring bodies [3].

Voting schemes have evolved from counting hands in early days to systems that include paper, punch cards, mechanical lever and optical-scan machines. Electronic voting systems provide some characteristics different from the traditional voting technique, and also it provides improved features of the voting system over traditional voting systems such as accuracy, convenience, flexibility, privacy, verifiability and mobility. But it suffers from various drawbacks such as Time consuming, Consumes large volume of paper work, No direct role for the higher officials, Damage of machines due to lack of attention, Mass update doesn't allow users to update and edit many items simultaneously. The Online Voting System overcomes these inconveniences [4]. The Online Voting System is a voting system that allows any voter from anywhere in the world to use their voting rights. A comprehensive overview of the functional and performance characteristics of the online voting system is given. Voters can cast their votes from anywhere in the world, in a highly secure way, without visiting voting booths. That makes voting a fearless act of aggression and that boosts the proportion of votes [5].

Voting is a very effective way to reveal opinion about an issue or subject from a group of people Based on the promise of greater efficiency, better scalability, faster speed, lower cost,

and more convenience, voting is currently shifting from manual paper-based processing to automate electronic-based processing. The term “electronic voting” characteristically depicts the use of some electronic means in voting and ensures the security, reliability, guarantee and transparency. The wide spectrum of application of voting now includes its use in real-life student council assemblies, shareholder meetings, and the passage of parliamentary legislation. It may be the most important, influential and common use of voting is its use in national elections and there are 204 countries in the world talking about national elections, 120+ nations adopt democratic or hybrid democratic methods so that the electoral system is the centre of this country [6]. People used the electronic voting machine or EVM in India, established by India's election commission and limited by Bharat Electronics, i.e. 1977's BEL. Online voting is a portal through which, by registering on the online voting website, a voter can cast his vote. All user information is entered into the database where the administrator can verify the user. In the database, there are numerous tables for users, candidates, performance, and administration. All basic information such as name, gender, state, email ID must be entered by each voter. This is the website's first page, known as the welcome page. It has all the options for the website, such as House, Polling Dates, Register, Login, Contact us, FAQs [7].

Every voter has to log in to their preferred candidates and click on cast vote to submit their vote. The development and testing of research is performed on LAN. On the other hand, online voting software has been in study for several years, published in recent years, researched cases of incorrect implementations. These variables need to be discussed so that the public can cast its vote in a healthy and acceptable environment. Online voting is a voting mechanism in which any person from anywhere may use his/her voting privileges. Request for online voting. Online voting application contains

1. Users details
2. Usernames with ID and password.
3. Users vote in a database.
4. Sum of total number of votes.
5. Result panel
6. Chat bot to help users
7. A unique user id given my administration [8].

The controlling unit is used for counting the number of polled votes; both units controlling unit and voting unit are connected together with a 5-meter-long wire unit but there are some issues associated with this system which are noted below.

A. Security Problems: -

In the present scenario, results of EVM can be changed by manipulating the program stored in the EVM and by installing a look alike component which can be instructed to change the results.

B. Illegal Voting (Rigging): -

Illegal voting is a common in the voting process where the voters of a particular candidate illegally cast the votes of genuine voters and dispose them of their voting rights in order to get the results in favour of a particular candidate.

C. Privacy: -

The concealment of the voter is secure and there is no way to illegally cast the vote of genuine voter votes.

D. Verifiability: -

The Electronic voting system provides means to recheck the results in case there is a necessity to recheck the election results.

E. Availability: -

The system ensures full availability to the voters on the polling day [9].

F. Resume Ability: -

Security can be considered the heart of any nation's voting system, while designing the system in this paper security is of highest priority. There is a various identification process in which Biometric verification is considered as the secure measure of voter because biometric signature with the help of finger print, retina etc. of any voters have unique value and these biometric identifications of voters never change even after death of person, now a days biometric is providing very effective results which will lead to the illegal voting. The personal data of voters and the casted vote of the voters are stored into a server which will communicate to all voting booths, there will be multiple voters to cast their vote on voting booths which is feasible for voters and due to votes being stored into the server there will not be tampering of votes during counting [10].

II. CONCLUSION

Online voting system that facilitates user (voter), candidate and administrator (who will be in charge and will verify all the user and information) to participate in online voting. Our online voting system is highly secured, and it has a simple and interactive user interface. The proposed online portal is secured and has a unique security feature such as unique id generation that adds another layer of security (except login id and password) and gives admin the ability to verify the user information and to decide whether he is eligible to vote or not. It also creates and manages voting and an election detail as all the users must login by user name and password and click on candidates to register to vote. Our system is also equipped with a chat bot that works as a support or guide to the voters, this helps the users in the voting process.

III. REFERENCES

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