**AUTHENTIFY**

**A Project Work Synopsis**

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# 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.

Keywords: Counterfeit product, QR code, Blockchain.

# Table of Contents

|  |  |
| --- | --- |
| Title Page | i |
| Abstract | ii |
| 1.    Introduction |  |
| 1.1           Problem Definition |  |
| 1.2 Project Overview |  |
| 1.3 Hardware Specification |  |
| 1.4 Software Specification |  |
| 2.    Literature Survey |  |
| 2.1 Existing System |  |
| 2.2 Proposed System |  |
| 2.3 Literature Review Summary |  |
| 3.    Problem Formulation |  |
| 4.    Research Objective |  |
| 5.    Methodologies |  |
| 6.    Experimental Setup |  |
| 7.    Conclusion |  |
| 8.    Tentative Chapter Plan for the proposed work |  |
| 9.    Reference |  |

# INTRODUCTION

The global development of a product or technology always comes with risk factors such as counterfeiting and duplication, which can affect the company's name, company revenue, and customer health. There are so many products that exist in the supply chain. To ensure that the product is real or fake. Because of counterfeit or fake products manufacturers facing the biggest problem and huge losses. To find the genuineness of the product we can use blockchain technology.

Blockchain is an arrangement of recording information that makes it troublesome or hard to change, hack, or cheat the framework. A blockchain is essentially a computerized record of transactions that is duplicated and distributed across the entire network of PC systems on the blockchain. Each block in the chain contains multiple transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant’s record. The decentralized database managed by the number of participants is known as Distributed Ledger Technology (DLT). Blockchain is a type of DLT in which transactions are recorded with an immutable cryptographic signature called a hash. Blockchain technology helps to solve the problem of counterfeiting a product.

Blockchain technology is more secure. Once the product is stored on the network hash code is generated of that product and it is possible to maintain all transaction records of the product and its current owner as a chain will be created for that product transactions. All the transaction records will be stored in the form of blocks in the blockchain. In the proposed system we are assigning a generated QR code to a particular product and the end customer can scan that QR code to get all information about that product. After scanning the QR code we can identify that the product is real or fake

## Problem Definition :

Fake product incidents have risen in the last few years. It is necessary to have a system for customers or users to check the all details of the product so that users can decide that the product is real or fake. So, the solution involves a simple QR code-based identification that can help the end-user or customers to scan and identify the genuineness of the product by using a smartphone

## Problem Overview

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.

## Hardware Specification

1. Camera
2. Device to scan QR code

## 1.4 Software Specification

1. Node.js
2. Ethereum/Near Protocol
3. MySQL Database

# 2. LITERATURE SURVEY

## 2.1 Existing System

## 2.2 Proposed System

## 2.3 Literature Review Summary (Minimum 7 articles should refer)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year and**  **Citation** | **Article/ Author** | **Tools/ Software** | **Technique** | **Source** | **Evaluation Parameter** |
|  |  |  |  |  |  |
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# 3. PROBLEM FORMULATION

# OBJECTIVES

The idea of this project came into existence because of the increase in the counterfeit products. The objectives of this project are: 1.To Design Anti Counterfeit System using Blockchain. 2.To secure product details using a QR code. 3. Provide security to the clients by offering data to client.

# METHODOLOGY

Nowadays, with the rise of technology and markets the problem to differentiate with original and duplicate has also incurred a lot of damage to consumers, distributors, retailers and also manufacturers. Therefore, in order to combat this a blockchain based application fake product detector is proposed. This chapter briefs the design of the system including a full description of the function and user interface of the system. The goal is used to use the blockchain features to provide a convenient, accurate and low-cost product anti-counterfeiting solution. The system is a blockchain based android application used to detect counterfeit products on daily basis.

# 6.EXPERIMENTAL SETUP

# 7.CONCLUSION

Counterfeit products are growing exponentially with the enormous amount online. So, there is a strong need to detecting counterfeit products and blockchain technology is used to detect fake products. Furthermore, the information is encoded into a QR code. Customers or users scan the QR code and then they can detect the fake product. Digital information of products can be stored in the form of blocks in blockchain technology. The data can be stored in the firebase cloud. Thus, the proposed system is useful for the customer to detect fake products in the supply chain. Customers can scan QR codes assigned to a product and can get all the information like transaction history, current owner based on which end-user can check whether the product is genuine or not.

## 8. TENTATIVE CHAPTER PLAN FOR THE PROPOSED WORK

**CHAPTER 1: INTRODUCTION**

**CHAPTER 2: LITERATURE REVIEW**

**CHAPTER 3: OBJECTIVE**

**CHAPTER 4: METHODOLOGIES**

**CHAPTER 5: EXPERIMENTAL SETUP**

**CHAPTER 6: CONCLUSION AND FUTURE SCOPE**

## REFERENCES

[1]