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Smart Voting Linked With Aadhar Card

Prof. Swapnaja Hiray, Saurabh Chavhan, Amol Khaire, Chitra Gore, Chetana Kaldate

Department of Computer Engineering, SKN Sinhgad Institute Of Technology And Science College Of Engineering, Lonavala, Pune, India

ABSTRACT: A smart voting system that ensures effective voting procedure and voting count. It implements the voting system using fingerprint and unique key which prevents the illegal acts against the voting system and provides the voter authentication in an effective manner. The field of biometrics was formed and has expanded to many types of physical identification. Still, the human fingerprint remains a very common identifier. The proposed system has two methods to double check on security as it uses the unique key and fingerprint as ID instead of voter ID card. In real time, instead of using one digit unique key, the entire 12 digit Aadhar card number can be used ensuring more effectiveness. Also the Aadhar card database can be used as the database for the fingerprints. This paper entirely changes the state of election process and ensures the integrity of electoral system. The primary idea is to make the voters trust in election system at the same time reduce the work of the election committee.

KEYWORDS: Aadhar ID, bio metric, time-synchronized, Encryption, Decryption, AES.

I.INTRODUCTION

Democracy principles depend 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 follow 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.

1.1 Overview

The project Online Voting system is designed to count the number of votes and thereby calculate the percentage of votes. Also the number of vote a candidate obtains is also obtained. Along with the number the percentage of votes for each candidate is calculated. The system is so designed that it can also check for duplication. It then decides the winner in every section. The project is designed with a modular approach and the number of modules is decided as per the requirements of the organization. The two modules are administrator module and the user module. The administrator has total authority of the organization and maintains all the aspects. The user has the provision to view the list of all candidates and results as well as vote for the desired candidates. The development in mobile device, wireless, android technologies and data communication result in view application that will make voting process easier and efficient e-voting system can cast and count votes with higher convenience and efficiency which even reduces mistakes rate of ballot examination.

Motivation

With such an upsurge in population increase, the next elections in the country will become progressively challenging, as newer and newer voters are introduced and keeping track of each and every vote becomes more time consuming and inefficient. As such, credibility and integrity 8 of the whole political landscape may be affected, as questions regarding the practicality of traditional methods and vote manipulation methods pop up. As a result, the Smart Voting Machine or SVM has been conceived that will take on this enormous challenge and deliver the desired results, while ensuring maximum security and maintaining the utmost credibility.

Objective

- 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.

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- User can vote at any place.
- User can see the result of election
- Only authorized user vote to voting.

The main concept of this project is to improve the efficiency and effectiveness of the whole system.

Existing System

In the current voting system, the ballet machines where used in which the symbols of various political parties are displayed. When we press the button with the respective party's (political party) symbol the voting is done. The chance of fake person casting their vote is more in the existing system. The voting person may use the fake voting card and cast his vote, this may cause problem. In the existing system, the person has to travel long places to his constituency to cast his vote. Therefore, we need an effective method to identify the fake voters during voting. So, the facial authentication process is used for detecting the right person and also making the system to work in online, which will help the voters to cast their vote from their place itself

II.LITERATURE SURVEY

1) Smart Voting System et.all. Girish H S1, Gowtham R2, Harsha K N3, Manjunatha B4

In "Smart Voting System" once a person casts his vote, the webpage gives a confirmation message that the vote is successfully registered and if a person's age is less than 18 years then the LCD displays the message that he is not eligible to vote as his age is less than 18 also if a person tries to vote once again using his fingerprint, the web page will display that the vote is already casted successfully.

2) Smart Voting Machine Based on Fingerprints and Face Recognition et.all. NadarRajkaniPaulraj, G.Rajagopalan, M.Rajesh, S.V.Kiruthika, I.Jasmine A/P

They have designed a Smart Voting Machine where there is no need for the user to carry his ID which contains his required details. The person at the polling booth needs only to place his Finger in fingerprint scanner and capture the face identity in web camera at the counter of the polling booth, thus allowing the acquisition of an on-spot Fingerprint and Face from the voter which serves as an identification.

3) Online Voting System via Mobile et.all. Chetan Sontakke1, Swapnil Payghan2, Shivkumar Raut3, Shubham Deshmukh4, Mayuresh Chande5, Prof. D. J. Manowar6

We propose to build an E-Voting system which is basically an online voting system through which people can cast their vote through their smartphones 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.

4) Online Voting System (Android Application)et.all.Shruti Thakkar1,Nisha Pawar2, Nikita Sarang3, Prof.Vijaylaxmi Kadrolli4 2016

This project is to create an Android application based on which voting can be performed. Also it will help to eradicate defrauding of the traditional voting system which involve voting by multiple votes cast by the same user. With an Android Application, one can login into the system using their VOTER ID and password to get authenticated further. Once the corresponding VOTER ID and password gets matched with the information provided in the database, the voter gets an option for OTP using SMS or EMAIL.

