

## FINGERPRINT BASED E-VOTING SYSTEM

Rajashree Mahesh Hande<sup>1</sup>, Rohini Nanaasaheb Hirade<sup>2</sup>, Puja Jyotiram Khamkar<sup>3</sup>,  
Priyanka Suryakant Khatavkar<sup>4</sup>, Sachin Hirnawale<sup>5</sup>

<sup>1,2,3,4</sup>Student, Department of Computer Engineering, HSBPVT's Group of institution department of computer,  
Parikrama college of Engineering Kashti, Ahmednagar, Maharashtra, India.

<sup>5</sup>Professor, Department of Computer Engineering, HSBPVT's Group of institution department of computer,  
Parikrama college of Engineering Kashti, Ahmednagar, Maharashtra, India

### ABSTRACT

Fingerprint Based Voting Project is an application where the user is recognized by his finger pattern. Since the finger pattern of each human being is different, the voter can be easily authenticated. The system allows 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 an authentication of the voters. Voter can vote the candidate only once; the system will not allow the candidate to vote for the second time. The system will allow admin to add the candidate's name and candidate photo who are nominated for the election. Admin only has the right to add candidate name and photo who are nominated. Admin will register the voter's name by verifying voter. Admin will authenticate the user by verifying the user's identity proof and then admin will register the voter. The number of candidates added to the system by the admin will be automatically deleted after the completion of the election.

Admin has to add the date when the election is going to end. Once the user has got the user id and password from the admin, the user can log in and vote for the candidate who are nominated. The system will allow the user to vote for only one candidate. The system will allow the user to vote for one time for a particular election. Admin can add any number of candidates when the new election will be announced. Admin can view the election result by using the election id. Even user can view the election result.

**Keywords** - Fingerprint, E-voting, nominated, authentication, recognition.

### 1. INTRODUCTION

The incredible development of the Arab Spring prompted the overturning of numerous systems so the Middle East nations at last had its opportunity to radiate and sparkle. In any case, in the event that considerations and endeavors are not taken, this opportunity going to be lost from the hands of the Middle East nations and on second thought, what will win is what is happening of grave disarray and earnestness. The Middle East nations are on intersection. This insurgency can find success by changing over these nations into genuine vote-based system and let individuals oversee themselves and express their decisions with respect to specific issues, bits of regulation, established revisions, resident drives, picking the individual as well as the approaches they need to make a plan of those nations in the years.

To change over the Middle East into majority rule nation's popular assessment is the main determinant to lay out an administration and casting a ballot is the cycle through which individuals show their viewpoint and help to arrange a vote-based government. So, the democratic framework ought to be dependable, exact and it should be secure. In the conventional decisions an elector used to make his choice by utilizing voting form paper. This is quite a while consuming interaction; it's truly requiring long investment and the likelihood of blunder is exceptionally high. Everything going on stays till the researchers found the various kinds of electronic democratic machine. The electronic democratic frameworks are used considerably more as a gadget to assist individuals with making their viewpoint and choice. To let the practicing of the right, pretty much all casting a ballot machine all around the globe comprise of elector personality and approval, the democratic and saving of the votes cast, counting the votes lastly give the political decision eventual outcome.

The utilizing of finger impression as an ID is an amazing methodology thinking about that simply regarding each individual in the globe is brought into the world with special finger impression even twins brought into the world with very surprising fingerprints. The unique finger impression is normally unchangeable over the course of life. The portrayal plan of the fingerprints either founded on worldwide or nearby data, for example, edges closures and edges branches (details). In this venture matching calculation join separating of neighborhood and worldwide data going to be plan. This matching calculation is essential in two phases of the appointment where the first for individuals' enlistment to recognize the option to choose and later on, at casting a ballot time, to permit citizens to make their choice by affirming assuming the man or lady meets every one of the prerequisites expected to cast a ballot and that known as validation.

