

Raspberry Pi 3 and Biometric Based Electronic Voting Machine (EVM)

Shubham Gaikwad¹, Shubham Jagtap², Sagar Bhagare², Prof. S. R. Patil²

¹Student, E&TC, Dr .D. Y. Patil School of Engineering & Technology, Lohegaon, Pune, Maharashtra, India

²Professor, E&TC, Dr. D. Y. Patil School of Engineering & Technology,Lohegaon, Pune, Maharashtra, India

ABSTRACT

EVM is Electronic Voting Machines. India, which is currently considered as the world's biggest vote based system has been lauded in the entire world for its popularity based standards of "Sovereign, Socialist, Secular, Democratic, Republic". It is presently the second biggest crowded nation on the planet. Despite the fact that the nation has a rich specialized and logical foundation yet the voting and decision techniques don't reflect it.. Analysts have demonstrated different issues identified with the voting procedure in India which is through Electronic Voting Machines (EVM).In this venture the outline that we will make how the voting procedures and hardware can be intended for a "free, reasonable and secure" surveying in the up and coming days. This proposed model will guarantee finish straightforwardness and will pick up the trust and honesty of the voters. Biometric validation and personality verification are given much need while proposing the idea since biometric confirmation is a kind of framework that depends on the one of a kind organic qualities, (for example, fingerprints, retina filter, and so on.) of people to check character for secure access to electronic frameworks. Novel Identification Number (UID)/Aadhar Card will be utilized for distinguishing proof of a voter. Crisis ready framework to changing the race officers and close police headquarters by sending knead through GSM.

Keywords: Raspberry Pi, Fingerprint Module, Global System For Mobile Communication, Buzzer , Switches.

I. INTRODUCTION

In India there are two kinds of voting strategy which are utilized to be taken after amid a race. The first is Ballot Paper System and the second one is Electronic Voting System (EVM).In the Ballot Paper framework individuals need to cast their votes on a bit of paper issued by Election Commission of India. In the wake of making the choice they have to drop that paper in the Ballot Box.

The Electronic Voting Machine comprises of two units, Control Unit and Ballot Unit. In the Electronic Voting Machine framework individuals need to make their choice by squeezing a catch against the

hopeful and the political party in the Ballot Unit. The vote will naturally be refreshed against the hopeful in the Control Unit of that machine since they are interlinked with a link. This control Unit is worked by the managing officer.

In any case, both the frameworks can't accomplish and achieve legitimate security and realness. Standoffish activists can without quite a bit of an extend cast false votes by undermining individuals and making dread in the territory. They at some point compel honest to goodness voters to cast their votes to a particular gathering by debilitating them. As there is absence of security and validness in the two frameworks so decision technique isn't getting

to be straightforward excessively. To dispose of this significant issue, we are outlining Biometric voting framework and it can be utilized for any race technique. It will accomplish and achieve the most elevated conceivable protection and security while making the choice by a voter in light of the fact that, the machine utilizes biometrics module and crisis alarm.

A. OBJECTIVE OF THIS PROJECT

Each and every individual on the planet has one of a kind unique mark. The biometric voting opens with recognizing the voter by his/her unique mark and when the voting procedure is finished, the machine can consequently tally the quantity of votes that a competitor has gained. As the framework opens the voter to cast his/her vote by distinguishing his/her unique finger impression, so there is less plausibility that withdrawn activists cast false votes. In this way, we can accomplish a straightforward vote.



Figure 1

II. LITERATURE SURVEY

Title: - Biometric System Based Electronic Voting Machine Using Arm9 Microcontroller

Author: - M.Sudhakar, B.Divya Soundarya Sai.
Professor in ECE, 2II Year M.Tech, Dept of ECE,CMR College of Engineering &Technology ,Hyderabad, TS-India.

