Coconut Bidding Application

Devika N[1], Megha S[2], Arpitha H P[3], Harshitha U[4], Veena Bhat[5], Dr. S Rabindranath[6]

[1,2,3,4]*Students, Department of Computer Science & Engineering, AMC Engineering College, Bengaluru, India*
[5]*Asst. Professor, Department of Computer Science & Engineering, AMC Engineering College, Bengaluru, India*
[6]*Associate Professor, Department of Computer Science & Engineering, AMC Engineering College, Bengaluru, India*

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Abstract - *Coconut Bidding Application is a web based application, in which farmer can sell the coconut products(coconut, dry coconut, tender coconut). It is more efficient way for buying and selling coconut products rather than traditional method. It is developed with the objective of making the Bidding system reliable, easier and faster. The objective of the Coconut Bidding Application is that the user can have better choice for their investment. Also it is time saving and through this system consumers can bid for the coconut product, thus eradicating middle man and benefiting both farmers and consumers. In this Application we have introduced a system to sell and buy coconut products based on bidding. The web application will allow the real-time bidding to sell the coconut product to the highest bid person. Consumer must have a valid username and password to login to the system. In this the admin will have complete control over the application. The buyer can select the coconut product and bid accordingly. The bidding will have a specific time duration, which will be set by the farmer. At the end of time limit, produce will be sold to the highest bidder. Our main aim is to provide a software environment for farmers to gain maximum profit. The consumers will also get a good quality coconut products.*

Key Words: MERN, Consumer, Web Application, Real-time bidding, Transparency

1. INTRODUCTION

India's economy is based on agriculture, yet despite this, many farmers confront a variety of challenges, including low prices for the goods they produce and a lack of appropriate channels for selling their goods.

Coconut is an important crop in India and is grown across the country, with the major production centers located in the coastal regions of Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, and West Bengal. India is the third-largest producer of coconuts in the world, after Indonesia and the Philippines, and produces around 22 billion coconuts annually. Kerala is the leading coconut producing state in India, followed by Tamil Nadu and Karnataka. The state of Kerala alone produces around 45% of the total coconut production in India. The main varieties of coconuts grown in India are Tall, Dwarf, and Hybrid varieties.

Coconut production in India is primarily done by small and marginal farmers, with about 90% of coconut plantations being owned by farmers who own less than 2 hectares of land. The crop is mainly grown for its tender coconut water, copra, coconut oil, and coconut shell products.

Even though india is one of the largest producers of coconut, they import coconut from other countries in order to meet the demand. According to the data from the Ministry of Commerce and Industry, Government of India, the imports of coconuts and coconut products in India have been fluctuating in recent years. In the financial year 2019-20, India imported 12,409 metric tons of coconuts and coconut products, which was a significant increase from the previous year. The failure to give farmers who grow coconuts the correct compensation is one of the causes of the import. As a result, this will deter farmers and lower the quality and output of coconut products. The existence of the intermediary, who purchases the coconut from the farmer at a reduced price and sells it to the consumer at a higher price, is the second factor contributing to the decrease in coconut production.

To overcome the above problem, we are trying to build an centralized platform where consumers and farmers can interact directly and negotiate prices in real-time. By streamlining the process of buying and selling coconuts, the application aims to increase efficiency, reduce costs, and improve transparency. The application will help both the farmer and the consumer where the consumer can save money and the farmer will get extra profit that he deserved.

1.2 Objective

Our main objective of this web application is to connect farmers and consumers directly and to provide a fair price to both farmers and the consumers. The goal of this project is:

- To streamline the process of buying and selling coconuts by providing a centralized platform where consumers and farmers can interact and negotiate prices in real-time.

- To increase efficiency and reduce costs in the coconut bidding process by eliminating the need for intermediaries and simplifying the negotiation process.

- To improve transparency and fairness in the coconut bidding process by providing a clear and accurate record of all bids.

- To ensure that coconuts are sold at a fair price by allowing multiple consumers to compete for each bid and ensuring that sellers receive the best possible offer.

2. EXISTING SYSTEM

Now in a developing country like India, the farmers sell their coconut products in a traditional way, a manual way which is as given below:

- Farmer has products
- Middlemen/Intermediary buys it from the farmer
- Middlemen/Intermediary sells it to the wholesaler or the consumer

In this traditional buying and selling system, the middleman always buy the coconut products from the farmer at a very low price and sell it directly to the wholesaler or the consumer far higher than the buying price. The most shocking thing in this is that the middlemen don't own anything, neither the farming land nor the stock but they get larger part of the price. They are not worried about the hard work of the farmer or the business risk of a wholesaler/consumer. Without anything he gets the most benefit.

