FINAL YEAR PROJECT REPORT

BS (SOFTWARE ENGINEERING)

AUCTISAFE: BUILDING A ROBUST & RELIABLE AUCTION SYSTEM

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FACULTY OF ENGINEERING, SCIENCE AND TECHNOLOGY

DEPARTMENT OF SOFTWARE ENGINEERING

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ABSTRACT

AuctiSafe have developed with the primary goal of revolutionizing and optimizing the online auction experience for both auction organizers and participants. The platform's purpose extends beyond just facilitating auctions; it aims to enhance accessibility, security, and versatility in the dynamic world of online bidding. The web application, AuctiSafe, stands as a sophisticated online auction management system, streamlining the end-to-end process for auctioneers and participants alike. Focused on enhancing user experience and ensuring robust security, AuctiSafe encompasses various functional features such as user authentication, diverse auction types (including Dutch, English, Reverse, Forward, Reserve, and Sealed Bid Auctions), online payment processing, and comprehensive reporting services. It caters to a diverse user base, comprising auction administrators, sellers, and bidders, buyers, and shipping/logistics providers, providing a seamless and efficient solution for managing auctions comprehensively.

AuctiSafe's architecture utilizes a multi-layered approach, featuring an intuitive user interface, an application server for efficient request handling, authentication and authorization modules for secure access, dedicated components for auction and bid management, reliable payment processing, notification services, and a robust database layer. The system's usability, maintainability, and security have further enhanced through the incorporation of various auction formats, a meticulous two-way authentication process, and an advanced payment processing system. In essence, AuctiSafe represents the successful integration of diverse auction functionalities into a cohesive and user-friendly platform, delivering a dependable solution for both auction organizers and participants in the dynamic landscape of online bidding.

We have approved this manuscript for submission and presentation as fulfillment of Bachelor of Software Engineering/ Computer Science.

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Supervisor: Dr. Abdul Ahad Abro

Date: 11-03-2024

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Project Coordinator: Dr. Aarij Mahmood Hussaan

Date: 11-03-2024

DECLARATION

I hereby declare that the work has been done by myself to fulfill the requirement of the BS (Software Engineering) and no portion of the work contained in this report has been submitted in support of any application for any other degree or qualification of this or any other university or institute of learning.

I hereby further declare that in the event of any infringement of the provision of the Act whether knowingly or unknowingly the university shall not be liable for the same in any manner whatsoever and undertake to indemnify and keep the university indemnified against all such claims and actions.

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LIST OF ACRONYMS

1. OTP - One-Time Password
2. API - Application Programming Interface
3. HBL - Habib Bank Limited
4. MD5 - Message Digest Algorithm 5
5. SHA - Secure Hash Algorithm
6. CV - Card Verification
7. HTML - Hypertext Markup Language
8. CSS - Cascading Style Sheets
9. CNIC - Computerized National Identity Card
10. GUI - Graphical User Interface
11. API - Application Programming Interface

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CHAPTER – 1

1.0 Introduction:

The world of trade has undergone significant changes, with auctions emerging as a powerful and impactful force. Auctions, once limited to physical locations with bidders waving paddles, have now smoothly shifted to the digital domain, leading to the development of a refined and effective online auction system. Technological advancements have broadened the scope and availability of auctions, transforming the process of buying and selling commodities and services. With the help of an online auction management system, auctioneers can easily organize and run the entire sale, from beginning to end. Online auction platforms like Ebay! Auctions and eBay have shown a rapid and significant increase in user engagement [1]. The quantity of auction commodities offered by eBay had a substantial surge, rising from hundred million in July 2010 to two hundred million in September 2014 [2-3].

An increase in participation and larger bid amounts is likely to result from the system's ability to facilitate remote bidding, which broadens the auction's reach and visibility. Incorporating knowledge and experience, we investigate the circumstances in which B2B auction purchasers will use the online-posted pricing channel, and we show that purchasers' preferences differ [4]. When it comes to logistical and physical limitations, online auctions have done away with proximity, preparation time, space, and a narrow target audience [5]. However, there are a lot of new opportunities for cheating in the digital age. Misrepresentation, promotion of illicit goods, and dishonesty are all examples of Abnormal bid that can happen before, during, or after an auction [6]. Another kind of fraud can happenobjec when a bidder fails to pay for an item after the sale. The topic of much research has been the occurrence of Abnormal bid before and after auctions [7-8].

In the modern interconnected world, the strength of an online auction system goes beyond just facilitating transactions; it involves protecting the integrity of the process. Abnormal bid detection is a crucial element that utilizes advanced technologies and security measures to detect and prevent unwanted activity. Abnormal bid detection plays a crucial role in online auction systems by

utilizing advanced technology to ensure secure transactions, establish confidence among participants, and strengthen the digital marketplace against potential risks. As we explore the features of an online auction system, we uncover the various security measures in place to allow players to confidently interact in a virtual environment that combines innovation with strong protections against Abnormal bid.

Modeling bidder behavior has been the primary focus of prior digital auction research [9–13]. This study has concentrated on topics such auction period, auction attributes, motivation to pay, competitive advantage, and format the numbers. What drives consumers to bid on online auctions has received less empirical attention in the aforementioned literature. Advised further research, both empirical and theoretical, to clarify how online auction. customers behave [14]. Value, size, and usability in the online marketplace have all increased at an exponential rate. In the years to come, this tendency is anticipated to pick up speed [15]. An integral part of the online marketplace, which makes use of ecommerce techniques, are online bidding mechanisms [16]. Everyone from auction organizers to vendors, bidders, purchasers, and logistics and shipping companies might end up using the system. The goal of the system is to keep user information secure, stop Abnormal bid, and keep the system up and running with little downtime.

The AuctiSafe application is a pioneering force in reinventing traditional online auctions within this setting. AuctiSafe offers a virtual marketplace for sellers and bidders, together with a sophisticated Abnormal bid detection technology to enhance the process's integrity. The AuctiSafe application symbolizes a dedication to transforming the online auction experience, going beyond being just a technological solution. This introduction prepares to delve into AuctiSafe's diverse features, highlighting its ability to connect a worldwide audience, enhance bidding processes, and ensure secure transactions with comprehensive Abnormal bid detection systems. The AuctiSafe application is innovative, combining efficiency, security, and accessibility to transform online auctions.

1.1 Problem Statement:

The existing online auction platforms are plagued by inefficiencies, security breaches, and a dearth of creative features, which results in trust concerns and restricts the overall experience that participants have. The deficiencies highlight the urgent requirement for a thorough and secure online auction solution. The lack of a thorough and user-focused solution hampers the development and possibilities of online auctions, affecting auction administrators, sellers, and bidders. AuctiSafe aims to revolutionize the digital auction industry by enhancing security, efficiency, and user pleasure. AuctiSafe is essential for transforming the dynamics of online bidding to provide a smooth, secure, and universally accessible experience for all participants.

1.2 Motivation:

To transform the online auction process and tackle the underlying difficulties found in old platforms. AuctiSafe aims to improve the efficiency and security of online bidding by introducing advanced abnormal bid detection mechanisms and user-friendly interfaces. The purpose is to create a global platform that promotes confidence among auction administrators, sellers, and buyers. AuctiSafe's is to optimize online auctions by providing a thorough, secure, and user-focused solution. The need is to empower users with a frictionless and reliable platform that supports both buying and selling products, while also fostering a lively and dynamic online auction community. AuctiSafe's objective is strengthened by offering a variety of auction formats, including Dutch, English, Reverse, Forward, Reserve, and Sealed Bid Auctions. The variety of auction forms accommodates the specific requirements of sellers and bidders, providing a flexible and all-encompassing online bidding experience. To revolutionize the online auction industry by providing a revolutionary and enjoyable experience for all users.

1.3 Objective:

The core objective of AuctiSafe is to construct a robust and reliable online auction system that prioritizes optimized security measures. The platform aims to redefine the standards of security within the online auction landscape, addressing existing vulnerabilities and ensuring a trustworthy environment for all participants. By building advanced and stringent security protocols into the system, AuctiSafe seeks to establish itself as the epitome of secure online auction platforms. The

primary focus is on fortifying the platform against potential threats, including abnormal bid and unauthorized access, to instill confidence among auction administrators, sellers, and bidders. AuctiSafe aspires to set a new benchmark for security within the digital auction space, implementing cutting-edge technologies and encryption methods to safeguard sensitive information and transactions. In essence, the main objective is to provide a secure foundation for online auctions, enhancing trust and reliability, and establishing AuctiSafe as a pioneer in the realm of secure and resilient auction systems.

Superior abnormal bid Detection:

AuctiSafe's primary goal is to be the leader in abnormal bid detection within the online auction sector. The platform seeks to utilize advanced technologies, and real-time monitoring to efficiently identify and prevent abnormal bid actions. AuctiSafe aims to establish a new benchmark for abnormal bid prevention in online auctions by focusing on user security and trust.

Automated System Efficiency:

AuctiSafe is dedicated to automating and simplifying the auction process. The goal is to provide a streamlined and intuitive platform that automates processes including registration, listing items, validating bids, and processing payments. AuctiSafe seeks to improve user experience, minimize manual involvement, and create a smooth and efficient auction process for administrators and participants through automation.

Diverse Auction Types:

AuctiSafe intends to offer a wide range of auction kinds to meet the unique tastes of its users. The goal is to provide a flexible platform that can handle various selling and bidding tactics, including Dutch, English, Reverse, Forward, Reserve, First Price, and Sealed Bid Auctions. The goal of this approach is to create an all-encompassing environment for AuctiSafe, guaranteeing a lively and interactive experience for both sellers and bidders participating in different auction styles.

1.4 Challenges:

Constructing AuctiSafe involved overcoming various hurdles through careful planning and creative problem-solving. The process from conceptualization to deployment was characterized by a sequence of obstacles that required meticulous thought and strategic planning.

i. **Research Complexity:** The primary challenge was to do thorough research to fully comprehend the complex dynamics of online auctions. This involved exploring several aspects such as user behavior, security threats, legal frameworks, and market trends.
ii. **Security Concerns:** Ensuring the security of the platform was crucial, albeit it posed a complex problem. A comprehensive effort was required to address security problems, including detecting weaknesses and installing strong encryption and authentication procedures.
iii. **Market Dynamics Adaptation**: Adjusting to changing market conditions and user preferences posed continuous hurdles. Continuous monitoring and modification are necessary to stay ahead of developing trends, respond to competition developments, and fulfill evolving consumer expectations.
iv. **Scalability Planning:** Forecasting the platform's future expansion and guaranteeing scalability was crucial yet difficult. Creating an adaptable technical framework able to manage higher user engagement and transaction levels necessitated meticulous preparation and anticipation.

1.5 Structure of Report:

This marks the completion of chapter one of the AuctiSafe project. This chapter highlighted the overall concept of the AuctiSafe application. The introduction section provides a detailed review regarding major details of auction system. The problem statement specifies what kind of issue we are tackling with this application and how it will be beneficial for society. The motivation heading provides a clear definition of what motivated us to come up with the idea of the AuctiSafe application.

As we go further into the content of chapter one, the major descriptions regarding the objective of the project can be seen. This is where you will find vital information such as research objectives,

academic objectives, as well as management objectives. Furthermore, we have provided content regarding the challenges that can occur with the progression of the application as well as in the usage of the application. Lastly, the remaining structure of the project report is given as follows:

1.5.1 Chapter 2: Technology Background

This chapter will consist of our well researched literature review regarding all the related prior work of our project subject and technologies.

1.5.2 Chapter 3: Requirements & Methodology

This Chapter will discuss basic models of the system, in addition to that the chapter will also host functional and nonfunctional requirements of our project.

1.5.3 Chapter 4: Project Plan & Initial Design

This chapter will consist of all the detailed designs of the project that will help the developer in understanding the project implementation and creating an easy route in development of the system.

1.5.4 Chapter 5: Project Design & Development

This is the most significant chapter since it details the actual design and implementation of the concept. i.e., the phases of design and development.

1.5.5 Chapter 6: Testing

We will construct test cases in this chapter.

i. Perform auction type functionality testing on the front end.
ii. Carry out backend testing (source code)
iii. Make a test cases to conduct testing and incorporate the results in report.

1.5.6 Chapter 7: Conclusion

In this last chapter, we will conclude our work, share results including facts and figures, tables, and graphs to show your findings.

i. Discuss limitations and challenges.
ii. Discuss the work that will be done in the future

CHAPTER – 2

2.0 Technology Background

In this chapter, we delve into the technological framework that powers AuctiSafe, our web-based auction management system. We explore the selection of technologies, problem-solving methodologies within the domain, and advancements relevant to web application development. Our project prioritizes the utilization of modern web technologies to ensure scalability, security, and optimal user experience.

AuctiSafe, being a web application, leverages the latest advancements in web development to provide a seamless and intuitive auction management experience. The choice of technologies is guided by the need for robust security measures, efficient performance, and user-friendly interfaces.

2.1 Background of the Technology:

The architecture of AuctiSafe is designed to provide a user-friendly interface accessible via web browsers. Users interact with the system through a graphical interface featuring various functionalities tailored to their roles. The application is built using a combination of frontend and backend technologies to ensure responsiveness, scalability, and security.

2.1.1 Frontend Technologies:

AuctiSafe's frontend is developed using HTML, CSS, and JavaScript to create a visually appealing and interactive user interface. These technologies enable the presentation of auction listings, bidding interfaces, and administrative dashboards in a format accessible across different devices and screen sizes.

2.1.2 Backend Technologies:

For the backend infrastructure, AuctiSafe relies on the ASP.NET MVC framework, powered by C# programming language. ASP.NET MVC provides a structured approach to web application development, facilitating code organization and maintainability. C# offers robust features such as

object-oriented programming, multithreading support, and extensive libraries for backend functionality.

Identifying Features:

- Secure Authentication and Authorization Mechanisms
- Efficient Data Management and Processing
- Real-time Notifications and Updates
- Seamless Integration with Payment Gateways
- Scalable Architecture to Handle High Traffic Loads.

2.1.3 Visual Studio IDE:

The entire development process of AuctiSafe takes place within the Visual Studio IDE. Visual Studio provides a comprehensive suite of tools for coding, debugging, and project management. Its intuitive interface and built-in features streamline the development workflow, allowing developers to focus on building robust and reliable web applications. With Visual Studio, developers benefit from seamless integration with ASP.NET MVC framework, enabling efficient development and deployment of web applications.

