

# **ANDROID BASED E-VOTING MOBILE APP USING FINGER PRINT AND QUICK RESPONSE CODE**

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## **Abstract:**

Android Based e-Voting Mobile App allows the voter to vote with his or her quick response code and fingerprint design. The framework is an application of democratic duty in terms of security in two different ways. Considering that the quick response structure and fingerprint of each voter is different, the processor was developed with the Quick Response code and fingerprint perception felt by voter. This will enable the voter to cast their ballots without any problems. Two-way protections are used to differentiate the customer exceptionally. Security details highlights in two different ways are different for each individual. Two-way protections are used to ensure voter turnout. A voter can only participate in one political race and that plan will not allow the candidate to participate in the next political decision. This project will allow the board to embed the name and candidate photo of the candidate reserved for democracy. The board address must include the candidate's name and the assigned photo. The board Guarantee registers the name of the voter by confirming the voter. The board approves the client by confirming the client's individual certificate, after which the administration registers the voter. After the end of democracy, the number of candidates in addition to the plan will be removed precisely. Users record singular data that includes a quick response code. At one event the democratic meeting and event was announced, and the voter sees the announcement through SMS. From then on, the voter is allowed to go to the polls and clear the quick response code. If the ballot is deemed approved from that point on, it is proper to proceed with the registration. Otherwise, then the application will exit accurately according to the estimate. The basic framework for this work plan is "client server web enhancement programming". On the client's surface, it has a unique fingerprint, despite the fact that it has a GUI that relies on the citizen's ID number, provides a line to participate in political races and shows promising, status and false news. The GUI's guarantee, without any additional restrictions, only follows procedures such as voter leader and analysis.

**Keywords** — **Finger print. Quick response code. Two-way protections. Democracy.**

## **I. INTRODUCTION**

India is one of the democracies that can be ruled by elected representatives. For this purpose, there is an identity card called voter card which enables the citizens of the country to vote. In the early days voting programs were scalable by humans. Due to India's leading role in the list of fastest growing countries in the world, all citizens began to move towards digital life. This was reflected in Indian Election system also by manual counting of ballot papers to punch cards and electronic voting machines. The electronic voting system currently in use is different from the traditional voting technique and it has some unique features such as accuracy, flexibility, privacy, verification and operation. Likewise, the system has owned few disadvantages such as spend too much of time, high use of paperwork, lack of direct contact with high

commands, mechanical problems caused by human negligence, does not allow new users to add, delete or edit and risks such as not being able to use multiple people at the same time are inevitable in electronic voting system. Moreover, the polling turnout in India is also low due to various factors such as pandemic, violence and tensions. Risks like these may overcome through online voting. The online voting system allows any voter to cast his or her ballot from anywhere in the country in a very secure manner without having to go to the polls. The Online voting system restricts direct human use. Moreover, this system poses some new challenges even though resolving the old electoral problems. The online voting system allows people to cast their ballots digitally from any polling station in the country. However, the system covers all the regulatory measures, social values and behavioural aspects of the current voting system and also

provides additional ease and safety. Technological advances in elections are always a challenging project and work with care, consultation and planning. The introduction of online voting system is a very difficult upgrade because this technology touches the centre of the entire electoral process vote registration and counting. This research work is designed and implemented by an e-voting system using Quick Response codes and finger print for quick response to user authentication with maximum security.

This will not only confirm the identity of the voter, but also verify the registration of the candidate who is eligible to vote. E-voting system has grabbed the attention of researchers over the past few years because it has some significant advantages over traditional paper-based voting.

The researcher proposed the e-voting technologies which offer an effective and efficient voting mechanism instead of existing voting system. Nowadays, the use of Mobile phone has become essential for a large number of people in the world. If we have a cell phone we can count on this world is in our hands. This tool is the marvelous work of world scientists. In addition, having internet connection with this tool increases its usage many times over. We can complete many tasks that are unimaginable to us with precision and accuracy. The researcher begins her research with the intention of using mobile phones to safer voting system. Furthermore, the mobile phone voting system has the potential to increase voter turnout. In this research, we have designed and developed a mobile phone voting system that allows users to vote arbitrarily at the right time using cellular network service providers. Following this we collected data from fifty users through a self-prepared questionnaire, of which 93% of participants said that this method was easy to use and 100% easy for participants to learn. The system was certified by the participants as efficient, reliable, accessible and secure. This research also contributes to the reform of the existing voting system by designing and improving the mobile phone voting framework and an application.