3. LITERATURE SURVEY

Many research papers have be written and published on the subject over the course of preceding few years. All the papers have their own advantages and disadvantages.

[1] E-Connect Kisan: An Ecommerce Application for farmers

AUTHORS: Danani Meet, Jadav Saisha, Dave

This paper highlights the lack of technological adoption in the agricultural sector in India, and how this has led to a lack of awareness of government agricultural schemes and information among rural farmers. The authors propose a solution in the form of a mobile application that provides details of these schemes and information in local languages such as English and Marathi. The application would enable farmers to access information more easily and conveniently, thus empowering them to make better decisions and improve their agricultural practices. Additionally, the paper discusses how the use of technology can help farmers sell their produce directly to customers, bypassing middlemen and increasing their profits.

[2] Agro Bidding-A Smart Dynamic System for Enhancement of Farmer's Life

AUTHORS: Nalinipriya G, Sangeetha R, Saniya K, Sri Dhanusiya Navarath S.

Online auction system is a web based application , in which seller can sell the goods . It is developed with the objective of making it user friendly and easier. The main aim is that the user can have better choice for their investment. The application allows consumer to quote their price for the produce, eradicating the middleman . The Application allows farmer to choose the consumer of choice based on the price.

[3] FarmBid:A Bidding E-commerce Platform to Provide Fresh Produces from Farmers

AUTHORS: Aloysius, Chiong Zhen Quan, Khairunnisa binti Sufian, Ng Sing Woei, Lai Li Ying

This paper discusses the challenges faced by farmers in Malaysia, including the influence of large agribusiness firms and the existence of middlemen in the supply chain, which can lead to exploitation and reduced profits for farmers. The authors propose a solution in the form of a bidding-integrated e-commerce platform called FarmBid. The platform allows farmers to directly negotiate with buyers, which increases their bargaining power and helps them earn more income. The paper presents results from fieldwork conducted with buyers and sellers, which show that both parties prefer direct purchases from farmers and a standardized delivery service. The authors conclude that the introduction of FarmBid can improve the quality of farmers' lives by increasing their income and reducing their reliance on intermediaries.

4. SYSTEM ARCHITECTURE

The users must register and then login to the application. While registering the user must provide valid aadhar card number and email. An authentication mechanism is the Aadhar number. Once a valid username and password is obtained, user can login to the application and perform different operations like adding products, bidding on the products, viewing the real time bidding, complaining on users.
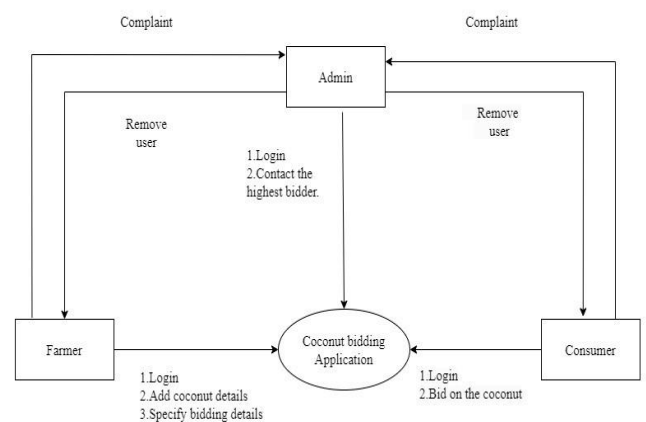

Figure-1: System Architecture

5. METHODOLOGY

Following are the basic modules in the project:

User registration:

This module allows farmers and consumers to register themselves by providing their details, which are used to sell or buy the coconut products in the bidding. Admin has all the to delete the account if any users complaint on the account.

Wallet:

This module allows consumers to put down a security deposit before the bidding process begins. Once the bidding is finished, the deposit is returned to all participants except for the highest bidder, who must pay the remaining amount in order to obtain the product. The purpose of this module is to ensure that all consumers are committed to the bidding process.

Sell:

The purpose of this module is to enable farmers to conduct real time bidding for their coconut products. It includes a add product detail form that allows farmers to input various details about their coconut products, including the category, base price, quantity and start and end time of the bid . It also includes a feature for uploading images of the coconut products and setting a start date and end date of the bidding. This module provides a convenient platform for farmers to put their coconut products and engage in real time bidding with consumers who are interested.

Buy:

This module allows users to view the coconut products they have bid on in an bidding, as well as the current status of those bids. It provides a complete details of the other consumers involved in the bidding process and allows them to track their progress in getting the desired coconut product. This feature is very useful for keeping track of multiple bids and ensuring that the consumer is up-to-date on the status of their bids.

New products:

This module allows consumers to view the available coconut product for bidding and participate in the bidding process by submitting a bid for the coconut product. To place a bid, the consumer must specify the amount greater than the current bid amount. Through this module, consumers have the opportunity to get the coconut products in the bidding by submitting competitive bids.

