



e-ISSN:2582-7219



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY

Volume 7, Issue 4, April 2024



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.521



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Fake Product Detection Using Android Application

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ABSTRACT: The manufacturing as well as marketing of counterfeit or duplicate products and goods leads to consequential financial, health and safety threat to end users. It also has adverse effect on the economic growth of original manufacturers and businesses through revenue loss, product defamation, downtime, replacement expenses, forcing many brands to spend money on fighting counterfeits, trust among business partners can also be at risk, stealing sales etc. To overcome and stop these crucial effects of counterfeiting, a android based system is used in identification of original products and also detects duplicate products to ensure the identification of original goods. In this project, with massive emerging trends in wireless technology, QR (Quick Response) codes and barcodes provides a technique to cut down the practice of counterfeiting the products. The fake products are identified using camera scanner, where QR or barcode of the product or goods is linked to a android to store product details and guaranteed unique code of each product stored as blocks in the database. If the code in product matches, the notification will be sent to the customer indicating the authenticity of the product and else if it does not match the code in database, a notification will be sent to customer indicating that product is fake or counterfeited and notification is also sent to manufacturer about the place of purchase if customer accepts the request made by the application. This approach to cut down counterfeit ensures that consumers won't completely rely on merchants to determine if products are original or forged. In this day and age, all information can be searched and obtained from technological developments. The more users of technology such as Smartphone's/androids among the wider community, the more information that can be obtained. Currently, there are many cases of violations of cosmetic circulation in Indonesia. Such as the circulation of products without a registration code from the BPOM (Food and Drug Supervisory Agency) which is faked by irresponsible parties. Of the many cases of cosmetic violations, along with changes in people's lifestyles such as changes in consumption patterns (users).

KEYWORDS: Fake Product, Detection, QR code, Bar code, Android Application

I. INTRODUCTION

The global development of the product or branded product always comes with risk factors such as counterfeiting and duplication of product which in turn can affect the company name, reputation, revenue and customer satisfaction. The trading and marketing of counterfeit products is growing at high rates. It affects adversely on the sales, reputation, and profits of the companies and also do poses a fatal threat for the unsuspecting buyers. In order to ensure the identification and traceability of fake goods or products throughout the supply chain and to overcome this phenomenon, a fully functional android system is proposed. Companies need to pay very low transaction fees and they don't need to worry about the possibility of delivering counterfeit products to end-users. Because of fake products builder, original manufacturers face the biggest problems and huge losses in sense of brand damage as well as revenue loss. To find the originality of the product a functional android technology can be used. Blockchain is a chained arrangement of recorded information that makes it difficult or impossible to modify or hack the framework. Once the product is stored on the network, hash code is generated for that product and it is possible to maintain all transaction records of the product as well as its current owner as a chain created for that product transactions. It will store all the transaction records as blocks in the blockchain. In the proposed



system we are assigning a QR code or barcode generated for a particular product created by manufacturer along with all the details of the product. The end customer can scan that QR code to get all information about that product. After scanning the

QR code or barcode on the product, the user can identify whether the product is real or fake. The development of technology is currently growing rapidly, especially smartphones/android. A smartphone is a cellular phone that is easy to carry and use anytime and anywhere, which has more capabilities, ranging from resolution, features, to computing including the mobile operating system in it. The presence of this smartphone is indeed able to provide various benefits and conveniences for its users, and almost all over the world, humans can use smartphones. Such as the development of QR Code generator applications and QR Code Readers.

II. LITERATURE REVIEW

Pooja C and Arunkumar K L. Fake Product Detection: Nowadays, the entire global has grown up every fasted similarly the technology also grown up. So, my project is basically fake product detection. The people can know how the product are fake or original in all the counterfeit product.[1]

Sanjay K.S. Detection of fake opinions on online products using Decision Tree and Information Gain: Online reviews are one of the major factors for the customers to purchase any product or to get service from many sources of information that can be used to determine the public opinion on the products

Chemana Shaik. Preventing Counterfeit Products using cryptography, QR Code AND Web service: Counterfeit production is a threat for every genuine business causing damage to their brand image and stealing their revenues. The aim of this paper is to present a novel method to prevent counterfeit products using cryptography, QR code and webservice

