DRUG TRACEABILITY

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ABSTARCT

Drug traceability is a critical aspect of the pharmaceutical industry to ensure the authenticity and safety of medications. In recent years, blockchain technology has gained significant attention as a promising solution for enhancing the traceability of pharmaceutical products. This abstract provides an overview of how blockchain technology is being applied to improve drug traceability.

Blockchain, as a decentralized and immutable ledger, offers a transparent and secure platform for recording and tracking the entire lifecycle of pharmaceutical products. The use of blockchain in drug traceability enables the creation of a tamper-proof record of each drug's journey from manufacturing to distribution and consumption. It allows for real-time monitoring, verification, and authentication of drug-related data, reducing the risk of counterfeit drugs entering the market.

PROBLEM STATEMENT

Blockchain is a technology that allows you to trace your drugs transparently. It offers

decentralized nodes for the end-to-end verification to trace the drugs in a transparent manner.This technology is a replacement for traditional drug management systems with distributed, non-repudiation, and security protection characteristics.Design a smart contract using the Ethereum blockchain where you should be able to track the drugs transparently. The pharmaceutical industry is confronted with a growing challenge related to the traceability of drugs, which directly impacts public health and the integrity of the supply chain. Inadequate Drug Traceability is the current methods and technologies used for tracing the production, distribution, and dispensation of pharmaceutical products are often insufficient and fragmented. This lack of comprehensive drug traceability creates a range of issues, including:

OUR SOLUTION

Blockchain technology, particularly when implemented through a smart contract on the Ethereum network, presents a robust and transparent solution to address the problem of inadequate drug traceability in the pharmaceutical industry. Here's how you can design a smart contract using the Ethereum blockchain for transparent drug traceability.

1. Decentralized Ledger: Implement a smart contract on the Ethereum blockchain to serve as a decentralized ledger for tracking pharmaceutical products.

2. Product Serialization: Each pharmaceutical product should be serialized with a unique identifier or barcode, and this identifier will be recorded on the blockchain along with relevant product information, including manufacturing date, batch number, and expiry date.

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:

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.

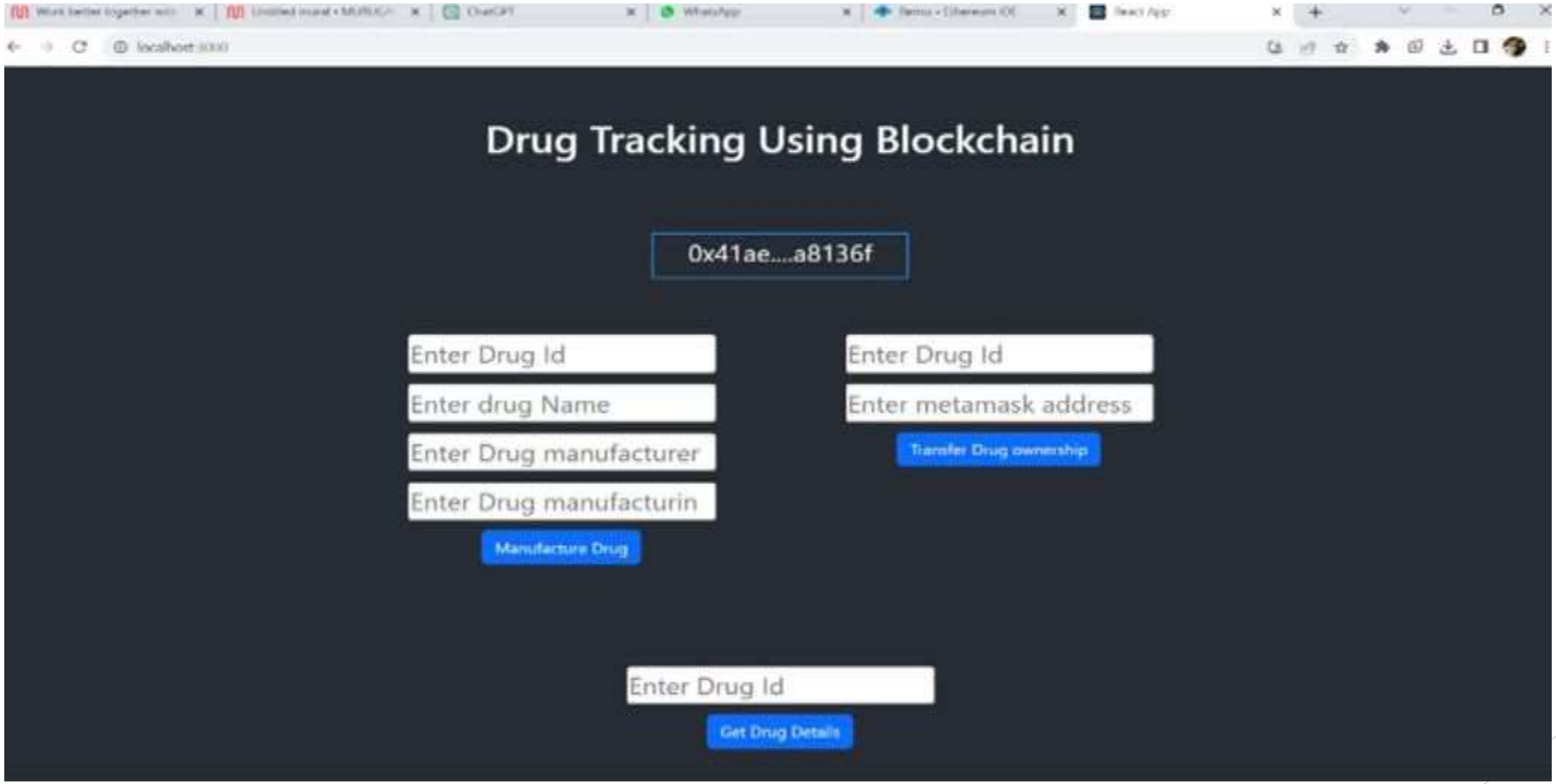
4. Open cmd enter commandsnpm install

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.

OUTPUT


Drug Tracking Using Blockchain
0x41ae....a8136f
Enter Drug Id
Enter drug Name
Enter Drug manufacturer
Enter Drug manufacturin
Manufacture Drug
Enter Drug Id
Enter metamask address
Transfer Drug ownership
Enter Drug Id
Get Drug Details

CONCLUSION

In conclusion, blockchain technology, with its decentralized and transparent nature, provides an effective solution for enhancing drug traceability. By leveraging the Ethereum blockchain and smart contracts, the pharmaceutical industry can establish end-to-end verification processes, ensuring the transparent tracking of drugs while offering robust security, non-repudiation, and an immutable ledger. This innovative approach replaces traditional drug management systems, elevating transparency, security, and accountability in the pharmaceutical supply chain, ultimately safeguarding public health and the integrity of the industry.

THANK YOU