



E – VOTING



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ABSTRACT

Manual voting systems are a coincidence in a new era of advanced technology where online devices speed up work, reduce errors, and help produce accurate results. The election system is the basis of democracy, and the people need to elect the head of the state. India currently has a

manual voting system that causes all sorts of problems. Due to this paper voting system, voters face many problems before or during elections, and some before and after voting with the government. The online voting system has two phases, one for voters and one for the election commission. The Voter module has voter registration and voting. Voting is safe because voters must pass three security certifications to vote. The authentication process consists of a high security password, fingerprint authentication and OTP. It also provides a single sign-on feature, as voters can vote only once during the election. The Election Commission module has features such as adding / removing candidates, deleting voters, and counting votes. The main goals of this task are to save time, ensure safety, avoid mistakes and save government expenses. Replacing the current system is a good solution, and using the system proposed in this work is useful for voters who use sources such as their own devices or devices regulated by the government. In addition, the proposed system also reduces the risk of corruption.

Keywords: Online voting, Highly secured, Authentication, Fingerprint check, efficient, low cost and error free

1.INTRODUCTION

GENERAL

In today's democratic countries, the voting process is extremely significant. Elections are the process of choosing the best candidate to rule the country. The people elect their leader in a democracy by casting votes for him. In India, an electronic voting system has recently been implemented. The existence of voters in the city is required in this system. This is the fundamental disadvantage of computerised voting. Because the voter can vote from anywhere, an online voting system can overcome this.

II.NEED FOR THE STUDY

The electorate expresses its will in a democracy by electing representatives. On behalf of the political body, these elected officials manage the country. The elections in which representatives are elected must be fair and the results accurately computed in order for them to adequately reflect and implement the desires of the people.

Looking back in time, we may deduce that voting systems based on raising hands had a security flaw (elections were not anonymous). A paper-based voting system, on the other hand, has significant drawbacks. Due to population expansion, a paradigm shift from manual voting to paper voting occurred, but time and security are now so critical that a second paradigm shift from paper voting to electronic voting has occurred. There is no compelling reason to remain with the paper voting method, but there are numerous security reasons to support the development of new electronic voting systems.

Speed: Manual vote counting is time-consuming, especially in more populous countries like India where there are many candidates for the same position and the voter has to vote for many elections.

Accessibility: People with disabilities or elderly people don't have easy access to the voting booth, but a convenient system like E-voting helps them to vote.

Transparency: The possibilities of manipulation of the results by influential authorities will almost disappear.

Security: Although the electoral commissions follow many security protocols, there have been complaints about numerous false votes. There is also some chances for revoting.

OBJECTIVES OF THE STUDY

The aim of the study is to analyse the current electoral system and propose an online electoral system that makes it easier for people to vote, using the available resources that could facilitate voters in elections.

III.LITERATURE SURVEY

In order to propose an online election system, it is necessary to study the current and existing voting system

BALLOT VOTING

A ballot is a device used in ancient times to vote. It is also found in paper or ball form. In ancient times, we use this device to vote. For the selection of candidates, people have to secretly seal or mark the selected candidate and place them in a box.



MACHINE VOTING

Machine voting is actually called electronic voting, which means voting on a machine instead of a paper ballot. On the paper ballot, you should check next to your selected candidate, here is the updated version of the ballot. You just need to press the button near your selected candidate symbol, you will only receive your selected candidate symbol to reconfirm your selected candidate.



ONLINE VOTING

Here we offer an updated version of automatic voting, that is, online voting. You can easily vote for your selected candidate using your smartphone. Which is perhaps the smartest way to vote. But this method is not widely used.



IV.EXISTING SYSTEM

There are no such application level system facilities in the country to carry out voting and the entire procedure under the current system. Furthermore, no such programme is currently being used for an automated voting system in accordance with the country's current voting structure. From the registration through the release of the results, everything is done by hand.

This procedure requires the government to spend a significant amount of time and money. As a result, the current system is inefficient. The current system is not a web-based system. The user or individual must want to vote and must be willing to travel to the polling station, which is not easy for everyone.

DRAWBACKS IN EXISTING SYSTEM

Problems with the current manual voting system include the following:

Expensive and time-consuming: The process of collecting data and entering that data into the database is time-consuming and expensive, for example, time and money are spent on printing input forms data, preparing registration stations with staff, then publishing the days set for the registration process, including sensitizing voters on the need to register, as well as the time spent entering this information in the database.

Too Much Paperwork: The process involves too much paperwork and paper storage which is difficult as the papers become bulky with the size of the population.

Errors in data entry: Errors are part of all people; it is highly unlikely that people will be 100% efficient at data entry.

Accessibility: Not everyone has free time to vote by queuing for more hours to vote. Elderly and the disabled persons cannot easily get to the voting booth, so this becomes a big problem.

