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An Approach of Android Voting System

Naveen M Shamanur[1*], Prof. Md. Irshad Hussain B [2*]

[1]Student, Department of Master Applications,

University B.D.T College of Engineering, Davanagere, Karnataka, India

[2]Assistant Professor, Department of Master Applications,

University B.D.T College of Engineering, Davanagere, Karnataka, India

Abstract:

The advancement of web technologies has given rise to a new application that will make the voting process very simple and convenient. E-voting facilitates the capture, capture, and counting of votes in an election. This project describes electronic voting on the Android platform. The proposed e-voting system allows users to vote without having to go to a polling place. The advancement of web technologies has given rise to a new application that will make the voting process very simple. This project describes e-voting on the Android platform using an Android application. The proposed e-voting system allows users to vote without having to go to a polling place. The proposed Online voting system work on the basis of Aaadhar number and the mobile number registered in the Aadhaar, which is then matched with an already saved number within a database that is retrieved from Aadhaar card database of the government.

Introduction

Voting on any social issue is now required in modern democratic societies. As a result, making the voting process easier and more efficient is becoming increasingly important. On the other hand, the rapid development of mobile phone operating systems has resulted in large-scale application development. The main reason for the incredible growth in android application development is that Android is an open source operating system. It means that software developers will have the ability to customise their products. In addition, the software development kit includes tools for creating and running Android applications. The first and most important requirements for any voting system are security and accuracy. As a result, EVS should meet at least the security requirements outlined in [1,2,3].

Existing e-voting systems include direct-recording electronic (DRE) voting machines, which record votes via a ballot display equipped with mechanical or electro-optical components that can be activated by the voter (typically buttons or a touchscreen), process data with computer software, and store voting data and

ballot images in memory components. Following the election, it generates a tabulation of the voting data, which is stored in a removable memory component and as a printed copy. The system may also allow for the transmission of individual ballots or vote totals to a central location for consolidation and reporting of results from precincts. These systems employ a precinct count method for tabulating ballots at the polling location. Typically, they tabulate ballots as they are cast and print the results after the polls close. Another existing E-Voting system identifies voters using RFID (radio frequency identification). If the voter is valid, the candidate list will be displayed to him or her. Biometric e-voting systems employ specialised hardware, such as a fingerprint scanner or a retina scanner. This hardware is responsible for voter identification. The voter can then vote for any candidate of his choice.

Every citizen in a democratic country has the right to vote. Traditional voting methods necessitate more time and paper waste. The strategy and operation of the highly secure E-smart voting system (ESVS), Aadhaar voting system, and OTP-based verification system to improve the voting process during elections. Furthermore, the vote cast by a user is encrypted before being stored in the database. E-SVS uses the user's Aadhaar number for voter identification and verification. With a smart voting system, voters can vote using their mobile phone and avoid long lines at polling stations. The ESVS uses the Aadhaar number to authenticate the user via an OTP sent to their registered Aadhaar-linked mobile number. The Smart Voting System successfully allows people to vote using smart phones, reducing the number of people queuing at polling booths. For the last few years, electronic voting has drawn a lot of attention and research because it has some significant advantages over traditional paper-based voting. This paper depicts the transformation of the voting system through the development of mobile phone voting and an application.

Literature Survey

As the world watched the electoral drama unfold in Florida at the end of 2000, people started wondering, “Wouldn’t all our problems be solved if they just used Internet Voting?”. People all over the world soon started taking a hard look at their voting equipment and procedures, and trying to figure out how to improve them [4]. There is a strong inclination towards moving to Remote Internet Voting – at least among the politicians – in order to enhance voter convenience, increase voter confidence and voter turnout. However, as will be seen later in this paper, there are serious technological and social aspects that make Remote Internet Voting infeasible in the visible future. Therefore, many technologists have suggested that remote poll-site electronic voting, where the voter can vote at any poll-site (not only his home county poll-site), seems to be the best step forward as it provides better voter convenience, but at the same time, does not compromise security.

This paper presents a survey of the state of the art in Electronic Voting, including the various works done in Internet Voting (and the arguments against its use), as well as in electronic poll-site voting. Electronic voting refers to the use of computers or computerized voting equipment to cast ballots in an election. Sometimes, this term is used more specifically to refer to voting that takes place over the Internet. Electronic systems can be used to register voters, tally ballots, and record votes [5].

The Caltech/MIT Voting Technology Project [6] came into being in order to develop a new voting technology in order to prevent a recurrence of the problems that threatened the 2000 U. S. Presidential Elections. The report assesses the magnitude of the problems, their root causes and how technology can reduce them. They address a wide range of "What is" issues including voting procedures, voting equipment, voter registration, polling places, absentee and early voting, ballot security, cost and public finance of elections, etc. They then propose a novel "What could be" framework for voting technology (that moves away from monolithic voting structures), and propose that a process for innovation be setup.

The framework is "A Modular Voting Architecture ("Frogs")" [7,] in which vote generation is performed separately from vote casting, and the "Frog" forms a permanent audit trail, the importance of which cannot be over-stressed. Here, the vote generation machine can be proprietary whereas the vote casting machine must be open-source and thoroughly verified and certified for correctness and security. Finally, the report provides a set of short-term and long-term recommendations on the various issues related to voting.

In "Electronic Voting" [8], Rivest addresses some issues like the "secure platform problem" and the (im)possibility of giving a receipt to the voter. He also provides some personal opinions on a host of issues including the striking dissimilarity between e-commerce and e-voting, the dangers of adversaries performing automated, wide-scale attacks while voting from home, the need for extreme simplicity of voting equipment, the importance of audit-trails, support for disabled voters, security problems of absentee ballots, etc.

