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| **Synopsis Report on**  **Online Auction System**  **Submitted as partial fulfillment for the award of**    **BACHELOR OF TECHNOLOGY**  **DEGREE**    **Session 2022-23**  **in**  **CSE-Data Science**  **By:**    **Aryan Gupta**    **Under the guidance of:**  **Ms. Shreya**    **DEPARTMENT OF CSE-DS**  **ABES ENGINEERING COLLEGE, GHAZIABAD** | | |
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| **AFFILIATED TO**  **DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY, U.P., LUCKNOW**  **(Formerly UPTU)** | | |

# Student’s Declaration

We hereby declare that the work being presented in this report entitled **“Online Auction**

**System is** an authentic record of my/ our own work carried out under the supervision of Ms. Shreya**, CSEDS.** The matter embodied in this report has not been submitted by us for the award of any other degree.

**Date: 13/03/2023**

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| **Signature of student** |
| **(Name: Aryan Gupta)** |
| **(Roll No.2100321540035 )** |
| **Department: CSE-DS** |

This is to certify that the above statement made by the candidate(s) is correct to the best of my knowledge.

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| **Signature of HOD** | **Signature of Supervisor** |
| **……………………** | **Mr. Shreya** |
| **CSE-DS** |
| **Date:** | **CSE-DS** |

# Acknowledgement

We would like to convey our sincere thanks to **Ms. Shreya** for giving the motivation, knowledge, and support throughout the course of the project. The continuous support helps in a successful completion of project. The knowledge provided is very useful for us.

We also like to give a special thanks to the department of Computer Science and Engineering-Data Science for giving us the continuous support and opportunities for fulfilling our project.

We would also like to extend our sincere obligation to Mr. Prabhat Singh, Head of Department, Computer Science and Engineering-Data Science for providing this opportunity to us.

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## List of Tables

* User table: This table can be used to record data on system users, such as their usernames, passwords, email addresses, and other pertinent information.
* The system's auction table can be used to hold data on the items being auctioned, their starting bids, ending times, and other pertinent information.
* Bid table: This table can be used to hold information on user bids on objects up for sale, including the user ID, auction ID, amount of the bid, and other pertinent information.
* Item table: This table can be used to hold facts about the products that are being sold through the system, such as their names, descriptions, pictures, and other pertinent information.
* Transaction table: This table can be used to hold data regarding system transactions, such as buyer and seller IDs, the item purchased, the amount paid, and other pertinent information.
* Table of categories: This table can be used to record details such as names and descriptions of the categories that items can be categorised under.

## List of Figures

1. **PROPOSED APPROACH**

* Collecting requirements Determine the specifications for the online auction system first. Creating an account, seeing items, placing a bid on items, and paying for products you win are some examples of this. In addition, security, user privacy, and scalability may need to be taken into account.
* Designing the user interface: After having a firm grasp of the requirements, build an intuitive user interface. To see how the layout of the pages will look, think about utilising wireframes or mock-ups.
* Database design: Choose the database architecture and structure that will store user, item, and bid information. Save data using a relational database management system, such as MySQL or PostgreSQL.
* Backend development: Create server-side scripts and API endpoints as well as the system's backend. To create the backend, you may use a web application framework like Flask or Django.
* Frontend development: Create the system's front end using JavaScript, CSS, and HTML. Build the user interface using a frontend framework like React or Vue.js.
* Testing the backend and frontend to see how well they integrate is known as integration testing.
* Security testing: Check the system for flaws and put security controls in place to safeguard user information and stop fraud.
* Installation: Install the system on a hosting platform like AWS or Heroku.
* Updating and maintaining the system on a regular basis will help to keep it secure, repair errors, and add new features as necessary.

1. **WORK FLOW DIAGRAM**

Testing the backend and frontend to see how well they integrate is known as integration testing.

Security testing: Check the system for flaws and put security controls in place to safeguard user information and stop fraud.

Installation: Install the system on a hosting platform like AWS or Heroku.

Updating and maintaining the system on a regular basis will help to keep it secure, repair errors, and add new features as necessary.

Integration testing involves evaluating how well the backend and frontend work together.

Testing for security holes and putting security measures in place to protect user data and thwart fraud.

Deploy the software on a web hosting service like AWS or Heroku

Updating and maintaining the system on a regular basis will help to keep it secure, repair errors, and add new feaRegular system updates and maintenance will assist to keep it secure, fix bugs, and add new features as required.tures as necessary.

