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**COLLEGE OF INFORMATICS AND COMPUTING SCIENCES**

**SUBASTANAUAN: AN ONLINE LIVESTOCK TRADING PLATFORM  
AND FINANCING OF B2B AND B2C LIVESTOCK INDUSTRY FOR  
OFFICE OF THE CITY VETERINARIAN, TANAUAN CITY**

A Capstone Project Presented to the Faculty of the  
College of Informatics and Computing Sciences

**Batangas State University-The National Engineering University  
JPLPC – Malvar Campus  
Malvar, Batangas**

In Partial Fulfillment of the Requirements for the Degree  
**Bachelor of Science in Information Technology  
Major in Service Management**

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**DECEMBER 2024**



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**APPROVAL SHEET**

This Capstone Project is titled "**SUBASTANAUAAN: AN ONLINE LIVESTOCK TRADING PLATFORM AND FINANCING OF B2B AND B2C LIVESTOCK INDUSTRY FOR OFFICE OF THE CITY VETERINARIAN, TANAUAUAN CITY**", prepared and submitted by Alba, Jene Russel R., De Leon, John Joseph P., Migo, Jorish Ann M., Pancho, Rodelyn in partial fulfillment of the requirements for the degree Bachelor of Science in Information Technology Major in Service Management, has been examined and is recommended for Oral Examination.

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**ACKNOWLEDGEMENT**

The success of this capstone project results from the assistance and support provided by the following individuals. The proponents would like to express their gratitude and appreciation to all who contributed to its completion.

First and foremost, to **Almighty God** for the guidance, wisdom and strength that sustained them throughout this project.

To the **Administration and Management of the Batangas State University – The National Engineering University**, for their constant support and dedication to enabling the university to uphold its basic values while providing students with a 21st-century learning environment that allows them to explore and learn about the global knowledge economy;

To their capstone instructor **Ms. Cruzette A. Calzo**, for allowing them the chance to conduct this study and for offering them priceless advice all along the way;

To **Dr. Aries P. Garcia DVM**, City Veterinarian, and **Mr. Brian M. Pamplona**, Meat Inspector III, for allowing them to work on a meaningful project.



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To their beloved capstone adviser, **Mr. Eddie D. Bucad Jr.**, for the continuous support in this research, for her enlightening suggestions and corrections, for her patience, motivation, enthusiasm, and immense knowledge for the completion of this research work;

To their chairperson and panelists, **Mr. Johnrey N. Manzanal**, **Ms. Hilanie S. Nieva** and **Ms. Donna M. Garcia**, for their constructive criticisms for the improvement of this study;

To their respective **classmates and friends**, for offering them advice and supporting them through this entire process; and

To their **family**, for supporting them financially, for being their inspiration to achieve this great achievement, for encouraging them to pursue this study, and for giving them infinite love.

*The Developers*



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**DEDICATION**

*With our humble effort,  
we firmly dedicate this piece of work  
foremost to Almighty God  
who served as the source of strength and wisdom;  
To our beloved parents  
whose support and encouragement  
push us to be this far.  
To our dear clients  
who spend their time and effort to assist us.  
To our adviser  
who sustained and showed the way in this journey.  
To our instructors  
To our friends, classmates and loved ones  
close to our hearts.  
Thank you all for giving us  
the motivation and inspiration to continue  
and be on this path right now.*

**J.R.R.A.  
J.J.P.D.L.  
J.A.M.M  
R.P.**



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**EXECUTIVE SUMMARY**

<b>TITLE</b>	: SUBASTANAUAAN: AN ONLINE TRADING PLATFORM AND FINANCING OF B2B AND B2C LIVESTOCK INDUSTRY FOR OFFICE OF THE CITY VETERINARIAN, TANAUAN CITY
<b>AUTHORS</b>	: ALBA, JENE RUSSEL R. DE LEON, JOHN JOSEPH P. MIGO, JORISH ANN M. PANCHO, RODELYN
<b>TYPE OF DOCUMENT</b>	: UNDERGRADUATE IT CAPSTONE PROJECT
<b>TOTAL NO. PAGES</b>	: 224
<b>NAME OF INSTITUTION</b>	: BATANGAS STATE UNIVESRITY TNEU JPLPC – MALVAR
<b>YEAR COMPLETED</b>	: 2024
<b>ADVISER</b>	: MR. EDDIE D. BUCAD JR.

The Office of the City Veterinarian (OCVET) of Tanauan City, a government agency responsible for overseeing livestock health and trade, plays a vital role in supporting local farmers and traders. However, the current livestock trading system relies on traditional face-to-face transactions, which limit market reach, reduce transparency, and make financing difficult for buyers. To address these challenges, SubasTanauan was developed to provide a digital marketplace where buyers and sellers can participate in auctions, access financing, and manage transactions



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efficiently. This system aims to modernize the livestock industry, promote fair pricing, and enhance government support for local farmers through technology-driven solutions.

SubasTanauan is an online platform created to improve livestock trading and financing by providing a more accessible and organized way for buyers and sellers to connect. The system includes online bidding and auctions where buyers can place real-time bids, a marketplace for direct buying and selling, and a loan credit system that allows buyers to apply for financing with clear payment terms. It also includes a payment system that ensures secure and convenient transactions between buyers, sellers, and financial institutions.

This project benefits livestock farmers, traders, and business owners who need a reliable market to sell and purchase livestock. It also helps feed suppliers, veterinarians, and financial institutions by creating opportunities for business growth. By using this system, farmers can reach more buyers, livestock businesses can operate more smoothly, and financial support becomes more available, helping to strengthen the local agricultural industry. Local consumers also benefit from better access to quality livestock products at competitive prices. The development of SubasTanauan follows a top-down approach combined with the Agile methodology to ensure efficient project management and continuous improvements



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based on user feedback. The system is built using HTML and Vue.js for the front end, while Node.js and MongoDB handle backend operations. Socket.io and WebSockets are implemented for real-time chat functionality, ensuring smooth communication between buyers and sellers. The interface is designed using Bootstrap for a responsive layout, while JavaScript is used for both front-end interactions and backend processes. The platform runs on a system with at least a 1.7GHz dual-core processor, 8GB RAM, and 2GB of free storage to ensure stable performance during operations.

To test and evaluate the system, various methods were applied, including unit testing, integration testing, system testing, acceptance testing, and performance testing following the ISO/IEC 25010:2011 evaluation standard. The testing process involved at least 50 participants, including farmers, livestock business owners, and potential users who were selected to assess the platform's usability and effectiveness. A black-box testing approach was used to evaluate the system's functions without requiring knowledge of the internal code structure. Additionally, survey questionnaires were distributed via Google Forms to gather user feedback on system performance, ease of use, and overall experience. The results from testing and user evaluations were analyzed to identify areas for improvement and ensure the system meets the needs of its intended users.



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The composite mean results showed that functional suitability received a rating of 4.27, which falls under "Strongly Agree," indicating that the system met the expected requirements for livestock trading. Performance efficiency scored 4.20, also interpreted as "Strongly Agree," showing that the platform operated within an acceptable response time and handled transactions effectively. Usability had the highest rating of 4.29, classified as "Strongly Agree," reflecting that users found the interface easy to navigate. Reliability was rated at 4.22, also under "Strongly Agree," proving that the system performed consistently without major failures during testing. The results were computed using the weighted mean formula,  $WM = (\sum fx) / N$ , where WM is the weighted mean,  $\sum fx$  represents the sum of the product of each response's frequency (f) and its assigned weight (x), and N is the total number of responses. The success rate (S) used in test cases is calculated using the formula  $S = (x/y) \times 100$ , where x represents the number of successful test cases, and y represents the total number of test cases executed. This formula determines the percentage of successful test cases by dividing the successful cases by the total cases and multiplying the result by 100. A higher success rate indicates a more effective test execution, while a lower success rate suggests areas that need improvement. In this evaluation, all test cases were successfully executed six times, resulting in a 100% pass rate. Each test case was conducted six times to ensure



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consistency and accuracy in performance measurement. If any test case had failed attempts, the success rate would be adjusted accordingly, impacting the final percentage. By executing each test case six times, the testing process verifies the system's stability and effectiveness. This rigorous evaluation, repeated six times, ensures that the system meets functional requirements and operates as expected, highlighting any areas that may require improvement. Continuous monitoring and updates ensure system stability and enhance user experience.

The platform has greatly improved access for farmers and livestock businesses, made marketplace transactions smoother, and made auctions more efficient while keeping transactions safe and managing user roles effectively. It encourages user interaction through a discussion forum, helping make livestock trading more open, efficient, and secure, which supports local economic growth. The system also optimizes store management, financing options, and bidding processes, ensuring seamless transactions between buyers and sellers. Features such as secure payment processing, automated inventory tracking, and role-based access control enhance usability and trust among users. Adding live bidding with real-time video streaming will make auctions even better, while ongoing improvements will help keep the platform useful and beneficial for the livestock industry in the long run, ensuring its sustainability and continuous positive impact.



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### **CHAPTER 1** **INTRODUCTION**

This chapter presents the overview, the purpose of the study, as well as the system's objectives, scope and limitations, and the definitions of terminologies used in the developed system.

#### **Project Context**

The project context outlines the background, significance, and rationale behind the development of the system. It provides an overview of the problem being addressed, the target users, and the intended impact of the project.

The auction market typically works by having a group of buyers and sellers who submit bids and offers, respectively. An exchange then matches the bids and offers to create a trade. The exchange will typically use a matching algorithm to determine which bids and offers can be matched to create the most efficient market. An auction market is a trading platform where assets, commodities, or securities are bought and sold through a bidding process. [1] In this market, the price of an asset is determined by the competitive bidding among participants. Buyers submit bids, which are the maximum prices they are willing to pay for an asset, while sellers submit offers (or asks), which are the minimum prices they are willing to accept. The auction process aims to match buyers and sellers to facilitate a trade. When a



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buyer's bid matches a seller's offer, a transaction occurs at that price. If multiple buyers or sellers are involved, the market ensures that the highest bid and the lowest offer are matched first, establishing a fair market price based on current supply and demand dynamics. Auction markets are known for their transparency, as the bidding process is often public, allowing participants to see the prices at which trades are executed. This transparency helps ensure fairness and efficiency in price discovery, making auction markets a crucial component of many financial systems. In 2000, the internet is shaping industries and changing business models. It is argued that companies that don't commit fully to this new world today will be left behind and only companies that develop and implement entirely new business models will succeed. Unlike the real world, the diversity in auctioning on the internet lies not in the difference in selection but in the multiplicity of methods of purchasing. It's not a matter of what you want to buy, but how you want to buy it. The most noticeable and attention-grabbing model is the rebirth of negotiated and auction pricing mechanisms on the internet. Financing is a crucial process in the business landscape, involving the provision of funds for business activities, purchasing, or investment purposes. Financial institutions such as online payment or banks, play a pivotal role in this process by providing capital to businesses, consumers and investors, enabling them to achieve their objectives. The importance of financing lies in its ability to



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facilitate the acquisition of products or services that would otherwise be beyond immediate financial reach. By leveraging this system, institutions and individuals can effectively manage their financial resources to support growth and development within the economic ecosystem.

The Tanauan auction market, established in 2014 by the Office of the City Veterinarian (OCVET), facilitates livestock and poultry trade for farmers in Tanauan City. The office recognizes the critical importance of the livestock industry not just as an economic pillar but also a livelihood source for many. Imagine a bustling auction market where farmers, traders and enthusiasts converge effectively from the comfort of their homes or offices. The existing process of an auction in Tanauan City, the farmers bring their animals to the livestock auction house in Poblacion 4, Tanauan City, Batangas and pay an auction fee as an entrance fee. This kind of auction buyer should be present in the auction house and takes time for the farmers to sell their animals due to competition between other farmers, farmer has an initial price of their animals and the buyers will bid on their prefer price or amount, once they agree on the certain amount or price that commonly pay through physical money then the animal will ship over to the place of the winning bidder. If the animals are not sold, the farmers go back and forth when like many others, has long relied on out dated methods of trading, characterized by physical auctions and



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informal connection among traders, buyers, and sellers. In their traditional method, there's also a problem when it comes to auctioning animals, such as whether the animal brought to the auction market is stolen, bad weather, lack of personnel manning posts, collusion between middlemen, and, foremost, the competition between different auction markets. Furthermore, when it comes to their transactions there is a B2B and B2C interactions. Business to business (B2B) experiencing difficulties when it comes to cashflow due to feed costs, and deceased outbreaks of animals that need medicine. In the livestock industry, particularly in hog farming, effective cash flow management is crucial for farmers. Farmers must allocate their available cash strategically to ensure they can purchase necessary supplies, such as feed for their pigs. This process involves finding reliable suppliers and ensuring they have sufficient funds to make these purchases. To address this challenge, our capstone project introduces a financing system designed to support farmers in managing their cash flow. This system provides them with the financial flexibility needed to secure feed and other essential resources, ultimately helping to sustain their operations by ensuring a steady supply of feed for their livestock.

Moving on to business-to-customer (B2C) transactions, these often involve individuals or small-scale businesses purchasing goods or services for personal use or to start their ventures. Unlike larger corporations involved in B2B transactions,



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these buyers may face challenges due to limited purchasing power. This lack of financial strength can make it difficult for them to buy in bulk or negotiate favorable terms, often leading them to seek more accessible and affordable options. As a result, B2C transactions are characterized by smaller, more frequent purchases driven by the immediate needs and budget constraints of individual consumers or small businesses. While these methods served their purpose in the past until today, they fall short in today's fast-paced, digital era. Recognizing these challenges, the Office of the City Veterinarian saw an urgent need for innovation and decided to support the development of SubasTanauan.

SubasTanauan is categorized by two which are the auction and marketplace. An auction is where happens the bidding of the animals, mostly likely to those livestock poultry farmers while in the marketplace this belongs to those livestock businesses to create store within the system that enables them to buy, sell and trade a livestock product. The proposed system is an online web application for auction livestock trading platform for the Tanauan City livestock industry, making the experience of buying, selling and auctioning of livestock products and community interaction to the next level along with the financing options to support B2B and B2C financial needs. However, beyond transactions and promoting various markets, the potential increase of income is also a challenging task. The birth of the



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online auction system enables the trading of goods and services, not only the involvement of money. This kind of practice finds a modern rivalry through technological advancements that simplify the process of trading of goods between livestock businesses and poultry farmers and conducting bidding online. The concept of livestock trading serves as a trigger fostering interconnectedness for livestock businesses, and poultry farmers to cooperate, having a collaboration and sharing of livestock products.

The reason that prompted the developer team to create the proposed title “An Online Livestock Trading Platform and Financing of B2B and B2C livestock Industry for Office of the City Veterinarian, Tanauan City” is to address these challenges. The target clients of the developers are livestock industry stakeholders and poultry farmers, particularly in collaboration with the Tanauan City, Office of the City Veterinarian. This increased accessibility is expected to attract more target clients and customers. The developer team's primary goal is to support the growth and potentially increase the income and sustainability of the livestock industry, specifically within the B2B and B2C sectors in Tanauan City.

SubasTanauan is designed to effectively address both B2B and B2C needs by incorporating advanced financing features. For B2B transactions, the system offers tailored financing solutions that enhance business growth by providing



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flexible payment terms and credit options. This approach helps businesses manage their cash flow more efficiently and invest in expansion opportunities. On the B2C side, our system empowers individual consumers with financing options that increase their purchasing power. By offering accessible credit and payment plans. It enables customers to make purchases they might not otherwise afford, thereby boosting their purchasing capacity and driving consumer satisfaction. Together, these features create a robust framework that supports both business growth and consumer empowerment.

To build “An Online Livestock Trading Platform and Financing of B2B and B2C Livestock Industry for the Office of the City Veterinarian, Tanauan City,” we will use a comprehensive technology stack to create a versatile and user-friendly solution tailored to the needs of the livestock industry. The platform will be developed using HTML (Hyper Text Markup Language) to structure the web pages, providing a solid foundation for displaying text, images, and other content consistently across all web browsers. Cascading Style Sheets (CSS) will be employed to style and enhance the visual appeal of the user interface, ensuring a cohesive and intuitive design that is easy to navigate. JavaScript will be utilized extensively to add interactivity to the platform, such as real-time form validation, dynamic content updates, and interactive elements that enhance user engagement.



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We will leverage Vue.js, a progressive JavaScript framework, to build a responsive single-page application (SPA).

This approach will allow us to create a highly interactive and reactive user experience, where the platform responds quickly to user actions without the need for full page reloads. To ensure the platform is mobile-friendly and maintains a consistent look and feel across all devices, we will integrate Bootstrap, a popular CSS framework. Bootstrap's pre-designed components and responsive grid system will enable us to develop a fully responsive platform efficiently, reducing the time required for frontend development. On the backend, we will use Node.js as our server-side runtime environment to handle multiple concurrent connections efficiently, providing a high-performance web server that can scale with increasing demand. To enable real-time, bidirectional communication between the client and server, we will use Socket.io. This will be crucial for implementing features such as live chat support, real-time notifications for trading offers, and instant updates on livestock availability, thereby enhancing the overall user experience. For data storage, MongoDB will be our database of choice, given its flexibility and scalability. Its NoSQL structure is ideal for managing the complex and dynamic data associated with livestock trading, user profiles, transaction histories, and financing records. Throughout the development process, we will use Visual Studio as our



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integrated development environment (IDE), which provides powerful tools for coding, debugging, testing, and deploying the platform. The platform will include features such as secure user registration and authentication, advanced search capabilities for livestock listings, integrated financing options, real-time communication tools, personalized dashboards, and integration with the Office of the City Veterinarian for regulatory compliance. By carefully selecting and integrating these technologies, we aim to create a versatile, scalable, and secure online platform that meets the unique needs of the livestock industry in Tanauan City, facilitating efficient trade and providing accessible financing options for both B2B and B2C transactions.

**Purpose and Description**

The purpose and description of this system outline its primary objectives and functionalities, providing a clear understanding of its role in streamlining livestock trading. This section explains how the system facilitates online auctions, enhances business opportunities for sellers, and offers a convenient platform for buyers.

Through the platform, the online auction market allows users to bid on livestock, create a store and post their products and services together with their detail. The financing system stands out as one of the main functions, enabling business to business and business to customer to loan credits within the platform.



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This feature will foster increased engagement in the livestock market and improve customer-business relationships. Moreover, a recommendation feature that offers animal recommendations for aspiring entrepreneurs to enter the livestock industry based on their interests and preferences. This will significantly expand the reach of the livestock industry by tapping into a broader customer base. Additionally, this system encourages innovation and digital transformation within the livestock industry sector by promoting the adaptability of technology in livestock trading and financing for both B2B and B2C livestock businesses. This strengthens the livestock industry and increases livestock market trends, elevating the experience of buying, selling and auctioning of livestock within the community to a higher level, enabling competitive livestock businesses to thrive in the evolving livestock industry.

The user can create a store where they can sell and buy livestock products. It also allows users and businesses to loan credits within the platform. In line with that, users can join in auctions to bid livestock. The Office of the City Veterinarian serves as the super admin of the system. Under this office, the super admin designates authorized users, including admins, financers, and customer support personnel. These authorized users assist in reducing the workload of the super admin by tasks such as approving accreditation and compliance of store, loan, item, payments, user verification requests and managing the bidding process, approving



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filtered store product content, generating reports and analytics, updating prices and announcements, and providing customer support. The support of the Tanauan City Veterinarian Office underscores the importance of this initiative in strengthening the livestock industry sector and nurturing economic growth. SubasTanauan encompassing goal is to bring the livestock industry up to the next level for B2B and B2C's businesses, enabling them to interact with the other livestock enterprises by providing them with the means to participate in the digital economy. With the growth of these industries on the platform, livestock poultry farmers and businesses will benefit from increased activity, expanded opportunities, livestock auctions, and a more sustainable economy in the livestock industry. The developers, as well as future developers, will also benefit from the system through optimized processes and access to a wider market of livestock buyers and sellers. Indeed, the primary features and functions of the web application are in line with the goals of enhancing livestock trading and financing for both B2B and B2C livestock businesses, thereby contributing to the overall development and growth of Tanauan City.

The platform is provided as a contribution to the Office of the City Veterinarian, aiming to promote the growth of the livestock auction and financing sector through digital innovation, thereby supporting Tanauan City's economic growth and development. The project aims to encourage the adoption of digital



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technology to enhance business operations. Supported by the Office of the City Veterinarian, the project recognizes the importance of restoring the livestock auction and financing sector for both B2B and B2C segments in the city. In doing so, the platform seeks to promote a more open and sustainable economy in livestock trading and financing, while also advancing the city's economic growth and development. The beneficiaries or the end users of the system will benefit to the livestock poultry farmers and businesses. Moreover, by leveraging technology, it increases efficiency in the market, fostering a more competitive and inclusive environment. Ultimately, this will help local farmers grow their operations while contributing to the overall economic resilience of Tanauan City.

### **Objectives of the Study**

The general objective of the proposed topic is to develop An Online Livestock Trading Platform and Financing of B2B and B2C Livestock Industry for the Office of City Veterinarian, Tanauan City that will help them to promote various livestock markets and potentially increase their income. Specifically, the project aims to develop the following:

1. User module that performs the following:

- 1.1. Browse and order various livestock products and animals;

- 1.2. Join livestock biddings;



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- 1.3. Create a store in the marketplace;
- 1.4. Transact payment and loan credit;
- 1.5. Interact and create discussion in the forum;
2. Super Admin module that provides the following:
  - 2.1. Generate reports;
  - 2.2. Allow super admin to manage user, admin, customer support and financer accounts;
  - 2.3. Manage store and filtered livestock product contents;
  - 2.4. Manage live bidding processes;
  - 2.5. Update prices and announcements;
3. Admin module that facilitates the following:
  - 3.1 Allows admin to manage user accounts;
  - 3.2 Enables admin to manage bidding processes;
4. Financer module that allows to manage payment and loan credits;
5. Customer Support that caters the following:
  - 5.1. Allows customer support to chat with the users;
  - 5.2. Manage users accounts;
6. Option filter that assists users based on preferences and criteria in browsing livestock related business such as:



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6.1. Starting cost;

6.2. Created at;

7. To test and evaluate the proposed system using:

7.1 Test Cases

7.2 ISO/IEC 20510:2011:

7.2.1 Functional Suitability;

7.2.2 Performance Efficiency;

7.2.3 Usability;

7.2.4 Reliability;

**Scope and Limitations**

The scope and limitations define the boundaries of the developed system, outlining its functionalities and constraints. This section details the features included in the system, such as online livestock auctions, bidding processes, and financing options, while also identifying areas beyond its coverage.

The proposed web application for livestock trading and financing system of B2B and B2C for livestock industry in Tanauan, Batangas offers a platform for OCVET to showcase various livestock markets in Tanauan, Batangas to a wider audience within their local community. Additionally, can reduce their operating



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costs by eliminating the need for physically handling and monitoring the auction market. The system assists the users by the recommendation feature that recommends animals for starting livestock businesses and services. It includes order tracking capabilities and supports cash-on-delivery transactions. The system assists the users by the recommendation feature that recommends animal for starting livestock businesses and services. The system also facilitates secure top-up transactions by allowing users to upload proof of payment directly onto the platform. Upon verification, the admin promptly credits the user's account, ensuring a smooth and secure transaction process. The loan credits are the credits that can be used only within the system. Within the system, the user can create store and post products. It offers a community forum allowing users to share their success stories, advertisements, recommendations, insights, expertise, and best practices. It also assists the users by customer support that assists with the user issues, and it can also view the user details upon the issues that may lead to returning products. By providing a platform for Office of the City Veterinarian (OCVET) to promote various markets in Tanauan City, Batangas and the system, chain reacts to livestock farmers and businesses creating opportunities to leveling up the traditional way of auction trading, buying and selling that potentially increases their income.



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The system has five main user roles: users, customer support, admin, super admin, and financer. Users can be vendors or customers who register on the system to sell, buy products and bid on livestock. The Administrative Assistant that acts as an admin is responsible for managing user accounts, and overseeing the bidding process and discussion within the forum of the system. The City Veterinarian who acts as super admin also hosts live bidding and oversees the overall system process, including viewing the dashboard which contains the wallet, the total loan including the active and finished loan, managing user accounts, payment and loan requests. It also manages the store and item request list in the system. The Finance Officer who acts as a financer also manages the payment and loaning of credits that can be used within the system and the Receptionist acts as customer support which provides assistance of the user issues.

A web application for livestock trading and financing, catering to both B2B and B2C sectors in Tanauan City, offers an innovative solution, but it has notable limitations. One such limitation is its potential inability to grant business permits because it often requires physical presence at the office. Before approval, the Office of the City Veterinarian (OCVET) checks facilities for compliance. The integration of payment gateways is also a limitation that the system addresses, primarily due to the developers' lack of financial resources. The lack of the capability for users to



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upload animal information or documents online for auctioning purposes is also a limitation of the system, primarily because the Office of the City Veterinarian needs to verify first the legitimacy of the animals. The system does not guarantee the return of their capital, it is because the lending involves risk that the loaner has financial difficulties, unforeseen circumstances, or intentional non-payment. Additionally, the system may necessitate a stable internet connection and up-to-date hardware, posing challenges for transactions between livestock businesses in both B2B and B2C sectors, especially those with limited resources. This challenge extends to the auction market beyond Tanauan City, Batangas.

Furthermore, accessibility for persons with disabilities (PWD) could be compromised, as the system may not be fully compatible with certain assistive tools like voice recorders, presenting a significant technological challenge for this demographic. Moreover, the system may demand substantial budget and resources for development and maintenance, thereby potentially restricting its accessibility to livestock businesses with limited resources. In addition, the success of the system will depend on the willingness of livestock stakeholders to adapt to the technology and integrate it into their business processes.

This could be a challenge for some users who are not yet familiar with online bidding and financing systems. Finally, ongoing updates and maintenance may be



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necessary for the system to stay relevant and efficient, posing a challenge for developers and administrators to handle over time. Despite these limitations, if properly designed and implemented, the benefits of this system to livestock and poultry farmers, as well as businesses in Tanauan City, could potentially outweigh the challenges. Additionally, this could provide valuable insights for decision-making, ultimately fostering sustainable growth and competitiveness for businesses in Tanauan City's agricultural sector.

### **Definition of Terms**

The definition of terms provides clear and precise meanings of key concepts, technologies, and terminologies used throughout the study. It ensures a common understanding among readers, preventing misinterpretation and enhancing comprehension of the project's technical aspects.

**Bootstrap.** Bootstrap is a tool used to design the system's interface, ensuring it looks good and works well on any device. [2] In the platform, it provides pre-designed layouts and styles, making development faster and more efficient. The system uses Bootstrap to create a clean, user-friendly design. This ensures users can easily access features, whether on a computer or smartphone. With its responsive grid system, Bootstrap ensures that the platform adapts smoothly to different screen sizes.



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**Data-binding.** Is the feature that keeps the system updated in real time. It ensures that changes in data, like new bids or auction updates, appear instantly on everyone's screens. [3] This keeps all SubasTanauan users informed and synchronized without delays. It's a key feature for ensuring a smooth auction experience.

**Encryption.** A method of securing data by converting it into unreadable code, which can only be deciphered by authorized parties. [4] Encryption is used in SubasTanauan to protect sensitive information such as passwords, financial transactions, and personal data, ensuring user privacy and system security. This adds an extra layer of defense against cyber threats, keeping user data confidential.

**File System.** The file system is where all important data, such as auction records, user profiles, and transactions, is stored. [5] In the platform, it keeps the information organized so the system can easily access or update it. This ensures that users' data is safe and well-managed. A reliable file system is crucial for maintaining accurate and secure records.

**Frontend and Backend.** The frontend is the part of the system users interact with, such as pages, forms, and buttons. [6] In the platform, the backend works behind the scenes to process data, like saving bids and user information. Together, they ensure the system is functional and user-friendly.



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**ISO/IEC 25010:2011.** Quality in use model is composed of five characteristics (some of which are further subdivided into sub characteristics) that relate to the outcome of interaction when a product is used in a particular context of use. [7] The **ISO/IEC 25010:2011** standard helps organizations and developers assess and improve software quality throughout its lifecycle. It is widely used in software development, evaluation, and certification processes to ensure the product aligns with user needs, organizational requirements, and technical standards.

**SubasTanauan.** It's an online platform that makes buying, selling, and financing livestock easier for users. [8] The platform allows sellers to list livestock and buyers to bid through online auctions. It aims to modernize and simplify livestock trading while supporting local businesses. By providing financial assistance and an enhance auction process, SubasTanauan helps local farmers and traders grow their businesses.

**Top-down Approach.** Is a method of designing the system by starting with its main purpose and breaking it into smaller tasks. [9] For example, the platform focuses on livestock trading, so features like bidding, financing, and auctions were developed. This approach ensures that every feature supports the system's overall goal. By structuring the system this way, developers can efficiently prioritize tasks and maintain consistency across all functionalities.



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### **CHAPTER 2** **REVIEW OF RELATED SYSTEMS**

This chapter presents the related systems gathered by the developers which served as the reference for the developed system. The review of related systems is derived from finished theses that have significant relevance to the developed system. This chapter also guides the developers to improve and develop the system more effectively.

#### **Technical Background**

To develop a system that meets the business requirements, the developers used tools based on efficiency, compatibility, and applicability.

HTML (Hypertext Markup Language) serves as the foundation of our platform, defining the structure and layout of each page. Without it, displaying content in an organized manner would not be possible. We used HTML to arrange elements such as auction listings, bidding interfaces, and user dashboards, ensuring that every section of the platform is structured logically.

CSS (Cascading Style Sheets) enhances the appearance of the system by applying styles, colors, fonts, and layouts. Since users will access SubasTanauan on different devices, CSS ensures a responsive design that adapts to various screen



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sizes. We utilized CSS to maintain a professional and visually appealing interface, improving readability and ease of navigation.

Bootstrap was integrated to speed up development with its pre-built styles and responsive grid system. Instead of coding every UI component from scratch, we leveraged Bootstrap's buttons, forms, navigation bars, and modals to create a sleek and consistent design. This helped streamline the development process while ensuring a user-friendly experience.

JavaScript brought interactivity to SubasTanauan, allowing dynamic content updates and smooth user interactions. From form validations to live bid updates, JavaScript was essential in making the platform more engaging. By incorporating JavaScript, we ensured that users could participate in auctions without needing to reload the page constantly.

Vue.js was chosen for its reactive data-binding capabilities, simplifying the development of complex user interfaces. Since the system involves real-time updates, and efficiently manages changes in data, such as bid increments and auction status updates, ensuring that users always see the latest information without delays. This framework also allowed us to break down the interface into reusable components, making the platform more maintainable and scalable.



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Socket.io played a crucial role in implementing real-time communication, which is essential for a live auction system. With this library, we enabled instant updates for bids, notifications, and auction statuses, creating a smooth and competitive bidding experience. Without real-time functionality, users would need to refresh their browsers repeatedly, which would disrupt the flow of the auction.

Node.js was selected as the backend runtime environment because it allows us to use JavaScript on both the frontend and backend. This unified development approach simplified our workflow and improved system efficiency. Node.js is particularly effective in handling multiple user requests simultaneously, making it a great choice for a fast-paced online auction system where multiple users are bidding in real time.

MongoDB, a NoSQL database, was chosen for its flexibility in handling different data structures. Since SubasTanauan manages a variety of information—such as user profiles, auction listings, bids, and financial transactions—MongoDB's document-based storage made it easier to organize and retrieve data. The schema-less nature of MongoDB allowed us to make adjustments to the data model without disrupting existing records, ensuring smooth scalability as the platform grows.

Visual Studio Code served as our primary development environment, providing a robust set of features for coding, debugging, and testing. With built-in



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support for Git integration, we were able to track changes efficiently and collaborate seamlessly. The IDE's debugging tools also helped us quickly identify and fix errors, ensuring a more stable and reliable system.

### **System Architecture**

The system's architectural design is structured to support multiple user roles and devices, ensuring smooth interaction between end users and system components. It integrates a responsive front end, a real-time processing back end, and secure data management, all interconnected through the internet.

Figure 1 illustrates the architectural design of the system structured to accommodate various user roles and devices. Highlighting components such as the End User, Front End, Internet, and Back End. End users, including vendors, customers, and administrators, interact with the system via the front-end interface, which is designed to be responsive across multiple devices, using HTML, CSS, Bootstrap, and Vue.js to collect and display data. The back end consists of a web server built with Node.js and Socket.io, a file system for managing static content, and a MongoDB database for storing and retrieving data. These components are interconnected through the internet, where the front end sends requests to the back end, which processes them, accesses necessary data, and responds with the required information. The front end then displays this information to users. The system's



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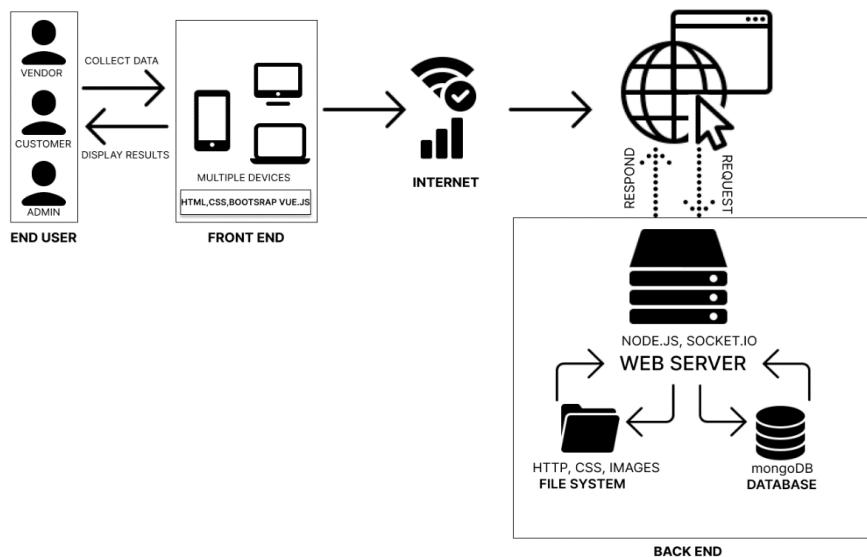
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configuration involves setting up the front end for compatibility across devices, configuring frameworks like Bootstrap and Vue.js, and ensuring Node.js and Socket.io can handle multiple connections and real-time communication. MongoDB must be efficiently configured for data storage, and the file system should be organized for easy access to static files. Security configurations, such as HTTPS and data encryption, are crucial for protecting user data as it travels over the internet, ensuring the system operates effectively and securely for all users. Overall, this architecture provides a robust framework for developing and deploying web applications that cater to different types of users. It balances the demands of responsiveness, data management, and real-time communication.



**Figure 1. System Architecture Design**



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## Related Systems

The related system section explores existing platforms and technologies similar to the proposed system, highlighting their features, functionalities, and limitations. By analyzing these systems, the study identifies best practices, potential improvements, and gaps that the proposed system aims to address.

The system developed by Abunales [10] titled An Online Trading System featuring a Reverse Image Search is designed for individuals looking to exchange their items. In contrast to bartering on various social media platforms, this system provides assurance by requiring all registered users to have a valid identity, reducing the risk of fraudulent transactions. Serving as a centralized hub for posting a wide range of items, the system's categorization feature sets it apart from other platforms. Unlike those with numerous groups for different product types, which can be cumbersome to navigate, this system offers a direct approach to finding specific products.

In correlation to SubasTanauan, it also has a feature in terms of verifying information of users utilizing the website. For instance, if a user desires to create a store, buy and trade within the system to increase their income, submitting of valid ID is necessary to prove that they are legitimate bidders and livestock poultry



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farmers in Tanauan City, Batangas. With this, there is assurance of security, ensuring that users on the website are safe and protected from any potential scams.

