

# E-VOTING APPLICATION USING BIOMETRICS & SMS OTP VERIFICATION

**Dr.B.Sujatha<sup>[1]</sup>, A.Gowthami<sup>[2]</sup>, M.Subiksha<sup>[3]</sup>, M.Porkalai<sup>[4]</sup>, .Kalaivani<sup>[5]</sup>**

<sup>1</sup>Professor , Department of Computer Science and Engineering,  
Sengunthar Engineering College (Autonomous) , India

<sup>2,3,4,5</sup>Final Year, Department of Computer Science and Engineering,  
Sengunthar Engineering College (Autonomous) , India

## ABSTRACT

The project title is “E-VOTING APPLICATION USING BIOMETRICS &SMS OTP VERIFICATION”.The problem of voting is still critical in terms of safety and security. This paper deals with the design and development of a web-based voting system using finger print and Aadhaar card in order to provide a high performance with high security to the voting system. Also, we use web technology to make the voting system more practical .The proposed Online Voting System allows the voters to scan their fingerprint ,which is then matched with an already save damage with in a data base that is retrieved from Aadhaar card database of the government. The voting system is managed in a simpler way as all the users must login by Aadhaar card number and One Time password and click on his/her favorable candidates to cast the vote. This will increase the voting percentage in India and reduces the cost of voting process. By using biometric fingerprint it provides enough security which reduces he false votes

**Keywords:** Admin ,User, Biometric, Fingerprint

## 1. INTRODUCTION

Voting schemes have evolved from counting hands in early days to systems that include paper punch card mechanical lever and optical scanner machines. An electronic voting system which is used nowadays provide some characteristic different from the traditional voting technique, and also it provides improved features of voting system over traditional voting system such as

Accuracy, convenience, flexibility, privacy, verifiability and mobility .But Electronic voting system suffers from various drawbacks such as time consuming, consumes large volume of paper, work, no direct role for the higher officials ,damage of machines due to lack of attention mass up date

does not allow users to update and edit many items simultaneously etc.

These drawbacks can overcome by Biometric and SMS OTP Online Voting System. This is a voting system by which any voter can use his/her voting rights from anywhere in the country. We provide a detailed description of the functional and performance characteristics of biometric online voting system. Voter can cast their votes from anywhere in the country without visiting to voting booths, in highly secured way. That makes voting a fearless of violence and that increases the percentage of voting.

## 2. RELATEDRESEARCH

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is nearly days to systems that include paper, punch card, mechanical lever and optical-scan machines. An electronic voting system which is used nowadays provide some characteristic different from the traditional voting technique, and also it provide simple features of voting system over traditional voting system such as accuracy, convenience, flexibility, privacy, verifiability and mobility. But Electronic voting systems suffers from various drawbacks such a time consuming, consume s large volume of paperwork, no direct control for the higher officials, damage of machines due to lack of attention, mass update doesn't allow users to update and edit many items simultaneously etc.

These drawback scan overcome by Biometric Online Voting System. This is a voting system by which any voter can use his/her voting rights from anywhere in the country. We provide a detailed description of the functional and performance characteristics of biometric online voting system

## 2.1 EXISTING SYTEM

To make the voting process very easy and efficient wireless and web technologies are used. The online-voting system has the possibility of secure, easy and safe way to capture and count the votes in the election. The proposed system provides the specification and requirements for Online- Voting using an Android platform. The Online voting means the voting process in election by using mobile phone. The android platform is used to develop an Online-voting application.

Paper-based voting: The voter gets a blank ballot and use a pen or a marker to indicate he want to vote for which candidate. Hand-counted ballots is a time and labour consuming process, but it is easy to manufacture paper ballots and the ballots can be retained for verifying, this type is still the most common way to vote.

**Lever voting machine:** Lever machine is peculiar equipment, and each lever is assigned for a corresponding candidate.

The voter pulls the lever to poll for his favourite candidate. This kind of voting machine can count up the ballots automatically. Because its interface is not user- friendly enough, giving some training to voters is necessary. Direct recording electronic voting machine: This type, which is abbreviated to DRE, integrates with keyboard; touch screen, or buttons for the voter press to poll. Some of them lay in voting records and counting the votes is very quickly. But the other DRE without keep voting records are doubted about its accuracy.

