



ONLINE PRODUCT AUCTIONING REVOLUTIONIZES FRAM TRADE: EFFICIENCY, ACCESSIBILITY, AND GLOBAL REACH

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ABSTRACT :

Bidding is one of the most ancient economic practices, persisting through the ages to facilitate the exchange of diverse goods. Despite its historical continuity, the core structure of bidding has remained unchanged. This dissertation explores the effectiveness of conventional bidding mechanisms in situations where the value of items relies on information accessible only to fellow bidders. In this specific scenario, it is acknowledged that sealed-bid formats generally fall short of achieving optimal allocation since they preclude the sharing of crucial information among bidders, in auctions such as those dedicated to art sales, a customary approach involves initiating with a relatively modest starting price, progressively elevating it until only one bidder expresses interest in acquiring the item. The specific dynamics of this process vary, with my proposed model allowing a bidder who withdraws at a certain price point to re-enter the bidding at a higher price potentially.

KEYWORDS: Online bidding, Bid, Auction, Click on the mouse, Real-time auctions, Sealed-bid formats

INTRODUCTION :

The world is constantly changing, with new technologies affecting how we live and do business. The history of the world economy is closely related to technological progress. The invention of the steam engine created machinery, the discovery of electricity made mass production possible, and the advent of the Internet made it possible to coordinate various aspects of work remotely. the division of production and the growing value of the world chain[1].

The digital revolution is driving a new society. From the emergence of artificial intelligence to the deployment of the Internet of Things (IoT), the world will undoubtedly experience a new era in which everything is connected. Of course, for the transition from a traditional society to a digital society we must not forget the blood flow and the "energy" of this transition. From the energy sector, we have to start thinking about this digitization critically [2].

The world is entering the era of digitization, where most of our daily activities are highly dependent on innovative digital and computer technologies. These current technologies have found their applications in socio-economic, environmental, sustainability, and climate research applications to increase the productivity and efficiency of a given system[3].

Electronic markets have become a global exchange platform that has transformed social and economic behavior. The digital revolution has opened the doors of the global village to industry, services, cities, and regions. Information and communication technology (ICT) can be a tool for developing rural and agricultural areas, as real experiences published in the literature show. The emergence of new technologies has also led to major changes in consumer purchasing processes and market relationships. The interest in places to shop is moving away from large shopping centers to "zero-kilometer" shopping and online shopping[4].

LITERATURE SURVEY

This perspective describes the possibilities that digitization can offer to build a sustainable society in the future. Smart technologies are seen as game-changing tools, the integration of which benefits three important elements of the food-water-energy nexus: (i) sustainable food production; ii) availability of clean and safe drinking water; and (iii) production and use of green energy. It then discusses the benefits of digitalization, which accelerates the transition to sustainable production practices and improves the health and well-being of citizens by providing digital access to care, especially for underserved communities.[1]

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A method, computer program product, and hardware for providing a user evaluation service in online auctions are disclosed. Objective criteria such as credit reports are combined with subjective assessments to create a user profile. Using objective criteria to complete user ratings treats new users more fairly and prevents auction participants from colluding to boost their ratings. A user profile can be shared between online auction services so that a user's combined transaction and rating history can be used across multiple sites.[3]

Today, due to the significant increase in product catalogs available at popular online auction houses, it is almost impossible to investigate the large number of auctioneers and shill bidders, the most common auction fraud in online auctions. To handle this type of increasing workload, automated mechanisms such as data mining techniques have become necessary. In this paper, we first present an RT-SAC (real-time self-adaptive classifier) framework to identify suspicious bidders in online auctions using a hierarchical neural network.[4]

According to research, there are many scams in online auctions. For example, in 2008, this figure was around 43 million dollars in the United States. Therefore, it can be considered a critical issue. This issue has always been a concern of customers and online auction users. Because of the interplay and interaction between security and trust, the two concepts must be considered together. To increase security, trust, and anti-fraud measures, it is essential to examine the structures and frameworks to reduce online auction fraud.[5]

The method includes checking whether the first bid exceeds the second bid in an auction to determine continuous priority in providing continuous service to at least the first and second bidders, wherein the relative priority in providing service to the first bidder depends on whether the value of the first bid exceeds the value of the second bid and where the service to the second bidder is relative priority depends on whether the value of the second bid exceeds the value of the first bid.[6]

