

Agro Bidding - A Smart Dynamic System for Enhancement of Farmer's Lifestyle

¹NalinipriyaG, ²SangeethaR, ³SaniyaK, ⁴Sri Dhanusiya NavarathS

¹ Professor & Head of Department, ^{2,3,4}UG final year students

Department of Information Technology,

Saveetha Engineering College, Chennai.

nalini.anbu@gmail.com, sangeetha1598@gmail.com, saniya2898@gmail.com, sridhanusiyanavarath45@gmail.com

Abstract--Online auction system is a web based application, in which seller can sell the goods. It is a popular method for buying and selling products. It is developed with the objective of making the auction system reliable, easier and faster. The objective of the online auction system is that the user can have better choice for their investment. Also it is time saving and through this system user can invest in their own selected firm. The application allows consumers to bid for the farm produce, thus eradicating middle man and benefiting both farmers and consumers. In this paper we have introduced a dynamic system to sell and buy agricultural products based on auction. The web application will allow the online auction administrator to sell the products through the desired person. Customer must have a valid user id and password to login to the system. In this the admin will post the image and details of the product. The buyer can select the product and bid accordingly. The bidding will have a specific time duration, which will be set by the seller. At the end of time limit, product will be sold to the highest bidder. Our main aim is to provide a software environment for farmers to gain maximum profit.

Keywords--Auction, Bidders, Time duration, highest bidder.

I. INTRODUCTION

The global reach of online auction market places for the buyers and sellers to overcome geographical constraints and purchase products anytime from anywhere over the internet. The online auction market provides the consumers with great advantage of low prices, greater product selection and greater efficiency compared to the usual traditional offline markets. The use of online auction system makes use of the decision making assistance tool that results in greater buyer's certainty towards their choice of the seller's and product that they make. The decision making assistance tool consists of three parts that is product information signals, seller's rating scores and seller's shilling activities. Here all type of user can go and analyse the data of different field and get maximum profit for future investment. This web application system will be an online auction system which consists of the seller, buyer or consumer products.

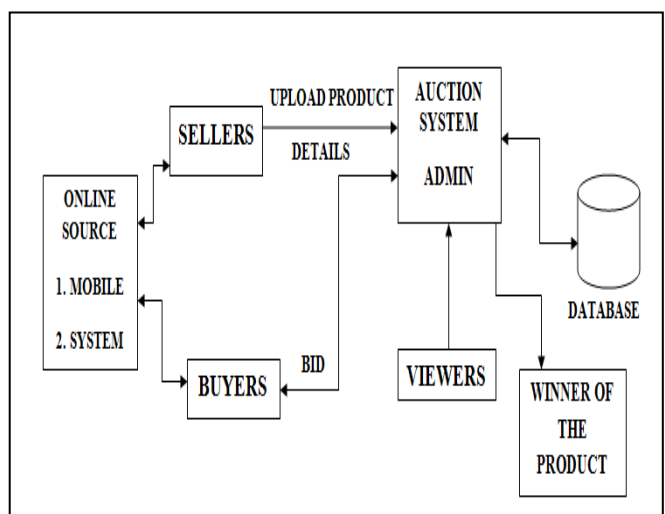
II. EXISTING MODEL

The existing auction system is managed manually. Prior to each auction, details of the auction are announced through media. Those who wish to take part in the auction have to arrive at the venue on time. In the conventional method,

most of the time prevent aspiring bidders from participating in the bidding process. The main challenge of the system is to track each bidding process and to keep records of both buyers and sellers until the end of the bidding.

