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Live Scan Plebiscite System

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Abstract: ***Live scan plebiscite system is an electronic system or device employed in any legal system to cast their votes rather than ballot papers and boxes which used earlier in conventional Election system. The traditional system may be a long, time-consuming process and there's a clear stage of error and malpractices. Later the system was replaced by electronic voting machine. To overcome the disadvantages of the electronic voting system, biometric identifiers are included in the voting system. Our proposed system consists of a Ballot unit with biometric system. This system verifies the biometrics of the candidate with the already stored data in Aadhar or voter identification card. In the proposed system the voter should verify his/her finger print and only if it matches they can vote.The data of the voters are stored in the cloud and can be retrieved from anyplace, so the voter can vote from any place outside the constituency. In the Electronic voting system, there is a simple unit called ballot unit which is used to record the votes. In this electronic voting only, the votes are recorded and counted and there is no separate unit to verify the voter, so anybody can record the votes and any number of times.***

Keywords: Ballot, Time consuming.

I. INTRODUCTION

In olden days ballots are used in elections for casting votes. Ballot could be a method of casting votes in any elections. In this method they use a piece of paper for secret voting, which is used to record decisions made by voters. Each one of the voters uses one ballot, which are not shared. To increase the accuracy and secrecy of voting process, a greater numberof computer-based voting systems were developed to assist collecting and counting the votes, which include Lever VotingMachines,Voting based Punched Cards and Optical Mark-Sense Scanners and Direct Recording Electronic voting systems. Although we have got such a big amount of technologies, even though we have so many technologies, each and every advanced technology have some disadvantages.

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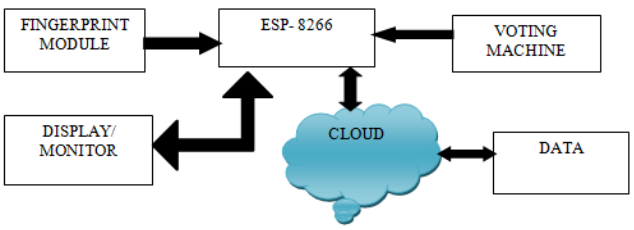
Since the electronic voting machine which are in current use also has few disadvantages like any voter can cast their vote any number of times, only the numbers of votes are counted. The verification of the voting person is done by humans only in the existing system.
Biometrics is the Technology that is used for the Comparison and analysis of data in the characteristics of human body, like finger prints, retina of an eye, DNA, voice of human and face patterns for the purposes of verification. This voting system which uses the biometrics to verify a person and also this systemis used to record, storeand processthe data primarily as digital information. First the data's like finger prints of the voters are recorded and the data are stored in the cloud. During election the system itself will check the matching of fingerprints and it can retrieve the necessary data of the voter, and the voter will be permitted to record their vote. The research on E-voting is an important topic for the progress of democracy in the world.In the current scenario there is a need for providing a secure and convenient E-voting system, this system will be used more frequently to collect people's opinion through cyberspace.

II. PROPOSED SYSTEM

The proposed system is designed for integrating Electronic Voting Machine with the biometric data of the voter as in the Aadhaar. This system verifies the Aadhaar Number and its unique bio-metric identification system to prevent and alert the authorities against fake voting and voting on behalf of absent voters during election. This system also prevents rigging during elections. The proposed system removes postal voting and the need for the voter to travel to their constituency for casting their vote. All the details of the voter and the candidates are stored in the cloud and can be retrieved from anywhere, so the voting process is made easy and can be done from anyplace. In this way the people's trust in democracy is maintained by ensuring a proper method for collecting and counting of votes. Unauthorized voting by impersonation and multiple voting by the same person can be avoided. The model consists of a Arduino UNO as the server used to give commands and fetch the data from the cloud and display the output in a monitor display.

A. BLOCK DIAGRAM:



The proposed System is a fingerprint-based voting machine, which verifies the fingerprints of the voter before voting. This system helps to conduct elections in an easy way which is most important and necessary for the democratic countries particularly a country like India. The proposed systemconsistsof fingerprint module, ESP-8266, voting machine and display. As the voter pressed thumb on the biometric sensor.

The biometric sensor will scan the unique finger pattern and accordingly generate a digital signal which is in the form of ones and zeroes and it authenticates the verification of the user with the data stored in the cloud where the database consists of name, location, aadhar card number. The wifi module named ESP-8266 is connected to web page for the candidate's name for the voter's location. If the specific person is verified then he/she can cast the vote in the allotted voting machine. Once the vote is casted the overall votes are counted by the election commission officer.

III. HARDWARE DESCRIPTION

A.ARDUINO:

Arduino is an electronic board which is used for easy use of both the hardware and software.

It has a capability to do the commands like reading inputs, switch on any device or send a message and switch on a motor or turn on a LED. Instructions are given to the micro-controller for the controlling, verifying and monitoring of voter's database. In the proposed system arduino is used to give command to the voting machine after verifying the voter.

A.FINGER PRINT DRIVER BOARD:

The ridge on the skin of human fingers shows different patterns. The ridges on the finger, referred to as friction ridges that facilitate the hand to understand objects and increase friction and improve the tactile sensing of the surface structure.

