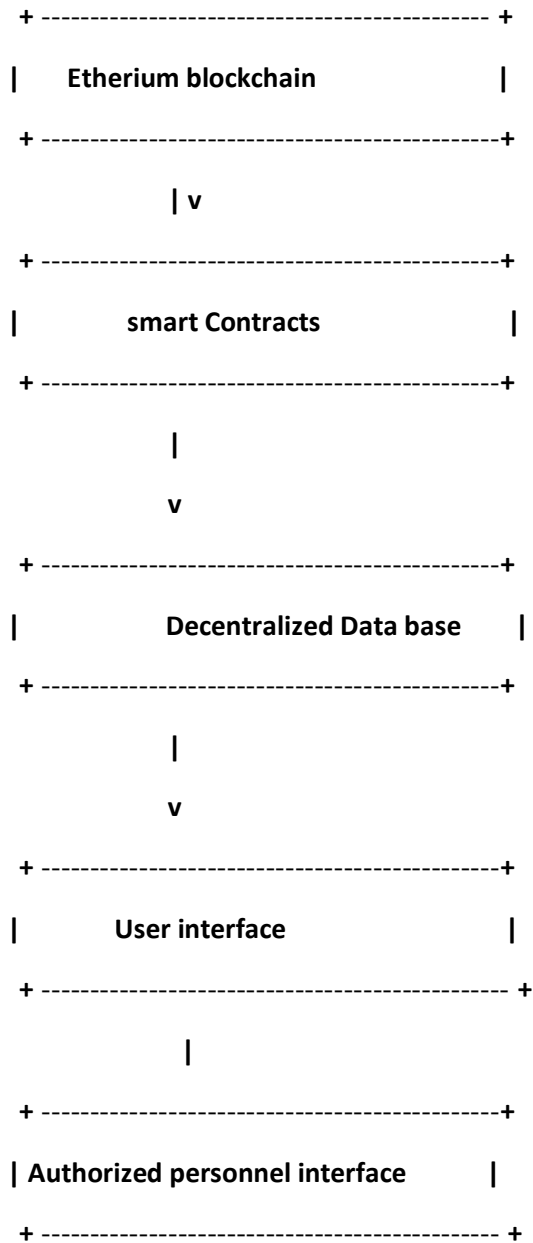


Project Design Phase-I Solution Architecture

Solution Architecture:

Here's a solution architecture diagram for library management system:



1. **Ethereum Blockchain:** The core of the system is built on the Ethereum blockchain, ensuring transparency and security for book data management.
2. **Smart Contracts:** Each book is represented by a smart contract on the Ethereum blockchain.

These contracts contain essential book details like title, author, ISBN, and ownership history.

- 3. Decentralized Database:** The decentralized nature of the blockchain ensures that book records are immutable and transparent. This eliminates the need for a centralized database.
- 4. User Interface:** Users can interact with the system through a user-friendly interface. Patrons can query book information and access trusted details about the books.
- 5. Authorized Personnel Interface:** Librarians and other authorized personnel can efficiently add new books or transfer ownership through a secure transaction.

This architecture leverages Ethereum smart contracts and a decentralized database to empower libraries with unprecedented data transparency, security, and efficiency, allowing them to seamlessly transition to the digital age.