5) Advanced E-Voting Application Using Android Platformet. All.Ganaraj K PG Scholar, Computer Science Department, Bearys Institute of Technology and Engineering 2017

The proposed smart voting system will be presented. This technology helps the user to cast the vote without visiting the polling booth. The application follows proper authentication measures in order to avoid fraud voters using the system. Once the voting session is completed the results can be available within a fraction of seconds.

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III.PROPOSED WORK

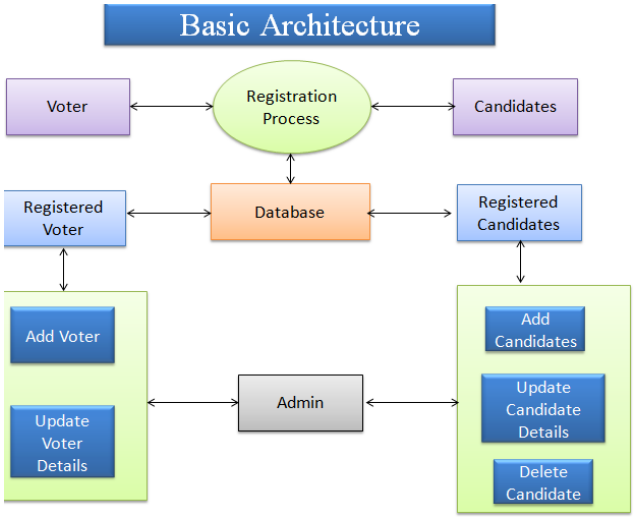

Fig 1:Architecture Diagram

3.1 Overview

Proposed System Aadhaar based voting system is an android based application which provides the voting system with two key features; they are reduction of costs in conducting elections and avoiding fake votes. This application is particularly targeted at the easiness of conducting an election. The uniqueness of this system is the use of biometrics that helps in determining whether the person is a valid voter to reduce fake voting to a large extent. An individual can cast his vote not only from his own constituency but also from other constituencies with the help of Aadhaar based verification. The number of officers appointed for conducting the elections can be reduced as the process of voting is made simple and easier through this application. As it is a centralized system the parliament and panchayath elections can be conducted on the same day.

Algorithm

1) AES

Rijndael is a family of block ciphers developed by Belgian cryptographers Vincent Rijmen and Joen Daemen. It was submitted as an entry to the National Institute of Standards and Technology's (NIST) competition to select an Advanced Encryption Standard (AES) to replace Data Encryption Standard (DES). In 2001, Rijndael won the competition and the 128, 192, and 256-bit versions of Rijndael were officially selected as the Advanced Encryption Standard. The three variants of AES are based on different key sizes (128, 192, and 256 bits). In this article, we will focus on the 128-bit version of the AES key schedule, which provides sufficient background to understand the 192 and 256 bit variants as well. At the end, we'll include a note the other variants, and how they differ from the 128-bit version.

2) Fingerprint algorithm

The proposed fingerprint recognition algorithm consists of two essential parts: pre-processing of the fingerprint image to improve its quality and the extraction of the signature. Pre-processing is a very important phase in the algorithm. Indeed, it makes it possible to improve the image to facilitate the task in the second step and to optimize the processing of the image; the different preprocessing phases are presented. Pre-processing steps for the extraction of biometric data (the biometric data concerning the fingerprint are the minutiae), the algorithm of the following figure was used Extracting signature steps

3.2 Methodologies

The proposed project contain following modules:

Administrator

1) Login-Login using username and password

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2) Add Citizen-Add Citizen details according to aadhar card details .
3) Add Candidate –Add Candidate details using aadhar card.
4) Add Election –Add Election details like date, name etc.
5) Add Party – Add Party data like name of party, party slogan, party president etc.
6) View Result- After election voting result is shown in graphical format.

User

1) Registration- Using aadhar card and Fingerprint details citizen do registration after that generate unique id.
2) Login- Login using aadhar card and fingerprint data.
3) View Candidate List- Show all candidate list who participate in their election.
4) Vote- Give vote to candidate
5) Result-Display graphical election result according to election and city wise.