Sold products:

This module allows users to view a list of items that have already been sold in the bidding, along with the current bid amount for each item. This feature provides users with a summary of the bidding progress and allows them to see which items have already been taken by other bidders. It also allows users to get to know the level of competition for certain coconut product and get a sense of how much they may need to bid in order to successfully get the desired coconut product.

5.1 Functionalities

Admin Function:

1) View the real time bidding
2) Remove users based on complaints
3) Contact the consumer once bidding is done

Farmer Function:

1) Add coconut product details
2) View the real time bidding going on his products
3) Complain on the consumer

Consumer Functions:

1) Get details of coconut product
2) Bid on the product
3) Complain on the farmer

6. RESULT

The application is created using the MERN Stack. Real-time bidding is made possible using web socket programming, or socket.IO. Without the use of an intermediary, the farmer and the consumer may communicate directly. Transparency and fair pricing for the purchase and sale of coconut products will be provided through the application. After the farmer has submitted the product's specifications and base price, customers can place bids on the coconut product they want. The highest bidder will be given the opportunity to purchase the coconut product.

Figure 2 shows how to login using a valid username and password. If a user is not already registered, they can do so by providing all the necessary information.
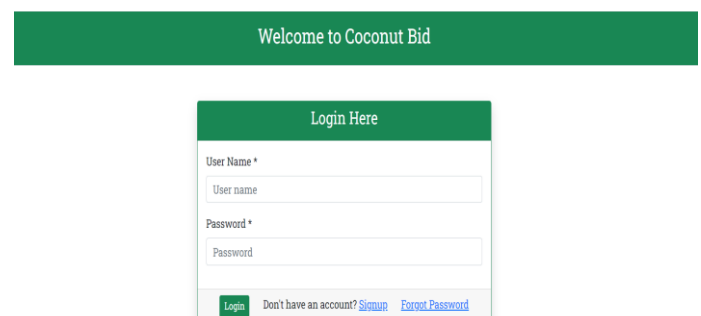

Figure-2: Login Page

Figure 3 shows all the fields required to be filled in order to register and login to the application. The aadhar number acts as an autenticity and its autenticity is checked using aadhar-validator library.
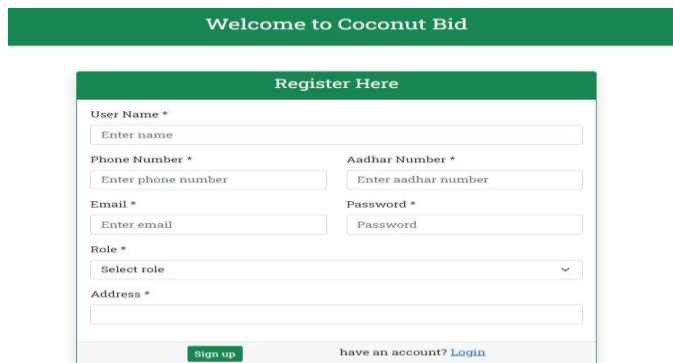

Figure-3: User Registration Page

The admin page is depicted in Figure 4. The application is entirely within the admin's control. The dashboard provides access to users who have registered, products that farmers have added, and complaints that both farmers and consumers have sent.
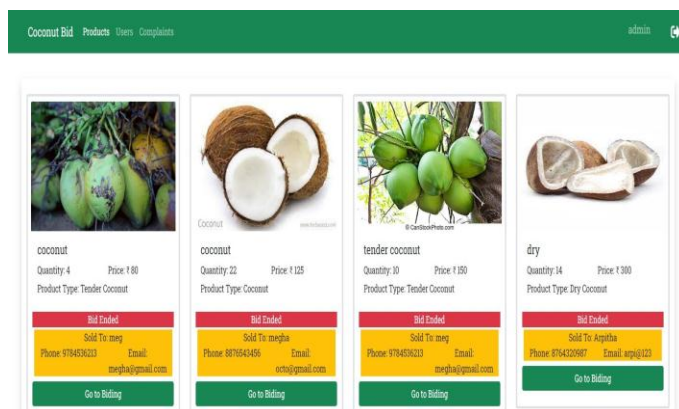

Figure-4: Admin Page

7. CONCLUSION

The coconut bidding application is a new tool that aims to streamline the process of buying and selling coconuts by providing a centralized platform where consumers and farmers can interact and negotiate prices in real-time. The application has several key benefits, including increased efficiency, reduced costs, improved transparency, and fair pricing. Moving forward, we believe that there is significant potential for the coconut bidding application to be expanded and customized for use in other countries with large coconut industries.

ACKNOWLEDGEMENT

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