III. PROPOSED AGRO BIDDING MODEL

The application allows consumers to bid for the farm produce thus eradicating middle man and benefiting both farmers and consumers. This system is a mobile application where user can sell and buy agricultural products by auction based scheduling. Using valid user id and password consumers and producers login to the system. If there is new user they have to register the application and required to fill the details such as name, email id, username, password. Username is the unique identity for any particular user. The seller can propose new auction by uploading the image and description of the agricultural products. The buyer have to select the product and bid accordingly. The price is fixed by seller of the product. Bidding will have a specific time duration, within the duration the buyers can bid beyond that duration bidding is not possible. The mobile application also offers a personal page that keeps record of their auctions. At the end time of the auction interval, the product will be sold to the highest bidder. The database is designed and handled by auction administrator. Admin can only change or modify the information related to auctions system.



Step3: Start time and end time of the auction is announced by the seller.

T_s = Auction start time

T_e = Auction end time

$S \rightarrow T_s$

$S \rightarrow T_e$

Step4: Seller assigns Starting price

S_p = Starting price

Step5: IF $W = -1$, then there are currently no winners.

W = Winner

Step6: IF $W = 1$, there is a winner.

B. Buyer Side

Step1: Start auction

Step2: Buyer places the bid according to the product.

Step3: Buyer will be provided with a bidder id.

Step4: At T_s , bidders starts bidding.

B_p = Bid price

S_p = Starting price

I_p = Increment price

GET B_p

IF $B_p < S_p$ THEN

ERROR()

ELSEIF $B_p \geq S_p + I_p$ THEN

PLACE BID()

$S_p = S_p + I_p$

END

IF $B_p \geq S_p$

$W = \text{Bid}$

Step5: At T_e , winner of the product will selected by admin.

T_c = Current time

T_e = End time of the auction

IF $T_c = T_e$

FIND (W)

BREAK;

ELSE

CONTINUE;

END

V. WORKING MODULE

A. Registration

The registration process is the first phase of the application. The user must enroll themselves by providing a valid user name and password. Each username must be unique. The user must also provide some of the personal details like mobile number, email ID, address in order to communicate for the further transaction once if the user wins the product. Each field in this page validates the data which is entered in it and generates an error message in case of any abnormalities. Both buyer and the seller have common registration processes.

B. Login

The login page consist of user name and password. Only the registered users can login and have access to their portal. The users can login to the session as and when they require to access the portal. Once their work is over they can logout the portal. If the user forgets the password, new password can be set by clicking forget password option. Once when the user go for forget password option, a new password will be sent to the registered email ID or the mobile number. If the username or password is invalid, error message will be popped up on the screen.

C. User

User Module contains all the information about the seller and buyer who are registered under the online auction system. All user information like name, address, mobile-number, email id, etc are handled by the user module. User

can view their monthly as well as annual auctions. Future auctions can also be viewed by the user. This module consist of the history of auctions in which the user participated before and also the history of the auctions won by the user. The user can post any product and also can participate in an auction simultaneously at the same time which means a user can act both as a buyer and seller.

D. Product

Product module consist of all the Information such as product name, type, price, photos. The seller can capture the image of the product at the time of bid and upload in this module and explain about the product in the description field. The seller can also fix a base price for the product and the starting price of the product depends upon the base price fixed by the seller. The buyer can view the product details in this module and can decide whether to participate in the auction or not. If the buyer wishes to participate in the auction they can go with the PLACE BID option. Time duration for the bidding to be held is also decided by the seller.

E. Bidding

The bidding module provides information about the date and time on which the auction is to be held. It consist of Information about the active users who are participating in the bidding. It also includes the time duration and the maximum number of bidders. These bidding details will be visible in every user's portal and if they are interested they can participate in the bid. The bid rate which is specified by the buyer must be higher than the starting price which is fixed by the seller. The buyers can participate in the bid only before the end of the bid duration time. The product will be sold to the user with the highest bid rate at the end of the auction.