### 2. METHODOLOGY

This is implemented with the both software and hardware using different tools as

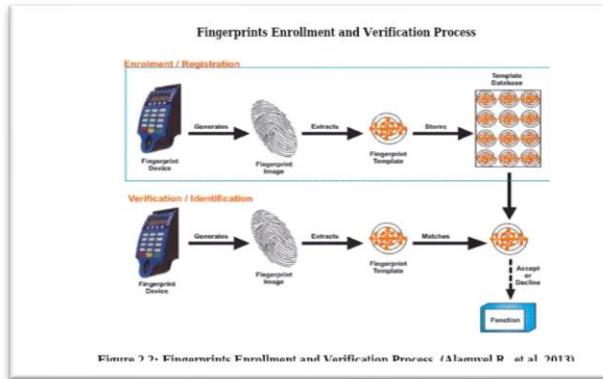
#### 1. Software

- NetBeans IDE
- Apache Tomcat
- MySQL Database

## 2. Hardware

- a) Finger print Module:MFS100
- b) RAM: 4/8 GB onwards.
- c) HDD: 500 GB onwards.
- d) Processor: Intel Pentium onwards.

## 3. MODELING AND ANALYSIS



Here, voters thumb impression are used for identifying the vectors

### Enrollment/Registration –

- Admin can register the voters
- During Registration when the voter keeps his/her thumb in scanner then generation the fingerprint template than stores this template in database.

### Verification/Identification –

- During voting when the vector keep His/her thumb in the scanner the system will check whether it matches with pre-store template in database.
- It matches then system will allow the vector to poll his vote and otherwise prevent the vector from polling.

## 4. RESULT AND DISCUSSION

### Applications

- The system can be used in various areas where election will be held.

### Advantage

- The system will not allow the voter to vote two or more candidates.
- The system will allow the user to vote for one times for a particular election.
- Providing the preventive measures system for voting.
- It cannot provide any chances to invalid votes.
- It reduces the timing of polling.

### Limitations

- If the voters fingers pattern has some cut or got damaged the system might not recognize the user environmental and usage can affect measurements.
- Require integration and/or additional hardware.

### Result

- The Fingerprint technology will be used in this project to create the system.
- The primary goal of the project is to make a system that requests the voter to give his/her Fingerprint as a personality proof. The fingerprint voting system reads the fingerprint's data and compares it with the data previously stored inside the database. If the data exists in the database meets with the previously stored data, the voting system will enable the voter to enter into the system and give his/her vote.

## 5. CONCLUSION

The Fingerprint technology will be used in this project to create the system. The primary goal of the project is to make a system that requests the voter to give his/her Fingerprint as a personality proof. The fingerprint voting system reads the fingerprint's data and compares it with the data previously stored inside the database. If the data exists in the database meets with the previously stored data, the voting system will enable the voter to enter into the system and give his/her vote.

## 6. FUTURE SCOPE

- This system can be used for elections since it provides complete security and will provide accurate results and save time and expenditure.
- This can be modify by interfacing it with a pc through a serial port in order to provide additional security.

## ACKNOWLEDGEMENTS

This project is under our knowledge, guidance givenby our professors and especially Thanks to concerned person, who has helped us to get knowledge on project.

## 7. REFERENCES

- [1] D. Maio, D. Maltoni, A. K. Jain, and S. Prabhakar (2003). Handbook of Fingerprint Recognition. Springer Verlag.
- [2] Jain, K, Ross, A, Prabhakar, S (2004). An Introduction to Biometric Recognition. New York, USA.
- [3] Farah Azirar, (2011). Fingerprint Recognition. Bachelor Thesis. School of Electronics and Physical Sciences, Department of Electronic Engineering, University of Surrey.
- [4] Jawad Nagi, (2009). Design of an Efficient High-speed fingerprint Recognition System. Final Year Project Proposal. College of Engineering, University Tenaga Nasional.
- [5] Mega, T. Y. (2008). Electronic Voting Systems: Security Implications of the Administrative Workflow. University of the Aegean, Samosl Greece.
- [6] Phil Brimblecombe, (2005). Face Detection Using Gabor filter, Bachelor Thesis. School of Electronics and Physical Sciences, Department of Electronic Engineering.