Methodology

- ➔ After logging in, the user enters the Voting phase, which is perhaps the most important part of this system.
- ➔ 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.
- ➔ Now as the voter casts his vote a ballot is created.

➔ This system working on the basis of the OTP, during the time of the election user need to enter their mobile number which is registered in the aadhaar database and immediately they can get the OTP and once it verified they can vote.

➔ Here we have given the option to watch the region and the participants with the symbol.

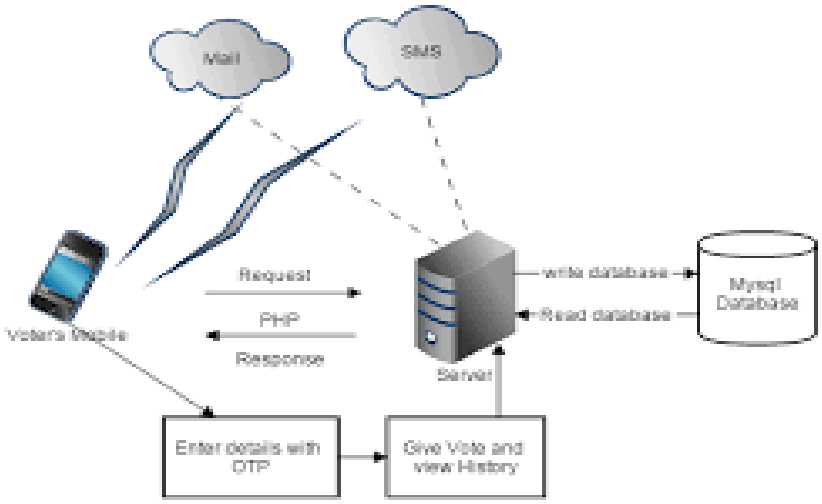

Figure1: Android voting system

Advantages:

- The system can be used anytime and from anywhere.
- It excludes the use of manual voting process.
- No one can cast votes on behalf of others and multiple times.
- Saves time and reduces human intervention.
- It makes employees happy as their opinions are considered for the matters in organization.
- The system is flexible and secured to be used.

Applications:

- This project can be used in commercial organizations, corporations.
- It can also be used in schools, colleges, institutes, banks.

Summary of resent existing approach system

SL.no	Author Name	Title Name	Methodology Used
1	Ankit Anand, Pallavi Divya	An Efficient Online Voting System	1.Registration 2.Choice of candidate's for voting 3.databaseobject browser, voting status 4.communication interface's
2	K. P. Kaliyamurthie, R. Udayakumar, D. Parameswari and S. N. Mugunthan	Highly Secured Online Voting System over Network	1.work flow 2.personal identification number 3.email 4.image
3	Dr.V.LATHA,ADIKESAVAN.V ,SATHEESH THIRUMALAI.C ,VIGNESH.T , VISHAL.P	AADHAR BASED ELECTRONIC VOTING SYSTEM AND PROVIDING AUTHENTICATION ON INTERNET OF THINGS	1.finger print scanner 2.pic micro-controller 3.bluetooth 4.LCD 5.Buzzer
4	K.Gowthami, M.Abinaya	ONLINE VOTING SYSTEM POWERED BY AADHAR AUTHENTICATION	1.finger print enrollment 2.biometric verification 3.architecture diagram 4.voter verification
5	Shaikh Mohammad Bilal N	Online Voting System via Smartphone	1.admin window 2.vote window 3.output window
6	Maria De Paola Vincenzo	THE CAUSAL IMPACT OF CLOSENESS ON ELECTORAL PARTICIPATION EXPLOITING THE ITALIAN DUAL BALLOT SYSTEM	1.OLS and fixed affect estimates 2.roubstness checks "Heckman correction" 3.proportional dependent variable estimator
7	Asdrúbal López Chau, Javier Silva Pérez, MiguLeón Chávez	An e-voting system for Android Smartphones	1.elliptic curves and bi-liner parings 2.special map to point function 3.short signature scheme 4.blind signature scheme

CONCLUSION

Since this E-Voting application is available in the Play Store, the percentage of people who vote has increased because they no longer need to travel to cast their votes, which are registered in their native language. It allows for online voting and saves individuals time while waiting in line. The transportation fee for transporting the electronic voting machine to pooling booths will be reduced. In this pandemic, E-Voting is far more important for avoiding crowds.

The presence casting a ballot framework, which has an issue with the cost of providing voting form papers, and the electronic democratic machines delivered in India can be attacked to demonstrate which framework has been fathomed. As a result, the democratic framework in the Android application has flaws. It incorporated the issue that if the telephone was undermined or harmed, it would result in democratic error. Something else, it was demonstrated that the new framework for the political decision day was more productive than the democratic framework that used voting form papers. For Election Day progress, their location typically used the polling forms paper. To sort out the events, a lot of money was spent. As a result, with this venture, the issue of utilising a large amount of cost can be reduced. Furthermore, the Android application can be determined the inormation which is the votes without utilising a labour to ascertain the votes. Additionally, the time required to distribute the overall result was reduced.

Future Work

This project was the first implementation of a system of this nature. We identify that the work done both in terms of analysing and implementing the system is by no means complete. In this section we list the things that were either left open by this project or were opened by the analysis performed and the lessons learned during our interaction with the subject.

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20. "An e-voting system for Android Smartphones" Lourdes López García1*, Asdrúbal López Chau1 , Javier Silva Pérez2 , Miguel León Chávez3 1 Centro Universitario UAEM Zumpango, Computer Engineering Department, Camino viejo a Jilotzingo continuación calle Rayón, Valle Hermoso. C.P. 55600. Estado de México, México.