Loss of registration forms: Sometimes registration forms are lost after being filled with voter data. In most cases they are difficult to track down and therefore many are not registered despite the vote.

There is little time to view voter registration: This is a very big problem because not everyone has free time during the short time they have to view and update voter registration voters. Above all, a certain number of voters are excluded from voting.

V.PROPOSED SYSTEM

The new voting protocol implemented has two keys: voter and election committee.

Voters (home, work, dedicated voting booths, or other devices have authentication and voting capabilities). The Election Commission is responsible for registering, approving and verifying voters and candidates. Database, ballot counting and results.

ADVANTAGES

The main features of the new protocol are the following:

1. This system has biometric scanning for security purposes. The user's biometric scan is compared to their Aadhar data.
2. It is easy to use, convenient and user-friendly.
3. This system has a single sign on feature (i.e.) we can cast our votes only once in the stipulated time.
4. This system requires a voter ID for registration and aadhar details for verification. You can only log in with your voter ID
5. Election commission can:
 - Add/remove candidate.
 - Cross-reference with the candidate's profile.
 - Check the atmosphere with the user.
 - Delete the duplicate profile.
 - Count the votes.
6. This system required the user to enter strong passwords containing uppercase, lowercase, numbers, special characters, etc. This password is to be verified before voting.
7. This system is more efficient and cost-effective.
8. This system has given OTP option with your registered mobile number which is valid up to 120 seconds, before voting.
9. You can customize your profile only after entering the profile password.
10. In the DATABASE information of every voter is stored and Database shows the information of every user.

VI.METHODOLOGY AND MODULES

There are several types of methodologies available for the online voting system, but the most efficient and effective means are used:

The proposed system consists of two modules,

1. User Module
2. Election Commission Module

USER MODULE

REGISTRATION

First of all, the voter has to register with his Aadhar card number and voter ID through the login portal and the person can login through the voter ID and password. The user can update his or her profile only during the election time using profile password

VOTING

During the election, users will be required to enter their voter ID and password in the same login portal they created earlier.

When the operation is confirmed, a new page will be displayed containing the names and symbols of the various candidates who can select a particular candidate and vote as soon as possible. For security reasons, the video and audio for each device will be recorded during the voting process. The user is prompted to place the fingerprint on the device's fingerprint reader. If the fingerprints match, proceed to the next step. Otherwise, the session will be closed. The OTP will now be sent to your registered mobile number and the OTP will be active for 120 seconds. Entering the correct OTP will take you to the next step. When you click the Submit button, the process ends there and voters will not be able to log in to the portal to prevent incorrect votes.

FINGERPRINT

Finger print is individual for all humans, hence it has been used as a Safety feature in mobile phones, app locker, bank lockers etc. So by using this latest technology with a scanner we can make voting a very secure process and can ensure that the correct person is casting their vote.

Every voter fingerprint is stored in the database and during the vote process this API checks whether the voter's fingerprint matches with the database.



OTP

OTP (One Time Password) is a unique code that the system automatically generates for each instance of a time. Since all voters have a mobile number associated with their aadhar, unique OTPs can be obtained for each individual's login, making the process even more secure and simple.



AUDIO AND VIDEO

Video recording features enables to ensure the correct voter. The data is stored in the server which can be later verified for security purpose. In case if a person stands in behind the camera and tries to force the Voter to vote for a particular party then audio recording comes into play, the entire audio and video recording is initiated when the voting process gets started and gets terminated after the voter cast their votes (i.e. for 5 mins). In this way, the administrator can check voters in the future if there are any suspects.



ELECTION COMMISSION MODULE

VOTER

The Election Commission of India can change voter information and add or remove voters at any time as needed. Voters receive a unique ID and password. DATABASE stores information from each voter and the database displays information from each user.

CANDIDATE

The Indian Election Commission can add or remove candidates for elections. Candidates participating in the election fill out a separate form, and the Election Commission uses the voter information provided by the candidate to add the party to the election.