This research seeks an answer to the question of how a person would make a trade-off between the listing fee (i.e. the cost of listing an auction item) and the probability of a transaction (i.e. the possibility of selling the item). Applying the business decision paradigm to the auction context, we study seller selection in an online auction and subsequent bidding strategies when faced with a trade-off between transaction probability and listing. The results of the laboratory tests suggest that the seller would be willing to pay high costs for a better business opportunity. Also, if the expected probability of the event is high, the seller is more likely to set a high starting price despite the high fee. Implications for theory and practice are discussed.[7]

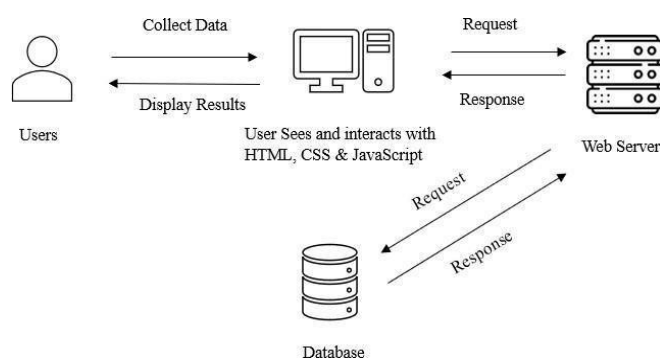
The main problem is the false assumption that the evaluations of bidders are independent of each other, which leads to inefficient auctions. To eliminate the inefficiencies of current online formats, we introduce a descending price auction model adapted for online shopping. Essentially, this model should address the complexity of competition in a networked environment while maximizing social welfare.[8]

PROPOSED SYSTEM

The opportunity to shop from the comfort of one's own home has seen a change like never seen before. Within the span of a few short years, what may have begun as an experimental idea has grown into an immensely popular hobby, and in some cases, a means of livelihood, online Bidding gathers tremendous responses every day, all day. With the point and click of the mouse, one may bid on an item they may need or just want, and in moments they find that either they are the top bidder or someone else wants it more, and you're outbid! The excitement of Bidding all from the comfort of home. One can have a positive experience doing business on an online Bidding, and each party can leave satisfied with their 'deal', whether they are the buyer, the seller, or the conveyance that brought it all together. The development of this new system contains the following activities, which try to develop the web application's entire process while keeping in view the database integration approach :

- This system will generate and track team progress while ensuring secure registration and profile management for users.
- Administrators can approve products for auction, set auction dates, and establish minimum auction amounts for each product.
- Before placing a bid, users' bank or credit accounts must undergo authentication to confirm the availability of the required bid amount.
- Users can choose their preferred fields for bidding, and periodic email alerts will be sent when an item in their selected category goes up for auction.
- The site features a comprehensive search and site map for convenient navigation.
- Discussion forums are available for users to interact with one another, facilitating discussions about the value and authenticity of products.

ARCHITECTURE DIAGRAM



Admin Registration Module

1.1 Admin Registration: In this section, the user can register on the system and get this online account on-site.

1.2 Admin Login: In this section, the user can log in to the system and check various products.

1.3 Product Categories: In this section, the products are arranged and can be viewed in categories.

1.4 Billing details: In this section, the admin can view and update his/her profile, view the products that are added to the bid, view order details

Field	Type	Constraints
User Id	Number	Primary key
LoginName	Varchar	
Passwd	Varchar	
FirstName	Varchar	
LastName	Varchar	
Role	SmallInt	
RegDate	DateTime	
Address	Varchar	
Email	Varchar	

2. User Registration Module

2.1 User login: In this section, the user can log in to the page.

2.2 User signup: The user can register for the first time.

2.3 Add to bid: In this section, the user can add products.

Cancel Bid: In this section, user can cancel their products.