“Development of an Online Laguna Agricultural Trading Center” is developed by Carandang [11] is to develop a system that can be used as an alternative channel to improve the marketability of farm products of farmers in Laguna. The proponent used two research methodologies. The proponent developed the Online Laguna Agricultural Trading Center. The system is an e-commerce website that will serve as an alternative channel of marketing the farmers’ products. It will also provide the farmer with an easy and economical way of managing some of its business processes. Through its Short Message Service capability, the farmer can handle customer inquiries and update the inventory of products and prices economically and easily.

The similarity of SubasTanauan to “Agricultural Globalization: System Development of a Market Mobile Application” are comparable in its potential to create a localized marketplace that leverages technology to improve efficiency and access for agricultural producers and consumers. While “Agricultural Globalization” focuses on a broader framework for connecting farmers and buyers, SubasTanauan presents a specific solution for the livestock industry in Tanauan



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City, Philippines. Both studies recognize the need for innovation in agricultural practices, particularly in facilitating market access and streamlining transactions.

SubasTanauan, as an online auction platform, mirrors the principles of agricultural globalization by integrating producers and consumers, promoting price transparency, and streamlining distribution. It further enhances this model by offering financial solutions that support both B2B and B2C transactions, a key element often missing in traditional agricultural markets.

“PalitTayo: An Online Trading System in the Philippines” was developed by Catajan Jr. [12]. Humans have learned to trade as a product of communication and to improve their social and economic status. With the advent of technology, various methods were used to facilitate trading, specifically the use of the internet, hence e-commerce also known as e-trade was introduced. In the Philippines, one common problem of available e-trade sites such as OLX.ph is the absence of social networking sites that allows a community of traders to communicate, negotiate and eventually trade items. PalitTayo: An online trading system in the Philippines was designed to serve that purpose. The heart of the system is the provision of a social networking site that acts as a platform to come up with a community of Filipino traders online. The study used the waterfall methodology in developing the system. The system undergone system test through a test instrument formulated and verified



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by an IT expert using selected criteria such as reliability, response time and security. Test results showed that the system functioned accordingly and met the expected results. To further assess the performance of the system, it underwent system evaluation using the TUP standard evaluation instrument for software materials. This indicates that the developed system can be a good platform in which local traders can use to build a community of traders and successfully trade their items.

SubasTanauan is an online livestock trading platform specifically designed for the Tanauan City livestock industry, integrating auction, marketplace, and financing features for both B2B and B2C needs, while PalitTayo is a general e-commerce platform for Filipino traders that focuses on community building through social networking, enabling communication and negotiation, but without industry-specific financial support. SubasTanauan, specifically for the livestock industry in Tanauan City, Philippines, mirrors the principles of agricultural globalization by integrating producers and consumers, promoting price transparency, and streamlining distribution. It also offers financial solutions for both B2B and B2C transactions, a key element often missing in traditional markets. However, achieving significant income for farmers requires additional support, such as education, training, and access to resources, to ensure long-term success.



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The system AGRIJUAN: Online Trading Platform for Agricultural Sectors in San Juan, Batangas provided by Evangelista et. al [13] focuses on the development of an online platform that directly connects small agricultural sectors to customers, effectively eliminating the need for middlemen. This platform provides flexibility for buyers through multiple payment methods, including GCash, cash on delivery, and pick-up options. The system promotes transparency and efficiency by generating analytical and graphical sales reports, ensuring both sellers and customers can monitor transactions. By facilitating direct interactions, this study empowers small-scale farmers to better advertise and distribute their agricultural products, ultimately boosting their market visibility and sales potential.

In comparison, the SubasTanauan project takes a similar approach by digitizing the livestock market through a specialized online trading platform. However, in addition to providing direct market access for livestock owners, the platform incorporates a financing system to assist users in purchasing livestock, opening up opportunities for both buyers and sellers to expand their operations. The system is designed to enhance income potential for livestock owners while promoting the growth of the local livestock industry. Additionally, the SubasTanauan project supports long-term growth by offering a platform for



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sustainable livestock trading, with an emphasis on increasing income through efficient trade and financial support mechanisms.

An Online Auction System was developed by Dimaculangan M.M.G. [14] the system is an online marketplace where people buy and sell a wide variety of goods, products, and services under different categories. As a seller, the user can post an advertisement about the product that the seller is selling, the services that he is offering, or the brand name of businesses he wants to promote. Posting ads is free of charge and takes only a few minutes. The system offers a lot of really interesting and helpful features that are really beneficial for users and businesses. An auction application is used by buyers and sellers. For the buyer, bidding on online auctions is fun and extremely easy. The website provides all the essential tools and resources to help member bid. To keep the auction transparent, auction websites also provide all necessary information about the product and seller. Once registered, a user can post or bid on an item for sale. The auction system queries the database to record and report the day's transactions. The seller determines the higher bidder.

An online auction system developed shares similarities with SubasTanauan, as the system is also an auction market that facilitates online bidding. In this system, bidders need to raise their bids through live bidding while viewing information



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about livestock animals and the auctioneer. The prospective buyers navigate through detailed listings of livestock animals, accompanied by comprehensive information and visuals, reminiscent of the experience of strolling through SubasTanauan's stalls.

The AFPEMCO Livestock and Agricultural Product Bidding System, developed by Baldemor R. et al [15] for farmers in Abra, is primarily designed to enhance the traditional agricultural sales process by incorporating modern online technologies. Abra, located in the northwest of the Philippines, relies heavily on agriculture and livestock farming, which form the backbone of the local economy. Historically, farmers in the region have sold their products in public markets, often facing challenges such as uncertainty in sales, inefficient disposal of stock, and limited engagement with potential buyers. The AFPEMCO system seeks to address these issues by enabling farmers to participate in competitive bidding through an online platform. By offering key features like real-time online bidding, SMS notifications for bid winners, and comprehensive report generation, the system streamlines the selling process and improves the overall sales experience for local farmers. The addition of SMS notifications ensures that users stay informed and up to date on bid outcomes, while report generation allows for better tracking and management of transactions. This combination of features enhances user



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experience by providing timely updates and enabling more efficient decision-making through accessible data insights.

On the other hand, the SubasTanauan: An Online Livestock Trading Platform and Financing of B2B and B2C Livestock Industry for the Office of the City Veterinarian in Tanauan City serves a broader scope and purpose. While AFPEMCO is specifically tailored to farmers, the Tanauan City platform is designed to cater to both business-to-business (B2B) and business-to-consumer (B2C) transactions within the livestock industry. It not only facilitates online livestock trading but also integrates financing options, enabling both buyers and sellers to access financial services, such as loans, to support their transactions.

This dual focus on trading and financing makes the platform more comprehensive, addressing the financial aspects of livestock transactions that are often overlooked in simpler bidding systems. Additionally, the Tanauan City platform aims to serve a wider demographic, including businesses and individual consumers, which contrasts with AFPEMCO's more localized target audience of Abra farmers.

Under the framework of E-commerce Platform and Decision Support System for Plants developed by Edulsa, A. [16] is designed to aid local gardeners in selling



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their plants online while offering users a more convenient and reliable way to search for, view, and purchase desired plants suitable for their needs. This system provides detailed product descriptions and information online. Additionally, it includes an auto-suggest feature to assist users in searching for plants when they lack specific knowledge about what to grow. The recommendation feature of the platform suggests the best plants based on users' interests, preferred planting times, soil type, sun exposure, and desired growth rate. The Auto Suggest Page is particularly beneficial for customers unsure if certain plants will thrive in their geographical location.

In SubasTanauan, the decision support system aims to assist the user based on their exact preferences on livestock animal that they want in able to start up a business. It provides a recommendation on what are the best livestock animals that suitable for them based on the location, breed, starting cost and kind of animals, the user wants.

As outlined by Darmayunata, Y. [17], a Livestock Marketing with an Android-Based System Application was developed with the aim of improving cattle marketing in Pekanbaru City, particularly in Rumbai District. The application serves to address challenges faced by cattle breeders, such as difficulties in selling due to



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middlemen and the impact of the COVID-19 pandemic. By utilizing technology, the application integrates consumers and producers, making the buying and selling process more efficient.

The android-based system application shares similarities with SubasTanauan in its focus on improving marketing trends for livestock, aligning with the goal of facilitating transactions within the livestock industry. SubasTanauan has goals to promote livestock products and businesses within the community without physically going to the auction market to look for the livestock animals. This approach is recognized as a valuable tool for understanding community acceptance and willingness to adopt such systems, a practice that aligns with SubasTanauan's potential approach in Tanauan City.

In accordance with Business Bliss Consultants FZE [18], an Online Auction Management System was developed as a web-based application designed to assist users in buying or selling items. It enables users to trade a wide range of products by posting advertisements. This application will allow users to post their products for auction; bidder can register and can bid for any available product. There are some existing applications that allow users for bidding but the product is not available in your local area, you cannot do inspection of the product that you are



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going to buy. By online auction application user will be able to bid for product that is available in his local area.

The system shares similarities with "SubasTanauan," which serves as an online platform for buying and selling goods. Both concepts emphasize facilitating transactions within the livestock industry through an online platform. The system features a virtual auction room where bidders can place bids on specific livestock animals, complete with their details, offering users a convenient and secure way to conduct online auctions.

A system provided by Meena S. [19] titled Financial Management System aims to maintain the company details and sends the daily report to the company manager. This project contains two modules such as admin module and user modules. The admin can maintain employee details and sales details. In user modules, day by day update attendance details and product sales details in the system. So, the admin can easily view product details and sales details and employee details in the system. The system can view day by day activities in the company process. Additionally, this tracking allows for better monitoring of employee performance and inventory management. By having access to up-to-date



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information, the admin can make more informed decisions to optimize operations and improve overall efficiency.

The develop a financial management system similarly highlights the importance of organized systems for managing data and processes, which aligns with the structured approach advocated in developing SubasTanauan, ensuring the systematic and efficient implementation of features such as trading and financing within the livestock industry. The financing system features of SubasTanauan enable users to loan and lend livestock animals not only with the use of money, but specifically in starting up a business in the livestock industry.

The proposed system by Benedict Zitung Kanyip et al. [20] called Livestock Inventory Management System is designed to assist with the record keeping of livestock. It will help you to track, monitor and report vital information about your animals, saving your time and money. The system will also handle the farm's input and output. The system is also designed to buy and sell livestock, users can choose if the livestock should be processed or brought alive. Users will be taught how to manage their animals and give them the right food and drugs.

The system will give updates of the latest information that will help users manage their livestock. In addition, it will provide timely reminders for



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vaccinations, feeding schedules, and health check-ups to ensure proper animal care. This proactive approach helps users maintain healthy livestock, leading to improved productivity and profitability.

In correlation with SubasTanauan, the project is an online auction market that helps the user to look for a wide range of livestock-related products and services. In terms of catering to both products and services, they are processed correctly and should be fulfilled accordingly. With this, users can easily browse through the available listings, compare options, and make informed decisions regarding their livestock-related needs. Furthermore, the platform's user-friendly interface simplifies the search process, allowing users to filter results based on specific criteria. Real-time updates and notifications ensure that users are always aware of new listings and changes, enhancing their overall experience. Ultimately, this system aims to create a seamless marketplace that supports the growth and success of livestock management. Additionally, this feature improves user satisfaction by creating an easy-to-use and engaging experience where buyers and sellers can easily connect and make transactions without hassle. In the end, the system is built to provide a simple and user-friendly online marketplace that promotes honesty, reliability, and smooth processes. It helps boost the growth and



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success of livestock businesses by making tasks easier, connecting people involved in the industry, and supporting responsible livestock practices in the area.

A system given by Malamati L. [21] titled FarmDain a Decision Support System (DSS) for Dairy Sheep and Goat Production could help farmers to manage their enterprises more efficiently, achieving higher production and profitability. This could benefit the sector's overall sustainability, providing significant benefits to the dairy industry. Most available DSS is focused on dairy cow farm management. Although such systems could be potentially modified to include parameters tailored to the needs of small ruminant farming, none of the current solutions supports such capabilities. The dairy sheep and goat sector differs regarding animal needs and management practices applied (nutritional management, reproduction, farming systems). Hence, different methods and models would have to be incorporated into already available DSS for the dairy cow sector.

In line with this, SubasTanauan aims to implement an input-based recommendation feature to assist users in starting livestock-related businesses based on their preferences, interests, and criteria. This feature allows users to specify inputs such as starting cost, location, breed or species of animals, facilities, and services.



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### **CHAPTER 3** **DESIGN AND METHODOLOGY**

This chapter provides the design and methodologies used in the system development including different diagrams to be applied. The type of research to be utilized is explained as well as its relationship with the system development.

#### **Data Gathering**

The data gathering process is essential for collecting relevant information that will guide the development of the system. Various methods, such as surveys, interviews, and document analysis, are utilized to understand user needs, system requirements, and industry standards.

The developers intend to employ both quantitative and qualitative research designs for their study. To gather quantitative data, researchers will conduct surveys and interviews with potential users of the web-application platform. This approach enables systematic and objective data collection, allowing for the identification of patterns and relationships between variables, and leading to valid and reliable conclusions based on the collected data. The internet serves as a valuable tool for accessing information on web-application development, complementing the data collection process.



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On the qualitative front, an interview will be conducted with Mr. Bryan M. Pamplona and Dr. Aries P. Garcia, DVM to gather insights into their auction transactions and financing processes. This interview aims to ensure that the OCVET transaction and process align with the objectives of developing a web-application online platform for livestock trading and financing, catering to both B2B and B2C users.

For the quantitative analysis, a structured survey methodology will measure the web-application's relevance, while an evaluation will assess its effectiveness in satisfying users' needs. The developers will administer the website evaluation and gather feedback from the community regarding their experiences and how well the web-application meets its requirements.

### **Project Concept**

The project concept outlines the fundamental idea and vision behind the development of the system. It defines the objectives, target users, and key functionalities that will be integrated to address specific industry needs.

The main purpose of an online trading platform web-application for livestock trading of B2B and B2C for livestock industry for Tanauan City is to provide a platform where they can engage their livestock businesses and services within a community of other livestock businesses. This platform is designed to help livestock



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farmers and customers to overcome some of the challenges they face in traditional auction and trading, such as limited customer engagement and minimal access to other livestock markets. The system aims to provide a cost-effective solution that promotes collaboration and showcases various livestock markets, enabling them to expand their customer base and increase their potential income.

Overall, the goal is to create a sustainable and supportive environment for livestock industry to excel and succeed in livestsoks businesses. This involves implementing policies that promote fair competition, providing accessible financial resources, and cultivating innovation within the livestock sector. By addressing challenges, enhancing to use a leveraging technology, we can pave the way for livestock industry to become resilient contributors to economic development. In essence, creating a system that encourages collaboration with other businesses and addresses the unique needs of livestock industry is essential for developing livestock diversity and sustainable growth. In the platform, the user was able to have several functions that they can perform. In the proposed credit-based system, users are allocated two types of credits: loan credits and user credits. Loan credits are the credits that users borrow, enabling them to make purchases within the system, but they cannot be cashed out.



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The registration will serve as their identity to the system, which potential users can sell, buy, and trade of a livestock. They can also search for livestock products that they need from other users on the platform. The users can engage in financing transactions within the system, where they can do loaning or lending of animal livestock business between business and business to customer without the need of cash. The platform will provide a secure and dependable system for these transactions to take place. Fourthly, users can do auction with other on the platform through a live bidding, which can be used for bid, negotiations, and other related matters. Users can also benefit from a recommendation feature based to their selected criteria and preferences, alongside access to a forum where stakeholders can share success stories, advertise, offer recommendations, insights, expertise, and best practices.

### **Development Methodology**

The development methodology defines the systematic approach used to design, build, and implement the system, ensuring efficiency and reliability.

Figure 2 shows the Agile Web Development Life Cycle for the creation of the web-application system is expected to yield superior outcomes. This methodology enables developers to efficiently navigate the development and implementation stages. Prior to initiating technology construction, researchers



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diligently ensured the provision of all necessary development resources and requirements. Proponents are committed to following a systematic process to effectively bring the web-application system to fruition.

In the initial stage, developers embark on a planning phase where the team identifies the project scope, goals, requirements, and compiles a list of features. Moving on to the design phase, researchers commence creating prototypes and visual designs to help users visualize the system and provide feedback. The subsequent step involves building features and testing them in small increments. Upon completion of the web-application system development, it is time to proceed to the testing phase, which entails testing the web-application system to ensure it meets the requirements and is free from errors.

To set things in motion, the fourth stage comes into play, which is the deployment phase. Developers aim to deploy the newly developed technology for the client to test and assess its performance. To complete the process, the last stage, the maintenance or review phase, takes place. The team monitors the system in production, addresses defects or bugs, and makes enhancements based on end-user's feedback. This phase ensures the system remains functional, secure, and up-to-date with evolving requirements. Continuous monitoring and improvements help maintain optimal performance and user satisfaction.



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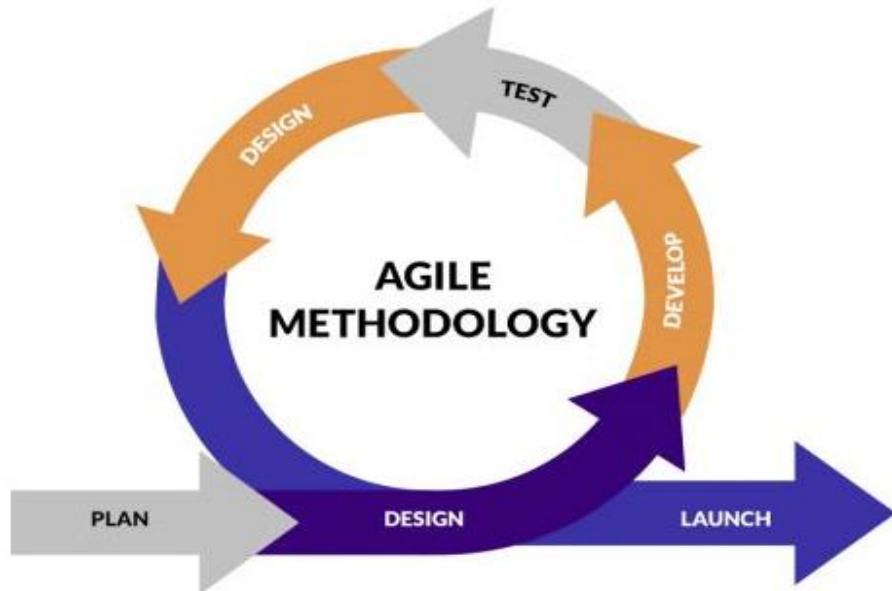
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**Figure 2. Agile Web Development Methodology**

### **Development Approach**

To create a system that is well-organized and meets user needs, the developers structured the development process by focusing on high-level functions first before refining individual components. The developers opted for the top-down approach in their development cycle, initiating the planning of the system's functions, processes, and initial graphical user interface based on user requirements. This methodology entails dissecting a larger system into smaller components to gain a clearer understanding of the subsystems. The developers opted for the top-down approach in their development cycle, initiating the planning of the system's



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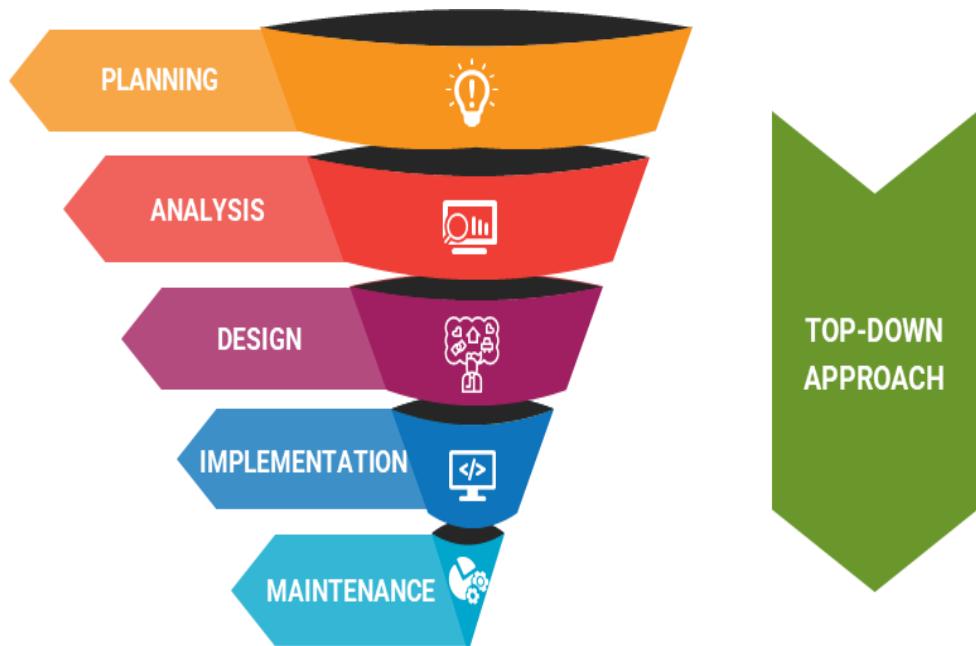
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functions, processes, and initial graphical user interface based on user requirements. This methodology entails dissecting a larger system into smaller components to gain a clearer understanding of the subsystems.



**Figure 3. Top-Down Approach**

The planning phase initiates with developers outlining the project requirements relevant to the client's livestock business and how the developed system will benefit them. Following this phase, developers brainstorm unique ideas to meet user demands.



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Next comes the analysis phase, where developers scrutinize plans and define requirements beneficial to the client. Data gathering, via personal interviews with users, takes precedence, aiming to understand how to improve their current situation.

Subsequently, the design phase ensues, focusing on crafting a user-friendly interface and integrating functions that cater to user needs.

Once the system is designed, the implementation phase follows. Here, developers rigorously test system features, rectifying errors or bugs, and ensuring user satisfaction.

Lastly, the maintenance phase involves ongoing checks for system errors or issues. Its objective is to guarantee full usability, effectiveness, and efficiency. Additionally, it facilitates client adjustments or upgrades to the system as needed.

### **System Analysis and Design**

System analysis and design are essential in creating a structured and efficient platform by evaluating user needs, defining system requirements, and establishing workflows. This process ensures that the system operates smoothly, meets business objectives, and provides an optimal user experience.

System analysis and design is a system's analyzing and designing process to meet specific requirements. Its fundamental objective is to determine a system's



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demands and develop a strategy to satisfy those needs successfully. Its recurring nature guarantees ongoing refinement and adjustment to accommodate changing requirements, ensuring the system remains relevant and effective. By breaking down complex systems into manageable components, it helps simplify development and ensures all parts work together efficiently to achieve the desired outcomes.

### **Context Flow Diagram**

The context flow diagram provides a high-level overview of how data moves within the system, illustrating the interactions between users and major system components. It helps visualize the system's scope, ensuring that all processes and external entities are properly identified.

Figure 4 illustrates the system flow, depicting the interaction between users and administrators to ensure the entire process of the system's operation and interface. System context diagrams serve as crucial tools for understanding the environment in which the system operates. By utilizing this diagram as a foundation, developers can effectively design a project that facilitates smooth interaction between the system and its users, ensuring efficient exchange of information and functionality. The main purpose of an online trading platform web-application for livestock trading of B2B and B2C for livestock industry for Tanauan City is to provide a platform where they can engage their livestock businesses and services



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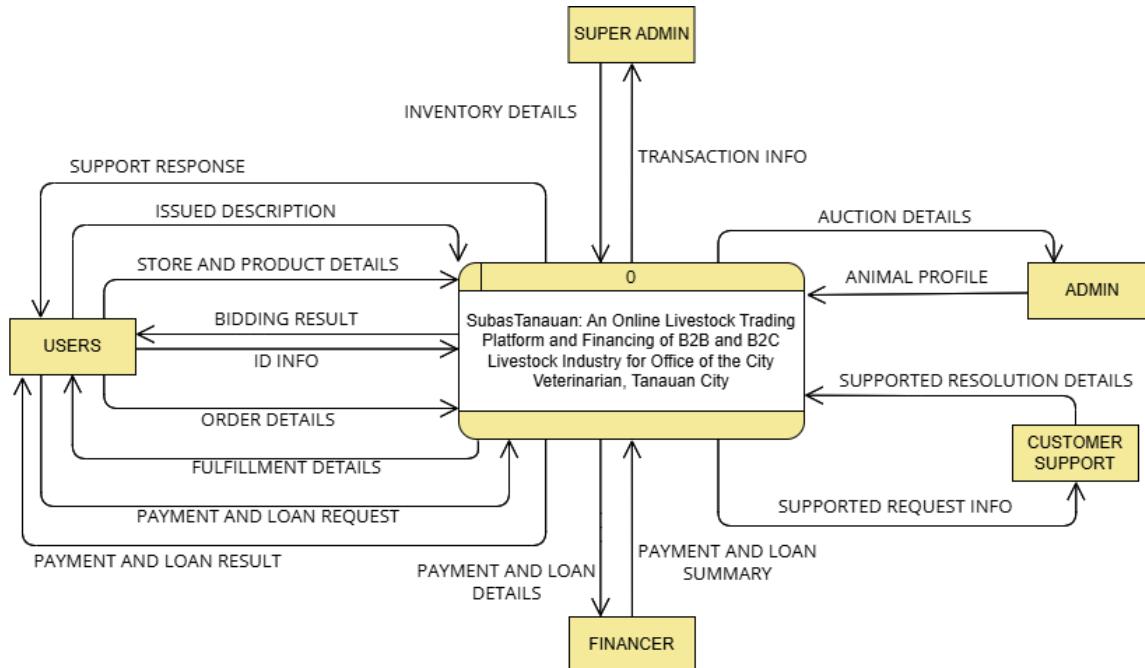
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within a community of other livestock businesses. In pursuit of its objectives, the system endeavors to provide an economical solution that not only minimizes operational costs but also maximizes returns for its users. Through the showcasing of diverse livestock markets, the system seeks to create a vibrant marketplace where buyers and sellers can connect, resulting in increased market penetration and enhanced visibility for participants. Ultimately, by facilitating the expansion of customer bases and tapping into new markets, the system strives to unlock untapped revenue streams and catalyze sustainable growth for businesses involved in livestock trading.



**Figure 4. Context Flow Diagram of the Developed System**



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The context flow diagram illustrates those key entities that interact with the system. These entities will include users, administrators, super admin, financers, and customer support.

Users could be a vendor, customers, or bidders that will interact with the system through various interfaces such as web and mobile applications, accessing features such as user can browse livestock listings, placing bids, and managing orders. They are also able to request payment and loan assistance through the platform.

Administrators, will oversee the system's operation especially managing user accounts, manage the auction processes by handling animal profiles and auction details, while also assisting with resolving support issues.

Financer, plays a key role in handling payment and loan requests, providing users with the results and details of their transactions and providing services such as financing options, loans, and payment processing and supporting the financial aspects of livestock trading.

Super Admin, serves as the highest authority within the system, responsible for oversees inventory management and processes critical transaction information and ensuring the system's overall functionality. They have elevated privileges compared to regular administrators, granting them access to critical system settings



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and transactions. This level of access enables them to implement necessary changes and oversee the overall integrity and security of the system.

Customer support, serves as the primary point of contact for users who require assistance, guidance, or resolution of issues while interacting with the system that receives and addresses user queries, providing timely responses and resolving problems that arise. Customer support plays a role in ensuring user satisfaction and smooth system operation. By offering step-by-step assistance and troubleshooting, they help users navigate any challenges they encounter. Additionally, the support team gathers valuable feedback, which can be used to enhance the system and improve the overall user experience.

### **Data Flow Diagram**

This part contains the data flow diagram of the super admin, admin and user which maps out the flow of information for any process or system. The illustrations below illustrate the scope and functionality of the system that will be developed in relation to each activity or use contact and shows the specific and actions the system carries out.

The administrator's data flow diagram, depicted in Figure 5, as one of the essential entities in the system, the admin's actions trigger the initiation of data flow upon logging in. Once authenticated, the administrator gains access to the user



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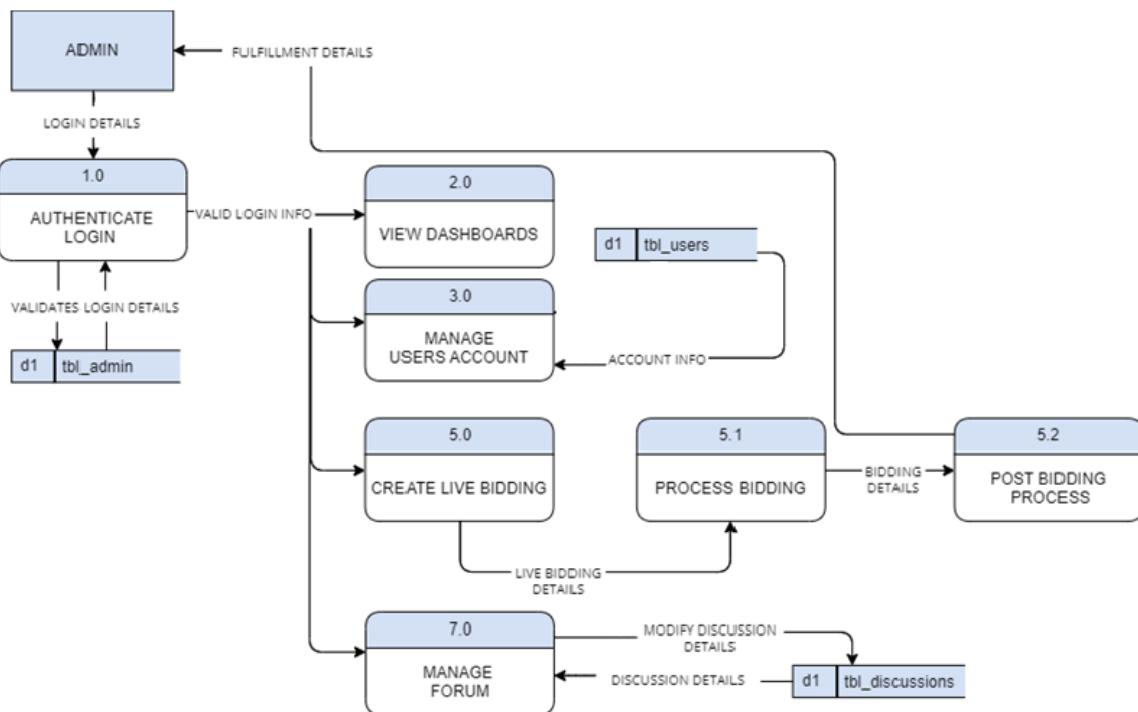
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dashboard, enabling them to oversee and manage various aspects of the system, including user accounts and auction activities.

Moreover, the administrator's responsibilities extend to facilitating live bidding sessions, where they are tasked with setting up auction parameters, monitoring bidding activity, and ensuring a smooth bidding experience for participants.



**Figure 5. Data Flow Diagram for Admin**

In Figure 6, shows the whole function of the customer support process, where data flows begin when a customer support representative logs in. Once logged in,



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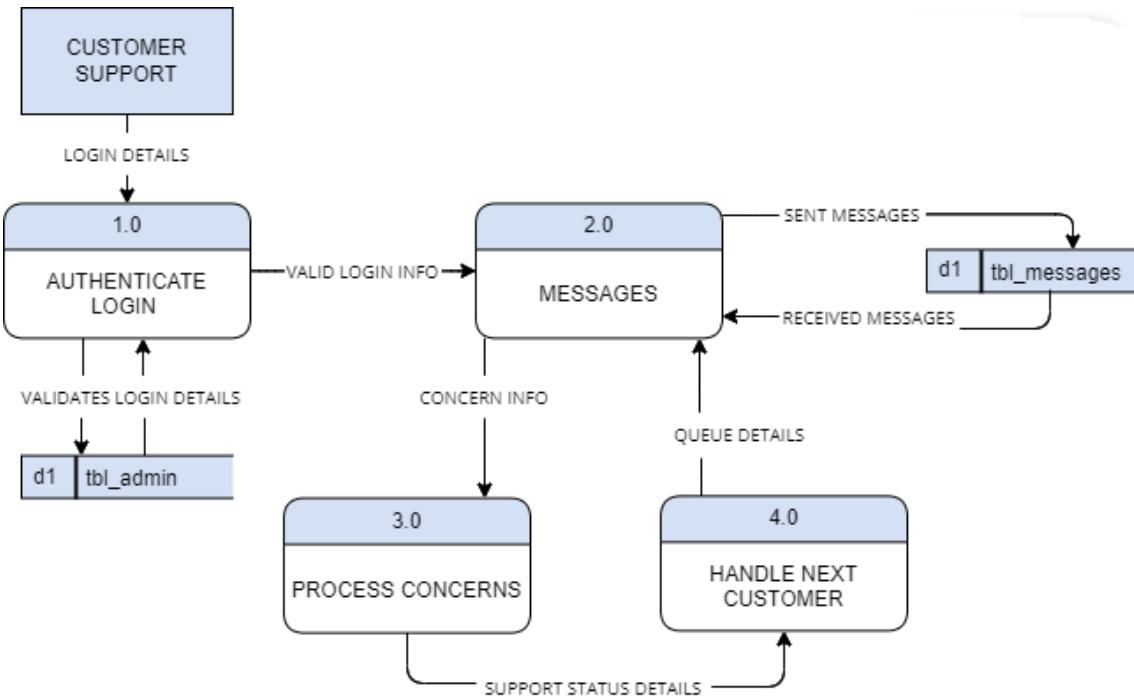
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they can view messages this includes the receive and send messages regarding user issues. Additionally, the customer support agent is responsible for providing comprehensive solutions and assistance to users and resolving issues efficiently.

The customer support will handle the next customer message immediately based on the user's issue after providing action and solutions to the user's concerns. Moreover, the workflow emphasizes the importance of handling subsequent customer messages promptly and effectively, maintaining a high standard of support service throughout the interaction.



**Figure 6. Data Flow Diagram for Customer Support**



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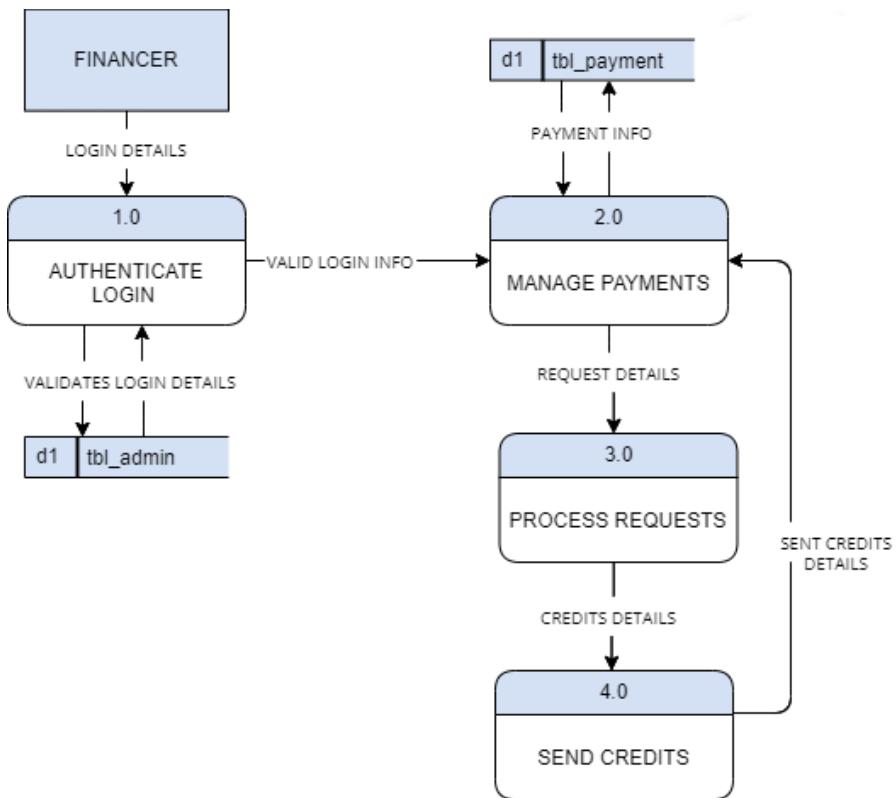
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In Figure 7, the financing module of the proposed system is illustrated. The data flow diagram illustrates that financers commence their activities by logging in. Once logged in, they gain access to view user payments and process payment and loan requests. Subsequently, the financer validates the request details, checks the credit details of the user request, and then proceeds to process the credits and loan credits accordingly. Finally, the financer reviews the entire transaction history, encompassing payment and loan records, to ensure accuracy and completeness.