Delivery of the Thing: After the Seller delivers the Item to the Buyer, the Sale is Complete.

Deploy the software Feedback: Following the transaction, the buyer and the seller can each leave the other feedback, which other users can view.on a web hosting service like AWS or Heroku

1. **Proportion of positive, negative and neutral tweets.**

* Get tweets: To gather tweets that make mention of the online auction system, use a technology like Twitter's API. By employing precise system-related keywords or hashtags, you can weed out unrelated tweets.
* preparation of the data Remove stop words, special characters, and URLs from the tweets to clean them up. To normalise the text, you can also utilise strategies like stemming or lemmatization.
* Sentiment analysis: To assess the sentiment of the preprocessed tweets, use a sentiment analysis tool like VADER or TextBlob. These tools categorise a text's sentiment as neutral, positive, or negative.
* After performing sentiment analysis, count the number of tweets that were categorised as favourable, negative, or neutral.
* Compute the proportion: In the end, determine the percentage of all collected tweets that are positive, negative, or neutral.

## ABSTRACT

An online auction system is a platform where buyers can place bids on items that are being offered for sale by sellers. The system offers a virtual marketplace where buyers and sellers can connect and where unique things can be found or better prices can be found. Several forms of auctions, including open, sealed, and reverse auctions, can be supported by the online auction system. Features including user registration, item listing, bidding, payment processing, and feedback gathering are often included in the system. To safeguard the interests of both buyers and sellers, the system must moreover offer a trustworthy and secure environment. A complicated system, the online auction system necessitates the integration of numerous elements, including user interface, database administration, and processing of payments. Buyers and sellers can exchange goods and services in a worldwide marketplace through the use of an effective online auction system.

### Chapter 1

#### Introduction

The online auction system is a platform where buyers can place bids on items that are being offered for sale by sellers. Through the creation of a virtual marketplace where buyers and sellers from around the globe may conduct business with ease, the online auction system has completely changed how people purchase and sell goods and services.

We want to create a simple online auction system for this short project that mimics the features of a real-world online auction system. Registered users can advertise products for sale on the system, and other users can place bids on those items.

Additionally, the system will have functions for user registration, bidding, and payment processing.

This small project is intended to give beginners a hands-on opportunity to practise their web development skills and acquire experience with a simple online auction system. It will go through key ideas including security, database administration, and web development.

Participants will have gained expertise in creating a web-based application using contemporary technologies by the end of this project, as well as a fundamental understanding of the concepts and features of an online auction system.

**The main objective of the project are : -**

* The online auction system mini project's main goal is to give participants a hands-on experience with web programming and database management, with an emphasis on mimicking the fundamental features of an online auction system.
* Participants in the project will gain a fundamental knowledge of the concepts and features of an online auction system, including user registration, item listing, bidding, and payment processing.
* Participants will gain experience in creating a web-based application using cutting-edge technologies including HTML, CSS, JavaScript, and PHP by finishing the project. In order to create a secure and dependable online auction system, they will also learn about database management and security precautions.
* In the end, the online auction system mini project aims to offer a practical learning opportunity.

**Chapter 2**

#### Project Objective

* User registration and authentication: Users should be able to sign up and make their own profiles using the system. In order to guarantee that only authorised users may access the system, it should also offer authentication techniques.
* Sellers should be able to list products for sale and manage their listings using the system. The initial bid amount, the minimum bid increment, and the length of the auction should be specified by the seller.
* Management of Bids: Registered users should be able to manage their bids and place them on things using the system. Users ought to be able to see their bid history and get alerts on the progress of their bids.
* Payment Processing: To make transactions between buyers and sellers easier, the system should offer dependable and secure payment processing methods.
* Handling of Feedback: The system should enable customers and merchants to share feedback on their interactions. Among the community of online auctions, this feedback may aid in fostering trust and reputation.
* Security and privacy: To safeguard user data and thwart illegal access, the system should include strong security features. Additionally, it must adhere to applicable privacy laws.