Review of author: -

This paper centers around straightforward, minimal effort unique mark based electronic voting machine utilizing ARM9 microcontroller. An electronic voting framework is a voting framework in which the voters' and voting information is recorded, put away and handled carefully. The proposed framework comprises of controller equipment and programming. The equipment is executed with ARM9 microcontroller alongside KY-M6 unique mark module.

The product code is created in WINCE6 advancement condition for interfacing the ARM processor with unique finger impression module. The proposed framework gives the best answer for limiting the time taken for distinguishing the voter. The plan executed in the FP-EVM is versatile, adaptable and with least power utilization. The planned framework is easy to understand, effortlessly versatile and financially savvy. Further ,the outlined framework has basic engineering, quick reaction time and extension for promote development.

Title: -A Finger Print based Voting System.

Author: -Rudrappa B. Gujanatti, Shivaram N. Tolanur, Murughendra S. Nemagoud, Shanta S. Reddy, Sangameshwar Neelagund.

Assisant Professor Electronics and Communication Department K. L. E. Dr. M. S. S. C. E. T, Belgaum, India.

Review of author: - Biometric Finger print gadgets are utilized as a part of the Electronic Voting machine for voter confirmation. We have planned a unique mark based voting machine where there is no requirement for the client to convey his ID which contains his required points of interest. The individual at the surveying corner needs just to put his Finger on the gadget, in this manner permitting the procurement of an on-spot unique mark from the voter which fills in as a recognizable proof. This Finger print peruser peruses the points of interest

from the tag. This information is passed onto the controlling unit for the check.

The controller brings the information from the peruser and contrasts this information and the effectively existing information put away amid the enrollment of the voters.

On the off chance that the information matches with the pre-put away data of the enlisted unique finger impression, the individual is permitted to make his choice. If not, a notice message is shown on LCD and the individual is banished from surveying his vote.

The vote throwing component is completed physically utilizing the push catches. LCD is utilized to show the related messages, notices and following outcomes.

III. BLOCK DIAGRAM:

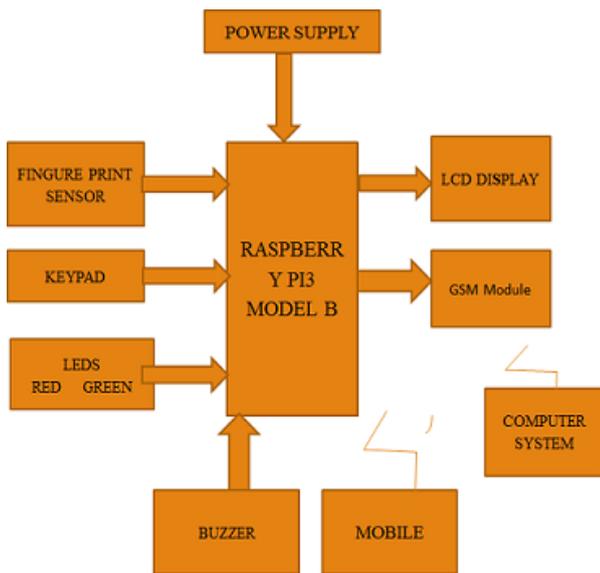


Figure 2

As we see in the square chart, it comprise of Raspberry pi3 demonstrate B, Fingerprint module, GSM module ,Buzzer, switches, control supply. Raspberry pi3 show B assumes an essential part in our gadget, as it is the processor used to control the different activities performed by our gadget. We are utilizing Fingerprint module which is a Sensor Module can direct unique mark picture preparing, format age, layout coordinating, unique mark

looking, layout stockpiling, and so on. Contrasted and comparable items from different providers. After that when figure print is coordinate, framework permit to voter to giving a vote in favor of approved hopeful. In any case, if there should arise an occurrence of figure print not coordinating or at the season of multiplied voting, framework stop the way toward voting. What's more, sending crisis ready back rub and sound from signal.

After fruitful voting framework including the vote the framework and spare it permanatly on the server. At end of the planning of voting period framework naturally stop the voting framework. Also, it send every one of the information to the decision commission to produce the outcome as quickly as time permits.

