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Aadhar Card based Voting System

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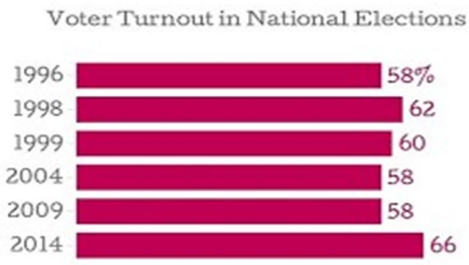
Abstract: ***In this paper, we propose a embedded finger-print recognition system for authentication of voting system. The proposed system consists of two modules: image recognition module(recognize finger print), human machine communication module (LED or LCD is used to display recognition results and receive inputs from users). Our proposed system is security system. Here we developed secure voting system for election. If unauthenticated person voted it send a GSM message to the mobile of control officer and it also activates a buzzer . The votes casted are saved, that helps the Election Commission of India to announce the result within a short period of time.***

Keyword: GSM ,Image processing , Voting system Fingure print recognition system,authendication

I. INTRODUCTION

The voting system is a process of selecting the right candidate for the development of any government and organization. This system must ensure integrity and secrecy of the votes been cast. So the main concern is to protect this system from the external threats that may be harmful to the voting[8]. India is a democratic country where election of the government is a part and parcel of this democracy. Being a citizen of India voting is the fundamental right. It expresses the choice of the people and that is why voting process needs to be fair, transparent and legal. Under many circumstances the voting system has become a debatable issue. At current time manual voting process using ballot papers is followed in the electoral system of India. In the manual ballot system, people need to cast their votes on the paper provided by the Election Commission[3], no bio-metric identification of the voter is required. As a result transparency of the voting process is always in question. Also the votes are preserved and counted manually which is a long time consuming process. A successful voting system can only be accomplished when a large number of population involves in the voting process. To make these a reality the voting system should be accessible to the voters without making them stand in a long queue outside the voting booth. Over the years many systems and ideas have been implemented and imitated to achieve a feasible voting system. The main goal of this idea proposed is to encourage more people to vote remotely wherever they are whichever smartphone they are using to reduce the time consumption and make it more flexible and feasible for the people. A machine which is used during elections for the purpose of collecting and counting the votes casted by the common people. This machine actually replaces the traditional way of collecting votes through boxes consisting of voting papers, called as paper ballot. Slowly, this system has changed or altered into a new technical and mechanical system which uses electronic voting machines[4] in order to avoid misconceptions. Even though this voting machine is fast and accurate, this system needs more manpower and also it is not much more reliable. To increase the reliability of the voting, many algorithms have been introduced. One of the major idea of developing the system is to use the person's identity. The major unique identity of the each and every person is his fingerprint, Iris etc. So one of the cheapest way of recognition is fingerprint recognition. Not only the developers use this biometric, the government also has taken necessary steps to collect the biometric data and stored into a database. The government also issued aadhar card to identify the person's unique identity. Using the aadhar card, we can easily make the voters to cast the vote without difficulty. Due to the advancements in upcoming technologies, we can also able to collect and count the votes in a faster manner and the counting process starts simultaneously as soon as the voting process ends.



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II.EXISTING SYSTEM

In the current system, as soon as the last voter, has voted the polling officer in charge of the control unit will presses 'close' button. After that the EVM will not accept any votes. Then the balloting unit is disconnected from the control unit and kept separately. During the counting of votes, the result button is pressed for displaying the result. This button is hidden and sealed; this can be broken only at the counting centre in the presence of designated officer[9]. Private information is provided by using passwords or PINs, which are easy to implement but has the risk of exposure and being forgotten[9].

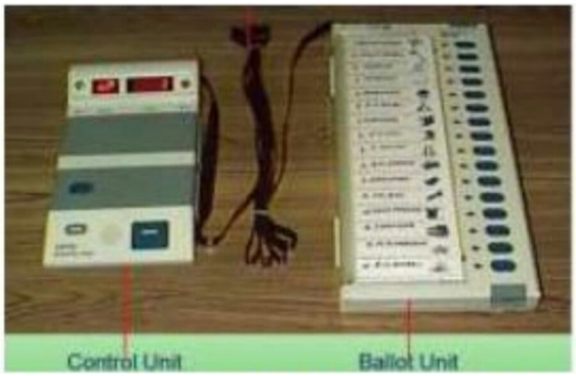

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Fig1,Electronic voting machine.(EVM)

III.PROBLEM STATEMENTS

A. Manual Process in the existing system is high
B. The man power is required during the election process is high
C. No alarm systems is present in the system.

