Project Design Phase-I

Solution Architecture

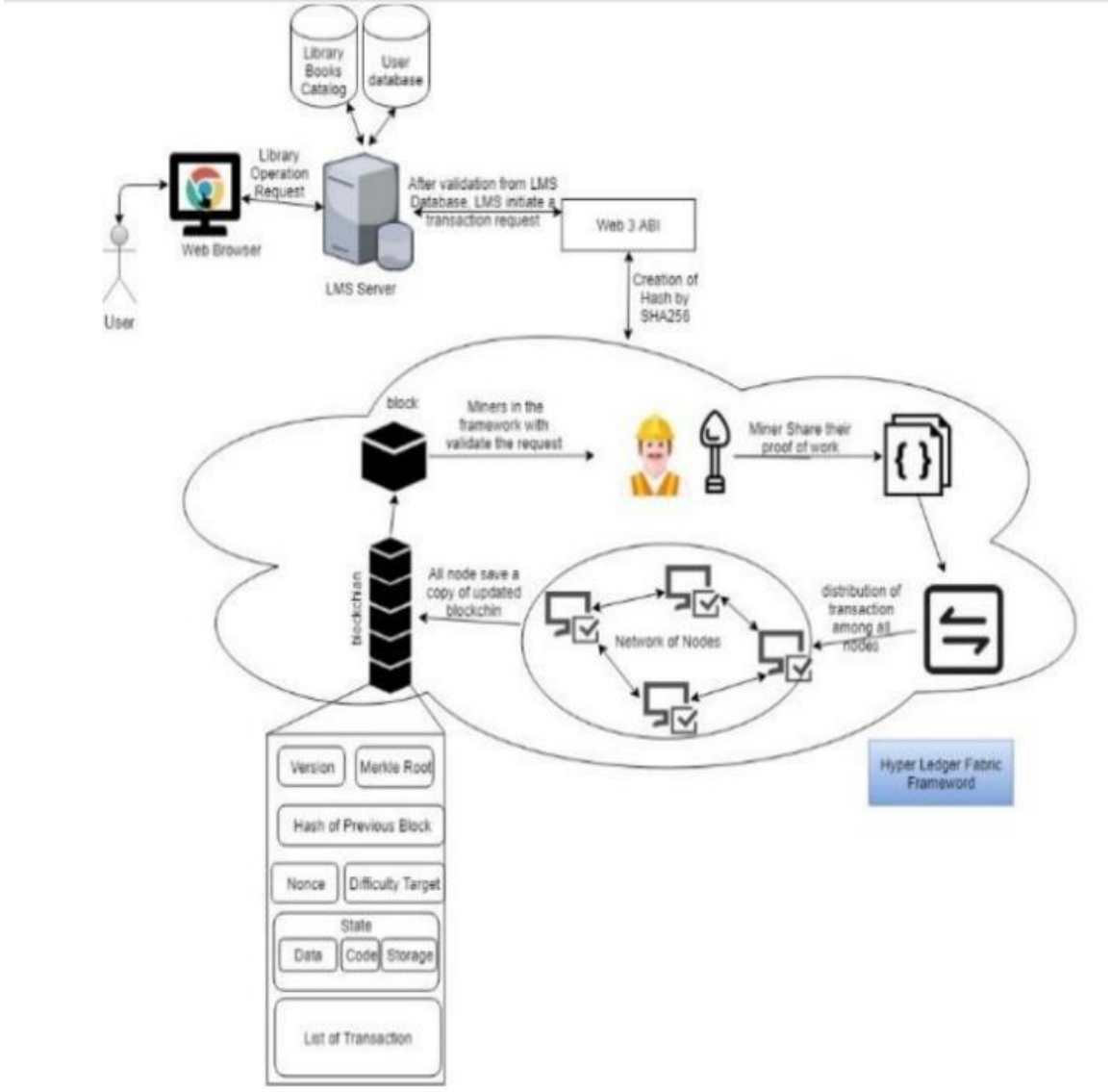
Date	27 October 2023
Team ID	NM2023TMID05999
Project Name	BLOCKCHAIN-POWERED LIBRARY MANAGEMENT
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Implement a customized blockchain-based management system to streamline operations, enhance security, and improve transparency for existing business challenges.
- Communicate the architecture, features, functionality, and advantages of the blockchain-based library management software, emphasizing increased data security, traceability of transactions, and efficient resource management to stakeholders.
- Detail the essential features, development stages, and technical specifications necessary for the successful implementation of a blockchain-powered library management system, focusing on user-friendly interfaces, data encryption, and decentralized record-keeping.
- Establish clear specifications dictating the design, governance, and delivery of the blockchain-powered library management solution, incorporating standards for data integrity, accessibility, and interoperability.

Solution Architecture Diagram:



Prerequisite

1 download node.js : Node.js

2 download vs code: **Li4nk**

3 download metamask : https://metamask.io/

Steps to complete the project

Step 1:-

1. Open the Zip file and download the zip file.

Extract all zip files

Step 2 :

1. Open vs code in the left top select open folder. Select extracted file and open .

2. Select the projectname.sol file and copy the code.

3. Open the remix ide platform and create a new file by giving the name of projectname.sol and paste the code which you copied from vs code.

4. Click on solidity compiler and click compile the projectname.sol

5. Deploy the smart contract by clicking on the deploy and run transaction.

6. select injected provider - MetaMask. In environment

7. Click on deploy. Automatically MetaMask will open and give confirmation. You will get a pop up click on ok.

8. In the Deployed contract you can see one address copy the address.

9. Open vs code and search for the connector.js. In contract.js you can paste the address at the bottom of the code. In export const address.

10. Save the code.

Step 3:

open file explorer

1. Open the extracted file and click on the folder.

2. Open src, and search for utiles.

3. You can see the frontend files. Select all the things at the top in the search bar by clicking alt+ A. Search for cmd

4. Open cmd enter commands

npm install

npm bootstrap

npm start

5. It will install all the packages and after completing it will open {LOCALHOST IP ADDRESS} copy the address and open it to chrome so you can see the frontend of your project.