ONLINE VOTING SYSTEM POWERED BY AADHAR AUTHENTICATION

M.Abinaya[1], K.Gowthami[2], M.Abinaya[3]

[1] *Student, Department of Computer science, Panimalar Engineering College, Tamil Nadu, India*
[2] *Student, Department of Computer science, Panimalar Engineering College, Tamil Nadu, India*
[3] *Student, Department of Computer science, Panimalar Engineering College, Tamil Nadu, India*

ABSTRACT

To provide a legal system that enables individuals to vote electronically. This system encompasses legal and social science aspects of the present legal system, while adding extra convenience and security to the general selection method. Bio metrics is the study of machine-driven methodology physical traits includes fingerprint identification that is that the method of scrutiny questioned and famous friction skin ridge impressions from fingers to work out if the impression square measure from identical finger. Casting vote may be a right given to each person by the constitution and whether or not the person truly solid votes in step with the law is that the major issue that has been discovered. The vote solid by a elector is reached to a candidate or party safely is additionally the particular right to be famous by the elector. This paper shows a planned model employing a fingerprint as a security that is take into account because the high security positive identification for soliding the vote and also the aadhar ID to login and cast the vote. This model truly provides importance to people that truly need to solid their vote, however cannot come back to their native places to merely solid vote. Instead individuals will sit within the most popular location and solid their vote firmly. This makes solid their precious vote simply and firmly to the party they really need to.

Keywords: Biometric fingerprint, ASP.NET, SQL, Aadhar card, c#, visual studio

1. INTRODUCTION

Voting schemes have evolved from enumeration hands in period of time to systems that embody paper, punch card, mechanical lever and optical-scan machines. An electronic electoral system that is employed these days offer some characteristic totally different from the normal selection technique, and conjointly it provides improved options of electoral system over ancient electoral system like accuracy, convenience, flexibility, privacy, verifiability and quality. However Electronic selection systems suffers from numerous drawbacks like time intense, consumes massive volume of paper work, no direct role for the higher officers, harm of machines as a result of lack of attention, mass update doesn't permits users to update and edit several item at the same time etc.

These drawbacks will overcome by Biometric on-line electoral system. This is an electoral system by that any elector can use his/her selection rights from anyplace within the country. We offer an in depth description of the purposeful and performance characteristics of biometric on-line electoral system. Elector will solid their votes from

anyplace within the country in extremely secured means. That produces selection a fearless of violence which increase share of selection.

2. RELATED WORK

Yanez, M. O., & Gbolagade, K. A. [1] in 2013 proposed the Overview of Biometric Electronic Voting System in Ghana. International Journal of Advanced Research in Computer Science and Software Engineering. This paper presents the overview of the development and implementation of Biometric Electronic Voting System Software (BEVSS) in Ghana. Many African countries have proposed electronic voting system for their national elections, this paper as a case study for Ghana would be a pivotal reference to speeding up their implementation. Microsoft Visual Basic 2010 is used to develop the BEVSS at the front end and SQL Server Database at the backend. The BEVSS is integrated with a biometric fingerprint machine to scan the finger print of eligible voters during the registration process and for the authentication or verification on Election Day. The BEVSS would be implemented on personal computers over a Local Area Network at each polling station. Prasad, H. K., Halderman, A. J.,Gonggrijp.R[2] in 2010 Estonia was the first country in the world to use Internet voting nationally, and today more than 30% of it s ballots are cast online. In this paper, we analyze the security of the Estonian I-voting system based on a combination of in-person election observation, code review, and adversarial testing. Adopting a threat model that considers the advanced threats faced by a national election system—including dishonest insiders and state-sponsored attacks—we find that the I-voting system has serious architectural limitations and procedural gaps that potentially jeopardize the integrity of elections. In experimental attacks on a reproduction of the system, we demonstrate how such attackers could target the election servers or voters' clients to alter election results or undermine the legitimacy of the system. Our findings illustrate the practical obstacles to Internet voting in the modern world, and they carry lessons for Estonia, for other countries considering adopting such systems, and for the security research community. Frances Zelazny [3] in 2009 proposed the Evolution of India's UID Program that based on the aadhar number