## II. LITERATURE SURVEY

### 1. Title: Techniques for feature extraction in speech recognition

Author : Manish P. Kesarkar, and Preeti Rao

Year : 2003

The period area waveform of a talking signal transmits all of the hearing data. After the phonological point of assessment, very slight can be thought on the basis of the waveform the situation. Though, previous researches in arithmetic, audibility, and talking technology have providing many procedures for transforming data that can be measured as information if interpreted properly. In directive to find some statistically related information from incoming data, it is imperative to have devices for decreasing the information of individually segment in the auditory signal into a comparatively small amount of limitations, or structures. These features should define each division in such a distinguishing way that other comparable divisions can be gathered organized by matching their features. There are massive interesting and extraordinary ways to define the speech indicator in terms of limitations. Though, they all have their powers and faintness, we have obtainable some of the maximum used approaches with their position.

### 2. Title: Development of a triggering voting System Using Biometrics Based on Adharcard Numbering.

Author : M.Venkata Rao, Venugopal Rao Ravula and Pavani Pala

Year : 2015

Now a day's polling process is trained by using EVM (Electronic voting machine). In this paper the authors has presented and use performance is to complete the progress of anti rigging elective system using finger print .The resolve of the development and implementation is to provide a security and good atmosphere to the consumers is to vote for the candidates by using the bright electrical voting machine by provided that a rival identification to individually user using the finger print identification technology. Here in this development and satisfy we are successful to supply the at maximum security since it is taking the finger print as the confirmation for EVM. Excellent EVM

is an Embedded based development and operation. It includes microcontroller and interfaces. Intellectual EVM has been mainly designed to gather, record, store, total and display cent percentage truthfully.

**3. Title: Web-Based Voting System Using Fingerprint Design and Implementation**

Author: Firas Hazzaa, Seifedine Kadry, and Oussama Kassem

Year : 2012

In order to deliver a high performance with high safety to the elective system also we use network technology to make the voting system more practical. The new scheme is proposed by a selection for an institution of higher education for selecting the president of the campus. The proposed EVS allows the electors to shot their fingerprint, which is then corresponding with a previously saved image within a record called as“Developed Web-based Voting System using Fingerprint Recognition”. This system has provided an effective way to cast elections, free of deception, and make the system more trustable, financial and fast. We have used Minutiae-based fingerprint verification and matching with high correctness.

**4. Title: Secure and verifiable Electronic polling system**

Author : Amna qureshi, David megias, Helena rifa-pous

Year : 2019

The electrical voting system for small to average sized Internet founded community judgement systems that make available privacy of vote, voter’s secrecy, voter’s verification, audit ability, election integrity, safety against association of malicious gatherings, double-voting anticipation, justice, and compulsion fight, and prevents malware infested polling device from operating the authentic voter’s polling choices. In adding, Se-VEP delivers cast-as-intended verifiability created on cryptographic primitives, which are used to strategy a complex polling interface between the voting scheme, the balloting server, the code creator and six polling code producers during the polling period. Compared to the extra state-of-the-art e-voting schemes, Se-VEP guarantees voter’s validity via multifactor validation scheme, maintenances various voting, averts twice voting through a going

to the polls tag, offers verifiability in the attendance of an untrusted voting device, involves less faith expectations on involved entities, and proposals computationally practicable solution for employment on moveable communication devices.

**5. Title: Secure electronic voting machine using Biometric**

Author : Karthik G Maiya , Vineesha. T, Veena G and Sujay S.N.

Year : 2018

In this research work the machine innovative computer technology is used. This system employs that exchange event and most significant error prone human factor. It increases elasticity and avoids incorrect voting. To validate a vote, elector has to use fingerprint.

**6. Title: Secured Smart Voting System using Aadhar.**

Author: G. Valarmathy, V.Saranya, Riya Rose Cherian

Year : 2017

This concept is mostly focused on the discount of voting calculation in India. To overcome the above difficult this paper proposed a system which is easy and protected by increasing a Mobile Application. Since it is a mobile application founded, it is greatly secure related to online voting system. In this system it is app founded Biometric online voting method, as we know Aadhar database has the person’s name, statement, age, iris, fingerprint and the mobile number. On the day of election, elector has to login the application, first of all voter has to give fingerprint, it will related with fingerprint which is deposited in database for the confirmation.

### **III. PROBLEM DESCRIPTION**

#### **Existing System**

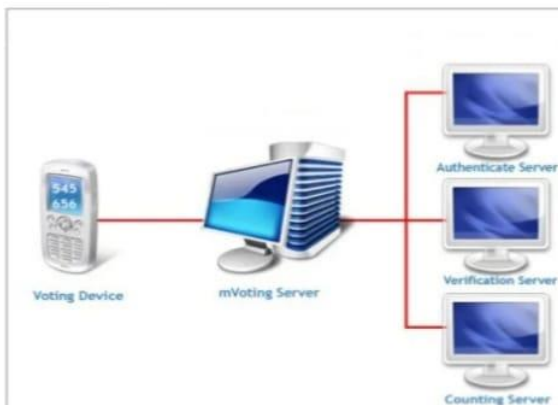
In elections voters cast their votes by simply depositing their ballots in sealed boxes distributed across the electoral circuits. When the election period ends, all these boxes are opened and votes are counted manually in presence of the certified officials. The voter gets a blank ballot and uses a pen or a marker to indicate he want to vote for which candidate. Hand-counted ballots is a time and labour consuming process, but it is easy to manufacture paper ballots and the ballots can be retained for verifying and this type is still the most

common way to vote. Lever machine is peculiar equipment, and each lever is assigned for a corresponding candidate. The voter pulls the lever to poll for his favourite candidate. This kind of voting machine can count up the ballots automatically. Because its interface is not user-friendly enough, giving some training to voters is necessary.

