Fake Product Identification using Blockchain

Abstract:

In recent years, Counterfeit products play an important role in product manufacturing industries. This affects the companies name, sales, and profit of the companies. Blockchain technology is used to identification of real products and detects fake products. Blockchain technology is the distributed, decentralized, and digital ledger that stores transactional information in the form of blocks in many databases which is connected with the chains. Blockchain technology is secure technology therefore any block cannot be changed or hacked. By using Blockchain technology, customers or users do not need to rely on third-party users for confirmation of product safety.

In this project, with emerging trends in mobile and wireless technology, Quick Response (QR) codes provide a robust technique to fight the practice of counterfeiting the products. counterfeit products are detected using a QR code scanner, where a QR code of the product is linked to a Blockchain. So, this system may be used to store product details and generated unique code of that product as blocks in the database. It collects the unique code from the user and compares the code against entries in the Blockchain database. If the code matches, it will give a notification to the customer, otherwise it will give the notification to the customer that the product is fake.

Existing System:

According to the Survey of Counterfeit Product Detection by Consumer Court Trails, Government of India, Counterfeit products are growing exponentially with the enormous amount of online and black-market. So, there is a strong need to address the challenges of detecting counterfeit products and designing appropriate technology to improve detection accuracy. This is one of the active research areas to be explored in the current world. This project discusses various techniques for identifying counterfeit products. There is no such technology to identify this.

Proposed System:

The worldwide improvement of an item or innovation consistently accompanies hazard factors, for example, forging and duplication. Forging items can influence the organization's name and the client's wellbeing.

Presently days discovery of phony item is the greatest test. Fake items are causing a significant impact on the organization and the client's wellbeing. Hence, item creators are confronting enormous misfortune. India and different nations are battling such fake and fake items. In the proposed framework, the framework produces QR codes utilizing Blockchain innovation. This

innovation stores exchange records in blocks. These squares are secure and difficult to access and change the data from it. By utilizing a QR code we can recognize the fake item.

Software Tools:

1. Ganache – Local Ethereum Blockchain
2. Nodejs
3. Metamask
4. Truffle
5. NPM
6. VS Code
7. Solidity
8. Web3.js

Hardware Tools:

1. Laptop
2. Operating System: Windows 11
3. RAM: 8GB RAM

Applications:

1. Product Identification at all commercial outlets
2. It is also used to identify the originality of all degree certificates