IV. ALGORITHM AND FLOWCHART

A:- Algorithm

- 1) Start.
- 2) Switch on the Raspberry pi3 model B
- 3) Switch on the Fingerprint module, GSM module.
- 4) Initialize the Raspberry pi3 model B .
- 5) Initialize Fingerprint module.
- 6) All the devices are ON.
- 7)Fingerprint scanning of voter by Fingerprint module .
- 8) It send the pattern to raspberry pi to matching through voter list.
- 9) If it matched then going for voting process.
- 10) But if finger print is not match Buzzer is ON and message send to police and officer.
- 11) After successful vote it save on the server.
- 12) Stop.

B:- Flowchart

As appeared in above flowchart, the procedure will be as per the following- Gadget will be begun first by giving force supply to it. Every one of the sensors i.e. unique mark and GSM will be on. To work the gadget there should be the spare the rundown of

voter first and contrast it when it accompanies voting. There will be customized directions for each voter in framework . In the event that there is none approved voter or twofold voting are coming at that point there will be a signal and an alarm message will be sent to the police and officer .If there is no any robbery at that point there will be no caution and message. Along these lines, process will end.

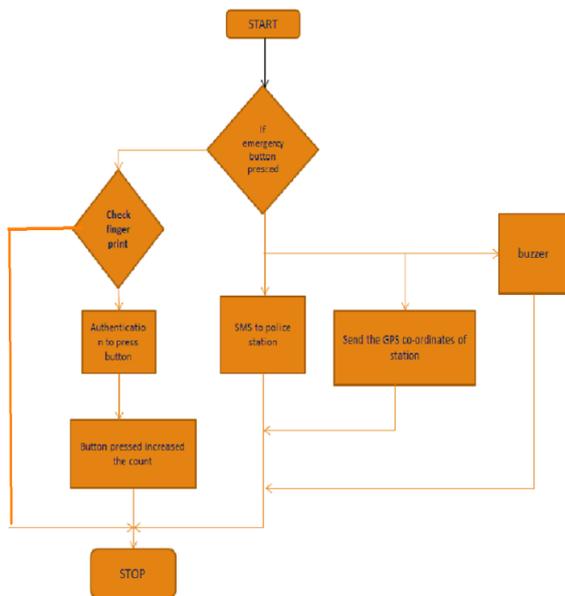


Figure 3

V.FUTURE SCOPE

- 1) Avoidance against fake voting.
- 2) Fixed time period voting – We can only allow voting for a fix time period. Only during this period citizen can vote.
- 3) We can additionally roll out improvements by incorporating EYE retina distinguishing proof in framework. That is the reason just a honest to goodness subject can vote this will build the dependability of the framework and make framework more solid.

V. CONCLUSION

The project “Fingerprint Based Voting Machine” was mainly intended to develop a fingerprint based advanced Electronic Voting Machine (EVM) which helps in free and reasonable method for leading races

which are reason for law based nation like India. It gives trust in voting framework; just the true blue voter is permitted to access voting. The framework. is easy to use, as in the client can without much of a stretch comprehend the framework despite the fact that the client does not known already. This is a direct result of the outlining strategies, and over all we reason that the EVM is a rising field and there is a decent degree for innovative work to actualize this framework with a propelled highlights.

VI. REFERENCES

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VII.BIOGRAPHIES:-



Student, E&TC, Dr. D. Y .Patil School of Engineering & Technology, Lohegaon, Pune-412105, India.



Student, E&TC, Dr. D. Y .Patil School of Engineering & Technology, Lohegaon, Pune-412105, India.



Student, E&TC, Dr. D. Y .Patil
School of Engineering &
Technology, Lohegaon,
Pune-412105, India.



Prof, E&TC, Dr. D. Y .Patil
School of Engineering &
Technology, Lohegaon,
Pune-412105, India.