**Figure 7. Data Flow Diagram for Financer**



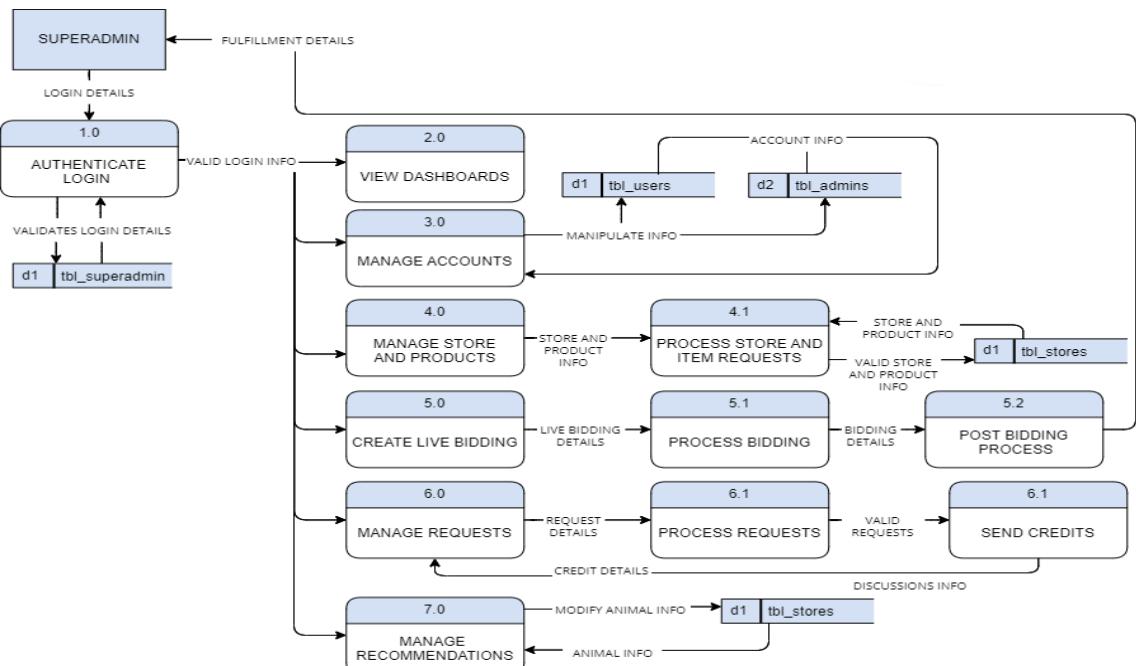
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Figure 8 illustrates the data flow diagram for the super admin, providing an overview of their processes within the proposed web application. As one of the key entities in the system, the data flow begins when the super admin logs in. Upon logging in, the super admin can access the dashboard, which displays metrics such as the total number of users, wallets, and active and completed loans. The super admin is responsible for managing all user accounts in the system. Like the admin, the super admin oversees live bidding and monitors bidding details throughout the auction process. Additionally, the super admin can view and manage the inventory, which includes the store, item list, and user requests.



**Figure 8. Data Flow Diagram for Super Admin**



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Figure 9 illustrates the data flow diagram of the users, which begins when they log in. After logging in, users can participate in live bidding for livestock and search for stores on the same page. They can browse the marketplace to search and filter livestock based on their preferences, and they also have the option to apply for store creation within the system. Once the store request is approved users can post their products. In the dashboard, users can view their wallets and total loan amounts, as well as make payments and submit loan requests, with all details provided throughout the process. Additionally, users can create discussions on the forum page to share their experiences with other potential users and can also send inquiries through customer support.

Customer support provides timely assistance, ensuring users can resolve any issues they face. The inquiries sent to customer support are routed to the appropriate team based on the nature of the problem, helping users receive targeted solutions. This communication channel also enables the platform to track common issues and identify areas for improvement. Furthermore, by sharing their experiences on the forum, users foster a community where insights and advice can be exchanged, enriching the experience for everyone. The system's design allows for an enhanced flow of information, ensuring users can easily access the tools and support they need to engage effectively in the marketplace.



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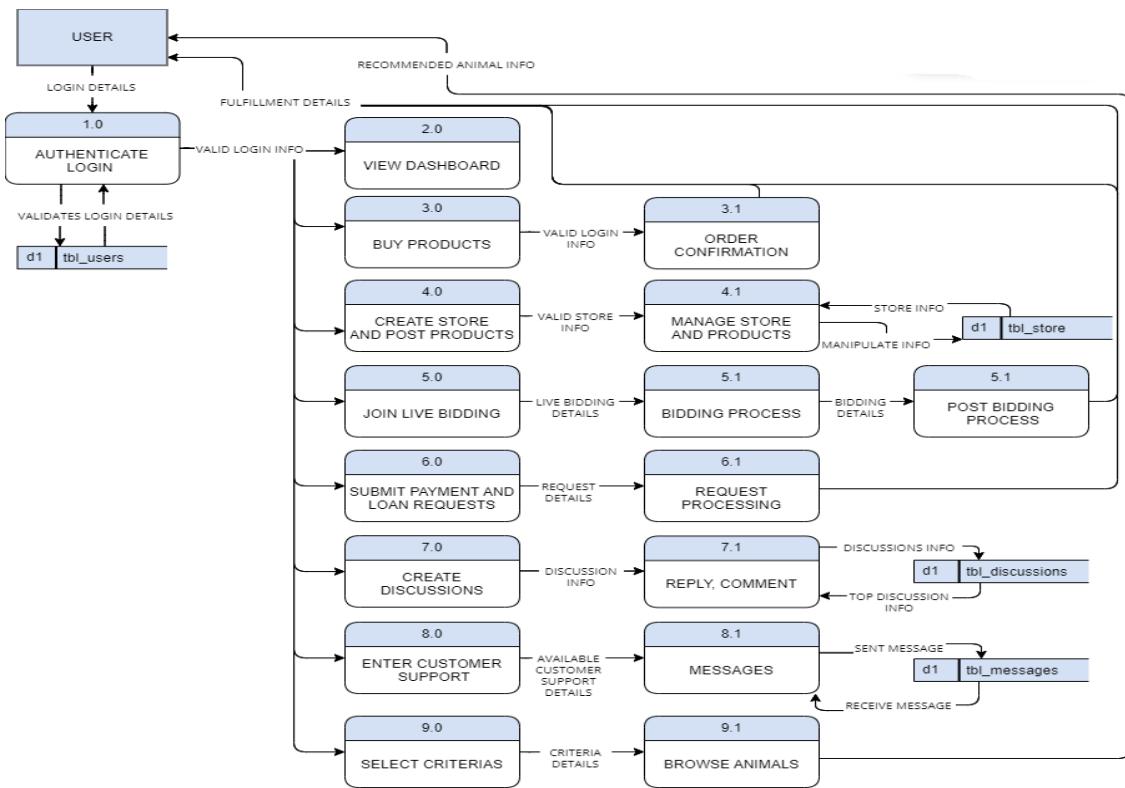
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**Figure 9. Data Flow Diagram for Users**

## Functional Requirements

This section outlines the functions of the system and its components, encompassing data manipulation, processing, and other specialized functionalities expected of the system.

Functional user requirements encompass both high-level overviews of the system's objectives and detailed descriptions of the software services it provides. These requirements serve as a guiding roadmap for developers, directing the design



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and implementation of software features to ensure they harmonize with user expectations and business goals.

**Table 1.**  
**Functional Requirements**

<b>Module</b>	<b>Description</b>
Registration and Login Module	This module facilitates user registration and authentication within a system or application. This module typically includes functionality for users to create new accounts by providing necessary information such as username, email address, and password.
Super Admin Module	This super administrator module manages overall user accounts (admins, users, financiers, customer support) and inventory (stores and items). Additionally, it includes functions to manage live bidding and view payment and loan request history.
Admin Module	This module serves as the second function of the super administrator, empowering them to manage user accounts and oversee the bidding process and responsible for managing forums for discussion.
Financing Module	This module allows B2B and B2C to apply for loaning and lending of a credits within the system.
Payment Module	This module manages a transaction of the users through ensuring secure online subscription.
Filtering Options	Options that assist users based on their preferences, interests, and criteria when browsing livestock-related businesses, such as starting cost, date started, and time last posted.



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### **Non-Functional Requirements**

Non-functional requirements encompass the specific characteristics or qualities that an innovation should possess. These requirements are just as crucial as functional ones, as they ensure the overall efficiency of the system.

The table presented illustrates various attributes and their corresponding measures. Non-functional requirements describe system attributes such as operational, security, and performance, thereby providing a comprehensive framework for system evaluation and optimization. They also address aspects like scalability, maintainability, and user experience, which are vital for ensuring the system can adapt to changing demands and remain user-friendly over time.

**Table 2.**  
**Non-Functional Requirements**

<b>Criteria</b>	<b>Description</b>
Functional Suitability	The system for the super admin, admin, and users fulfills all specified functions of the web application and provides a user-friendly experience accessible to all users.
Performance Efficiency	The system possesses the capacity to handle substantial user and data loads without performance degradation and ensure uninterrupted operation and optimal performance.



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**Table 2.**  
**Non-Functional Requirements (Cont'd)**

Criteria	Description
Usability	The system should be crafted considering the admin and user base, to address their particular requirements and preferences concerning the utilization of the web application.
Reliability	The web application system for the admins and users reliably performs specific functions within the designated timeline set for each task.

### User Design Interface

The user design interface focuses on creating an intuitive and visually appealing experience that enhances usability and accessibility. It ensures that users can efficiently navigate the system, interact with features, and complete tasks with minimal effort.

The design that you see below is the design that developers use for their systems. In this section, the developers made the details of the interface's functionality, design, and user interactions that are intended to give users an extensive understanding of the interactive and visual components of the system. The user interface (UI) has been carefully designed to not only be visually appealing but



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also to enable smooth navigation and effective task completion through careful analysis and careful consideration of user needs. Each element of the design has been crafted to enhance usability, ensuring that users can quickly find the information they need and user feedback was incorporated throughout the design process to continuously improve the interface and meet evolving requirements.

Figure 10 shows, the email textbox (1) for the admin to enter their registered email address. A password textbox (2) for the admin to enter their registered password. A login button (3) that directs the admin to access the system.

**SUBASTANAUAN**

**ADMIN LOGIN**

1

username

2

password

3

**Figure 10. Admin - Login Page**



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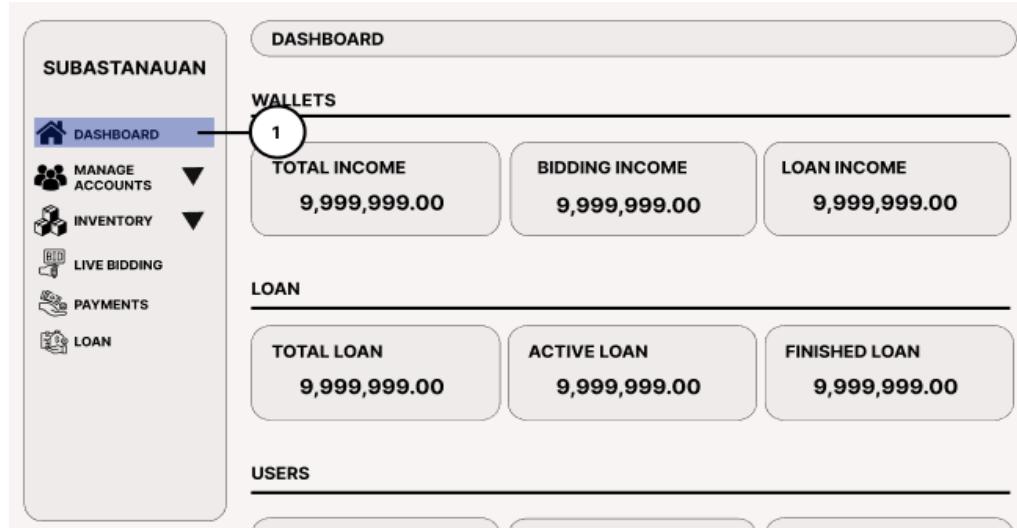
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Figure 11 depicts the dashboard (1) for the super admin, enabling them to access various features. These include viewing wallets, total income, bidding income, and loan income. The dashboard also provides insights into the total loans, encompassing both active and completed loans of all users. Moreover, it displays the total number of users benefiting from the system and the count of authorized users. Additionally, the dashboard offers a comprehensive overview of the system's performance, empowering the super admin with valuable data to make informed decisions and optimize operations effectively.



**Figure 11. Super Admin - Dashboard Page**

In Figure 12, the interface presents several components for the system. Positioned within the navigation bar, an arrow button (1) aids in smooth navigation,



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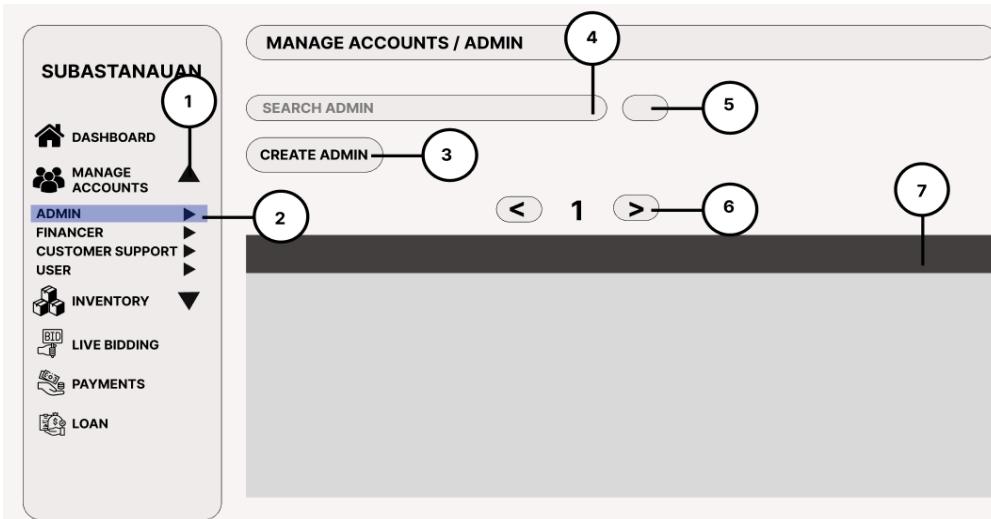
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ensuring intuitive exploration throughout the platform. Tabs (2) within the same bar enable quick access to distinct sections, enhancing user experience. Additionally, the Super Admin can effortlessly create new admin accounts (3) via a dedicated feature. To expedite user management, a search input box (4) is provided for admin searching, complemented by a search button (5) for admin efficient searches. Furthermore, the next arrow buttons (6) facilitate to display the next set of lists. Notably, a comprehensive table (7) equipped with action buttons empowers the super admin to perform various administrative tasks efficiently, consolidating control and oversight within a single interface.



**Figure 12. Super Admin - Admin Management Page**

The Figure 13 system interface contains an arrow button (1) in the navigation bar aid in smooth navigation, Tabs (2) within the same bar offer swift access to



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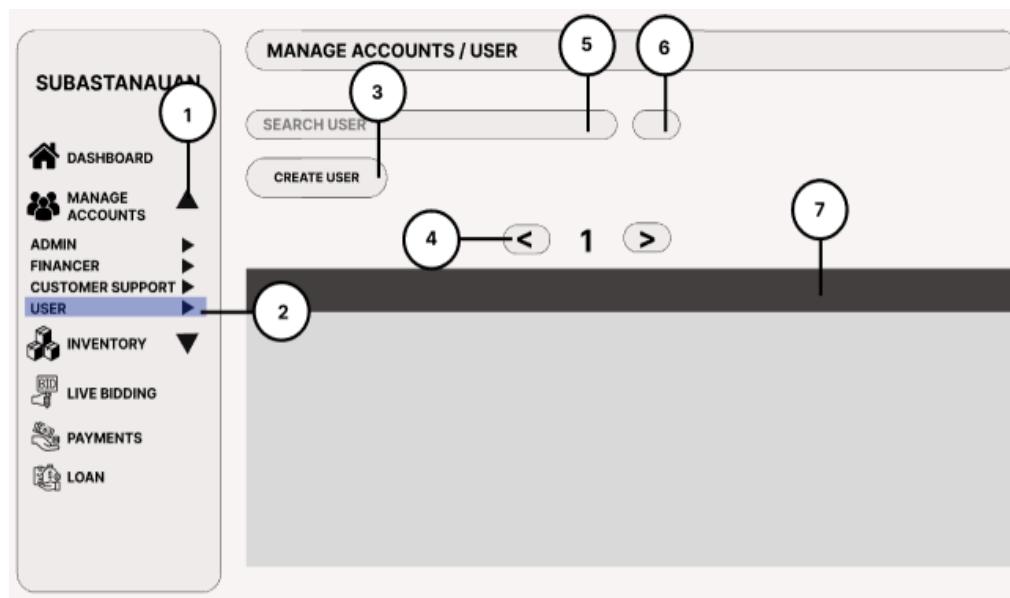
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different sections. SuperAdmin can create new user accounts (3) through a dedicated button. , back arrow button (4) facilitates smooth navigation to the previous set of list. For efficient user management, there's a search input box (5) accompanied by a search button (6) specifically designed for admin searches. Additionally. Notably, a comprehensive table (7) equipped with action buttons enables the super Additionally, a comprehensive table (7) equipped with action buttons enables the SuperAdmin to manage user roles, edit account details, and perform bulk actions efficiently, streamlining overall user management tasks.



**Figure 13. Super Admin – User Management Page**



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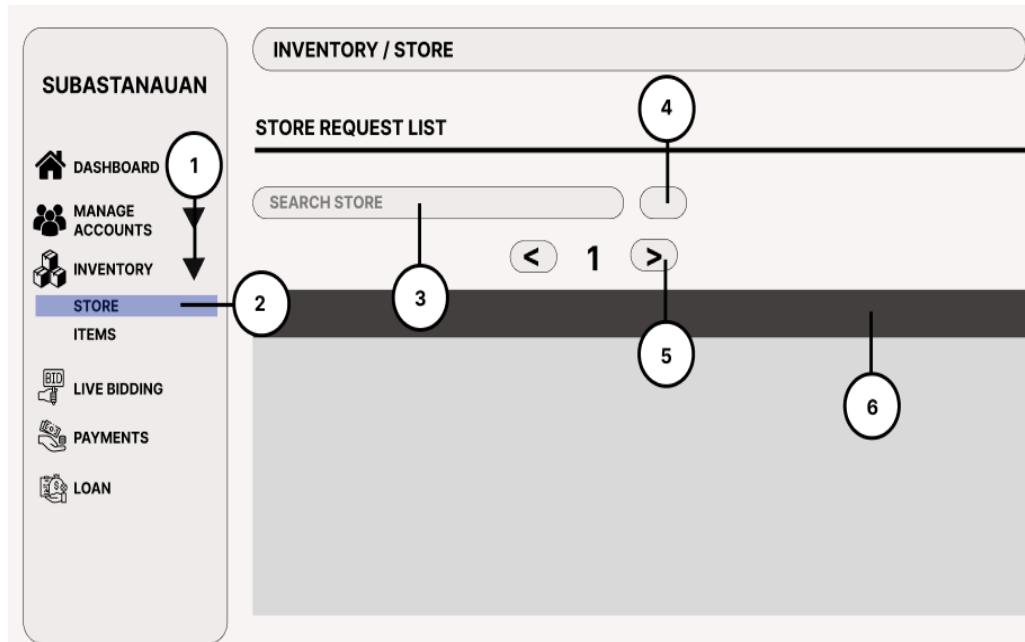
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The Figure 14 system interface contains an arrow button (1) in the navigation bar aid in smooth navigation, Tabs (2) within the same bar offer swift access to different sections. For efficient store management, featuring several key elements. At the design is a search store input box (3), inviting users to effortlessly pinpoint specific stores. Adjacent to it, a search button (4) awaits to initiate searches with a single click. Navigating through multiple pages of results is made easy with a next arrow button (5), ensuring users can explore without interruption. This table (6) serves as a central management for the super admin, providing a clear overview of pending tasks.



**Figure 14. Super Admin – Store Request Page**



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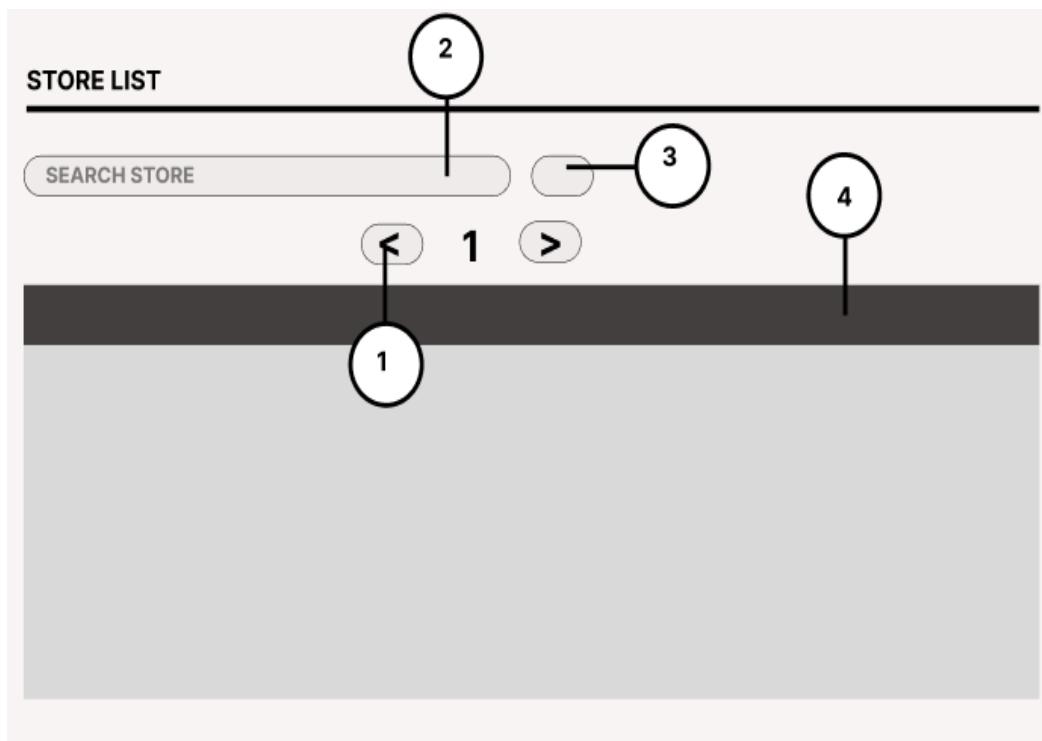
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Figure 15 showcases an intuitive interface designed to manage stores. At the forefront is a back arrow button(1), to view the previous set of lists within the system. Directly above, Super admin encounters a search store (2), allowing them to quickly locate specific stores of interest. Adjacent to this list is a prominent search button (3), enabling users to execute their search queries effortlessly. The centerpiece of the interface is a comprehensive table (4) displaying the store list, providing the super admin with a centralized platform to manage various store-related tasks efficiently.



**Figure 15. Super Admin – Store Management Page**



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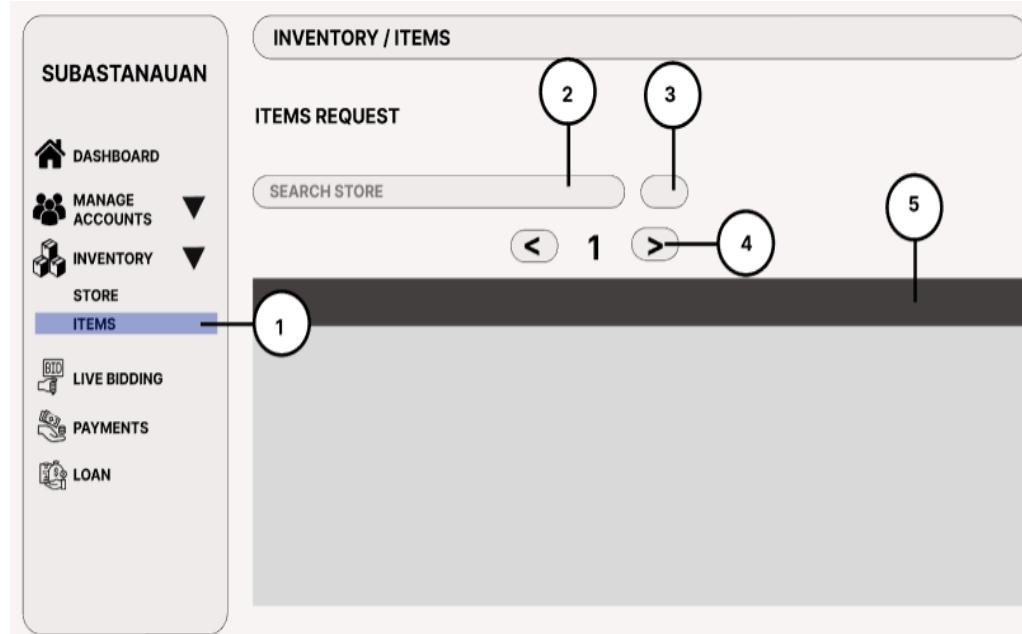
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In Figure 16 , tabs (1) within the same bar offer swift access to different sections, Beside these tabs, users will find a search input box (2), facilitating the quick and precise location of items within the system. Adjacent to the input box is a search button (3), enabling users to execute their search queries. To navigate through multiple pages of search results, a next arrow button (4) is conveniently placed, providing effortless progression. Comprehensive table (5) tailored for the super admin's management of item requests. Within this table, the super admin can efficiently oversee and address various item-related tasks, ensuring smooth operations and effective management of the system.



**Figure 16. Super Admin – Item Request Page**



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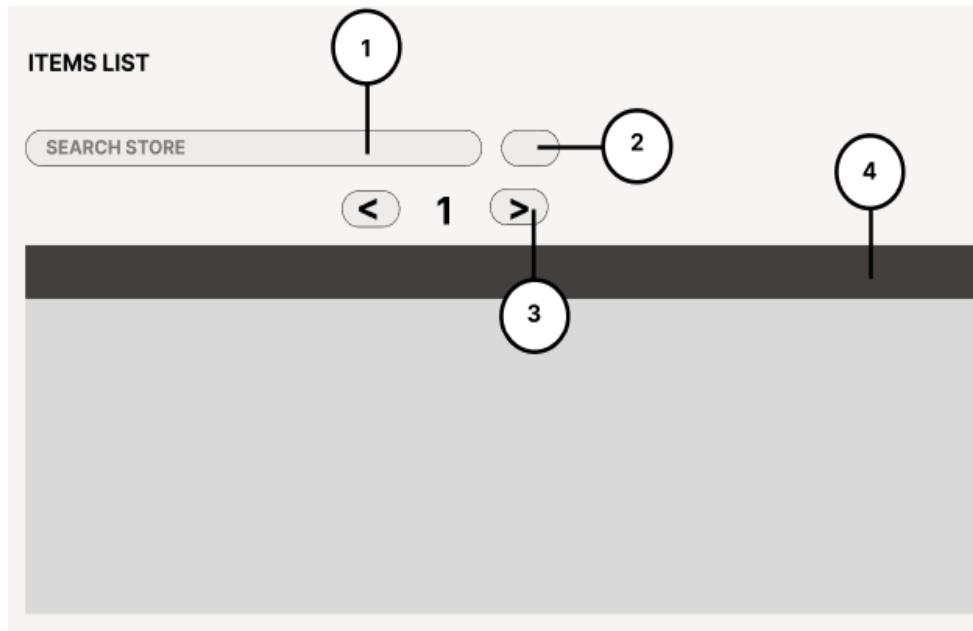
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In Figure 17, the Super Admin is greeted with an interface designed for efficient marketplace management. At the top, a search input box (1) to assist Super Admin in locating specific items. Adjacent to the input box, a search button (2) waits to execute search queries with a single click for Super Admin convenience. For navigation through search results, a next arrow button (3) is displayed, allowing Super Admin to explore listings effortlessly. Central to the interface is a comprehensive table (4), dedicated to the super admin's oversight of marketplace items. Within this table, the super admin can efficiently manage various item-related tasks, ensuring optimal functionality and organization within the marketplace.



**Figure 17. Super Admin – Item Management Page**



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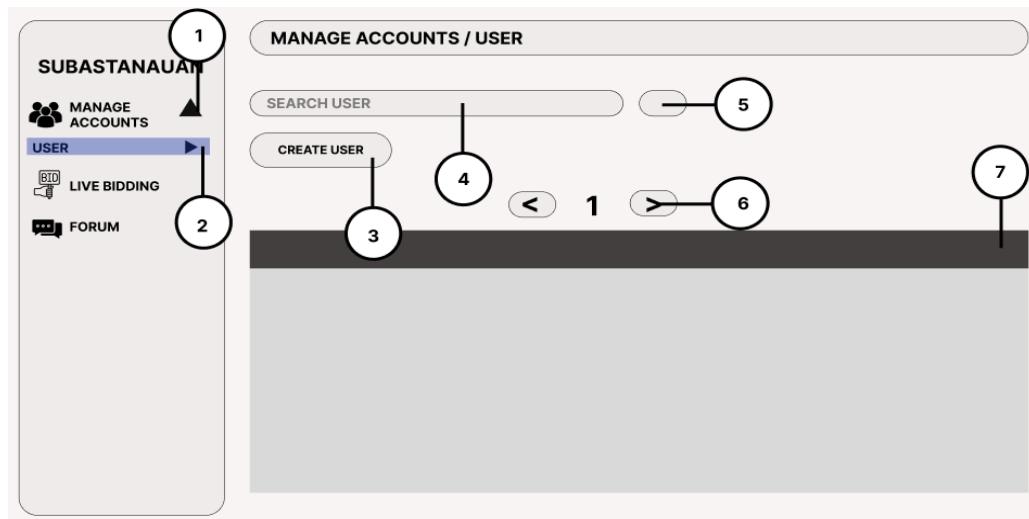
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In Figure 18, the interface is designed to facilitate user management efficiently. Within the side navigation bar, arrow buttons (1) aid in navigation between different tabs showing and hiding sections. Each tab (2) offers access to distinct sections of the platform. Create user button (3), enabling the admin to create user. Above this, a search user input box (4) assists in locating specific users quickly. Admin can execute search queries with the search button (5). For effortless navigation through search results, a next arrow button (6) is available. Central to the interface is a comprehensive table (7), providing the admin with action buttons to manage users efficiently. This table includes options for editing and other actions, ensuring smooth administration of user accounts.



**Figure 18. Admin – User Account Management Page**



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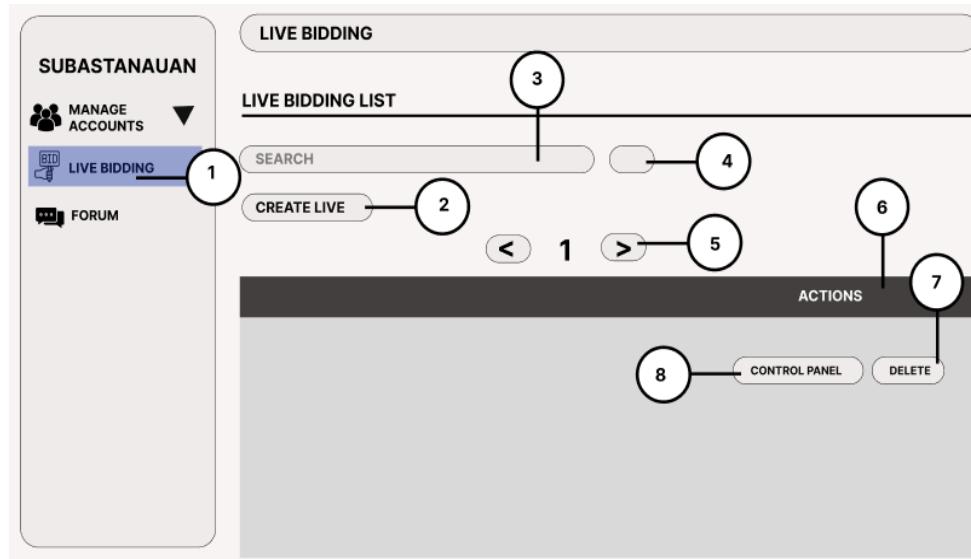
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In Figure 19, the interface is optimized for managing live bidding rooms. Within the side navigation bar, a tab (1) provides easy access to different sections of the platform. Admin can initiate the creation of live bidding rooms using the prominent create live button (2). Search store input box (3) enables users to swiftly locate specific items of interest. Adjacent to the input box, a search button (4) executes search queries promptly. For fluid navigation through listings, a next arrow button (5) is conveniently placed. At the heart of the interface lies a comprehensive table (6) displaying listings, equipped with action buttons such as "delete" (7) for managing items efficiently and a "control panel" button (8) grants access to the room, allowing users to edit room details as needed, ensuring optimal management of live bidding activities.



**Figure 19. Admin – Auction Management Page**



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In Figure 20, admins are provided with a user-friendly interface tailored for managing live bidding sessions effectively. Positioned at the top left corner is a prominent "go back" button (1), enabling admins to navigate back effortlessly. A dedicated multimedia box (2) designed specifically to display animal portraits. At the bottom of the interface, a dedicated box (3) displays the current highest bid, keeping admins informed in real-time. A "start countdown" button (4) is available to initiate the bidding process smoothly, while the "sold" button (5) adjacent to it facilitates the management of sold items. To navigate through auction items seamlessly, admins can utilize the "next item" button (6) conveniently located for easy access and a chat box (7) fosters interaction among participants, enhancing the community feel and facilitating communication during bidding sessions. Below the chat box, an input field (8) allows admins to engage in discussions, with a "send" button (9) enabling quick communication.