IV.PROPOSED SYSTEM

Our proposed system reduces man power and is the highly secured system. It works in two steps. First step is the collection of database and the second step is the authentication.

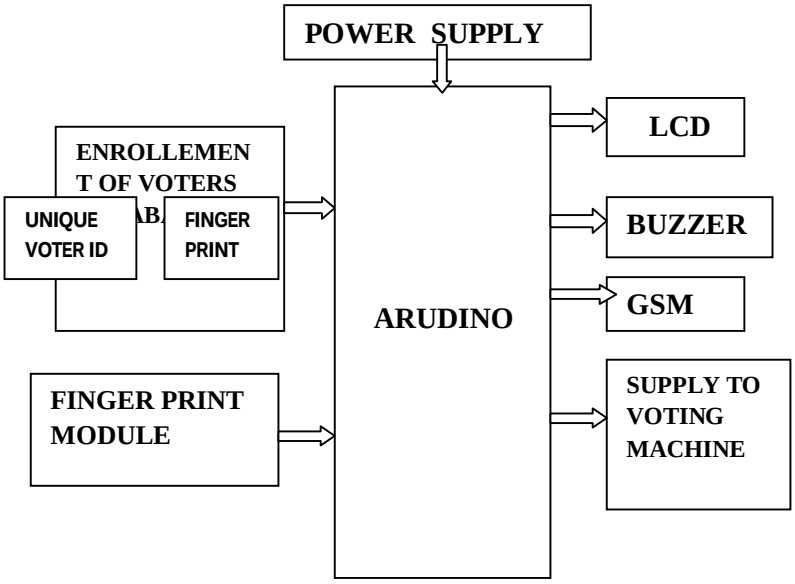

Fig2. Block diagram

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A. Enrollment of the Persons in the Database

First the finger print of the particular person in collected and stored with the unique identification aadhar number. This collected database is stored in the arudino storage(EEPROM).

UNIQUE ID (AADHAR NO.)	NAME	FINGER PRINT IMAGE
XXX1	A.PRIYA	
XXX2	M.KAVIYA	
XXX3	T.RAJA	

Table1.Enrollement of voters

B. Authentication for voting

In this step the finger print of the person is sensed through finger print sensor. The sensed finger print is compared with the database that is created during enrollement. It does the programming required for processing the fingerprint using Arduino Sketch. The Arduino Uno [1] is a microcontroller board based on the ATmega328 [2]. It receives data from the fingerprint module via the serial input pin and processes the data. Depending on other external inputs, it performs the voting process. If the sensed finger print matches with the database then it displayes as authenticated. After authentication the supply to the voting machine is ON. Thent hevoters can cast their vote.

After voting the details of the particular person ,who have casted their vote locks. So that he cannot vote for the second time. When the unauthorized person or the person who has already voted tries to access the voting system. The buzzer switch ON and a message is send to the authenticated person in the election commission.

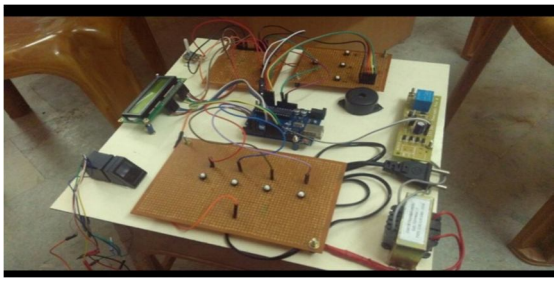

Fig.3. Aadhar based voting system

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CANDIDATE NO.	NAME	NUMBER OF VOTES
1	BJP	20
2	INC	14
3	MARXIST	13
4	NCP	10

RESULT: BJP wins

Table 2. casting of votes with result

C. The advantage of this election system is followed

1) The election results can be published at the same day and hence it is a time saving technique.

2) High accuracy and security.

3) Very reliable.

V.CONCLUSION

This system helps to increase the percentage of voting in India. In our voting process authentication is done by using finger vein recognication to cast voter's vote. It ensures that the unauthorized person does not vote. The successful implementation is possible only with the support of all political parties.

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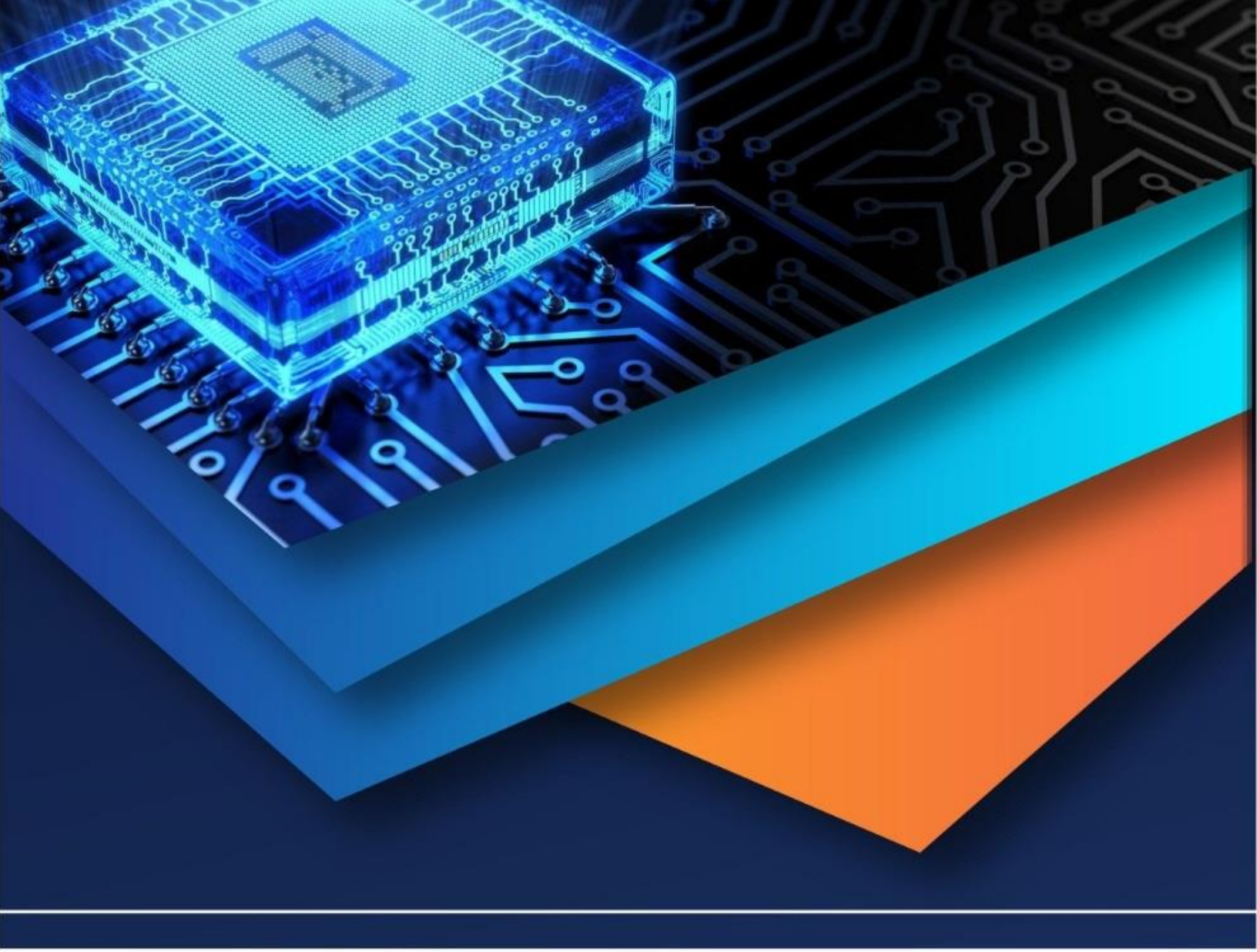

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