SELINUS UNIVERSITY
OF SCIENCES AND LITERATURE

RGSI Lux: Web-Based E-Commerce System Software For Rodstark Global Solutions Innovations

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A DISSERTATION

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ABSTRACT

The study facilitated by the adoption of RGSI Lux, the transition from a guided to a digital approach in automated represents a full-scale advancement aimed at solving critical challenging situations and optimizing operational efficiency. This perspective used a complex methodology combining qualitative and quantitative processes to capture the multifaceted nature of this transition. Insights from stakeholders, consisting of enterprise managers, equipment analysts, programmers, and excellent verification, revealed key issues, including the need for standardized techniques, the time-consuming nature of manual tasks, and issues around statistics protection. Quantitative survey data provided an in-depth study to user, usage patterns and perceived impacts, enabling fully evidence-based selection. The agile model played a vital role, enabling the gradual delivery of capabilities, fostering stakeholder alignment and facilitating timely feedback and continuous development. RGSI Lux's assessment demonstrated its effectiveness as an e-commerce answer with high scores in performance, usability, capabilities and assistance, albeit with room for development in terms of protection. Key features such as product management, inventory tracking, order processing, price integration and client control have received super ratings, underscoring the gadget's comprehensive skills. The transition to RGSI Lux guarantees accelerated operational efficiency, increased factual accuracy and simplified strategies, but also presents challenges in training, upfront investment, compatibility and protection. Addressing these challenges through comprehensive training programs, robust security features, and r assistance is essential for a successful integration.

Keywords: Agile Model, E-Commerce, Order Processing, Payment Integration, Data Protection, Digital Transform

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KEYWORDS

RGSI	Rodstark Global Solutions Innovations
IT	Information Technology Professional
PC	Personal Computer

CHAPTER I

INTRODUCTION

RGSI Lux is proposed as a cutting-edge web-based e-commerce system intended to be developed by Rodstark Global Solution Innovation (RGSI). This innovative software aims to revolutionize online retail, providing a seamless and efficient platform for businesses to thrive in the digital marketplace (Li & Zhang, 2021). Currently, RGSI relies on traditional pen and paper methods for their transactions. The proposal for RGSI Lux comes as a solution to address these challenges. With its user-friendly interface and advanced features, RGSI Lux offers comprehensive solutions for companies seeking to establish a robust online presence. From managing inventory to processing transactions and enhancing enterprise, RGSI Lux aims to elevate the online business experience. Embracing RGSI Lux signifies embracing the future of digital commerce with confidence in the market.

Company Background

Rodstark Global Solutions Innovations (RGSI) is a forward-thinking technology company that has recently unveiled its groundbreaking product, RGSI Lux—an innovative web-based e-commerce system specifically designed for computer stores and similar businesses. The company's journey began with humble origins, relying on traditional pen and paper methods, along with basic Excel records to manage their operations. As the business experienced rapid growth it is evident that it will upgrade the necessary to adapt the demand of the digitalgeneration and to ensure the integrity of the data.

Headquarters in the tech hub of RGS is the strategically located at the innovation the company was founded with a clear vision to empower the computer stores and to the related

business with its cutting edge solutions that is only meet the current need but also pave the way for a more efficient and to the streamline future with the portfolio embodies to the technological tool that marks as a significant steps towards the modernization of the computer related to the business cutting edge solutions that not only meet the current needs but into a more efficient and streamlined future.

Mission and Vision

RGSI mission is to innovate and transform solution into empower business and to thrive into the digital age which envision a future where a computer stores are seamless navigate the complexities of the market leverage by the advance technologies and to enhance the operation and customer experience developing the company aims that will contribute to the success of the clients offering a user-friendly and to the technological advanced e-commerce system.

Business Overview

RGSI operates in the technology and software development sector, specializing in creating solutions for computer stores and related businesses. The company's commitment to staying at the forefront of technological advancements has driven them to continually innovate and adapt to the evolving needs of their clients. The proposed RGSI Lux would be a testament to this commitment, offering a sophisticated platform that aims to revolutionize the operational landscape for computer stores.