IV.RESULTS

1. Splash Screen

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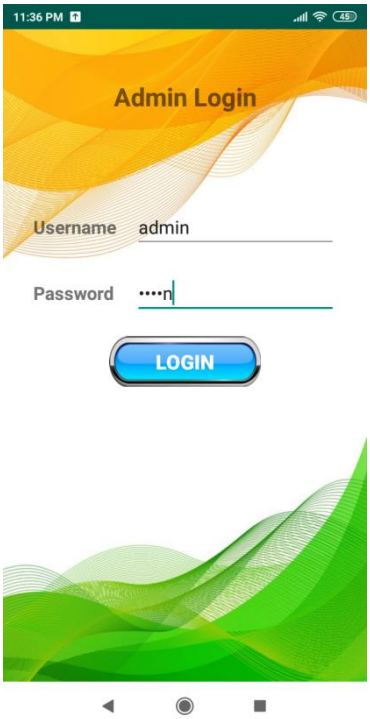
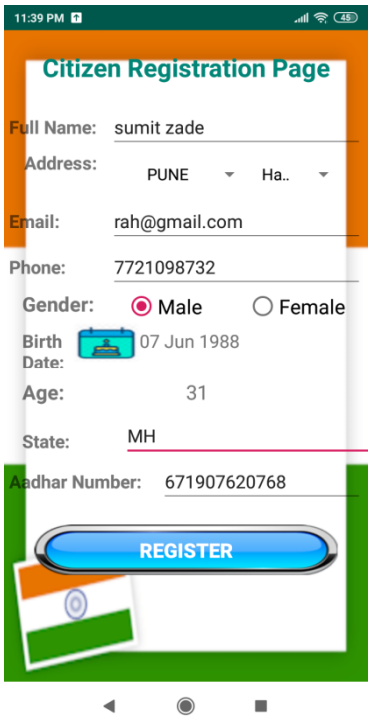
2. **Module Screen**

3. **Admin Login**



4. **Admin Home**

5. **Add Citizen**



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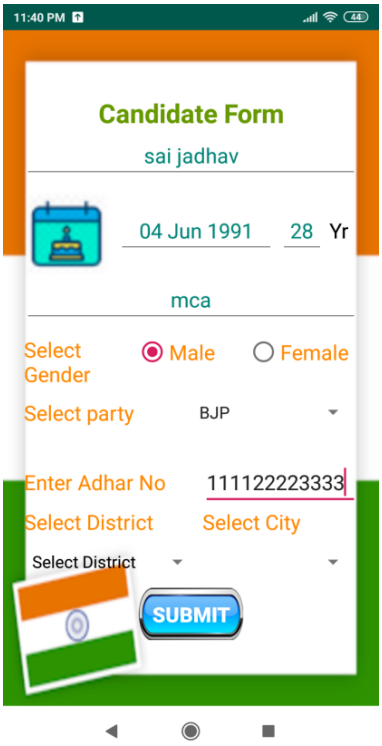
6. **Add Candidate**



7. **Add Election**

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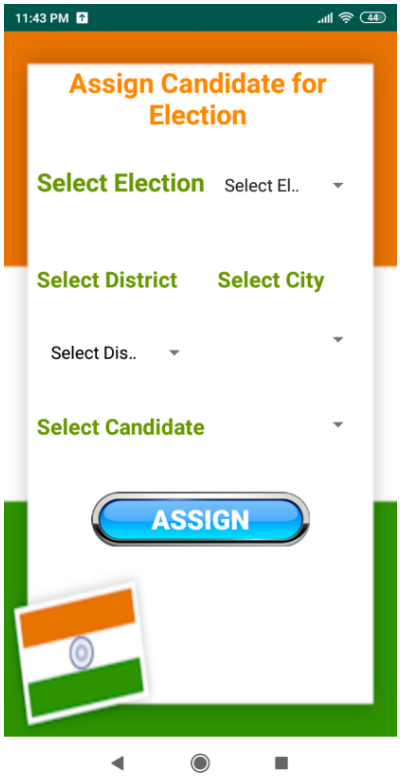
8. **Add Party**

