

1. INTRODUCTION

1.1 Project overview:

The goal of this project is to develop a secure and transparent voting system by leveraging blockchain technology. The system will ensure the integrity of the voting process by recording votes on an immutable and transparent ledger. It will prevent double voting, protect against tampering or manipulation, and increase voter trust in the electoral process. The system will be user-friendly, accessible to all voters, and prioritize the privacy and security of voter data. Through the implementation of smart contracts and encrypted transmission of voting data, the system will provide real-time

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1.2 Purpose:

The purpose of the project is to create an electronic voting system using blockchain technology to address concerns about the integrity, security, and transparency of the voting process. By leveraging the immutability and transparency of blockchain, the system aims to prevent tampering, ensure accurate vote counting, and provide a secure platform for voters to cast their ballots. The ultimate goal is to increase trust in the electoral process, enhance voter engagement, and promote fair and reliable elections.

2. LITERATURE SURVEY:

2.1.EXISTING PROBLEM:

The existing problem with traditional voting systems is the potential for fraud, tampering, and lack of transparency. Paper-based systems can be vulnerable to human error, manipulation, and inaccuracies. Additionally, centralized electronic voting systems have faced security breaches and concerns about data privacy. By implementing a blockchain-based voting system, these issues can be addressed through the immutability, transparency, and decentralized nature of the technology. This ensures that votes are securely recorded, protected against tampering, and visible to all participants, increasing trust in the electoral process.

2.2 REFERENCES:

1. "Blockchain-Based Secure Voting System" by N. Sharma, S. Jain, and S. Tyagi.
2. "A Survey on Blockchain-Based Voting Systems" by S. Zohrevand, M. R. Rasti, and S. S. Kanhere.
3. "Blockchain Voting Systems: A Survey" by M. Stavrou and L. Mancini.
4. "Blockchain Voting Systems: Challenges and Opportunities" by R. Matamoros, A. Ferrer, and J. L. Ferrer.
5. "A Blockchain-Based Voting System for the Future" by A. O. Adewumi and S. Misra.

7.CODING AND SOLUTIONING

7.1. FEATURES 1

1. **Transparent and Immutable:** The blockchain technology ensures that all votes are recorded in a transparent and tamper-proof manner, providing a high level of integrity and trust.
2. **Decentralized Network:** The system can be built on a decentralized network of nodes, allowing for distributed consensus and reducing the risk of a single point of failure.
3. **Secure Identity Verification:** Implement robust identity verification mechanisms to ensure that only eligible voters can participate in the election.
4. **Privacy Protection:** Utilize cryptographic techniques to protect the privacy of voters, ensuring that their identities and voting choices remain confidential.
5. **Auditable and Verifiable:** Enable election officials and stakeholders to audit and verify the voting process, allowing for transparent

7.2 FEATURES 2

1. **Accessibility:** Design the system to be user-friendly and accessible to a wide range of voters, including those with disabilities or limited technological proficiency.
2. **Real-Time Results:** Provide real-time