India has embarked on an ambitious new program to provide its citizens and residents a unique, official identity. The UID (Universal ID) program aims to improve the delivery of government services, reduce fraud and corruption, facilitate robust voting processes, and improve security. It is by far the largest application of biometric identification technology to date and will have far-reaching implications for other developing countries that are looking to adopt national ID programs to further social and economic development. This paper discusses the evolution of the UID program, the innovative organization and path breaking technology behind it, how it is being rolled out, and how robust ID is beginning to be used. The paper also draws lessons for other countries. Unlike many "legacy "national ID programs, the UID is designed from the ground up to support authentication. Its use of multimodal biometrics increases inclusion into the main enrollment database and has a huge impacting improving accuracy. It relies on mobile technology, but has also become a driving force behind the development of that technology. Its standards-based approach opens the way for vendor competition and cost reduction. At the same time, its exclusive focus on authentication still leaves the problem of how to validate certain aspects of identity, such as citizenship status. The paper discusses this in the context of the turf war between the UID and the National Population Registry. ID also shows the importance of learning from failure. The case of Andhra Pradesh, discussed in the Annex, showed both the potential value of biometric ID and weaknesses that led to that massive exercise failing to deliver on its potential. RathnaPrabha.S1, Trini Xavier.X2, Deepika.V3, Iswarya.C4 [4] in 2008 this paper proposed the concept There is lot of methods to avoid fraudulence in voting systems, but we are not able to eradicate it completely. This project will give solutions for the above mentioned problem. Fingerprint is one of the unique identities of a human being which is being used in the aadhar system. By using arguing software and by using image processing. We capture the finger print of every individual and the face of the individual is being captured. Face of the person captured is compared to aadhar details using lab view. In future, it could also be implemented using eye trace which will give more accurate results. Himanshu Agarwal, G.N.Pandey, [5] in 2013 proposed the online voting system For India election ,the proposed model has a greater security in sense that voter high security needed before vote is accepted n database of Election commission of India(EC) in additional voter can confirm his/her vote gone to correct party.
K. P. Kaliyamurthie1, R. Udayakumar, D. Parameswari and S. N. Mugunthan [6] n 2013 the am of this paper allow people to vote who have citizenship of India and whose age s above 18 years and of any sex can gave their vote through onlne.The proposed software s developed and worked based on Ethernet and to avoid false vote. Pranay R.pashne, Dhraj[7] n 2014 this paper present system of casting votes has resulted in a number of problems such as low percentage of voting etc.. Voting through EVM (electronic voting machine) .To overcome these to introduce

android application specifically designed for electronic voting will enable people to vote securely from anywhere by using their mobile .The disadvantage of this paper is to support only android platform and authentication s big issue. Divya G Nair, Binu. V.P, G. Santhosh Kumar [8] n 2015 proposed secret sharing scheme by making shares of input and manipulating the shares to compute a typical function of input.

it provide fast and accurate computation of result with voter privacy and the disadvantage of this fairly complicated protocol and difficult to provide security

3. EXISTING METHODOLOGY

In existing system voters cast their votes by simply depositing their ballots in sealed boxes distributed across the electoral circuits around a given country, when the election period ends all these boxes are opened and votes are counted manually in presence of certified officials.In this process there can be error in counting of votes and some cases voters find ways to vote more than once .Sometimes votes are even manipulated to distort the result of an election in favour of certain candidates.To avoid these shortcomings government of India came up with DRE(Direct recording electronic).This completely eliminate paper ballots from the voting process.However it has been found that EVMS are not tamper proof and are easily hacked. In this project, we integrate CIDR with e-voting mechanism to make e-voting in India reality.