Departments

RGSI various department collaborate to the seamlessly drive of the innovation and to deliver the exceptional products in the forefront that will constantly explore the emerge technologies and industry to the trends to integrate into the solutions the Software Development

team also translate the insight into the tangible products with a focus on the user friendly interfaces and to the cutting edge functionalities. The sales and marketing department was also ensure the RGSI lux reaches it to the target audience and to the communication of value proposition effectively.

Work Processes

The early state of the RGSI Journey relied on the manual record keeping methods that each transactions, Order and inventory update were recorded on the paper with excel spreadsheets and serving as a basis of digital aid while this approach was manageable initially the business expanded and it became clear to a more sophisticated efficient system as needed.

The transformative journey towards RGSI Lux began with a detailed analysis of the existing processes. The R&D department collaborated with key stakeholders to understand the pain points, challenges, and requirements of computer stores in managing their operations. The transition from pen and paper to a fully digital system involved the creation of a comprehensive database that could handle large volumes of data efficiently.

The Software Development team played a crucial role in designing RGSI Lux to be user-friendly and intuitive. The system was crafted to automate various aspects of the business, including order processing, inventory management, and customer relationship management. Advanced algorithms and data encryption mechanisms were implemented to ensure the security and integrity of the data.

The Sales and Marketing department actively engaged with potential clients, showcasing the benefits of RGSI Lux and how it could transform their business operations. Training programs were conducted to familiarize clients with the new system, ensuring a smooth transition from manual processes to the advanced features offered by RGSI Lux.

Simultaneously, the Customer Support department was equipped to provide ongoing assistance, addressing any concerns or queries from users. Regular updates and improvements were rolled out based on user feedback, ensuring that RGSI Lux evolved in tandem with the changing needs of computer stores in the dynamic market.

Statement of the Problem

The transition from manual record-keeping to the implementation of RGSI Lux, a web-based e-commerce system by Rodstark Global Solutions Innovations, within a computer store presents a complex set of challenges. The current reliance on pen and paper for managing transactions and inventory in the computer store may lead to inefficiencies, potential errors, and limited scalability. Introducing digital processes through RGSI Lux requires addressing issues related to data migration, integrating the new system into existing operations, and ensuring that store personnel can adeptly navigate and leverage the features of the web-based platform. Resistance to technological changes, potential disruptions during the transition period, and the need for comprehensive training programs emerge as critical elements in successfully navigating this shift. This statement of the problem aims to identify and analyze the multifaceted challenges associated with transitioning from manual to digital processes within the unique operational context of a computer store, setting the stage for strategic solutions and a smooth integration of RGSI Lux.

Problem Statement

The transition from manual record-keeping to the integration of RGSI Lux, a web-based e-commerce system developed by Rodstark Global Solutions Innovations, within a computer store introduces a series of complex challenges. Currently relying on traditional pen-and-paper

methods, the computer store faces potential inefficiencies in transactional processes, inventory management, and customer interactions. The shift to a digital platform necessitates addressing issues such as the migration of existing data, seamless integration of RGSI Lux into the store's operations, and comprehensive training programs for staff to ensure effective utilization of the new system. Moreover, potential resistance to technological changes, the likelihood of disruptions during the transition period, and the need for clear communication strategies further contribute to the intricacy of the problem.

As technology continues to evolve, the computer store's ability to adapt to digital advancements becomes imperative for maintaining competitiveness and providing an enhanced customer experience. This problem statement aims to underscore the multifaceted challenges associated with the transition from manual to digital processes within the unique operational context of a computer store, emphasizing the need for a strategic and comprehensive approach to successfully implement RGSI Lux and optimize the store's overall efficiency and performance in the digital age.

