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Smart E-Voting System with Face Recognition by BlockChain Technology

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Abstract: The advancement in the mobile devices, wireless and web technologies given rise to the new application that will make the voting process very easy and efficient. The E-voting promises the possibility of convenient, easy and safe way to capture and count the votes in an election. This research project provides the specification and requirements for E-Voting using an Android platform. The e-voting means the voting process in election by using electronic device. The android platform is used to develop an E-voting application. In the proposed method the concept of e-voting application is created using android. The authentication is done through the face recognition through the mobile camera application. In this method the voter has to register using the application and the face recognition will be provided once the registration is successful. On scanning the face, the voter will be asked for the password. Once the authentication is done the voter is made to proceed with the voting process. The main purpose of implementing this concept is to increase the voting percentage. So that the voter is not required to visit the voting center to cast their vote and also to avoid fake voting.

Keywords: Privacy, E-voting, Smart phone, Face detection, Mobile Camera, One Time Password, Voter, etc.

I. INTRODUCTION

Voting is the method for choosing a person who is being selected by the community member for a position at entire country. Voting process not just only in the election for selected the candidates who will be in the requirement position like a President. The process also will do for choosing the person that needs to vote who will in the position for handle the task for example for the choosing the leader in the class. As known, the voting process was using the ballots paper to ensure the process system. It is difficult because the problem which the ballots need to calculated by manually calculating. In manually calculating, the problem that can be happen when the person who calculated the ballots will miss counting or maybe the person more bias at one person candidates. Technology development of mobile applications nowadays is more popular and used by authorized body. The advent of various mobile applications on time currently has influenced the style of life than can help users to facilitate the activities of their daily lives. Android is one of the major operating systems in the growing market in nowadays.

II. PROBLEM STATEMENT

We first formally define the e-voting fraud detection. Then, we prove that the time limit. The proposed system we define the easy to use and the simple android application for the using face recognition using android camera and the avoid fraud.

GOALS & OBJECTIVE

- The main objective of this system is avoiding the fraud for election department and the time limitation system. For using this application everyone can get the easy to vote.
- The scope of project is to add the finger print module the person recognition using the finger print and the select to voter.

III. PROPOSED SYSTEM

Proposed system is internet voting system. We provide an online platform for voting i.e a Website & Android App. Propose system three parts as Voter, Election Admin- istrator or Election Process.

Voter: Voter is the main part of system which participate in election process. He registers himself in system by giving his personal information.

Election Administrator: To manage all the data coming from voter during registration and election process, election administrator has worked. Also, it generates public and private key for voters. It is nothing but java package.

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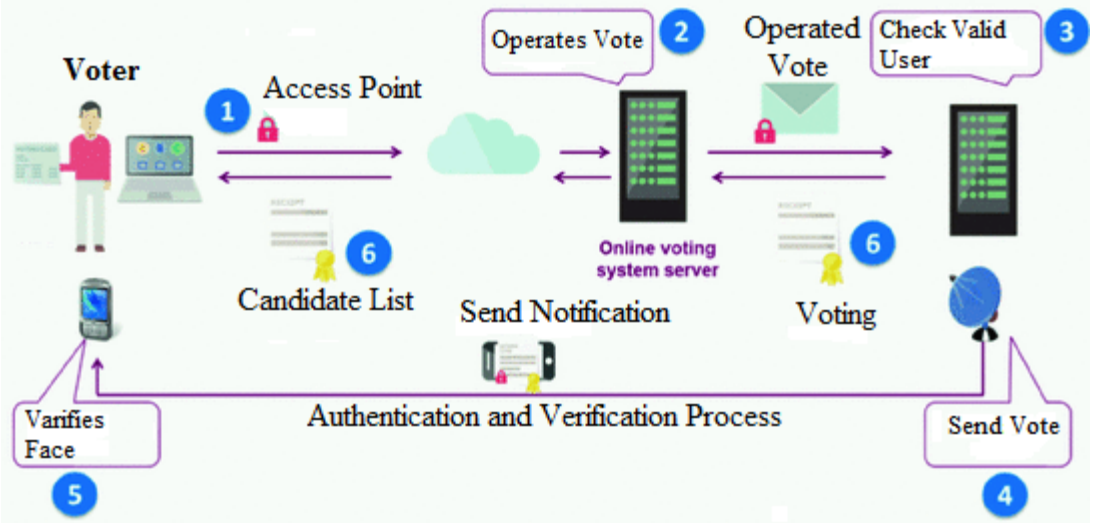
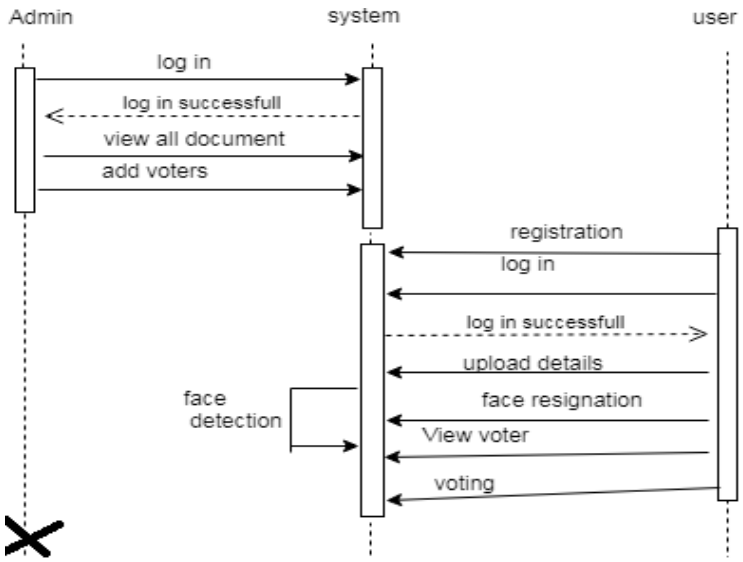


Election Process: In this process voter select the candidate to vote and give his vote for selected candidate.
Working of Propose System: In propose system as told earlier voter register him- self. During registration system takes voters unique identity number. Unique identity is for generating unique public and private key for every voter. So here problem of double voting is solved.
After taking all required information from voter, if voter is eligible for voting process then only system accept registration of voter. Then system i.e election administrator generate public and private keys for voter.
Public Key and Private Key: Private key and public key are the hash value data which is unreadable. During election process for login purpose and giving vote to candidate public key and private key is required. It act like login id and password in this voting process. But voter cannot always remember it as it is large value. After successful registration this key send to the registered email or mobilenumber. Also, during voting process for data encryption and decryption purpose it is used. After successful authentication and generating public and private key pair, voter lo- gin himself in system using keys. When voter enter in system, he gets list of all candidates. Voter chooses candidate for voting and give him vote. That vote is a block which is added in blockchain and broadcast to every system in network. Every voter follows this process and every block is added in blockchain and hash value of each block is calculated. Every block contains previous blocks hash value. So, every block is connected with each other by hash value of previous block. As blockchain is decentralized the blockchain is created on every computer system in network. So, hacking of blockchain and tempered with data is not possible. When whole election process is over, all votes calculated and result get declared.
Process of Blockchain creation: Every block has data, hash of the block andhash of previous block. When new block is created then hash of previous block is store in this block and then hash of new block is calculate and store in it. In this way blockchain is created.

IV. SEQUENCE DIAGRAM



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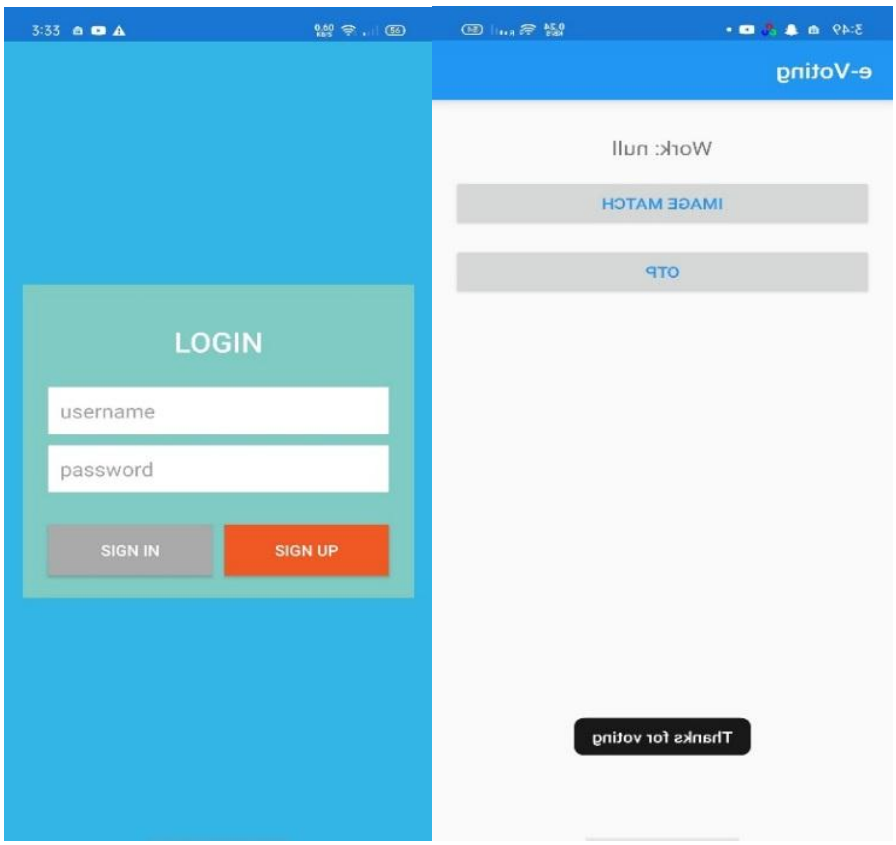
V. RESULT

1 Admin View

2 User View



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VI. CONCLUSION

Blockchain Technology is gaining popularity day by day. Using blockchain in voting system will help to achieve secure and cost-efficient election while guaranteeing vot- ers privacy. Also, due to the encryption mechanism, it is impossible for any person to gain access to all the votes without first taking control of the entire service network. Through changes to the voting system developed previously in the Online Voting Project, most legal reservations against electronic voting were rebutted. The voting protocol became simpler and faster to implement, but most significantly now offers better integration of the general public through the use of a bulletin board. Previously existing technical security flaws were also eliminated. This brings us one step closer to our objective of making electronic voting feasible at networked polling stations in the short term and using any terminals without any technical, legal or organization problems in the medium to long term. We are assuming that online elections in non- parliamentary elections in Germany are now within the realms of possibility.

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