Additionally, the interface may include visual indicators such as a timer display to show the countdown progress, sound notifications to signal the start or end of bidding, and color-coded bid updates to highlight the latest highest bid. These elements contribute to a dynamic, engaging, and efficient live auction experience. These additional features contribute to a more dynamic, interactive, and user-



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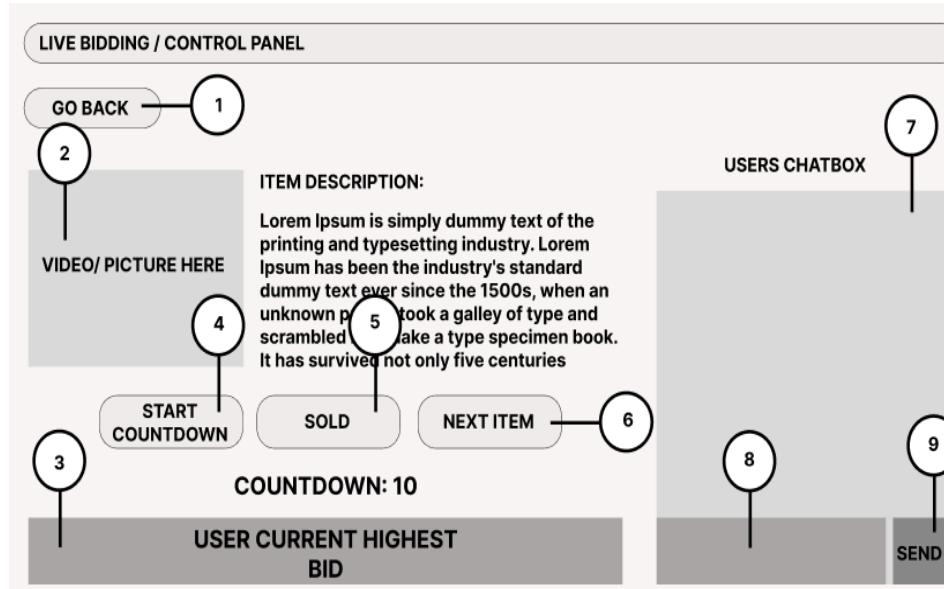
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friendly auction experience, ensuring smooth operations while promoting fairness, engagement, and efficiency in the bidding process.



**Figure 20. Admin – Control Panel Room Page**

In Figure 21, the interface is designed to facilitate forum management efficiently. Within the side navigation bar, a tab (1) offers access to the forum management section. Positioned prominently is a search input box (2), allowing admins to quickly locate specific discussions or topics. Users can navigate through multiple pages of discussions using the next arrow button (3). The central feature of the interface is a comprehensive table (4), displaying forum discussions and requests for the admin to manage. This table provides admins with tools to oversee and



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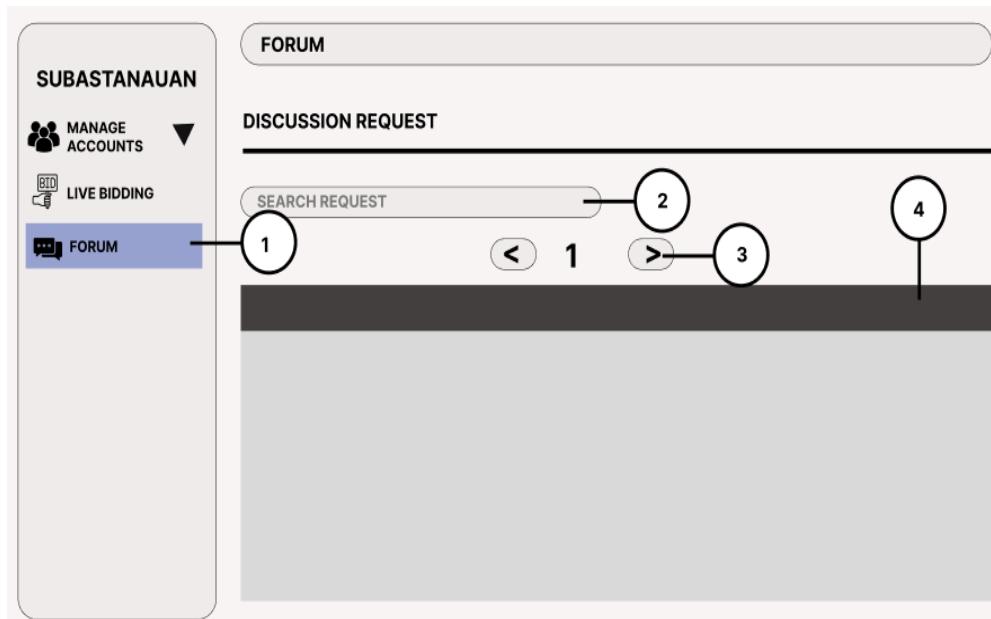
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moderate discussions effectively, ensuring a vibrant and organized forum community.



**Figure 21. Admin – Forum Request Management Page**

In Figure 22, the interface discussion management for admins. Positioned pa search discussion input box (1), enabling admins to locate specific topics or threads. To navigate through various discussion lists, an intuitive next arrow button (2) is provided. At the heart of the interface is a comprehensive table (3), presenting lists of discussions for admin management. Within this table, admins can efficiently oversee and moderate discussions, thanks to the inclusion of action buttons tailored for tasks such as editing, deleting, or locking threads. This setup ensures effective



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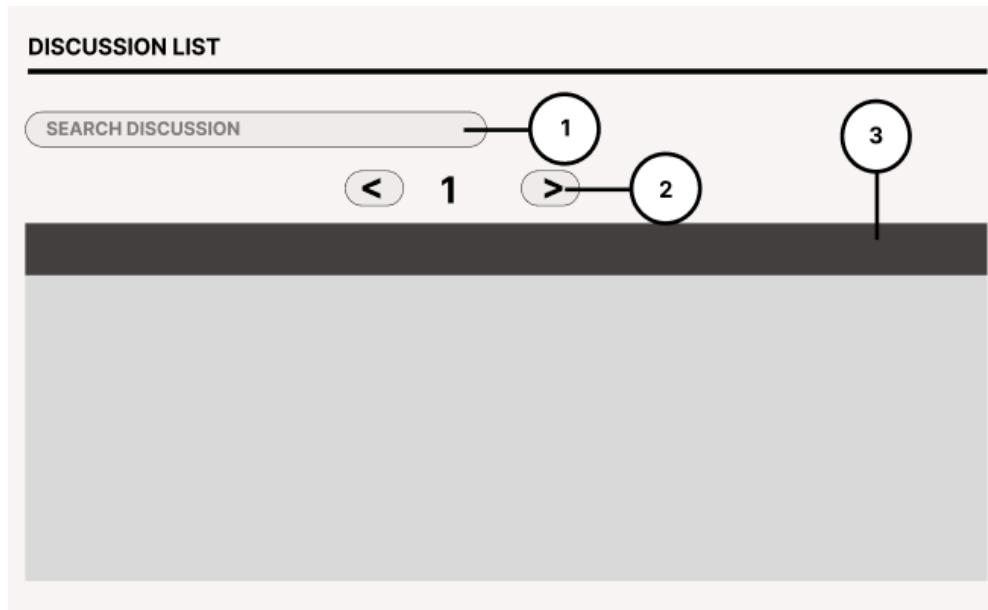
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administration of the discussion platform, promoting engagement and maintaining order within the community.



**Figure 22. Admin – Forum Management Page**

Figure 23 shows the payment tab (1) serves as the entry point for financers into the dashboard of the financer interface where financial transactions await their attention. With the search request button (2) at their disposal, financers can efficiently initiate searches for specific payment requests submitted by users, optimizing the process of addressing financial needs. Using the arrow button (3), financers can go between previous and next payment requests, ensuring a smooth workflow as they review and respond to each request in turn. Meanwhile, the table



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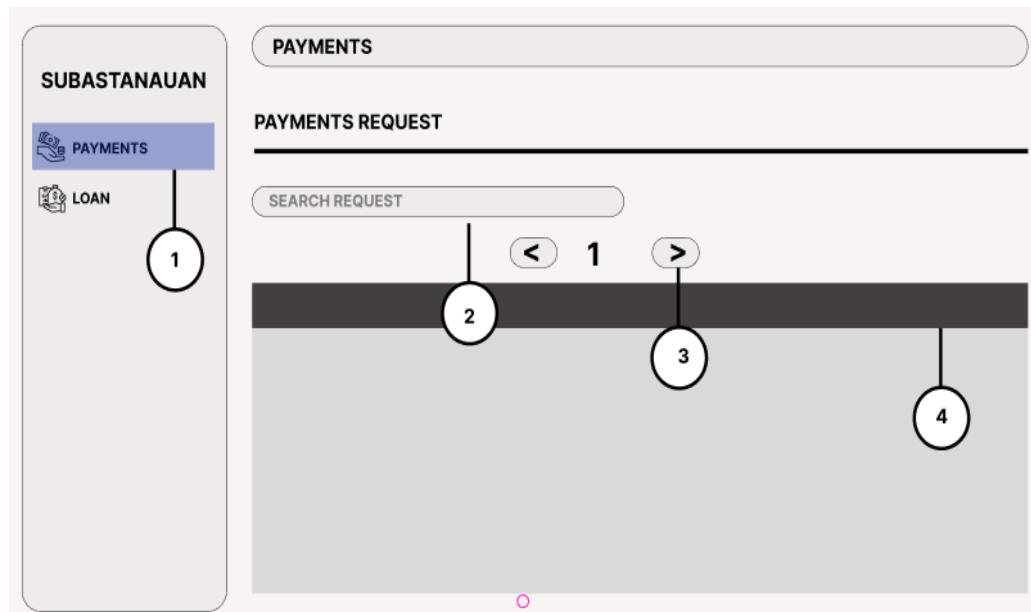
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(4) acts as a comprehensive directory, presenting a clear list of payment requests within the interface, facilitating easy reference and management of financial transactions.



**Figure 23. Financer – Payment Request**

Figure 24 shows the search payment button (1) serves as a tool for financers, empowering them to efficiently track down specific payment transactions within the interface. Whether they're seeking a particular transaction or exploring payment trends, this button optimizes the process, saving valuable time and effort. Complementing this functionality, the arrow button (2) offers seamless navigation through the transaction history, enabling financers to effortlessly traverse past and future transactions with ease. Meanwhile, the comprehensive presentation of



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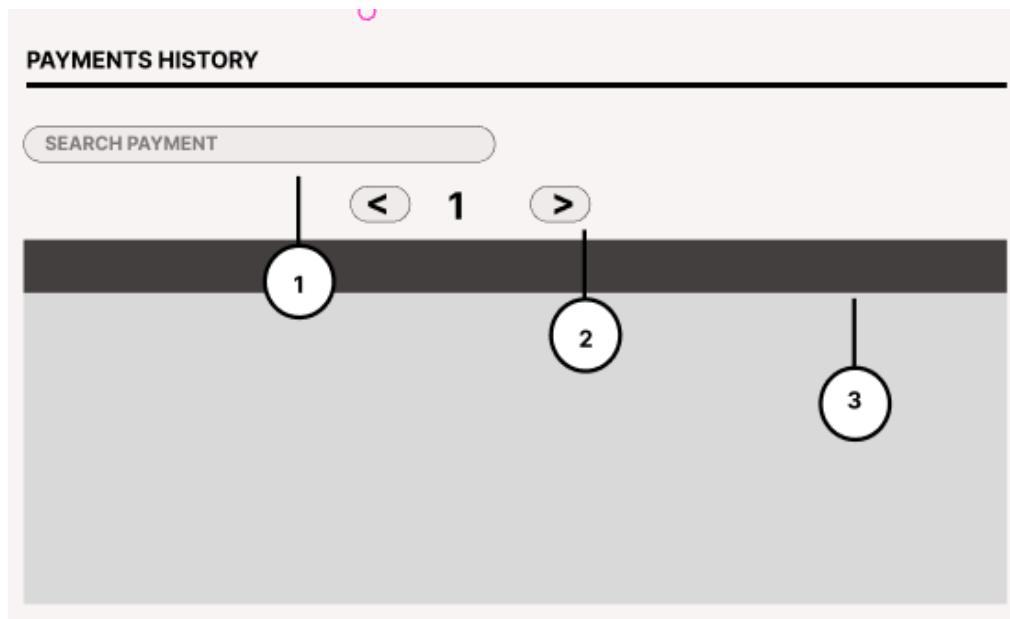
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payment history in the table (3) ensures that financers have access to detailed insights, including payment details and relevant data, empowering informed decision-making and meticulous financial management.



**Figure 24. Financer – Payment History**

Figure 25 illustrates the search loan button (1) optimizes the process for financers by offering them targeted search capabilities within the interface, enhancing their ability to locate specific loan records swiftly and accurately. With this functionality, financers can efficiently manage their workload, focusing their attention on pertinent loan requests and optimizing their workflow for increased productivity. Additionally, the arrow button (2) empowers financers to navigate through transaction histories, allowing them to view past and upcoming



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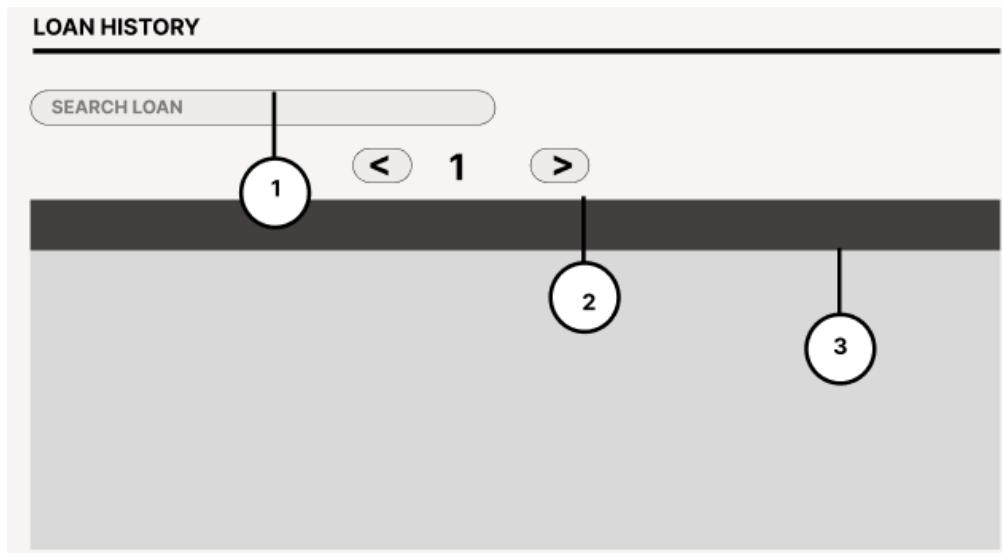
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transactions. Together with the table (3), which provides a comprehensive overview of loan activities, including payment details and other information, financers can make informed decisions and maintain a thorough understanding of loan dynamics within the system.



**Figure 25. Financer – Loan History Page**

Figure 26 shows the customer support tab (1) acts as a lifeline for users seeking assistance, providing a help to resolve queries and issues promptly. Within the chat interface, users can not only view currently queued messages tab (2) but also track the progress of their inquiries, ensuring transparency and peace of mind. Additionally, the chat box interface features an input text box (3) where users can articulate their concerns, fostering clear communication channels between users and



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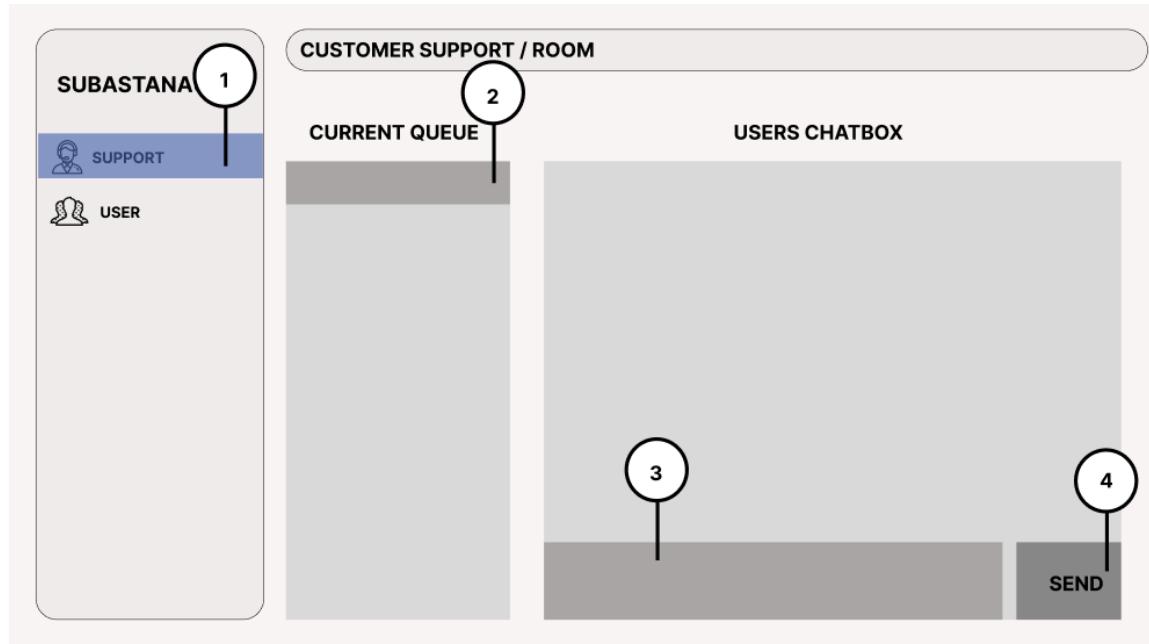
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customer support representatives. This interactive platform is further enhanced by the send button (4), which expedites the transmission of messages, facilitating a seamless exchange of information and resolutions and also resources to ensure that users receive comprehensive assistance tailored to their specific needs, enhancing overall user satisfaction and experience.



**Figure 26. Customer Support Page**

Figure 27 the dashboard page (1) is depicted, showcasing the functionality to view user wallets, providing oversight of the available credit balance and current loan status of the user. This feature enables users to easily monitor their financial information and make informed decisions regarding their credit and loan



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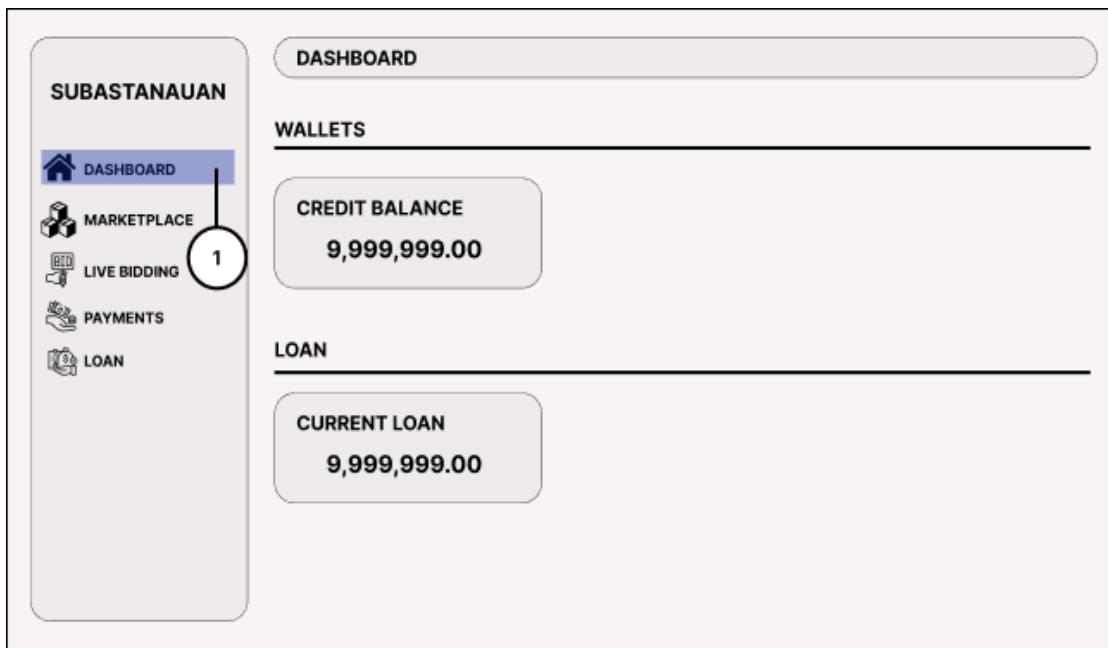
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management. Moreover, the dashboard's intuitive layout ensures that users can quickly access important data without navigating through multiple screens.



**Figure 27. User – Dashboard Page**

This visual representation of Figure 28 outlines the core functionalities of the marketplace interface. The marketplace button (1) acts as a direct portal for users to access the system's store, simplifying navigation. The search bar button (2) offers users a quick and accessible means to start product searches, enhancing ease of use. The filter button (3) allows users to tailor their browsing experience by specifying preferences, with the apply filter button (4) enabling them to activate chosen filters and update marketplace listings accordingly. Lastly, the description button (5)



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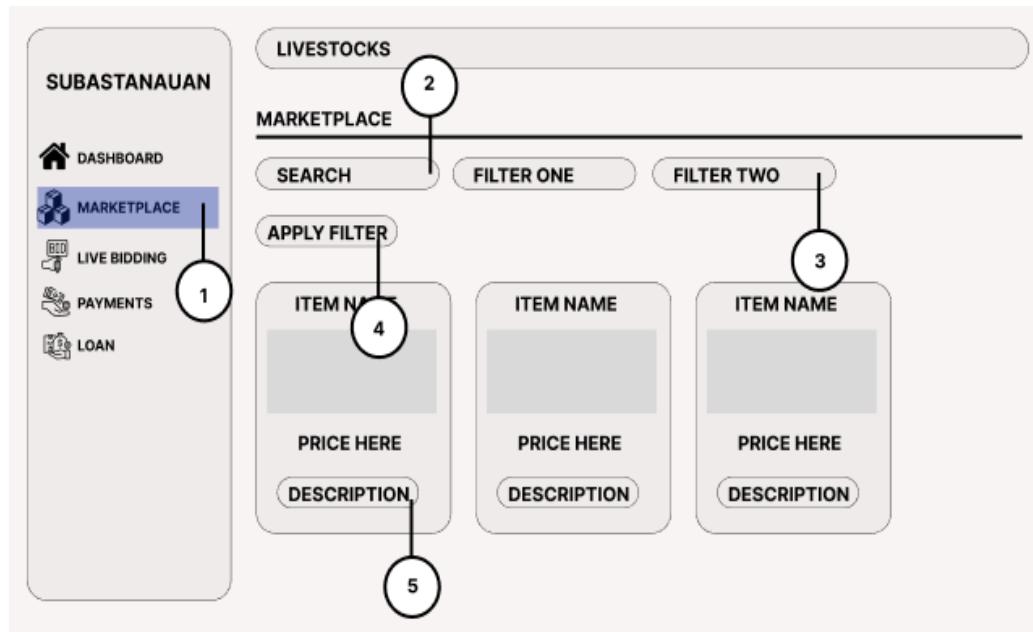
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provides users with additional item details, aiding informed decision-making during their browsing journey.



**Figure 28. User – Marketplace Page**

Figure 29 illustrates live bidding page interface (1) serves as a gateway for users to immerse themselves in dynamic auction experiences. Upon accessing this page, users are directed to the action of the bidding page. To navigate this marketplace is has the search input box (2), an invaluable tool empowering users to pinpoint specific items or auctions of interest. The functionality of the search bar (3), is strategically positioned for access to relevant content, ensuring users can efficiently explore the breadth of offerings available. Through the auction



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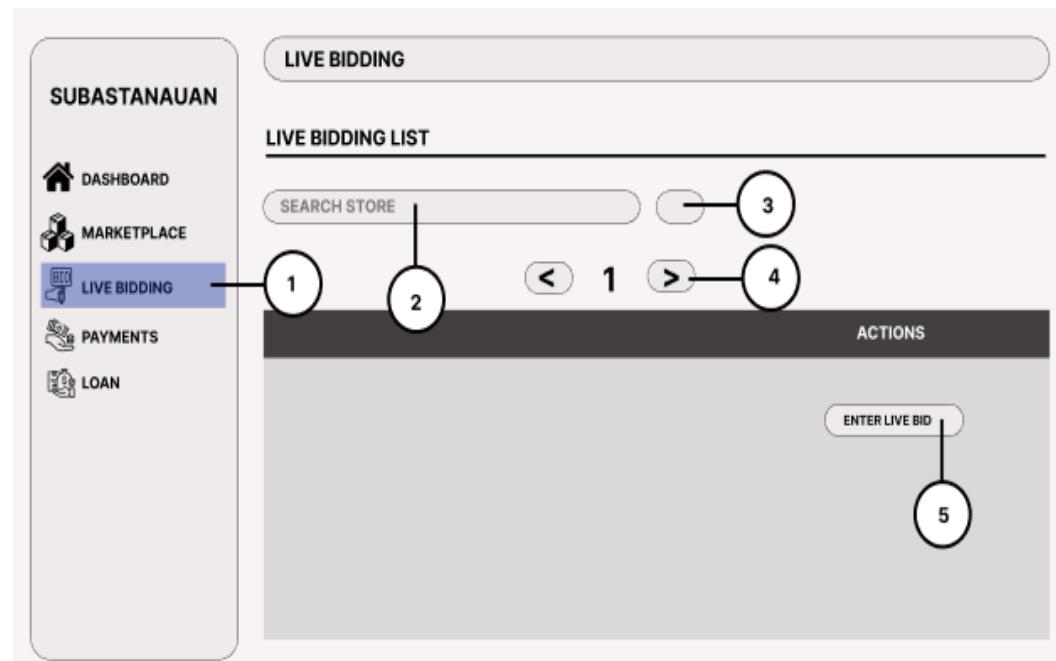
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landscape, the arrow button (4) stands ready, guiding users with intuitive precision whether they wish to progress forward or backtrack to previous pages. Finally, the enter live button (5), a compelling call to action signaling the commencement of their auction journey.



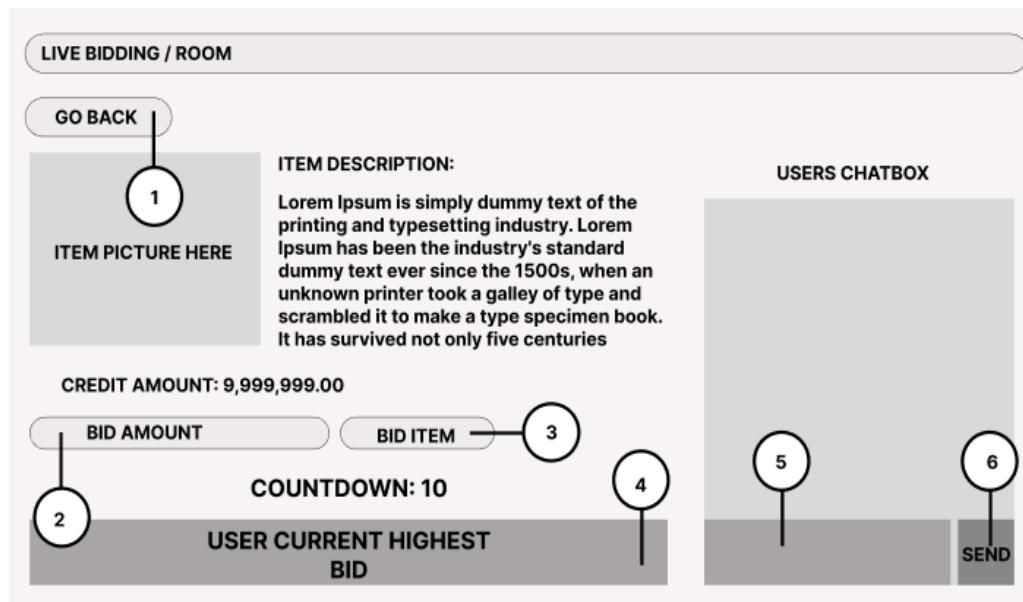
**Figure 29. User – Auction List Page**

Figure 30 shows the go back button (1), providing users with the option to exit the bidding room if they choose to do so. The bid amount button (2) allows users to specify the amount they wish to bid on an item or auction, complemented by the bi item button (3), which enables users to express their interest in bidding on a specific item within the bidding interface. The user's current highest bid box (4)



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displays the user who currently has the highest bid. Additionally, the message input box (5) enables users to input a message, and the send button (6) allows users to transmit the message. Together, these features create a comprehensive and user-friendly bidding experience, facilitating smooth interaction and engagement in the auction process.



**Figure 30. User- Live Bidding Room**

Figure 31 shows the payment button (1) is the user gateway to handle transactions smoothly. They directly to the payment interface, where they can settle your dues hassle-free. That's where the request button (2) comes in handy, signaling to the user to initiate a payment request right within the interface. And if you need to backtrack or move forward through the process, the arrow button (3) has your



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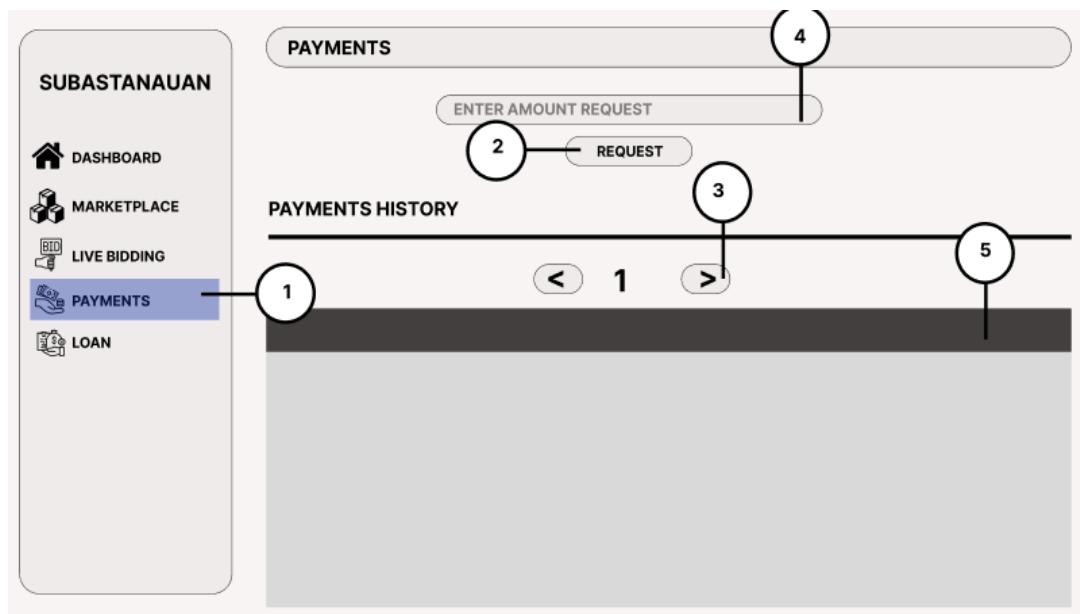
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back, letting user flip through pages with ease, whether user checking their transaction history or moving on to the next step.

The user taps the enter amount request button (4) and input the amount they want. And for a quick overview of user payment history, glance over at the table (5), where all their past transactions are neatly laid out for their convenience.



**Figure 31. User- Payment Page**

Figure 32 shows when users click on the loan button (1), they're directed to the interface where loan transactions. The arrow button (2) is their trusty companion, granting them the freedom to navigate forward or backward, whether they're checking out past loan transactions or retracing their steps. For the user with



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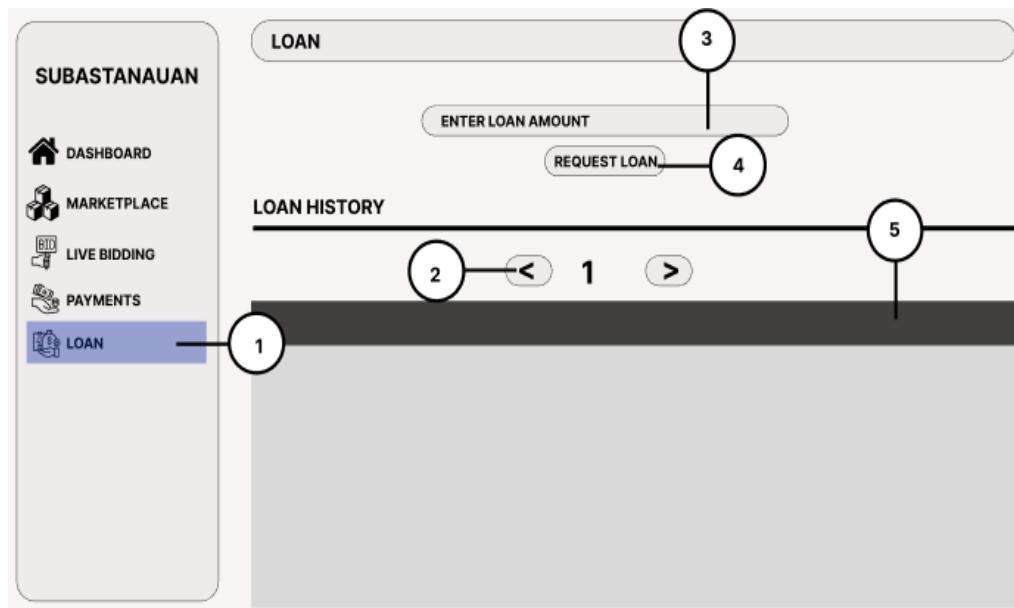
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a specific loan amount, the enter amount loan request button (3) is their ticket to inputting their desired sum. The request button (4) stands ready, signaling their intent to submit a loan request right from within the interface. And for a comprehensive overview of their borrowing history, the table button (5) grants them access to a neatly organized list of past loan transactions, ensuring they can review their financial journey with ease.



**Figure 32. User – Loan Page**

Figure 33 shows the forum navigation button (1) is the user's starting point for exploring the forum within the system where all the discussions happen. Where the user wants to create, discussion button (2) comes in handy it's their ticket to post threads in the forum interface. Use the arrow button (3) to flip through past



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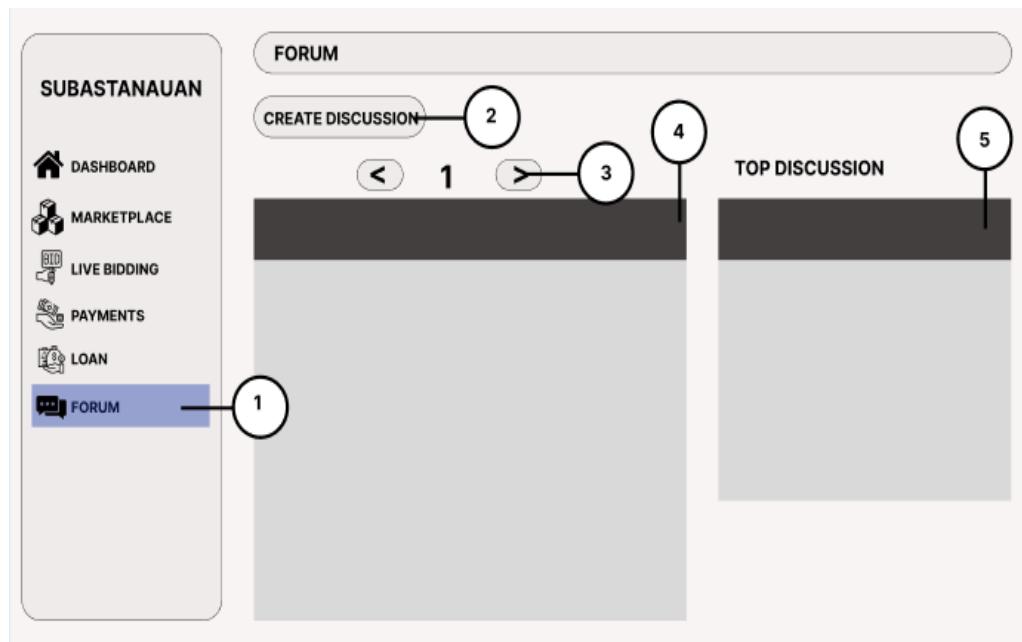
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discussions, whether they're catching up or revisiting the other's discussion. And with the table button (4), users can effortlessly browse through a curated list of discussions curated by their peers, making the sense of community engagement and connection. Finally, for users seeking a pulse on the latest discussion, the top discussion bar (5) offers a glimpse into the most trending and talked-about topics, providing a valuable window into the collective interests of the forum's participants.