2.5 View products: In this section, users can view the products they bid on.

2.6 Change password/Update profile: In this section, user can change their password or update their profile.

2.7 Logout: In this section, the user can log out of the page.

Result and discussion

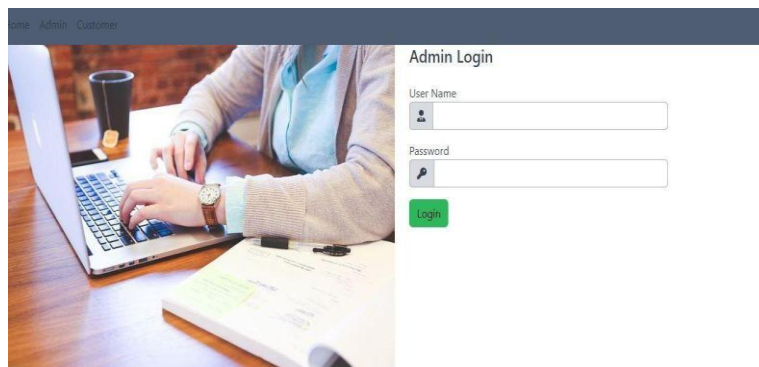


FIGURE 1. Admin Login Page

Figure 1, the login page for "Online Product Auctioning Revolutionizes Trade" is the portal to a groundbreaking platform. Transforming traditional trade facilitates online auctions for various products. Users gain access to an innovative marketplace, enhancing efficiency and competitiveness. The login page symbolizes the initiation of a trade revolution, bringing convenience and dynamism to commerce.

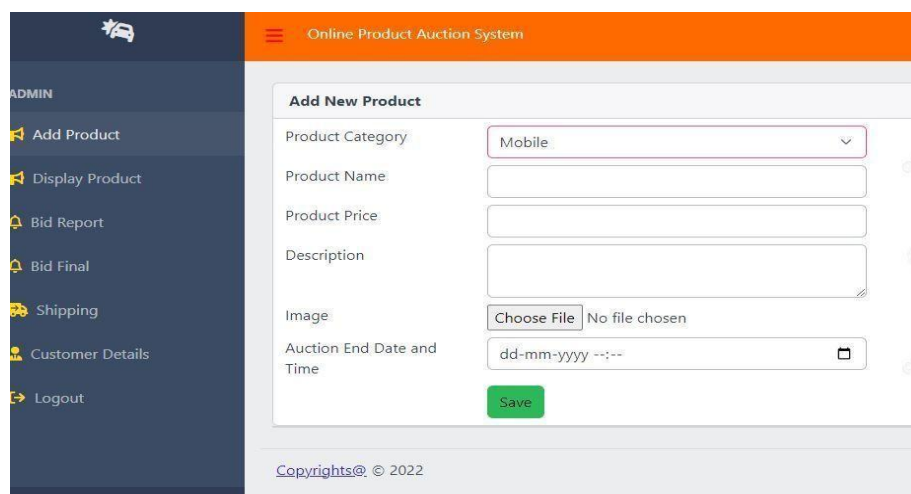


FIGURE 2. Add Product page

Figure 2, the "Online Product Auctioning Revolutionizes Trade" Add Product page empowers users to seamlessly list their products for online auctions. Streamlining the process enables sellers to provide detailed information, images, and pricing. This user-friendly interface enhances the platform's efficiency, fostering a dynamic marketplace and contributing to the evolution of traditional trade practices.

