

An Efficient Online Voting System

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Abstract: The word “vote” means to choose from a list, to elect or to determine. The main goal of voting is to come up with leaders of the people’s choice. In order to provide preventive measure, the proposed project will be implemented with two security measures namely face recognition and “UNIQUE ID” Verification. Face recognition is used to verify voters, to eliminate fake votes and to eliminate repeated voting. “UNIQUE ID No.” is used to fetch all the details of voter’s from the database. Based on the region, voters will get list of candidates from which voter’s will select one candidate. Data regarding votes and voters will be stored in main database using encryption technique. Data will be stored at only one place, so winning party information can be announced within short time period. In this paper, we present an efficient online voting system.

Keywords: Face Recognition, E-voting, One Time Password

I. Introduction

In the development of any country democracy plays a vital role. Democracy System runs by a leader of the country who is selected by citizen of a country. Citizens have right to choose leader through election. Process of election consumes lots of man-power as well as resources and preparation is started many days before commencement of the election. During this preparation it may happen that involved people make an illegal arrangement with each other or try to substitute their henchmen in the process to win the election. Election is the system which gives people a chance to choose their leader, so it must be transparent, Meddle-Proof, Usable, Authenticated, Accurate, Verifiability and Mobility. In the existing system there are certain drawbacks such as damage of machines, chances of violence, dummy voting and problem of proper monitoring is also an issue. As this process is place oriented and there is region wise distribution, voters need to reach the place of voting. This paper projects to implement voting system through device within secure and violence free environment. The data storage format is encrypted which provides highly secured environment and is validated through face recognition.

II. System Design

The online voting system software is developed to be used by everyone with very simple and self-explanatory GUI (graphical user interface). The focus of this design is to elaborate an interchangeable and collective online voting system with which user can register and get user ID and password and can vote for the candidate of their choice after login to the system.

Like most of the systems in the world, the security consideration is very important. This system provides a better security as it ensures that no voter is allowed to vote more than once. The system also takes care that no voter can determine for whom anyone else voted and no voter can duplicate anyone else’s vote. Every voter can make sure his/her vote is cast.

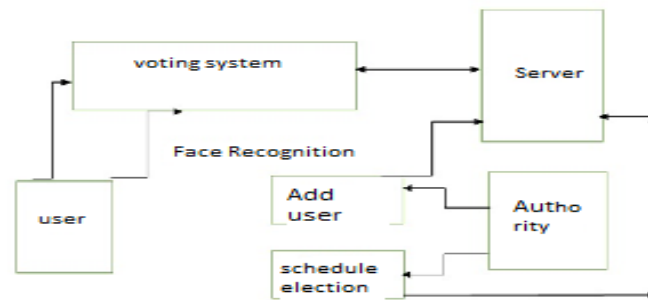


Fig: System Design

III. Existing System

In the existing voting system, the complete election process is divided constituency wise to facilitate the security forces and to make the election system fair. To maintain discipline and security requires a huge amount of man power so, it is bit difficult to accomplish election in a single day. Allocation of polls is done by election commission in advance. Generally polling booth is setup in school and community halls. Voter's card is distributed before one week so; the people can come to know about the location of voting. Time and place for voting is predefined. Each polling station is opened for at least 8 hours on the Election Day.

IV. Proposed System

Voting will be done through web portal. First an application is required through which voters can communicate. We need to use existing database in which voters information exist. Voters/citizens information is available in register database Secure data centre is required to store and fetch the data as per requirement. Throughout voting process an internet connection is essential. Assume that almost every next person use internet over which our application program will execute. After connection is established voters need to access web portal.

V. Methodology

The procedure of voting is as follow:

Every New User in the India is first register for Voting. So, our first step is registration. The voter details are maintained by the voting authorities. the voter has to enter is username, voter ID, UNIQUE ID(for example AADHAR), password, user photo, email Id which will be stored in database. The task of voter registration is strictly preserved for the system administrator. Therefore if you are logged in as a mere user/voter, you don't have this privilege, therefore, the registration page link is disabled for you. Login option allows us to log us in for voting. Enter username, password and user face recognition to verify their eligibility in the election.

