

SECURED VOTING SYSTEM USING FINGERPRINT

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ABSTRACT

A electoral system that is predicated on finger print and aadhaar card range that cut back prohibited Criminal selection and provides election result at the spot. By victimisation this method, the aged peoples will choose their close polling system rather than looking out their various polling booths. Many persons have to be compelled to visit their native to vote, by this system, we will cut back the motion stress of the peoples. Cut back the burden of election officers and provides actual result of election on up to this point. Fingerprint system is user friendly. It reduces the polling timely to carrying to polling center from the polling box. Cut back the staff of selection center it provides simple and correct tally while not troubles.

Keyword : - aadhaar number , finger print scanner.

1. INTRODUCTION

Electronic selection refer's to selection victimization electronic means that to either aid or beware of the chores of casting and tally votes reckoning on the actual implementation ,e-voting could standalone electronic machine (also known as EVM) or laptop to the net .This concept describe an online electoral system for Indian election is planned for first time there are number of electoral system develop everywhere the planet with every of them having it's limitation's this method uses the fingerprint device to scan thumb of the voter's so as to supply high performance with high security to the selection counter conjointly as we victimisation internet of thing i.e.(IoT) to create the electoral system a lot of sensible.This method accustomed displays the data-base of the user (voter).Once receiving the instruction from the polling officer, conjointly the citizen will use the bit screen to poll his/her vote.

The internet of things (IoT) is that the inter-networking of physical devices, vehicles, building and different things embedded with electronics, software, sensors, actuators and network connectivity that permits these.The IoT permits objects to sense or controlled remotely across existing network infrastructure, making opportunities for a lot of direct integration of the physical world into computer-based system, and leading to improve potency, accuracy and economic profit additionally to cut back human intervention.

Within the broadest sense, the IoT encompasses everything connected to the net, however it's more and more being use to outline objects that "talk" to every different.Simply, the Internet of things is created from device - from easy sensors to sensible phones and wearable's - connected along.For creating an IoT infrastructure wherever we have to tendency to set up the hardware with package and management the device.

By introducing this new IoT based Electronic Voting Machine, We achieve

- 1.Reduce the cost of paying staff to count votes manually and can provide improved accessibility for disability voters.
- 2.The cloud storage can store the voting result in its memory which will be inerasable.
- 3.The results can be published the same day which reduce the mishaps.

2. EXISTING METHODOLOGY

After obtaining the liberty from British government, Indian Government offer a right to Indian individuals to elect their leader. India having the biggest democracy within the world. So, to attain the transparency in legal system is difficult task of election commission. the target of pick is to permit voters to decide on their government and political representatives. The election is that the basic method of democracy within which individuals show their opinions by choosing their candidates. Bharat is disbursal immense cash to improve our legal system to supply a much better government to voters. The legal system ought to be honest, clear and totally secure for the higher democracy. this system is employed to less transparency as a result of there can be probability of rigging at pick time. the safety of the pick method, authentication of voters, protective the voted knowledge these area unit the necessary factors of current election system. Thus it's necessary to come up with a secure legal system.[1]

2.1 ARDUINO UNO

The Arduino Uno can be a microcontroller board supported the ATmega328. it's fourteen digital input/output pins, cardinal analog inputs, a sixteen megahertz generator, a usb port, has influence slot, have ICSP header and a push. It supports the microcontroller and simply connect it to a laptop computer with a USB cable. The Arduino entirely totally different from all previous boards in that it dont use the FTDI USB-to-serial driver chip. Instead, it chooses the Atmega8U2 programmed as a USB-to-serial device.



Fig -1: Arduino uno

2.2 ABOUT BIOMETRIC, FINGERPRINT AND AADHAR

Biometrics is that the science of creating the identity of an individual based on the physical, chemical or activity attributes of the person. Physical or activity characteristics embody fingerprint, face, hand/finger geometry, iris, retina, signature, gait, palm print, voice pattern, ear, hand vein, odor or the deoxyribonucleic acid information of an individual to ascertain identity. This data is unique to every person. Higher officials uses fingerprints for personal identification of each individual for security purposes. The matching suggests that identification accuracy victimization fingerprints is very high. it has been determined that the fingerprints of each person are unique, also each finger's fingerprint of a similar person is unique and fingerprints of identical twins are also different. Today, most fingerprint scanners cost but Rs.5000, therefore it's affordable for security reasons. India's central government agency, unique Identification Authority of India (UIDAI) issues an Aadhaar card. in the Aadhaar database government collect biometric and demographic data of residents, store them in a centralized database and issue a 12-digit unique identity number to each individual. it's considered the world's largest national unique identification number.



