

A
Synopsis
on
Blockchain based Digital Document Verification System

Submitted by

Ashutosh Mahadik
Vaishnavi More
Prathamesh Apsingekar
Devika Sawant



Department of Information Technology
RMD Sinhgad School of Engineering
Savitribai Phule Pune University
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1.Problem Statement

- Investigate the efficacy of blockchain technology in enhancing the security and integrity of digital document verification systems.

2.Objective

- Ensure tamper-proof records and protect student data.
- Utilize a decentralized ledger and eliminate the need for a central authority.
- Lower administrative costs and achieve long-term savings through automation.
- Automate verification and provide instant access to credentials.

3.Area of Project - Blockchain Technology

4.Scope of Project

1. Digital Document Authentication: Verify the authenticity and integrity of digital documents, such as certificates, contracts, and academic records.
2. Decentralized Verification: Utilize blockchain's decentralized nature to eliminate the need for a central authority in the document verification process.

3. **Immutable Records:** Ensure that once documents are recorded on the blockchain, they cannot be altered or tampered with, providing a permanent and tamper-proof record.

4. **Enhanced Security:** Leverage blockchain's cryptographic features to protect documents from unauthorized access and cyber threats.

5. **Streamlined Processes:** Automate and streamline the document verification process, reducing time and administrative overhead.

6. **Scalability:** Design the system to handle large volumes of document verification requests efficiently.

7. **User Access Control:** Implement robust access control mechanisms to ensure only authorized users can upload or verify documents.

5. Requirements

Hardware Requirements:

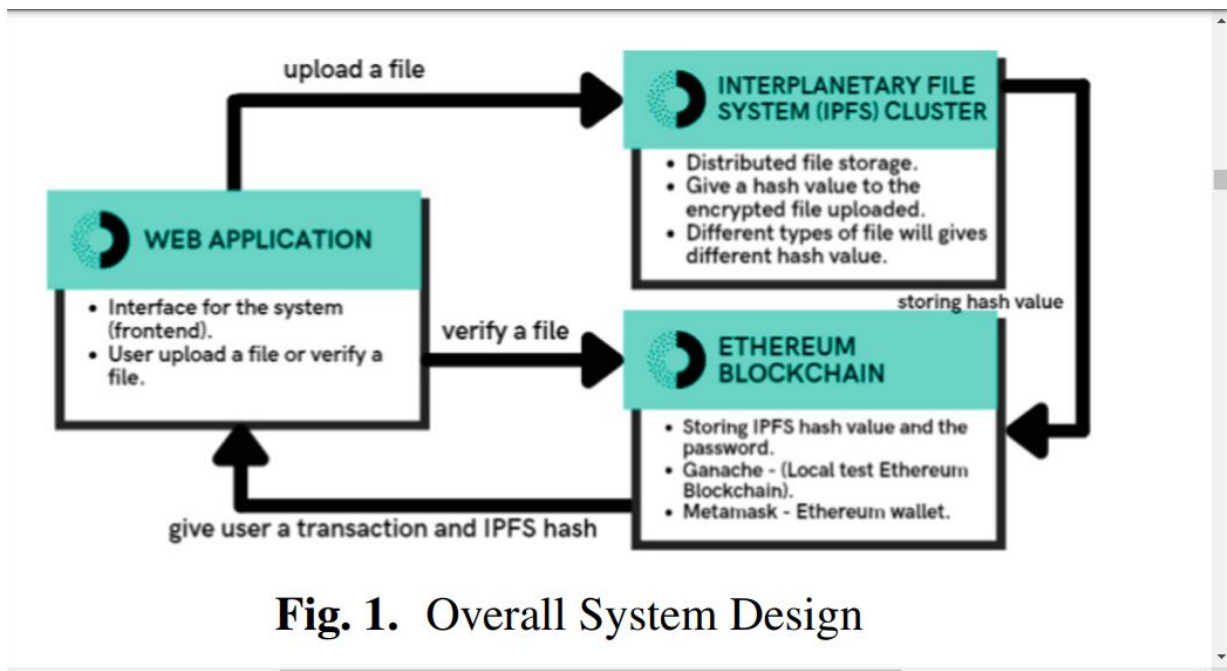
- System : Intel i5 11th processors and above
- Hard Disk : 500 GB
- Monitor : 14' Colour Monitor
- Mouse : Optical Mouse
- Ram : 8 GB
- Keyboard : Any keyboard

