Secure and Efficient Block Chain Based Protocol For Food Beverages

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Abstract

This paper is executing a food menu function for customer to search as well as upload food in sequence. Nowadays, mobile devices with wireless technologies have appeared into the humanity industry in particularly restaurants with the development of food ordering system. Most of the restaurants are used in the manual ordering system, which is involving papers and pen. In this method has can be very slow and can occur in error in noting down the users orders. Additionally, large numbers of peoples are needed to use the online ordering system. It is more helpful and reduces the users waiting time. In this work presents the customer has been creating the registration he/she then the password will be generated. The user can create the account and login into the system and show the restaurant food menu details. Select the food item from the menu. Adding the customer data will be updated and delete the food orders from the menu bar. Update the cost of product details and update the additional information like photo, description etc. If the customer no need item remove all items from the current order and to show the payment details as well as type the location from the mobile. Finally, the notification SMS can be received from the mobile and view the place order. The existing supply chain method is not efficient enough to take care of the food safety at every stage. Due to in efficiencies in the food supply chain, food industry faces countless challenges.

But the rising distributed ledger technology; block chain can improve the food safety by connecting multiple stakeholders like farmers, processors, retailers, as well as consumers.

Keywords: Restaurant system, Retailers, online food order, E-food, Food Industry.

1. Introduction

Due to a large number of overweight and suffering from chronic disease in the world, the assessment topic about how to eat keep a healthy diet is a critical issue. In any case, healthy eating is not about strict nutrition viewpoint, staying an idealistically. With the progression of new technologies, particularly mobile phone devices have made food order through the online application, more popular. The conventional method of taking orders in restaurants to including pen and papers note down the order has getting less as it is very moderate and to cause issues in taking the orders.

One issue in healthcare is the lack of accessibility for as often possible health observing. Health software offers progressively for less expensive arrangement and reducing the physical patients, physical relation as well as to gives observing solutions. One of the problems faced by the customers is that the eating place and cafeteria in the site only operated by a particular duration of time. So that most of the shops are closed at 7.00 pm. The customers which consist of need take the instant noodles, junk foods as well as highly controlled sugar snacks to satisfy the hunger. It is happening the health issue and requirements for health treatment. Therefore by using eFoodcart application, they can order the food and transactions without going out of those hostels.

At a very grand level, most of the customer, particularly the overfat, knows that a healthy diet is very important. In this work that many customers would like to how to eat more healthily, but the problem is that they rarely educated how to eat healthily. It happens the health issue and

needs for health treatment. Therefore by using eFoodcart application, they can order the food and transactions without going out of those hostels.

Utilize the autofocus camera on an android phone or tablet to scan a packaged foods barcode to get easily understand the good information that can be used by shockingly fat, sugar, as well as high in salt. Using footswitch, which consists of the family members are purchased to buy grocery shopping product through the mobile application. Food switch app using barcode scanner which described as packaged foods our camera and what food they are eating.

2. Related Works

The food switch app implementing the online food ordering techniques, which describes how to order the food through a mobile application and how to deliver to the customer safely [1]. At the present time, food deliver sequence has been widely considered. A lot of researcher have extensive predictable the requirement of velocity awake to building the farming supply chain, particularly, huge undeveloped country like China [2]. Previously sharp elsewhere to since China's agricultural deliver chain building at rest in immaturity that present are lots of troubles. To wholly solve these troubles, it must grab the foundation of provide chain cultivation [3]. In this work implemented by changed world customer are excited about the most recent technologies and mechanizing their typical tasks and thinking about this reality and with a plan to reduce errors and improve effectiveness in conventional food ordering method [4]. An online food ordering method is projected by delivery routing optimization using Google map and GPS technology. In this work, they have to give details of about the Google map and GPS for online food ordering function. The main problem in this work is routing optimization. By there, the majority of the result toward food operate troubles be starting the view of the provisions distribute sequence such because electron rotate individuality [5].

The technologies will validate, prove, record as well as supply and release report on the relocate of rights as well as provision of products as well as good [6]. The block chain be P2P

circulated ledger tools, which facilitate provisions operate towards perform in decentralized, clear as well as confined promote atmosphere .In this work propose of the hotel self examination classify method foundation on Zigbee knowledge This method has been complete automatically received data, display, storage as well as analysis so that customers can easily order their food quickly [8].