**Figure 33. User – Forum Page**

Figure 34 illustrates the support navigation tab (1) serves as a lifeline for users encountering issues or seeking assistance within this interface. Its presence ensures a direct pathway for users to submit their inquiries, report problems, or seek



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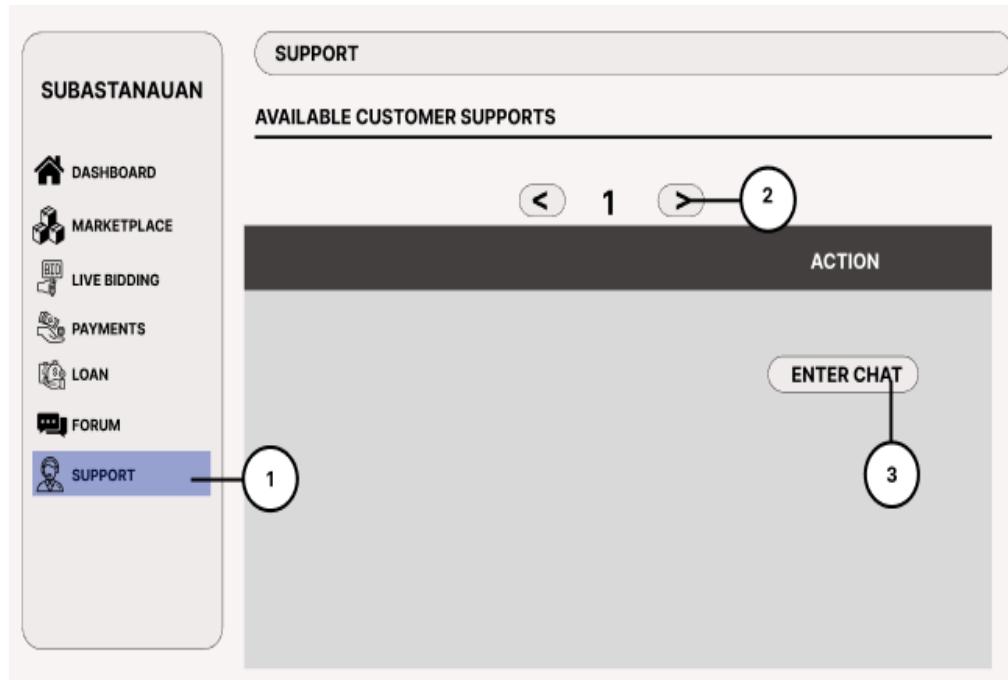
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guidance from customer support. Meanwhile, the arrow button (2) offers the navigation through the support system, facilitating easy movement between pages to review past inquiries or explore available support options.

When real-time communication is paramount, the chat button (3) provides users with instant access to a chat interface where they can articulate their concerns or complaints directly to support agents. This smooth integration of features empowers users to engage with support resources efficiently, a responsive and supportive environment within the system.



**Figure 34. User- Customer Support Page**



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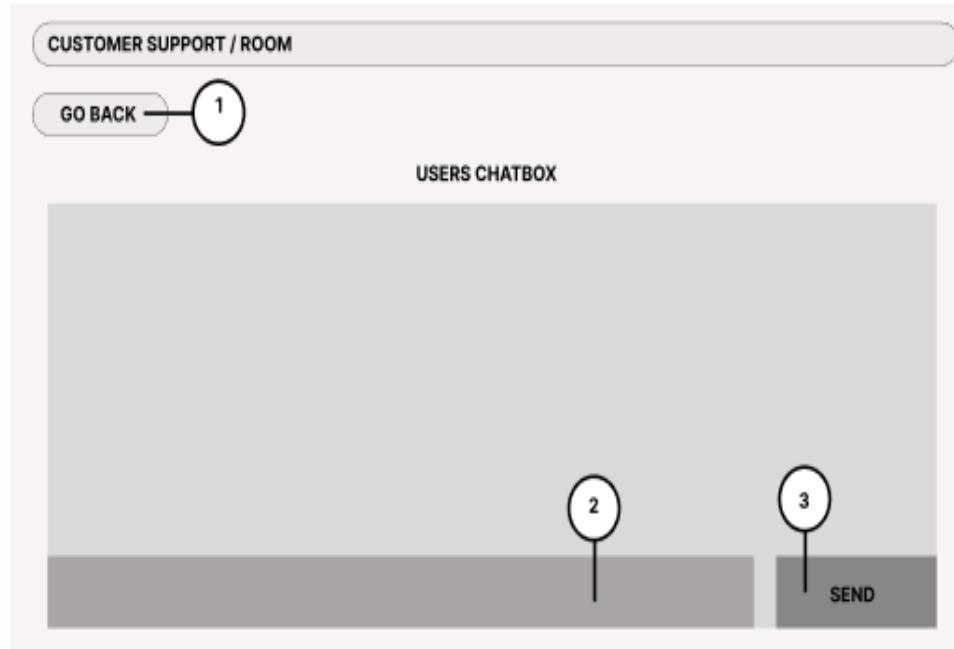
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Figure 35 shows the go back button (1) serves as a reassuring anchor for users within the customer support section, offering them a familiar route back to where they came from or an exit from the chat interface if needed. Its presence provides a sense of control and familiarity, essential for navigating through support interactions. Meanwhile, the input text box (2) stands ready to capture users' queries, issues, or feedback, giving them a platform to articulate their concerns effectively. With the send button (3) positioned nearby, users are encouraged to take action and transmit their messages, knowing that assistance from customer support is just a click away.



**Figure 35. User- Customer Support Room**



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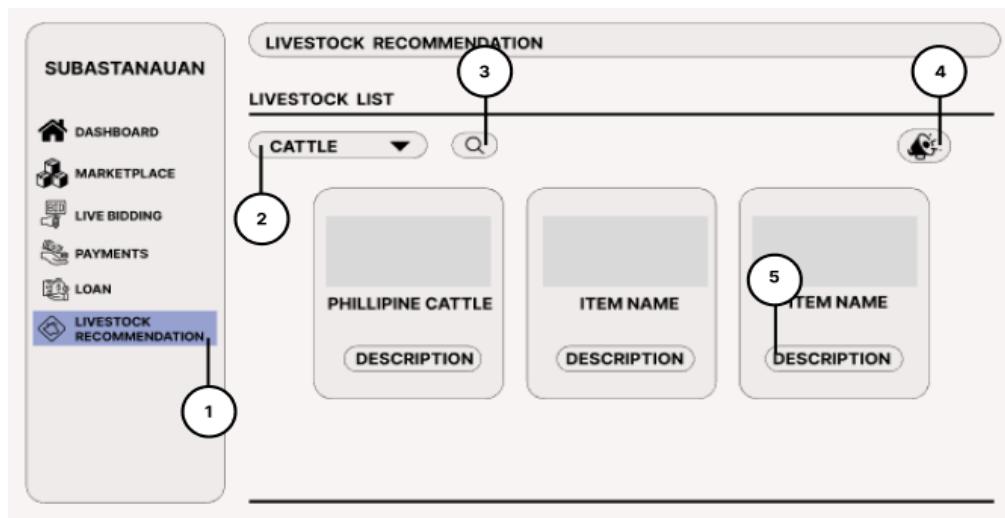
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Figure 36 shows the livestock recommendation tab (1) serves as a personalized advisor, guiding users toward optimal livestock choices tailored to their needs. By specifying their criteria (2), users can fine-tune recommendations to align with their interests and preferences. Once ready to explore, the search button (3) becomes their trusty companion, enabling quick access to specific items or information within the interface. Additionally, staying informed is made easy with the announcements button (4), providing users with essential updates and notifications relevant to their livestock journey. And for those craving deeper insights, the description button (5) offers a gateway to enriched information and detailed features within the interface, empowering users to make well-informed decisions.



**Figure 36. User- Livestock Recommendation Page**



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### **Software Development Tools**

To ensure the efficient development of the system, various software development tools were utilized based on their functionality, compatibility, and effectiveness.

The frontend was developed using HTML, CSS, Bootstrap, JavaScript, and Vue.js, ensuring a visually appealing and interactive user interface. HTML was utilized as the structural foundation of the platform, providing the necessary framework for organizing content and layout. CSS (Cascading Style Sheets) enabled customization of the design, including colors, fonts, and layouts, ensuring a modern and user-friendly interface. To enhance responsiveness and adaptability across different screen sizes, Bootstrap was integrated, offering a flexible grid system, pre-built UI components, and CSS utilities. JavaScript played a crucial role in handling user interactions, event management, and client-side data manipulation, enabling smooth transitions, form validations, and dynamic updates. The Vue.js framework was chosen to simplify the development of complex UIs by providing a component-based architecture, efficient state management, and real-time data binding, resulting in a responsive and engaging user experience.



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For real-time communication, the developers implemented Socket.io, which enables live bid updates, instant notifications, and interactive chat features. The backend was powered by Node.js and Express.js, leveraging their asynchronous, event-driven architecture to handle multiple user requests efficiently. The system's database was built using MongoDB, a document-oriented NoSQL database known for its scalability and high-speed data retrieval, ensuring efficient storage and management of user accounts, auction listings, bid history, and transactions.

To enhance security and authentication, Nodemailer was integrated for sending email-based OTP (One-Time Password) verifications, ensuring secure user registration and login processes. For development and collaboration, the team utilized Visual Studio Code (VS Code) as the primary Integrated Development Environment (IDE) due to its intelligent code completion, debugging tools, and seamless integration with version control systems. Git and GitHub were used to manage source code, track changes, and enable collaboration among developers, ensuring an organized and efficient development workflow.

The system was deployed and hosted on Render, a cloud-based hosting platform known for its scalability, built-in database support, automatic SSL certification, and ease of deployment. Render ensures high availability and minimal



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downtime, making it an ideal hosting solution for handling live bidding sessions, real-time user interactions, and secure data processing.

**Hardware Requirements**

These hardware requirements are carefully selected based on the system's processing needs, storage capacity, and network capabilities. By utilizing the right hardware, the system can function smoothly, handle multiple user interactions, and maintain overall stability.

Table 3 shows the hardware needed to run the website that was created. To use the device, you need a personal computer or other device and an internet connection for the hardware specifications. For a better approach to the system, the required hardware configuration is mentioned and specifications aim to facilitate smooth operation and user experience, emphasizing the importance of compatible hardware for efficient utilization of the system.

**Table 3.  
Hardware Requirements for the Developers**

EQUIPMENT	TYPE/SPECIFICATION
Processor	1.7 GHz and above
CPU	Minimum of dual core
RAM	8gb
Hard Drive	At least 2gb free space



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To access the developed system, users must utilize PCs with internet connections. Adhering to the specified hardware requirements ensures optimal system performance and enables customers to operate it effectively and accurately. Table 3 outlines the minimum hardware specifications necessary for developers utilizing the system. Additionally, meeting these requirements helps in minimizing technical issues and ensuring a smooth user experience across different devices. Regular updates to the hardware specifications may be necessary to accommodate future enhancements and maintain system compatibility. Proper training and support should also be provided to help users understand and meet these requirements for seamless system integration.

**Table 4.**  
**Hardware Requirements for the Users**

<b>EQUIPMENT</b>	<b>TYPE/SPECIFICATION</b>
Processor	1.7GHz and above
CPU	Minimum of dual core
RAM	2gb
Hard Drive	At least 2gb free space

Table 4 outlines the minimum hardware specifications required for users to effectively utilize the system. The development process incorporated various



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hardware devices and equipment to ensure adherence to these specifications. Additionally, a detailed list of requirements and tools, along with their respective functions, was employed to meet the necessary standards and ensure optimal functionality of the developed system for user utilization.

### **Software Requirements**

To ensure the system's functionality, efficiency, and security, the appropriate software components must be selected and integrated. These software requirements include the operating system, development frameworks, databases, and other essential tools that support system operations.

The software endeavors to simplify the code-build-debug cycle, simplifying intricate workflows. Furthermore, developers will employ MongoDB, a widely-used programming language for managing relational databases and stream processing within a relational data stream management system.

Table 5 outlines the software specifications required for the server of the developed system, serving as the minimum software prerequisites for the website's proper operation. A web-application for SubasTanauan was constructed utilizing HTML, CSS, Bootstrap, JavaScript, Node.js, Vue.js, and MongoDB, compatible with Windows operating systems. This software suite aids in the system's swift and



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efficient development. This carefully chosen software suite not only supports the system's swift and efficient development but also ensures scalability and maintainability as user demands evolve.

**Table 5.**  
**Software Requirements for the Developers**

Equipment	Specification
OS	Windows 10 version 22h2
Software Architecture	64-bit
Programming Tool	VISUAL STUDIO CODE version 1.68
Programming Language	HTML 5, CSS 3, Bootstrap 4, JavaScript es6, Node.js 23.5.0, Vue.js 3.5.13 and MongoDB 8.0
Web Browser	Google Chrome 121.0.6167.140

Table 6 outlines the software specifications for the server component of the newly developed system catering to users. Within this table, we outline the requisite software specifications for the client-side environment of our platform, specifically tailored for developers. These specifications serve as the foundational software prerequisites necessary to guarantee optimal performance and functionality.

The system under scrutiny is an innovative web-application which is an online livestock trading platform and financing for B2B and B2C is designed for



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Subas Tanauan. Our development stack encompasses a combination of HTML, Node.js, Vue.js, CSS, Bootstrap, JavaScript, and MongoDB technologies. To ensure widespread accessibility, compatibility is established with Windows operating systems, particularly versions 7 and above, operating within a 32-bit software architecture. Furthermore, our system seamlessly integrates with various web browsers, including Google Chrome, Microsoft Edge, Mozilla Firefox, Brave, and Safari. This comprehensive suite of software components not only streamlines the development process but also facilitates the efficient operation of our system. Our paramount goal is to provide a user-friendly experience for all stakeholders involved, thereby fostering seamless interaction and satisfaction.

**Table 6.**  
**Software Requirements for the Users**

EQUIPMENT	TYPE/SPECIFICATION
OS	Windows 7 or higher
Software Architecture	32-bit
Web Browser	Google Chrome 139.0.2171.65, Microsoft Edge 79, Mozilla Firefox 34.0.5, and Safari 7.01



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### **Testing and Evaluation**

These phases involve identifying and resolving potential issues, assessing performance, and validating the system's reliability, security, and usability. Through thorough testing and evaluation, the system can be refined to deliver an optimal and error-free user experience.

To ensure the delivery of top-tier system software to users, it's imperative to conduct thorough software testing. The proposed system has been rigorously assessed through various testing phases, encompassing unit testing to validate individual components, integration testing and acceptance testing to confirm alignment with user expectations and requirements.

Unit testing the individual units or components of the software are tested in isolation from the rest of the system. Each unit, which can be a function, method, or class, is tested to ensure that it performs as expected based on its design and specifications.

Integration testing involves testing interactions between different components or modules of the software after they are integrated. The goal is to verify that these components work together seamlessly and produce the expected results.



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System testing evaluates the entire software system as a whole, ensuring that it meets the specified requirements and functions correctly in its intended environment.

Acceptance testing involves verifying whether the software meets the acceptance criteria set by stakeholders, including clients, end-users and validates that the software satisfies the requirements and expectations defined in the project's specifications or user stories.

Performance testing evaluates the responsiveness, scalability, and stability of the software under different load conditions. It aims to identify performance bottlenecks, resource limitations, or system weaknesses that could affect the software's ability to handle user traffic or workload.

The outcomes of the testing and evaluation phase will be utilized to pinpoint any potential issues or glitches encountered by users and administrators prior to the system's rollout to students.

The effectiveness of the testing techniques employed, the quality of user feedback, and the prompt resolution of any identified issues or bugs will serve as key criteria for evaluating the success of this phase.



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### **Method of Testing**

The method of testing is critical in finding potential weaknesses or anomalies in the system, allowing to create a space for improvement through modifications.

The black box method is a software testing technique where the internal workings or structure of the system being tested are not known to the tester. The goal of black box testing is to assess the functionality and behavior of the software from an external perspective, focusing on its inputs, outputs, and expected behavior as defined by specifications or requirements.

### **System Evaluation**

System evaluation is conducted to determine the effectiveness, efficiency, and reliability of the developed system. This process involves assessing the system's performance, usability, and security to ensure it meets the intended objectives and user requirements.

System Evaluation was conducted by the proponents for the web-application which is an online livestock trading platform and financing for B2B and B2C livestock industry, in accordance with the ISO/IEC 25010:2011 Software Evaluation Criteria. Four main areas of evaluation were conducted in order to verify the system's quality and determine how satisfied users were with the specifications.



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These areas include functionality, performance, usability, and security, each focusing on different aspects of the system's operation and user experience.

Functional Suitability assesses the degree to which the software's functions meet specified and implied needs when used under specified conditions.

Performance Efficiency evaluates how well the software utilizes system resources. Reliability software's ability to maintain its performance level under stated conditions for a specified period.

Usability assesses the ease of use and user experience provided by the software interface.

A Likert scale with a potential rating of 1 to 5 was used to collect user ratings for different aspects. A varied sample of thirty people completed the survey, and the results provided our developers with important information about how well SubasTanauan meets user expectations overall. The range of verbal interpretations used by the users is displayed in Table 7. The phrase "Strongly Agree," which corresponds as highest interpretation in the table 4.50 – 5.00, indicates that the respondents strongly agreed with the statement under evaluation. As a representation of how strongly respondents disagreed with the statement under review, the lowest interpretation, which falls between 1.00 and 1.49, corresponds to the phrase "Strongly Disagree."



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**Table 7.**  
**Likert Scale**

POTENTIAL RATING	VERBAL INTERPRETATION
5	Strongly Agree
4	Agree
3	Fair
2	Disagree
1	Strongly Disagree

Developers can effectively communicate interview results by utilizing interpretation aids, which help emphasize key findings and simplify the development process. This demonstrates the variety of verbal interpretations utilized to classify survey results and underscores the significance of employing a standardized interpretation method to articulate survey findings accurately. Standard interpretation methods guarantee uniformity and precision in conveying survey outcomes, essential for facilitating transparent communication and informed decision-making. By adopting a consistent approach, organizations can reduce ambiguity and ensure stakeholders comprehend the data's significance clearly.

By adopting a consistent approach, organizations can reduce ambiguity and ensure stakeholders clearly comprehend the data's significance. This consistency fosters trust in the results and allows for more effective discussions and strategic



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planning. Furthermore, it helps avoid misinterpretations that could lead to costly mistakes or inefficiencies during the development process.

**Table 8.**  
**Range of Verbal Interpretation**

RANGE	VERBAL INTERPRETATION
4.50 – 5.00	Strongly Agree
3.50 – 4.49	Agree
2.50 – 3.49	Fair
1.50 – 2.49	Disagree
1.00 – 1.49	Strongly Disagree

**Test Case**

In the testing phase, developers invited individuals with diverse skills to thoroughly examine the system. Each person played a significant role in assessing the system's functionality, user-friendliness, and overall performance. The evaluators conducted a comprehensive assessment covering various areas:

Total number of users: 6

- 1 Business Administrator
- 1 Thesis Adviser
- 4 Developers

Developers utilized to provide detailed test cases and expected outcomes specific to the administrative features of the online livestock trading and financing for B2B and B2C livestock industry. These test cases were designed to ensure that



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authorized users with administrative privileges could accurately and efficiently carry out administrative tasks. By confirming that authorized users could perform their tasks effectively, the system's integrity is enhanced, and data confidentiality is maintained.

Table 9 presents a comprehensive set of sample test cases tailored for administrative tasks within the system. Before proceeding with any administrative actions, it is essential for the administrator to initiate the system by logging in, thereby ensuring its accessibility and operability. Following a successful login session, the administrator's first task involves overseeing and managing user accounts, ensuring that all user-related operations are functioning smoothly.

Additionally, administrators play a crucial role in facilitating live auctions within the system. This involves setting up auction details for animals, including uploading images or videos, initiating countdowns, and managing bid-related information, ultimately ensuring a seamless bidding process. Moreover, administrators are responsible for moderating user-generated discussions on the forum page, approving or moderating content to maintain a conducive and respectful environment for community interaction. They also generate reports on auction performance and user engagement to inform future improvements and maintain system integrity.



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**Table 9.**  
**Sample Test Case for Administrator**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual Result</b>	<b>Status</b>
1	Enter username and password	The admin should be able to login using the valid username and password.		
2	Manage Users Account	Admin should be able to view the overview information to manage and create users.		
3	Manage Bidding List	The admin can manage the live bidding through control panel or able to delete the live.		

Table 10 outlines the Sample Test Case for Customer Support, emphasizing the initial step of authenticating a login to verify the functionality and accessibility of the system. Once authenticated, the designated support representative gains access to view and respond to user inquiries or issues, providing assistance as necessary. The authentication process serves as a security measure to safeguard user data and ensure that only authorized personnel have access to sensitive information.

Additionally, the test case includes scenarios to assess the responsiveness of the support system and the efficiency of resolving user inquiries, enhancing overall user satisfaction.



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**Table 10.**  
**Sample Test Case for Customer Support**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual Result</b>	<b>Status</b>
1	Enter username and password	The customer support should be able to access and login their username and password within the system.		
2	View Users Account	The customer support can view user account information.		
3	Chat with the users	The customer support should be able to view the current queue and able to send and receive the message in the users chat box.		

Table 11 illustrates the Sample Test Case for Financer, highlighting the importance of the initial login authentication to ensure system functionality and accessibility. Upon successful authentication, the designated financer gains access to view payment and loan credits, facilitating effective management of financial transactions and credit allocations. This process is crucial for maintaining financial transparency, adhering to regulatory requirements, and optimizing the allocation of funds within the system. Moreover, the ability to view payment and loan credits enhances accountability and accountability, as it allows for comprehensive auditing and reporting, ensuring compliance with regulatory standards and internal policies.



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**Table 11.**  
**Sample Test Case for Financer**

Task No.	Task Description	Expected Result	Actual Result	Status
1	Enter username and password	The financer should be able to login and access their username and password within the system.		
2	Manage Loan Credits	The financer should be able to view the loan request and history of the users' transactions.		
3	Manage Payments Credits	The financer should be able to view the payment request and history of the users' transactions.		

The Sample Test Case for Super Administrator is presented in Table 12, designed to assess the accessibility of the super admin to the system. Upon entering the username and password, the super admin gains direct access to the system dashboard, enabling oversight of all transactions within the system.

Subsequently, the super admin can view and manage all user accounts, ensuring that authorized personnel fulfill their respective roles to facilitate system operations effectively.



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Furthermore, the super admin has visibility into financial transactions within the system, including user payment credits, payment processing, tracking, and user applications for loan credits and repayments. This oversight ensures transparency and accountability in financial operations. Additionally, the super admin can manage inventory details, including store requests and product lists, to verify the credibility of users applying for store access and product posting privileges. This comprehensive test case evaluates the super admin's ability to oversee and manage critical aspects of system functionality. Furthermore, the super admin can oversee user roles and permissions, managing admins, customer support, bidders, and loaners to ensure that each user has the appropriate access level within the system.

**Table 12.**  
**Sample Test Case for Super Administrator**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual Result</b>	<b>Status</b>
1	Enter username and password	Super admin should be able to login using the valid username and password.		
2	View Dashboard	The super admin should be able to view the wallet income, loans, and total number of registered users.		
3	Manage Users Accounts	Super admin should be able to view users, admins, financers and customer supports.		



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**Table 12.**  
**Sample Test Case for Super Administrator (Cont'd)**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual Result</b>	<b>Status</b>
4	Manage Inventory	The super admin should be able to manage the store and item list and view requests upon accessing the system.		
5	Manage Bidding List	The super admin should be able to manage the live bidding through control panel or able to delete the live.		

The Sample Test Case for the User is presented in Table 13, serving as a comprehensive framework for evaluating the functionality and performance of the system. This section outlines various scenarios and expected outcomes designed to assess the core features of the application. By encompassing these diverse scenarios, the testing framework not only validates the technical performance of the system but also emphasizes the importance of user experience. This structured approach to testing aims to identify potential issues early, ensuring that all components of the system function cohesively, ultimately leading to a reliable and satisfying user experience. This ensures that the platform can handle expected user behaviors while also identifying any potential system vulnerabilities or usability issues.



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**Table 13.**  
**Sample Test Case for User**

Task No.	Task Description	Expected Result	Actual Result	Status
1	Enter username and password	The user should be able to login using a secure authentication process that includes their registered email address and password.		
2	View Dashboard	The user should be able to view their current balance and credit balance within the system.		
3	Browse and Order in the Marketplace	The user should be able to access the marketplace, where a variety of items are available for browsing and available for browsing and purchasing.		
4	Join Biddings	The user should be able to join or enter live bidding that allows for quick access to ongoing auctions.		
5	Access Request Credits	The user can enter the amount request upon the system and able to view the payment history.		
6	Interact with the Forum	The user are able to create category for their discussions.		



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### **CHAPTER 4** **RESULTS AND DISCUSSION**

This section explores the outcomes and analysis of the created system in alignment with the set objectives. It encompasses genuine observations from both developers and users concerning the functionality of the system that was developed.

#### **User - Products for Marketplace Page**

This serves as a dedicated platform for users to explore and purchase a variety of agricultural and livestock-related products. It provides a seamless browsing experience, allowing buyers to access essential details such as product names, descriptions, prices, and stock availability. This feature ensures a convenient and efficient purchasing process, supporting the needs of farmers and livestock owners.

Figure 37 showcases a user-friendly interface designed to help users browse and purchase agricultural and livestock-related products efficiently. This module serves as a convenient hub where buyers can explore a wide variety of items, such as live chickens, feeds, equipment, and veterinary supplies. Each product is displayed with essential details, including its name, description, price, and available stock, ensuring that users have all the necessary information before making a



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purchase. This intuitive design simplifies the buying process, making it easier for users to meet their farming and livestock management needs.

The screenshot displays a marketplace interface with five product cards:

- Product Name: Live Chicken**  
Description: Broiler Chicken  
Price: ₱220.00  
Stocks: 4  
**Buy this item**
- Product Name: Broiler**  
Description: Broiler Starter Crumble  
Price: ₱190.00  
Stocks: 10  
**Buy this item**
- Product Name: Megamix**  
Description: Megamix Pelleted Feeds  
Price: ₱300.00  
Stocks: 11  
**Buy this item**
- Product Name: Weighing Scale**  
Description: Available for pigs, goat, hogs and cattle.  
Price: ₱1,500.00  
Stocks: 11  
**Buy this item**
- Product Name: Calcium Gluconate**  
Description: Injection Veterinary Medicine  
Price: ₱200.00  
Stocks: 11  
**Buy this item**

The screenshot shows the Subastanauan App dashboard with a modal window for creating a new auction:

- Product Name: WATER HOSE**  
Description: 15CM  
Price: ₱40.00  
Stocks: 8  
**Buy this item**
- Product Name: Broiler**  
Total Items: 0  
Stocks: 10  
Starting price: 190  
Total price: 0  
**Submit** **Cancel**
- Product Name: Megamix**  
Description: Megamix Pelleted Feeds  
Price: ₱300.00  
Stocks: 11  
**Buy this item**
- Product Name: Milkogen**  
Description: Milkogen  
Price: ₱10.00  
Stocks: 3  
**Buy this item**
- Product Name: Milkgreen**  
Description: Milkgreen  
Price: ₱10.00  
Stocks: 1  
**Buy this item**

**Figure 37. User - Products for Marketplace Page**



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### **User - Products for Auction Page**

This section provides detailed information about each product, including its name, description, weight, and starting price. It also highlights essential features such as product images, bidding history, and seller details, allowing users to evaluate their options before placing a bid. Additionally, interactive elements like search and filter functions enhance usability, ensuring a seamless browsing experience for buyers.

Figure 38 represents the Products for Auctions giving users a simple and easy-to-use interface to view livestock products available for auction. It also includes a search bar for finding items quickly and buttons to view more details, helping buyers make informed decisions during the auction process. These features work together to simplify the browsing experience and empower buyers to make well-informed decisions when participating in auctions.

Additionally, real-time updates on bids and product availability enhance user engagement, ensuring a seamless and competitive bidding experience. These features work together to simplify the browsing experience and empower buyers to make well-informed decisions when participating in auctions.



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Subastanauan App

Dashboard Products for Auction Marketplace My Auctions My Orders My Request Credits Chat Support Forum

Showing 1 to 9 of 9 results Per page 9

Product Name	Description	Starting Price	Action
BRAHMAN MALE	COLOR: WHITE WEIGHT: 84KG	₱60,000.00	<a href="#">View Item</a>
Chester White	COLOR: White WEIGHT: 80 kg	₱15,000.00	<a href="#">View Item</a>
BRAHMAN CATTLE	MALE PATABAIN	₱60,000.00	<a href="#">View Item</a>
CARABAO	Farm Carabao	₱20,000.00	<a href="#">View Item</a>
Cattle	Farm Cattle	₱35,000.00	<a href="#">View Item</a>
PIGS	PIG PATABAIN	Additional Info: WEIGHT: 60KG	<a href="#">Starting Price: ₱15,000.00</a> <a href="#">View Item</a>
CATTLE BRAHMAN	BROWN	Additional Info: 50KG	<a href="#">Starting Price: ₱60,000.00</a> <a href="#">View Item</a>
Brown Cattle			<a href="#">Starting Price: ₱20,000.00</a> <a href="#">View Item</a>
SAMPLE BID	SAMPLE DESC	Additional Info: SAMPLE ADD INFO	<a href="#">Starting Price: ₱50,000.00</a> <a href="#">Bid for this item</a> <a href="#">View Item</a>
Showing 1 to 9 of 9 results Per page 9			

Subastanauan App

Dashboard Products for Auction Marketplace My Auctions My Orders My Request Credits Chat Support Forum

Bid for this item

Enter your bid amount\*

Starting Price: ₱60,000.00

Submit Cancel

Showing 1 to 9 of 9 results Per page 9

Product Name	Description	Starting Price	Action
BRAHMAN MALE	COLOR: WHITE WEIGHT: 84KG	₱60,000.00	<a href="#">View Item</a>
Chester White	COLOR: White WEIGHT: 80 kg	₱15,000.00	<a href="#">View Item</a>
BRAHMAN CATTLE	MALE PATABAIN	₱60,000.00	<a href="#">View Item</a>
CARABAO	Farm Carabao	₱20,000.00	<a href="#">View Item</a>
Cattle	Farm Cattle	₱35,000.00	<a href="#">View Item</a>
PIGS	PIG PATABAIN	Additional Info: WEIGHT: 60KG	<a href="#">Starting Price: ₱15,000.00</a> <a href="#">View Item</a>
CATTLE BRAHMAN	BROWN	Additional Info: 50KG	<a href="#">Starting Price: ₱60,000.00</a> <a href="#">View Item</a>
Brown Cattle			<a href="#">Starting Price: ₱20,000.00</a> <a href="#">View Item</a>
SAMPLE BID	SAMPLE DESC	Additional Info: SAMPLE ADD INFO	<a href="#">Starting Price: ₱50,000.00</a> <a href="#">Bid for this item</a> <a href="#">View Item</a>
Showing 1 to 9 of 9 results Per page 9			

**Figure 38. User - Products for Auctions**



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**User - Request Payment and Loan Module**

This section allows users to request and manage their credits within the system. This feature provides a seamless and transparent process for users to add funds, track their credit history, and submit proof of payment for verification.

The interface displayed in Figure 39 enables users to create a credit request by specifying the amount, credit type, and payment mode. Users are also required to upload proof of payment and enter a reference number for verification purposes. The status field indicates whether the request is pending or approved and users can either submit their request by clicking Create or opt to Create & create another.

The screenshot shows the Subastanauan App interface. On the left, there's a sidebar with various navigation options like Dashboard, Products for Auction, Marketplace, My Auctions, My Orders, My Request Credits (which is currently selected), Chat Support, and Forum. The main area displays 'User Credits' with a total current credit of ₱125,400.00. A modal window titled 'Create user credit' is open, prompting for 'Amount' (₱68,000.00), 'Credit type' (Select an option), 'Payment mode' (Select an option), 'Proof of Payment' (a file upload field with placeholder 'Drag & Drop your files or Browse'), 'Reference Number' (a text input field), and 'Status' (set to PENDING). At the bottom of the modal are 'Create', 'Create & create another', and 'Cancel' buttons. To the right of the modal, a table lists 'Total Approved/Paid Credits' at ₱81,000.00, with several rows of data showing credit details and status (APPROVED) with 'View Proof of Payment' links.

**Figure 39. User - Request Payment and Loan Module**



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### User – Forum Page

The forum feature serves as a collaborative space where users can engage in discussions, share insights, and seek assistance within the platform. It provides an organized structure for categorizing topics, ensuring that conversations remain relevant and easy to navigate.

Figure 40 represents Forum that showcases a forum feature that allows users to create and manage categories, enhancing organization within the platform. Users can set up specific categories based on topics of interest, making it easier to navigate and engage in relevant discussions. Each category can be customized with a title and description, enabling users to better organize content and encourage focused conversations and also includes options for users to post threads, reply to discussions, and categorize their content effectively.

**Figure 40. User – Forum Page**



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**Super Admin - Generate Report Page**

This page provides a comprehensive summary of key data metrics related to the platform's operations. It allows administrators to track auction activities, product deliveries, user participation, and sales trends. By visualizing this data, the system enhances decision-making, helping stakeholders analyze platform performance and optimize future strategies.

Figure 41 illustrates the dashboard view of the Generate Report page, showcasing various statistics and graphical representations of platform activity. The top section displays essential numerical data, such as the total number of products in auction and the total products delivered. Below, bar charts visualize user engagement, including the number of users who joined auctions, registered accounts, and sold products on a monthly basis. These insights assist administrators in monitoring platform growth, identifying trends, and making data-driven decisions to improve overall efficiency.

Additionally, the dashboard's graphical representation allows for quick assessments of platform trends, helping stakeholders determine the effectiveness of ongoing auctions and sales. The ability to track user engagement and sales volume over different time frames ensures that the system remains responsive to user needs.



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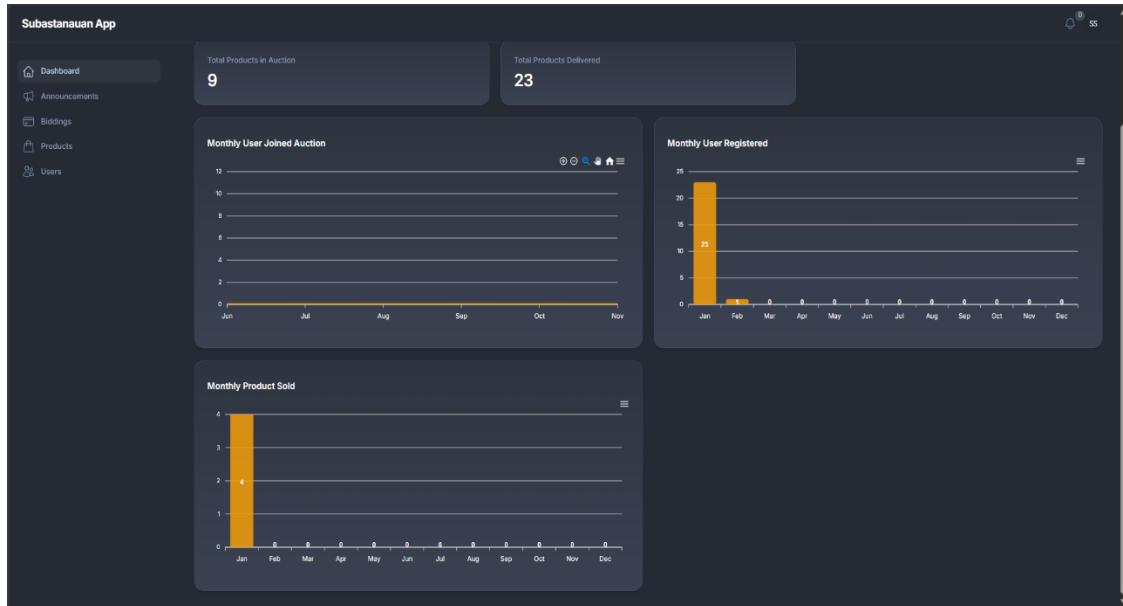
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**Figure 41. Super Admin – Generate Report Page**

### **Super Admin – User Management Page**

This page enables the management of various user roles, such as buyers, sellers, and administrators, ensuring that each has appropriate access and permissions. Through user management, administrators can create, modify, and deactivate accounts, maintaining the integrity and security of the platform.

