

## **INTELEGENT E-VOTING SYSTEM USING BLOCKCHAIN TECHNOLOGY**

**J.KARTHIKEYAN<sup>1</sup>,Dr.S.SAJITHA BANU<sup>2</sup>,M.MOHAMED RAFT<sup>3</sup>,G.BALAMURUGAN<sup>4</sup>**

1, student, Department of Master of Computer Application. Mohamed Sathak Engineering College.

Ramanathapuram, India.

2, Assistant Professor, Department of Master of Computer Application, Mohamed Sathak Engineering College.

Ramanathapuram, India.

3.Professor,HOD, Department of Master of Computer Application, Mohamed Sathak Engineering College.

Ramanathapuram, India.

4.Assistant Professor, Department of Master of Computer Application, Mohamed Sathak Engineering College.

Ramanathapuram, India.

### **ABSTRACT**

Security assurance is an inevitable factor required for online voting system. The proposed system is an authenticated system that provides integration of trio security features such as QR code scanning, face recognition, cryptography. The existing voting system is based on ballot machine where when we press the button corresponding to the symbol, the voting is done. Here there is a security risk, the person who votes may be fake person voting. The people there might not know that a person is using fake voting card, this may cause problem

### **INTRODUCTION**

Security assurance is an inevitable factor required for online voting system. The proposed system is an authenticated system that provides integration of trio security features such as QR code scanning, face recognition, cryptography. The existing voting system is based on ballot machine where when we press the button corresponding to the symbol, the voting is done. Here there is a security risk, the person who votes may be fake person voting. The people there might not know that a person is using fake voting card, this may cause problem. The proposed system is an integrated system that provides three layers of security. First

level of security is that each individual voter is provided with a separate QR code and that code is scanned before entering the room.

### **PROBLEM SPECIFICATION**

Private blockchains solve many of today's security problems using strong cryptography features and the limited access to the ledger, without negating the transparency aspect the blockchain technology offers. It a trusted third party, many security problems can be easily solved, but could lead to the 'trusted' third party to become the one who breaks the security policy.

using the FINGERPRINT TECHNOLOGY provided if we maintain the fingerprints of all the voters in a Database.

### **PROJECT DESCRIPTION**

#### **ADMIN MODULE**

Admin manages the lifecycle of an election. Multiple trusted institutions and companies are enrolled with this role. The election administrators specify the election type and create aforementioned election, configurative ballots, register voters, decide the lifetime of the election and assign permission nodes. Election administrators create election ballots using a decentralized app. This

decentralized app interacts with an election creation smart contract, in which the administrator defines a list of candidates and voting districts. This smart contract creates a set of ballot smart contracts and deploys them onto the block chain, with a list of the candidates, for each voting district, where each voting district is a parameter in each ballot smart contract.

### **VOTER REGISTRATION**

The registration of voter phase is conducted by the election administrators. When an election is created the election administrators must define a deterministic list of eligible voters. This requires a component for a government identity verification service to securely authenticate and authorize eligible individuals. Using such verification services, each of the eligible voters should have an electronic ID and PIN number and information on what voting district the voter is located in. For each eligible voter, a corresponding wallet would be generated for the voter. The wallet generated for each individual voter should be unique for each election the voter is eligible. Field officer will verify area wise and voting proof of peoples. If registered candidates are satisfied under the given election criteria, then they are added into the voters list.

### **NOMINEE REGISTRATION:**

In this module, nominees can register their information for participate the election. They have to give their personal information as well as their aadhaar no, assets value, cash in hand etc. After registration, their details and documents are verified by election administrator. If there are no issues in application and documents about a nominee, then he is declared as eligible candidate to participate that election.

### **SYSTEM TESTING**

System Testing is an important stage in any system development life cycle. Testing is a process of executing a program with the intention of finding errors. The importance of software testing and its implications with respect to software quality cannot be overemphasized. Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. A good test case is one that has a high probability of finding a yet undiscovered error.

### **UNIT TESTING**

In the unit testing the analyst tests the program making up a system. The software units in a system are the modules and routines that are assembled and integrated to perform a specific function. In a large system, many modules on different levels are needed.

Unit testing can be performed from the bottom up starting with the smallest and lowest level modules and proceeding one at a time. For each module in a bottom-up testing, a short program executes the module and provides the needed data.

### **INTEGRATION TESTING**

Integration testing is a systematic technique for constructing the program structure while conducting test to uncover errors associate with interfacing. Objectives are used to take unit test modules and built program structure that has been directed by design.