**Punch card:** The voter uses metallic hole-punch to punch a hole on the blank ballot. It can count votes automatically.

## DRAWBACKS OF THE EXISTING SYSTEM

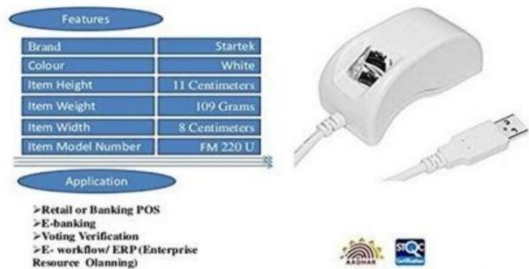
The existing system of election in running manually. The voter has to visit to booths to vote a candidate so there is wastage of time. So, we are just providing online voting. The Existing System of Election is running manually. The Voter has to manually register into the Voter List. Also Vote counting has to be done manually. All the Information of the Voter or Candidate is to be filling in manually. Voter must be present in his/her Constituency to give his/her Vote. There are Electronic voting machines used which takes more cost. The voting system previously being used by the Government is a paper-based system, in which the voter simply picks up ballots sheets from electoral officials, tick off who they would like to vote for, and then cast their votes by merely handing over the ballot sheet back to electoral official.

## 2.2 PROPOSED SYSTEM

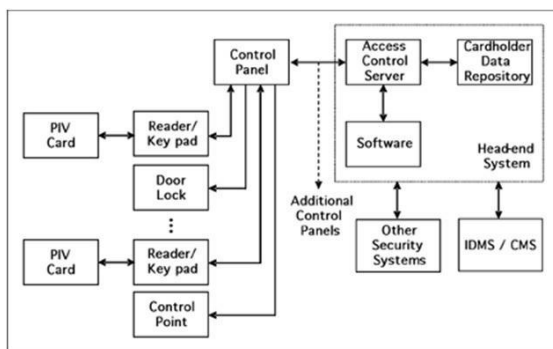
This Online Voting System will manage the voter's information by which voter can login and use his

voting rights. There is a data base which is maintained by the Election Commission in which complete data of voter with complete information is stored. This system reduces the election conducting cost. It is quick process and votes are easily counted. At the time of requesting to vote, the system will display only those candidates who are belonging from particular voter's ward. The proposed system is the Biometric online voting system with biometric fingerprint using Aadhaar card. It determines the particular voter by his/her fingerprint whether he/she is a valid voter or not. It allows particular voter to cast the vote online and update the database in the server. Biometric online voting system uses Aadhaar card to retrieve the complete details about the voter.

**3.HARDWARE DESIGN AND FLOW DIAGRAM**



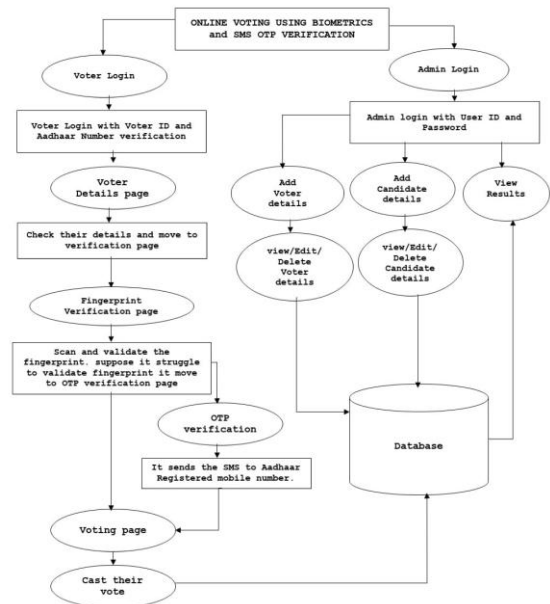
**Fig3.1 Hardware design**



**Fig3.2 Flow diagram**

In ssFig3.2 FM220 is a compact CMOS-based optical reader designed specially to provide high level biometric security for identity authentication applications. FM220 maintains the highest standards and has received both FBI-PIV and STQC certifications. Supported by Startek comprehensive SDK with Startek high performance patented proprietary algorithms of MINEX Certified Template generator and matcher solution, FM220 offers great hardware and software compatibility makes it an ideal platform for developers