Smart agreement is theoretical to herald the block chain functional smart contracts to computerize duty as well as optimize agency method [9].This methods are implemented as a killer application in cell phone data services in location-based technologies and wireless communication. In this wireless network can access customer to the nearest restaurant or the entire shopping centre with the minutes at any time and any place [10]. In addition, a block chain is suitable for institute larger simplicity openly at the customer, during produce the appropriate information straight on the paper. In this work presents a combine with technologies these are web-based services wireless communication as well as web-based services. They understood the wireless food ordering organization. The presents of wired as well as wireless data access to the servers as well as food organize structure by Smartphone and both desktop PCs [12].

In this system using wireless network based on the food ordering system through mobile application devices. Android device has more popularity, and it is utilize the mobile application in the mechanization mission location. It is a Linux based in service organization using portable plans. These are Smartphone and tablets [13]. This work implements an as large amount of PDA support android application include be calculated, execute as well as residential by using restaurant location. It is one of the first eCommerce application easily order to the food items, and it is privacy and secure easily interact with mainframe desktop and PC [14]. Android device have more popularity, and it is utilize of the portable function in the mechanization mission position. The purpose of this work is by wireless PDAs in the café as well as verifying the manager as well as employee have been same awareness. In this work presents on an android

mobile application which consists of climate change and food ordering system. It is combined with the options are an adaption, mitigation as well as food security [15].

3.Proposed design

The overall workflow of the footswitch application based on web service stored in a cloud environment by using android application is shown in figure 1. FSA consists of four modules. These are the customer module, admin module.
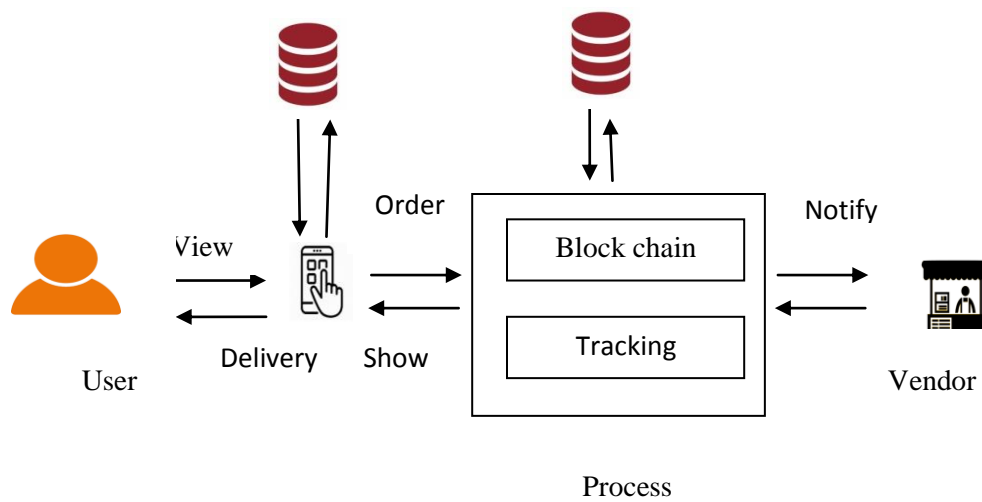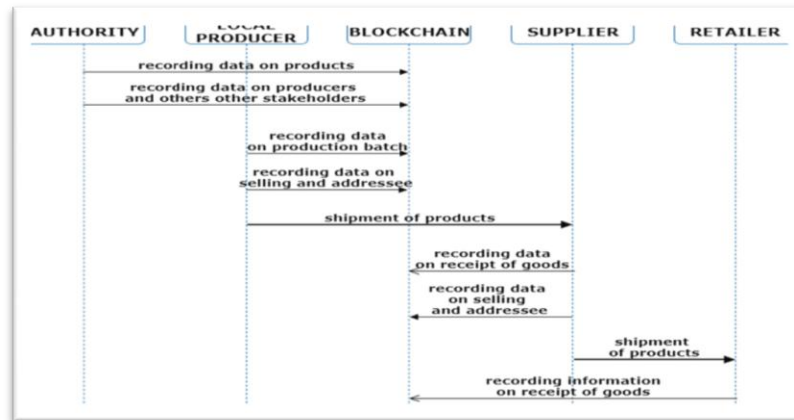

Figure 1.WorkFlow of Food Ordering System

Figure 2. Transcations recorded on Blockchain

3.1   User module:

The food delivery system, which is consists of a user module and implemented by the user, has to come to the hotel. At first, the customer has been creating the registration he/she then the password will be generated. Finally, the customer has to get a username and password. Then the customer he/she can order the food. The bill transaction is automatically going to the particular user. The user can create the account and login into the system and show the restaurant food menu details. Select the food item from the menu. If the customer no need item remove all items from the current order and to show the payment details as well as type the location from the mobile. Finally, the notification SMS can be received from the mobile and view the place order.

