Secure Online Auction System using Web Development

S. L. Wakchaure[1], Dahegaonkar Savi[2], Dongare Sakshi[3] ,Wakchaure Sakshi[4], Wagh Pratiksha[5]

Professor, Department of Computer Technology[1]

Students, Department of Computer Technology[1]

Amrutvahini Polytechnic, Sangamner, Maharashtra, India

Abstract: *Online auction however is a different business model where the items are sold through price bidding. Usually bidding have start price and ending time. Potential buyers in auction and the winner is the one who bids the item for highest price. We treat the fraud detection with a binary classification. For buying product online user have to provide his personal details like email address, license number, PAN number etc. Only the valid user will have authority to bid. This prevents various frauds according in online shopping. Online Auction management system is a web based application which will helps users to buy or sell items or goods; they can trade anything they want by posting the ad of the particular product. This application will allow users to post their products for auction; The bidder or customer can register and can bid for any available product. There are some many existing applications which does not contain some local products and they are not available for bidding. With the use of this online auction system user can bid for any product and buy the particular product at higher and best prices.*

Keywords: Auction System

I. INTRODUCTION

Online auction sites, such as eBay and Yahoo! Auctions, are experiencing a dramatic increase in their popularity. The number of auction items hosted by eBay has increased from 110 million to approximately 266 million between July 2010 and September 2014 . A seller lists an item online for a set amount of time and buyers must place a bid higher than the last bid in order to purchase. Online auctions have removed the physical and logistical limitations of geographic proximity, time to organise, physical space, and small target audience.

'Auctions' or 'reverse auctions' or simply 'e-Auctions'. Online auction is nothing but a group which is based for auction. In an online auction system, If you want to sell something by auction then you can post that on website. It is just a selling and buying of products. In this project user can do a bid on particular product. The main objective of the e-Auction process is that it must be possible to obtain the particular product at best value and the highest but best price. It is not possible to achieve the best value outcomes while the focus remains on price. There are two categories of users first is customers and second is vendor. Vendor can sell his products on this website and customer can purchase it accordingly. Product will be given to only those customers who can put a high bid price on the particular product to purchase. A single user can do more than one bid on product. There are two categories of users one is customers and second one is vendor, both have their own' registration forms'. There is a common 'login page' for vendors and for users but when both of them login, it would be easily find out that whether it is a vendor or a buyer because their registration forms are different. There are of their 'registration details' two home pages i.e. one page has a different behaviour if vendor login then it shows the vendor's menu and if the customer login it will show customer menu . Customers should have an appropriate knowledge of the online- Auction subject, it's market and it's market price. In this website if anyone wants to sell products first of all they will have to register first then a unique id will be given to the registered users. After registration user have to give details of their products like (price of product ,at what price he/she wants to start the bid, image of the product) or if he/she wants to sell his/her product

II. USER BASED PROBLEMS

Consider the given problem statement for an "Online Auction System" to be developed:

In this' Secure Online Auction System' new users can register to the system through an online process. By registering in the user agrees to abide by different previously defined terms and conditions as specified by the system. Any registered user

can access the different features of the system authorized to him / her, after he/she authenticates himself/herself through the login screen. An fully authenticated user can put items or products in the system for auction. Authenticated users can place a bid for any item or product. Once the auction is over, the items will be sold to the user by placing the maximum bid. Payment policy are to be made by third party payment services, which of course are guaranteed to be secure. The user selling the item will be responsible for its shipping and tracking. If the seller feels that he or she is getting a good price for a particular product, he/she can however, sell the item at any point of time to the maximum bidder currently then available.

III. LITERATURE SURVEY

3.1 Existing Auction Systems

Wurmann et al. provide a software design for online English auctions that supports both software and human agents. Their proposed auction server named the Michigan Internet AuctionBot provides for flexible specification of auctions considering different parameters so that agent researchers can explore the design space of auction mechanisms. However, the authors do not show how they developed their auction system. Furthermore, the AuctionBot has been decommissioned since the early 2000s.