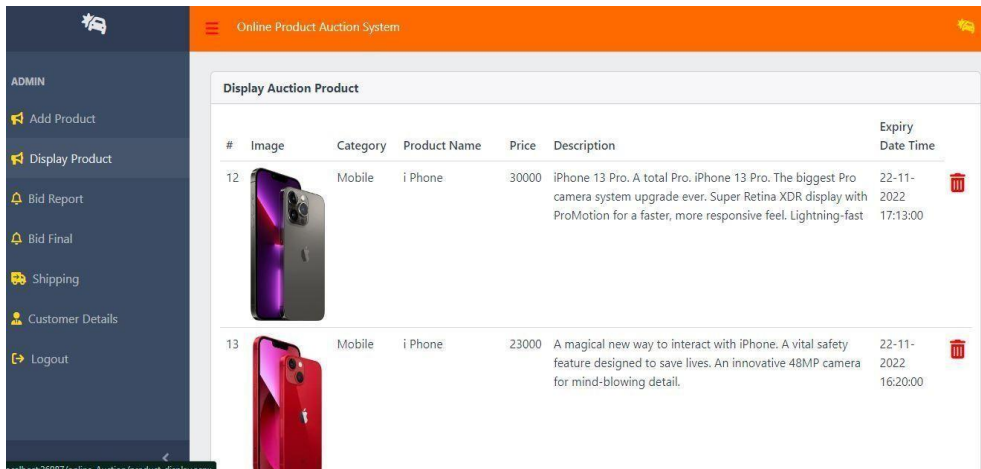


Figure 3. Display product page

Figure 3, the "Online Product Auctioning Revolutionizes Trade" Display Product page showcases a vibrant marketplace. Featuring detailed product listings with images and descriptions, it offers a user-friendly experience. Buyers can explore a diverse range of items, fostering transparency and competition. This page signifies a transformative shift in trade dynamics, embracing innovation and accessibility.

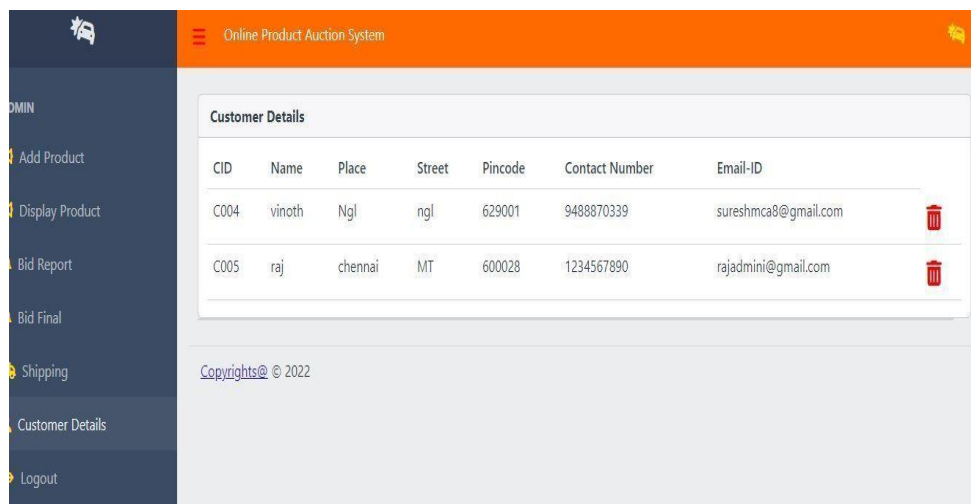


Figure 4. Customer Details page

Figure 4, "Online Product Auctioning Revolutionizes Trade" Customer Details page is a secure platform for buyers. Here, users input and manage their personal information, ensuring a smooth transaction experience. This page prioritizes privacy and convenience, underscoring the platform's commitment to revolutionizing trade by providing a user-centric and trustworthy environment.