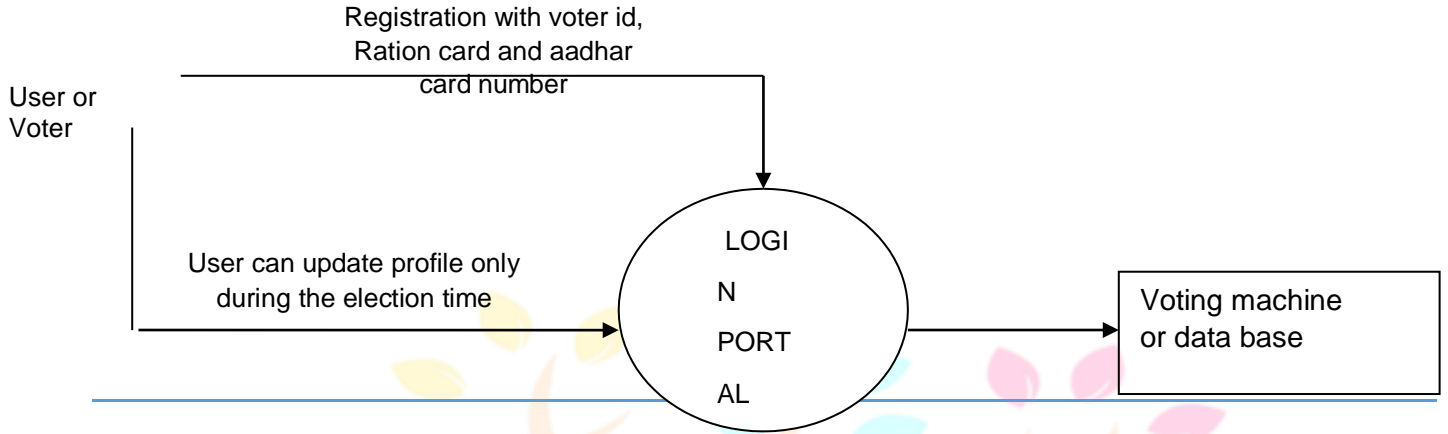
VOTES

The backend of this system is a well-developed database with a NOSQL database such as Mongo DB and a MYSQL database such as phporacle, which can provide the right data if the query is correct, thus resolving the vote count case.

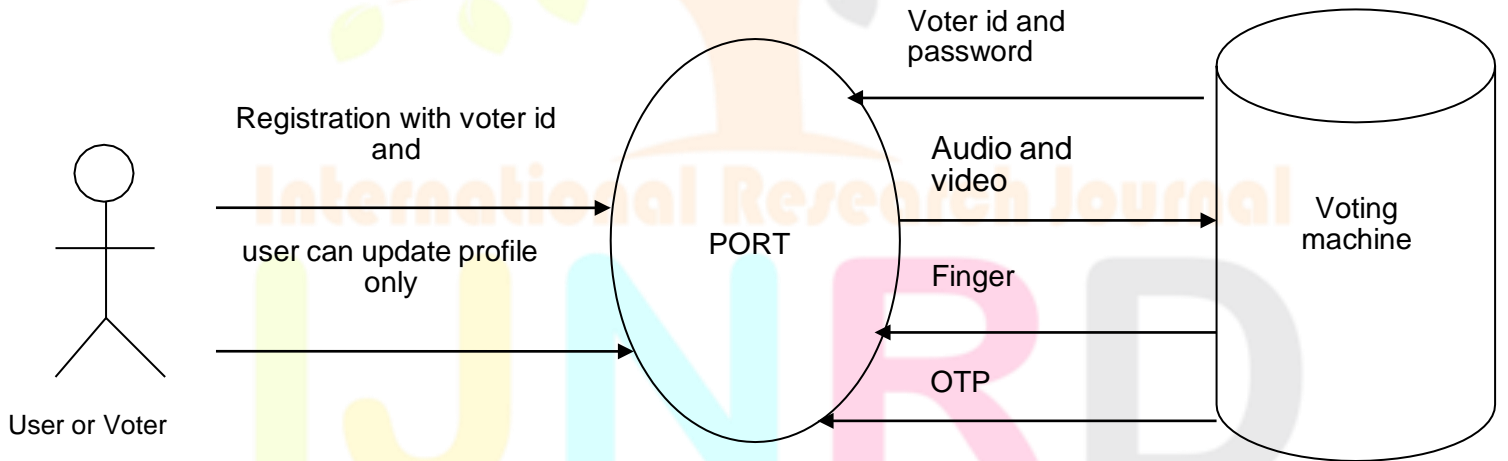
VII.DATA FLOW DIAGRAM

USER MODULE:

REGISTRATION:



VOTING:



VIII.CONCLUSION

We have successfully implemented a new national online voting system in our country as a result of the completion of this project. We have been able to provide an advanced voting system to voters at home and abroad through our online voting system, thanks to the introduction of technology and the internet in our daily lives.

This online voting system keeps track of voter information and allows you to log in and exercise your right to vote. The system will incorporate all of the voting system's features. It gives you the ability to keep track of each party's voter vote and count the total number of votes cast. The Election Commission of India maintains a database that contains all of the names of voters along with their entire information. This user with a voter ID and aadhar can vote and the results will be displayed by calculation. Only users can log in on election days, and this system sets a login timeout. The online voting system aims to reduce the time spent in long lines at polling stations during voting. Since this is an online application available on the Internet, it also aims to allow voters to vote from anywhere in the world, as described. It also increases the percentage of votes and reduces the cost and time of the voting process. Very easy to use and takes no time.

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