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Identification of Counterfeit Products Using Blockchain

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ABSTRACT: Nowadays, Counterfeit Products have become a main and global problem as customers are being mis-lead into purchasing fraudulent goods with no way to validate veracity. Recently, Blockchain has become prominent as it stimulates trust between untrusting contributor. This paper uses blockchain technology to conflict the auctioning of fake products. We use blockchain to allow producers or creators to include veritable product serial numbers onto the balance sheet; customers can then use the serial numbers to verify the veracity of product before buying it. Blockchain plays an essential role in establishing, that data was not dabbled with producing a trusted environment. This system uses Ethereum algorithm to which helps to Identify Counterfeit products.

KEYWORDS: Blockchain, Counterfeit Product, SHA-256 Algorithm, Veracity**.**

I. INTRODUCTION

During several years, the Identification of Fake or Counterfeit Products in market has always create a challenge for all supply chain Shareholders. As per latest estimation, the overall sales of counterfeit and pirated products have increased being worried to 4 Arab 60 Crore which is about 3.3% of the overall trade. The auctioning and benefits of industries around the world have been disturbed by the circumstance. The Clothing and Medicinal, Electronic regions experienced auctioning losses of about 2630 Crore & 1020 Crore respectively. Moreover, with the approach of recent technologies & E-commerce, the market of counterfeit product has increased rapidly on social media platforms, The anonymity, reach
& segmenting tools of E-commerce & social media have smoothed the walkway for Counterfeit. Hence, counterfeiting as in producing twins or fakes of real products pose great threat to innovation & economic growth. Blockchain technology has been receiving much attention over the past decade and its numerous applications are being developed. Blockchain is a decentralized system of shared, immutable balance-sheet. It ease the process of reporting, dealing and chasing assets over a business network thus decreasing risks and cutting costs for all involved. Hence, any application using Blockchain as its base technology certifies that the data are establish resistant. In this paper, a decentralized application system (D - App) has been established that uses SHA-256 blockchain technology in its construction. The D - App provokes a real - world supply chain and establishes the possession of product is lifted and reported in the blockchain network. Besides, the system proposed here can also be implemented in Ecommerce and retail sites that can significantly bring clarity in the virtual platforms for all consumers. Though Radio Frequency Identification (RFID) has been used for research in this region previously, it has create security and privacy risks which can be efficiently distribute with using blockchain.

II. RELATED WORK

1] A survey on Implementation of Anti-Counterfeiting System Using Blockchain by Savitha K R, Dr. Channa Krishna Raju, Dr. M. Siddappa. In this paper, Customers examine the product details using secret key code and afterward they can distinguish the phony item. It contains only the verification certificate,license and verification number. The overall improvement of a thing or development reliably goes with danger factors, for instance, producing and duplication.

2] Fake Product Identification System using blockchain by Yasmeen Dabbagh, Reem Khoja,Nidal Naseer. This study introduces Account Trade, which enables accountability in the big data trade among dishonest consumers and ensures accurate bookkeeping. This paper limitations of user needs to request manufacturers for file user needs.

3] Fake Product Detection using Blockchain Technology by Tejaswini Tambe, Sonali Chitalkar, S.Y.Raut. The system is built on a blockchain, and businesses that use it will just have to spend the necessary sums of money to

create and modify their contracts The system contains only two roles i.e., manufacturers and end users.it uses SHA Algorithm which contains some limitations.

III. PROPOSED ALGORITHM

A. *SHA 256 Algorithm*
B. *Data Mining Algorithm*
C. *Validation*
D. *Majority*
E. *Recovery*

Step 1: Generate QR Code.

IV. PSEUDO CODE

Step 2: Add the Product and Verify the Product.
Step 3: Check by Distributor and Verify by Company.
Step 4: Distributor request accept by Company and then company will generate QR Code of Products. Step 5: Display QR Code to Distributor and Upload it.
Step 6: Match the QR CODE Generated by Distributor and Company.
Step 7: Transaction is enabled by comparing with company Information . Step 8: Display Product is either Fake or Real.
Step 9: End

V. SYSTEM ARCHITECTURE

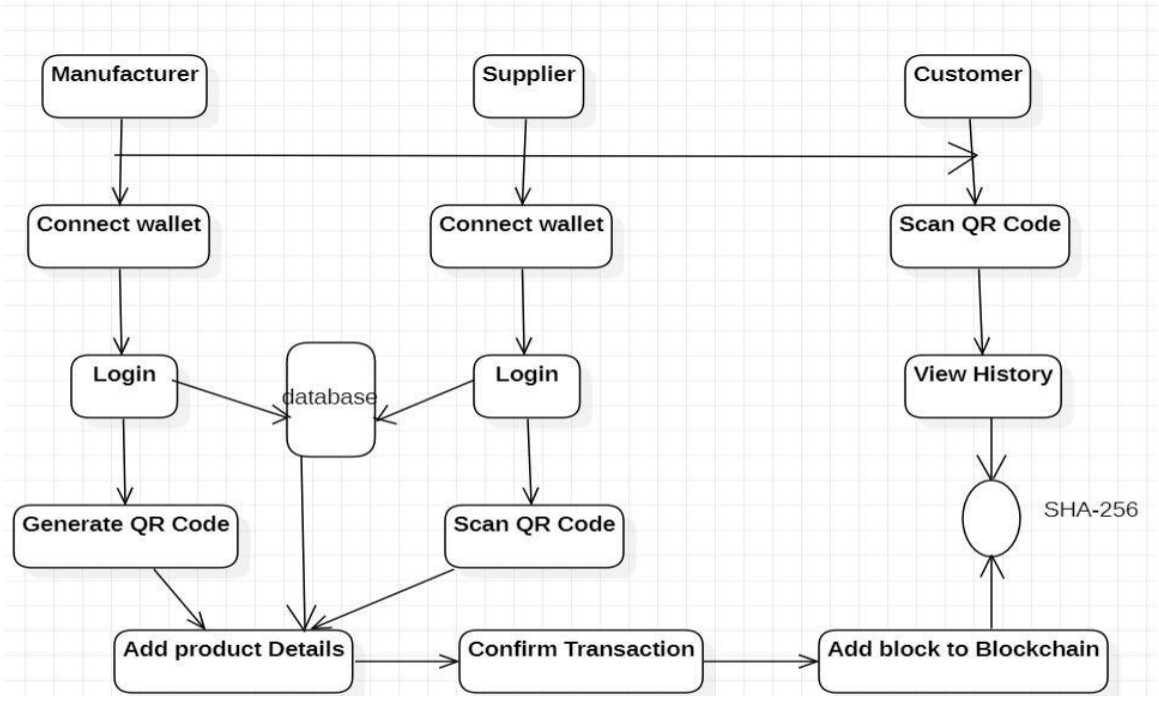

Fig.) System Architecture

VI. OPINION

Blockchain is the decentralized system, hence it assures confidentiality and privacy of the data on the network. Manufacturer and Customers trust will build through this system it will helps in improving providence and reducing dishonesty. In this paper, SHA- 256 algorithm used in detection of counterfeit products system is proposed. Creating a system that could quickly and accurately spot counterfeit product was the aim of this endeavour.

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