4. PROBLEMS IN THE EXISTING SYSTEM

Integrity of the election method can verify the integrity of democracy itself. Therefore the election system should be secure and strong against a range of fallacious behaviors, ought to be clear Associate in Nursing and comprehensible that voters and candidates can settle for the results of an election. However in history, there area unit samples of elections being manipulated so as to influence their outcome. In an exceedingly electoral system, whether or not electronic or exploitation ancient paper ballots, the system ought to meet the subsequent criteria Anonymity, Tamper-resistant, Human factor.

5. PROPOSED WORK

We propose shopper server web-enabled computer code design for the project. On the shopper facet we've a fingerprint scanner and a interface that accepts voter's aadhar range, offer the system generated distinctive range for every citizen and show confirmation standing and error messages. The interface can solely act on events from the server and feedback of citizen with none additional process. Servers are placed at remote locations from the poll booths. They are used for finishing up all the process work like image process, transferring knowledge between the shopper and therefore the information. There is a central information known as Central
Identities knowledge Repository that forms the backbone of the system. It contains all the demographic and biometric knowledge of each subject of Asian country. So as to cut back load on
central information there are zonal information are settled aboard the server technology.
The target of this project is to gift a high level summary of fingerprint sensing and matching technology therefore on give the reader with some insights into the strengths and limitations of the automation in matching fingerprints.
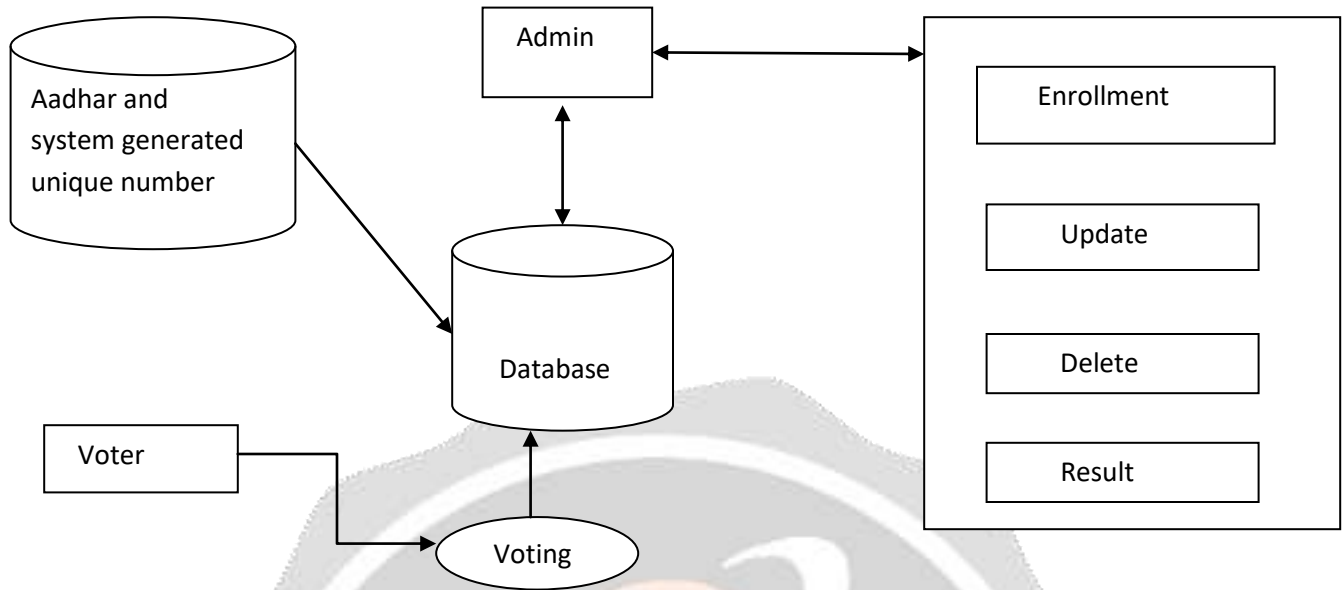
Fig -1 Architecture diagram of proposed method

5.1. AUTHENDICATION AND VERIFICATION OF THE VOTER:

Authentication is that the method of determinative whether or not somebody or one thing is, in fact United Nations agency or what it's declared to be. In order to manifest someone we tend to need them to be .In user registration module, they are planning to enter their personal details at the side of aadhar number, our project we tend to done verification whereas user enter age, after coming into all details in user registration module, user click submit button.

