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**ABSTRACT**

The main objective of the democracy is "vote" by which the people can elect the candidates for forming an efficient government to satisfy their needs and requests such that their standard living can be improved. In developing countries like "INDIA" the election commission follows manual voting mechanism which is done by electronic voting machine. This machine is placed in the poll booth centre and is monitored by higher officials. due to some illegal activities the polling centre are misused and people's vote to right has been denied. This seldom occurs in rural areas as well as in urban cities because the educated people are not interested in casting their votes to candidates who represent their respective areas. To ensure 100% voting automation came into play. But this automated system have been approved only on some developed countries since security have not been ensured to a large extent. Our main aim of the proposed system is to develop a compatible voting machine with high security . The proposed system is mainly designed for our country. It has three phases. First the details of the persons who are above 18years are extracted from aadhar card database since it had became mandatory in present scenario. Automatically a new voter id with necessary details will be created and an intimation will be given to the persons through their e-mail. At the time of voting, the user can specify their id and password. To ensure more security, finger prints of the voter is used as the main authentication resource. Since the finger pattern of each human being is different, the voter can be easily authenticated. The system allow the voter to vote through his fingerprint. Finger print is used to uniquely identify the user. The finger print minutiae features are different for each human being. Finger print is used as a authentication of the voters. As soon as they cast their vote, their voter id and other details will be erased automatically and the aadhar card details which they used will be tracked and will be locked to access. This is done to preserve the security. When people cast their vote the results will be updated automatically and on the same day of election, the results will also be published. Also our proposed system supports the online voting too.r.

**Keywords:** *vote, electronic voting machine, aadhar card, finger prints, voter id.*

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**I. INTRODUCTION**

Democracy principles depends upon the people's decision. So, to have great vision we need to take correct decision. This can be made by "voting". The conventional voting mechanisms follows the issue of voter id and other details which is generated manually. So, there are chances of parallax errors. Moreover the electronic voting machine may be devised in a such a way that people whatever and whomever they vote, will be converted into some other's party or candidates. It may be misused. To avoid this automation had been developed. Many organizations and developed countries have accepted the automated system.

**II. EXISTING SYSTEM:**

The automated voting systems are developed before some years ago. The existing systems have only been approved in developed countries. That too, not in all developed countries. Because the security has not yet been fully preserved. We moved onto automation mainly to rely on security. But, the existing systems failed to ensure.

### III. RELATED WORKS

#### 1. Secure online voting system:

This system proposed a secure online voting system by utilizing the concept of biometric and steganographic authentication. Homomorphic technique encrypts the casted vote stored and decrypts it during the results.

*Drawbacks:*

1. Not reliable
2. Is not user friendly

#### 2. Mobile voting system:

This system utilized the cell-phone systems to cast vote which was very secure, efficient and easy way to cast vote. RSA algorithm was used for security purpose. This system provided e-voting system which fulfilled the security requirements of voting process. Totally there were three steps in this system.

*Drawbacks:*

1. Process will be done through SMS messaging so there will be wastage of money.
2. Not compatible with current trends
3. The same user can cast their vote in paper ballot also. hence no security is ensured

### IV. PROPOSED SYSTEM:

Our Proposed System is a finger-print based application that enhances our country with a better voting system to ensure 100% voting .Since the existing voting system is not having high security our project will overcome this major drawback.

Our digital voting system generates the list of all the people in the state above 18 years from the aadhar card database since it is made mandatory in our country today. From the generated list our system will automatically generates a voter id for people above the age of 18.Hence by this way nobody will be left out without getting their right to vote which fails in the existing system. Therefore 100% voting will be achieved.

*Voting Phase:* During the time of voting the voter can download the voter id from the net by using the aadhar card number. By using this number he/she can cast his/her vote. Instead of using the existing voting machine we supply a new machine which is capable of tracking the aadhar card details of the voters. It will automatically give a notification to the voter to cast their vote. So the people can cast their vote with the latest technology and high security than the existing system.

The major enhancement feature in our proposed system is the high security level which is not available in the existing systems. The security is maintained by making a voter to cast his/her vote only once. If he/she tries for the second time he/she will not be able to vote since tracking feature is included in our system. And also when each voter is casting his/her vote the count will be updated at the same time in the admin database through the server. Hence by this method it is very difficult to cheat.

Therefore our idea will lead our country to a smart world and will help to emerge as a developed country. Our proposed system will ensure 100% voting in the country with high security voting system as like the developed countries.

*Online Voting Phase:* People who wish to cast their vote through online may also use our system since we are implementing our idea as a system and mobile app too.

**V. WORKING:**

**Online voter id generation:**

The aadhar card information comprising of each individuals name, date of birth, gender, aadhar number, mail id, address, state, district, fingerprint of left and right hand along with retina scan and passport size photo are stored in the admin database. From the aadhar data, voter id is generated for people above 18years of age as it is the eligibility criterion for voting. The people can download heir voter id from their mail id for their future use. A new database is generated for the people above 18 years of age for the voter id details.