2.2 Literature Review

In 1993, online auctions based on news groups were the first to appear on the web [17]. Online auction houses like eBay and On Sale were among the first to launch in 1995 [18]. The level of uncertainty experienced by online auction customers is higher compared to their in-person counterparts [19–20]. In order to sidestep the "lemons" problem, online auction houses have developed innovative ways for vendors to provide more details on their reliability and product quality [41]. With these updates and the buyer safety methods offered by other third-party payment auditors like PayPal, more people are interested in buying things through online auctions.

Online auction businesses are distinct from other types of e-Businesses in a number of ways. Let me start by saying that online auction platforms such as eBay are incredibly competitive markets. There are always a lot of similar things being sold by other merchants. A bigger online auction site organization (like eBay) is where online auction vendors are a member of. Because of this, sellers

in online auctions are unable to set themselves apart from competitors. In addition, website trust, reputation, and quality can impact vendor pricing in online auctions, as purchasers set their own price limit. Lastly, customers may be misled into believing they are engaging with a trustworthy seller who possesses the required business expertise, such as shipping, when in reality they are not. The reason behind this is the ease with which an auction firm can be started and run using internet platforms. Lastly, a large number of digital auctions take place between strangers who have never met before, thus the confidence of the buyer or seller at the beginning of the process is crucial in determining the outcome.

Research into the usage of expensive qualitative indicators in digital auctions has been conducted. The application of reputation systems to supply vendors with pertinent past experience has been the focus of previous research. One way to keep track of people's opinions and assessments of their actions in the past is through a system for assessing reputation .The high cost of reputation system signals is a direct result of the time and effort required for vendors to prove their worth to a wide audience before they can claim to be a reliable market vendor. Online auctions also take into account the setting of a reserve price as a pricey quality indication.

Most auction companies' reputation systems are overly simplistic. Traders can only be rated on a "adverse," "unbiased," or "beneficial" scale after completing a deal. Some unscrupulous business owners and purchasers even resort to dishonest means to boost their image. Scammers might hide their true intentions from unsuspecting consumers by inflating their feedback scores through fabricated transaction records. Making a string of minor purchases to increase one's satisfactory status is another common method, followed by fraud on one large purchase. One more common sort of fraud when participating in auctions is using multiple states accounts. Initially, a con artist may choose aliases and use them to deceive others into thinking they are either themselves or their collaborators. The con artists then have their henchmen post positive evaluations to boost their own profiles.

The topological complexity and massive size of eBay make it amenable to modeling and analysis as a complex network. Auction models, approaches to purchasing and selling, models of credibility, and identification of deception are just a few of the areas that have examined eBay. Researchers significantly improved the detection rates of inflated accounts through the application of hierarchical evaluation, abnormal bids involving inventory data—a collection of interrelated

assets—can be discovered. A wide range of abnormal bid and discrepancy detection tasks also benefit from this type of research. Finding outliers in complex social network features is possible with graph theory.

Making a list of the features of various approaches is the easiest method to build a quantifiable quality set for detecting abnormal bid or swindles. Having a larger set of qualities does not, however, always lead to better categorization accuracy. Sifting through a huge pool of potential traits to identify the most relevant ones would be more efficient, even if it would seem reasonable to build a massive collection of all prospective attributes. A more direct translation of this would be that attribute selection is meant to speed up the generation of detection reports, which in turn improves cost effect prognosis and aids in understanding the findings.

CHAPTER – 3

3.0 Introduction:

In this chapter, we provide a detailed account of the development process undertaken for our web-based auction management system, AuctiSafe. We outline the objectives of the project and elaborate on the systematic approach adopted by the development team to ensure the smooth functioning of the application. The project plan, meticulously crafted with the aid of Gantt charts and other organizational tools, serves as a blueprint for the development journey. Each activity within the plan is allocated a specific time period based on its complexity, allowing for flexibility in the project timeline.

Furthermore, we delve into the Functional, and Non-Functional requirements specific to our web application. Functional requirements, essential for fulfilling the basic needs of the project, include functionalities such as user authentication, item listing, bidding, and payment processing. Non-functional requirements, such as performance, security, and usability, are equally prioritized to ensure a seamless user experience. Throughout this chapter, we outline the detailed process followed to meet these requirements and achieve the project objectives within the context of a web application.

3.1 Project Plan:

	Task name	Start date	End date	Duration
		01/04/2023	05/01/2024	40w
1	AuctiSafe: Building a Robust and Reliable ...	01/04/2023	05/01/2024	40w
2	FYP-I Timelines	01/04/2023	16/06/2023	11w
3	Project Approval	01/04/2023	07/04/2023	1w
4	Introduction of Project: Project Title, Scop...	08/04/2023	14/04/2023	1w
5	Literature Review Of Auction System	15/04/2023	21/04/2023	1w
6	Research Methodology: Complete Resear...	22/04/2023	28/04/2023	1w
7	Iteration 1: Functional & Non-Functional ...	29/04/2023	12/05/2023	2w
8	Iteration 2: Development Analysis by ERD...	13/05/2023	26/05/2023	2w
9	Iteration 3: Designing & Prototype of Auc...	27/05/2023	02/06/2023	1w
10	Poster Making	03/06/2023	09/06/2023	1w
11	Complete Project Report	10/06/2023	16/06/2023	1w

Figure 1: Project Plan

Auctisafe : The Reliable & Robust Auction System					
Name	**Start Date**	**End Date**	**Duration**	**Progress**	**Week duration**
DB / Project / Github Setup	Oct 25, 2023	Oct 26, 2023	2 days	100%	Week 1-3
Authentication / Authorization	Oct 25, 2023	Oct 26, 2023	2 days	100%	
Auction Creation	Oct 25, 2023	Oct 26, 2023	2 days	90%	
English, Dutch, Sealed Bid, Reverse Auction Implementation	Oct 26, 2023	Oct 31, 2023	4 days	70%	
Automated Email Generate, BID Winner Detector	Nov 01, 2023	Nov 06, 2023	4 days	90%	
Forgot Password	Nov 07, 2023	Nov 09, 2023	3 days	100%	
Week 1-3 Testing & Bug fixing	Nov 10, 2023	Nov 16, 2023	7 days	0%	
Reserve and Forward Auction implementation	Nov 17, 2023	Nov 23, 2023	6 days	100%	Week 4-7
Reporting system & Automated take Action on it.	Nov 24, 2023	Nov 27, 2023	4 days	100%	
Automated Account Suspending on Reporting.	Nov 28, 2023	Nov 30, 2023	3 days	100%	
ReCaptcha on Forms Like (Create Auction, Login/Signup, Contact) for security	Dec 1,2023	Dec 5,2023	5 days	100%	
Admin Panel Configuration and Function like :	Dec 6,2023	Dec 12, 2023	7 days	100%	
1) Sellers and bidders, items					
2) Activities of sellers and bidders					
3) Delete accounts (optional)					
Week 4-7 Testing & Bug fixing	Dec 13, 2023	Dec 14, 2023	2 days	100%	
Fraud Bid Detection	Dec 15, 2023	Dec 21, 2023	7 days	100%	Week 8-10
Automated take Action and suspends account	Dec 22, 2023	Dec 26, 2023	5 days	100%	
Auctomated Account Suspending on Reporting.	Dec 27, 2023	Dec 28, 2023	2 days	100%	
Admin Remaining Options:	Dec 29, 2023	Jan 03, 2024	6 day	100%	
4) Manually suspend or activate accounts					
5) Manually register accounts					
6) Manually change passwords					
7) Manually edit account information.					
Week 8-10 Testing & Bug fixing	Jan 03, 2024	Jan 04, 2024	2 days	100%	
Payment API Integration	Jan 05, 2024	Jan 18, 2024	14 days	100%	Week 11-12
Testing & fixing bugs	Jan 19, 2024	Jan 25, 2024	7 days	100%	Week 13-14
Refactoring & Optimizing Code	Jan 26, 2024	Feb 01, 2024	7 days	100%	

Figure 2: Gantt chart

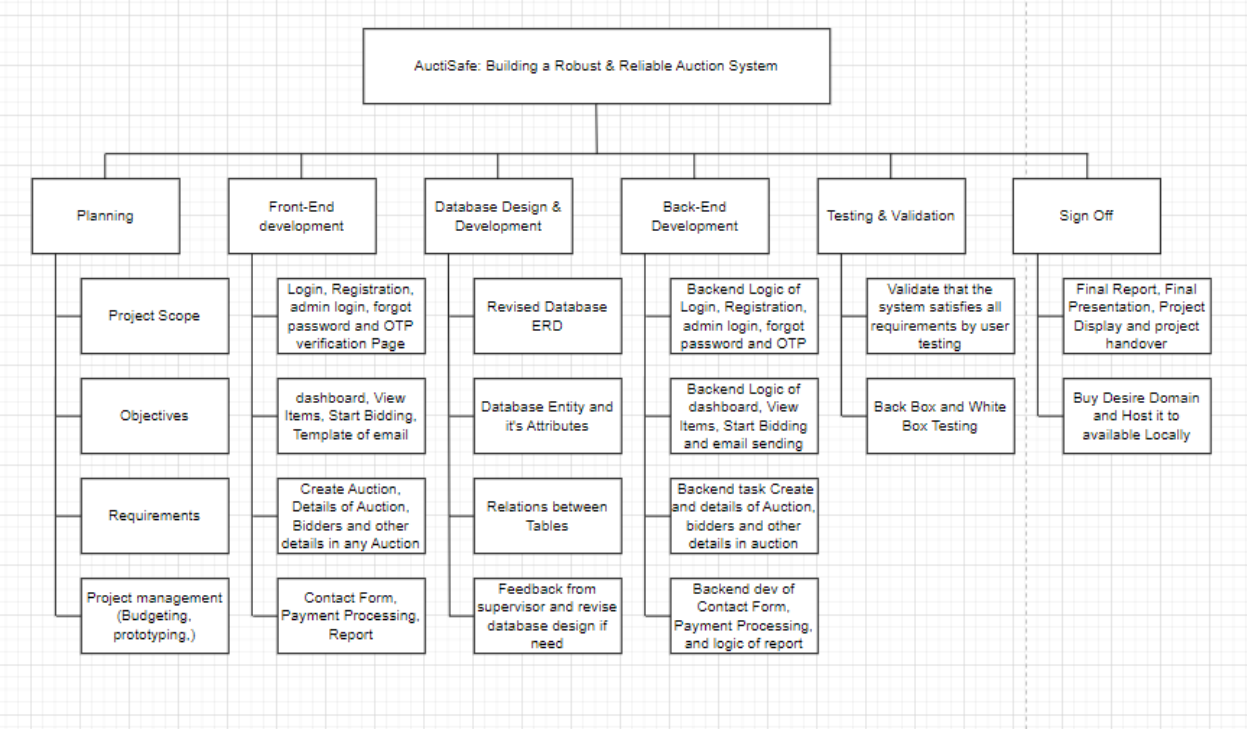

Figure 3: Work breakdown structure (WBS)

3.2 Functional Requirements:

3.2.1 Admin:

To access the admin panel, the admin must enter their email and password and then click on the login button. Next, an OTP will send to the admin's system email, which they will need to enter in order to redirect to the home page.

The admin will have the rights to view details of:

- sellers and bidders, items
- activities of sellers and bidders
- Delete accounts (optional)
- Manually suspend or activate accounts

- Manually register accounts
- Manually change passwords
- Manually edit account information.

3.2.2 Authentication:

By default, the application's base URL (xyz.com) should take the user to the index page (i.e. xyz.com/index) or a similarly qualified URL. To enter the application, the user must successfully log in using their correct email and password, then click on a button to request an OTP Verification code, which will be sent to their registered email address. The user must enter the correct OTP verification code to be redirect to their home page.

There will be no limit on the number of attempts, the user can make to log in, but they will receive an error message whenever they provide invalid credentials. The login page should include links to the Registration page for new users, login as an Admin, and the Forgot password page. To log out of the application, the user should click on the Log Out link provided on the right-hand corner of each page (appearing after they have successfully logged in).

3.2.3 Signup/Registration:

The New Registration page provides a form for new users to register themselves by providing unique identification. It should also contain a link to the Login page. The form will have the following mandatory fields:

- First Name
- Last Name
- Email
- Password
- Confirm Password
- Phone Number
- CNIC

- Address
- Account Number (for receiving amounts from bidders)

After filling in the required fields, the user can click on the Register button. Next, there will be a two-way authentication process.

First, a verification code will send to the email address the user provided during registration. The user will need to enter the verification code to complete the first step of authentication.

For the second step of authentication, Insert a captcha of any image.

Additionally, there will be a check box on the registration form for users to agree to all terms and policies before successfully registering on the website.

3.2.4 Forgot/Remember Password:

If a user forgets their password, they can retrieve it using the Forgot Password page. They will need to provide their registered email address and click on the "Forgot Password" button. The system will then send an OTP code to their email address. The user will need to enter the OTP code in the system. If the given OTP matches the sent OTP, the system will display two new fields: New Password and Confirm Password. The user can then enter their desired new password and confirm it in the corresponding fields. After that, they can click on the "Change Password" button to finalize the password change.

3.2.5 List Items/Create Auction/Sell Item:

To create a new auction for selling an item, the user must provide the following mandatory details:

- Picture of the item
- Category of the item
- Product name
- Title
- Desired auction type or customize their auction from the following
    i. Dutch Auction

ii. English Auction

iii. Reverse Auction

iv. Forward Auction

v. Sealed Bid Auction

- Money amount depending on the selected auction
- Time period of the auction
- Description about the item

Once the user has filled in all the required fields, they can click on the "Create" button. The system will then send an OTP verification code to the user's email address. The user must enter the OTP code in the system to create the auction.

After successfully creating the auction, it will display on the user's (owner) homepage with the name of their item.

3.2.6 Start Bidding/Give Offer:

Before starting a bid on any item, the system will check whether the item has remaining time or has already started selling. If the selling has started, the system will send an OTP code to the bidder's email, and the bidder must enter the code in the system.

3.2.7 Bid Winner:

After Creating auction, bidders will be able to bid and bidding pattern will behave upon the selected auction on product and after auction time system will execute a query and find the winner according to auction which will be selected auction and then bidder will pay amount of bid then tax (13%) and registration fees (10%) will deduct from auction payment and then remaining payment will transfer from our company to auctioneer after delivered the product to bidder.