Figure 42 shows the illustrations of the User Management, which allows system administrators to oversee and manage all user accounts. This module includes functionalities for managing Financer Accounts, where financers can be added, removed, or edited; Customer Support Accounts, enabling the assignment and management of



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customer support roles; Admin Accounts, providing full control over administrative users; and Users Accounts, which include regular system users.

Name	Email	Role	Avatar	Action
Subastanauan SuperAdmin	superadmin@subastanauan.shop	SUPER ADMIN		<input checked="" type="checkbox"/> Edit
Christine Chan	rawitejeg@mailinator.com	USER		<input checked="" type="checkbox"/> Edit
Ivory Sykes	nabanan672@xmexico.com	USER		<input checked="" type="checkbox"/> Edit
Sonya Randolph	briyid141@wirelay.com	USER		<input checked="" type="checkbox"/> Edit
sellerTest	clickmee24@gmail.com	SELLER		<input checked="" type="checkbox"/> Edit
RodBuyer	pncrhrdyn21@gmail.com	USER		<input checked="" type="checkbox"/> Edit
Catherine McDonald	oliceyberdeveloperph@gmail.com	USER		<input checked="" type="checkbox"/> Edit
Jorish	ajdeplilar03@gmail.com	SELLER		<input checked="" type="checkbox"/> Edit
Admin Rod	rodrapchao02@gmail.com	ADMIN		<input checked="" type="checkbox"/> Edit
financer Rod	roddelpilar21@gmail.com	FINANCER		<input checked="" type="checkbox"/> Edit

**Figure 42. Super Admin – User Management Page**

### **Super Admin – Store and Livestock Product Management**

The store and livestock product management module is an essential feature that enables the Super Admin to oversee and regulate product listings effectively. This functionality ensures that all products, whether for auction or marketplace sales, are accurately recorded, categorized, and updated to maintain a well-organized platform.



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Figure 43 illustrates the interface used by the Super Admin to manage store and livestock products. The page displays a comprehensive table listing all available products, including key details such as product name, description, starting price, selling type (marketplace or auction), bidding dates (if applicable), and corresponding images or thumbnails. The system also provides options for exporting product data and deleting listings when necessary. This feature allows the Super Admin to monitor inventory, ensure the accuracy of product details, and maintain a structured marketplace. By offering efficient product management tools, the system enhances usability, streamlines transactions, and ensures that buyers and sellers have access to reliable and well-maintained listings.

The screenshot shows a dark-themed application interface titled "Subastanauan App". On the left, a sidebar menu includes "Dashboard", "Announcements", "Biddings", "Products" (which is selected and highlighted in blue), and "Users". The main content area is titled "Products" and contains a table with the following data:

Product name	Description	Starting price	Selling type	Start bidding date	End bidding date	Images	Thumbnail	Actions
Eggs	CHICKEN EG...	₱10.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
ROPE	per yards	₱200.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
CAGE	iron cage	₱4,000.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
Feeds	per sack	₱1,000.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
BUCKET	stainless...	₱200.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
Milk	Goats Milk	₱100.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
Milkogen	Homeopathy...	₱250.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
Calcium Gluconate	Injection...	₱200.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
Weighing Scale	Available...	₱1,500.00	MARKETPLACE	Product is not for Bidding	Product is not for Bidding			<span>Delete</span>
BRAHMAN MALE	COLOR: WHI...	₱68,000.00	AUCTION	2025-01-12	2025-01-13			<span>Delete</span>

**Figure 43. Super Admin - Store and Livestock Product Management**



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**Super Admin – Live Bidding Management**

This page is responsible to oversee and regulate all ongoing and completed bidding activities within the platform. This module ensures a transparent, fair, and well-organized bidding process, enabling both buyers and sellers to engage efficiently in livestock auctions.

Figure 44 illustrates the Live Bidding Management interface, where the Super Admin can monitor and manage active and completed bids. The table presents essential details such as the bidding unique ID, product name, product price, bid amount, bidding start and end dates, and the status of each bid (e.g., Pending or Closed).

Bidding id	Product	Price	Bid amount	Bidding start date	Bidding end date	Status
b3ca602b-1993-449f-971b-c00938bf7f8	BRAHMAN MALE	₱56,000.00	₱60,000.00	2025-01-12	2025-01-13	PENDING
6e5decad-1b3f-4c3d-805b-62097af7843b	BRAHMAN MALE	₱56,000.00	₱57,000.00	2025-01-12	2025-01-13	PENDING
5d4540f1-ff62-4382-8ef7-7edc97fe3022	Chester White	₱15,000.00	₱16,000.00	2025-01-13	2025-01-13	PENDING
52fb34b2-ef66-445d-a5dc-c495fb7c7616	BRAHMAN CATTLE	₱60,000.00	₱61,000.00	2025-01-13	2025-01-14	PENDING
0cfac1f9-ff53-4817-b32e-d3e8fffae0c77	CARABAO	₱20,000.00	₱25,000.00	2025-01-14	2025-01-15	PENDING
52a399d0-0314-4f8d-a726-e15629919008	Cattle	₱35,000.00	₱38,000.00	2025-01-15	2025-01-16	CLOSED
7ea886c7-0f72-4ec2-a653-54fbafafab044	PIGS	₱15,000.00	₱17,000.00	2025-01-15	2025-01-16	CLOSED
aa476329-f670-438d-a87c-b79fc9bae78	PIGS	₱15,000.00	₱18,000.00	2025-01-15	2025-01-16	PENDING
65a8463b-8f5c-4c05-8d44-0b7f7536c05b	PIGS	₱15,000.00	₱100,000.00	2025-01-15	2025-01-16	CLOSED
394ad975-0973-4462-824b-b039864049c	CATTLE BRAHMAN	₱60,000.00	₱70,000.00	2025-01-18	2025-01-19	CLOSED

**Figure 44. Super Admin – Live Bidding Management**



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### **Super Admin – Update Prices and Announcements Management**

This feature allows the Super Admin to update product prices and manage announcements, ensuring that buyers and sellers receive accurate and up-to-date information about livestock auctions and marketplace products. Effective price management and timely announcements are essential for maintaining transparency and keeping users informed within the platform.

Figure 45 showcases the Update Prices and Announcements Management Page, where the Super Admin can modify product prices, post important announcements, and ensure the system reflects the latest changes in pricing and market trends. This module helps maintain a well-regulated trading environment, preventing discrepancies in product pricing and improving user engagement by delivering relevant updates.

By utilizing this feature, the platform enhances its credibility and efficiency, allowing administrators to adapt pricing strategies, regulate the marketplace, and communicate essential information directly to users. This ensures a smooth and well-informed trading experience for all participants in the livestock auction system, fostering transparency and trust among buyers and sellers.



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The screenshot shows a web-based application interface titled "Subastanauan App". On the left, there is a sidebar with navigation links: Dashboard, Announcements (which is currently selected), Buildings, Products, and Users. The main content area is titled "Create Announcement". It contains several input fields: "Name\*", "Body\*", "Title\*", "Icon" (with a dropdown menu showing "No icon selected"), "Color" (with a dropdown menu showing "Select an option"), and "Users\*" (with a dropdown menu showing "Select an option"). At the bottom of the form are three buttons: "Create" (highlighted in blue), "Create & create another", and "Cancel".

**Figure 45. Super Admin – Update Prices and Announcements Management**

### **Admin – User Management Page**

This feature allows administrators to oversee user accounts, manage roles, and maintain the integrity of the platform by monitoring user activity. User management is a crucial aspect of maintaining a well-regulated and secure platform, ensuring that all participants adhere to the system's guidelines and policies.

Figure 46 illustrates the User Management Page, where administrators can view, edit, and manage user accounts. This module provides essential information such as user details, roles, and status, enabling admins to approve, suspend, or



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remove accounts when necessary. Additionally, it ensures that only verified and authorized users participate in livestock auctions and marketplace transactions.

By utilizing this feature, the platform maintains a structured and secure user base, preventing fraudulent activities and ensuring a safe and efficient trading environment for both buyers and sellers. This functionality strengthens platform security, user accountability, and overall system management within the online livestock trading platform.

Name	Email	Role	Avatar	Action
Subastanuan SuperAdmin	superadmin@subastanuan.shop	SUPER ADMIN		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Christine Chan	rawitejag@mailinator.com	USER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Ivory Sykes	nabanan572@rcmexico.com	USER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Sonya Randolph	titlycf1410@wirelay.com	USER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
sellerTest	clickmee240@gmail.com	SELLER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
RedBuyer	pnchrdyn21@gmail.com	USER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Catherine McDonald	elitecyberdevelopersph@gmail.com	USER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Jorish	ajdelpilar03@gmail.com	SELLER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Admin Rod	rodpancho02@gmail.com	ADMIN		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
financer Rod	roddelpilar21@gmail.com	FINANCER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID

**Figure 46. Admin – User Management Page**



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**Admin – Live Bidding Management**

This feature ensures that bidding processes run smoothly, preventing fraudulent actions and maintaining a fair and competitive auction environment for all users. Live bidding management is a key functionality that enables administrators to monitor and regulate auction activities in real-time.

Figure 47 illustrates the Live Bidding Management Page, where administrators can track active bids, oversee bidding transactions, and manage auction timelines. This page displays vital details such as bidding unique ID, product name, bid amount, bidding start and end dates, and status. The system categorizes bids into pending and closed, allowing administrators to efficiently track auction progress and finalize transactions.

With this feature, administrators can review bid histories, resolve disputes, and ensure adherence to platform rules, fostering a secure and transparent bidding process. This functionality strengthens the livestock auction system's credibility, ensuring fairness and reliability for both buyers and sellers.

Additionally, it allows administrators to track bidding trends, identify potential irregularities, and generate reports for performance analysis.



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Bidding uid	Product	Bid amount	Bidding start date	Bidding end date	Status
b1caab7b-9953-443f-97c-b-c5083c8d778	BRAHMAN MALE	₱56,000.00	2025-01-12	2025-01-13	PENDING
b1510cad-7b2f-4c3d-805b-d187af7a43b	BRAHMAN MALE	₱56,000.00	2025-01-12	2025-01-13	PENDING
b1454011-6ed2-4362-8b17-7edc578c322	Chester White	₱15,000.00	2025-01-13	2025-01-13	PENDING
b278fb67-cf69-4d5d-a00c-d45f97b7c2fa	BRAHMAN CATTLE	₱60,000.00	2025-01-13	2025-01-14	PENDING
b138cf9f-f533-4817-532e-4b8985a0c77	CARABAO	₱20,000.00	2025-01-14	2025-01-15	PENDING
b2a399d-0314-4f65-d729-85629998008	Cattle	₱35,000.00	2025-01-15	2025-01-16	CLOSED
7ea88ba7-6072-4a57-9553-640476da5146	PIGS	₱15,000.00	2025-01-15	2025-01-16	CLOSED
aa476329-h70-438d-ab7c-b79b9fb8ad78	PIGS	₱15,000.00	2025-01-15	2025-01-16	PENDING
b51d44ec-8f1a-4c05-b444-0bf7536e05ab	PIGS	₱15,000.00	2025-01-15	2025-01-16	CLOSED
279469f7-6973-4462-92b0-b031ff964d49c	CATTLE BRAHMAN	₱60,000.00	2025-01-18	2025-01-19	CLOSED

**Figure 47. Admin – Live Bidding Management**

### Financer Module

This module ensures a seamless financial transaction process, allowing users to acquire credits through various payment modes while maintaining transparency in fund allocations. The Financer Module is a crucial component of the platform that facilitates the management of user credits, loan approvals, and payment verifications.

Figure 48 illustrates the User Credits section within the Financer Module, where administrators or financers can oversee all credit-related transactions. The table provides a detailed overview of user credit history, including the amount



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requested, credit type (loan, paid, or free credits), payment mode, reference number, and proof of payment. The status column indicates whether a request has been approved, declined, or is still pending, ensuring that all financial transactions undergo proper verification.

Additionally, a "View Proof of Payment" option allows financers to validate uploaded payment receipts for accuracy and legitimacy. This module enhances financial security and trust by enabling precise tracking of credit distributions and ensuring that all credit transactions comply with platform policies.

User	Amount	Credit type	Payment mode	Reference number	Proof of payment	Status	View Proof of Payment
	₱100.00	LOAN CREDITS	GCASH	1234567890		DECLINED	
	₱100.00	PAID CREDITS	GCASH	2468101214168		APPROVED	
	₱100,000.00	LOAN CREDITS				APPROVED	
RodBuyer	₱46,000.00	PAID CREDITS	GCASH	123		APPROVED	
RodBuyer	₱20,000.00	LOAN CREDITS				APPROVED	
RodBuyer	₱20,000.00	PAID CREDITS	GCASH	1234567890		APPROVED	
RodBuyer	₱10,000.00	LOAN CREDITS				APPROVED	
RodBuyer	₱15,000.00	LOAN CREDITS				APPROVED	
RodBuyer	₱15,000.00	PAID CREDITS	GCASH	1234567890		APPROVED	
Jhm	₱2,000.00	PAID CREDITS	GCASH	1234567890		APPROVED	

**Figure 48. Financer Module**



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### **Customer Support Page**

This page enables users to seek assistance, resolve issues, and receive timely responses, ensuring a smooth and hassle-free experience while using the platform. The Customer Support Page serves as a vital communication channel between users and the platform's support team.

Figure 49 showcases the Chat Support Interface, which facilitates real-time communication between users and customer support representatives. The left panel displays active conversations, allowing administrators to efficiently manage and respond to user inquiries. The chat window provides a structured view of messages exchanged between the support team and the user, including timestamps for better tracking of conversations.

The interface also includes a search bar for filtering messages and a "Create Conversation" button to initiate new discussions. This feature ensures that users can promptly report issues or ask questions, while administrators can keep track of support requests in an organized manner. By maintaining an open line of communication, the Customer Support Page enhances user satisfaction and ensures a reliable support system within the platform.



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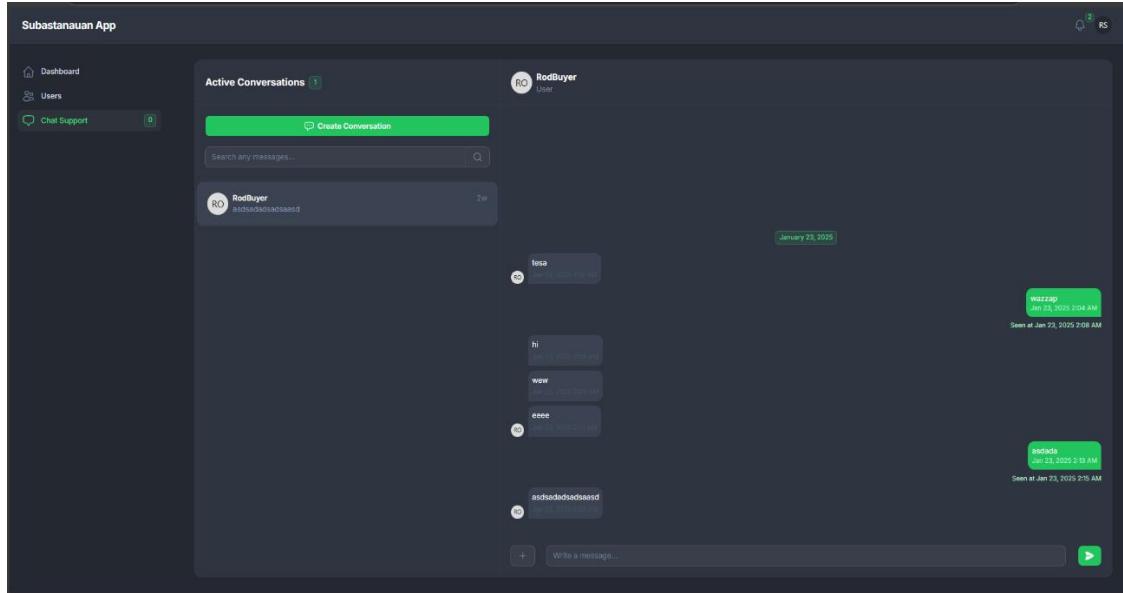
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**Figure 49. Customer Support Page**

**Customer Support – User Management**

It enables customer support representatives to efficiently monitor user details, review account information, and assist users with their inquiries or concerns. This functionality ensures a well-organized and user-friendly system, fostering trust and reliability within the marketplace. The Customer Support - User Management page plays a crucial role in overseeing and managing user accounts within the platform.

Figure 50 illustrates the User Management Interface under the Customer Support module. This page provides a comprehensive list of registered users,



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displaying key details such as name, store name, email, home address, avatar, and total credits. Each entry includes a "View Account" option, allowing support representatives to access detailed user information and provide assistance when necessary. The left-side navigation panel includes quick access to Dashboard, Users, and Chat Support, streamlining support operations.

The pagination feature at the bottom ensures seamless navigation through multiple user records. By integrating these management tools, the platform enhances the efficiency of customer support operations, allowing for quick resolution of user concerns and a smoother experience for all participants.

The screenshot shows a dark-themed application window titled "Subastanauan App". On the left, a sidebar menu includes "Dashboard", "Users" (which is currently selected), and "Chat Support". The main content area is titled "Users" and shows a table with the following data:

Name	Store name	Email	Home address	Avatar	Total credits	Action
Subastanauan SuperAdmin	superadmin@subastanauan.shop	n/a		\$0.00	<a href="#">View account</a>	
Christine Chan	ravitejag@mailinator.com	Et qui omnis dolore		\$0.00	<a href="#">View account</a>	
Ivory Sykes	nabanan572@xcmexico.com	Deserunt sunt totam		\$0.00	<a href="#">View account</a>	
Sonya Randolph	trillyt141@wirelay.com	Quod qui sit accusam		\$0.00	<a href="#">View account</a>	
sellerTest	clickmee248@gmail.com	#609 rail road, Tarasau,...		\$0.00	<a href="#">View account</a>	
RodBuyer	pnchrdyn21@gmail.com	Brgy. 2 Sto. Tomas City,...		\$12,400.00	<a href="#">View account</a>	
Catherine McDonald	eitecyberdevelopers@gmail.com	Sunt vel iure cupid		\$0.00	<a href="#">View account</a>	
Jorish	ajdelpilar03@gmail.com	San Antonio Sto. Tomas Re...		\$0.00	<a href="#">View account</a>	
Admin Rod	rodpancho02@gmail.com	n/a		\$0.00	<a href="#">View account</a>	
financer Rod	roddejplar21@gmail.com	n/a		\$0.00	<a href="#">View account</a>	

At the bottom, it says "Showing 1 to 10 of 24 results" and has a "Per page" dropdown set to 10, along with a page navigation bar showing pages 1, 2, 3, and >.

**Figure 50. Customer Support – User Management**



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### **Option Filter Module**

This functionality simplifies the process of locating desired livestock, improving user convenience and navigation within the platform. This feature enhances the browsing experience by allowing users to efficiently search and filter auction products based on specific criteria.

Figure 51 showcases the page with an integrated filtering system on the right panel. Users can refine their search using parameters such as starting price and creation date, ensuring they can quickly find livestock that meets their preferences. The search bar at the top right further allows users to look up specific products by name. The filtering options help users streamline their decision-making process, making it easier to compare livestock options and participate in bidding efficiently.

Additionally, the filtering system enhances usability by enabling users to apply specific conditions to price ranges, helping them compare listings within their budget. This feature is particularly beneficial for bidders looking for competitive pricing or specific livestock categories. By narrowing down results, users can efficiently identify the best options without manually sifting through numerous listings, improving decision-making and overall platform navigation.



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**Products for Auction**

Product Name	Description	Starting Price	Action
BRAHMAN MALE	COLOR: WHITE WEIGHT: 84KG	₱56,000.00	<a href="#">View Item</a>
Chester White	COLOR: White WEIGHT: 80 kg	₱15,000.00	<a href="#">View Item</a>
BRAHMAN CATTLE	MALE PATABAIN	₱60,000.00	<a href="#">View Item</a>
CARABAO	Farm Carabao	₱20,000.00	<a href="#">View Item</a>
PIGS	PIG PATABAIN	Additional Info: WEIGHT: 60KG	<a href="#">View Item</a>
CATTLE BRAHMAN	BROWN		<a href="#">View Item</a>
Brown Cattle			<a href="#">View Item</a>
SAMPLE BID	SAMPLE DESC		<a href="#">View Item</a>

**Figure 51. Option Filter Module**

## Evaluation Results

The evaluation results provide a comprehensive analysis of the system's performance, usability, and functionality based on user feedback. This assessment ensures that the platform meets its intended objectives while identifying areas for potential improvement.

The table below presents a summary of the evaluation results for SubasTanauan: An Online Livestock Trading Platform and Financing System for the B2B and B2C Livestock Industry, developed for the Office of the City Veterinarian in Tanauan City. The evaluation measured the composite and average



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weighted mean, along with verbal interpretations for each criterion, providing insights into the system's performance.

A total of fifty (50) respondents, including potential users and administrators, participated in the assessment. Their feedback was instrumental in analyzing the system's overall reliability, usability, and functionality. Evaluation criteria included functional suitability, performance efficiency, usability, reliability, and security. Test participants confirmed that essential features, such as text input fields, buttons, and navigation tools, operated effectively and according to design.

The findings reflect comprehensive feedback on the system's user experience, particularly in accessing modules and processing applications. Respondents observed that all components—buttons, forms, filters—functioned smoothly, supporting a seamless interaction and validating the system's readiness for practical use.

Table 14 summarizes the evaluation findings for the system's functional suitability. These results offer valuable insights into the system's performance within this category, helping developers assess its effectiveness and pinpoint areas for potential enhancement. This information provides a foundation for improving the system's functionality to better support the needs of the City Veterinarian's Office and its users.



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**Table 14.**  
**Summary of User Evaluation Results Based on**  
**Functional Suitability**

FUNCTIONAL SUITABILITY	Weighted Mean	Verbal Interpretation
1. Does the system allow users to browse and order various livestock products and animals efficiently?	4.30	Agree
2. Can users join and participate in livestock biddings without technical difficulties?	4.28	Agree
3. Can the user able to add products for marketplace and auction?	4.28	Agree
4. Does the system allow the financer to manage payments and loan credits effectively?	4.33	Agree
5. Can users filter livestock products based on starting cost?	4.30	Agree
6. Is the filtering system efficient in sorting livestock products based on creation date?	4.28	Agree
<b>Composite Mean:</b>	4.30	Agree

Table 15 outlines the findings of the system's evaluation based on performance efficiency criteria. This evaluation assesses how well the system performs in terms of resource utilization, speed, and responsiveness during user



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interactions. With a composite mean score of 4.2, the system demonstrates a high level of performance efficiency, indicating that it meets the standards for effective operation under typical usage conditions.

**Table 15.**  
**Summary of System Evaluation Results Based on Performance Efficiency**

<b>PERFORMANCE EFFICIENCY</b>	<b>Weighted Mean</b>	<b>Verbal Interpretation</b>
1. Is the platform responsive when navigating through different sections (e.g., browsing listings, bidding, viewing financial details)?	4.30	Agree
2. Does using the platform significantly affect the speed or performance of other applications on your device?	4.28	Agree
3. Have you experienced any issues with the filtering options not working as expected (e.g., incorrect results, filters not applying)?	4.06	Agree
4. Does the platform consume a noticeable amount of battery when in use on your device?	4.31	Agree
<b>Composite Mean:</b>	4.20	Agree

Table 16 provides the findings from the usability evaluation survey, which assesses the system's ease of use, intuitiveness, and overall user satisfaction. The



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system achieved a high composite mean score of 4.29, indicating that users found the platform accessible, easy to navigate, and well-suited to their needs.

These insights are crucial for developers, as they confirm that the system meets user expectations and provide guidance for any further enhancements to maintain or improve usability. This positive feedback highlights the system's effectiveness in delivering a user-friendly experience, reinforcing its ability to support seamless transactions and interactions within the platform.

**Table 16.**  
**Summary of System Evaluation Results Based on Usability**

<b>USABILITY</b>	<b>Weighted Mean</b>	<b>Verbal Interpretation</b>
1. Does the filtering options helpful in narrowing down search results when registering (e.g., starting cost and created at)?	4.18	Agree
2. Does the platform able you to complete your tasks (e.g., bidding, listing, payment) without assistance?	4.28	Agree
3. Does the system provide clear and user-friendly instructions for each module?	4.30	Agree
4. The platform maintains ease of use across different devices, including mobile responsiveness.	4.31	Agree



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**Table 16.**  
**Summary of System Evaluation Results Based on Usability (Cont'd)**

USABILITY	Weighted Mean	Verbal Interpretation
5. Does the platform able to provide solution through chat support?	4.30	Agree
<b>Composite Mean:</b>	4.29	Agree

Table 17 presents the findings from the system's reliability evaluation, focusing on the system's ability to perform consistently and accurately under defined conditions. This evaluation aimed to ensure the system met the developers' goals for dependability and error-free operation.

The assessment results yielded a composite mean score of 4.22, indicating that users found the system highly reliable and capable of functioning without unexpected issues or interruptions.

**Table 17.**  
**Summary of System Evaluation Results Based on Reliability**

RELIABILITY	Weighted Mean	Verbal Interpretation
1. Does the platform save your actions and updates without data loss?	4.30	Agree



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**Table 17.**  
**Summary of System Evaluation Results Based on Reliability (Cont'd)**

<b>RELIABILITY</b>	<b>Weighted Mean</b>	<b>Verbal Interpretation</b>
2. Does the platform provide accurate and up-to-date information on listings and transactions?	4.22	Agree
3. Does the platform notifications and alerts for important updates (e.g., announcements, transaction status) are reliable?	4.10	Agree
4. In cases where issues arise, does the platform's support or technical team help you to resolve the issues?	4.28	Agree
<b>Composite Mean:</b>	4.22	Agree

Table 18 presents the results of the survey on the system's security features, evaluating aspects like password encryption, data protection, and secure access controls. The system received a composite mean score of 4.22, indicating that users have a high level of trust in the security measures implemented. This score reflects confidence in the system's ability to safeguard sensitive information and protect user data against unauthorized access.

The verbal interpretation of this score aligns with the composite mean, reinforcing that the system meets user expectations for data security and privacy.



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These findings validate the developers' efforts in creating a secure environment and serve as a benchmark for maintaining high standards in data protection.

**Table 18.**  
**Summary of System Evaluation Results Based on Security**

<b>SECURITY</b>	<b>Weighted Mean</b>	<b>Verbal Interpretation</b>
1. User passwords are securely encrypted and are not accessible in plain text format.	4.44	Agree
2. Does the platform experienced you any issues logging into your account (e.g., minimum characters, account username or password)?	4.00	Agree
<b>Composite Mean:</b>	4.22	Agree

The questionnaire used in the system evaluation comprises four questions on functional suitability, four on performance efficiency, five on usability, four on reliability, and two on security criteria. These questions were designed to thoroughly assess various aspects of the system's performance and user experience. The developers presented this questionnaire to potential users and facilitators of SubasTanauan: An Online Livestock Trading Platform and Financing System for the B2B and B2C Livestock Industry, developed for the Office of the City Veterinarian in Tanauan City. Through this structured feedback approach, the



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evaluation sought to capture detailed insights from users, ensuring the platform meets industry standards and aligns with the specific needs of its intended audience.

### **Test Case Results**

The test case results present a detailed assessment of the system's functionality, reliability, and performance based on predefined test scenarios. This evaluation ensures that each module operates as expected, identifying any defects or inconsistencies that need resolution. By systematically verifying the system's features, the test case results provide valuable insights for developers to refine and enhance the platform, ensuring a seamless user experience.

Table 19 presents the test case results for the administrator. The system was thoroughly tested by six users, including the city veterinarian (1), facilitator (1), an adviser (1), and three developers. The evaluation aimed to verify that all functionalities met the expected standards of accuracy and reliability.

For the test cases, a 100% result indicates a "pass," confirming that the system's features performed correctly as intended. Conversely, any result at or below 99% is marked as "fail," indicating that the feature did not meet the required operational standard.



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**Table 19.**  
**Summary of Test Case Results for Administrator**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual Result</b>	<b>Status</b>
1	Enter username and password	The admin should be able to login using the valid username and password.	Admin was able to login	6/6 = 100% PASSED
2	Manage Users Account	Admin should be able to view the overview information to manage and create users.	Admin was able to view user information and create user.	6/6 = 100% PASSED
3	Manage Bidding List	The admin can manage the live bidding through control panel or able to delete the live.	Admin successfully managed live bids	6/6 = 100% PASSED

Table 20 provides a summary of test case results for the Customer Support role, assessing its key functionalities within the system. The table evaluates tasks such as logging into the system, viewing user account details, and communicating with users via chat. Each task was tested six times, with all attempts yielding successful results, leading to a 100% pass rate. These results confirm that the Customer Support role functions as expected, ensuring seamless access, account management, and real-time communication with users. This validation ensures that customer support can effectively assist users and maintain smooth system operations.



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**Table 20.**  
**Summary of Test Case Results for Customer Support**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual Result</b>	<b>Status</b>
1	Enter username and password	The customer support should be able to access and login their username and password within the system.	Customer support was able to log in successfully.	6/6 = 100% PASSED
2	View Users Account	The customer support can view user account information.	Customer support was able to view all user account details.	6/6 = 100% PASSED
3	Chat with the users	The customer support should be able to send and receive the message in the users chat box.	Customer support was able to send and received message.	6/6 = 100% PASSED

Table 21 provides a summary of test case results for the Financer role, evaluating its ability to perform essential financial operations within the system. The test cases assess the financer's ability to log in, manage loan credits, and oversee payment transactions. Each task was tested six times, with all attempts successfully completed, resulting in a 100% pass rate. These results confirm that the Financer role functions as expected, ensuring efficient management of loan requests, payment processing, and transaction history tracking within the system.



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**Table 21.**  
**Summary of Test Case Results for Financer**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual Result</b>	<b>Status</b>
1	Enter username and password	The financer should be able to login and access their username and password within the system.	Financer successfully logged in.	6/6 = 100% PASSED
2	Manage Loan Credits	The financer should be able to view the loan request and history of the users' transactions.	Financer successfully viewed loan requests and transaction history	6/6 = 100% PASSED
3	Manage Payments Credits	The financer should be able to view the payment request and history of the users' transactions.	Financer successfully viewed payment requests and transaction history.	6/6 = 100% PASSED

Table 22 summarizes the test case results for the Super Administrator role, evaluating its ability to oversee and manage key system functionalities. The test cases assess tasks such as logging in, viewing the system dashboard, managing user accounts, handling inventory, and overseeing live bidding sessions. Each task was tested six times, with all attempts yielding successful results, leading to a 100% pass rate. These results confirm that the Super Administrator role operates effectively,



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ensuring comprehensive system control, user management, financial oversight, and auction supervision within the platform.

**Table 22.**  
**Summary of Test Case Results for Super Administrator**

Task No.	Task Description	Expected Result	Actual Result	Status
1	Enter username and password	Super admin should be able to login using the valid username and password.	Super admin successfully logged in.	6/6 = 100% PASSED
2	View Dashboard	The super admin should be able to view the wallet income, loans, and total number of registered users.	Super admin successfully viewed.	6/6 = 100% PASSED
3	Manage User Accounts	Super admin should be able to view users, admins, financers, and customer support accounts.	Super admin successfully viewed all accounts.	6/6 = 100% PASSED
4	Manage Inventory	Super admin should be able to manage the store and item list and view requests.	Super admin successfully managed inventory and viewed requests.	6/6 = 100% PASSED
5	Manage Bidding List	Super admin should be able to manage live bidding through the control panel or delete live bidding sessions.	Super admin successfully managed live bidding.	6/6 = 100% PASSED



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Table 23 provides a summary of test case results for the User role, assessing its ability to perform core system functions. The test cases evaluate tasks such as logging in securely, viewing the dashboard, browsing and ordering from the marketplace, participating in live bidding, requesting credits, and interacting with the forum. Each task was tested six times, with all attempts yielding successful results, leading to a 100% pass rate.

**Table 23.**  
**Summary of Test Case Results for User**

Task No.	Task Description	Expected Result	Actual Result	Status
1	Enter username and password	The user should be able to login using a secure authentication process that includes their registered email address and password.	User successfully logged in.	6/6 = 100% PASSED
2	View Dashboard	The user should be able to view their current balance and credit balance within the system.	User successfully viewed current and credit balance.	6/6 = 100% PASSED
3	Browse and Order in the Marketplace	The user should be able to access the marketplace, where a variety of items are available for browsing and purchasing	User successfully accessed the marketplace.	6/6 = 100% PASSED



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**Table 23.**  
**Summary of Test Case Results for User (Cont'd)**

Task No.	Task Description	Expected Result	Actual Result	Status
4	Join Biddings	The user should be able to join or enter live bidding that allows for quick access to ongoing auctions.	User successfully bid in the auction.	6/6 = 100% PASSED
5	Access Request Credits	The user can enter the amount request upon the system and able to view the payment history.	User successfully entered payment requests and loan request and viewed history.	6/6 = 100% PASSED
6	Interact with the Forum	The users are able to create category for their discussions.	User successfully create discussions.	6/6 = 100% PASSED

### **Implementation Plan**

Transitioning from manual processes to a computerized system necessitates meticulous planning and execution. SubasTanauan: An Online Livestock Trading Platform was conceived to enhance the livestock trading experience for the Office of the City Veterinarian in Tanauan City, Batangas. Prior to the system's development, the specific needs and challenges faced by the organization were thoroughly assessed to ensure the final product aligned with their operational



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requirements. A primary focus during the creation of SubasTanauan was user-friendliness, enabling both sellers and buyers to easily navigate the platform. Continuous communication with the Office of the City Veterinarian was vital throughout the development phase, ensuring they were well-informed about the system's functionalities and capabilities. The deployment process for the system is as follows:

- (1) Delegate Roles to Facilitators and Administrators, in the implementation phase of the SubasTanauan system, specific roles and responsibilities were assigned to facilitators and administrators. This strategy ensured that only authorized personnel could access particular functionalities, allowing for effective system management while protecting against unauthorized access.
- (2) Conduct User Training Sessions, after finalizing the system according to client specifications, comprehensive training sessions were held for facilitators and administrators. These sessions focused on managing livestock listings, overseeing bidding processes, handling transactions, and facilitating user interactions.
- (3) Distribute User Guides, following the completion of beta testing for the system, thorough user guides were provided to all users. These guides serve as essential resources for troubleshooting and navigating the platform, empowering users to address technical issues independently and confidently.
- (4) Provide Ongoing Technical Assistance, after the deployment of the system, a continuous technical



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support service was established to assist users encountering challenges. (5) Confirm System Specifications, before implementation, it was crucial to validate that all system specifications, including compatible hardware, software requirements, and stable internet connectivity, were fulfilled.