3.2   Admin module:

In this module presents functionality user and admin only. It cannot be accessible to any other users of the system, which is a hotel employee or customer to change the data. Adding the customer data will be updated and delete the food orders from the menu bar. Update the cost of product details and update the additional information like photo, description etc. The previous customer can access this system, and the function will be not configured.

3.3   Hotel /restaurant owner module:

This is the very simplest modules compare to other modules. It is planned to be can only by using a hotel employee. This module describes retrieving the new orders from the database, and then the new orders display in the application so that the new rules can easily readable through the graphical way.

Benefits of the block chain concept in food Chain

Block chain simplifies this difficult task by as long as for one too many data combination as well as process orchestration participants. They are Tree types of elements explain the food supply chain used from the block chain method that is efficiency, transparency as well as security and safety.

Transparancy:

The major plan of a block chain be help to the replace off in order, generate a digital double in sequence as well as its workflow, as well as authenticate the value of food as it shift next to the sequence .These plan are expert by allowing every contributor to split statement, confirmation as well as assessment of all previous statement regarding the provisions. The passage of provisions next to the deliver sequence is holding a block chain article called a "food bundle". Finally, in this technique, the package is the grouping of each information provided by the stakeholders over the duration of provisions aim. That information can be able to using institute the derivation, value, flavour, sustainability as well as taste summary, as well as lots of previous feature of the provisions.

Efficiency:

A blockchain is a part of communications so as to facilitate original communication among players not significant or trusting each other yet. Every participants approach mutually

during the blockchain, can estimate the declaration made, as well as inform their description controller when matches in value, instance, capacity, etc., are found. Buyers as well as sellers are synchronized by a combined but dependable want to data, which can then be combined as well as used by either party. In this process, traceability does not have to wait for huge company organization to use principles, as well as/or semi-mandatory or determined production training, to admission in sequence.

Security and safety:

Block chains can also be used to issue as well as manage the formation of single cryptographic tokens be able to made to signify value in escrow connecting two participants In fact, tokens need not take the form of value replace for financial settlements of invoices as well as contracts. Rather, they represent a license to publish information that becomes individually respected in quantity to the requirements of others in the block chain. For example, in-field sensors, drones as well as precision spraying equipment are expensive to purchase by farmers.

4. Result and discussion

At first, the FSA system application will be downloaded from the browser, and the n number of users can download them through the browser.
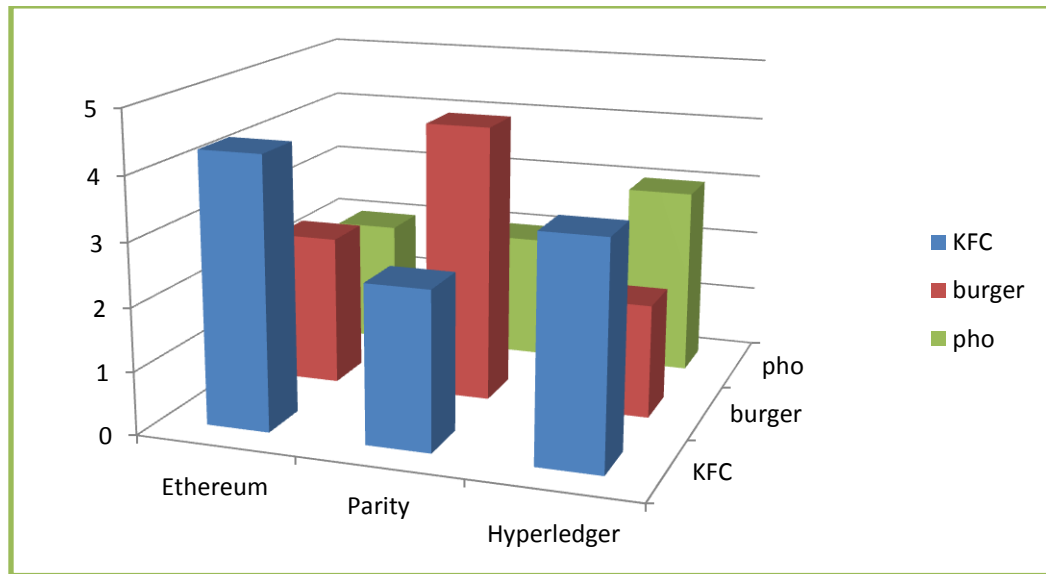
Figure 3.Result and discussion