**4. ARCHITECTURE DIAGRAM**



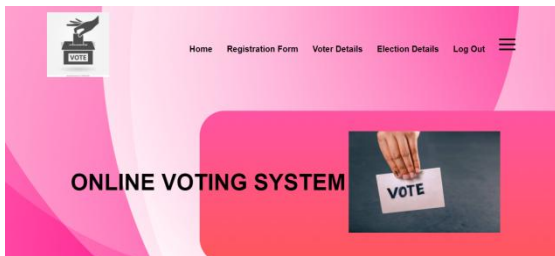
**Fig 4.1 Architecture diagram**

Fig 4.3 shows click the URL, go to the website Login(user's) contain user's ID and password (voters ID and Aadhaar number) respectively.

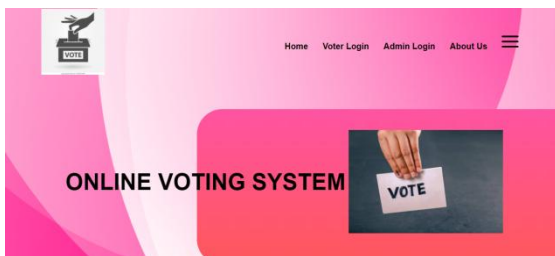
After login profile page will be shown with details and ward number and then either voters can use finger print scanner or OTP and also if fingerprint scanner is not work you move to the Alternate suppose After click confirm button [one Notification will occur to your phone] OTP will be been sensed after confirmation process [It's valid

for only 30sec]. If it's not valid it again goes to starting page again After you enter the OTP, it moves to the voting page.you can vote there (whom you want to vote) conform the vote (once your voting is completed it logout automatically and again u can't login with your same, I'd). It gives finally voting successfully message. shows the message that OTP generated successfully. Here we have to enter the OTP which we get as message on our registered mobile number.

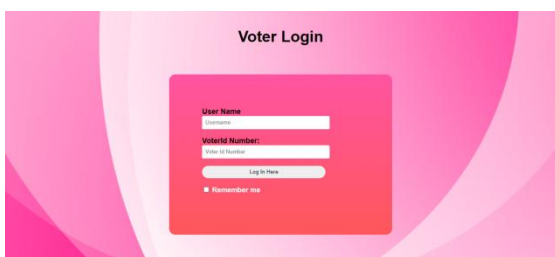
### 5. RESULT OUTCOMES



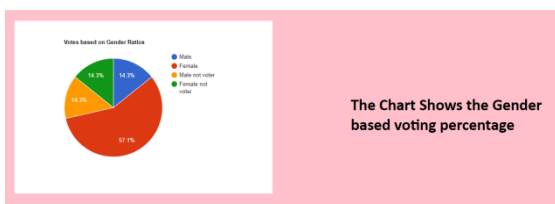
**Fig 5.1:**Home page after enter into the website which contain of registration form



**Fig 5.2:** Voters login form page

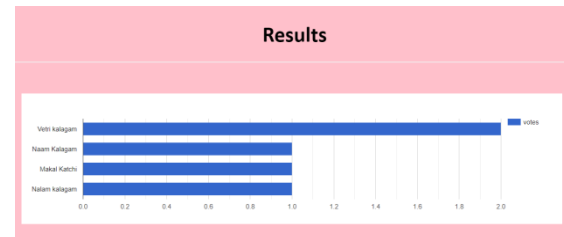


**Fig 5.3:** Voters login page



The Chart Shows the Gender based voting percentage

**Fig 5.4:**The chart shows the voting percentage based on gender.



**Fig 5.5:** Result page which includes of candidate party name

### CONCLUSION

This voting system helpseverybodytocasttheirvoteswithoutanyproblem.Onlinevotingwill increase the percentage of voting. Manual counting is not required. So, by this we will get the very prominent, clear and fast result. It's a great challenge for us to use php language for the development of our project. By using this newly developed system we can over come many problems of existing system. This system is more efficient than the existing one.

The completion of this project we provide online voting system using web application. The security interns of OTP (One Time Password).

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