9. **Assign Candidate**



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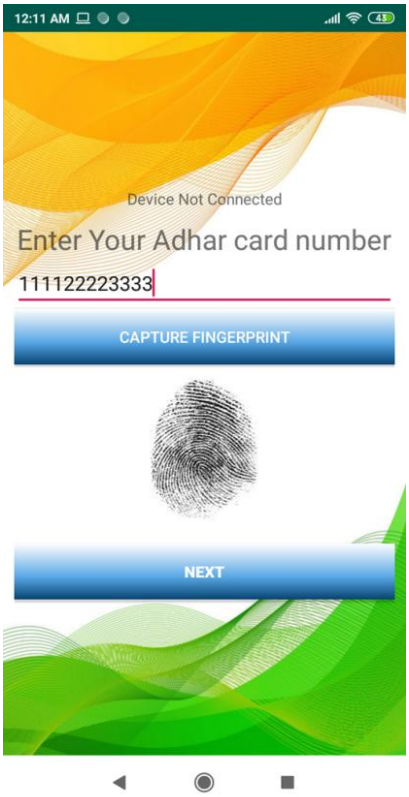
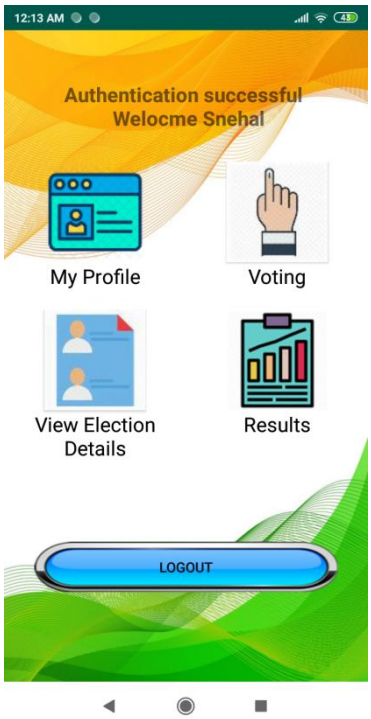
10. Voter Login



11. Voter Home Screen



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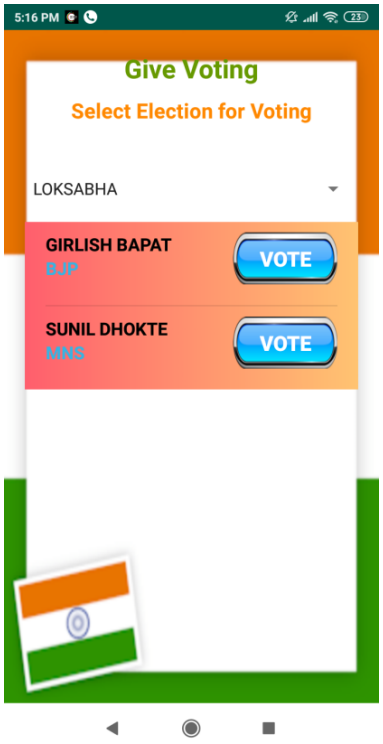
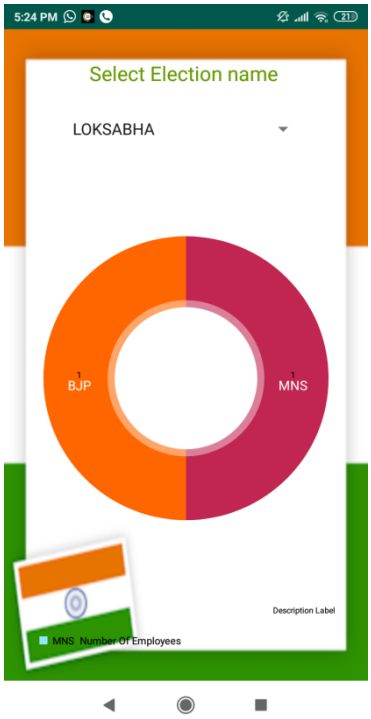
12. Voter Profile

13. Voter Election Details

14. Voter Voting Screen



15. Election wise Result



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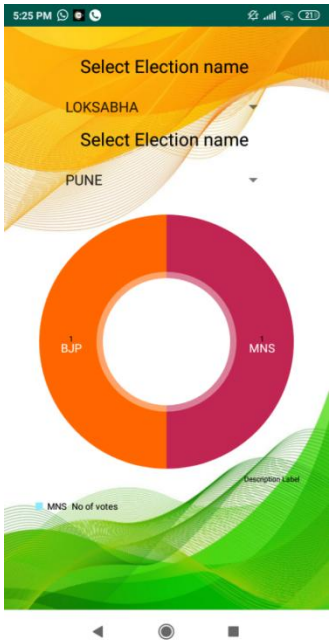
16. City wise Result



Tools and Technologies Used:

This application is mounted on the Internet, to user has to make sure that the machine, which he is using, is connected to Internet through Lease Line, Telephone line or Cable.
Also, Microsoft Internet Explorer 4.0 and above or Netscape Navigator 4.74 and above must be installed on the machine.

V.CONCLUSION

In this paper, we are provided with the advantages of having our system over the traditional voting system. Illegal voting arethe main problem faced by the existing system, with our system illegal voting's can be removed completely. Our system also prevents multiple votes by the same person and checks the eligibility of the voter. A person can vote from anywhere provided they should be above age 18.

VI.FUTURE SCOPE

As the technology has advanced a lot, the possibility of attack by hackers is a threat to our system. The most secured Aadhaar details should be kept secure. To ensure this we can make use of cryptography such that encryption can be used to secure the database and the integrity of the data. In future, databases that can accommodate large data can be incorporated.

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