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ONLINE VOTING SYSTEM

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ABSTRACT

With rapid growth in technologies the old voting methods can change to advanced voting methods. Online voting software is a modern solution that can efficiently and securely facilitate the voting process for various groups and organizations. The use of such software eliminates the need for physical polling stations, as voters can cast their ballots from anywhere with an internet connection. The benefits of using online voting software are many; it increases accessibility, saves time and resources, ensures accuracy and transparency, and supports a more democratic decision-making process. Eligibility verification and accurate voter information are essential components of a successful online voting platform. While several countries have already implemented online voting software, this approach still faces challenges and limitations that must be addressed before universal adoption. In the following sections, we will delve further into the various types of electronic voting methods and examine successful global examples of online voting. We will also discuss current trends and future developments in online voting software provide a comparison between online and traditional voting methods.

Keywords: Mysql, Java, Servlet, JSP.

I. INTRODUCTION

The introduction of an online voting system aims to provide a more convenient and efficient way for citizens to participate in elections. With paper-based voting systems, it can be difficult to locate specific candidates and ensure voter eligibility. It also made hectic and rush for voters to visit the Centre and vote the candidate. An online voting system addresses these issues by providing secure authentication and verification mechanisms, making the voting process more automated and streamlined.

It made easy for authorized person to login in from its own device and vote. Furthermore, online voting systems can also increase transparency and provide faster results. While there are concerns regarding security and privacy, the benefits of an online voting system cannot be denied. In this context, the purpose and scope of the system are to ensure that every citizen can participate in the democratic process in a secure and hassle-free manner

1.1 PURPOSE AND SCOPE

The purpose of the online voting system is to provide a convenient platform for voters to exercise their democratic right without hassles. The system seeks to eliminate the need for standing in queues and using paper ballots, EVM machines that may be challenging to locate a specific candidate. The scope of the system is vast, as it can be used for various elections, ranging from local/state government to national assembly polls. Additionally, the benefits of the system include an increase in voter turnout and enhanced accessibility for all. The features of the system include a secure authentication and verification process using username and PIN

However, the potential challenges and concerns with the system include the possibility of hacking or tampering with the votes, which can lead to false results. Implementing the system would require collaboration between various government agencies, and there is a need to create awareness among voters about the system's benefits. Overall, the purpose and scope of the online voting system can revolutionize the way elections are conducted in India, and it is essential to work towards its implementation in a secure and transparent manner.

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II. LITERATURE SURVEY

2.1 RESEARCH PAPERS

The author in [1] "Online Voting System" uses fingerprint and uses Aadhaar card for authentication. This system is very efficient and ads extra security to avoid occurrence of fraud. In paper [2] "Online voting system" we collected most the part of our system from this paper login id and password is used for authentication purpose and admin panel controls and look after each and every aspect from registration to the result creation.

In paper [3] "Online voting system using Cloud" UI consists of login name and some special characters for user login purpose. Register voter has to use his/her email id for creation for unique id which is essential at time of login.

III. METHODOLOGY

This software is being developed for convenient use of voters. it can be used for various elections, ranging from local/state government to national assembly polls User just have to register, login and vote his/her favorable candidate.

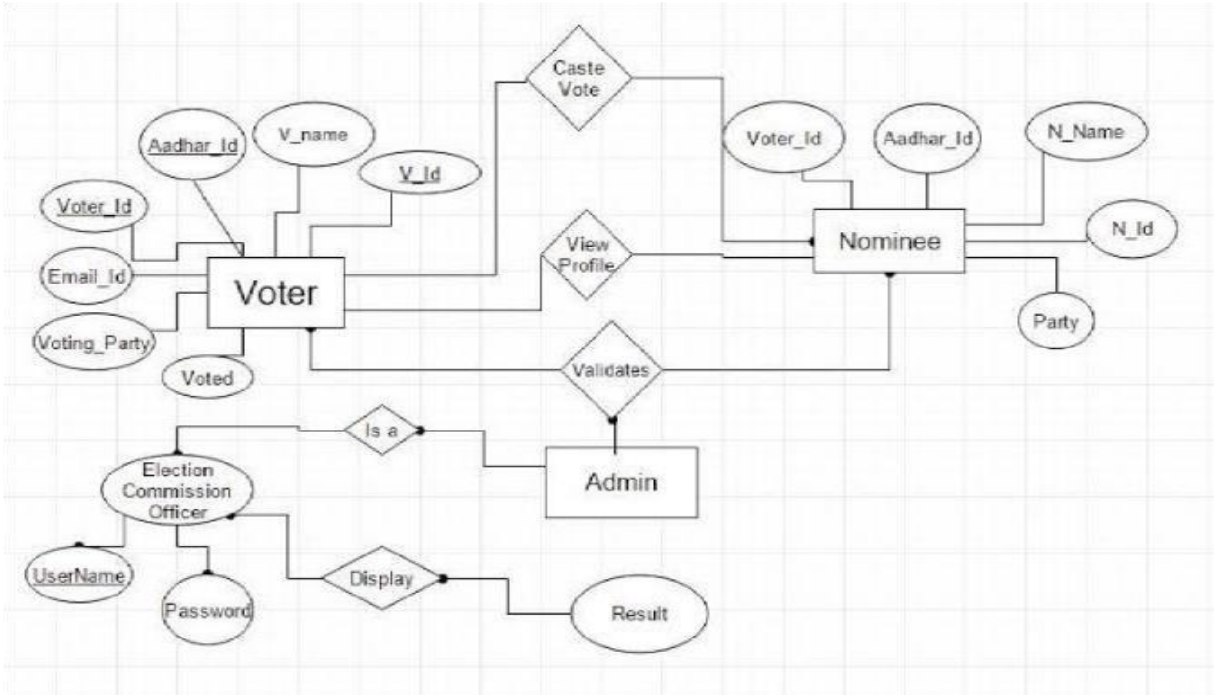
Online voting system contains:

a) Voter's information in database.

b) Voter's Names with ID and password.

c) Voter's vote in a database.

d) Calculation of total number of votes



This online voting system can be explained using following phases:

1) Registration phase.

2) Authentication phase.

3) Voting phase.

4) Counting phase.

5) Result

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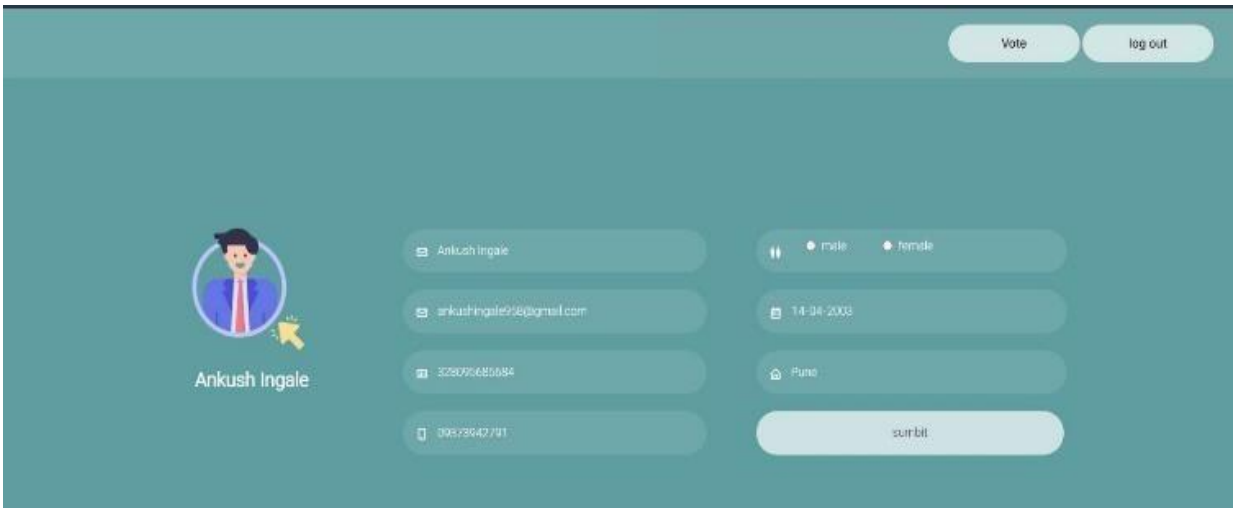
Our system has a server back-end which takes care of all the authentication and the admin panel will take care of each and every function going within such as, user registration, candidate registration, eligibility, casting vote by user, result, etc.

For casting vote user has to register first and then login by its username and password. In case of any mistake, user an update his/her profile as well.



All the information is entered in database for easy access of admin and verification of user and for which different tables are used like candidate, user, result, etc. Our system also generates live voting count which is being displayed.

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IV. FEATURES

In the online voting system, features play a significant role in ensuring a smooth and secure voting process. The system should offer candidate registration and document verification, with an auto-generated user ID for each voter.

It should be easy to understand and use, with an online interface that makes it accessible to all eligible voters. Automation of the voting process is a crucial feature that streamlines the entire process and saves time. The system should be able to display results in real-time, ensuring transparency in the voting process. To ensure secure authentication and verification of voters, the system should use AADHAAR ID-based online election. While there may be concerns and challenges, such as the need to prevent hacking and ensure data security, implementing an online voting system has numerous benefits and is the way forward in modern democracy. for voters, who no longer have to travel to polling booths or wait in long queues to cast their vote. leadership votes and student government elections. These benefits contribute to a more democratic process and promote greater participation among citizens.