**Chapter 3**

#### Proposed Methodology

* Collecting criteria is the initial step in creating the online auction system. This entails determining the system's requirements for its features and functionalities, as well as its needs and goals.
* Designing the system architecture, which includes the user interface, database structure, and backend features, is the following stage. To envision the system design and make sure it satisfies the requirements, prototypes and wireframes must be created.
* Implementation: Based on the design specifications, the implementation stage entails writing code and creating the system. This covers both backend development using a server-side language like PHP or Python and front end development using HTML, CSS, and JavaScript.
* Testing: During the testing phase, the system is put to the test for usability, functionality, and security. To make sure the system complies with the requirements and is error-free, unit, integration, and user acceptability testing must be conducted.
* Making the system accessible to users on a web server is known as deployment. This include setting up the database, the server environment, and making sure the system is scalable and capable of supporting a high number of users.
* Maintenance and Support: The third phase entails continuing system maintenance and support, which includes bug fixes, new feature additions, and user technical help.

**PROPOSED APPROACH:-**



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Planning and requirement gathering



•

-

Designing the system architecture, user interface, and database structure



•

Technology Selection



•

backend programming using a server-side language



•

Testing, Making the system accessible to users, maintenance and Support

#### Chapter 4

**Design and Implementation**

The design and implementation of our project is as follows:

Requirement gathering and analysis: Compiling and analysing the system's requirements is the first stage. This involves determining the system's desired features and functionalities as well as the various user roles.

Designing the database schema that will house the system's data is the following stage. Table creation, table connection definition, constraint definition, and index definition all fall under this category.

Designing the system architecture entails selecting the technology stack, computer languages, frameworks, and tools that will be used in the system's development. The system's general structure must be designed, its components and modules must be identified, and the APIs and protocols that will be used for component communication must be chosen.

Designing the layout and user interface of the system, including the creation of web sites, forms, and graphical components, is called user interface design.

Implementation: The system is programmed during the implementation process based on the requirements and design. Writing the code for the database entry layer, the frontend user interface, and the backend server all fall under this category.

Testing and deployment: After deploying the system, it is thoroughly tested to make sure all of its features and functionalities operate as intended. After testing is finished, the system is put into production so that users can utilise it.

Maintenance: To make sure the system keeps working properly after it has been implemented, maintenance is required. Bugs must be fixed, new features must be added, and the system must be updated to reflect advancements in technology.

