Online Election Voting Using One Time Password

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Abstract—This paper introduces an online voting system in which the election data is stored and processed. In today’s world of growing advanced mobile technologies, the traditional voting method can be changed to a newer and effective approach termed as E-voting. The Mobile voting system provides a convenient, easy and efficient way to vote eliminating the shortcomings of traditional approach. In this paper we propose to build an E-Voting system which is basically an online voting system through which people can cast their vote through their smart phones or by using an e-voting website. To achieve the required security we are using OTP (one time password) approach, which is most commonly on the web to tell the difference between a human using a web service and an automated bot thus making the website more secure against spam-bot attacks. The OTP principle emphasizes that each time the user tries to log on, the algorithm produces pseudorandom output thus improving the security. Nowadays Technology is being used more and more as a tool to contribution voters to cast their votes.

Keywords—E-voting, OTP, Secure

I. INTRODUCTION

Considering how far e-commerce has come there should be provision for people to vote online with good security and convenience. In it is revealed that there is a raising interest for voting on social networking tools like Facebook or Twitter and through SMS. This system allows users to send their votes directly to web services, for its computation and display the results to the voters which gives some decision power to voters. Online voting increases participation in voting as people can cast their vote form any place, any time.

A. E-voting technique

In this paper, authentication technique proposed is - One Time Password (OTP). One Time Password principle produces pseudorandom password each time the user tries to log on. This OTP will be send to voter’s mobile phone and E-mail ID. An OTP is a password that is only valid for single login session thus improving the security.

B. E-voting for better security

This system provides a better security as it ensures that no voter is allowed to vote more than once. Also the system 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.

II. LITERATURE SURVEY

E-Voting application on website gives user to vote. There is a DATABASE which is maintained by the ELECTION COMMISSION OF INDIA in which complete information about voter is stored. Admin can update various voters’ information and handle complete data of voters and candidates. Information about voters like their name, Nationality, Voter ID, address can be maintained by the admin. Even though the system allows voters to vote any candidate from anywhere, but the voters should have to authenticate themselves and get access to their account. This technique is imposed to ensure that only the valid person is allowed to vote in the elections. The aim of this project is to design and develop a voting application for the Android platform that will help people to vote securely from anywhere from the country. Electronic voting using E-voting website refers to the use of smart phones to vote and use computerized voting equipment to vote.

III. EXISTING SYSTEM

In the past, people went to polling place and take the blank ballots, then punch a hole or append the seal. If the seal is not clear enough, or the vote is damaged by soiling, it may bring some debate on the result. In order to resolve these situations, the technology of electronic voting (e-voting) comes into existence. The initial E-voting System which was developed was not much secure and hence less efficient. It was also meant for a small number of people, restricting its use for a small organization. By using information technology, E-voting system can cast and count votes with higher convenience and efficiency, even make the electoral procedures simple and reduce the mistake rate of ballot examination.

IV. PROPOSED WORK

Here Admin will load the databases of all voters. He can add/delete/edit candidates, parties and voters. He registers each voter with valid E-mail ID and corresponding information.
Each voter obtains OTP at login time to their E-mail ID by clicking on “Get Password” button and submit voter ID. Password will be sent to pre-registered E-mail ID. OTP will be generated using shuffling set of characters or by uniqid() function.

Figure 1. Obtaining OTP

V. SYSTEM DESIGN

Admin:
1. Import voter details with valid E-mail ID from database.
2. Enter valid Candidate details of each constituency.
3. Enter party details.
4. Enter start and stop election time.

Voter:
1. Click on “Get Password”
2. Enter Voter ID
3. Get OTP on registered E-mail ID.
4. Log in with credentials
5. Vote confirmation and voting.

As soon as voter logs out password will be changed and he/she needs to obtain newer password to log in. They can vote from remote places and can see the results soon after the election is over.

VI. ADVANTAGES

1. The system can be used anytime and from anywhere by the Voters.
2. No one can cast votes on behalf of others and multiple times.
4. The system is flexible and secured to be used.
5. Unique Identification of voter through Aadhar number/Voter-ID.
6. Extremely secure system with one time password.
7. Improves voting with friendly GUI Interface.
8. No fraud vote can be submitted.

VI. FUTURE SCOPE

There exist various methods to secure the Voting process. Our project Used random OTP for secured voting. In future more complex OTP or hardware techniques can be used and can be made it complex for hacking and related issues. It can be extended to more Security Using various level of Authentication and Verification. More Security and Privacy Issues can be maintained by using various aspects.

VII. CONCLUSION

The major advantage of e-voting is user can cast the vote from any place and at any time with increased security. Online Election systems have many advantages over the traditional voting system. Some of these advantages are less cost, faster generation results, easy accessibility, accuracy, and low risk of human and mechanical errors. It is very difficult to develop e-voting system which can allow security and privacy on the high level. Future development focused to design a system which can be easy to use and will provide security and privacy of votes on acceptable level by proper authentication and processing section. By online voting system percentage of voting is increases and cost and time of voting process is decreases. It is easy to use and it is less time consuming. It is very easy to debug.

REFERENCES

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