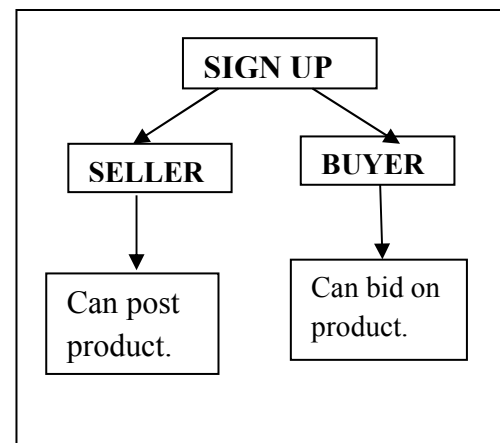


Fig.2.Module diagram

VI. IMPLEMENTATION

In this project the tool used to develop web application is Android Studio. Android studio is a replacement of Eclipse Android. The application will run over all kind of operating system. It supports OS such as Windows, macOS, Linux. JDK (java development toolkit) 1.7 is used for our mobile application. MYSQL server is used for database purpose. It allows backup and restore of data from database.

A. Output Screenshots

The output of the web application is projected as screenshot and displayed below. Fig.3. product bidding amount page, indicates the base amount as 4000.00 which is fixed by seller and 4039.00 which is the highest bid amount before bidding starts. Rupees 39 is the increment amount from the starting price.

Fig.3. Product bidding amount

Fig.4. Create auction page

Figure.4. Indicates create auction page, where the image of the product is captured at the time auction and all the required field has to be filled. Incomplete creation of auction cannot be submitted. Auction time date and duration is given. The bidding page will be opened for users only at the start time of auction.

VII. RESULT AND DISCUSSION

Features of the system are market value, price, sales ratio, product quality, time. In the existing system, the price of the product is fixed at the time of auction. The bargaining price may deviate from other seller which depends on their individual skills set and reputation. The products are wasted if there is improper sale of goods. Due to the lack of feedback, sometimes the seller might be misled in wrong purchases. The seller will be unaware of product which the customer wants to buy. In this way the products may remain unpurchased.

In Agro Bidding system the base price is set by the seller. The quality of the application is audited by the user in the application. The maximum price is attained by user in the advanced Bidding system. All the goods are sold in order to avoid the wastage of products. However the feedback from the customer and seller is important in all the ways, otherwise there may be wastage of products. The bidding duration is set by the seller just to overcome incomplete sale.