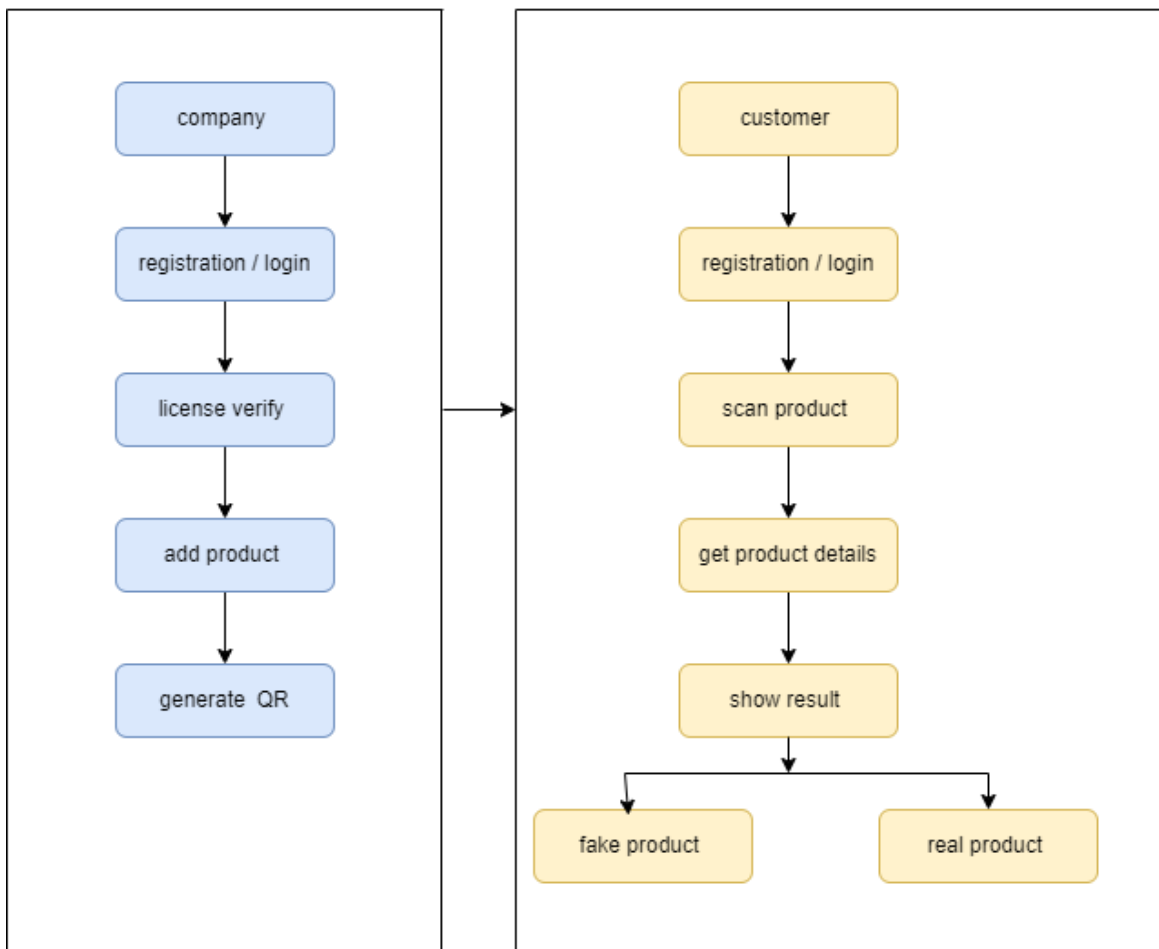
Delima Sitanggang and Evta Indra. Designing a Counterfeit-Product-Check Application using Android Based Barcode Scanner in Cosmetics Products: In this day and age, all information can be searched and obtained from technological developments. The more users of technology such as smartphones/androids among the wider community, the more information that can be obtained.

Manna Pagi, Nihar Ghevaria & Ms. Avneet Saluja. Duplicate Product Detection Android Application: There are many duplicate goods being sold in the present times. It is mandatory to have a system for the end user to know all the details of the product while buying the product so that the buyer can decide if the good is genuine or not.

These references offer a comprehensive overview of the existing literature on predictive modeling, machine learning approaches, and ethical considerations in the context of applicant prediction for fake product detection. They provide valuable insights into the methodologies, challenges, and implications of leveraging advanced analytics and data-driven techniques



III. SYSTEM ARCHITECTURE AND DATA MODEL



FOR DEVELOPER'S BACKEND

1. Company
2. Registrataion / Login
3. License Verify
4. Add Product
5. Genrate QR

FOR USER'S USEAGE

1. Customer
2. Registration / Login
3. Scan Product
4. Get Product Details
5. Show Result
6. Whether Product is FAKE or REAL



IV. RESULT AND CONCLUSION

QR code is not hackable but information in it can be copied or known to generate similarly QR code as well as print out of QR code works well to scan and retrieve information so in order to overcome this secure graphic QR code can be used that if when QR code is photocopied then it will lose information due to the ink smearing. These copy detection pattern or secure graphic is a with optimal design to lose information when copied and it is printed irreversibly. Customer when found the product is counterfeited then system should able to show the same products but original from different sites with price differences to improve usability, efficiency and effectiveness of the system.

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