Fig -2: Fingerprint Scanner

3. PROPOSED METHODOLOGY

The basic principle of this paper is “A person can vote from any part/place of the his/her native place where the actual voting is going on and it can be count over the internet.” A novel study has also been done about current system and all the previous system which were used by our ECI (Election commission of India). Also other system which are used in other countries like United States of America (Electoral College System), United Kingdom (Ballot Paper System), France (EVM), China (Hierarchical Electoral System), Online Voting System by Elections Online (US). All the data of this voter is already saved in the Arduino based server. Once after the data is verified. He or she can pole his vote from anywhere in state by choosing his/her constitution.



By using Biometric sensor, each person fingerprint is compared with his/her Aadhaar details. Once the person completed his/her vote cannot vote twice since all the finger print has been registered in Aadhaar details. This prevents the mishaps and the voting is done smoothly. The Arduino board count the difference between incoming & outgoing person in the bus & also Count the person in the bus & display the message on the personal computer. By using Biometric sensor, each person fingerprint is compared with his/her Aadhaar details. Once the person

completed his/her vote cannot vote twice since all the finger print has been registered in Aadhaar details. This prevents the mishaps and the voting is done smoothly. The Arduino board count the difference between incoming & outgoing person in the bus & also Count the person in the bus & display the message on the personal computer.

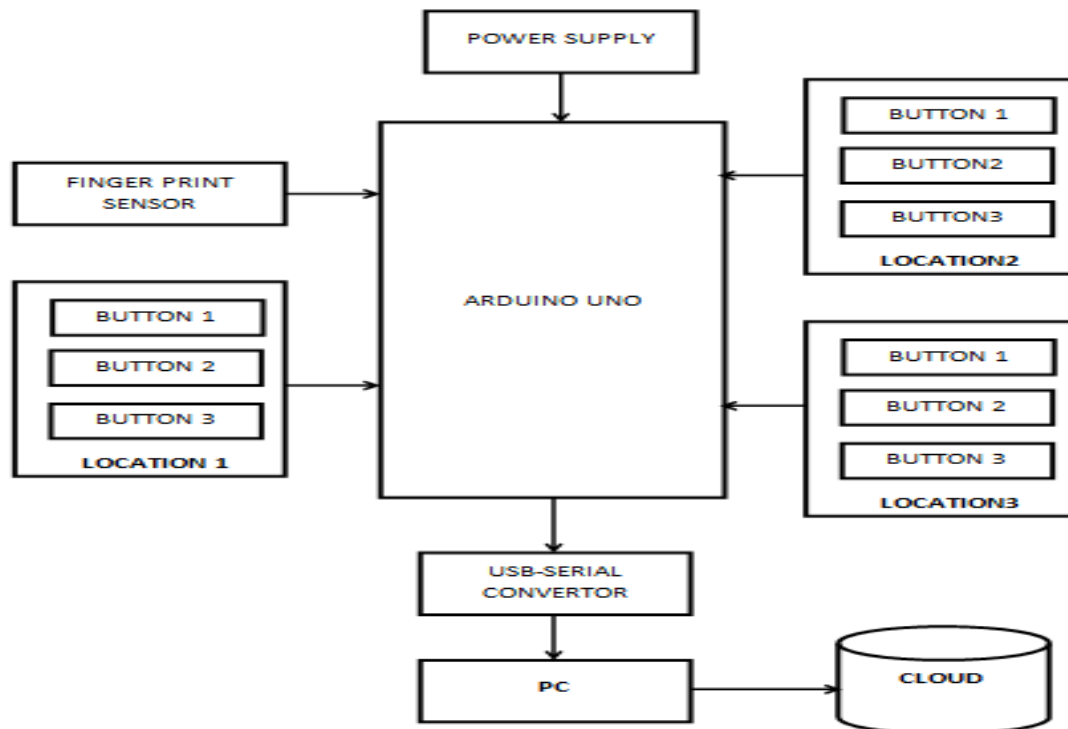


Fig 3: Block diagram

Steps of System:

Step 1: go to any polling station in State.

Step 2: you can scan your fingerprint when your turn comes.

Step 3: System checks your fingerprint with Aadhaar database's fingerprint and also checks you are eligible or not means you are above 18 or not.

Step 4: Then if you are eligible then it shows message "You can vote" else it shows "You can't vote because you are not eligible"

Step 5: Then we can choose the constitution and select the area.

Step 6: you can pole your vote.

Step 7: your vote will be counted to the respected constitutions.

This system satisfies the following requirements,

1. Peoples can vote without going to their home constituency on the election day means they can vote from their current city.
2. There is no chance of illegal voting because of Fingerprint authentication.
3. Aadhaar's database permits only eligible voters to vote and, it also ensures that eligible voters vote only once.
4. It maintains privacy means authority; ballot officer or anyone else can't link any ballot to the voter.
5. It also saves time as well as money of traveling.
6. quick results are possible.