Then it move to another module referred to as verification of citizen therein user once more offer their aadhar variety at the side of Arcanum with they already given in user registration module. After that user enter in to enrollment module therein system can generate distinctive 4-digits variety for every user by suggests that o3 authentication.

In that module user offer their fingerprint four times and click on verify. Then it mechanically verified their knowledge and move to the vote module therein user offer fingerprint only once and vote the candidate (party) and make sure their vote and eventually click submit.

5.2. MODULES:

5.2.1. CANDIDATE DETAILS:

The Candidate Details are recorded within the information that shows the actual candidate UN agency electoral for involved party like DMK, ADMK, MDMK, etc. All the quantity of candidate UN agency electoral for the priority parties are recorded

5.2.2. VOTER DETAILS:

The citizen details are inserted into the information that performs finger print authentication for a selected citizen and citizen id is ought to be noted for corresponding citizen. The choice of explicit citizen is finished by victimization citizen id. The most method ought to acknowledge the finger print picture element illustration victimization Finger print algorithmic rule victimization Bio-metric Authentication

5.2.3. FINGERPRINT ENROLLMENT

In the Enrollment Process, the fingerprint is captured with the help of the fingerprint scanner, and the captured image is enhanced with the techniques used in paper, once the image is enhanced the feature called minutiae (ending, bifurcation) are extracted with the help of the minutiae feature extraction technique and the extracted features are stored in the database for verification.
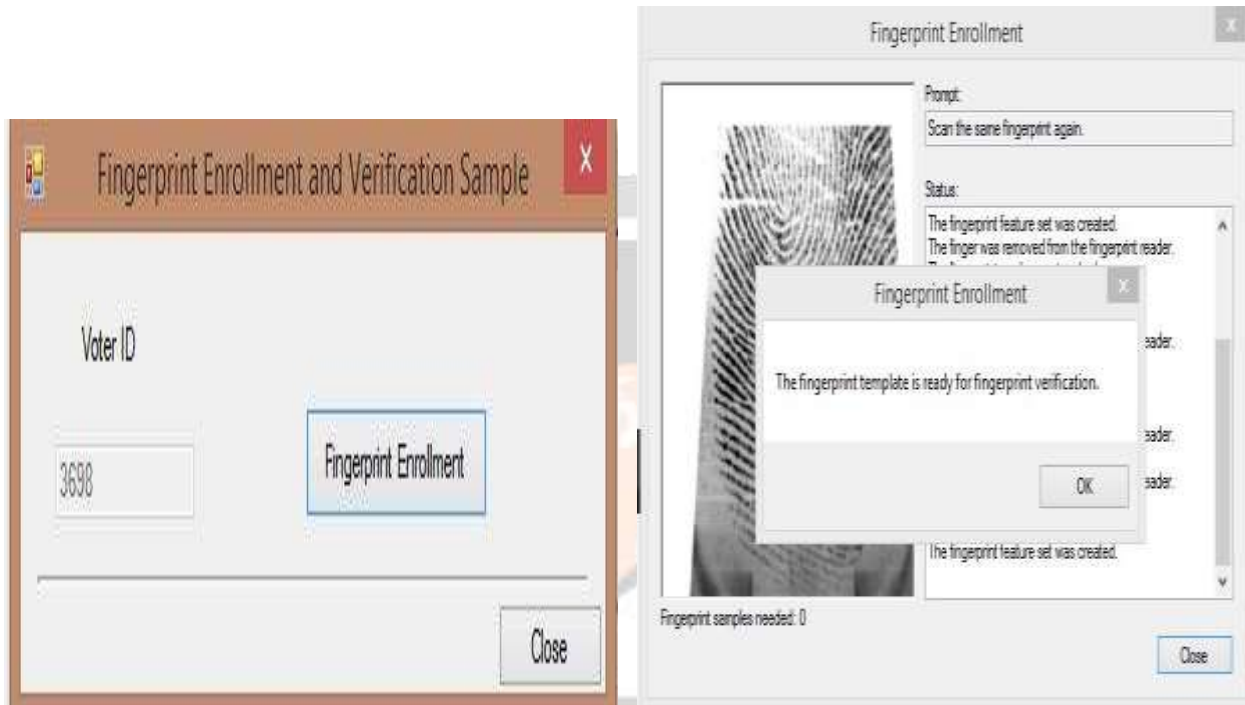
5.2.4 BIOMETRIC VERIFICATION

