Secured Mobile System Voting Based On Aadhar Using Android Application

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Abstract: Ballot based Voting is present, but still there is no system to avoid Proxy Casting and Recasting is implemented. There is no option to see our casted vote also. There is no security in this current application. So, this work introduce a blockchainbased new voting system which uses finger print for verification of voter with the help of aadhar card details with an android application for more security, one can login into the system using their aadhar card to get authenticated further. Then the voter will receive the OTP after this voter can cast their vote to their preferred candidate.

Key words:Aadhar,Blockchain,Fingerprint,One time password.

I. INTRODUCTION

The finger print verification is the uniqueness of this application which allows the casting of vote only once by an individual. He/ She will have a login in the mobile linked with Aadhar card analyze the voter to scan their finger print, which is then match with an already saved image within a database which is retrieved from Aadhar card database. At that time candidate will receive the OTP then the candidate can cast their vote where it is safely encrypted to a server[1-6].This creates an immutable chain, which is where the block chain gets its name from, and prevents tampering with the integrity of the previous entries. (i) Verifiability:

The ledger is decentralized, replicated and distributed over multiple locations. This ensures high availability(by eliminating a single point of failure) and provides third -party verifiability as all notes maintain the consensus version of the ledger. (ii) Distributed consensus:

A distributed consensus protocol to determine who can append the next new transaction to the ledger. A majority of the network votes must reach a consensus before any new proposed block of entries becomes a permanent part of the ledger[7-12].

II. EXISTING SYSTEM:

From traditional period vote fraudulent is happening, on every century there are some security is implementing but in parallel way fraudulent is increasing. Till now there is an fraudulent made on voting server and also security level is less. These can be solved by the proposed system.

III. PROPOSED SYSTEM:

Once the user creates an account there are allowed to login into their account to access the application. User and candidate have to register their details along with Aadhar number. User will be giving his/her all the user details like name, Aadhar card number, Voter ID, Mobile Number, E mail ID and finally the constituency details. All the information is stored in the centralized voting server. This work need to map the Aadhar number with Mobile number for user verification system. The main purpose of this mapping is to verify the user information, So that proxy casting and recasting of vote will not occur. This work will be mapping single mobile number with single Aadhar card, there will not be single Mobile number for double Aadhar cards so this system will avoid all the misbehaviour activities. Admin will be adding all the details about the people in the centralized server.

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CANDIDATE REGISTRATION:

In this module admin will register the candidate using their Aadhar number. Candidate registration will be made using Aadhar number and constituency of that candidate. If a user candidate provides improper information, the system will discard those registration processes. Users will give all their personal details like Name, Aadhar card number, Voter ID, Mobile Number, E-mail ID, and finally constituency details. All the data along with constituency and party details are stored in the centralized voting server.

3.3 VOTING SERVER:

The admin will store the entire information in the blockchain. The server will update the each new voter's information in its database. The server will authenticate each voter by Aadhar card before they access the application. So that the user can access the application.

fig 3.3 Voting server

BLOCK CHAIN FORMATION:

A block is a container data structure. The average size of the block seems to be 1MB (Source). Here every certificate number will be created as a block. For every block an hash code will generate for security. Here every voting information will be stored on blockchain. If a user store the information on blockchain it is more secured and every block is created based on constituency.

VERIFICATION:

In this user will get OTP after they polled the vote. OTP is the purpose for confirmation of vote. When user poll the vote OTP will be send to the user verification, after that confirmation of OTP, system will update vote on database.

IV. METHODOLOGY:

FINGER PRINT MODULE:

The finger print is captured with the help of finger print module and captured finger print is stored in the database. This finger print is then compared with the input Aadhar number when both the finger print matches only it will be authenticated otherwise alert message will be given.
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V. WORKING:
The fingerprint verification is the uniqueness of this application which allows the casting of vote only once by an individual. He/She will have a login in the mobile linked with Aadhar card and allows the voter’s to scan their fingerprint, which is then matched with the already saved image with a data base that is retrieved from Aadhar card data base. At that time candidate will receive the OTP then the candidate can cast their vote where it is safely encrypted to a server. After this the information will be stored to the voting server.

VI. FUTURE SCOPE:
The main scope of the work is to verify the casting of the voter has register correctly. This work is based on deploy blockchain concept. The main advantage of the project is to provide an opportunity to cast their vote from home itself. For more security iris verification can be done in future.

VII. CONCLUSION:
In this work, a mobile voting system based on Aadhar have many applications over the traditional voting system. Future development focus to design a system which can be easy to use and will provide security and privacy of votes on acceptable level by proper authentication. By this system the percentage of voting will be increased. It is easy to use and less time will be consumed. By using this application fake votes will be reduced.

REFERENCES:

