BHARATHIDASAN ENGINEERING COLLEGE

ELECTRONIC VOTING SYSTEM

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ABSTRACT

- The project proposes a electronic voting system based on blockchain, which improves security and decreases the of hosting a cost national wide election.
- The electronic voting system providing the transparency and flexibility
- Electronic voting system that offers the fairness and privacy of current voting schemes

BLOCKCHAIN

- The main purpose of implementing this concept is to increase the voting percentage.

- The current electoral system is a major concern for democracy, with key issues such as vote rigging, hacking, election manipulation, and booth capturing. To address these issues, an E-voting model is proposed based on blockchain, which addresses all limitations while still being hospitable to public examination.

EXISTING SYSTEM

• Existing system is a manual one in which users and the details of the candidates are stored in books. The users have to wait a long time in queues for voting. Wrong and unwanted votes are given. Counting of votes are done manually which takes lots of time and inaccurate counting is done. It is very difficult to maintain historical data.

DISADVANTAGES

- If elections are conducted in existing system model in the pandemic time, then there is sure spread of disease like COVID, which happened in the recent elections in India.

- It is difficult to maintain important information in books.

- Voters have to wait in long queues for voting they have to travel long distantance

PROPOSED SYSTEM

- In the proposed method the concept of E-voting application is created using Ethereum Blockchain and node.js framework.

•Once the authentication is done the voter is made to proceed with the voting process where to vote.

•So that the voter is not required to visit the voting center to cast their vote and also to avoid fake voting.

ADVANTAGES

- The proposed system has good authentication so only authorized person can able to vote and also cannot vote multiple types.

- Vote Counting can be made very quickly and results will be displayed in few minutes

- The proposed system does not require any physical presence during vote polling or counting.

LITERATURE SURVEY

AUTHOR : Fridrik P.H jalmarsson, Gunnlaugur K. Hreioarsson

TITLE : Blockchain-Based E-Voting System.

YEAR : September- 2018

ABSTRACT : In this system election is represented by a set of smart contracts, which are instantiated the blockchain by the election on administrators.

AUTHOR : Prof. Mrunal Pathak,Amol Suradkar.

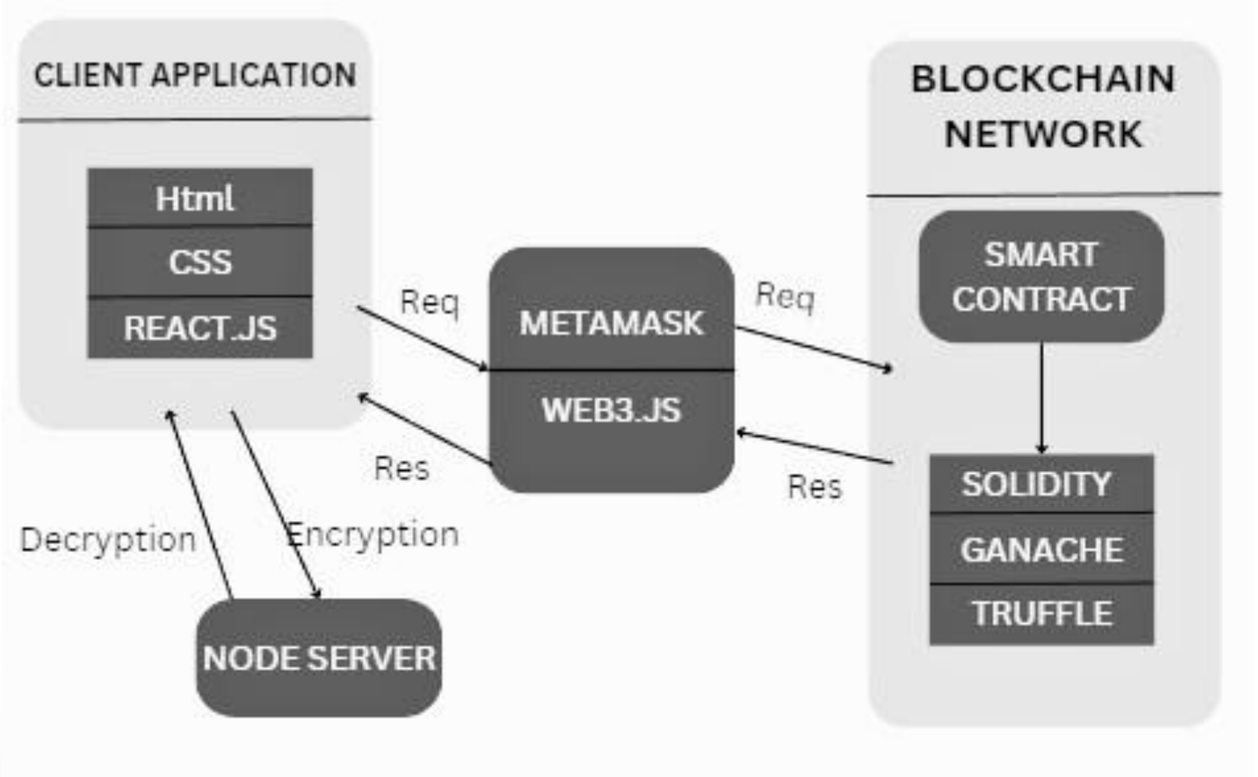
TITLE : Blockchain Based E-Voting System

YEAR : May 2021

ABSTRACT : Blockchain technology is a solution to traditional electoral systems, as it embraces a electronic system and the entire database are owned by many users.

ETHEREUM

SYSTEM ARCHITECTURE



ARCHITECTURE DESCRIPTION

- Here, we have tranditional front-end client that is written in HTML, CSS, and Javascript.

- Instead of talking to a back-end server, this client will connect to a local Ethereum blockchain that is already install.

- The business logic is coded in a Smart Contract with the Solidity programming language.

- This smart contract is deployed to local Ethereum Blockchain and will allow voters to vote.

MODULES

Admin Module

Initialize Elections

Add Candidate.

Voter Registration

Voting Module Voting

Results Module

Admin Module :

This module has to maintain the information of the candidate and shows the details of the candidate. And also maintains the records of the party and the candidate.

Initialize Elections :

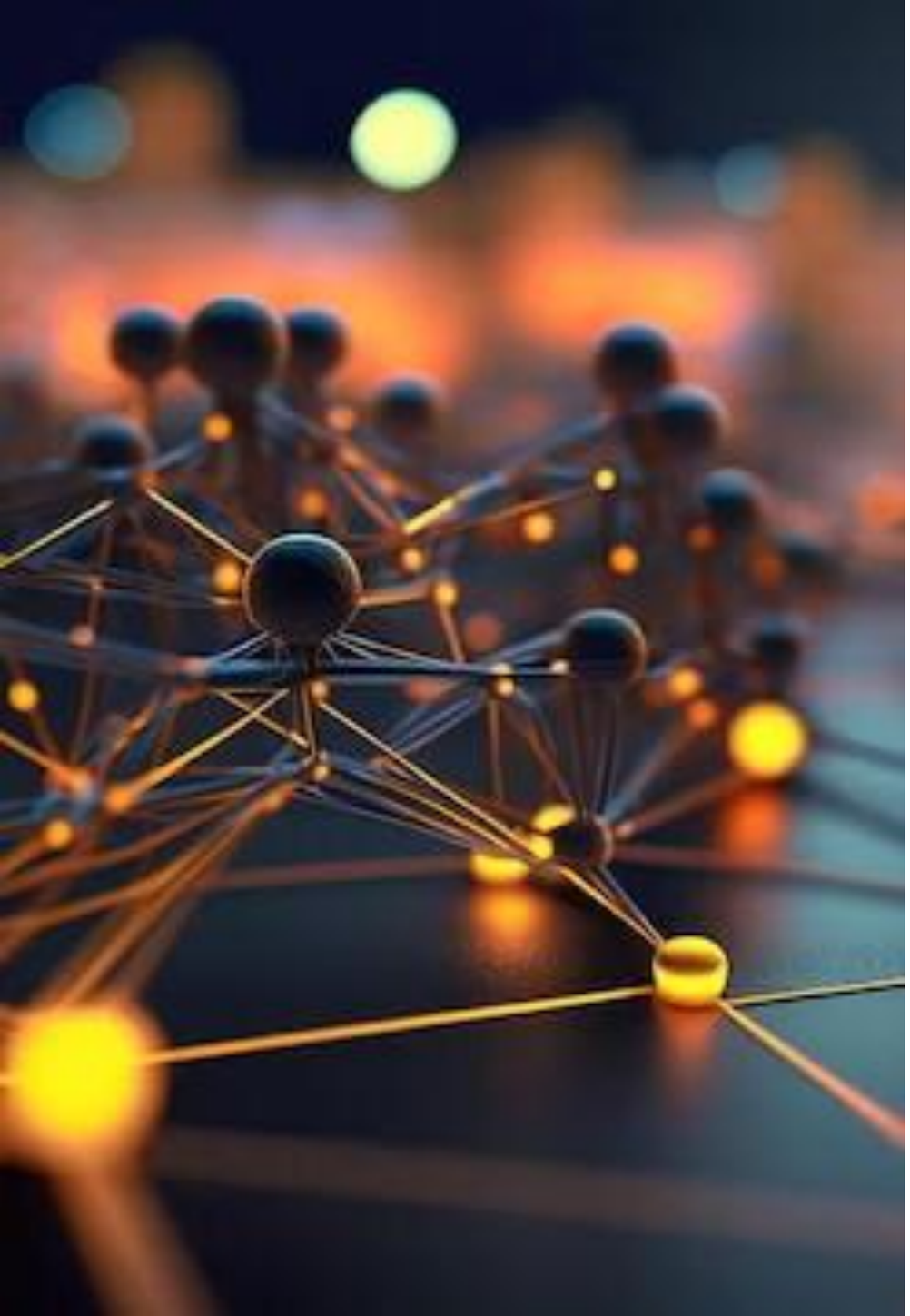
This module the admin can able to initialize new elections. To enter the admin details and Election will be declared.

Add Candidate :

This module the admin can able to add the candidates who are going to constitute in the particular election. First they add candidate name ,solgons ,etc…

Voter Registration :

In this module the voter register themselves by add the details such as Name, Phone Number, and Blochchain address. Once the voter registers, then the admin should view it and approve it, then only the voter can able to vote in the election.



Voting Module :

In this module we can register our vote. Once the user has registered his vote then again he is not allowed to vote again i.e. only one user can vote only at one time.

Voting results Module :

In this module we can get the results of the election i.e who had won the election with how many votes.

SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS

- Processor Type : Intel(R)core(TM) i3-3200
- Speed : 3.00 GHZ
- Ram :Minimum of 4.00 GB RAM
- Hard disk : Minimum of 10 GB HDD

SOFTWARE REQUIREMENTS

- Technology :-

  Truffle Framework

  Web3j

  Ethereum Blockchain
- Programming Language:-

  Solidity

  HTML ,CSS & JAVASCRIPT
- Tools used:-

  Visual Studio

  Ganache

  MetaMask & Nodejs

CONCLUSION

A electronic voting system has the potential to Immutable records provide transparency and privacy, are cheaper in the long run, enable elastic elections, provide instant results, reduce dependence on human resources, and are faster than waiting in queues to vote. They also provide accuracy, timeliness, and comprehensiveness.

FUTURE ENHANCEMENTS

- With the system we currently have, moving the cryptography to a library in Solidity could largely improve our individual ballot verifiability.
- Linking application with Government voting system data. The current project is built for small organization, but in future we would build it as a national voting system.
- Adding Aadhar number verification system.

THANK YOU