3.2.8 Payment Processing:

After the bidding is complete, a confirmation email will send to the winner/selected bidder of the auction. The bidder will then need to pay the amount of the item that they have won, which depends

on how much they have bid. The system will provide some text fields that the bidder will need to fill out including

- Credit card No
- CV
- card issue date
- card expiry date
- Amount

The amount field will automatically fill by the system to reflect the amount the bidder has to pay the seller. Once the bidder fills out the required fields, they can click on the "Transfer" button to transfer the money from their account to the seller's account.

There are several payment methods available, including

- PayPal (not available in Pakistan)
- HBL API
- Allied Bank API
- Bank Al Habib API
- Easy-Paisa API

During the development phase, one of these payment APIs will selected based on its suitability.

3.2.9 Report:

If a person is fraud by someone, they can report the offender by filling out a form with the fraudster's email and description of the incident. Once the report submitted, it will save in the system.

The system will track the number of reports received against each seller/bidder account. If an account receives three or more reports from different accounts, it will suspend, and an email notification will send to the account holder. If the suspended account holder attempts to log in, they will redirect to a suspension page.

3.3 Non-Functional Requirements:

3.3.1 Response Time:

If user performs any function in software so the redirection on new page / completion of task will be done in maximum 5 seconds.

3.3.2 Security:

1. **Confidentiality:** Confidentiality must implement to ensure that the sensitive Data of individual users will secured and protected from other users.
2. **Integrity:** To ensure the security of sensitive data during operations like authentication and payment processing, it is essential to maintain integrity in the system. This involves using security algorithms like MD5 or SHA to hash the data and secure its transmission from the client-side to the server-side.

3.3.3 Usability:

The Software Design should be very user-friendly meaning it should cater all types of users, including like technical person, non-technical individual. This will Achieve by using fluent and understandable English, Common Icons and avoid complicated design.

3.3.4 Maintainability:

The Software data should be have maintained and stored in a database. The database should design in a Normalized form and all the data of the system should kept up-to-date in Database.

3.4 Summary:

In this chapter, a detailed Project Plan, Functional, Non-Functional requirements and other planning mechanisms are discussed in detail that will be required in our project. We have also mentioned an introduction regarding our web application how we can perform our task so we make a milestone chart in this first we describe our task week wise in summary activity and then we make a Gantt chart according to summary activity. In Gantt chart we were describing task name or duration for implementation of our “AuctiSafe” After Gantt chart we describe Non-Functional requirements of our android application the requirements are system settings and feedback.

CHAPTER – 4

4.0 Introduction:

In this chapter, we delve into the design and specification of our web-based auction management system, AuctiSafe. We provide a comprehensive overview of the project, detailing its various aspects with diagrams and frameworks. The aim is to elucidate the application's flow and functionality, ensuring a clear understanding for users and developers alike.

We have employed a range of diagrams to illustrate the complete flow of our application, making it easily understandable for users. Entity Relationship Diagrams (ERDs), and Unified Modeling Language (UML) diagrams are extensively utilized to depict the system's workflow and specifications. These diagrams serve as blueprints, guiding the development process and facilitating communication among stakeholders.

The purpose of creating these diagrams is to guide the direction of our system and illustrate how each component interacts within the application. By detailing the flow of our application, from input to output, we ensure a smooth implementation process. Moreover, these diagrams provide invaluable insights into the system's architecture and functionality, aiding developers in writing clear and concise code.

With the design and specification phase complete, development has commenced to transform these visual representations into a fully functional and user-friendly auction management system. Each diagram is meticulously crafted to encompass all functional inputs and outputs, thereby ensuring the seamless operation of the system. Through this chapter, we aim to provide a clear understanding of the system's design and specification, setting the stage for the development phase.

4.1Entity Relationship Diagram

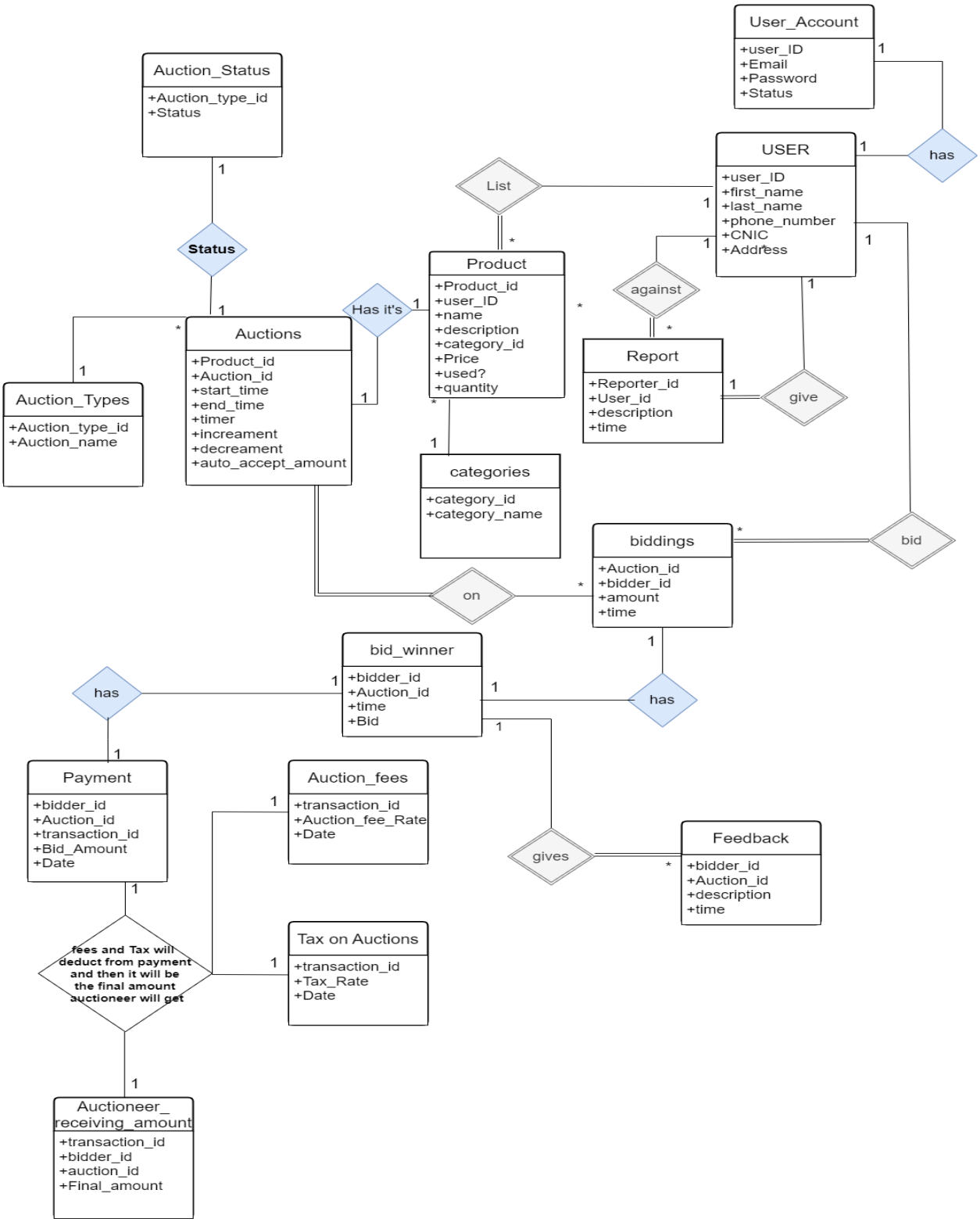

Figure 4: Entity Relationship diagram

4.2 Use Cases Diagram:

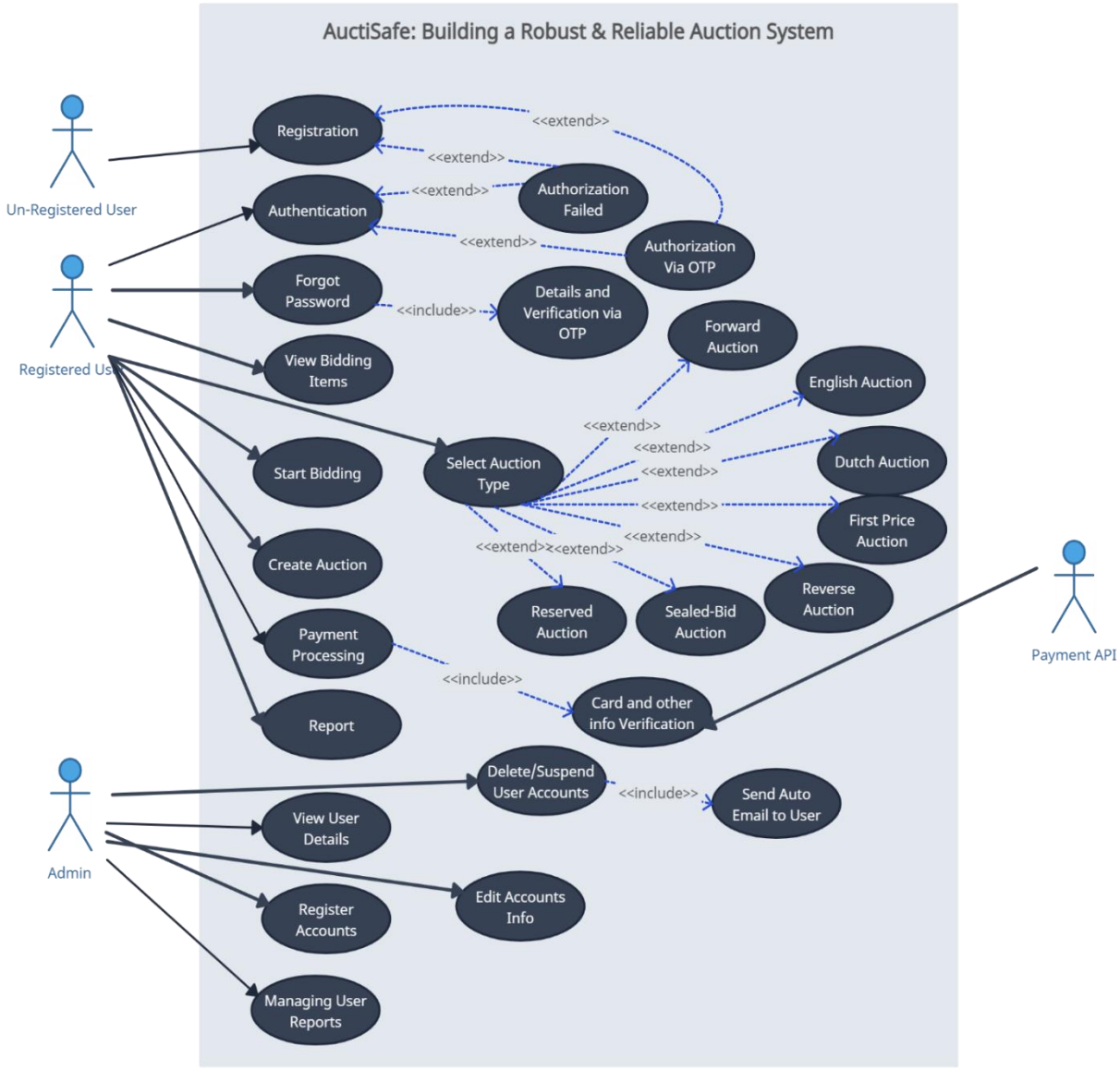

Figure 5: Use cases of AuctiSafe

4.3 User Stories

Use Case-1 REGISTRATION	
Description:	This use case involves the process of registration for an unregistered user who wants to get registered in AuctiSafe. The user provides the necessary information, completes the registration form, verifies their email address using OTP, and successfully passes the CAPTCHA verification to create an account and gain access to the system's features.
Actor:	Unregistered Users
Trigger:	The trigger for this use case is when an unregistered user initiates the registration process by accessing the AuctiSafe platform.
Preconditions:	1. The user has not previously registered or created an account in AuctiSafe. 2. The user has access to a device with an internet connection.
Normal Flow:	1. The user visits the AuctiSafe website or opens the AuctiSafe application. 2. The user locates the registration section or clicks on the "Register" button/link. 3. The system presents the registration form to the user, prompting them to provide the required information. 4. The user fills in the necessary details, including their name, email address, desired username, and password. 5. The user agrees to the terms and conditions of using AuctiSafe 6. The user completes the CAPTCHA verification by entering the displayed characters or solving the provided puzzle. 7. The user submits the registration form. 8. The system validates the entered information, checking for any errors or missing fields. 9. If the provided information is valid, the system generates a One-Time Password (OTP) and sends it to the user's provided email address. 10. The user checks their email, retrieves the OTP, and enters the received OTP in the provided field on the registration page. 11. The system verifies the entered OTP against the generated OTP. 12. If the entered OTP matches the generated OTP, the system proceeds to the next step. 13. The system activates the user's account, making it accessible for login. 14. The system redirects the user to the login page, indicating that the registration process is complete. 15. The user can now log in using their registered username or email and the provided password.
Exceptional Flow:	1. If the user enters invalid or incomplete information, the system displays error messages highlighting the specific fields that require correction. 2. If the user's chosen username is already taken, the system prompts the user to select a different username. 3. If the user fails to correctly enter the CAPTCHA verification, the system prompts the user to try again. 4. If the user enters an incorrect OTP, the system prompts the user to re-enter the correct OTP or request a new one.

Figure 6: Use case 1

Use Case-2 AUTHENTICATION & AUTHORIZATION	
Description:	This use case involves the process of user authentication and authorization for AuctiSafe. Registered users attempt to access the auction management system by providing their credentials. The authentication process includes two methods: authorization via a One-Time Password (OTP) or failed authorization.
Actor:	Registered Users
Trigger:	The trigger for this use case is when a registered user attempts to log in to the AuctiSafe.
Preconditions:	1. The user has already registered and created an account in the auction management system.
	2. The user has a valid username or email associated with their account.
	3. The user has chosen to perform the authentication process.
Normal Flow:	1. The user opens the login page of the auction management system.
	2. The user enters their registered username or email and the associated password.
	3. The system verifies the entered credentials against the stored user information.
	4. If the entered credentials match the stored information, the system grants access to the user.
	5. If the entered credentials do not match, the system proceeds to the next step.
	6. The user selects the "Authorization via OTP" option.
	7. The system sends an OTP to the user's registered mobile number or email.
	8. The user retrieves the OTP and enters it in the provided field.
	9. The system verifies the entered OTP against the generated OTP.
	10. If the entered OTP matches the generated OTP, the system grants access to the user.
	11. If the entered OTP does not match, the system prompts the user to re-enter the correct OTP.
Exceptional Flow:	1. If the user's entered credentials do not match the stored information, the system displays an error message indicating failed authorization for AuctiSafe.
	2. In the case of failed authorization, the user will not granted access to the AuctiSafe.
Post conditions:	1. If the user's authentication is successful, the user gains access to the AuctiSafe.
	2. If the user's authentication fails, the user will not granted access to the AuctiSafe and is notified about the failed authorization for auction management.

Figure 7: Use case 2

Use Case-3 FORGOT PASSWORD	
Description:	This use case involves the process of password recovery for registered users who have forgotten their password. Users initiate the password reset process by selecting the "Forgot Password" option. The system generates and sends a One-Time Password (OTP) to the user's registered email address, allowing them to reset their password and regain access to their account.
Actor:	Registered Users
Trigger:	The trigger for this use case is when a registered user selects the "Forgot Password" option.
Preconditions:	1. The user has already registered and created an account in the system.
	2. The user has a valid registered email associated with their account.
Normal Flow:	1. The user clicks on the "Forgot Password" link or option on the login page.
	2. The system displays a password recovery form, prompting the user to enter their registered email.
	3. The user enters their registered email address in the provided field.
	4. The system validates the entered email and proceeds to the next step.
	5. The system generates a One-Time Password (OTP) and associates it with the user's account.
	6. The system sends an email to the user's registered email address containing the OTP and instructions for password reset.
	7. The user checks their email, retrieves the OTP, and proceeds with the password reset process.
	8. The user enters the received OTP in the provided field.
	9. The system verifies the entered OTP against the associated user account.
	10. If the entered OTP matches the generated OTP, the system proceeds to the next step.
	11. The system presents a form where the user can enter a new password.
	12. The user enters their desired new password in the provided field.
	13. The user submits the form to complete the password reset process.
	14. The system updates the user's account with the new password and confirms the successful password reset.
Exceptional Flow:	1. If the entered email will not found in the system or is invalid, the system displays an error message indicating that the email is not registered.
	2. If the user encounters any issues during the password recovery process, they can contact the system administrator or support team for further assistance.
Post conditions:	1. If the password reset process is successful, the user's account password is updated with the new password.
	2. The user can log in to the system using the new password and regain access to their account.

Figure 8: Use case 3

Use Case-4 VIEW BIDDING	
Description:	This use case involves the process of registered users viewing bidding items in AuctiSafe. Registered users, who have successfully logged into the system, can access the list of available items up for bidding, review item details, and make informed decisions regarding their participation in the auction..
Actor:	Registered Users
Trigger:	The trigger for this use case is when a registered user logs into AuctiSafe and navigates to the bidding section.
Preconditions:	1. The user is a registered user and has successfully logged into AuctiSafe.
	2. The user has appropriate permissions to view and participate in auctions.
Normal Flow:	1. After logging into AuctiSafe, the user is directed to the dashboard or main page.
	2. The user navigates to the bidding section of the platform.
	3. AuctiSafe retrieves a list of available bidding items from the database.
	4. AuctiSafe displays the list of bidding items to the user, including relevant details such as item name, description, starting bid, current bid, bid end time, and any additional information.
	5. The user scrolls through the list of bidding items to explore available options.
	6. If desired, the user clicks on a specific bidding item to view more detailed information.
	7. AuctiSafe presents the detailed view of the selected bidding item, including high-quality images, additional descriptions, specifications, and any special conditions or terms associated with the item.
	8. The user reviews the details and determines their interest in bidding on the item.
	9. If the user decides to participate, they note the bid end time and current bid amount for reference.
	10. The user may continue browsing other bidding items or proceed with placing a bid on the selected item, depending on their preference.
Exceptional Flow:	1. If there are no bidding items available at the time, AuctiSafe may display a message indicating that no items are currently up for bidding.
	2. If the user encounters technical issues or errors while browsing or viewing bidding items, they may need to refresh the page
Post conditions:	1. The user has successfully viewed the available bidding items in AuctiSafe.
	2. The user can make an informed decision regarding their participation in the auction based on the item details and current bidding status.

Figure 9: Use case 4

Use Case-5 START BIDDING	
Description	This use case involves the process of registered users starting bidding on items in AuctiSafe. Registered users can participate in auctions by selecting the type of auction they wish to engage in and placing bids on the available items accordingly.
Actor	Registered Users
Trigger	The trigger for this use case is when a registered user navigates to the bidding section in AuctiSafe and selects the type of auction they want to participate in.
Preconditions	1. The user is a registered user and has successfully logged into AuctiSafe.
	2. The user has appropriate permissions to participate in auctions.
Normal Flow	1. After logging into AuctiSafe, the user accesses the bidding section.
	2. AuctiSafe displays the available types of auctions, such as "English Auction," "Dutch Auction," or "Sealed Bid Auction." User selects the desired auction type.
	3. AuctiSafe displays the available items for bidding within the chosen auction type.
	4. User selects an item and enters their bid amount based on auction type.
	5. User confirms the bid.
	6. AuctiSafe validates and updates the bid if valid.
	7. User receives confirmation of their successful bid
	8. User can monitor the bidding progress and adjust their bid if desired within the chosen auction type.
Exceptional Flow	1. If the bid amount entered by the user is below the minimum bid increment or invalid for the selected auction type, AuctiSafe displays an error message and prompts the user to enter a valid bid amount.
	2. If bidders within the same auction type place a higher bid before the user's bid is confirmed, AuctiSafe notifies the user that their bid has been surpassed and provides an opportunity to place a new bid within the chosen auction type.
Post conditions	1. The user's bid will successfully place on the selected item within the chosen auction type in AuctiSafe.
	2. The user can monitor the bidding progress, receive notifications about outbid scenarios within the selected auction type, and adjust their bid accordingly.

Figure 10: Use case 5

Use Case-6 CREATE AUCTION	
Description	This use case involves the process of a registered user creating an auction for their items in AuctiSafe. The registered user utilizes the system's functionality to list their items, set auction parameters, select the type of auction, and make them available for bidding by other users
Actor	Registered Users
Trigger	The trigger for this use case is when a registered user logs into AuctiSafe and initiates the process of creating an auction for their items, selecting the auction type in the system.
Preconditions	1. The user is a registered user and has successfully logged into AuctiSafe.
	2. The user has logged to create and manage auctions.
Normal Flow	1. After logging into AuctiSafe, the user is directed to the dashboard or main page.
	2. The user navigates to the auction creation section within the system.
	3. AuctiSafe provides a form or interface for the user to input the details of the auction.
	4. The user selects the desired auction type from the available options, such as "English Auction," "Dutch Auction," or "Sealed Bid Auction."
	5. The user enters the necessary information, such as item description, starting bid price, auction duration, reserve price, and any additional terms or conditions.
	6. The user uploads images or provides links to showcase the item being auctioned.
	7. The user confirms the auction details and submits the auction listing.
	8. AuctiSafe validates the information provided and creates the auction in the system, associating it with the selected auction type.
	9. AuctiSafe assigns a unique identifier or code to the auction for tracking purposes.
	10. The auction becomes active and is made available for other users to view and bid on, adhering to the selected auction type's rules and mechanisms.
	11. The user receives confirmation that their auction has successfully created.
Exceptional Flow	1. If the user encounters errors or missing information during the auction creation process, AuctiSafe prompts the user to correct the necessary fields before submission.
Post conditions	1. The user's auction has successfully created and listed in AuctiSafe, associated with the selected auction type.
	2. The auction becomes active and visible to other users adhering to the rules and mechanisms of the selected auction type.
	3. Other users can view the auction details, place bids, and participate in the auction based on the selected auction type's rules.
	4. The user can monitor the progress of their auction, receive notifications on bids, and manage the auction settings specific to the chosen auction type if applicable.

Figure 11: Use case 6

	Use Case-7 PAYMENT PROCESSING
Description	This use case involves the process of a registered user selecting the payment processing option in AuctiSafe, to facilitate secure transactions for auction items. The user chooses the preferred payment method, provides the necessary card and verification information, and ensures a smooth payment process.
Actor	Registered Users
Trigger	The trigger for this use case is when a registered user proceeds to make a payment for an item won or purchased in an auction on AuctiSafe.
Preconditions	1. The user is a registered user and has successfully logged into AuctiSafe.
	2. The user has participated in an auction and won an item or intends to purchase an item through the system.
Normal Flow	1. After winning an auction or deciding to purchase an item, the user navigates to the payment processing section within AuctiSafe.
	2. AuctiSafe presents the available payment options to the user, such as credit card, debit card, or other approved payment methods.
	3. The user selects the preferred payment method, specifically choosing the option for card payment.
	4. AuctiSafe prompts the user to provide the necessary card information, including card number, cardholder name, expiration date, and security code (CVV).
	5. The user enters the card details accurately.
	6. AuctiSafe securely processes the card information using encryption via security measures such as OTP.
	7. AuctiSafe validates the card information and verifies the user's eligibility for payment.
	8. The user provides the required verification details, such as a one-time password (OTP) or billing address.
	9. AuctiSafe verifies the provided information and confirms the payment.
	10. AuctiSafe generates a payment confirmation and provides a receipt to the user.
	11. The user receives confirmation of the successful payment and the completion of the transaction.
Exceptional Flow	1. If the user encounters errors or missing information during the payment process, AuctiSafe prompts the user to correct the necessary fields before proceeding with the payment.
	2. If the card payment fails due to technical issues or invalid card details, AuctiSafe provides appropriate error messages and allows the user to retry the payment or choose an alternative payment method.
Post conditions	1. The user's payment is successfully processed and recorded in AuctiSafe.
	2. AuctiSafe updates the transaction status and marks the item as paid.
	3. The user receives a payment confirmation and receipt.
	4. AuctiSafe initiates the necessary procedures for order fulfillment, such as shipping or item release.

Figure 12: Use case 7

	Use Case-8 REPORT
Description:	This use case involves the process of a registered user reporting a complaint against another registered user in AuctiSafe. The user identifies an issue or violation of the platform's policies and initiates a complaint. AuctiSafe implements a mechanism to track and handle complaints, and if a user receives three valid complaints, their account is blocked or suspended.
Actor:	Registered Users
Trigger:	When a registered user encounters an issue or observes a violation of AuctiSafe's policies by another registered user and decides to report a complaint.
Preconditions:	1. The user is a registered user and has successfully logged into AuctiSafe.
	2. The user has identified an issue or violation committed by another registered user.
Normal Flow:	1. The registered user navigates to the complaint reporting section in AuctiSafe.
	2. They provide details about the complaint, including the username of the reported user and a description of the issue.
	3. The user submits the complaint.
	4. AuctiSafe acknowledges the complaint and assigns it a unique identifier.
	5. AuctiSafe reviews the complaint for validity and compliance with platform policies.
	6. If the complaint is valid, AuctiSafe takes appropriate actions, such as warning the reported user or conducting an investigation.
	7. AuctiSafe communicates updates to the user who reported the complaint.
	8. If three valid complaints are filed against a user, AuctiSafe blocks or suspends their account.
	9. AuctiSafe notifies the user who reported the complaints about the outcome.
Exceptional Flow:	1. If the user encounters any issues or difficulties during the complaint submission process, AuctiSafe provides appropriate error messages or support channels for assistance.
Post conditions:	1. The user's complaint has successfully submitted and recorded in AuctiSafe's complaint tracking system.
	2. AuctiSafe takes appropriate actions based on the validity and severity of the complaint.
	3. AuctiSafe communicates the outcome and actions taken to the user who reported the complaint.
	4. If a user receives three valid complaints, AuctiSafe blocks or suspends that user's account as per the platform's policies and guidelines.

Figure 13: Use case 8

Use Case-9 VIEW USER DETAILS	
Description	This use case involves the process of an admin accessing and viewing various details in AuctiSafe. The admin can view the details of registered users, listing items, and bidder information to monitor and manage the platform effectively.
Actor	Admin - An authorized individual with administrative privileges in AuctiSafe.
Trigger	The trigger for this use case is when the admin needs to access and view specific details in AuctiSafe for administrative purposes.
Preconditions	1. The admin has the necessary credentials to log into AuctiSafe as an admin.
	2. AuctiSafe is operational and accessible.
Normal Flow	1. The admin logs into AuctiSafe using their admin credentials.
	2. They access the admin dashboard or control panel.
	3. The admin navigates to the section for viewing user details.
	4. They search for a specific registered user using criteria such as username or email.
	5. AuctiSafe displays the user's details, including profile information and activity history.
	6. The admin goes to the listing items section.
	7. They view a list of active and inactive listings, filtering and sorting as needed.
	8. AuctiSafe presents the details of each listing, including item description and bidding status.
	9. The admin accesses bidder details for a specific auction.
	10. They review bidder information, such as usernames, bid amounts, and timestamps.
	11. The admin may export or download the user, listing, and bidder details for further analysis or reporting.
Exceptional Flow	1. If the admin encounters any technical issues or errors while accessing the details, AuctiSafe provides appropriate error messages or support channels for assistance.
Post conditions	1. The admin successfully views the requested details of registered users, listing items, and bidder information in AuctiSafe.
	2. The admin can use the obtained information for administrative tasks, monitoring platform activities, and making informed decisions.

Figure 14: Use case 9

Use Case-10 DELETE / SUSPEND USER ACCOUNTS	
Description:	This use case involves the process of an admin deleting or suspending a user account in AuctiSafe. The admin has the authority to take action against a user account based on violations or non-compliance with platform policies. After deleting or suspending the account, AuctiSafe automatically sends an email notification to the user, explaining the reasons for the suspension.
Actor:	Admin - An authorized individual with administrative privileges in AuctiSafe.
Trigger:	The trigger for this use case is when the admin identifies a user account that needs to be deleted or suspended due to violations or non-compliance with platform policies.
Preconditions:	1. The admin has the necessary credentials to log into AuctiSafe as an admin.
	2. AuctiSafe is operational and accessible.
Normal Flow:	1. The admin logs into AuctiSafe using their admin credentials.
	2. They access the admin dashboard or control panel.
	3. The admin navigates to the user's account management section.
	4. They search for the specific user account.
	5. AuctiSafe displays the user's details, including profile information and activity history.
	6. The admin selects the option to delete or suspend the user account.
	7. AuctiSafe prompts for confirmation and reasons for the action.
	8. The admin confirms and provides the necessary information.
	9. AuctiSafe deletes or suspends the user account.
	10. AuctiSafe automatically sends an email notification to the suspended user, explaining the reasons for the suspension.
Exceptional Flow:	If the admin encounters any technical issues or errors while accessing the details, AuctiSafe provides appropriate error messages or support channels for assistance.
Post conditions:	1. The admin successfully deletes or suspends the user account in AuctiSafe.
	2. AuctiSafe sends an email notification to the suspended user, providing the reasons for the suspension.
	3. The user's account is permanently deleted or temporarily suspended based on the admin's action.

Figure 15: Use case 10

Use Case-11 Admin Manually Manages/ Monitors Reports	
Description:	This use case involves the process of an admin manually managing and monitoring reports in AuctiSafe, an Auction Management System. The admin reviews and takes appropriate actions based on the reports filed by users regarding violations, disputes, or suspicious activities. This allows the admin to ensure a fair and secure auction environment.
Actor:	Admin - An authorized individual with administrative privileges in AuctiSafe.
Trigger:	The trigger for this use case is when the admin receives reports from users regarding violations, disputes, or suspicious activities in the auction system.
Preconditions:	1. The admin has the necessary credentials to log into AuctiSafe as an admin.
	2. AuctiSafe is operational and accessible.
	3. Users have the ability to file reports within the AuctiSafe system.
Normal Flow:	1. The admin logs into AuctiSafe using their admin credentials.
	2. They access the admin dashboard or control panel.
	3. The admin navigates to the section for managing reports or receives notifications of new reports.
	4. They review the list of reports filed by users, including details and evidence.
	5. The admin selects a specific report to review in detail.
	6. They evaluate the report based on platform policies and guidelines.
	7. The admin takes appropriate action, such as warning the reported user or initiating an investigation.
	8. They update the report status in AuctiSafe.
	9. If needed, the admin communicates with the reporter or reported user for additional information.
	10. The admin repeats the process for other pending reports, addressing them one by one.
Exceptional Flow:	If the admin encounters any technical issues or errors while accessing the details, AuctiSafe provides appropriate error messages or support channels for assistance.
Post conditions:	1. The admin successfully reviews and manages the reports filed in AuctiSafe.
	2. The admin takes appropriate actions based on the reports, ensuring a fair and secure auction environment.
	3. The status of each report has updated in AuctiSafe, reflecting the actions taken and resolutions achieved.

Figure 16: Use case 11

4.4 Flow chart of Auction Types:

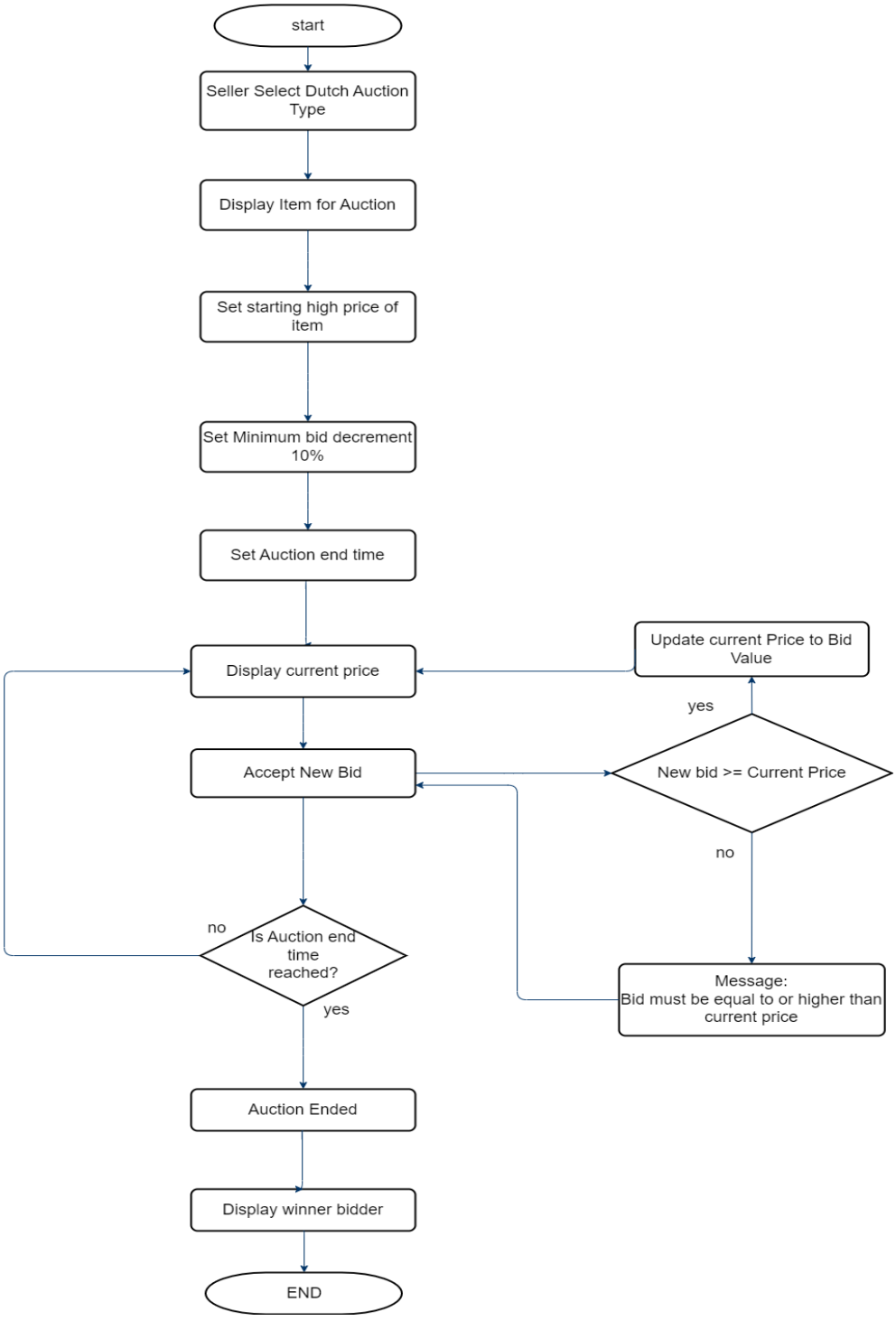

Figure 17: Flowchart of Dutch Auction Type

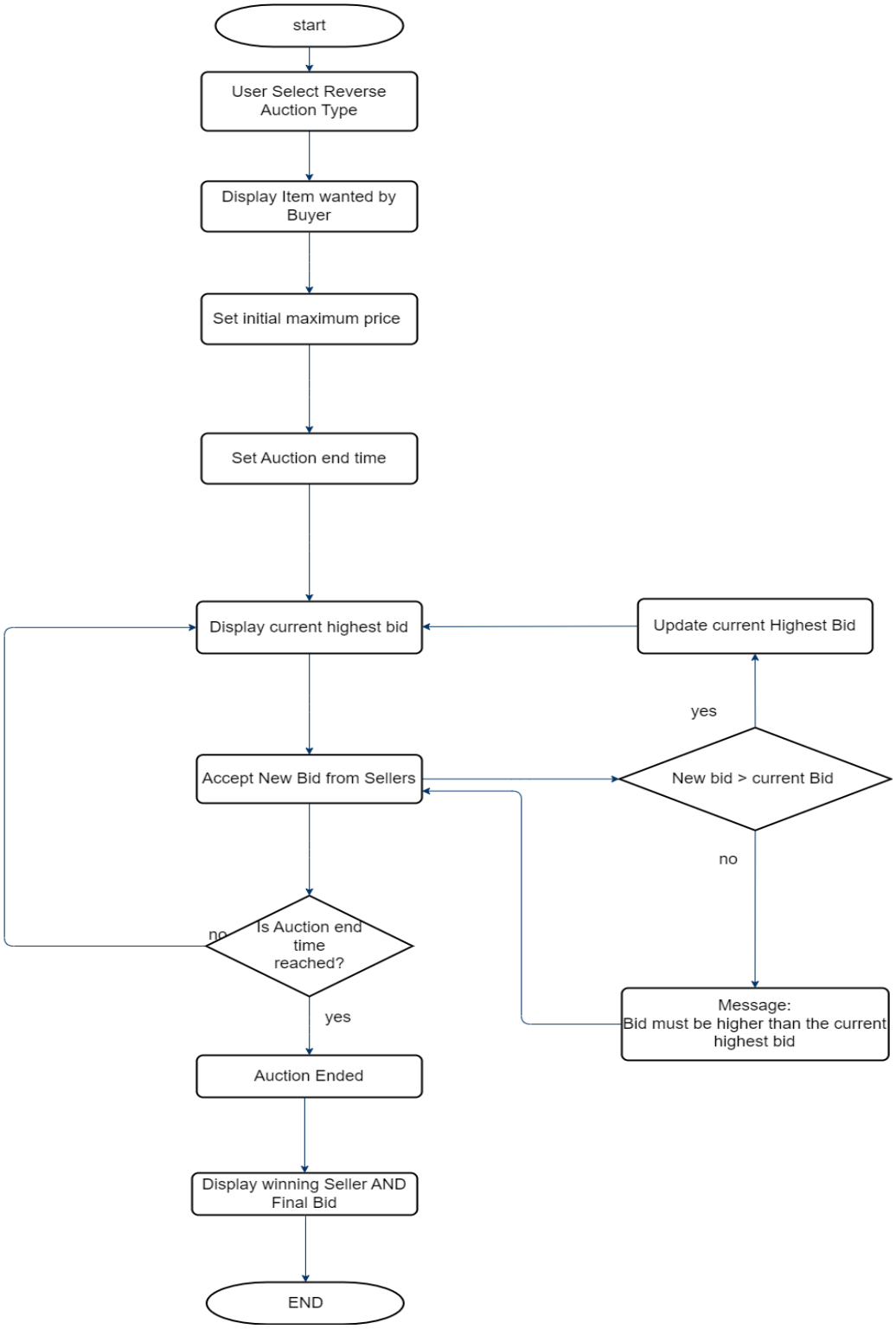

Figure 18: Flowchart of Reverse Auction Type

4.5 Summary:

In Chapter 4, the process of designing and specifying AuctiSafe, our web-based auction management solution, thoroughly examined. The system's architecture and functionality thoroughly mapped out through the employment of diagrams such as the Entity Relationship Diagram (ERD) and Use Case Unified Modeling Language (UML) diagram. The Entity-Relationship Diagram (ERD) offered valuable insights into the structure of the database, delineating the interconnections among various entities inside the system. In the interim, the Use Case UML diagram depicted many user interactions and system behaviors, encompassing crucial functionalities such as user registration, authentication, password retrieval, and bidding item viewing. The Use Case UML diagram comprehensively examined and depicted each user story, encompassing registration, authentication, password recovery, and displaying bidding items. Diagrams play a crucial role in facilitating comprehension of the system's needs and functionality for developers and stakeholders alike, rendering them indispensable tools. In this chapter, we have established a strong basis for the development phase by describing the system's design and specification. This will ensure that AuctiSafe effectively satisfies the requirements of its users and stakeholders.

CHAPTER – 5

5.0 Introduction:

The primary focus of this chapter pertains to the user interface and system architectural components of AuctiSafe, a web-based auction management system. The present chapter offers a comprehensive examination of the frontend and backend design, with a particular focus on the user interactions and the general structure of the system. Furthermore, we will explore the external libraries employed in the system and analyze the incorporation of other libraries to augment functionality.

By showcasing screenshots from the AuctiSafe online application, readers are provided with a clear understanding of the user interface design and its compatibility with user needs. Furthermore, we aim to enhance the understanding of the many functions offered by the system and provide detailed explanations regarding the validation processes incorporated within the source code. Through an analysis of the user interface and system architecture, readers can gain insight into the functioning of AuctiSafe and its ability to meet the requirements of its users. This chapter provides a thorough examination of the technical components of the program, establishing a foundation for later chapters to delve deeper into its functionality.

5.1External Libraries:

- To access all models:

```
using Auctisafe.Models;
```

- To access all view models:

```
using Auctisafe.ViewModel;
```

- To generate list:

```
using System.Collections.Generic;
```

- To write data base query:

```
using System.Linq;
```

- To make web and for mvc architecture:

```
using System.Web;
```

- To follow mvc architecture:

```
using System.Web.Mvc
```

- for achieving code first approach and deploy the changes in database

```
using System.Data.Entity.Migrations;
```

- For cultural date time

```
using System.Globalization;
```

- For input files (Files ko server pr save karwane k lye)

```
using System.IO;
```

- For validation:

```
using System.ComponentModel.DataAnnotations.Schema;
```

- For making tables:

```
using System.Data.Entity;
```

- For timer:

```
using System.Threading;
```

- For Mailing

```
using System.Net.Mail;
```

- For Hashing password:

```
using System.Security.Cryptography;
```

5.2 Web Application Screenshots:

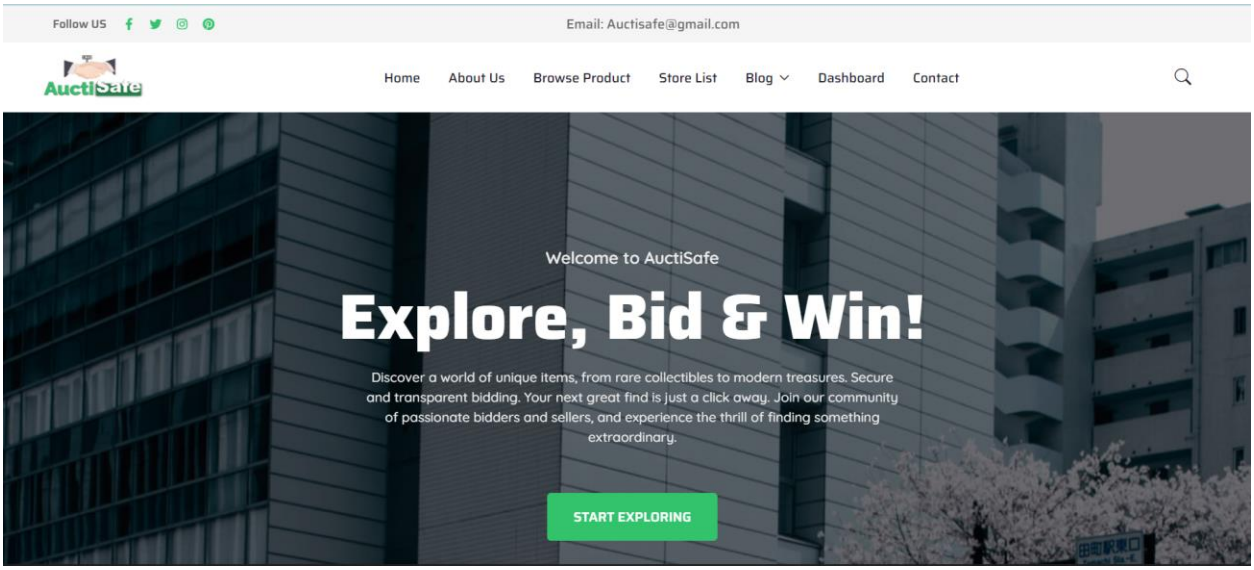

Figure 19: Home Screen

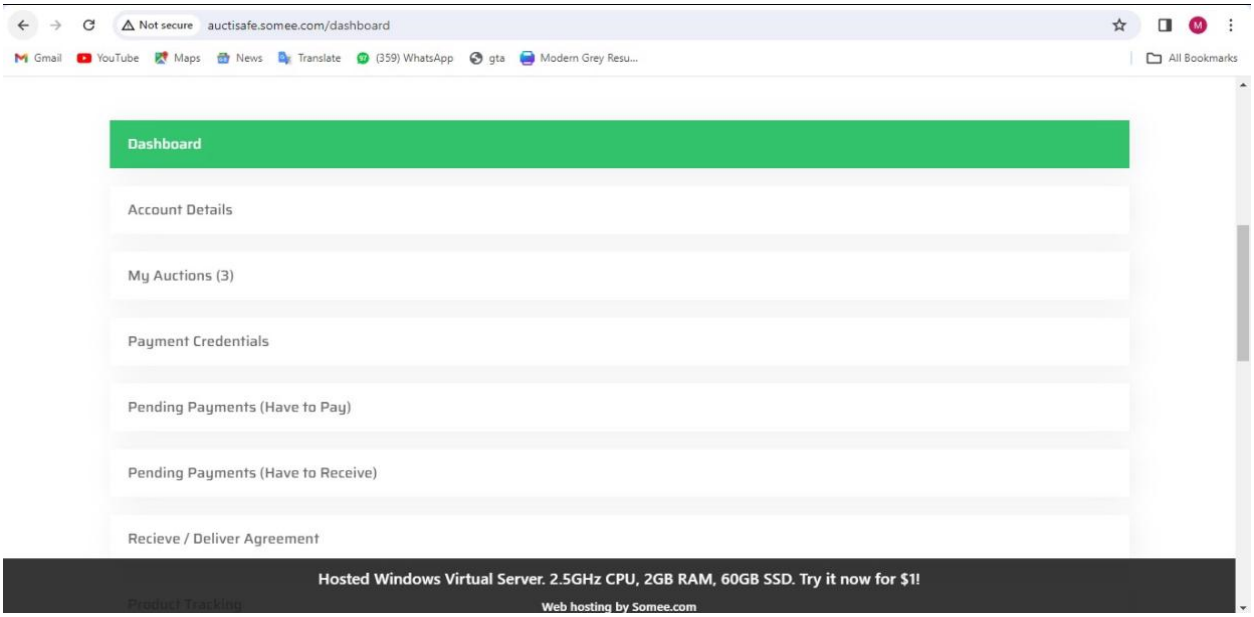

Figure 20: User Dashboard

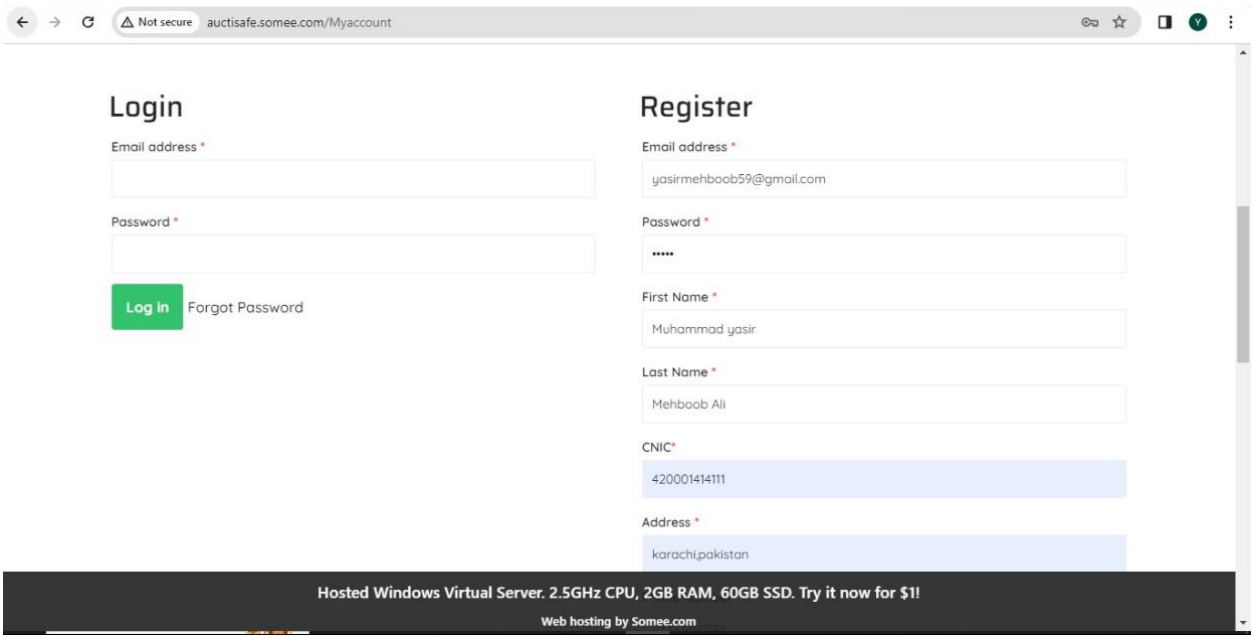

Figure 21: User Account Creation

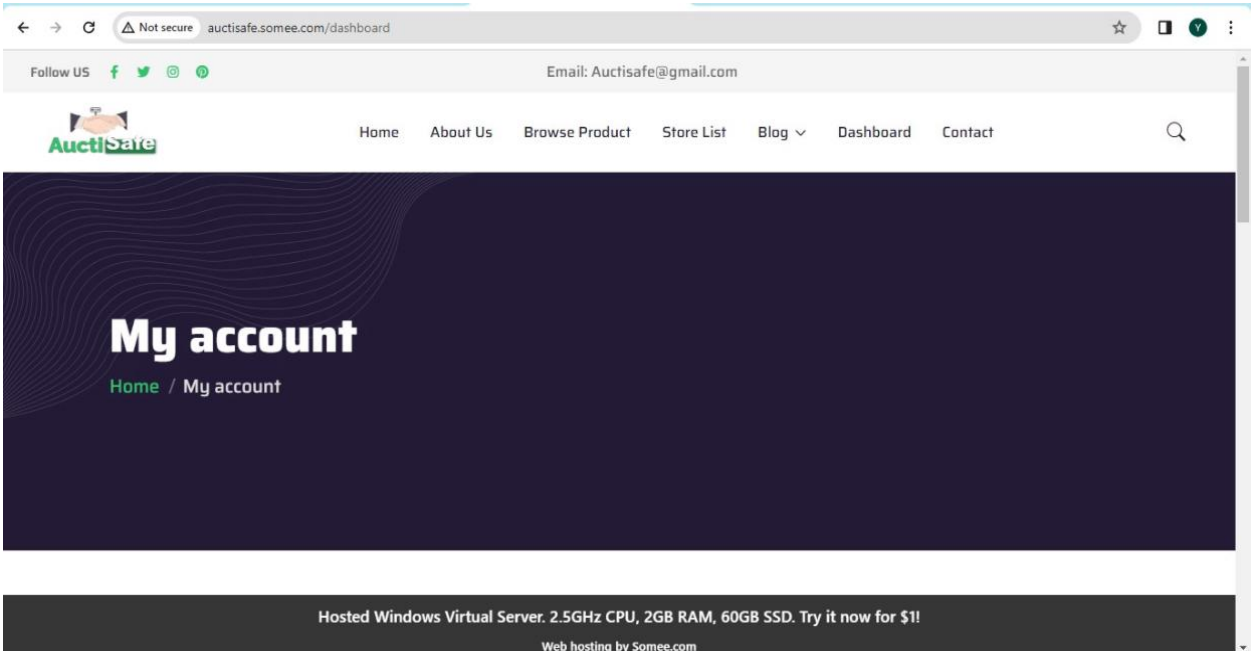

Figure 22: My Account

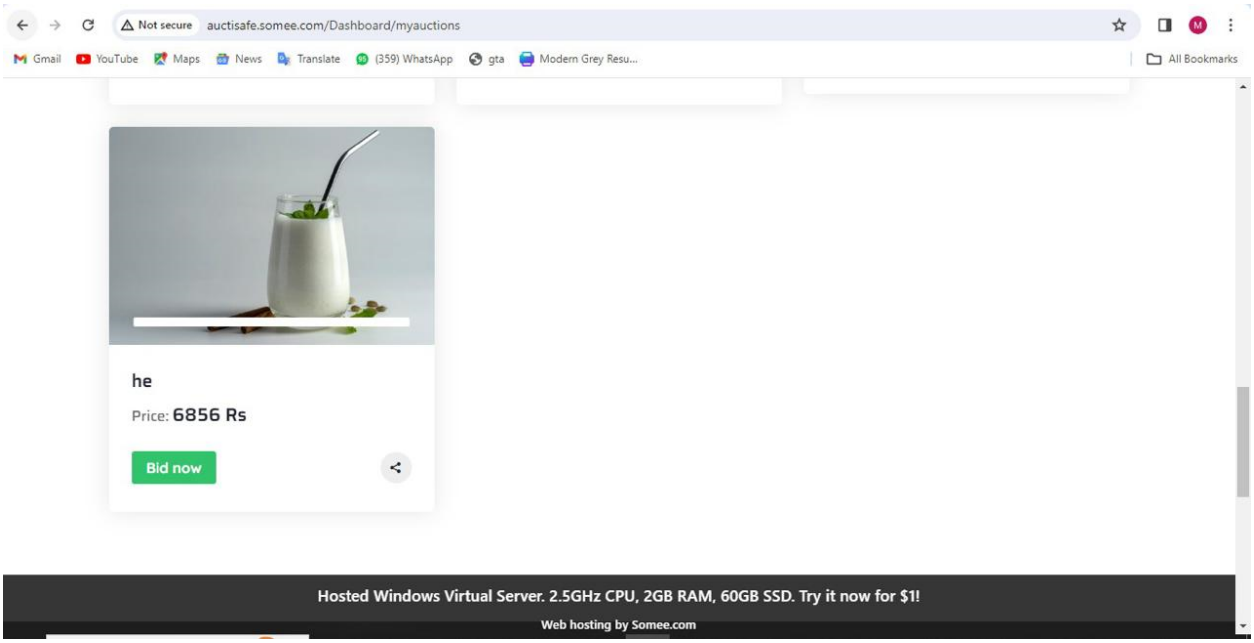

Figure 23: My Auction

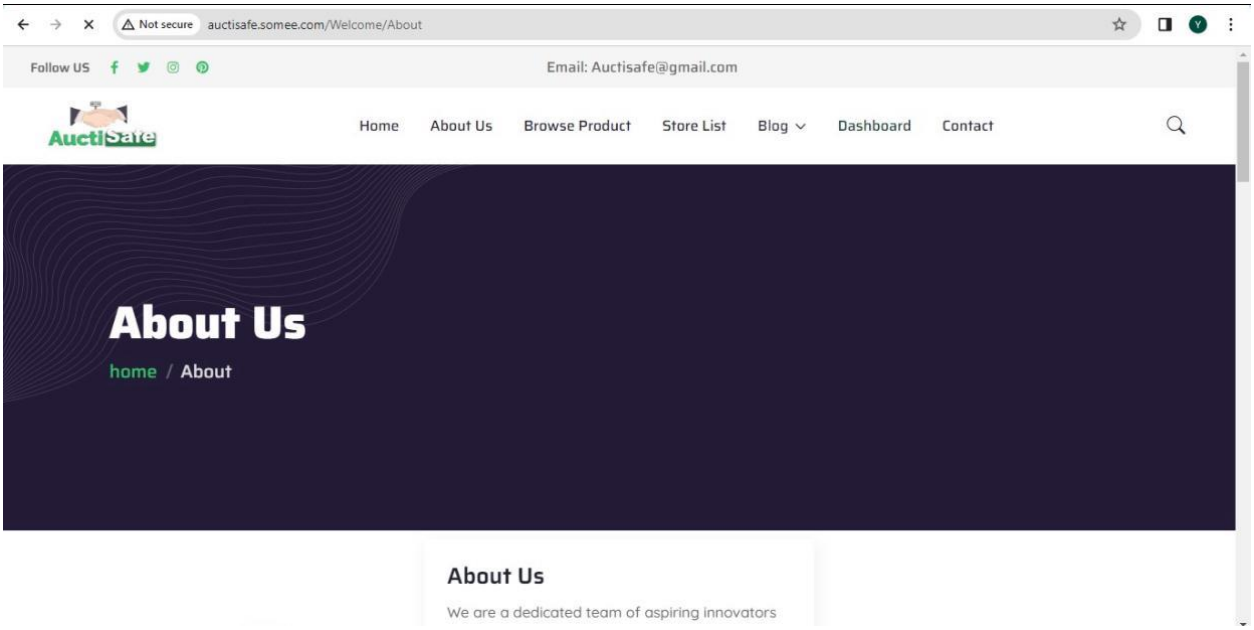

Figure 24: About Us

5.3 Summary:

This chapter explored the complexities of AuctiSafe's user interface design, integration with external libraries, and system architecture. By means of comprehensive deliberations and the utilization of visual aids, we delved into the many components of frontend design, thereby illustrating their significance in augmenting user experience and satisfying user demands. Furthermore, an analysis was conducted on the incorporation of external libraries, emphasizing their role in expanding the application's capabilities. In addition, the system architecture of AuctiSafe was elucidated, encompassing aspects such as backend design and database queries, in order to demonstrate its smooth functioning. Through the utilization of screenshots, readers were able to acquire a full comprehension of the interface and navigation flow of the online application. In its entirety, this chapter presented a comprehensive perspective on the technological elements of AuctiSafe, so establishing a foundation for subsequent investigation into its capabilities.

CHAPTER – 6

6.0 Introduction:

This chapter explores the thorough testing procedure carried out to guarantee the capability and dependability of our software, AuctiSafe. By developing and implementing test cases, our objective was to determine if the software functions as intended and generates the anticipated results. We employed a comprehensive testing technique that included both standard test cases and usability test cases. This enabled us to assess the software from several viewpoints and identify any possible problems. Readers acquire a full understanding of the software's capabilities by gaining insights on both its minor and large functionalities.

After the conclusion of the implementation phase, the process of testing became crucial in order to verify the effective operation of the system. Every screen and button underwent thorough testing to ensure compliance with the required requirements and functions. In order to optimize the testing process, we utilized code reusability, despite the intricate nature of the program. For instance, specific functionality employed shared data across several parts, hence enhancing operational efficiency. Consequently, a comprehensive set of 58 test cases have been established, with each instance being thoroughly recorded with various properties like test case ID, description, processes, anticipated outcomes, and current state. This comprehensive documentation offers clarity into the testing procedure and enables efficient monitoring of testing results over a period.

6.1 Test Cases:

Requirement Reference	1	**Project Name**	Auction Management System
Test Case Id	1.1	**Test Type**	Functionality
Execution Type	Website		
Test Case Description	To test that Home Screen should display after opening the website		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/.		
Expected Result	Website screen should be visible to the user		
Actual Result	Web Page is visible to the user		
Pass/Fail	pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 1: Test case 1

Requirement Reference	1	**Project Name**	Auction Management System
Test Case Id	1.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that About Us Screen should display after clicking on about Us		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on about us		
Expected Result	About Us should be visible to the user		
Actual Result	About Us Should be visible to the User		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

TABLE 2: Test case 2

Requirement Reference	1	**Project Name**	Auction Management System
Test Case Id	1.3	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Browser Product should display after clicking on browse		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Browse Product		
Expected Result	Browse Product should be visible to the user		
Actual Result	Browse Product Should be visible to the User		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 3: Test case 3

Requirement Reference	1	**Project Name**	Auction Management System
Test Case Id	1.4	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Blog should display after clicking on blogs		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Blogs		
Expected Result	Blogs should be visible to the user		
Actual Result	Blogs Product Should be visible to the User		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 4: test case 4

Requirement Reference	1	**Project Name**	Auction Management System
Test Case Id	1.5	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Login and Registration screen should display after clicking on Dashboard		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard		
Expected Result	Login and Registration screen should be visible to the user		
Actual Result	Visible to the users		
Pass/Fail	pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 5: test case 5

Requirement Reference	1	**Project Name**	Auction Management System
Test Case Id	1.6	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Contact Us Page should display after clicking on Contact Us		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Contact Us		
Expected Result	Contact Us be visible to the user		
Actual Result	Contact Us Should be visible to the User		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 6: test case 6

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.1	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test the user get a verification code after providing all detail of registration and clicking on captcha		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Provide Email, Name, Address, cnic, password 5. Click on the Captcha 6. Click on Register Button		
Expected Result	User will get email of verification code		
Actual Result	User get a code		
Pass/Fail	pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 7: Test case 7

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user get a error if the email is not correct		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Insert a wrong email 5. Fill all other fields 5. Click on the Captcha 6. Click on Register Button		
Expected Result	A require filled validator display		
Actual Result	Displayed Successfully		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 8: test case 8

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.3	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test the user should not registration if any field is empty and redirect to the same page		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Provide Email , Name , Address , cnic , password 5. Leave Any on field empty 6. Click on the Captcha 7. Click on Register Button		
Expected Result	Redirected to the my account page		
Actual Result	Redirected Successfully		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 9: Test case 9

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.4	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test the user should not registration if captcha is not filled		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Provide Email , Name , Address , cnic , password 5. Leave the Captcha 6. Click on Register Button		
Expected Result	A alert will display that please complete the captcha		
Actual Result	Alert Displayed		
Pass/Fail	pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table No 10: test case 10

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.5	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test the user should not registration if verification is wrong		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Provide Email , Name , Address , cnic , password 5. Leave the Captcha 6. Click on Register Button 7. Enter wrong verification code 8. Click of Create button		
Expected Result	Alert Should be Display that enter the correct code		
Actual Result	Alert displayed		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table No 11: test case 11

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.6	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user will not able to use Captcha after few minutes.		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Provide Email, Name, Address, cnic, password 5. wait few minutes to fill captcha		
Expected Result	A error should be display		
Actual Result	Error displayed		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 12: test case 12

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.7	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the user will not register if there already a email registered		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Provide Email , Name , Address , cnic , password 5. Leave the Captcha 6. Click on Register Button 7. Fill the captcha		
Expected Result	Alert will displayed that email already exists		
Actual Result	Message displayed		
Pass/Fail	pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 13: test case 13

Requirement Reference	2	**Project Name**	Auction Management System
Test Case Id	2.8	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that after putting verification code that user get alert that account is pending		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Provide Email, Name, Address, cnic, password 5. Leave the Captcha 6. Click on Register Button 7. Fill the captcha 8. Enter verification code 9. Click on create		
Expected Result	Alert will displayed that account is on pending		
Actual Result	Alert Displayed		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 14: test case 14

Requirement Reference	3	**Project Name**	Auction Management System
Test Case Id	3.1	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test the user should be login success Fully after provide registered email and correct password..		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and Password 5. click on login		
Expected Result	Redirect to my account or Admin panel		
Actual Result	Redirect Success fully		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 15: test case 15

Requirement Reference	3	**Project Name**	Auction Management System
Test Case Id	3.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test the user should be not be login if password is wrong		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and Wrong Password 5. click on login		
Expected Result	Message should be display Enter the correct credential		
Actual Result	Message displayed		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 16: test case 16

Requirement Reference	3	**Project Name**	Auction Management System
Test Case Id	3.3	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test the user should be not be login if password is wrong		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Wrong Email and correct Password 5. click on login button		
Expected Result	Message should be display Enter the correct credential		
Actual Result	Message displayed		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 17: test case 17

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.1	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the user is on his dashboard after login		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login		
Expected Result	User should be redirect on his dashboard		
Actual Result	Redirected to the dashboard		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 18: test case 18

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can check their details and update detail		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login 6. Click on account details		
Expected Result	User can see there details and update them		
Actual Result	Detail visible and updated		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 19: test case 19

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.3	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can see their own auctions		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login 6. Click on My Auctions		
Expected Result	User can see there auctions		
Actual Result	User auctions are visible		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 20: test case 20

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.4	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can see all the pending payment(Have to Pay) are Display		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login 6. Click on dashboard 7. Click on Pending payments (Have to Pay)		
Expected Result	User can see all pending payments (Have to pay)		
Actual Result	All payment are visible which are have to pay		
Pass/Fail	pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 21: test case 21

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.5	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can see all the pending payment (Have to receive) are Display		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login 6. Click on dashboard 7. Click on Pending payments (Have to receive)		
Expected Result	User can see all pending payments (Have to receive)		
Actual Result	All payment are visible which are Have to receive		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 22: test case 22

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.6	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that after uploading screenshot of payment a message visible to the user		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Open Email		
Expected Result	After upload transfer Screenshot a message should be visible, TRX send		
Actual Result	Message visible to the user		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 23: test case 23

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.7	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user get an email when admin approve the payment		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Open email		
Expected Result	User get an email		
Actual Result	Email received to the user		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 24: test case 24

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.8	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user get an email when admin reject the payment		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/. 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login 6. Click on dashboard 7. Click on Pending payments (Have to receive)		
Expected Result	User get an email		
Actual Result	Email received to the user		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 25: test case 25

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.9	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Argument should be visible to the Auctioneer and buyer after payment acceptance by the admin at their dashboard		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User Must Be Login There must be an Auctioneer and Auction winning		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login 6. Click on dashboard 7. Click on Receive/delivery Agreement		
Expected Result	Agreement should be visible to the Auctioneer and winner after auction complete.		
Actual Result	Agreement is Visible to the Users		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 26: test case 26

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.10	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Agreement Submission message should be visible to the Auctioneer and buyer in there dashboard		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ There must be an Auctioneer and Auction winning		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. click on login 6. Click on dashboard 7. Click on Receive/delivery Agreement 8. Update the Agreement File 9. Click on submit button		
Expected Result	Agreement Submission message should be visible		
Actual Result	Message Displayed		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 27: test case 27

Requirement Reference	4	**Project Name**	Auction Management System
Test Case Id	4.11	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the user is logout when he click on logout button		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on dashboard 7. Click on logout tab		
Expected Result	User must be redirect to the My account from dashboard		
Actual Result	Redirected and logout successfully		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 28: test case 28

Requirement Reference	5	**Project Name**	Auction Management System
Test Case Id	5.1	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the auction is only created when user fill all the field,		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on dashboard 7. Click on create auction tab 8. Select the Auction type and provide all the details		
Expected Result	User must be redirect to the My account from dashboard		
Actual Result	Redirected successfully		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 29: test case 29

Requirement Reference	5	**Project Name**	Auction Management System
Test Case Id	5.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the auction is not created when any one field is empty		
Pre-Condition	User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on dashboard 7. Click on create auction tab 8. Select the Auction type and leave any of the require field		
Expected Result	User must be redirect at the same page.		
Actual Result	Redirected at same page successfully		
Pass/Fail	Pass		
Date Prepared	Jan 19,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abrar Ali		

Table 30: test case 30

Requirement Reference	6	**Project Name**	Auction Management System
Test Case Id	6.1	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can see the bid history		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on dashboard 7. Click on create auction tab 8. Select the Auction type and leave any of the require field		
Expected Result	Bidding history must be visible to all the bidders		
Actual Result	Bid History Visible		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 31: test case 31

Requirement Reference	6	**Project Name**	Auction Management System
Test Case Id	6.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that name of bidder is hidden in seal bid auctions		
Pre-Condition	User Must Be Login.		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on dashboard 7. Click on create auction tab 8. Select the Auction type and leave any of the require field		
Expected Result	Bidding history must be visible to all the bidders		
Actual Result	Bid History Visible		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 32: test case 32

Requirement Reference	7	Project Name	Auction Management System
Test Case Id	7.1	Test Type	Functionality
Execution Type	Web Site		
Test Case Description	To test that auction winner gets any email after winning auction		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Open user Gmail		
Expected Result	User receive any email of auction winning		
Actual Result	Email receive by user		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 33: test case 33

Requirement Reference	7	Project Name	Auction Management System
Test Case Id	7.2	Test Type	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can an email when his account is activate		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Open user Gmail		
Expected Result	User receive an email that his account is activate		
Actual Result	Email receive by user		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 34: test case 34

Requirement Reference	7	**Project Name**	Auction Management System
Test Case Id	7.3	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can an email when his account is deactivated		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Open user Gmail		
Expected Result	User receive an email that his account is deactivated		
Actual Result	Email receive by user		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 35: test case 35

Requirement Reference	7	**Project Name**	Auction Management System
Test Case Id	7.4	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can an email when his product is deactivated		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Open user Gmail		
Expected Result	User receive an email that his product is deactivated		
Actual Result	Email receive by user		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 36: test case 36

Requirement Reference	7	**Project Name**	Auction Management System
Test Case Id	7.5	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that user can an email when his product is activated		
Pre-Condition	User should visit on the web http://www.auctisafe.somee.com/ User must be on dashboard Page. User Must Be Login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Open user Gmail		
Expected Result	User receive an email that his product is activated		
Actual Result	Email receive by user		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 37: test case 37

Requirement Reference	8	**Project Name**	Auction Management System
Test Case Id	8.1	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the all the un-normal bids are remove after few minutes		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Click on Bid History		
Expected Result	All the bids should remove		
Actual Result	Bid Remove success fully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 38: test case 38

Requirement Reference	8	**Project Name**	Auction Management System
Test Case Id	8.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the user account will be automatically suspended when there are more than 3 report against any user		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Click on Bid History		
Expected Result	User account should be suspended		
Actual Result	Suspended Successfully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 39: test case 39

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.1	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin redirected to the admin panel when is login with his user id and password		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login		
Expected Result	Admin will redirected to the admin panel		
Actual Result	Redirected Success fully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 40: test case 40

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.2	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can check the list of all the product.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of product and Auctions		
Expected Result	List of the Product should be visible to the user		
Actual Result	Products Detail visible to the admins		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 41: test case 41

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.3	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can check all the details of the product.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of product and Auctions 7. Click of detail and Auctions		
Expected Result	All product details is visible to the admin		
Actual Result	Products Detail visible to the admins		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 42: test case 42

Requirement Reference	**9**	**Project Name**	Auction Management System
Test Case Id	9.4	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can active the auctions.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of product and Auctions 7. Click of detail and Auctions 8. Click on the Active Auction		
Expected Result	Auction will be active and user get an email		
Actual Result	User receive an email of Auction Activation		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 43: test case 43

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.5	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can De-active the auctions.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of product and Auctions 7. Click of detail and Auctions 8. Click on the deactivate Auction		
Expected Result	Auction will be deactivated and user get an email		
Actual Result	User receive an email of Auction deactivation.		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 44: test case 44

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.6	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can keep tracking the status of auction.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of product and Auctions 7. Click of detail and Auctions		
Expected Result	Current status of the auction is visible to the Admin		
Actual Result	Status visible		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 45: test case 45

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.7	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can see all the bidding on the auction.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of product and Auctions 7. Click of detail and Auctions		
Expected Result	List of all the bidding is visible to the Admin		
Actual Result	Bidding visible		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 46: test case 46

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.8	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can roll back the un- normal bids.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of product and Auctions 7. Click of detail and Auctions 8. Scroll down and click of roll-back		
Expected Result	User will get and email that your bid detected as un-normal		
Actual Result	User receive an email		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 47: test case 47