These ridge patterns square measure currently proved as different for each person. Fingerprints square measures the finger prints which is currently used for identification and verification purpose of finger prints.

In this Proposed work the security is provided by integrating the finger print sensor module with Arduino.

In this system the R305 finger print module was used, where the module has TTL UART interfaced with the Arduino. This module can directly connect with 3V or 5V micro-controllers.

The user can easily store the finger print data's in the module and can configure the data for identification of the person

C. POWER SUPPLY UNIT:

Power supply unit converts the AC power from the supply to low-voltage regulated DC power which is supplied for all the internal components of the circuit. power supplies are classified in to manually operated which has switch for selection of input voltage, and other is automatically adapt to the supply voltage.

D. LIQUID CRYSTAL DISPLAY:

Liquid crystal display(LCD) is the display system works with the solid and liquid states. Liquid crystal displays have some applications like TVs, laptop computer screen, cell phones and video games. Liquid Crystal Display is an electronic display. A 16x2 display is a basic module and is utilized in various applications. The display has two registers, they are, Command and knowledge. The command register registers the commands given to the digital display. A command is an instruction sent to digital display to perform a predefined operation like initializing, clearing, setting the position and dominant show etc. the information is displayed using information register. Thus, we have used the liquid crystal display for the conformation of the voters finger print and verification of the finger prints of the voters.

E. BUZZER:

A buzzer can also be called as beeper could be adevice which produces sound. A buzzer is often operated mechanically, or it are often be used as a piezoelectric device. The applications of buzzersare it is used in timers; alarms and therefore the inputs are given through a mouse click or keystroke.

F. SWITCH (RESET BUTTON):

In electronics, the push button is employed to reset a device. On a personal computer, the switch clears the memory and resets the machine.

G. LED:

Light emitting diode (LED) is a semi-conductor device which emits light when a supply is given. Once the supply is given, the electrons within the semi-conductor combines with the electron holes and releases energy as photon. The color of the light depends on the material used and the energy required for electrons to move between the energy band gap of semi-conductor material.

IV. IMPLEMENTATION

The proposed voting system uses a fingerprint module which uses the fingerprint from the voter as an input. The controller receives the input and checks it with the pre-enrolled fingerprint.

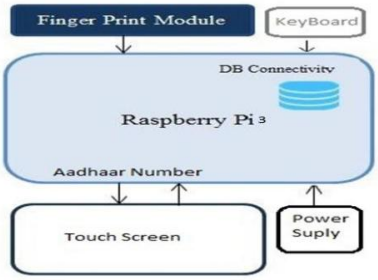
Then, the system authenticates the voter to vote for the respective party. The ESP 8266 module is used for cloud access and displays the candidate list using an IP. The voter can vote to the respective candidate by touching the party name and reselect it for the vote count. Now, the voter has successfully voted to the candidate in his/her constituency.

V.LITERATURE SURVEY

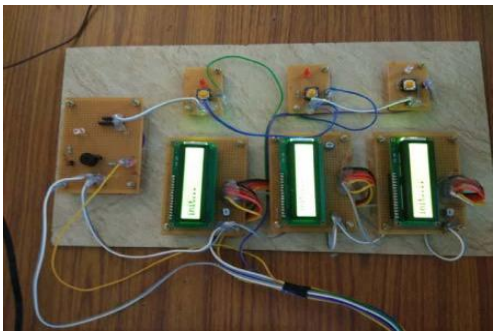
Literature survey helps us to analyse the work done in the area worldwide and also to analyse the advantages and disadvantages of the previous work done. [1]

Shanta Reddy et al (2015)- "A fingerprint-based voting machine", in this paper,

fingerprint of the person is used for the voter's identification and also for verification of thumb impression because thumb impression varies from person to person, this technique is used to minimize the error. A database is created, which contains the details of the fingerprint images of the voters. Hence with this repetition of votes are also verified. Using this system, the elections will not be a difficult task. Authors can use any number of color diagram, chart, picture, screenshots, and any snap which is required for the research of the title.



[2] N.N.Nagamma, et al (2017)- "Aadhar based fingerprint EVM system", in this voting system, the voters can login using Aadhaar card number andtheir password to poll their vote.The proposed EVM consisting of fingerprint module, raspberry pi board, touch based LCD and also thumb impression is stored in the device.



VI. HARDWARE SETUP

VII. RESULTS AND DISCUSSIONS

The samples of 100 fingerprints of various people are collected and it is stored in the database. The Hardware setup made is tested with the samples of some 150 fingerprints of various peoples and it is verified with the database which is already stored. The sensor senses the fingerprint of the candidates and it will allow the voting system to operate only if the fingerprint matches the stored data.A buzzer sound with indication LED is given to identify the fingerprint matching. This system can be extended to n number of data's depending on the storage space of the system.

VIII. CONCLUSION

Thus, the above proposed plebiscite system verifies the biometric data of the voter with the prerecorded data. This system can provide the secure and confidential voting system. This system would be useful for the people to vote from any voting booths since the data are stored in the cloud. It would also make people encourage to vote. The proposed system also eliminates fake voting as the aadhar verification is done. The proposed system would also help the government to enhance the election process and to run it smoothly. This system can be enhanced by adding different features as face recognition, eye ball movement etc.

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