The word 'Auction' is extracted from the Latin root auctus which means "I augment". It is a process of purchasing and selling items and goods through the bid and selling to the bidder who makes the highest offer will win the particular auction which has taken place. Usually in the auction when there are some bidders that participate in the same auctionthen the items or product will increase the price against each other.The increasing prices continue until it reaches the highest price by the bidder at which user can buy the product. Many types of auctions exist; each of them has their own rules and conditions. By publishing the items to the audience an auction may have a wide range of

bids which make the item or product to reach at veryhigh price. The Auction Sales or auction sittingare held in the auction houses or in other specific places. The people who wish to sell theiritems by taking part in auctioning in auction houses and publish their items for sale.In theauction sales, the seller has to pay some amount to the auctioneer who is managingthe auction by accepting offering price at which he/she has to sell the particular item and declaring items to be sold.

3.2 Problem Survey

A. Problem Motivation

Considering the limitations of the existing literature, we have designed uAuction. Our main target research is to detect shill bidding in real-time. To do this, we need to develop our own auction system as it is illegal/unethical to engage in shill bidding using commercial auction sites (e.g., eBay, TradeMe, etc.) for testing purposes. This paper's aim is to describe our knowledge and experiences with developing a web-based auction model. The reasons for developing this auction system are as follows:

- To fully understand online auction system requirements;
- To gain experience with administering an auction server and participating in online auctions;
- To enable testing of fraud detection/prevention techniques; and
- To educate auction users about fraud/auctioning behaviours.

The need of this system is to develop a system that offers maximum level of security as commodities are involved in the process. The system must first of all give exclusive access to the buyers and sellers to advertise the product for auctioning and bidding. When you do register, then the registration of the users must be verified by a valid aadhar number which can be tracked in case of a fraud practices and also by a mobile OTP that is sent at the time of registration. The development of this new system contains the following activities:

1. This system will provide secure registration and profile management of the users.
2. Administrators would authorize the product to auction, set auction dates and minimum auction amount for that product.
3. In prior to each bid, the user's mobile number and Aadhar card details must be authenticated and authorized.
4. Users can select their interested fields for bidding and periodic Message alerts must be sent in case if they have won an auction for a particular item/product.
5. Complete Search/Site map of the entire site for easy access.

An auction house needs to have products to auction/bid so in the proposed system this is done using product registration module. The module is open to user who is registered into the system sellers and they need to authenticate before they register any product, This system controls all the auction closing dates by adding 1 day to the submitting date there by restricting the bidding process to go on definitely. Another important module in the propose the protect in the "Bidding module ". Here one can see the details of any particular product and also the bidding history. The user can bid on that item by entering any amount which is greater than or equal to the incremental bid amount. Here also the system checks to see whether the user has his credential verified validly or otherwise he/she will be directed to the login, registration page. The last but not the least module is the "Administration module". This particular module is only open to the web administrator due to some security reasons. In this module the administrator can add product categories and the it is to be avoid upright the creation of categories. This will be necessary when some of the details of the product need to be edited for one reason or more reasons. The third and the last section closes bid and manages where the administrator notifies both the seller and buyer then they need to complete the transaction. There is another module which runs more or less like any other background process. The function of the module is to close the bid of the products whose closing date is less than the current date. This complete process is automatic and hiddenfrom the web users.

B. Project Scope

This system is designed as an online web-based application which can be accessed by any other devices it can be, either a computer, tablet, iPad, iPhone, mobile phone or PDAs.This system is targeted to serve primarily to the local towns and other cities, then after when more modification is made it can serve to the whole country where more business enterprises can have access to the system and finally reach out to the entire parts of world. Using this online auction management system, bidders will be able to get connected to the specific sellers who will offer them necessary information or can give them hand or ideas to sell their items. It will help bidders and buyers save time and offer quality deliverables to the bidders by giving them quick response and attention to the services (Gemino and Parker, 2009). This system will provide advantages by changing the manual way of seeking items in the market and travelling far long journeys just to get some items and it also therefore saves the time. The scope of this application is to build a user friendly online auctioning website, where user will be able to auction any product which is available in nearby areas or regions in the world. By using Online Auction management system it will be easy for auctioneer to make an auction and it will also be time saving so and beneficial in many other ways. By making auction through this application will help reach maximum number of buyers bidding in local area. There will also be an extra feature where bidder and seller can message each other.
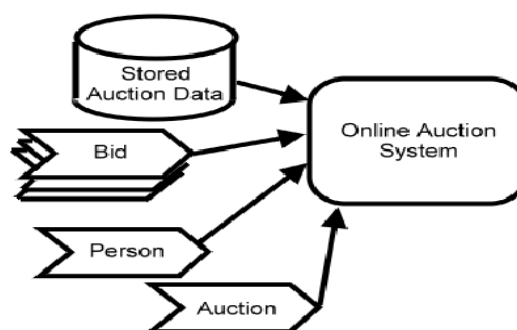
3.3 System Architecture Diagram

