Project Design Phase

Solution Architecture

Date	23 october 2023
Team ID	NM2023TMID01000
Project Name	BLOCKCHAIN POWERED LIBRARY MANAGEMENT
Maximum Marks	4 Marks

Solution Architecture:

- Blockchain architecture is the design structure of a peer-to-peer (P2P) network of computers that serves as a backend for applications and systems. This network is built to function as a unit (virtual machine) even though there is no central authority to manage the interaction among the nodes.

- This technology also aids in the acquisition of library materials that can improve collection maintenance. Blockchain can protect user and patron records and enhance the privacy of user and research data. This technology also improves collaboration among library patrons and staff.

- Blockchain document management digitizes the entire paperwork cycle offering streamlined search and retrieval of data together with the uncompromised security saving the time on reconciliation and approval processes. Blockchain stores the data in a way that makes it unalterable.

- The paper proposes that blockchain can enhance library services such as collection development, circulation services, research, data management, and storage.

Solution Architecture Diagram:

A node raises transaction request

Transaction is represented as a block

Block is broadcasted to all nodes of the network

Transaction is validated by the nodes

A new block is added to the existing blockchain

Transaction is completed