In the Verification process, the person who comes to cast a vote is registered his/her thumb impression in the controlling phase, once the image is captured it is enhanced and the feature is stored for future comparison. To check whether the voter is an authenticated voter, the input image is compared to the database. It is called authentication process. In case the print is not stored in the database, alert message will be given, so the person cannot vote or if the same person votes again, the system will display a dialogue box as "Revoting" , so that the security can be alerted. If the image is found in the database then the person is allowed to vote in the balloting phase. In the balloting phase there is the number of fingerprint scanner with the symbols equallent to the number of nominees. The person allowed in the controlling phase may depict his/ her thumb impression in the corresponding scanner for whom they like to vote. Once it is captured, the identification process is carried between the controlling and balloting phase in order to identify that the person who crossed the verification process is the person who cast the vote. If there is no deadlock condition occur (i.e) Both the captured and query image is matched then their vote is recorded for a corresponding nominee.
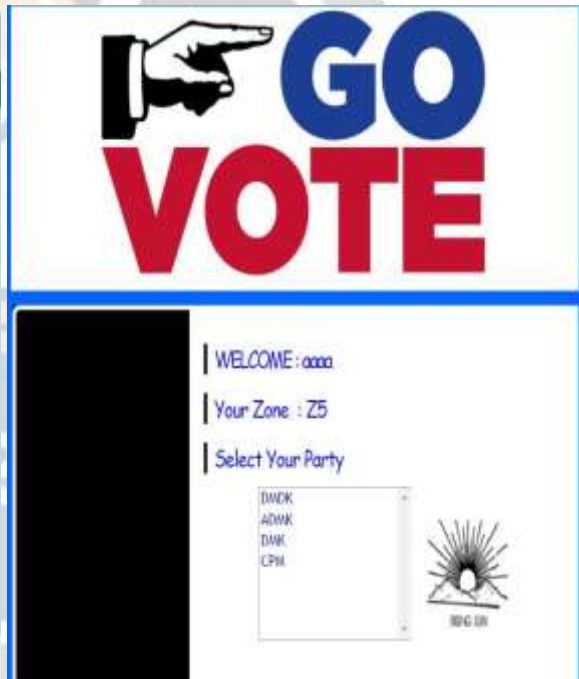
6. CONCLUSION

In this paper, we've got planned an internet electoral system that is healthier and quicker than previous systems. The new system prevents access to ill-gotten voters, provides simple use, transparency and maintains integrity of the option method. The system conjointly prevents multiple votes by a similar person and checks eligibility of the citizen. It conjointly permits someone to vote from anyplace given that the citizen is inside electoral limits.

7. LIMITATIONS

E-voting systems have several blessings over typical systems however it still has got to solve several hurdles before turning into coming back to fruition. India's majority population is rural and illiterate. Conjointly there's shortage of power and inadequate network between cities and villages that any adds to the issues. This technique needs smart information measure and high speed web affiliation for in operation, however it's still a far off reality in several cities in Asian country. But conditions area unit up with the onset of education in rural areas and with increasing urban population this project could presently become a reality.

8. REFERENCES

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