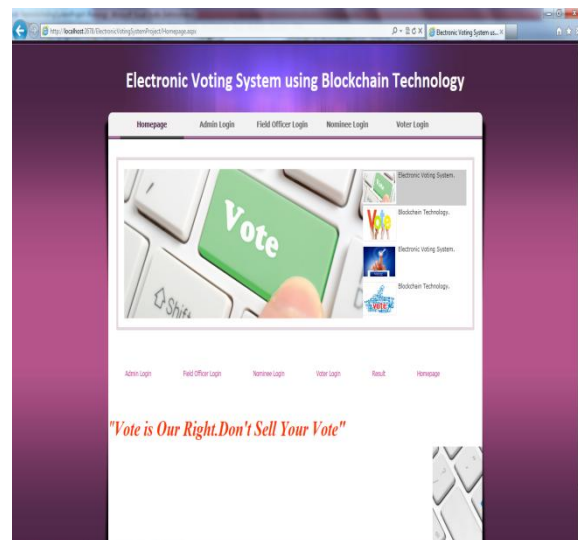
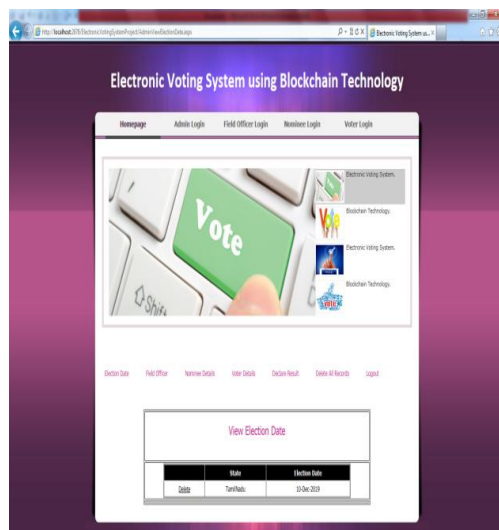
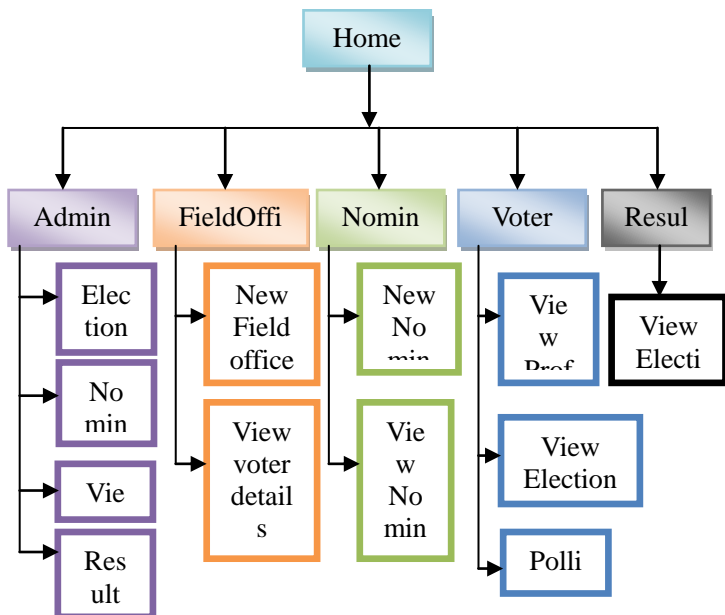
The integration testing is performed for this Project when all the modules where to make it a complete system. After integration the project works successfully.

## VALIDATION TESTING

Validation testing can be defined in many ways, but a simple definition is that can be reasonably expected by the customer. After validation test has been conducted, one of two possible conditions exists.

- The functions or performance characteristics confirm to specification and are accepted.
- A deviation from specification is uncovered and a deficiency list is created.

## SYSTEM DESIGN ARCHITECTURE DIAGRAM



## CONCLUSION

The “Hardware Integrated Trio Security System” has been implemented successfully. It is user friendly and which gives the user more support at each and every step. The entire system is documented and can be easily understood by the end users. The web page is designed using Asp.net and various measures have been taken to avoid illegal access to the system. Various test factors are also followed; it was error free and was found to work satisfactorily. The implementation and testing has been done in a step-by-step process. Each module has been developed and tested individually to obtain the necessary required output in the desired form. The entire system is documented and can be easily obtained by end users.

## FUTURE ENHANCEMENT

- ❖ The newly developed system, in its present form, is eminently suited to the existing needs. But in order to meet the future needs, which can become progressively more complex the efficiency of the system can be improved by making some simple modifications in the programs.
- ❖ The user is given a blank website so as to design the website or web page of his own, by activating links,

changing images and changing the text using editor.

- ❖ In future the project will be altered by which the user is given more options to design more number of pages. This will be achieved by

#### **. BIBLIOGRAPHY**

- ❖ Douglas W Jones. Threats to voting systems. In NIST workshop on threats to voting systems, 2005.
- ❖ Yi Liu and Qi Wang. An e-voting protocol based on blockchain.
- ❖ Taher ElGamal. A public key cryptosystem and a signature scheme based on discrete logarithms. IEEE transactions on
- ❖ .

providing more links ,more customizing options and we may offer the user possibility of creating domain of its won.

information theory, 31(4):469–472, 1985.

- ❖ Tadayoshi Kohno, Adam Stubblefield, Aviel D Rubin, and Dan S Wallach. Analysis of an electronic voting system. In Security and Privacy, 2004. Proceedings. 2004 IEEE Symposium on, pages 27–40. IEEE, 2004