4. RESULTS

In total, this system overcomes most of the problems faced during the voting period by the paper ballot system. The efficiency of this system depends upon the web interface, its usability. This will surely ensure a safer voting method which is very much what is required for a healthy growth of a developing nation. In this paper, the proposed

Fingerprint based voting system which is better and faster than previous systems. The new system prevents access to illegal voters, provides ease of use, transparency and maintains integrity of the voting process. The system also prevents multiple votes by the same person and checks eligibility of the voter. It also allows a person to vote from anywhere provided that the voter is within electoral limits. Fingerprint based voting system has provided chance to avoid invalid votes, It reduce the polling time, Easy to carrying to polling center from the polling box, Reduce the staff of voting center, It provide easy and accurate counting without any troubles, Provisioning of voting preventive measures.

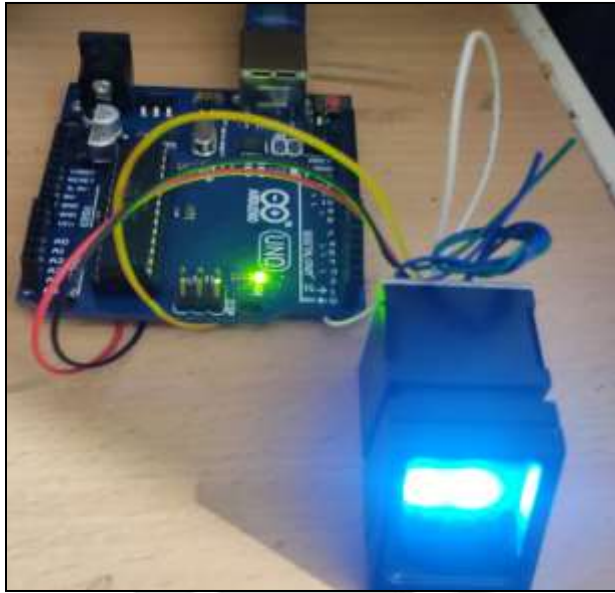


Fig 4:Fingerprint sensor with Arduino

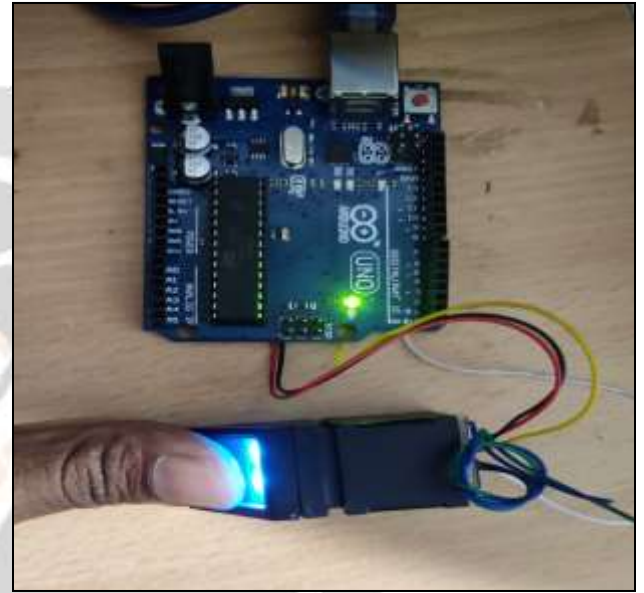


Fig 5:Enrollment of Fingerprint

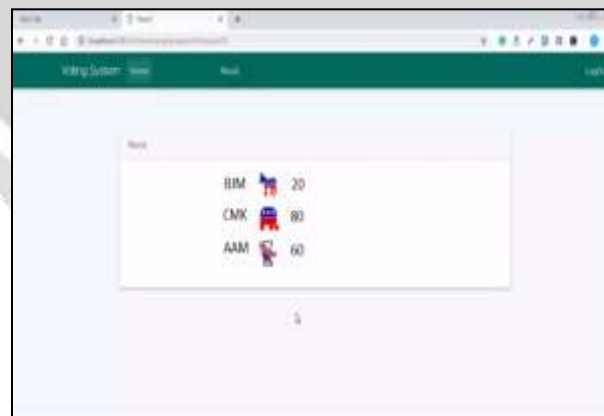


Fig 6:Results

5. CONCLUSION

Fingerprint based voting system have many advantages over current voting system. Some of these advantages are private and secure, saves money. Finally, it provides easy and accurate counting without any mistakes in counting as the results cannot be changed.

6. ACKNOWLEDGEMENT

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