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.9	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can check the list of all the users		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on User and their details		
Expected Result	List of all the users should be visible to the Admin		
Actual Result	User list visible to the admins		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 48: test case 48

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.10	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can check all the details of the User.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on User and their details 7. Click on details and update		
Expected Result	All Users details is visible to the admin		
Actual Result	User Detail visible to the admins		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 49: test case 49

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.11	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Admin can activate the user account.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of user and their details 7. Click on details and update 8. Click on Activate 9. Click on update		
Expected Result	User get an email of account activation		
Actual Result	Email receive successfully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 50: test case 50

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.11	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that Admin can deactivate the user account.		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click of user and their details 7. Click on details and update 8. Click on deactivate 9. Click on update		
Expected Result	User get an email of account deactivation		
Actual Result	Email receive successfully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 51: test case 51

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.12	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test hat admin can check the list of all the transactions		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on transactions ID’s		
Expected Result	List of all the transaction should be visible to the admin		
Actual Result	List successfully visible		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 52: test case 52

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.12	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that admin can accept or reject the transactions		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on transactions ID's 7. Click on accept or reject		
Expected Result	Admin should get an email that his payment is successfully receive or reject		
Actual Result	Email receive successfully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Abdul Qadir		

Table 53: test case 53

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.13	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that admin can check the list of all the report		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on Report analyze		
Expected Result	Admin should get an email that his payment is successfully receive or reject		
Actual Result	Email receive successfully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 54: test case 54

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.14	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can reject report		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on Report analyze		
Expected Result	Report should be delete from the list		
Actual Result	Remove successfully		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 55: test case 55

Requirement Reference	9	**Project Name**	Auction Management System
Test Case Id	9.15	**Test Type**	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can suspend the user account		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on Report analyze		
Expected Result	User account should be suspended and user get and email		
Actual Result	Account suspended successfully and user get email		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 56: test case 56

Requirement Reference	9	Project Name	Auction Management System
Test Case Id	9.16	Test Type	Functionality
Execution Type	Web Site		
Test Case Description	To test that the admin can send the announcement to all the users		
Pre-Condition	Admin must be login		
Test Steps	1. Go to Google chrome. 2. Search for http://www.auctisafe.somee.com/ 3. Click on Dashboard 4. Enter Correct Email and correct Password 5. Click on login 6. Click on announcement.		
Expected Result	All the user receive an announcement.		
Actual Result	Announcement (Email Will Sent to All Registered Users)		
Pass/Fail	Pass		
Date Prepared	Jan 20,2024		
Date Run	Jan 21, 2024		
Prepared By	Muhammad Yasir		
Tested By	Wajiha Jawwad Ali		

Table 57: test case 57

6.2 Summary:

We test our software to get our expected results of our software or whether a system under test satisfies requirements or works correctly. After test cases, we get satisfied results the usability test case.

CHAPTER – 7

7.0 Introduction:

This chapter serves as the concluding chapter of our final year project, offering a comprehensive summary of all the work accomplished during the development of AuctiSafe, our auction system web application. This chapter encapsulates the entire journey, highlighting the challenges overcome, limitations encountered, and the future prospects of the software. Throughout the project, we meticulously addressed the challenges faced, ensuring that each obstacle was met with innovative solutions and diligent effort. The limitations of the system have been candidly discussed to provide users with a clear understanding of the application's capabilities and areas for improvement. Furthermore, the future work section outlines potential enhancements and additions that can be made to AuctiSafe to further elevate its effectiveness and utility. As technology evolves and user needs evolve, there is ample scope for enhancing the application's features and functionality. This section offers insights into how future iterations of AuctiSafe can enhance the overall user experience and deliver even greater value to its users.

7.1 System Limitations and Challenges:

AuctiSafe is an innovative online auction management system aimed at streamlining the auction process and enhancing user experience. While it offers numerous benefits, it also faces certain limitations and challenges that are important to address:

i. **Internet Dependency:** AuctiSafe heavily relies on internet connectivity for its operation. In cases where users have limited or no internet access, they may face difficulties in accessing the platform, limiting their participation in auctions.

ii. **User Accessibility:** AuctiSafe's interface may pose challenges for users who are not well-versed in technology, particularly those in rural areas or with limited digital literacy. This could hinder their ability to fully utilize the platform's features and functionalities.

The challenges we faced during the development of the project were:

i. **Security Concerns:** Ensuring the security of the platform was crucial, albeit it posed a complex problem. A comprehensive effort was required to address security problems, including detecting weaknesses and installing strong encryption and authentication procedures.

ii. **Market Dynamics Adaptation:** Adjusting to changing market conditions and user preferences posed continuous hurdles. Continuous monitoring and modification are necessary to stay ahead of developing trends, respond to competition developments, and fulfill evolving consumer expectations.

iii. **Scalability Planning:** Forecasting the platform's future expansion and guaranteeing scalability was crucial yet difficult. Creating an adaptable technical framework able to manage higher user engagement and transaction levels necessitated meticulous preparation and anticipation.

7.2 Future Work:

Expanded Auction Types: Introducing additional auction types beyond those initially implemented, such as multi-round auctions or hybrid auctions, can offer users more flexibility and cater to a broader range of auction scenarios.

Mobile Application Development: Developing a dedicated mobile application for AuctiSafe can enhance accessibility and convenience for users, allowing them to participate in auctions and manage their accounts seamlessly from their smartphones or tablets.

Integration of AI Technology: Leveraging artificial intelligence (AI) technology for predictive analytics and personalized recommendations can enhance the auction experience for users, providing them with tailored suggestions based on their preferences and bidding history.

7.3 Conclusion:

In conclusion, the development of AuctiSafe represents a significant milestone in the realm of online auction management systems. Despite the challenges and limitations faced during its development, AuctiSafe stands as a robust and reliable platform for conducting auctions efficiently and securely.

Through meticulous planning, implementation, and testing, we have created a versatile system that caters to the diverse needs of auction administrators, sellers, and bidders. While the current version of AuctiSafe addresses many key requirements and functionalities, there is ample room for future enhancements and refinements.

As we look ahead, our commitment to innovation and excellence drives us to explore new avenues for improving AuctiSafe and delivering even greater value to our users. With ongoing development and refinement, we are confident that AuctiSafe will continue to evolve as a leading solution in the online auction management space, empowering users to conduct auctions with ease and confidence.

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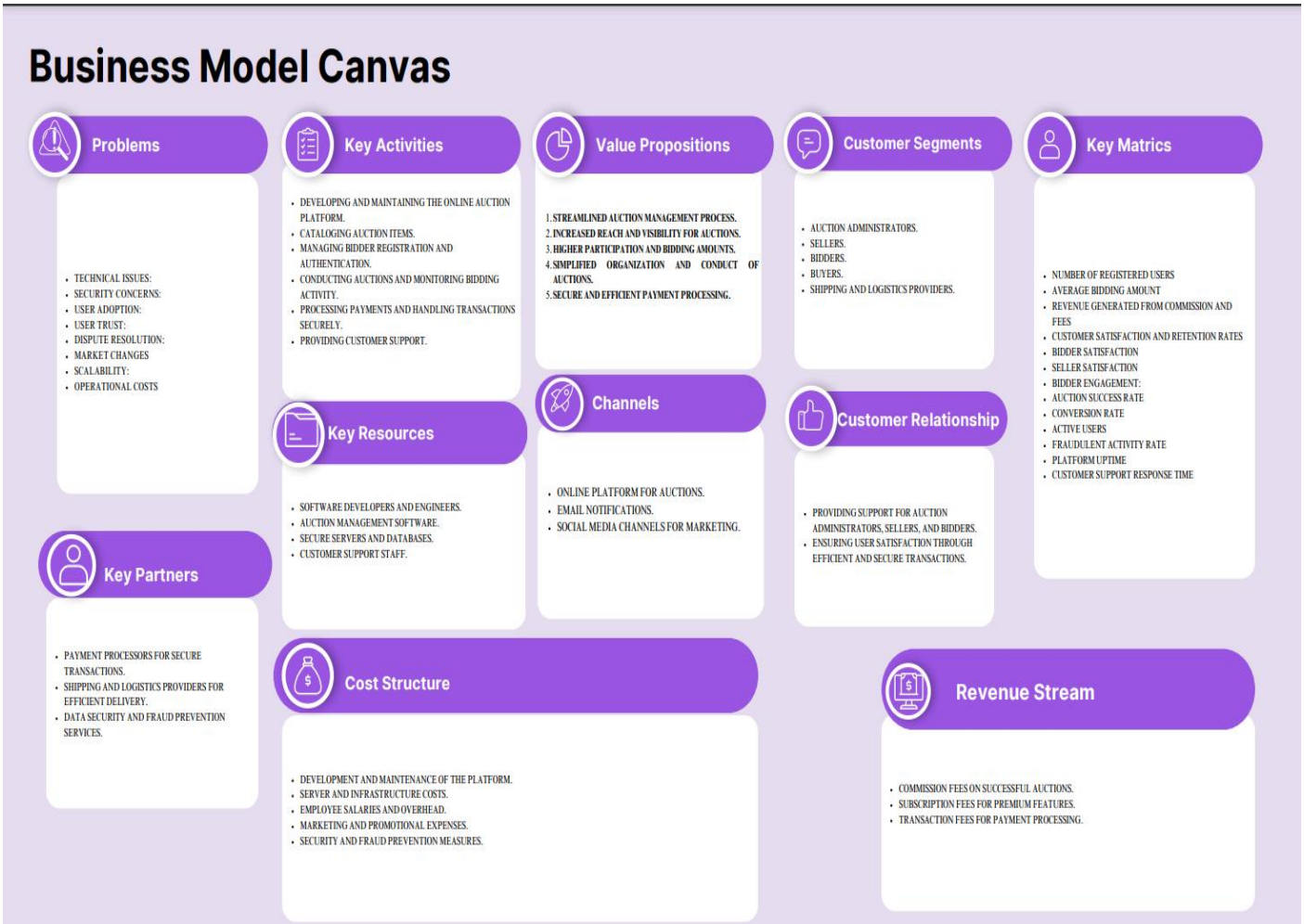
APPENDIX

Business Canvas:



Detailed Gantt Chart:

	Task name	Start date	End date	Duration	Status	Progress	Resource
		01/04/2023	05/01/2024	40w		28%	
1	AuctiSafe: Building a Robust and Reliable ...	01/04/2023	05/01/2024	40w	In progress	20%	All Member
2	FYP-I Timelines	01/04/2023	16/06/2023	11w	In progress	20%	All Members
3	Project Approval	01/04/2023	07/04/2023	1w	Done	100%	All Members
4	Introduction of Project: Project Title, Scop...	08/04/2023	14/04/2023	1w	Done	100%	All Members
5	Literature Review Of Auction System	15/04/2023	21/04/2023	1w	Done	100%	Yasir & Qadir
6	Research Methodology: Complete Resear...	22/04/2023	28/04/2023	1w	Done	100%	Wajiha & Qadir
7	Iteration 1: Functional & Non-Functional ...	29/04/2023	12/05/2023	2w	Done	100%	All Members
8	Iteration 2: Development Analysis by ERD...	13/05/2023	26/05/2023	2w	In progress	50%	Wajiha, Qadir ...
9	Iteration 3: Designing & Prototype of Auc...	27/05/2023	02/06/2023	1w	Open	0%	Yasir, Qadir & I...
10	Poster Making	03/06/2023	09/06/2023	1w	Open	0%	All Members
11	Complete Project Report	10/06/2023	16/06/2023	1w	Open	0%	All Members
12	FYP-II Timelines	23/09/2023	05/01/2024	15w	Open	0%	All Members
13	Iteration 1: Development of 'Login/Signup...	23/09/2023	06/10/2023	2w	Open	0%	Wajiha, Yasir & ...
14	Iteration 2: Core Features Development &...	07/10/2023	13/10/2023	1w	Open	0%	Ibrar & Qadir
15	Testing: Login/Signup, Main Home Page, ...	14/10/2023	17/10/2023	4d	Open	0%	Wajiha & Ibrar
16	Iteration 3: Additional Features Developm...	18/10/2023	27/10/2023	1w 3d	Open	0%	Wajiha, yasir & ...
17	Iteration 4: Implementation of Payment P...	28/10/2023	10/11/2023	2w	Open	0%	Ibrar , Qadir
18	Testing of Implemented Parts, Bug Testing	11/11/2023	17/11/2023	1w	Open	0%	Wajiha & Ibrar
19	Iteration 5: Design & Development: Woul...	18/11/2023	01/12/2023	2w	Open	0%	All Members
20	Iteration 6: Final Testing, Bug Testing and ...	02/12/2023	22/12/2023	3w	Open	0%	All Members
21	Final Draft	23/12/2023	05/01/2024	2w	Open	0%	All Menbers

SOFTWARE MANUAL:

Initial Setup:

Upon accessing the AuctiSafe web application, users will be greeted with a floating screen welcoming them to the platform. To begin exploring the application, users can follow these steps:

3. View the floating screen upon entering the web application.
4. Click on the "Start Exploring" button to proceed.

The dashboard serves as the central hub for navigating through various features and functionalities of the application. To begin the initial setup process, users can follow these steps:

1. Navigate to the registration section by clicking on the "Register" button.
2. Fill out the required fields including email, name, address, CNIC, and password.
3. Complete the Captcha verification process to ensure security.
4. Click on the "Register" button to submit the registration details.
5. After successful registration, an email verification code will be sent to the provided email address.
6. Enter the verification code in the designated field to verify the email address.
7. Click on the "Create" button to finalize the registration process.

Login Process:

Once registered, users can proceed to log in to their accounts using the following steps:

1. Enter the correct email address and password in the respective fields.
2. Click on the "Login" button to access the dashboard.
3. Upon successful login, users will be directed to the main dashboard interface.

The main window:

Within the dashboard, users have the option to create new auctions by selecting the "Create Auction" tab, where they can specify the type of auction and provide necessary details. Additionally, users can explore existing products and ongoing auctions by clicking on the "Products and Auctions" tab. For more detailed information about specific auctions, users can access the auction details section. To actively participate in ongoing auctions, users can view the "Active Auctions" tab. Throughout the auction process, winning bid notifications are automatically sent to participants via email upon auction conclusion.