AADHAR BASED ELECTRONIC VOTING SYSTEM AND PROVIDING AUTHENTICATION ON INTERNET OF THINGS

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Abstract: The idea is to reduce fake votes and illegal voting in election process. To improve security in current election process, two level of authentication is implemented, one is through RFID based aadhar card and other is through biometric traits, since it is very unique identity of individual.

1. INTRODUCTION

After India got freedom from British, Indian government is conducting election. It is the right of an every individual to select their favorite party. To organize election in India, an election commission is formed. It works according to rules and regulation. A person who is 18 and above are eligible to caste their vote. On election day, all Indians will caste their vote to their favorite party in nearby polls. On counting day, officers will count all the votes of each party. And the party which has majority will be a winner. The idea is to implement two level of authentication to improve security in e-voting. If a person caste fake vote will be identified and reported.

2. EXISTING SYSTEM

In current scenario, a person will caste their vote in polling booth, where the election insiders verify the voters and their details, then allow them to vote. Here there are chance of fake votes by dishonest election insiders and cheating can happen by any other means. There is no proper validation of biometric traits, since it is unique. After, voter caste their vote, it will be moved to database, it reduce time in publishing result. There is no need of capturing booths. All the eligible voters and their biometric traits was registered in UID database. There is no need to create that the admin will manage the central database. Voters. Then the current voting process consumes time for casting and counting the votes. There is need to capture polling booth and the voters may find boring as they need to wait a long time in queue. Then government needs to allocate funds for election insiders.

3. PROPOSED SYSTEM

In our paper, the idea is to overcome problem in current voting system and provide high security in electronic voting system. In proposed system, the voter will swipe their Rfid based aadhar card. The system reads an Rfid number of an individual, it will be given unique by election commission. It is used to fetch details of an individual/voter.

Then user needs to give their fingerprint, because biometric traits like fingerprint, face are very unique and vary from each and every person. No two person can have same finger print.

4.1 AUTHENTICATION:

User swipes their Rfid-card with Rfid-Reader and fingerprint scanner captures user's fingerprint.
reported. This vanishes illegal voting and fake voters.

In our proposed system, the proper validation of voter is done. By this means cheating get vanished. Although a person can get other person aadhar card and number, he couldn’t get other persons.

4. BLOCK DIAGRAM

This two input is used for authentication purpose.

4.2 INTEGRATING MICRO CONTROLLER WITH DATABASE:

The processed-input will be moved todatabase. The database compares Rfid number with finger print.

4.3 CODING TO VERIFY VOTER:

Code are executed in server which matches the data with stored data in database They can cast their respective votes, otherwise buzzer sound.

4.4 STORE AND UPDATE DATABASE:

After the person successfully casted their vote, it will be stored in database and count are added to central database.

5. PCI MICRO-CONTROLLER:

The General Instruments introduced pci-microcontroller. In 1970, picmicrocontroller was 1650 and 1655 RISC with 30 instructions. Then it was later sold to Microsoft.

The feature of pic-microcontroller is low-cost and efficiency.

There is two types of Convenient Packaging

1) Through Hole (Dip)
2) Surface Mount (SMD)

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Figure 2

UTXD and URXD are universal transmitter device and universal receiver device which is used to transmit data.

GPIO1 and GPIO2 are general purpose input and output which is used to connect input/output device.
5) PORT E

![PORT E Diagram]

6. WiFi Functionality

ESP8266 is a Wi-Fi module that adds Wi-Fi functionality to a microcontroller which is being in use through Universal Asynchronous Transmitter Receiver serial connection.

![ESP8266 WiFi Pinout]

7. BUZZER

![BUZZER Diagram]

When voltage goes beyond 2.5 v then short circuit happens, buzzer sounds.

8. SCREENSHOT OF KIT

![Screenshot of Kit]

9. CONCLUSION AND FUTURE

9.1 ENHANCEMENT:

Aadhar based Electronic voting systems has lot of advantages. The advantages are low cost, faster results, confidentiality, and lower probability of mechanical errors. Future enhancements should design a system that are user friendly and will have security safeguards and privacy of voters by concentrating on authentication side.

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