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Bidhub: Online Auction Platform

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Abstract—

Online auctions provide a convenient way for buyers and sellers to participate in the buying and selling of products through the internet. Traditional auction systems require physical presence, manual record keeping, and direct communication between participants, which can limit accessibility and transparency. To address these challenges, this project presents BidHub: Online Auction Platform, a web-based application designed to simplify and organize the auction process.

The proposed system allows users to register and log in, sellers to list products with descriptions and starting prices, and buyers to browse available products and place bids. The platform manages auction information, maintains bid records, and identifies the highest bidder when the auction period ends. The system is developed using Python and Django for backend processing, HTML, CSS, and JavaScript for the user interface, and SQLite for database management.

The platform aims to provide a user-friendly environment for online bidding, improve transparency in auction activities, and reduce the limitations of traditional auction methods. It also provides a foundation for future enhancements, including real-time bidding updates, secure online payment integration, notifications, and advanced fraud prevention mechanisms.

Keywords— Online Auction, BidHub, Django, Python, E-Commerce, Product Listing, Online Bidding, SQLite, Web Application..

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I. INTRODUCTION

The growth of internet technology has transformed the way people buy and sell products. Online auction platforms allow buyers and sellers to participate in auctions without being physically present at the same location. These platforms improve accessibility, save time, and provide opportunities for users to participate in competitive bidding.

Traditional auction systems often require participants to gather at a particular location. They may also depend on manual record keeping and direct communication, which can create difficulties in maintaining accurate bidding records and ensuring transparency.

The proposed BidHub: Online Auction Platform provides a web-based solution for managing auction activities. Users can register and log in to the system, sellers can list products for auction, and buyers can view product details and participate in bidding. The system maintains auction-related information in a database and supports the management of product listings and bids.

The project uses Django to handle backend operations, HTML, CSS, and JavaScript to develop the frontend interface, and SQLite to store application data. The platform is designed to provide a simple and organized auction environment for users.

The main aim of the project is to make online auction activities more accessible, efficient, and transparent while providing a foundation for future improvements in security, payment processing, and real-time communication.

II. LITERATURE REVIEW

Existing research on online auction systems has explored web-based bidding, electronic commerce, secure transaction management, and real-time auction processing. These approaches demonstrate how web technologies can simplify the interaction between buyers and sellers and improve the management of auction activities.

Traditional auction methods have limitations such as restricted participation, manual record keeping, and difficulties in providing immediate updates about bidding activities. Web-based auction systems address these issues by allowing users to access auction information through internet-connected devices.

Research on secure electronic auction systems emphasizes the importance of user authentication, data protection, reliable bid recording, and fair bidding procedures. These mechanisms help protect user information and support confidence in online transactions.

Real-time bidding systems focus on updating bid information efficiently and allowing participants to monitor the progress of an auction. However, implementing secure payment processing, preventing fraudulent bidding, and maintaining accurate auction records remain important challenges.

The proposed BidHub platform uses web technologies and database management to organize product listings and bidding activities. It provides a foundation for improving accessibility, maintaining auction records, and supporting transparent participation in online auctions. Future enhancements can include real-time updates, payment integration, notifications, and additional security mechanisms.

III. METHODOLOGY

The proposed BidHub: Online Auction Platform follows a web-based client-server architecture. The frontend provides the interface through which users interact with the application, the Django backend processes requests and manages application logic, and the SQLite database stores relevant information.

The system development process begins with identifying the requirements of buyers, sellers, and administrators. The application is then organized into functional components for user management, product listing, auction management, and bidding.



Python and Django are used to implement backend functionality. HTML, CSS, and JavaScript are used to develop the user interface, while SQLite provides database storage. The application processes user requests and interacts with the database to manage the information required for auction activities.

The working procedure begins with user registration and login. After accessing the platform, sellers can create product listings by providing the required product information and starting bid price. Buyers can browse the available products, examine their details, and participate in bidding according to the auction rules.

The system maintains bidding information and supports the identification of the highest bidder when an auction closes. Auction records stored in the database can be used to review product and bidding information.

The major modules of the proposed system are:

User Management: Handles user registration and login.

Product Management: Supports the creation and management of product listings.

Auction Management: Organizes auction details and auction status.

Bidding Management: Records bids and supports the identification of the highest bidder.

Database Management: Stores user, product, auction, and bidding information.

The system is designed to provide a simple interface and organized data management. Additional security, payment, and notification features can be incorporated in future development stages.

IV. RESULTS AND DISCUSSION

The BidHub: Online Auction Platform is designed to provide an organized environment for online auction activities. It supports the management of user accounts, product listings, and bidding information through a web-based interface.

The application uses Django to process requests and SQLite to maintain the required records. The interface enables users to interact with the

The following sections provide space for inserting screenshots of the implemented project. The screenshots should be captured from the actual application to demonstrate its working functionality.

1. User Interface

a) Home Page

The home page serves as the main interface of the BidHub platform. It introduces the online auction application and provides access to the available features. The interface is designed to help users navigate the platform and access auction-related information.



Fig 1.a Home Page of the BidHub Online Auction Platform.

