

BUSINESS REQUIREMENTS

TEAM ID	NM2023TMID04404
PROJECT NAME	ELECTRONIC VOTING SYSTEM

REQUIRMENT ANALYSIS

Functional Requirements

- **Transaction Recording:** The system must securely record all financial transactions on the blockchain, ensuring the accuracy and immutability of transaction data. This is essential for maintaining a transparent and tamper-proof transaction history.
- **User Authentication:** Robust user authentication mechanisms are crucial to verify the identity of customers and bank personnel. Without proper authentication, the system's security and integrity are at risk.
- **Security Features:** The system must incorporate stringent security measures, including encryption and multi-factor authentication, to safeguard user data, private keys, and the overall integrity of the blockchain network. Security is paramount to protect against fraud and cyber threats.
- **Compliance and Reporting:** Adherence to regulatory compliance requirements and the ability to generate reports for regulatory authorities and audits are vital to ensure the system's legality and transparency.

- **Real-time Updates:** Providing users with real-time updates on their transactions is essential for transparency and to build trust. It allows customers and bank administrators to monitor the status of their transactions as they occur.
- **Scalability:** The system should be designed to handle a growing number of transactions and users while maintaining performance and responsiveness. Scalability is critical to accommodate future growth and ensure the system remains efficient.

Non-Functional Requirements

- **Performance:** The system should exhibit high performance, ensuring fast transaction processing and response times even during peak loads.
- **Security:** The blockchain network and associated data must be highly secure, protecting against unauthorized access, fraud, and cyberattacks.
- **Reliability:** The system must be reliable and available 24/7, minimizing downtime and ensuring that banking operations can proceed without interruption.
- **Scalability:** The system should be designed to handle an increasing number of transactions and users without a significant drop in performance.
- **Usability:** The user interface should be intuitive and user-friendly, ensuring that both customers and bank personnel can easily navigate and use the system.
- **Interoperability:** The system must be capable of integrating with other banking systems, allowing for seamless interbank transactions and data sharing.
- **Data Privacy:** User data must be kept private and in compliance with data protection regulations, such as GDPR, to ensure the confidentiality and integrity of customer information.

- **Auditability:** The system should maintain comprehensive audit logs of all transactions and user interactions for regulatory compliance and auditing purposes. **Disaster Recovery:** Effective disaster recovery and backup procedures should be in place to ensure data is not lost in the event of system failures or disasters.
- **Cost-Effectiveness:** The project should be cost-effective to implement, maintain, and operate, aligning with the bank's budget and financial goals. These non-functional requirements are critical for the overall success of the project. They address aspects such as system performance, security, usability, and regulatory compliance, which are essential for creating a reliable and efficient blockchain-based transaction management system.