Burger King mined: Fj1qQhvQysEryHEtFiGbEVAVG0YVTidO40m0owwC0xQ=
Pho mined: 1FGmfn7ZXsomS5RTH9uVplb+reLUB5t5Z4Zmq7Oavs8=
KFC Vietnam mined: mFKUbc11GpwNQpoF9rNKRP46Avk3XhwMYuK2tuQYIjM=
Burger King mined: VhgJrjkBHV4pJ+ppjxjM+rwLkbOSyaO+pPB8sYg+rcg=
Pho mined: BlfV+6VOqSW+FNpxUwWyu+MrEO0RsCMU4x0kRr843iM=
KFC Vietnam mined: pZiwuXinNToo+k7wEhDmPwthKvpd68yCLM9u5Ig1nj0=
Burger King mined: KdYjRECoCWgEeI56eyEp7HuYpAVig0Qk5mvDRul6bro=
KFC Vietnam mined: PT4/pFof1JZ6xj/MDU+Vxq41fm6AMeZpkyzxxzo6cd0=
Pho mined: EieTc4eh3uViNcNKQ2iu/fY8nvpel2eOunUMaznvaXk=

------ Block chain of [KFC Vietnam] ------
rpAtTyAD4B2cyUI9qEewBNnwNixvLyJBnXcjxwKitEU=
Pj1qQhvQysEryHEtFiGbEVAVG0YVTidO40m0owwC0xQ=
mFKUbc11GpwNQpoF9rNKRP46Avk3XhwMYuK2tuQYIjM=
1FGmfn7ZXsomS5RTH9uVplb+reLUB5t5Z4Zmq7Oavs8=
VhgJrjkBHV4pJ+ppjxjM+rwLkbOSyaO+pPB8sYg+rcg=
BlfV+6VOqSW+FNpxUwWyu+MrEO0RsCMU4x0kRr843iM=
pZiwuXinNToo+k7wEhDmPwthKvpd68yCLM9u5Ig1nj0=
KdYjRECoCWgEeI56eyEp7HuYpAVig0Qk5mvDRul6bro=
PT4/pFof1JZ6xj/MDU+Vxq41fm6AMeZpkyzxxzo6cd0=
EieTc4eh3uViNcNKQ2iu/fY8nvpel2eOunUMaznvaXk=
------ END ------

------ Block chain of [Burger King] ------
rpAtTyAD4B2cyUI9qEewBNnwNixvLyJBnXcjxwKitEU=
Pj1qQhvQysEryHEtFiGbEVAVG0YVTidO40m0owwC0xQ=
mFKUbc11GpwNQpoF9rNKRP46Avk3XhwMYuK2tuQYIjM=
1FGmfn7ZXsomS5RTH9uVplb+reLUB5t5Z4Zmq7Oavs8=
VhgJrjkBHV4pJ+ppjxjM+rwLkbOSyaO+pPB8sYg+rcg=

Figure 4.Output of food chain based on Block chain

After installing the application in their android device, the user gets a notification with the current version and updates for the application. Documentation inside the blockchain cannot be adapted retroactively since it is organization. . Not only communication except and other information can be recorded inside the block chain, such as documents, food traceability or identity management. This individuality leave the block chain knowledge perfect for managing the whole agri-food supply chain by avoiding the imitation as well as guarantee the quality, transparency, the origin as well as the reliability. The exercise of block chain functional to food supply chain in the context of smart. Tourism is powerful as well as can lead important results as well as revolution in conditions of process as well as procedure organization opportunity the way conduct compound spread request.

5. Conclusion

Our explanation appears better than conventional reason since all the communications is previously present as well as block chain itself. Present is no requiring disbursing designed for cloud explanation otherwise service supplier. In addition preservation is staying as well as user confidence is exploited as the entire communications have the possession. Present not performer capable toward influence records, it can be include or borrowed communications. In the whole case of this convincing also for additional establishment, our explanation decreases the role of the middle influence growing client trust. The influence requirements to be hand over only for actors as well as products certification as well as agreement, using previously accessible as well as used systems as well as infrastructures, which is a minimal condition compulsory by law. Behind to no mediator is occupied the documentation chain is entirely prohibited during smart contracts in a wholly transparent as well as liberally accessible way and unmodifiable.

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