2 Admin Dashboard

The Admin Dashboard provides a centralized interface for the administrator to oversee and manage the activities of the BidHub Online Auction Platform. It helps the administrator monitor product listings, manage auction information, and supervise the overall functioning of the system. This dashboard supports organized platform management and helps maintain auction-related information efficiently

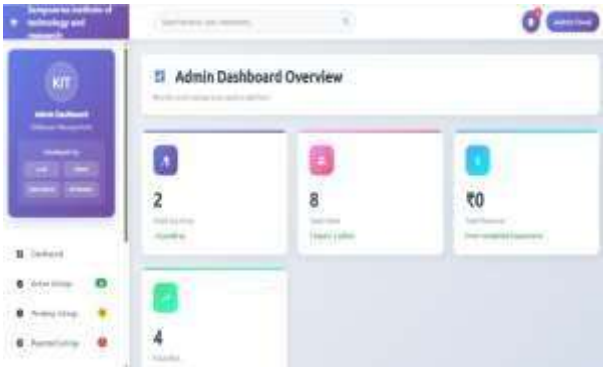


Fig.2 Admin Dashboard

3 Seller Dashboard

The Seller Dashboard enables sellers to manage products available for auction. Sellers can add new products by providing details such as product name, description, and starting bid price. The dashboard helps sellers organize their product listings and monitor the auction activities associated with their products**.**

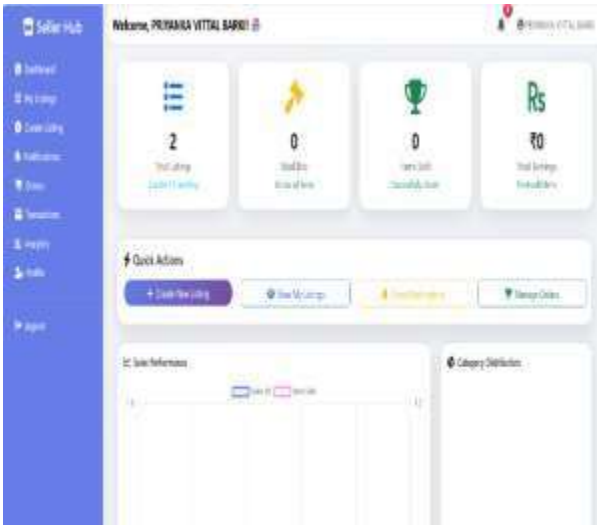


Fig.3 Seller Dashboard

4 Buyer Dashboard

The Buyer Dashboard provides an interface for buyers to browse available auction products and view relevant product details. Buyers can examine product descriptions, check starting bid prices, and place bids on items according to the auction rules. This dashboard makes it easier for buyers to explore available products and participate in online bidding.



Fig.4 Buyer Dashboard

4. Bidding Interface

The bidding module supports the recording and management of bids placed by users on available auction items. The platform maintains bidding information and supports the identification of the highest bidder when the auction period ends.

The bidding process provides an organized way for participants to compete for products. The stored information can also support the review of auction activities.

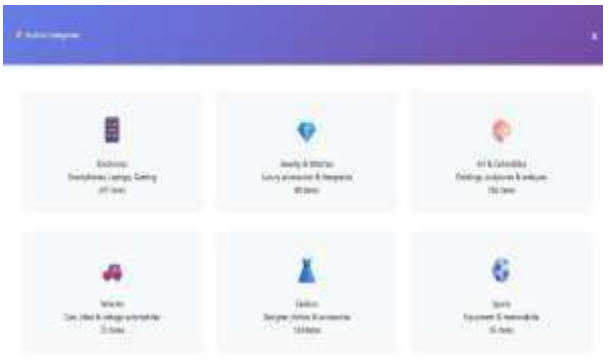


Fig 5 List of categories

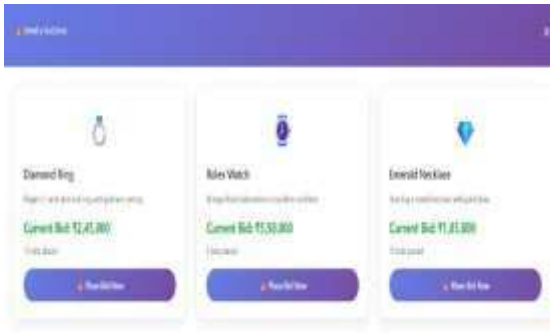


Fig 6 List of Auctions



Fig 7 Auction Bidding

The final evaluation of the application should be based on actual testing of user authentication, product listing, bidding operations, database storage, and auction completion. The implemented features and observed results should be documented using screenshots and test observations.

V. CONCLUSION

The BidHub: Online Auction Platform provides a web-based approach to organizing online auction activities. It is designed to simplify the interaction between buyers and sellers by supporting user registration, login, product listing, and bidding management.

The use of Python and Django supports backend processing, while HTML, CSS, and JavaScript provide the frontend interface. SQLite is used to store the information required by the application. These technologies provide a foundation for developing and managing the auction platform.

The project aims to improve accessibility and organization in the auction process while reducing dependence on traditional auction methods. Maintaining product and bidding information in a database also supports the systematic management of auction activities.

Future enhancements may include real-time bidding updates, secure online payment integration, email or SMS notifications, advanced user authentication, fraud detection, and improved auction reporting. These enhancements could make the platform more secure, reliable, and suitable for a wider range of online auction applications.

REFERENCES

[1] C. Zhang and J. Li, “Design and Implementation of an Online Auction System,” 2019.

[2] A. Kumar and P. Singh, “Secure E-Auction System Using Web Technologies,” 2020.

[3] S. Sharma and R. Gupta, “Web-Based Online Auction Platform for E-Commerce Applications,” 2021.

[4] M. Patel and K. Shah, “Design of Real-Time Online Bidding System Using Web Technologies,” 2022.

[5] D. Brown and T. Wilson, “Secure Online Payment and Transaction Management in E-Commerce Platforms,” 2023.