DECENTRALIZED E-VOTING SYSTEM USING BLOCKCHAIN TECHNOLOGY

Project Owner: Faizan Shakeel

Department: CSE(IOTCSBT)

The project proposes a decentralized e-voting system using blockchain technology for enhanced security, transparency, and accessibility in elections. A Solidity smart contract deployed on the Ethereum blockchain manages candidate registration, allowlist administration, voting periods, vote casting, and result determination.

Secure voter registration verifies identities using personal documents or biometrics, with registered voters added to a smart contract allowlist for participation. A user-friendly interface like a web or mobile app connects users' web3 wallets, enabling candidate viewing, vote casting, and real-time result monitoring.

The blockchain functions as an immutable ledger for voting data, supported by cryptographic methods like digital signatures and hashing for data integrity and secure communication. Voter anonymity is preserved by separating identities from votes. This approach aims to foster trust in electoral processes and boost participation through accessible and secure digital voting systems.