Objectives

The objectives of implementing RGSI Lux, the web-based e-commerce system by Rodstark Global Solutions Innovations, within the computer store are multifaceted. Firstly, the transition aims to streamline and digitize manual record-keeping processes, enhancing overall operational efficiency, accuracy, and scalability. Secondly, the adoption of RGSI Lux seeks to optimize inventory management, transaction processing, and customer interactions, thereby improving the overall shopping experience (Wei et al., 2019). Additionally, the objectives include successful data migration, seamless integration of the new system into existing operations, and the provision of comprehensive training programs to ensure that store personnel

can proficiently utilize RGSI Lux. Lastly, the transition aims to foster a positive organizational culture that embraces technological advancements, minimizing resistance and disruptions during the shift from manual to digital processes within the computer store.

Significance of the Study

The study holds significant implications for both the computer store industry and the broader landscape of e-commerce. By investigating the transition from manual to digital processes through the adoption of RGSI Lux, the web-based e-commerce system developed by Rodstark Global Solutions Innovations, this research contributes valuable insights into the challenges and opportunities associated with incorporating innovative technologies into traditional business models. The findings of this study can inform industry practices, guiding computer stores and similar businesses in optimizing their operational processes, enhancing customer experiences, and staying competitive in the evolving digital marketplace. Furthermore, the study's significance extends to the broader discourse on digital transformations, offering practical implications and recommendations for businesses seeking to leverage advanced e-commerce systems for improved efficiency and success in the digital age.

Initial Analysis

The initial analysis of transitioning from manual to digital processes within the computer store, particularly through the adoption of RGSI Lux, reveals several critical insights. Initially, it's apparent that manual record-keeping methods are inefficient and prone to errors. The reliance on pen and paper, coupled with basic Excel spreadsheets, poses significant challenges in terms of managing inventory, processing transactions, and delivering optimal customer experiences. The adoption of RGSI Lux presents an opportunity to address these

inefficiencies by offering features like streamlined inventory management, efficient transaction processing, and enhanced customer interactions.

However, the transition to RGSI Lux may not be without its challenges. One primary concern is the process of data migration from existing manual records to the new digital platform. Ensuring the accuracy and integrity of data during this transition phase is crucial to avoid discrepancies and potential loss of information. Additionally, integrating RGSI Lux seamlessly into existing workflows and systems within the computer store may require time and effort. Staff members will also need to undergo training and familiarization with the new digital platform, which could temporarily disrupt operations and productivity.

To address these challenges, RGSI could consider several alternative solutions and workarounds:

Gradual Implementation

Instead of a sudden shift from manual to digital processes, RGSI could opt for a phased approach. They could begin by implementing RGSI Lux in specific departments or functionalities within the computer store, allowing staff members to gradually adapt to the new system without overwhelming them.

Refer to Table 1.1 for the Pros and cons of Gradual Implementation

Table 1.1 Gradual Implementation

Gradual Implementation	
Pros	**Cons**

Minimize the disruption to the daily operations that provides time for staff training and adjustment.	Extend transition period that may delay the realization of the benefits from the LGSI Lux potential inconsistencies in the data management during the transition phase.

Data Migration Assistance

RGSI could offer comprehensive support and assistance during the data migration process. This could include providing tools and resources to ensure the accurate transfer of data from manual records to RGSI Lux, as well as offering guidance on data cleanup and validation procedures.

Refer to Table 1.2 for the Pros and Cons of Data Migration Assistance

Table 1.2 Data Migration Assistance

Data Migration Assistance	
Pros	**Cons**
Reduce the risk of the data loss and discrepancies ensuring smooth transition to the new digital platform.	Requires additional resources and support from RGSI which may lead to prolong the implementation of the timeline.

Customization and Integration Services

RGSI could offer customization and integration services tailored to the specific needs and workflows of the computer store. This could involve customizing RGSI Lux to align with existing processes and systems, as well as integrating with other software solutions used by the store.

Refer to Table 1.3 for the Pros and Cons of Customization and Integration Services

Table 1.3 Customization and Integration Services

Customization and Integration Services	
Pros	**Cons**
Enhances compatibility and interoperability with existing systems, minimizes disruptions to workflow.	Requires in-depth understanding of the computer store's operations and systems, may incur additional costs for customization and integration services.