V. SECURE AUTHENTICATION AND VERIFICATION

Online voting systems rely on secure authentication and verification techniques to ensure only eligible voters can cast their vote. In India, voters can use their voter identification number to cast their vote through the online module of the project.

The online voting app created by the Election Commission Authority only allows verified voters to vote. The Estonian I-voting system provides an even more secure authentication method by using the PIN of the national ID card for authentication. Any electronic voting system must ensure that a voter's identity is securely verified before allowing them to cast their ballot. This helps to prevent voter fraud and ensures that the election results are fair and accurate.

VI. BENEFITS

Online voting offers numerous benefits over traditional voting methods. Firstly, it provides accessibility and ease use of online voting system. It eliminates the need for manual counting of votes, thereby reducing the chances of human error and ensuring a smooth and efficient election process. With the online voting system, voters can cast their vote conveniently from their mobile devices or computers, making it easily accessible to a wider audience. Additionally, the system can eliminate fake ballots, rigging of votes, and other forms of electoral fraud. The automation of the voting process provides a credible and transparent voting process that gives voters the confidence that their vote will be counted fairly. By adopting an online voting system, election authorities can streamline and modernize their processes while improving the accuracy and reliability of their voting system.

VII. RESULT AND TRANSPERANCY

The online voting system offers a high level of transparency and efficiency in the electoral process. It automates the voting process, reduces the chances of errors or manipulation, and ensures fair and accurate results. The system is designed with secure authentication and verification features that help to eliminate fraudulent activities, such as vote selling or intimidation. The real-time results make it easier for voters to follow the progress of the election and have trust in the outcome. However, there are still concerns related to security and privacy that must be addressed by implementing appropriate effective online voting system could greatly benefit the democratic process.

VIII. AUTOMATION OF THE VOTING PROCESS

Automation of the voting process is one of the key advantages of having a measure, such as the use of VVAT (Voter-Verifiable Audit Trail) that can help to enhance transparency and accountability. Overall, the online voting system has the potential to revolutionize the electoral process, and with careful implementation and monitoring, it can ensure greater transparency and trust in democratic elections.

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IX. CHALLENGES AND CONCERNS

While online voting has the potential to increase voter turnout and reduce costs, there are several challenges and concerns that must be addressed. One of the biggest concerns is the security and privacy of the voting process. It is crucial that the authentication and verification methods are secure and so that no outside interference can corrupt the results. Additionally, there is a concern that online voting could disenfranchise certain groups who may not have easy access to the internet or who may not be tech-savvy. Another challenge is the potential for technical difficulties or glitches during the voting process. It is important that the system is reliable and can handle a high volume of users without crashing Finally, there is a concern that online voting could lead to a lack of transparency in the election process.

X. CONCLUSION

In conclusion, Online Voting System is a highly innovative and technological solution to many of the challenges faced in traditional voting systems. It not only simplifies voting process but also saves time and resources. With secure authentication and verification measures in place, the system offers transparency and accountability in the electoral process. However, the implementation of the online voting system still raises concerns regarding security, privacy, and accessibility. It is important to address these issues before making the system available to the public. The online voting system has tremendous potential to revolutionize the electoral process and ensure greater participation and representation for all.

The way forward is to focus on developing a comprehensive security infrastructure and addressing concerns to make the system accessible to all. By doing so, we can create a more inclusive and democratic electoral process for the future.

XI. FUTURE SCOPE

After discussing the benefits and features of the online voting system, it's time to think about its implementation and future scope. The implementation of the online voting system would require a significant investment in hardware, software, and internet connectivity. However, the benefits of enhanced security, a faster and automated voting process, and increased transparency justify the investment. In the future, the system could be improved by incorporating blockchain technology for added security and auditability. A more comprehensive voter database that includes biometric information, such as fingerprints or facial recognition, could enhance authentication and verification measures.

While the online voting system offers many advantages over traditional paper-based voting, there are still some concerns and challenges to consider. Ensuring equal access and participation, protecting voter privacy and preventing fraud and hacking are some of the key issues that need to be addressed. In conclusion, the online voting system has enormous potential to modernize the election process in India.

It is important that the results are easily accessible and that the system is implementation and future development will require a multistakeholder approach that includes government, transparent to maintain trust in the electoral process. Despite these challenges and concerns, addressing these issues and implementing a civil society, and the private sector. With the right strategies and investments, the online voting system could become a reliable and secure tool for democratic participation and decision-making.

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