TudoFarm (E-commerce platform for agricultural products)

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Abstract- By erasing conventional time and geographic limitations, emerging technologies have reshaped the enterprise. The information revolution introduces a fresh produce marketing e-commerce application. The majority of individuals can purchase products online. E-commerce not only develops a new virtual community of buyers, sellers, and suppliers linked by the need for goods and services, but it also aids in increasing the effectiveness of agricultural products' distribution. Customers can utilise search engines to uncover thousands of similar websites by searching e-commerce websites. It not only lowers the cost of distribution but also makes it possible for agricultural products to be distributed faster, safer, more conveniently, and more effectively to a larger area.The producer-consumer model (BPCM) proposed in this study is based on blockchain technology and enables farmers to sell their products directly to customers while prohibiting intermediaries from exploiting farmers through the use of smart contracts.

***Index Terms*— E-commerce, Marketing,Blockchain.**

I. INTRODUCTION

The main difficulty faced by farmers today is not only the production and the yield of the agricultural products but also the environment or the place to promote and sell their products for the desired price.Nowadays many farmers were not able to continue agriculture because of the financial burdens and less profit in their sector. Our idea is mainly to make a platform where the farmers can promote their products and sell their products to their customers. Our idea is to create a web application where the producers and the consumers can connect with each other.This web application is an open platform where anyone can promote their products to their customers. This web application will improve the agricultural sector and also the upcoming small business sector. This application uses Bockchain technology to record transactions. Blockchain technology is very safe and secure.

The main motive of this idea is to develop the sector of agriculture and small business. This application will create an environment for the farmers. The application will contain all the information about the product.
Some of them are listed below :

1. Information about the producer.
2. Information about materials used for producing or manufacturing the product.
3. The quality of the product.
4. The way by which the product has been produced and etc.

II. BASICCONCEPTS/TECHNOLOGYUSED

It took the Internet several decades to transform from a network thatwasprimarily used for communication purposes at and between military and educational institutions into a technological platform that was host and realize commercial applications (Mueller, 2002). However,after the introduction of the World Wide Web (Berners-Lee et al., 1994),it took only a few more years before commercial websites were soaring(Mukhopadhyay et al., 2008; Tian and Stewart, 2006) and e-commerce became a worldwide business model, with retail e-commerce sales amounting to 4.89tn US dollars in 2021 with an expected growth of upto 6.39tn US dollars by 2024 (Statista, 2021b), which has been amplifiedby the global COVID-19 outbreak as indicated by early research(Hasanat et al., 2020). In comparison, the total market capitalization of cryptocurrencies amounted to 566.26bn US dollars in 2017, 128.78bnUS dollars in 2018, 237.1bn US dollars in 2019 and 758.06bn US dollarsin 2020 (Statista, 2021a), showing a strong decline after the 2017 type,but also a rapid recovery and growth afterwards. Payments with cryptocurrencies only have a 2% share of digital payment transactions, butare growing in importance (Markham, 2019).The following sections briefly describe the advent of e-commerce and highlight several important research topics that have emerged. Next,summary of relevant developments in the blockchain spaceIt has surpassed the speed of the e-commerce era in terms of expectations and, in some cases, market acceptance. focus of discussion This is especially due to the nature of blockchain.It can have a big impact on e-commerce.

It also makes smart irrigation possible, in which water pumps are turned on and off in response to temperature and humidity sensors placed on the soil. These technologies also help farmers discover weeds and plant diseases in their crops. Drones are used to apply nutrients to the crops in the correct quantity, protecting them from injury.

III. STUDYOFSIMILARPROjECTSORTECHNOLOGY/LITERATUREREVIEW

Blockchain is a technological stack that impacts e-commerce viatechnological, legal, organizational and quality issues as well as consumer issues. It opens up new opportunities by offering unprecedentedtechnological possibilities, but at the same time, it necessitates a criticalevaluation of current business processes, such as practices that involvesensitive customer data or the design of communication channels alongthe supply chain. Technological issues relate to the handling of data,privacy and security issues, development, implementation and thedesign of the underlying system as well as the potential impact of noveltechnologies, such as the Internet of Things (IoT), big data, cloudcomputing, artificial intelligence (AI) and machine-to-machine (M2M)communication.

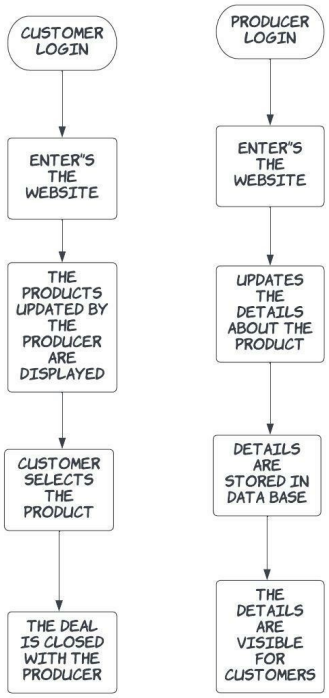
IV. PROPOSEDMODEL/TOOL

When the producer updated the product the details of the product are sent to every customer in the application, if the customer is interested in the product then the customer is allowed to chat with the producer/dealer. Once the order is confirmed the allotted commission amount is charged from both the dealer and customer side. The details about the transactions are recorded using blockchain technology which is more secure than the other available technology.

