# Summary

The existing voting systems, whether conventional or electronic, involve insufficient levels of transparency since the election data is under control of a third party which makes it extremely difficult for voters to ensure that their election votes are counted carefully and accurately by the election administrators.

# OBJ

* To develop such system that is tamper proof (no single entity has control over the election data), the TP’s only role would be deployment of the system.
* To make elections accessible to the voters, so they can participate in a modern, convenient and fair way.
* To develop such system that provides a substantial level of transparency by sustaining an exposed registry of votes, while defending the privacy of the voters.

# IMP

Permissioned Blockchain:

Available for everyone to read, but don’t allow anyone to be a node, serving the network’s security, transaction verification or mining.

ElGamal/Paillier Cryptosystem (Homomorphic Encryption)

Homomorphism feature allows one to operate on ciphertexts without decrypting them. For a voting system, this property allows the encrypted ballots to be counted by any third party without leaking any information in the ballot

Digital Signatures:

To sign the voter's ballot, so that no can tamper with the ballot. And the voter can use his/her private key to verify the ballot.

Mining/Validation nodes can be divided among the election administrators, government, civil soiety, enterprise e.t.c.

# BEN

*The benefits of the project are as follows :*

* The interest in blockchain technology taking over from traditional election methods has potential advantages due to the big technological upgrade from how elections are currently held. Many national elections still take place using a paper-based system, leaving open huge holes for security breaches, fraud, and corruption.
* Blockchain offers an updated system for voters that could potentially fix these concerns.
* Its traditional assets, such as its transparency, allow for votes to be followed, counted, and correlated by many different sources while still maintaining the privacy of the voters due to the anonymous transactions along the blockchain.
* Minimize the paper work in order to put end to paper waste and reduce the human resource needed for carrying out the election.
* Elimination of political and unfair business since it is decentralized the voting system will not be in control of any third party.
* Make elections affordable.
* It will reduce the amount of time and human resouce required to conduct elections.

# DET

Git / network  
Mobile and Web app