Now the CA (central authority) maintains the database of voter details and also a database of voters who have already voted. the CA will check whether the voter has already voted ; if yes ,the voter will not be allowed to vote again. if the voter has not voted before, the CA will check the validity of the voter.

After logging in, a list of candidates will be displayed on the screen of the voter's device. The user can select any of the candidates and further confirm their vote for the candidate. When a candidate is selected and the vote is cast the message will be displayed as you successfully casted your vote.

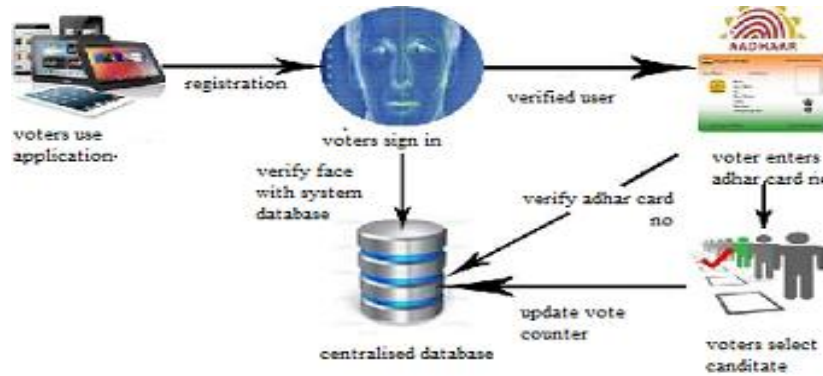


Fig. System Methodology

VI. Implementation

Home

It is the welcome page of the website, having all the feature options of the website.

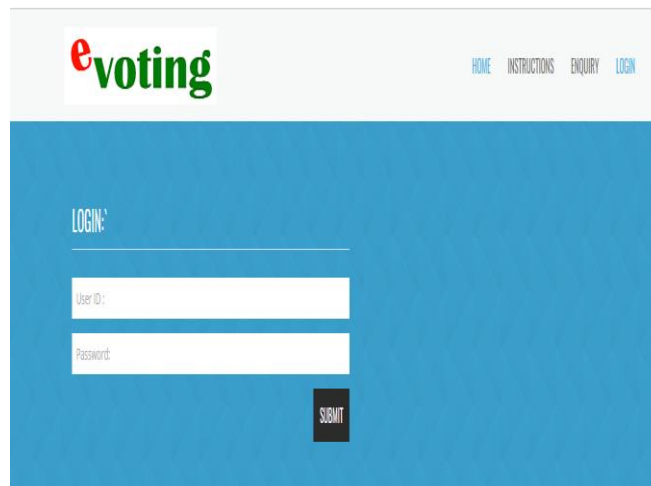


Registration:

This is the register page, where the voter, candidate and election commission officer can register themselves. They all have to enter basic information best of their known. All the information registered in the website are saved in the respective database. The Election Commission officer has authority to accept eligible user and suitable candidate, otherwise he/she has right to reject their registration.

Login:

User Login: After registering into the website, this information is saved to the database and sent to the election commission. The user can Login to the website with his unique USERNAME and PASSWORD generated through registration.



VII. Conclusion

The Electronic Voting System (EVS) is developed by considering the problems of ballot-paper voting system & Electronic Voting Machine (EVM). EVS reduces manual labour effectively. Results can be obtained very quickly i.e., vote casting is done automatically. Even though there is a single laptop, any corruptions done by either the pooling officer or the voters can be identified quite easily. The obtained results of a particular pooling station can't be altered since there are multiple copies of the results. In this process, internet connection is must which will bring the overall system in success.

VIII. Future Enhancement

AADHAR based Electronic voting systems have many advantages over the traditional way of voting. Some of these advantages are lesser cost, faster tabulation of results, improved accessibility, greater accuracy, and lower risk of human and mechanical errors. It is very difficult to design ideal e-voting system which can allow security and privacy on the high level with no compromise. Future enhancements focused to design a system which can be easy to use and will provide security and privacy of votes on acceptable level by concentrating the authentication and processing section, and also app development can be done.

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