

# BLOCKCHAIN TECHNOLOGY IN E-COMMERCE

BITS F463 - CRYPTOGRAPHY

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# CONTENTS OF WEBSITE

1. LOGIN/SIGNUP PAGE
2. PAGE WITH INVENTORY
3. PAGE PROVIDING KEY AND ENCRYPTED PRODUCT ID
4. SECTION TO VERIFY PRODUCT ID USING KEY

# IDEA BEHIND THE PROJECT

1. THE IDEA IS TO MITIGATE LOSS TO PRODUCERS AND REDUCE INCONVENIENCE FACED BY DELIVERY COMPANIES.

2. WE HAVE USED BLOCKCHAIN TECHNOLOGY TO OVERCOME THESE ISSUES.



# BENEFITS OF USING BLOCKCHAIN

- Purchase of counterfeit products can be avoided by verification by customers at the time of delivery.
- Identity of the customer can be verified prior to delivery of the product.
- All past transactions are stored in the Blockchain for future referencing and is immutable.

# IMPLEMENTATION DETAILS

- Upon purchase of a product, the product ID(64 bits) is encrypted and stored in the blockchain.
- Encryption key(64 bits) used is randomly generated and sent to the buyer.
- While receiving the product, buyer scans the bar-code on the product and obtains the product ID.
- Buyer searches the blockchain using his transaction ID for the encrypted product ID.
- He decrypts it using the exclusively sent key and compares both the product IDs to check whether the product is genuine or not.
- Consequently the identity of the buyer is also verified.



**S**oftware industry.  
**G**aming Industry.  
**S**mart Contracts.

# **SCOPE IN DIFFERENT APPLICATIONS**

SecureBuy - A blockchain x  
localhost/crypto/index.php sahil

# SB

HOME VALIDATE PRODUCT LOGOUT

## OUR PRODUCTS

PENCIL

CAMERA

LIGHT BULB

LOCK

Buy Buy Buy Buy

Type here to search ENG IN 02:13 13-04-2018

192.168.137.229:5000/txi sahil

192.168.137.229:5000/txion

Transaction added on blockchain successfully Transaction ID = Txn4 Product Code = fedbca9786543210 key = 0674186789f8df2b Encrypted Product ID= f8af2f00faced3b

SecureBuy - A blockchain x 0674186789f8df2b - Goo x New Tab x sahil

localhost/crypto/index.php

SB HOME VALIDATE PRODUCT LOGOUT

## VALIDATE PRODUCT

Txn4  
0674186789f8df2b  
fdbca9786543210

Validate

SEE WHAT OTHERS ARE SAYING ABOUT US

Type here to search

ENG 02:24 IN 13-04-2018

192.168.137.229:5000/blocks x New Tab x sahil

192.168.137.229:5000/blocks

Your Purchase has been Authenticated

**THANK YOU  
FOR LISTENING!**