Advantages of the application

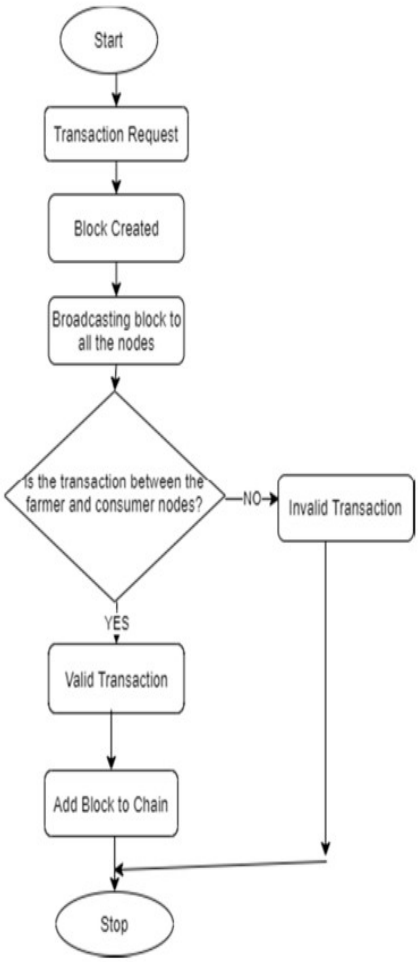
1. Simple to use.
2. Secure transaction.
3. Promoting products.
4. Overhead is low.

Due to its immutability and traceability, blockchain is most frequently used in the agricultural sector for supply chain management use cases . Another useful application of blockchain involves crop insurance claims, in which farmers and insurer come to an agreement on terms. It includes inadequate agricultural water supplies and flooding.[1] Farmers can sign up for a blockchain-based agricultural insurance programme.



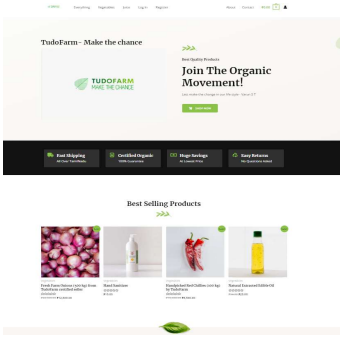
V. IMPLEMENTATIONANDRESULTS

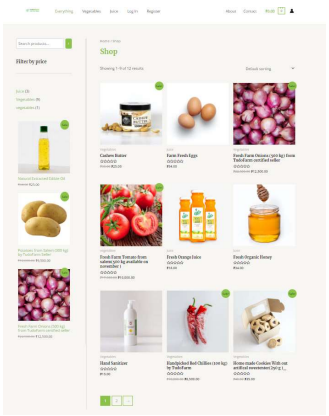
By promoting the abundance of digital technologies in agriculture, our government is taking a number of steps to improve the farmer's economic situation. Security and flexibility are the two main concerns that must be addressed in the adoption of the aforementioned technologies. Farmers will benefit greatly from the proposed Blockchain-based Producer-Consumer Model since it will eliminate the current disconnect between farmers and customers. Using smart contracts, this model eliminates transactions between consumers and consumers and authenticates transactions between farmers and consumers, eliminating intermediaries—agents that operate in the place of consumers—from taking advantage of farmers.

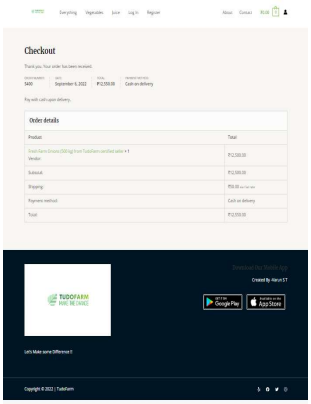


1. **WebsiteDevelopment**:

Our website is a development of a wordpress tool in which all the plugins are inserted into in a single form of way both in the front end and in the back end







VI. CONCLUSION

. If crop damage results from a natural disaster like a flood or other extreme weather, the insurer will automatically deposit the claim amount to farmers with the help of a third party's monitoring report (meteorological stations) and smart contract validation[2].In order to protect fish farmers' data from manipulation, this article suggests a secure block chain and Internet of Things (IoT) based fish farm platform. This article presents numerous blockchain application cases in supply chain management, healthcare, agriculture, and education. This essay examines how block chains protect networks from Sybil attacks[3]. In many different nations, the ministries have launched numerous social programmes to implement blockchain technology [4] Farmers can now monitor their crops from a distance thanks to the development of precision agriculture.

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