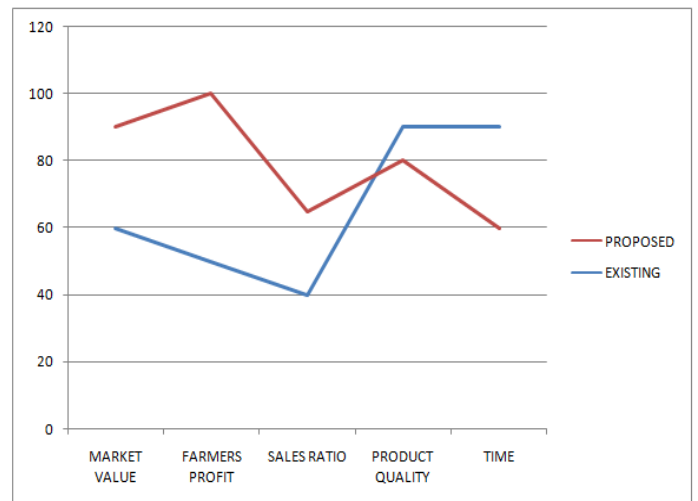


Fig.5. Comparison of existing auction system with proposed auction system

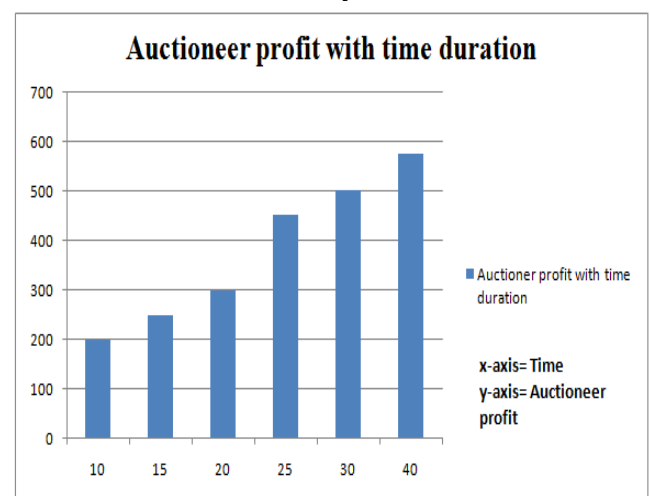


Fig.6. Auctioneer profit with time duration

Not all auction system necessarily incurs these costs. The auctioneer fixes the cost of running an auction. Fig.7. Auctioneer profit with respective time duration

indicates how much profit is earned in particular time duration.

VIII. FUTURE WORKS

The online auction system can be enhanced further by adding additional features such as in mobile application. First thing is adding a chat room in application so that users can communicate other user. If buyers have any clarification are doubts regarding the products they can get clarified by messaging seller. Next important thing is payment option can be provided for the purpose of direct selling.

Adding an secure socket layer would prevent data's from third parties. More graphics can be added to attract users.

REFERENCES

- [1] Gengdi, Wang wei, Liu xiaoyang, "The Study of Security of E-commerce System", IEEE CCTAE 2010, May 2010, pp 20-23.
- [2] Shengli chen, yunfeng Luo, Huiqiu Wu, Xiaohua Yang, "Design of Optimal Auction for Online Commerce", proceedings of the 7th World Congress on Intelligent Control and Automation, June 2008, pp 4190-4195.
- [3] Matthew K. Franklin, Michael K. Reiter, "The Design and Implementation of a Secure Auction Service, IEEE transactions of software engineering, Vol 22, No.5, May 1996, pp 302-312.
- [4] Shangyou Hao, "A Study of Basic Bidding Strategy in Clearing Pricing Auctions", IEEE transactions on power systems, Vol. 15, No. 3, August 2000, pp 975-980.
- [5] Xiaojun Feng, Peng Lin, Qian Zhang, "FlexAuc: Serving Dynamic Demands in a Spectrum Trading Market with Flexible Auction", IEEE, February 2015.
- [6] Jian Chen, Xilong Chen, Xiping Song, "Bidder's Strategy Under Group-Buying Auction on the Internet", IEEE, November 2002.
- [7] Md.Nazrul Islam, Md.Zahidur Rahman, "Secure Online Sealed Bid Auction", IEEE, December 2008.
- [8] Chun Wang, Hamada Ghenniva and Weuming Shen, "Constraint-Based Winner Determination for Auction-Based Scheduling", IEEE, May 2009.
- [9] Enrique Campos-Nanez, Natalia Fabra and Alfredo Garcia, "Dynamic Auctions for On-Demand Services", IEEE, November 2007.
- [10] Weibin Zhang, "Research on E-commerce Mode of Food Enterprises", IEEE, June 2010, pp 464-467.
- [11] KumaaraVelan, "Modelling Bidders in Sequential Automated Auctions", IEEE Advance access, April 2009, Vol 53, pp 210-218.
- [12] LifangPeng, CongmingCai, Ruey-shin Chen, "The Analysis of Time-cost in Online Auction", IEEE, September 2009, pp 691-699.
- [13] Gregory E. Kersten, Tomasz Wachowicz, "On winners and losers in procurement auctions", IEEE, June 2008.
- [14] Tsan-Ming Choi, Xun Li, Chen Ma, "Search-Based Advertising With Choice-Based Budget Constraint", IEEE Transactions on systems, Vol.45, No.8, November 2002, pp 1178-1186.
- [15] Xiaojun Feng, Peng Lin, Qian Zhang, "FlexAuc: Serving Dynamic Demands in a Spectrum Trading Market with Flexible Auction", IEEE Transactions on wireless communications, Vol.14, No.2, February 2015.