**Table 24.**  
**Implementation Plan**

Date	Duration	Activity	Person Involved
November, 2024	90 minutes	Presentation of the system to stakeholders	Developers, City Veterinarian Coordinators, Livestock Traders
November, 2024	180 minutes	Finalization of system based on stakeholder feedback	Developers, City Veterinarian Coordinators, Livestock Traders
December, 2024	120 minutes	Beta testing of the system	Developers, City Veterinarian Coordinators, Livestock Traders, Adviser
December, 2024	150 minutes	Final system testing	Developers, City Veterinarian Coordinators, Livestock Traders, Adviser
December, 2024	180 minutes	Official launch of the system	Developers, City Veterinarian Coordinators, Livestock Traders



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**CHAPTER 5**  
**SUMMARY FINDINGS, CONCLUSIONS,**  
**AND RECOMMENDATIONS**

This chapter presented the summary of findings and conclusions that the developers arrived at during the creation of the system. The developers also provided recommendations that can serve as an instrument for future proponents for the enhancement of the developed system.

**Summary of Findings**

The project aimed to assist the Office of the City Veterinarian in revitalizing the livestock industry, particularly the auction market in Tanauan, Batangas. Utilizing expertise in Information Technology, the developers built a web application that serves as an online trading platform, transforming the manual processes involved in livestock auctions and financing into a more efficient and organized system. This platform optimized the management of roles such as admin, user, super admin, customer support, and financer. Upon completing the system, several key findings were identified, which are as follows:

1. The developed system provided an application for the office of the City Veterinarian as well as farmers and livestock businesses to perform the following:



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- 1.1. Browse and order livestock products, ensuring an organized and accessible trading experience.
- 1.2. Join livestock auctions, facilitating fair bidding opportunities and transparent transactions.
- 1.3. Create and manage online stores, allowing sellers to showcase their livestock and manage inventory efficiently.
- 1.4. Process payments and loan credits, providing secure and accessible financial transactions.
- 1.5. Engage in discussions and forums, fostering knowledge-sharing and networking among users.
2. The Super Admin Module allows OCVET to efficiently oversee platform operations, providing:
  - 2.1. User and store management, ensuring smooth operation and compliance with platform policies.
  - 2.2. Bidding process oversight, ensuring a secure and transparent auction system.
  - 2.3. Price and announcement updates, keeping all stakeholders informed with real-time changes.



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- 2.4. The platform provides reporting tools that give insights into market trends.
- 2.5. These tools also track transactions and financial activities, helping users make informed decisions.
3. The Admin Module enables the efficient management of:
  - 3.1. User accounts, allowing smooth onboarding and verification processes.
  - 3.2. Bidding events, ensuring auctions run seamlessly and fairly.
4. The Financer Module successfully manages financial transactions, offering:
  - 4.1. Loan processing features, providing users with accessible credit for livestock investments.
  - 4.2. Secure payment management, ensuring smooth and secure transactions between buyers and sellers.
5. The Customer Support Module enhances user experience by:
  - 5.1. Providing real-time chat assistance, helping users with inquiries and concerns.
  - 5.2. Managing user accounts, assisting with account recovery and technical support.
6. The Option Filter Feature improves the browsing experience by allowing users to:



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- 6.1. Search livestock products based on starting cost and creation date, ensuring efficient discovery of relevant listings.
7. The web-based system has been tested using the test cases and gave the result of 100% by the administrator and developers. Also, the developed system was tested using the ISO/IEC 25010:2011 software evaluation with following criteria:
  - 7.1. Functionality. The web-based system and its expected functions works properly.
  - 7.2. The web-based system demonstrates consistent performance under defined conditions over a specified period of time. This reliability ensures that the system effectively supports the management and handling of registered farmers and livestock businesses to more efficient processing of registrations and ongoing operations, ultimately enhancing the overall effectiveness of business management and minimizing disruptions.
  - 7.3. Usability. The web-application system excels in user interaction by providing an intuitive and user-friendly interface. The system's design and functionality are optimized for effective and appropriate use, enhancing the overall user experience and satisfaction.



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7.4. Efficiency. The web-application system operates with high efficiency, consistently generating accurate and reliable information. It processes data quickly and effectively, ensuring that users receive precise results and timely updates. This efficiency enhances the overall effectiveness of the system, supporting smooth and accurate management of tasks and operations.

8. The developers implemented a structured deployment plan, including:

- 8.1. Step-by-step system rollout, ensuring smooth integration with existing processes.
- 8.2. Key milestone tracking, enabling effective monitoring of system adoption and performance.

### **Conclusions**

This summary presents the key findings, discusses the implications for the livestock industry, and provides insights into potential directions for future development and research.

The primary goal of the SubasTanauan web application was to streamline the livestock trading process and reduce the workload of the City Veterinarian's Office administrators. To evaluate whether the system met its objectives, the development



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team conducted a comprehensive series of tests.

The development and implementation of SubasTanauan, an online livestock trading platform and financing for B2B and B2C livestock industry for the Office of the City Veterinarian in Tanauan City, Batangas have significantly improved the efficiency and effectiveness of livestock transactions. This innovative system connects buyers and sellers, addressing key challenges and enhancing the overall trading experience within the organization.

1. The system has notably contributed to the organization in the following areas:
  - 1.1. The User Module allows farmers, traders, and buyers to browse, order, and sell livestock products while facilitating secure transactions through integrated payment and financing options.
  - 1.2. The Bidding System enables users to join live livestock auctions efficiently, ensuring fair and transparent bidding processes.
  - 1.3. The Marketplace Feature provides sellers with a dedicated online store, making livestock products more accessible to potential buyers.
  - 1.4. The Interactive Forum fosters engagement between users.
  - 1.5. Allowing them to discuss industry trends, ask questions, and exchange best practices.



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2. The system enhances operational efficiency by enabling Super Admins and Admins.
  - 2.1. To manage user accounts, monitor bidding processes, and oversee marketplace activities.
  - 2.2. This reduces administrative workload and improves response times to user inquiries.
3. The Financer Module streamlines loan and credit transactions.
  - 3.1. This helps making financial assistance more accessible to livestock farmers and traders.
  - 3.2. By integrating financing options, the system supports business expansion and investment in better livestock management practices.
4. The Customer Support Module ensures seamless communication between users and support representatives, addressing concerns and providing assistance in navigating the platform.
5. The Filtering and Search Options enhance the user experience by allowing buyers to find livestock products based on specific criteria such as price range and date of listing.
6. The system was tested against ISO/IEC 20510:2011 standards, demonstrating compliance in the following areas.



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- 6.1. Functional Suitability: The platform effectively performs its intended functions with high reliability.
  - 6.2. Performance Efficiency: The system processes transactions smoothly, reducing delays in bidding and order placements.
  - 6.3. Usability: The user-friendly design accommodates both experienced and novice users, ensuring an intuitive experience.
  - 6.4. Reliability: The system maintains stability, providing consistent performance with minimal technical issues.
7. The potential impact of the system extends beyond its core functionalities:
    - 7.1. It contributes to the growth of the local economy by enabling farmers and traders to expand their market reach.
    - 7.2. It encourages the adoption of sustainable livestock trading practices through educational resources and digital transactions.
    - 7.3. It opens opportunities for future enhancements, such as promotional tools for sellers, social media integration, and partnerships with local agricultural organizations.

### **Recommendations**

The recommendation section provides insights and suggestions for further



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enhancing the system based on evaluation results and user feedback. It highlights potential improvements to optimize functionality, usability, and overall performance. These recommendations aim to ensure the system continues to meet user needs effectively while adapting to future advancements and requirements.

Following the successful development and deployment of SubasTanauan, the team has carefully analyzed the system's initial impact and gathered insights from users and stakeholders. While the platform effectively addresses key needs within the livestock trading community, there are additional areas where enhancements could further elevate its functionality, user engagement, and overall effectiveness.

These opportunities for improvement reflect a commitment to continuous innovation and a deeper understanding of user expectations.

To guide future research and development efforts, the team has outlined several recommendations that could enhance SubasTanauan. The following recommendations are intended to provide a foundation for future enhancements and to inspire ongoing optimization efforts:

1. Future developers could implement more diverse and secure payment options, such as digital wallets and direct bank transfers, to streamline transactions. Additional enhancements could include an escrow service



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to hold funds until both parties confirm the transaction, ensuring trust and security for users.

2. Future developers could add a module for certified veterinarians to record health inspections and quality assessments of livestock to improve buyer confidence. This feature could integrate health certificates or real-time updates on livestock health status to promote transparency.
3. Future developers could equip the platform with advanced analytics to allow users and administrators to view detailed reports on trading trends, livestock prices, and user engagement that could provide valuable insights for strategic decision-making, benefiting both sellers and buyers.
4. Future developers could enable SMS and email notifications for key actions, such as new bid alerts and transaction confirmations, to help users stay informed without needing to log in frequently.
5. Future developers could introduce gamified elements, such as badges for frequent users or achievements for high ratings, to incentivize positive user behaviour and enhance platform interaction.
6. Future developers could integrate AR technology to allow buyers to view livestock virtually in 3D, providing a more immersive and realistic experience than static images to help buyers inspect livestock more



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thoroughly and improve their purchasing decisions. This integration could also allow for interactive features, such as zooming in on specific details or comparing multiple animals side by side, further enhancing the decision-making process.

7. Future developers could introduce an automated inventory management system for frequent sellers, simplifying the tracking of livestock availability, health, and sales data.
8. Future developers could establish partnerships with local veterinary clinics or agricultural services to offer users exclusive discounts or health services for livestock.
9. Future developers could implement an emergency alert feature to inform users of critical situations, such as livestock disease outbreaks, transportation disruptions, or regulatory changes.
10. Future developers can add a live platform feature dedicated to real-time bidding would transform the bidding experience, creating a more engaging and competitive atmosphere.
11. Future developers should consider integrating an improved search algorithm to assist users in finding specific livestock more efficiently ensuring a smoother and faster user experience.



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**BIBLIOGRAPHY**

- [1] POEMS. Auction Markets. Retrieved from <https://www.poems.com.sg/glossary/stocks/auction-markets/> on August 29, 2024.
- [2] Bootstrap. 2025. Bootstrap. Retrieved from <https://getbootstrap.com/> on January 15, 2025.
- [3] Mozilla Developer Network (MDN). 2024. Data-binding. Retrieved from [https://developer.mozilla.org/en-US/docs/Web/Guide/Data\\_binding](https://developer.mozilla.org/en-US/docs/Web/Guide/Data_binding) on December 10, 2024.
- [4] IBM. 2024. Encryption. Retrieved from <https://www.ibm.com/topics/encryption> on November 28, 2024.
- [5] TechTarget. 2024. File System. Retrieved from <https://www.techtarget.com/searchstorage/definition/file-system> on October 5, 2024.
- [6] Red Hat. 2025. Frontend and Backend. Retrieved from <https://www.redhat.com/en/topics/cloud-native-apps/frontend-vs-backend> on January 20, 2025.
- [7] ISO. 2011. ISO/IEC 25010:2011 – Software Quality Model. Retrieved from <https://www.iso.org/standard/35733.html> on September 8, 2024.
- [8] SubasTanauan. 2024. SubasTanauan: Online Livestock Trading Platform. Retrieved from [subastanauan.shop](http://subastanauan.shop) on October 30, 2024.
- [9] ScienceDirect. 2025. Top-down Approach. Retrieved from <https://www.sciencedirect.com/topics/computer-science/top-down-design> on January 5, 2025.



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- [10] Abunales, M.R., Velarde, M.R. 2021. Online Trading System with Reverse Image Search. Retrieved from <https://www.atlantispress.com/proceedings/ijcse21/125966499> on January 22, 2024.
- [11] Jain, A., and Carandang, C. 2019. Development of an Online Laguna Agricultural Trading Center. International Journal of Computing Sciences Research, 2. DOI: 10.25147/ijcsr.2017.001.1.29. Retrieved from [https://www.researchgate.net/publication/331088339\\_Development\\_of\\_an\\_Online\\_Laguna\\_Agricultural\\_Trading\\_Center](https://www.researchgate.net/publication/331088339_Development_of_an_Online_Laguna_Agricultural_Trading_Center) on August 29, 2024.
- [12] Catajan Jr, A. Palit Tayo. Retrieved from <https://www.academia.edu/Documents/in/PalitTayo> on August 29, 2024
- [13] Niña A. Evangelista, Vince V. Rubia, and Riza Mae P. Sevilleno. 2024. AGRIJUAN: Online Trading Platform for Agricultural Sectors in San Juan, Batangas. Batangas State University. Accessed September 10, 2024. <https://helios.batstateu.edu.ph/cataloging/servlet/presenttitledetailform.do?siteTypeID=1&siteID=&includeLibrary=true&includeMedia=false&mediaSiteID=&bibID=70432&walkerID=1725944317807>
- [14] Dimaculangan, M.M.G. 2022. Online Auction System. Retrieved from <https://library.batstateu.edu.ph/api/?core=request&do=viewpdf&sid=64b51800971028824017480e87ceb9ba&id=31329> on January 22, 2023
- [15] Romeo B. Baldemor, Amor A. Tuzon, and Christopher John R. Llanda. 2022. AFPEMCO Livestock and Agricultural Product Bidding System with SMS Notification. Abra State Institute of Sciences and Technology, Lagangilang, Abra, Philippines, June 9, 2022. Accessed from <https://ssarj.asist.edu.ph/afpemco-livestock-and-agricultural-product-bidding-system-with-sms-notification/>.



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- [16] Edulsa, A.F.A. 2018. E-commerce Platform and Decision Support System for Plants. Retrieved from <https://ijisrt.com/An-Ecommerce-Platform-and-Decison-Support-for-Plants-with-Comprehensive-Information-1.pdf> on May 2017.
- [17] Darmayunata, Y., Siswati, L., and Aryanto, A. 2021. Pekanbaru City Livestock Marketing with Android-Based Applications. Journal of Applied Engineering and Technological Science (JAETS). 3, 1 (Dec. 2021), 40–52. DOI: <https://doi.org/10.37385/jaets.v3i1.292>
- [18] Business Bliss Consultants FZE. 2023. Online Auction Management System. UKDiss.com. Retrieved from <https://ukdiss.com/examples/0410591.php> on March 6, 2024
- [19] Meena, S., Girija, S., and Kayathri, S. 2018. Financial Management System. International Journal of Engineering & Technology, 7, 71. DOI: <https://doi.org/10.14419/ijet.v7i3.10.15633>
- [20] Nahata Commerce College. Online Auction Management System "Bhusawal Aarts". Retrieved from <https://basponcollege.org/LMS/EMaterial/Science/Comp/HVP/JS%20Notes.pdf> on November 15, 2023
- [21] Malamati, L., Louta, E., and [Additional Authors]. 2023. FarmDain: A Decision Support System (DSS) for Dairy Sheep and Goat Production. Animals. Retrieved from <https://www.mdpi.com/2076-2615/13/6/899> on August 29, 2022



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**APPENDICES**

**A. GANTT CHART OF ACTIVITIES**

**B. RELEVANT SOURCE CODE**

**C. EVALUATION TOOL**

**D. USER GUIDE AND MANUAL**

**E. SAMPLE INPUT AND OUTPUT**

**F. GRAMMARIANS CERTIFICATION**

**G. TURN OVER**

**H. CURRICULUM VITAE**



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### **A. GANTT CHART OF ACTVITIES**

The Gantt chart presented outlines the timeline and progression of key tasks involved in the development of the project. It visually represents the project schedule, ensuring a structured and organized approach to each phase. The chart is divided into multiple tasks, each spanning a specific timeframe, allowing for effective monitoring and management of progress.

The project begins with the Planning & Topic Creation phase, which occurs at the start of the timeline. This stage is crucial as it lays the foundation for the entire project by defining the scope, objectives, and direction. Following this, the Data Gathering and Topic Proposal and Approval phases are executed, ensuring that relevant information is collected and validated before moving forward. Next, the Documentation phase takes place, running parallel with the Prototyping stage. Documentation is essential for recording system requirements, design specifications, and overall development plans. Prototyping, on the other hand, helps in visualizing the system's functionality before full-scale development begins.

The System Development phase is the most extended period in the Gantt chart, indicating the core implementation of the project. This stage involves coding, integrating features, and ensuring that all functionalities are developed as per



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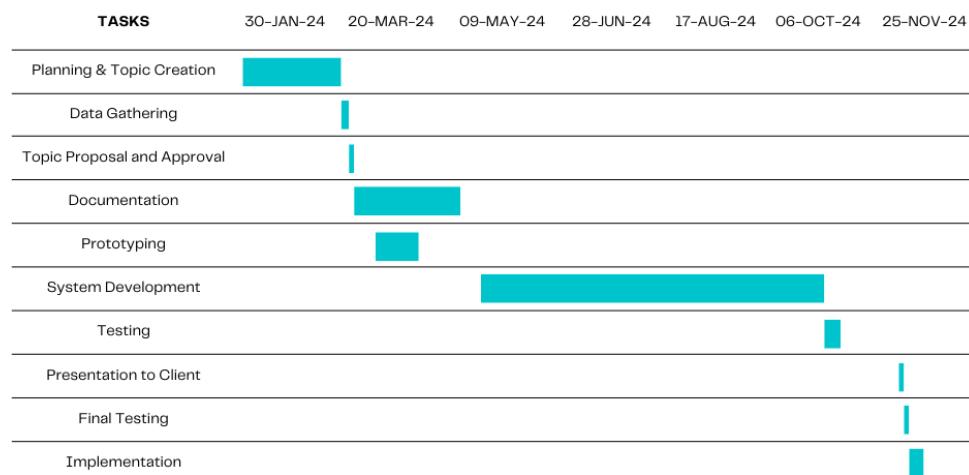
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requirements. After system development, the Testing phase is initiated to identify and resolve any potential issues or bugs, ensuring that the system operates smoothly. As the project nears completion, a Presentation to the Client is scheduled, providing an opportunity for stakeholders to review the system and provide feedback. This is followed by Final Testing, which serves as the last quality assurance step to verify the system's stability and performance before deployment. Finally, the project concludes with the Implementation phase, where the system is fully deployed and made operational for end users. This stage signifies the culmination of all previous efforts, ensuring a successful and functional system is delivered.

## **GANTT CHART**



**Figure 52. Gantt Chart**



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**B. RELEVANT SOURCE CODE**

```
1 <div>
2   <a
3     class="text-black text
4     xl uppercase lg:inline
5     block font-semibold pt-12"
6     href="javascript:void(0)"
7   >
8     Manage Account/
9   Admin
10  </a>
11  <hr class="my-4
12 md:min-w-full" />
13  <br/>
14  <!-- Header -->
15  <div>
16    <div class="mb-3 pt-0"
17 style="display: flex; gap:
18      a. 10px;">
19      <input type="text"
20      placeholder="Search
21      admin" class="px-2 py-1
22      placeholder-blueGray-300
23      text-blueGray-600 relative
24      bg-white
25      rounded/text-sm shadow
26      outline-none focus:outline
27      none focus:shadow
28      outline"/>
29      <button class="bg
30      emerald-500 text-white
31      active:bg-emerald-600
32      font-bold uppercase text-xs
33      px-4 py-2 rounded shadow
34      hover:shadow-md outline
35      none focus:outline-none
36      mr-1 mb-1 ease-linear
37      transition-all duration-150"
38      type="button">
39        Clear Search
40      </button>
41    </div>
42    <br/>
43    <button class="bg
44      emerald-500 text-white
45      active:bg-emerald-600
46      font-bold uppercase text
47      sm px-6 py-3 rounded-full
48      shadow hover:shadow-lg
49      outline-none focus:outline
50      none mr-1 mb-1 ease
51      linear transition-all
52      duration-150"
53      type="button" v
54      on:click="toggleCreateUs
55      r()">
56        Create User
57      </button>
58    <br/><br/><br/>
59    <div style="display:
60      flex; gap: 10px; justify
61      content: center; align
```



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```
62 items: center;">
63   <button class="bg
64 emerald-500 text-white
65 active:bg-emerald-600
66 font-bold uppercase text-xs
67 px-4 py-2 rounded shadow
68 hover:shadow-md outline
69 none focus:outline-none
70 mr-1 mb-1 ease-linear
71 transition-all duration-150"
72 type="button">
73   <i class="fas fa
74 chevron-left"></i>
75   </button>
76 <p style="font-size:
77 1.4rem; font-weight:
78 bold;">1</p>
79   <button class="bg
80 emerald-500 text-white
81 active:bg-emerald-600
82 font-bold uppercase text-xs
83 px-4 py-2 rounded shadow
84 hover:shadow-md outline
85 none focus:outline-none
86 mr-1 mb-1 ease-linear
87 transition-all duration-150"
88 type="button">
89   <i class="fas fa
90 chevron-right"></i>
91   </button>
92 </div>
93 <br/><br/>
94 <AdminTable @edit
```

```
95 user="toggleEditUser()"
96 delete
97 user="toggleDeleteUser()"/
98   <!--#region CREATE
99   ACCOUNT-->
100  <div>
101    <vue-final-
102      modal v
103    model="showModal"
104    classes="modal
105      container"
106      content
107      class="modal
108      content">
109      <button
110        class="modal_
111        close"
112        @click="togg
113        CreateUser()">
114        <mdi
115        close></mdi
116        close>
117      </button>
118      <span
119        class="modal_
120        title">Create
121        Admin
122        Account</span>
123      <br/>
124      <div
125        class="modal_
126        content">
```



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125	<p>Username:	none focus:shadow-outline w-
126	/p>	full"/>
127	<input	153  
128	type="text"	154 <p>First
129	placeholder="E	Name:</p>
130	nter username"	155 <input
131	class="px-2 py	type="text"
132	1 placeholder	placeholder="Enter first
133	blueGray-300	name" class="px-2 py-1
134	text-blueGray	placeholder-blueGray-300
135	600 relative bg	text-blueGray-600 relative bg-
136	white bg-white	white bg-white rounded text-
137	rounded text-sm	sm shadow outline-none
138	shadow outline	focus:outline-none
139	none	focus:shadow-outline w-
140	focus:outline	full"/>
141	none	156  
142	focus:shadow	157 <p>Last
143	outline w	Name:</p>
144	full"/>	158 <input
145	 	type="text"
146	<p>Password:</p>	placeholder="Enter last name"
147	<input	class="px-2 py-1 placeholder-
148	type="password"	blueGray-300 text-blueGray-
149	"placeholder="	600 relative bg-white bg-white
150	Enter password"	rounded text-sm shadow
151	class="px-2 py1	outline-none focus:outline-
152	placeholder-	none focus:shadow-outline w-
	blueGray-300 text-blueGray-	full"/>
	600 relative bg-white bg-white	159   
	rounded text-sm shadow	160 </div>
	outline-none focus:outline-	



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```
161           <div
162             class="modal__action">
163               <button
164                 class="bg-emerald-500 text-
white active:bg-emerald-600
font-bold uppercase text-xs
px-4 py-2 rounded shadow
hover:shadow-md outline-
none focus:outline-none mr-1
mb-1 ease-linear transition-all
duration-150" type="button"
@click="toggleCreateUser()">
165               Cancel
166               Create
167             </button>
168           </div>
169         </vue-final-
modal>
170       </div>
171     </div>
```

```
172           <!--#region
173             EDIT ACCOUNT-->
174           <div>
175             <button
176               class="modal__close"
177             @click="toggleEditUser()">
178             <mdi-
close></mdi-close>
179           <br/>
180           <div
181             class="modal__content">
182               <p>Username:</p>
183               <input
184                 type="text"
185                 placeholder="Enter username"
186                 class="px-2 py-1 placeholder-
blueGray-300 text-blueGray-
600 relative bg-white bg-white
rounded text-sm shadow
outline-none focus:outline-
none focus:shadow-outline w-
full"/>
```



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183 <br/>  
184 <p>Password:</p>  
185 <input type="password" placeholder="Enter password" class="px-2 py-1 placeholder-blueGray-300 text-blueGray-600 relative bg-white rounded text-sm shadow outline-none focus:outline-none focus:shadow-outline w-full"/>  
186 <br/>  
187 <p>First Name:</p>  
188 <input type="text" placeholder="Enter first name" class="px-2 py-1 placeholder-blueGray-300 text-blueGray-600 relative bg-white rounded text-sm shadow outline-none focus:outline-none focus:shadow-outline w-full"/>  
189 <br/>  
190 <p>Last Name:</p>  
191 <input type="text" placeholder="Enter last name" class="px-2 py-1 placeholder-blueGray-300 text-blueGray-600 relative bg-white rounded text-sm shadow outline-none focus:outline-none focus:shadow-outline w-full"/>  
192 <br/><br/>  
193 </div>  
194 <div class="modal\_\_action">  
195 <button class="bg-emerald-500 text-white active:bg-emerald-600 font-bold uppercase text-xs px-4 py-2 rounded shadow hover:shadow-md outline-none focus:outline-none mr-1 mb-1 ease-linear transition-all duration-150" type="button" @click="toggleEditUser()">  
196 Cancel  
197 </button>  
198 <button class="bg-emerald-500 text-white active:bg-emerald-600 font-bold uppercase text-xs px-4 py-2 rounded shadow hover:shadow-md outline-none focus:outline-none mr-1 mb-1 ease-linear transition-all duration-150" type="button" @click="editUser()">