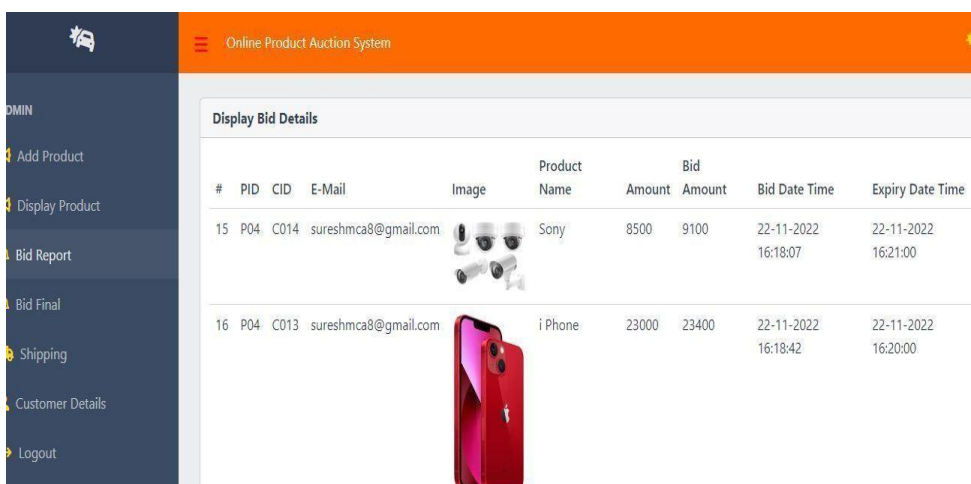
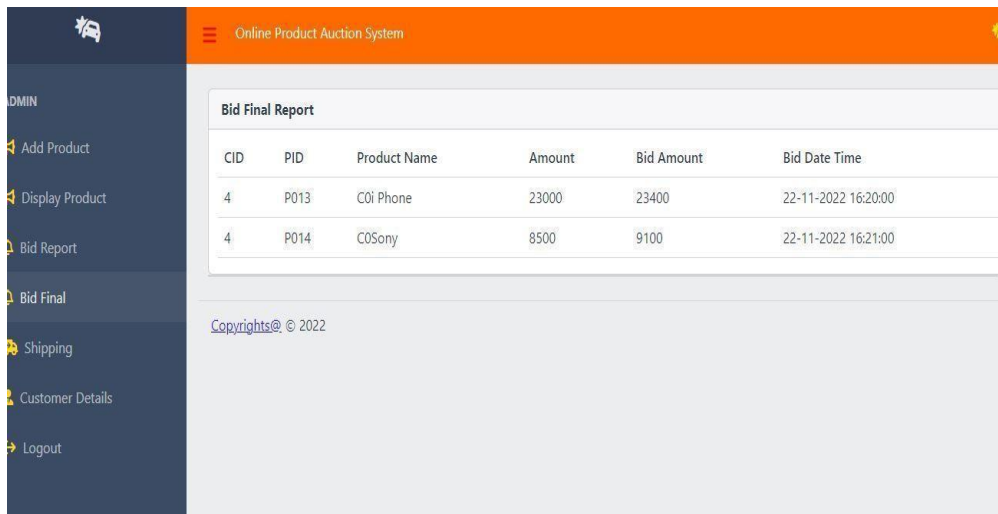


Figure 5. Bid Report page

Figure 5, the "Online Product Auctioning Revolutionizes Trade" Bid Report page is a comprehensive overview of bidding activities. Users can track bids, view auction progress, and assess competitive pricing. This page enhances transparency and engagement, revolutionizing the trade landscape by providing real-time insights, and empowering users to make informed decisions during the auction process.



CID	PID	Product Name	Amount	Bid Amount	Bid Date Time
4	P013	COi Phone	23000	23400	22-11-2022 16:20:00
4	P014	COSony	8500	9100	22-11-2022 16:21:00

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Figure 6. Bid Result page

Figure 6, result page is a pivotal interface revealing auction outcomes. It displays winning bids, bidder information, and transaction details. This page marks a transformative shift in trade dynamics, fostering transparency and efficiency, as users witness the results of the innovative online auction platform.

CONCLUSION & FUTURE ENHANCEMENT

In conclusion, the implementation of an online auction system represents a significant leap forward in the realm of commerce and trade. This platform has been meticulously designed to address the limitations of traditional auction houses, offering a more inclusive and accessible experience to participants from diverse geographical locations. The dual-phase approach of logical and physical design ensures the seamless translation of user requirements into a robust and efficient system. The logical design phase, encompassing data flow diagrams and database design, focuses on capturing user needs and determining the intricate details of information flow within the system. This meticulous planning lays the groundwork for the subsequent physical design or coding phase, where programmers bring the envisioned system to life, adhering to precise design specifications. Key components such as input design, output design, and database design play pivotal roles in shaping the user experience. Input design ensures the efficient collection and processing of data, while output design delivers clear and intelligible information to users, aiding in decision-making. The physical design phase, involving program development and coding, solidifies the functionality of the system, delivering a working platform that meets user expectations without compromising effectiveness, and fostering an environment conducive to ongoing enhancements and updates.

FUTURE ENHANCEMENT:

The developed system is flexible and changes can be made easily. The system is developed with an insight into the necessary modifications that may be required in the future. Hence the system can be maintained successfully without much rework. One of the main future enhancements of our system is to enhance the system security by adding the option of Blacklisting defaulting bidders. There also can be an option for rating sellers. Online payment settlement can be incorporated into the system

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