### **Disadvantages**

1. It is time consuming
2. It is much through group of manpower to improved consequences.
3. It is occasion overwhelming.

### **Proposed System**



This research work suggests “client-server web-enabled software” structural design for the scheme. On the customer surface it contains a finger print image in addition to Quick Response a GUI that believe voter’s id numeral, give a line to take part in an election and display confirmation, status and error messages. The GUIs determination merely acts on proceedings as of the attendant and criticism of the elector with no some additional dispensation. Servers are located at distant location as of the census booth. They are used for carrying out all the processing work such as image processing, transferring data between the client and the database, generating statistics, sending messages to voters, etc. Therefore mobile application can overcome time consuming and casting their vote at any circumstance.

### **Advantage**

1. The scheme will not permit the elector to take part in a vote two or more applicant.
2. The scheme determination permits the consumer to cast the vote for one occasion and for the exact vote.

### **IV. METHODOLOGY**

The design is the link between the information system and the user. It includes the evolving condition and processes for data research and individual steps are compulsory to put operation data in to a functional form for allowance and can be accomplished by examining the computer to recited data from a printed or written paper or it can take place by consuming people entering the data right into the organization. The design of participation focuses on regulatory the volume of input necessary, monitoring the mistakes, evading delay, escaping extra stages and possession the practice simple. The input is designed in such a way so that it provides security and ease of use with retaining the privacy. Input Design is based on the following things:

1. Input scheme is the process of changing a user-oriented explanation of the participation into a computer-based organization. This strategy is important to avoid faults in the data input progression and shows the accurate direction to the administration for receiving correct information from the electronic system.
  2. It is attained by generating user-friendly monitors for the information entry to holder large dimensions of data. The objective of scheming input is to make data entry easier and to be allowed from errors. The data admission screen is intended in such a way that all the data management is accomplished and also it has the observing facility choices by default.
  3. When the information is arrived it will checked for its validity. Information can be entered with the help of monitors. Applicable communications are provided as when desired so that the user will not be in maize of instantaneous. Therefore the independent of input design is to create an input arrangement that is easy to follow
- A feature output is one, which meets the requirements of the end user and presents the information clearly. In this system the results of

processing are communicated to the users and to other system through outputs.

The output plan it is strong-minded how the evidence is to be displaced for direct need and also the durable copy output. It is the most important and shortest source information to the employer. Effective and intellectual output scheme develops the system's connection to help employer decision-making.

1. Designing computer output would proceed in an controlled, well believed out method; the accurate output must be established while make sure that each output component is designed so that persons will find the organization and can be used simply and efficiently. When enquiry scheme computer productivity, they must identify the detailed output that is necessary to meet the requirements.

2. Select techniques for giving material.

3. Create paper, report, or other designs that have indication manufactured by the structure.

The production form of an information method must complete one or more of the following purposes.

- ❖ Convey information about previous events, present status or predictions of the Future.
- ❖ Indication significant events, opportunities, difficulties, or forewarnings.
- ❖ Generate an achievement. Confirm an achievement.

## **CONCLUSION & FUTURE WORK**

Each and every one the swot up which had been re-examined demonstrate that, this scheme conquer most of the problem faced throughout the vote period by Electronic Voting Machine scheme. The competence of the scheme depends winning the web border, its usability. This determination certainly makes sure and safer vote means which is extremely a great deal what is the necessary for strong growth of a just beginning nation. In this document, the future online voting system with Quick Response code and fingerprint scanner which is improved and earlier than preceding system. Online voting scheme by fingerprint scanner has provided possibility to keep away from unacceptable take part in a ballot. In this scheme only genuine register being can be take part in an election. In the future, having outlined the voting

protocol and the basis for its operations, it is important to outline the direction this protocol can take. The Ethereal protocol (Wood, 2014), has been established early in the work as a potential candidate to become the platform for our voting protocol. One of the reasons for this is that Ethereal supports creation of contracts, which are accounts which are operated by the Electronic Voting Machine. These contracts can be used to implement a voting scheme. However, voters' anonymity and privacy are important pieces of any voting protocol and are not yet handled by Electronic Voting Machine transactions.

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