Software Requirements:

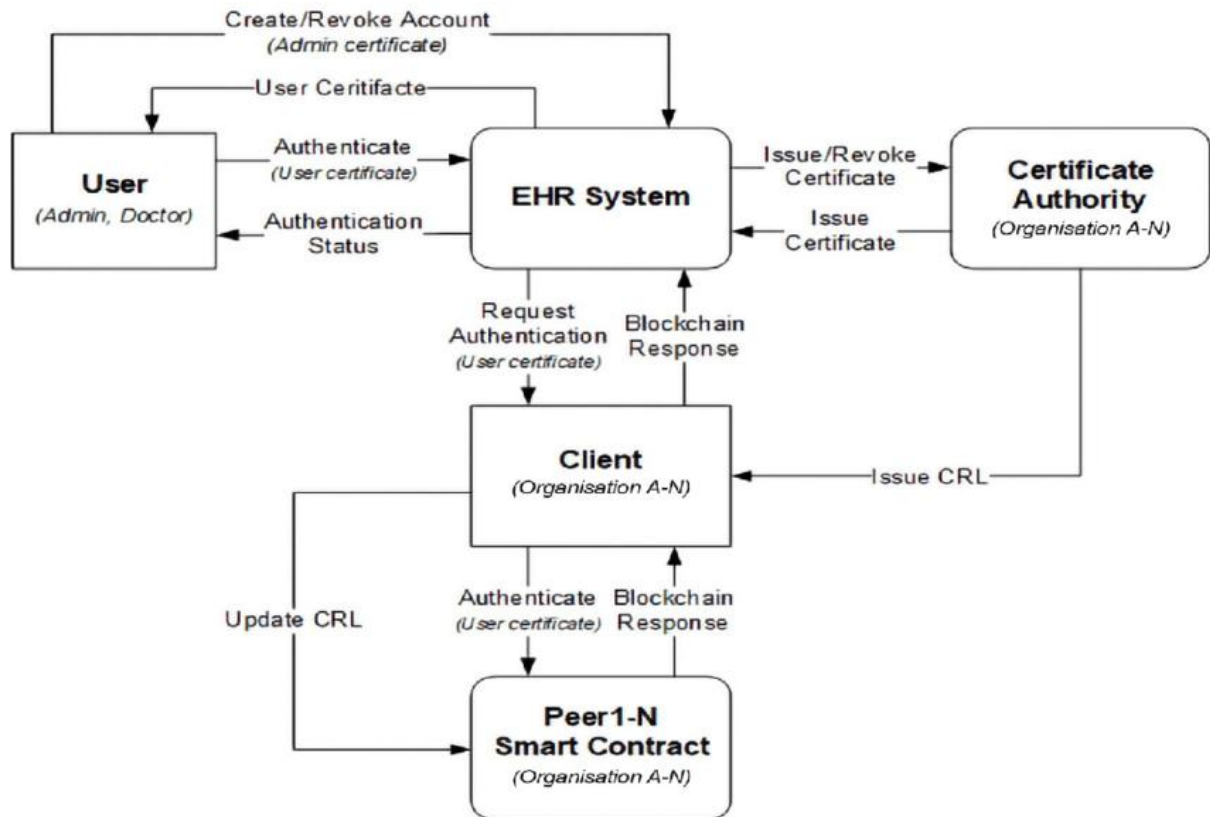
- Operating system: Windows 10 +
- Coding Language: Javascript, HTML, CSS, Solidity, JSON, MongoDB
- Other software requirements: Ganache, IPFS desktop client, MetaMask Chrome Extension, Node.js and npm packages.

6. System overview-

Proposed system and expected outcomes.



7. Architecture and initial phase of design (DFD).



8. References –

1. Cerberus: A Blockchain-Based Accreditation and Degree Verification System, 2023
2. A Systematic Literature Review on Blockchain-Based Systems for Academic Certificate Verification, 2023
3. PublicEduChain: A Framework for Sharing Student-Owned Educational Data on Public Blockchain Network, 2024
4. Blockchain based document verification system