**Casting the vote:**

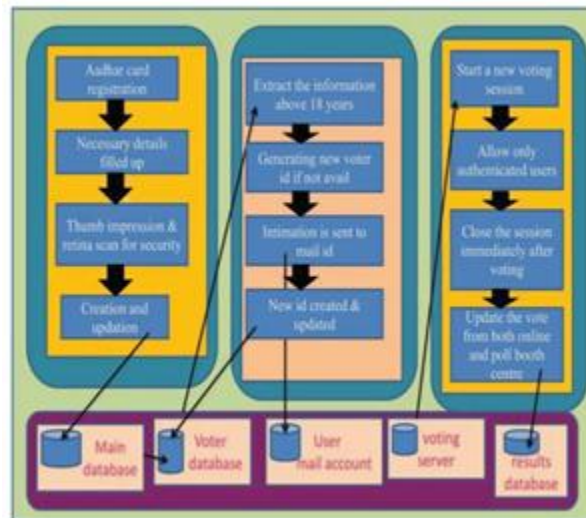
A voting machine with tracking, scanning, etc will be developed and a computer will be attached to that machine through USB cables. The user has to first login into the system through the fingerprint. Authentication is being granted from the aadhar finger print database. If both the fingerprint matches, the user has to go through the scanning process of his/her face and retina. If it matches, the voter will be allowed to enter their voter id and cast their vote for their interested party. People trying to vote second time is not being allowed as once the finger print is granted authentication the login is being denied for the user. The casted vote is being updated at each instance of time in the database. The election results can be published at the same day with high accuracy and efficiency. Also, people who are voting through online will also go through some authentication process.

By using our app, they can cast their vote to their candidates.

**VI. MERITS**

- Automated voter id generation
- Digital voting
- Reduces manual work
- Transparent voting system
- Secure voting system through finger print matching

**VII. ARCHITECTURE DIAGRAM**



## VIII. CONCLUSION

A nation with less voting percentage will struggle to develop as choosing a right leader for the nation is very essential. Unfortunately our nation lacks in the 100% of voting. This is mainly due to the failure of the security level in the existing voting system. Our application tends to make our nation into a developed country by increasing the percentage of vote by developing a high security voting system. Let's make our country smart and let's make our nation to become super-power.

## IX. FUTURE WORK

We are trying to develop an mobile app that is hardware independent.

## REFERENCES

- [1] Benaloh, J.& Tuinstra, D. (1994) "Receipt-free Secret-Ballot Elections", In *Proceedings of the 26th ACM Symposium on Theory of Computing (STOC '94)*, Montreal, Canada.
- [2] APPENDIX 2J, *Experience of electronics voting overseas*.THE POLICY INSTITUTE,TRINITY COLLEGE DUBLIN.Dr.Kenneth Benoit ,Department of Political Scieence TCD.
- [3] Brennock, M. (2004) *Cabinet to press ahead on e-voting in EU and local polls*. *The Irish Times*.
- [4] *California Secretary of State Ad Hoc Touch screen Voting Task Force Report*
- [5] Caltech-MIT. (2001) *Voting: what is, what could be*. *Cal Tech-MIT Voting technology Project Report*
- [6] Cetinkaya, O. & Cetinkaya, D. (2007) "Towards Secure E-Elections in Turkey: Requirements and Principles".
- [7] Chaum, D. (1981) "Untraceable Electronic Mail, Return Addresses, and Digital Pseudonym.
- [8] Chaum, D. (1982) "Blind Signatures for Untraceable Payments".
- [9] Chaum, David (2000) *Secret-Ballot Receipts and Transparent Integrity*.
- [10]Cranor, L. & Cytron, R. (1997) "Sensus: A Security-Conscious Electronic Polling System for the Internet".
- [11]Fujioka, A., Okamoto, T. and Ohta, K. (1992) "A Practical Secret Voting Scheme for Large Scale Elections".
- [12]Gritzalis D, editor. (2002) *Secure electronic voting*. *Advances in information security*.
- [13]Hoffer, J. A., et al (2002). *Modern Systems Analysis & Design*3rd edition, Prentice Hall, Upper Saddle River, NJ.
- [14]Jefferson, D.R., Rubin, A.D., Simons, B., and Wagner, D. (2004) A "Security Analysis of the Secure Electronic Registration and Voting Experiment (SERVE)"
- [15]Kazi, M.A.F. (2003): *Realist Evaluation in Practice*, Sage, London.
- [16]Kerner,S.M (2006).Is PHP The Cure Fore For The "Broken" Web
- [17]Kohno T, Stubblefield A, Rubin AD, & Wallach DS. , (2004) *Analysis of an electronic voting system*. *IEEE symposium on security and privacy*.
- [18]Larman, Craig. (2005). *Applying UML and Patterns: An Introduction to Object- Oriented Analysis and Design and Iterative Development, Third Edition*.
- [19]Leatham, S. (2003) *Mostirish citizens approve of e-voting*:
- [20]Lorrie Cranor (2001) .*Lorrie Cranor's Voting*.
- [21]X. Yi, P. Cerone, and Y. Zhang, "Secure Electronic Voting for Mobile Communications,".
- [22]Y. Feng, S. L. Ng, and S.S. Grosche, "An Electronic Voting System Using GSM Mobile Technology,".
- [23]K. Kim, and D. Hong, "Electronic Voting System using Mobile Terminal," *World Academy of Science, Engineering and Technology*, pp. 33-37, 2007.>24@ .. 3. .DOL\DPXUWKLH, 5. 8GD\DNXPDU, '3DUD PHV Z D UL DQG 6. 1. 0XJXQ W K D Q , 3KLJK O\ VHFU U H G RQOLQH YRWLQJ V\ VWHP RYHU QHWZRUN'. >25@ \*LDQOXFD'LQL 3, QFUHDVLQJ 6HFXULW\ DQG \$YDLODELQW\ RI DQ ,QWHUQHW 9RWLQJ 6\ VWHP'.>26@ ;XQ <L, (LML2NDPRWR, 3UDFWLWLFDO ,QWHUQHW YRWLQJ V\ VWHP'.