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```
duration-150" type="button"          221      toggleCreateUse
@click="toggleEditUser()">>           r(){
199          Create            222      this.showModal
200          </button>        = !this.showModal
201          </div>            223      },
202          </vue-final-       224      toggleEditUser(
modal>           ) {
203          </div>            225      this.showModal
204          </div>            Edit = !this.showModalEdit
205          </template>        226      }, toggleDelete
206          <script>          eUser() {
207          import           227. },
208          AdminTable from    228 toggleDeleteUser() {
"('@/components/Subastanauan   229 this.showModalDelete
/Dashboard/Superadmin/Admini   = !this.showModalDelete;
ntable.vue";                  230 }
209          export default {   231 }
210          name:             232 };
"manage-account-admin-         233 this.showModalEdit
page",                      = !this.showModalEdit;
211          data () {          234 },
212          return {           235 toggleDeleteUser(user) {
213          showModal:        236 this.selectedUser = user; //
false,                      Set the user to be deleted
214          showModalEdit: false
215          }                 237 this.showModalDelete
216          },                   = !this.showModalDelete;
217          components: {       238 }
218          AdminTable,        239 }
219          },                  240 }
220          methods: {          241 }
```



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**C. EVALUATION TOOL**

Questionnaire for System Evaluation “**SUBASTANAUAN: AN ONLINE LIVESTOCK TRADING PLATFORM AND FINANCING OF B2B AND B2C LIVESTOCK INDUSTRY FOR OFFICE OF THE CITY VETERINARIAN, TANAUAN CITY**”

**SURVEY – QUESTIONNAIRE**

Name (Optional): \_\_\_\_\_

**Directions:** Read the given conditions. Select the answer that best represents your view or situation for each question. Use the scale given below.

**Scale:**

**5** - Strongly Agree

**4** - Agree

**3** – Neither

**2** - Disagree

**1** - Strongly Disagree

<b>FUNCTIONAL SUITABILITY</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. Does the system allow users to browse and order various livestock products and animals efficiently?					
2. Can users join and participate in livestock biddings without technical difficulties?					



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3. Can the user able to add products for marketplace and auction?					
4. Does the system allow the financer to manage payments and loan credits effectively?					
<b>PERFORMANCE EFFICIENCY</b>	5	4	3	2	1
1. Is the platform responsive when navigating through different sections (e.g., browsing listings, bidding, viewing financial details)?					
2. Does using the platform significantly affect the speed or performance of other applications on your device?					
3. Have you experienced any issues with the filtering options not working as expected (e.g., incorrect results, filters not applying)?					
4. Does the platform consume a noticeable amount of battery when in use on your device?					
<b>USABILITY</b>	5	4	3	2	1
1. Does the filtering options helpful in narrowing down search results when registering (e.g., starting cost and created at)?					
2. Does the platform able you to complete your tasks (e.g., bidding, listing, payment) without assistance?					
3. Does the system provide clear and user-friendly instructions for each module?					



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4. The platform maintains ease of use across different devices, including mobile responsiveness.					
5. Does the platform able to provide solution through chat support?					
<b>RELIABILITY</b>	5	4	3	2	1
1. Does the platform save your actions and updates without data loss?					
Does the platform provide accurate and up-to-date information on listings and transactions?					
2. Does the platform notifications and alerts for important updates (e.g., announcements, transaction status) are reliable?					
3. In cases where issues arise, does the platform's support or technical team help you to resolve the issues?					
<b>SECURITY</b>	5	4	3	2	1
1. User passwords are securely encrypted and are not accessible in plain text format.					
2. Does the platform experienced you any issues logging into your account (e.g., minimum characters, account username or password)?					



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### **D. USER GUIDE AND MANUAL**

This manual is designed to guide two types of users on the SubasTanauan platform: Livestock Buyers/Users, and the Administrators. Whether you're placing bids on livestock, managing user accounts, or adding new livestock listings and etc., this guide provides the step-by-step instructions needed to navigate the platform efficiently and effectively.

#### **System Requirements**

The system requirements outline the essential hardware, software, and network configurations needed for the SubasTanauan platform to operate efficiently. These specifications ensure the system's reliability, security, and scalability, allowing seamless transactions, real-time bidding, and financial management. By establishing clear technical requirements, the platform can deliver optimal performance, minimize technical issues, and enhance user experience. For the best experience on SubasTanauan, please ensure your system meets the following requirements:

1. A stable internet connection (minimum 5 Mbps for smooth performance).
2. A modern web browser (e.g., Google Chrome, Mozilla Firefox, Safari) updated to the latest version.



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3. A compatible device, such as a laptop, desktop computer, tablet, or smartphone.

### **User Guide for Registration**

The User Guide for Registration provides step-by-step instructions to help users create an account on the Subastanauan platform. This guide ensures that users can complete the registration process smoothly by following the necessary requirements, such as entering valid credentials and verifying their accounts.

Creating an account on SubasTanauan allows you to bid and buy livestock products.

Follow these steps to register:

1. Visit the SubasTanauan website.
2. Click the create an account to register.
3. Enter your Username, Email, Password etc. in the registration form.
4. Click the Next step button.
5. Upload your verification ID
7. Then click Sign up.



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**Subastanauan App**

**Sign up**

or sign in to your account

Name\*  
Juan Dela Cruz

Email address\*  
juandelacruz@gmail.com

Home address\*  
123 Tanauan Batangas

Password\*  
.....

Confirm password\*  
.....

Confirm password\*  
.....

Avatar\*

Valid ID\*

SSS, Pag-ibig, National ID or any valid ID

**Sign up**



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**Log In Users**

This section highlights the key aspects of the login system, including authentication protocols, user verification, and access control measures. This functionality is crucial in maintaining data security, preventing unauthorized access, and personalizing the user experience. Through a streamlined login process, users can efficiently navigate the platform, participate in auctions, manage transactions, and engage with other marketplace activities.

1. Go to the Subastanauan login page.
2. Enter your registered username and password and click Log In.
3. To access user dashboard, enter email verification sent through the registered email and click Verify.

Subastanauan App  
Sign in  
or sign up for an account

Email address\*

pnchrdlyn21@gmail.com

Password\*

.....

Remember me

Sign in



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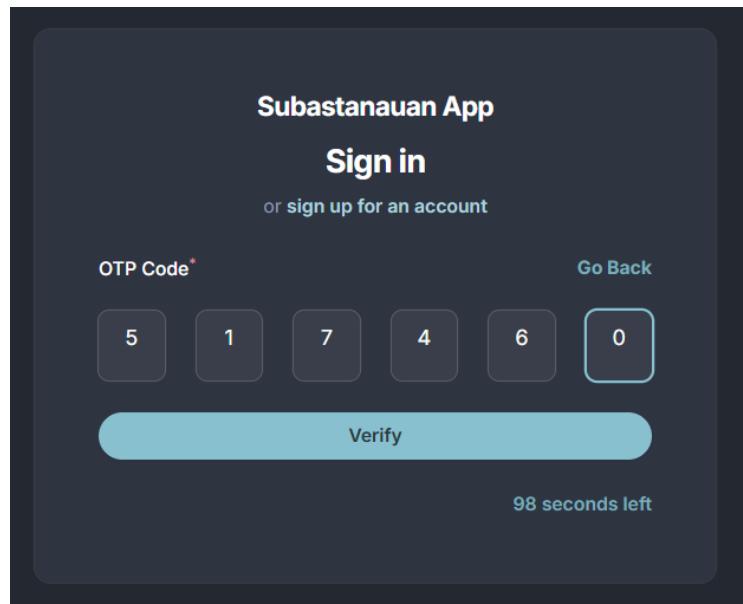
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## Dashboard

The Dashboard provides a comprehensive overview of your orders, divided into the following categories for easy tracking:

### 1. Pending Orders

- Displays the number of orders that have been placed but are yet to be processed.
- Use this section to monitor any new orders awaiting action.

### 2. Processing Orders

- Shows orders currently being prepared or undergoing fulfillment.



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- If no orders are in this stage, it will display "0."

**3. Shipped Orders**

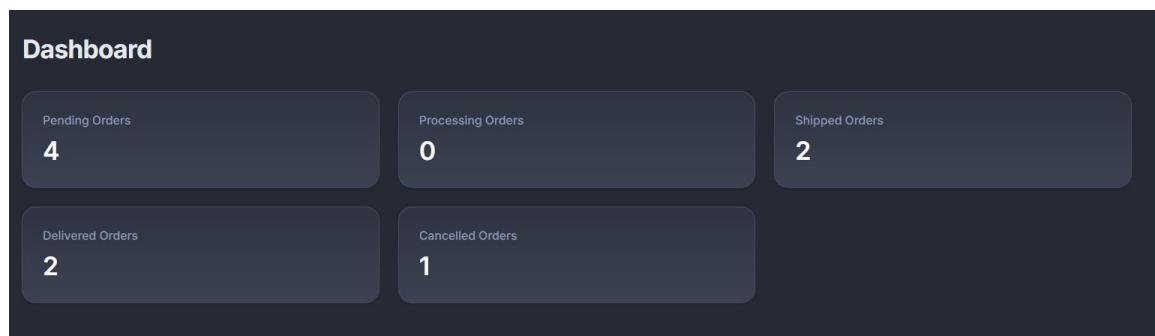
- Indicates the number of orders that have been dispatched but are yet to be delivered.
- Use this to track ongoing deliveries.

**4. Delivered Orders**

- Lists the number of orders successfully delivered to the customer.
- A helpful way to confirm order fulfillment.

**5. Cancelled Orders**

- Displays orders that were cancelled either by the user or the system.
- Use this to review or manage any cancelled transactions.





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### **Products for Auction**

The Products for Auction interface provides users with an overview of available items listed for bidding.

#### **1. Browse Products**

- Scroll through the available product cards to find an item of interest.

#### **2. Search or Filter**

- Use the Search or Filter options for a more targeted view of items.

#### **3. View Product Details**

- Click "View Item" on the product card to review additional information and decide whether to participate in the auction.

The screenshot displays a grid of five product cards for auction:

- Brahman Male:** An image of a white cow. Product Name: BRAHMAN MALE. Description: COLOR: WHITE WEIGHT: 84KG. Starting Price: ₱56,000.00. View item button.
- Chester White Pig:** An image of a white pig. Product Name: Chester White. Description: COLOR: White WEIGHT: 80 kg. Starting Price: ₱15,000.00. View item button.
- Brahman Cattle:** An image of a white cow. Product Name: BRAHMAN CATTLE. Description: MALE PATABAIN. Starting Price: ₱60,000.00. View item button.
- Carabao:** An image of a water buffalo. Product Name: CARABAO. Description: Farm Carabao. Starting Price: ₱20,000.00. View item button.
- Cattle:** An image of a brown and white cow. Product Name: Cattle. Description: Farm Cattle. Starting Price: ₱35,000.00. View item button.

Showing 1 to 5 of 5 results | Per page | 9 |



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## Marketplace

The Marketplace section showcases items available for direct purchase.

This simple layout ensures an easy and smooth shopping experience for all users.

Users can effortlessly browse through various livestock products, view detailed descriptions, and compare prices. Additionally, the platform provides filtering options to help buyers find specific products that match their preferences and budget.

### **1. Browse Products**

- Scroll through the available items to find something of interest.

### **2. Search or Filter Items**

- Enter keywords in the search bar or use filters to narrow down the results.

### **3. View Product Details**

- Click on a product to see additional details, such as features and specifications.

### **4. Purchase the Item**

- Once you've decided on an item, click the "Buy This Item" button to proceed to checkout.



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**Marketplace**



Product Name: Live Chicken

Description: Broiler Chicken

Price: ₱220.00  
Stocks: 4

[Buy this item](#)



Product Name: Broiler

Description: Broiler Starter Crumble

Price: ₱190.00  
Stocks: 10

[Buy this item](#)



Product Name: Megamix

Description: Megamix Pelleted Feeds

Price: ₱300.00  
Stocks: 11

[Buy this item](#)



Product Name: Weighing Scale

Description: Available for pigs, goat, hogs and cattle.

Price: ₱1,500.00  
Stocks: 11

[Buy this item](#)



Product Name: Calcium Gluconate

Description: Injection Veterinary Medicine

Price: ₱200.00  
Stocks: 11

[Buy this item](#)

**Auctions**

The auction serves as the core functionality of the platform, enabling users to participate in live bidding for livestock products. This feature provides a structured and transparent bidding system where buyers can place competitive bids in real time. Sellers can list their livestock with detailed descriptions, starting prices, and bidding timeframes, ensuring fair and organized transactions.

The user is presented with a complete list of auctions they have participated in. This includes both ongoing and completed auctions. The system will display key information for each auction, such as the auction title, auction status (whether it is active, closed, or completed), start date and end date, and auction item



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details. This gives users an at-a-glance understanding of their involvement in each auction.

### My Auctions

Bidding uid	Product	Bid amount	Bidding start date	Bidding end date	Status	
b3cabb2b-9953-443f-97cb-c5083c8fdf78	BRAHMAN MALE	₱56,000.00	₱60,000.00	2025-01-12	2025-01-13	PENDING
5d454011-fd62-4382-8d17-7ede57fe3022	Chester White	₱15,000.00	₱16,000.00	2025-01-13	2025-01-13	PENDING
528b1ab2-cfde-4d5d-a50c-c45f51b7c26a	BRAHMAN CATTLE	₱60,000.00	₱61,000.00	2025-01-13	2025-01-14	PENDING
0c9acf19-f153-4817-b32e-d9e8f65a0c77	CARABAO	₱20,000.00	₱25,000.00	2025-01-14	2025-01-15	PENDING
52a39fe0-0314-4f8d-a126-e85629918008	Cattle	₱35,000.00	₱38,000.00	2025-01-15	2025-01-16	CLOSED

Showing 1 to 5 of 5 results

Per page 10 ▾

### Orders

The Orders section is a critical feature designed to provide users with a comprehensive and organized overview of their transaction history and the current status of all their orders. This section offers transparency, helping users stay informed about the entire lifecycle of their orders from placement to delivery or cancellation. By presenting clear and detailed.

It serves as a central hub for users to track and manage the products they've purchased, monitor the progress of each order, and easily handle any issues,



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including dealing with cancelled orders. This section offers transparency, helping users stay informed about the entire lifecycle of their orders from placement to delivery or cancellation. By presenting clear and detailed information on the transaction ID, products ordered, total price, order status, and cancellation management, this section ensures users have complete control over their purchase history.

### My Orders

Transaction id	Product	Total items	Total price	Status	
d24a16c8-68f6-4dad-9301-942a59d40966	BUCKET	1	₱200.00	CANCELLED	
08513d93-793f-4c86-8ff5-478c2fbea752	Broiler	1	₱190.00	PENDING	Cancel Order
9a1ff91f-e09c-4479-9e4d-7183c77c2b48	Milkogen	2	₱500.00	PENDING	Cancel Order
c7960590-9da1-4adc-b6fd-000c4427f585	Live Chicken	5	₱1,100.00	PENDING	Cancel Order
01cb32fc-1e53-44ff-93dc-ed944baad60d	BUCKET	1	₱200.00	DELIVERED	
59678d8a-102b-41b9-bb6b-8cde2c7404f0	EGGS	1	₱110.00	DELIVERED	
b930305f-0b7a-4803-b7dc-7a5ba8e303eb	BUCKET	1	₱200.00	SHIPPING	
f4bf241b-6acc-480e-9737-09638fb24a51	BUCKET	2	₱400.00	SHIPPING	
e5fe0e9d-a795-4579-9afc-97d8df494e71	Live Chicken	2	₱440.00	PENDING	Cancel Order

Showing 1 to 9 of 9 results

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### Users Credits

This section is designed to help users easily track their available credits, loan approvals, and the status of paid credits, ensuring they have full visibility into their financial interactions. The User Credits Dashboard is a crucial feature that



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provides users with a comprehensive and transparent overview of their credit-related activities within the platform.

With detailed breakdowns, visual indicators, and intuitive management tools, this section enhances the user experience, making it easier for users to track and manage their credits within the platform.

### User Credits

Total Current Credits₱86,000.00Request New Credit

Total Approved Loan Credits₱20,000.00Total Approved Paid Credits₱66,000.00

Amount	Credit type	Payment mode	Reference number	Proof of payment	Status
₱46,000.00	PAID CREDITS	GCASH	123		APPROVED <span style="color: #4db6ac; margin-left: 10px;">View Proof of Payment</span>
₱20,000.00	LOAN CREDITS				APPROVED <span style="color: #4db6ac; margin-left: 10px;">View Proof of Payment</span>
₱20,000.00	PAID CREDITS	GCASH	1234567890		APPROVED <span style="color: #4db6ac; margin-left: 10px;">View Proof of Payment</span>

Showing 1 to 3 of 3 results Per page 10

## Forum

The Forum section provides users with a platform to engage in meaningful discussions, share insights, and connect with others who share similar interests. One of the key features of the forum is the ability for users to create and organize discussion categories and allows users to tailor their discussions to specific



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topics or areas of interest, fostering a more organized and engaging community environment.

The screenshot shows a dark-themed forum interface. At the top, there's a navigation bar with links for 'Forum', 'Recent threads', 'Unread & updated threads', 'Manage', and 'RodBuyer'. Below the navigation is a breadcrumb trail with a home icon and the text 'Index'. The main content area is titled 'Index'. In the center, there's a category card for 'Piggery Tips' with the subtext 'Welcome Piggy Enthusiast'. To the right of the category card are three small stats: 'Threads: 1', 'Posts: 2', and 'Expert advice on pig care, feeding, a...'. A blue button labeled 'Create category' is located in the bottom right corner of the category card.

## Troubleshooting

This section outlines common issues that users may encounter and provides systematic solutions to resolve them efficiently. By addressing potential errors related to user authentication, payment processing, auction participation, and other key functionalities, troubleshooting enhances the system's reliability and usability. Here are some common issues and solutions for the SubasTanauan online platform.

### **1. Forgot my password**

- Click Forgot Password on the login page and follow the instructions to reset your password.



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## COLLEGE OF INFORMATICS AND COMPUTING SCIENCES

### **2. Cannot submit livestock bid**

- Ensure that all required fields in the bidding form are completed.
- Ensure that you have a good internet connection and try refreshing the page and if the problem persists, message the support team at customer support page.

### **3. Financing application is not submitting**

- Verify that all mandatory fields in the application form are filled.
- Check your internet connection and refresh the page if necessary.
- For persistent issues, message support team at customer support.

### **4. Application running slowly or freezing**

- Check if other applications or tabs are affecting your device's performance.
- Restart your browser or device.
- Contact support if performance issues continue page.

### **5. Email already in use**

- Double-check that you haven't already registered with the same email address.



## **COLLEGE OF INFORMATICS AND COMPUTING SCIENCES**

- If you previously registered but forgot your password, use the Forgot Password option to reset it.
- Contact support if you believe this is an error and need help retrieving your account.

### **System Support**

The System Support section outlines the various technical and user assistance mechanisms integrated into the platform to ensure seamless operation and user satisfaction. This includes troubleshooting guides, real-time customer support, automated system monitoring, and regular updates to enhance functionality and security. If you encounter issues that you cannot resolve on your own, or if you need further assistance, the SubasTanauan support team is here to help. Our team is dedicated to providing timely support to ensure that you have a smooth experience with the platform. Whether you have questions about bidding, managing your account, or navigating the marketplace, SubasTanauan customer support is just a message away. We understand that every situation is unique, so our support team is available to provide personalized solutions, guiding you through any challenges you may encounter.

**Support Hours:** Monday to Friday, 8:00 AM to 4:00 PM (GMT+8)



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**E. SAMPLE INPUT AND OUTPUT**

The figure displays sample input for the livestock bidding application, updating bid status, scheduling livestock inspections, updating transaction processes, reviewing and finalizing purchase agreements, and issuing certificates of livestock ownership.

**Registration**

Subastanauan App

**Sign up**

or [sign in to your account](#)

Name \*

Email address \*

Home address \*

Password \*

Confirm password \*



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Confirm password\*

Avatar\*



man-face-clipart-design-illustration-free-.... 99 KB Upload complete tap to undo x

Valid ID\*



national-id.webp 231 KB PAMBANSANG PAGKAKARILANAN Philippine Identification Card 1234-5678-9101-1234 Anakulo/Last Name DELA CRUZ Mag. Pangalan/Given Names JUAN Middle Name MARTINEZ Pebla ng Kapanganakan/Date of Birth JANUARY 01, 1990 PHL

SSS, Pag-Ibig, National ID or any valid ID

Sign up

**Users Log In**

Subastanauan App

**Sign in**

or sign up for an account

Email address\*

Password\*

Remember me

Sign in



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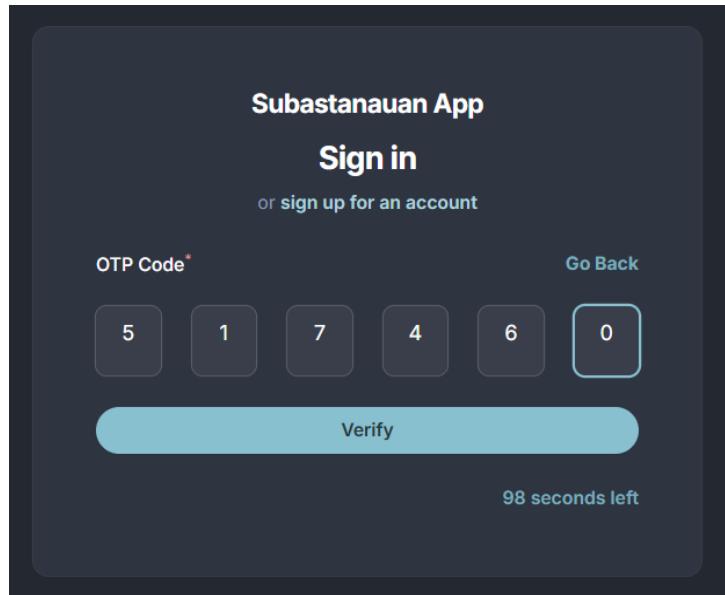
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**Marketplace**

**Marketplace**

<p>Product Name: Live Chicken Description: Broiler Chicken Price: ₱220.00 Stocks: 4 <a href="#">Buy this item</a></p>	<p>Product Name: Broiler Starter Crumble Description: Broiler Starter Crumble Price: ₱190.00 Stocks: 10 <a href="#">Buy this item</a></p>	<p>Product Name: Megamix Pelleted Base Feeds Description: Megamix Pelleted Feeds Price: ₱300.00 Stocks: 11 <a href="#">Buy this item</a></p>	<p>Product Name: Weighing Scale Description: Available for pigs, goat, hogs and cattle. Price: ₱1,500.00 Stocks: 11 <a href="#">Buy this item</a></p>	<p>Product Name: Calcium Gluconate Description: Injection Veterinary Medicine Price: ₱200.00 Stocks: 11 <a href="#">Buy this item</a></p>
---	---	--	---	---



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**COLLEGE OF INFORMATICS AND COMPUTING SCIENCES**

Buy this item

Transaction id

df4473df-38d4-431e-8d38-d4b4692b56cb

Product name

Feeds

Total items\*

1

Stocks

1

Starting price

1000

Total price

1000

**Submit** **Cancel**

**My Auctions**

**My Auctions**

Bidding uid	Product	Product	Bid amount	Bidding start date	Bidding end date	Status
b3cabb2b-9953-443f-97cb-c5083c8fdf78	BRAHMAN MALE	₱56,000.00	₱60,000.00	2025-01-12	2025-01-13	PENDING
5d454011-fd62-4382-8d17-7ede57fe3022	Chester White	₱15,000.00	₱16,000.00	2025-01-13	2025-01-13	PENDING
628b1ab2-cfd8-4d5d-a50c-c45f51b7c26a	BRAHMAN CATTLE	₱60,000.00	₱61,000.00	2025-01-13	2025-01-14	PENDING
0c9ac1f9-f153-4817-b32e-d9e8f65a0c77	CARABAO	₱20,000.00	₱25,000.00	2025-01-14	2025-01-15	PENDING
52a39fe0-0314-4f8d-a126-e85629918008	Cattle	₱35,000.00	₱38,000.00	2025-01-15	2025-01-16	CLOSED

Showing 1 to 5 of 5 results

Per page **10**



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**COLLEGE OF INFORMATICS AND COMPUTING SCIENCES**

## My Orders

### My Orders

Transaction id	Product	Total items	Total price	Status	
d24a16c8-68f6-4dad-9301-942a59d40966	BUCKET	1	₱200.00	CANCELLED	
08513d93-793f-4c66-8ff5-478c2fbe752	Broiler	1	₱190.00	PENDING	<a href="#">Cancel Order</a>
9a11f91f-e09c-4479-9e4d-7183c77c2b48	Milkogen	2	₱500.00	PENDING	<a href="#">Cancel Order</a>
c7960590-9da1-4adc-b6fd-000c4427f585	Live Chicken	5	₱1,100.00	PENDING	<a href="#">Cancel Order</a>
01cb32fc-1e53-44ff-93dc-ed944baad606	BUCKET	1	₱200.00	DELIVERED	
59678d8a-102b-41b9-bb6b-8cde2c7404f0	EGGS	1	₱110.00	DELIVERED	
b930305f-6b7a-4803-b7dc-7a5ba8e303eb	BUCKET	1	₱200.00	SHIPPING	
f4bf241b-6acc-480e-9737-09638fb24a51	BUCKET	2	₱400.00	SHIPPING	
e5fe0e9d-a795-4579-9afc-97d8df494e71	Live Chicken	2	₱440.00	PENDING	<a href="#">Cancel Order</a>

Showing 1 to 9 of 9 results

Per page 10

## Users Credits

Create user credit

Amount  
10000

Credit type  
LOAN CREDITS

PAID CREDITS  
LOAN CREDITS

Proof of Payment  
Drag & Drop your files or [Browse](#)

Reference Number

Status  
PENDING

[Create](#) [Create & create another](#) [Cancel](#)



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**User Credits**

[Request New Credit](#)

Total Current Credits

**₱86,000.00**

Total Approved Loan Credits

**₱20,000.00**

Total Approved Paid Credits

**₱66,000.00**

Amount	Credit type	Payment mode	Reference number	Proof of payment	Status	Action
₱46,000.00	PAID CREDITS	GCASH	123		APPROVED	<a href="#">View Proof of Payment</a>
₱20,000.00	LOAN CREDITS				APPROVED	<a href="#">View Proof of Payment</a>
₱20,000.00	PAID CREDITS	GCASH	123458910		APPROVED	<a href="#">View Proof of Payment</a>
₱10,000.00	LOAN CREDITS				PENDING	<a href="#">View Proof of Payment</a>

Showing 1 to 4 of 4 results

Per page 10 ▾

**Forum**

**Create category**

Title

LIVESTOCK INDUSTRY

Description

Hello everyone, can you give some safety tips for entering livestock industry

Color (light mode)

#007bff

Color (dark mode)

#007bff

Parent category

None

Enable threads

Make private

**Create**



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Index / LIVESTOCK INDUSTRY

## LIVESTOCK INDUSTRY

Hello everyone, can you give some safety tips for entering livestock industry

[Edit category](#) [Create category](#) [New thread](#)

No threads found

## Seller Dashboard

### Dashboard

Total Income Today ₱0.00	Total Income This Month ₱310.00	Total Income This Year ₱310.00
Pending Orders 1	Processing Orders 0	Shipped Orders 2
Delivered Orders 2	Cancelled Orders 0	

## Seller - Biddings

### Biddings

ALL WINNING (2) NOT WINNING (2)

d	Product	Bid amount	Bidding start date	Bidding end date	Bidding Status	Is winning	Status	Action
i314-418d-a12b-e85629918008	Cattle	₱38,000.00	2025-01-15	2025-01-16	BIDDING DONE	Yes	CLOSED	<a href="#">Bidding Details</a>
i072-4ed2-a653-64b67ada0d46	PIGS	₱17,000.00	2025-01-15	2025-01-16	BIDDING DONE		PENDING	<a href="#">SET IN PROGRESS</a> <a href="#">Bidding Details</a>
870-438d-ab7c-b19bcf9ba878	PIGS	₱18,000.00	2025-01-15	2025-01-16	BIDDING DONE		PENDING	<a href="#">SET IN PROGRESS</a> <a href="#">Bidding Details</a>
9f5e-4c05-8d44-0bd7536e05bb	PIGS	₱100,000.00	2025-01-15	2025-01-16	BIDDING DONE	Yes	CLOSED	<a href="#">Bidding Details</a>

Showing 1 to 4 of 4 results Per page 10



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## COLLEGE OF INFORMATICS AND COMPUTING SCIENCES

### Biddings

ALL WINNING (2) NOT WINNING (2)

Search

Bidding uid	Product	Bid amount	Bidding start date	Bidding end date	Bidding Status	Is winning	Status
52a39fe0-0314-4f8d-a126-e85629918008	Cattle	₱38,000.00	2025-01-15	2025-01-16	BIDDING DONE	Yes	CLOSED
65c84ccb-8f5e-4c05-8d44-0bd7536e05bb	PIGS	₱100,000.00	2025-01-15	2025-01-16	BIDDING DONE	Yes	CLOSED

Showing 1 to 2 of 2 results

Per page 10

### Biddings

ALL WINNING (2) NOT WINNING (2)

Search

d	Product	Bid amount	Bidding start date	Bidding end date	Bidding Status	Is winning	Status
i072-4ed2-a653-64b67ada0d48	PIGS	₱17,000.00	2025-01-15	2025-01-16	BIDDING DONE	PENDING	✓ SET IN PROGRESS
670-438d-ab7c-b19bcf9ba678	PIGS	₱18,000.00	2025-01-15	2025-01-16	BIDDING DONE	PENDING	✓ SET IN PROGRESS

Showing 1 to 2 of 2 results

Per page 10

### Seller – My Orders

#### Orders

ALL PENDING (1) PROCESSING (0) FOR SHIPPING (2) DELIVERED (2)

Transaction ID	Product	Product Price	Total Items	Total price	Status	
01cb32fc-1e53-44ff-93dc-ed944baad60d	BUCKET	₱200.00	1	₱200.00	DELIVERED	Order Details
59678d8a-102b-41b9-bb6b-8cde2c7404f0	EGGS	₱10.00	1	₱10.00	DELIVERED	Order Details
6930305f-6b7a-4803-b7dc-7a5ba8e303eb	BUCKET	₱200.00	1	₱200.00	SHIPPING	Order Details
f4bf241b-6acc-480e-9737-09638fb24a51	BUCKET	₱200.00	2	₱400.00	SHIPPING	Order Details
6cf4963e-3368-4271-92f-96b704576c84	BUCKET	₱200.00	1	₱200.00	PENDING	Order Details

Showing 1 to 5 of 5 results

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**Seller – My Products**

Create product

Product Name\*  
Chicken

Description\*  
Live Chicken

Additional info

Starting price\*  
250

If MARKETPLACE (Only for Selling), If AUCTION (For Bidding)  
MARKETPLACE

Product Stocks\*  
10

Images\*

Drag & Drop your files or **Browse**

45-days-chicken-768x534-1.jpg  
87 KB

Upload complete tap to undo

Add multiple image of the item

Thumbnail\*

45-days-chicken-768x534-1.jpg  
87 KB

Upload complete tap to undo

**Create**   **Create & create another**   **Cancel**



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**My Products**

[Add Products](#)

<input type="checkbox"/>	Product name	Description	Starting price	Selling type	Start bidding date	End bidding date	Images	Thumbnail
<input type="checkbox"/>	Chicken	Live Chick...	₱250.00	<a href="#">MARKETPLACE</a>	Product is not for Bidding	Product is not for Bidding		

Showing 11 to 11 of 11 results

Per page [10](#)

[1](#) [2](#)

**Financer – User Credits**

**User Credits**

User	Amount	Credit	payment	Status	
	₱100.00	LOAN		DECLINED	<a href="#">View Proof of Payment</a>
	₱100.00	PAID		APPROVED	<a href="#">View Proof of Payment</a>
	₱100,000.00	LOAN CREDITS		APPROVED	<a href="#">View Proof of Payment</a>
RodBuyer	₱46,000.00	PAID CREDITS	GCASH	123	<a href="#">View Proof of Payment</a>
RodBuyer	₱20,000.00	LOAN CREDITS		APPROVED	<a href="#">View Proof of Payment</a>
RodBuyer	₱20,000.00	PAID CREDITS	GCASH	12345678910	<a href="#">View Proof of Payment</a>
RodBuyer	₱10,000.00	LOAN CREDITS		APPROVED	<a href="#">View Proof of Payment</a>
RodBuyer	₱15,000.00	LOAN CREDITS		PENDING	<a href="#">View Proof of Payment</a> ✓ Approve ✕ Decline
RodBuyer	₱15,000.00	PAID CREDITS	GCASH	12345678910	<a href="#">View Proof of Payment</a> ✓ Approve ✕ Decline

**Dashboard**

Total Credits Income

**₱0.00**

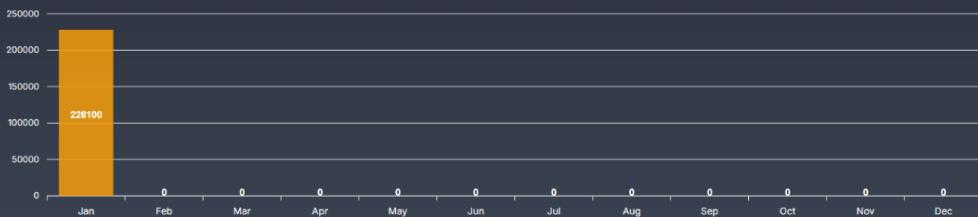
Total Credits Request Approved Today

**0**

Total Credits Request Declined Today

**0**

Monthly Credits Income





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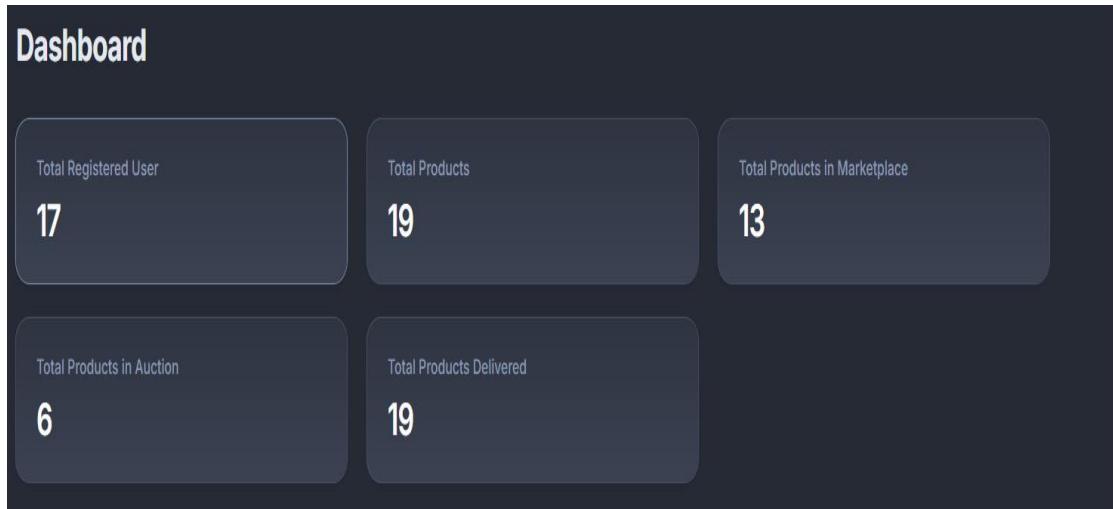
Tel. Nos.: (043) 778-2170/ (043) 406-0830 loc. 108

E-mail Address: cics.malvar@g.batstate-u.edu.ph | Website Address: <http://www.batstate-u.edu.ph>



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**Admin – Dashboard**



**Admin – Biddings**

Biddings > List

### Biddings

Bidding uid	Product	Product	Bid amount	Bidding start date	Bidding end date	Status
b3cab2b-9953-443f-97cb-c5083c8fdf78	BRAHMAN MALE	₱56,000.00	₱60,000.00	2025-01-12	2025-01-13	PENDING
6e1ddcad-1b3f-4c3d-805b-62671af7a43b	BRAHMAN MALE	₱56,000.00	₱57,000.00	2025-01-12	2025-01-13	PENDING
5d454011-fd62-4382-8d17-7ede57fe3022	Chester White	₱15,000.00	₱16,000.00	2025-01-13	2025-01-13	PENDING
528b1ab2-cfde-4d5d-a50c-c45f51b7c26a	BRAHMAN CATTLE	₱60,000.00	₱61,000.00	2025-01-13	2025-01-14	PENDING
0c9acf19-f153-4817-b32e-d9e8f65a0c77	CARABAO	₱20,000.00	₱25,000.00	2025-01-14	2025-01-15	PENDING
52a39fe0-0314-4f8d-a126-e85629918008	Cattle	₱35,000.00	₱38,000.00	2025-01-15	2025-01-16	CLOSED



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**Admin – Users**

sellerTest	clickmee246@gmail.com	SELLER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
RodBuyer	pnchrdlyn21@gmail.com	USER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Catherine Mcdonald	elitecyberdevelopersph@gmail.com	USER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Jorish	ajdelpilar03@gmail.com	SELLER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
Admin Rod	rodpancho02@gmail.com	ADMIN		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID
financer Rod	roddelpilar21@gmail.com	FINANCER		<input checked="" type="checkbox"/> Edit <input type="checkbox"/> View Valid ID

Showing 1 to 10 of 17 results

Per page **10**

**1** **2** **>**

**Customer Support**

The screenshot shows a messaging application interface with the following details:

- Active Conversations:** 1
- Conversation with RodBuyer:** User (RO) sent "tesa" at Jan 22, 2025 6:56 PM. RodBuyer responded with "wazzap" at Jan 22, 2025 7:04 PM. The message was seen at Jan 22, 2025 7:08 PM.
- Conversation with asdsadedsadsaasd:** User (RO) sent "hi" at Jan 22, 2025 7:08 PM. The user responded with "wew" at Jan 22, 2025 7:09 PM. The user responded with "eeee" at Jan 22, 2025 7:13 PM. The user responded with "asddada" at Jan 22, 2025 7:13 PM. The message was seen at Jan 22, 2025 7:15 PM.
- Search Bar:** Search any messages...
- Create Conversation:** Create Conversation
- Message Input:** Write a message...



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**F. GRAMMARIAN'S CERTIFICATION**

**CERTIFICATE OF EDITING OF THESIS/DISSERTATION**

This is to certify that the Thesis/Dissertation entitled "**SUBASTANAUAAN: AN ONLINE LIVESTOCK TRADING PLATFORM AND FINANCING FOR THE B2B AND B2C LIVESTOCK INDUSTRY FOR THE OFFICE OF THE CITY VETERINARIAN, TANAUAUAN CITY,**" prepared and submitted by **ALBA, JENE RUSSEL R., DE LEON, JOHN JOSEPH P., MIGO, JORISH ANN M., and PANCHO, RODELYN**, in partial fulfillment of the requirements for the Degree Bachelor of Science in Information Technology Major in Service Management has been reviewed and edited by the undersigned based on the minutes of the Final Defense.

It now follows the standard format of the University and conventions of research writing.

  
**MA. THERESA DUMDUMAYA, LPT, MAED, MPA**  
Signature over Printed Name

**Editor**

Date Signed: **January 24, 2025**



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**G. SYSTEM TURN OVER**



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**H. CURRICULUM VITAE**



**EDUCATIONAL BACKGROUND**

**Bachelor of Science in Information Technology major in Service Management**

Batangas State University JPLPC-Malvar Campus, Malvar, Batangas  
2021-Present

**SUMMARY OF QUALIFICATION**

- Plenty IT skills like HTML & CSS
- Capable in Microsoft office Application
- Computer Hardware Troubleshooting

**PERSONAL INFORMATION**

**Age:** 23

**Date of Birth:** January 15, 2002

**Gender:** Male

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Roman Catholic

*I do hereby certify that the above information is true and correct to the extent of my knowledge and ability.*

**JENE RUSSEL R. ALBA**

**Address:** Tanauan, Batangas

**Contact No.:** 09632088140

**Email:** 21-64264@g.batstate-u.edu.ph

**CAREER OBJECTIVE**

I seek to utilize this opportunity to apply the theoretical foundations acquired during my academic journey to practical projects and real-world challenges.

**SEMINARS ATTENDED**

- DATABIZ Conference 2024 (Data Science, Artificial Intelligence and Business Analytics)
- CISCO for all Certification: Cybersecurity

**CHARACTER REFERENCE**

**Mr. Johnrey N. Manzanal**  
Associate Dean, CICS  
Batangas State University TNEU  
JPLPC- Malvar Campus,  
Malvar, Batangas

**Mr. Eddie D. Bucad Jr.**  
Faculty Expert/Adviser  
Batangas State University TNEU  
JPLPC- Malvar Campus,  
Malvar, Batangas

**JENE RUSSEL R. ALBA**



Republic of the Philippines  
BATANGAS STATE UNIVERSITY  
**The National Engineering University**

JPLPC – Malvar Campus

G. Leviste St. Poblacion, Malvar, Batangas

Tel. Nos.: (043) 778-2170/ (043) 406-0830 loc. 108

E-mail Address: cics.malvar@g.batstate-u.edu.ph | Website Address: <http://www.batstate-u.edu.ph>



**COLLEGE OF INFORMATICS AND COMPUTING SCIENCES**



**EDUCATIONAL BACKGROUND**

**Bachelor of Science in Information Technology major in Service Management**

Batangas State University JPLPC-Malvar Campus, Malvar, Batangas

2021-Present

**SUMMARY OF QUALIFICATION**

- Active listening
- Dependable
- Multitasking
- Proficient in Microsoft Office applications

**PERSONAL INFORMATION**

**Age:** 22

**Date of Birth:** May 1, 2002

**Gender:** Male

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Roman Catholic

*I do hereby certify that the above information is true and correct to the extent of my knowledge and ability.*

**JOHN JOSEPH P. DE LEON**

**Address:** Laurel, Batangas

**Contact No.:** 09485857260

**Email:** deleonjohnjoseph@gmail.com

**CAREER OBJECTIVE**

I am looking for a company that will provide me with the opportunity to fully utilize my skills and contribute to its growth and success.

**SEMINAR ATTENDED**

- DATABIZ Conference 2024 (Data Science, Artificial Intelligence and Business Analytics)
- CISCO for all Certification: Cybersecurity

**CHARACTER REFERENCE**

**Mr. Johnrey N. Manzanal**

Associate Dean, CICS  
Batangas State University TNEU  
JPLPC- Malvar Campus,  
Malvar, Batangas

**Mr. Eddie D. Bucad Jr.**

Faculty Expert/Adviser  
Batangas State University TNEU  
JPLPC- Malvar Campus,  
Malvar, Batangas

**JOHN JOSEPH P. DE LEON**



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**EDUCATIONAL BACKGROUND**

**Bachelor of Science in Information Technology major in Service Management**

Batangas State University JPLPC-Malvar Campus, Malvar, Batangas

2021-Present

**SUMMARY OF QUALIFICATION**

- Willingness to learn and adapt to new technologies
- Strong problem-solving and analytical skills
- Teamwork and effective communication

**PERSONAL INFORMATION**

**Age:** 23

**Date of Birth:** July 11, 2002

**Gender:** Female

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Roman Catholic

*I do hereby certify that the above information is true and correct to the extent of my knowledge and ability.*

**JORISH ANN M. MIGO**

**Address:** Sto.Tomas, Batangas

**Contact No.:** 09104978450

**Email:** jurisamigo@gmail.com

**CAREER OBJECTIVE**

To utilize my skills with a strong commitment and dedication for the progressive growth of the company.

**SEMINAR ATTENDED**

- DATABIZ Conference 2024 (Data Science, Artificial Intelligence and Business Analytics)
- CISCO for all Certification: Cybersecurity

**CHARACTER REFERENCE**

**Mr. Johnrey N. Manzanal**

Associate Dean, CICS  
Batangas State University TNEU  
JPLPC- Malvar Campus,  
Malvar, Batangas

**Mr. Eddie D. Bucad Jr.**

Faculty Expert/Adviser  
Batangas State University TNEU  
JPLPC- Malvar Campus,  
Malvar, Batangas

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**COLLEGE OF INFORMATICS AND COMPUTING SCIENCES**



**EDUCATIONAL BACKGROUND**

**Bachelor of Science in Information Technology major in Service Management**

Batangas State University JPLPC-Malvar Campus, Malvar, Batangas

2021-Present

**SUMMARY OF QUALIFICATION**

- Proficient in Microsoft Office (Word, Excel, PowerPoint)
- Basic Canva design and editing
- Fundamental knowledge of HTML & CSS

**PERSONAL INFORMATION**

**Age:** 22

**Date of Birth:** October 21, 2002

**Gender:** Female

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Roman Catholic

*I do hereby certify that the above information is true and correct to the extent of my knowledge and ability.*

**RODELYN PANCHO**

**Address:** Sto.Tomas, Batangas

**Contact No.:** 09457806349

**Email:** pnchrdlyn21@gmail.com

**CAREER OBJECTIVE**

In pursuit of a position that will enable me to apply my knowledge and skills acquired during my academic years, to contribute to the organizations success and gain practical experiences.

**SEMINAR ATTENDED**

- DATABIZ Conference 2024 (Data Science, Artificial Intelligence and Business Analytics)
- CISCO for all Certification: Cybersecurity

**CHARACTER REFERENCE**

**Mr. Johnrey N. Manzanal**

Associate Dean, CICS

Batangas State University TNEU

JPLPC- Malvar Campus,

Malvar, Batangas

**Mr. Eddie D. Bucad Jr.**

Faculty Expert/Adviser

Batangas State University TNEU

JPLPC- Malvar Campus,

Malvar, Batangas

**RODELYN PANCHO**