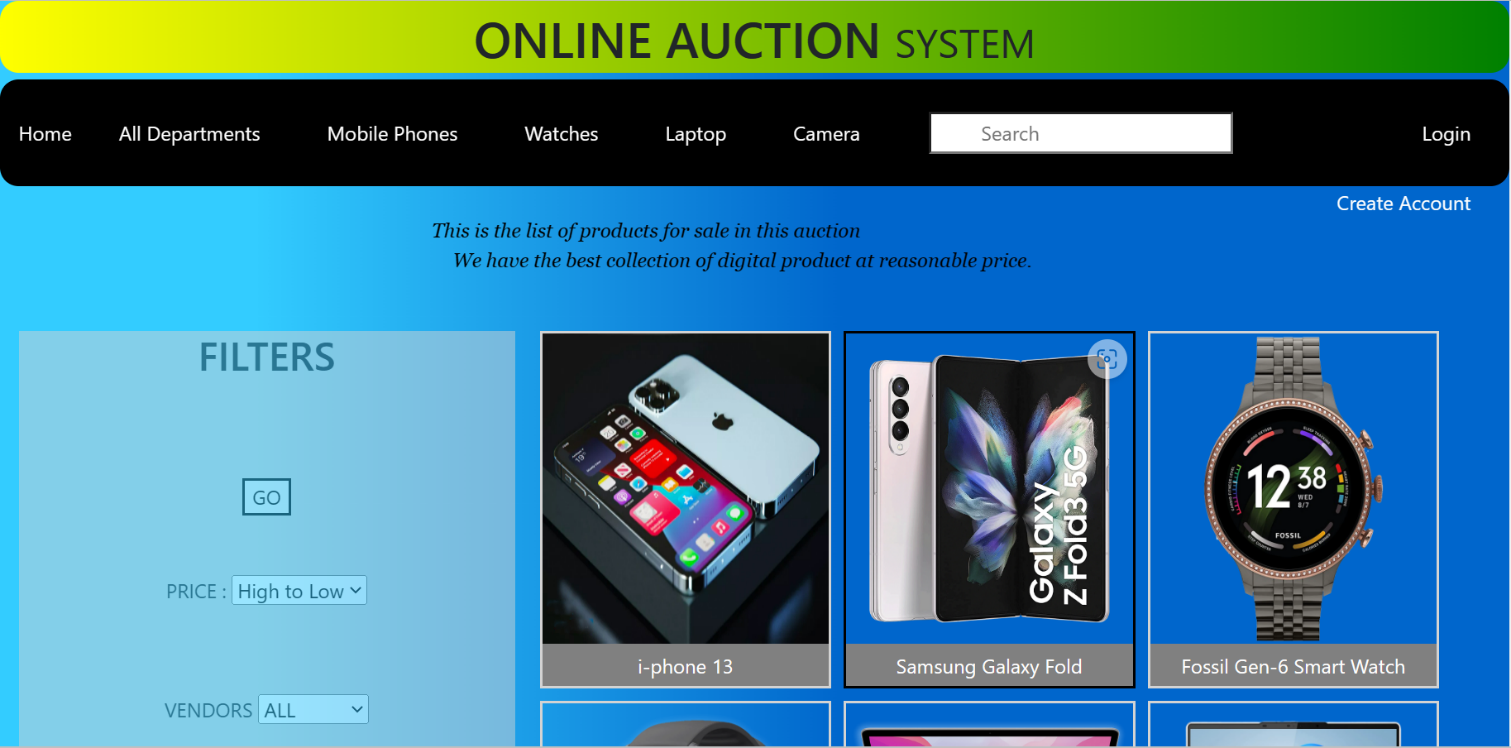
**Chapter 5**

#### Results and Discussion

#### Results:-

The online auction system mini-project was created and executed with success. Users can place bids on things up for auction and auction off their own items through the system. Additionally, the system has features like user registration, object administration, bid history, and buyer and seller messaging.

All of the system's functionalities were thoroughly tried, and they were discovered to be operating as intended. The system handled simultaneous bidding from numerous users on the same item and processed bids and transactions quickly and effectively.



#### Discussion:-

Users can purchase and sell items in an online market with the help of the online auction system mini project. Users of the system have access to a larger market of buyers and vendors, which may enable them to sell their goods for a higher price or secure better deals.

Making sure the bidding process is fair and open is one of the major difficulties in creating an online auction system. The system was created to only permit registered users to place bids on things, and bidding histories were monitored to stop any fraudulent activity.

Making sure that the system can handle a large number of users and transactions is another challenge when creating an online auction system. The system was made to be scalable in order to be able to handle a large number of users and transactions without experiencing any serious performance problems.

The online auction system mini project offers users looking to buy and sell things in an online marketplace a useful tool overall. A large number of users and deals can be handled by the system, which offers a fair and transparent bidding process.

**Chapter 6**

#### Conclusion and Future Scope

#### Conclusion:-

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In conclusion, the mini-project on the online auction system is an effective implementation of an online marketplace for purchasing and selling items via an auction process. Users have access to a larger group of buyers and vendors thanks to the system, which gives them the opportunity to sell their goods for a higher price or find better deals.

The system can handle a large number of users and transactions without experiencing any serious performance problems because it was built to be scalable. All users have an equal opportunity to place bids because the bidding procedure was made to be fair and open.

Users of the online auction system gain access to a larger group of buyers and vendors, which may result in better deals on goods or higher prices for goods being sold. The system additionally offers users a simple and handy way to take part in auctions from the comfort of their homes, at any time of the day.

Overall, the mini-project on the online auction system shows the value of fair and open systems in online commerce and offers users a useful tool for buying and selling things in an online marketplace.

#### Future Scope:-

1-Integration with payment gateways: The system currently permits users to place bids on products, but payment processing is not included. Users can quickly and securely pay for their purchases by integrating payment providers like PayPal, Stripe, or other payment gateways.

2- Features for advanced bidding: The method could be improved with features for advanced bidding like proxy bidding or automatic bidding. While proxy bidding can automatically bid on behalf of a user up to their maximum bid, automatic bidding can automatically raise a user's bid if another user outbids them.

3-Imporved messaging system:User experience could be improved by integrating features like push notifications, read receipts, or message previews into the current messaging system, which already enables users to interact with one another.

4-Integration with social media: Integrating the online auction system with social media platforms like Facebook, Instagram, or Twitter can help increase the system's reach and user base.

5-Data analytics and insights: The system could be enhanced with data analytics and insights to help users understand bidding trends and get insights into market trends. This can help users make better decisions when buying or selling items.

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