Figure 1

3.4 Participants and the Online Auction Format

A. Online Auction Participants/Stakeholders There are three main stakeholders in an online auction: • Seller – A seller lists an item (or collection of items) for sale. The seller is typically after the highest price possible for the item(s). • Bidder – A bidder submits a bid for an item listed by the seller. The amount the bidder bids is an indication of what the bidder is willing to pay for the item being auctioned. The bidder is typically after the lowest price possible in order to win. • Auctioneer – The auctioneer is responsible for hosting the auction, providing the resources required for the auction, and conducting the auction proceedings according to the auction rules. The auctioneer is usually paid a listing fee by the seller. In some cases,

the auctioneer may receive a commission based on the winning price. In this case, the auctioneer will typically want the item to sell for the highest price possible.
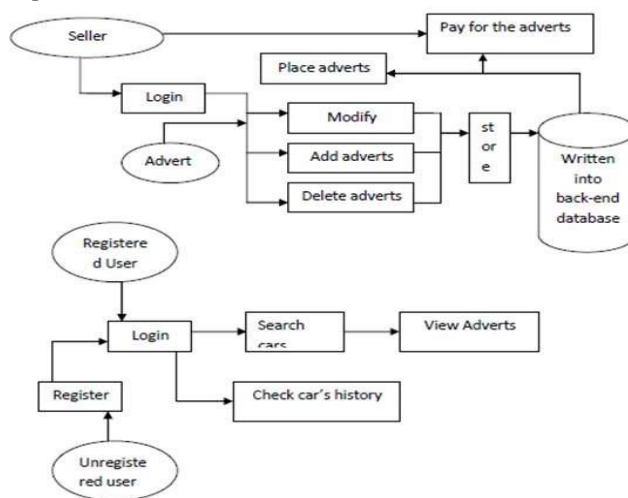

Figure 2

Advantages

- Only authorized and verified customer can participate in auction.
- Fraud customer or seller gets detect in early stages and measure to prevent it.
- Authenticate legitimate users can buy the product online very efficiently and securely with the help of this system
- The products for auction does not need any physical location
- The bidder can participate in auction from anywhere at anytime through online auction.

Disadvantages

- Customer can view only the product picture and some details on the auction website, which may lead to lack of product genuineness

IV. CONCLUSION

The online auction system has made customers more efficient and efficient in their behavior and has driven businesses to new heights, forcing many to make the adjustments and changes necessary to reach a new market of knowledgeable consumers. The rapid growth of e-auctions has led to an e-transformation in global retail infrastructure. Thanks to a growing internet and higher incomes and a more large population, despite many obstacles. Secure online payments, good for electronic stores, return policies and exciting discounts help you understand the benefits of the auction system.

APPLICATIONS

Online auctions include business to business (B2B), business to consumer (B2C), and consumer to consumer (C2C) auctions.

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BIOGRAPHY

S. L. Wakchaure,(Lecturer) Dept of Computer Technology, Amrutvahini Polytechnic, Sangamner

Dahegaonkar Savi, (Student) Department of Computer Technology, Amrutvahini Polytechnic, Sangamner

Wakchaure Sakshi, (Student). Department of Computer Technology, Amrutvahini Polytechnic, Sangamner

Dongare Sakshi, (Student) Department of Computer Technology, Amrutvahini Polytechnic, Sangamner

Wagh Pratiksha, (Student) Department of Computer Technology, Amrutvahini Polytechnic, Sangamner