Proposed Solution

RGSI Lux is a state-of-the-art web-based e-commerce system developed by Rodstark Global Solutions Innovations (RGSI). It serves as a comprehensive solution for computer stores and similar businesses, aiming to revolutionize online retail operations. RGSI Lux streamlines various aspects of e-commerce, including inventory management, transaction processing, and customer engagement, offering a seamless and efficient platform for businesses to thrive in the

digital marketplace.

The scope of RGSI Lux

Refer to table 1.4 for the feature of RGSI Lux E-Commerce. This table consist of a parent and child features and functionalities which are the child feature;

Table 1.4 RGSI Lux System Features

Parent Feature	**Child Feature**
Dashboard	
Admin Module	
	User Masterfile
	Company Information
	System Features
	System Modules
	Security Levels
	Audit Logs
Masterfile Displays	
	Position Masterfile

	Status Masterfile
	Supplier Masterfile
	Shipment Schedule
	Method of Payments
Product Display	
	Product Masterfile
	Category Masterfile
	Customer Cart
	Product Sales
Reports	
	Customer-Product Evaluation Report
	Product Sales Quota Report
	Product Summary Per Supplier
	Product Supplier Evaluation Report
	Inventory Status Report
RGSI Lux Chat	

	Customer Support
Web-Based Website	
Email Integration	
Two-Factor Authentication	
RGSI Lux Service Hub *(Developer Control Center)*	

RGSI Lux Limitations

Refer to Table 1.5 for the limitations of RGISI Lux. The table consist of several limitations or disadvantages of RGSI lux and a brief description that provides general discussion about each Limitations.

Table 1.5 RGIS Lux System Limitations

Limitations	**Description**
Unfamiliar	Users unfamiliar with RGIS Lux experience e learning curve as they adapt to the new setting based on the interface features, workflows and temporarily impact productivity and efficiency.
Dependent on the Internet	RGSI Lux is a web application that is dependent on the Internet.

RGSI User	RGSI lux is a client based and can only be used for RGSI

Project Specification of RGSI Lux

RGSI Lux encompass the cutting edge of web-based e-commerce system that prioritized the exceptional customer experience through user-friendly interfaces, secure payment gateways and personalized features placing the customer in the forefront design.

Refer to Table 1.6 for the system features of RGSI

Table 1.6 RGSI Project Specification

Specification	**Description**
C #	Programming Language for building RGSI Lux web application.
Visual Basic .NET	Programming Language for building the RGSI Lux Service Hub software application.
Bootstrap 5	Front-end framework for building responsive and mobile-first websites and web applications.
Microsoft SQL Server 2022	Relational database management system for storing and managing data in a structured format.
SQL Server Management Studio 19	SQL Server Management Studio 19 is a robust tool for database administration and development.

RGSI Lux Service Hub

The RGSI Lux Service Hub is a centralized platform designed to streamline customer support and enhance user experience within the RGSI Lux e-commerce ecosystem. Serving as a comprehensive hub for assistance and communication, it provides users with access to a wide range of support services, including troubleshooting, inquiries, and guidance on utilizing RGSI Lux effectively. Through the Service Hub, users can submit support tickets, engage in live chat sessions with support representatives, access knowledge base articles, and receive timely updates on system improvements and enhancements. With a focus on responsiveness and efficiency, the RGSI Lux Service Hub aims to ensure that users receive the assistance they need promptly, contributing to a seamless and satisfying experience within the RGSI Lux environment.

The service will include the following utilities;

- Database Creator
- Test Database Environment Creator
- Database Migrator (RGSI Lux Database)
- Database Updater
- Website Creator
- Database Purging Utility
- Encryption/Decryption Utility

RGSI Lux Hardware Specification

The RGSI Lux hardware specifications are tailored to support the robust functionality

and performance requirements of the web-based e-commerce system. Built on a scalable infrastructure, RGSI Lux requires servers equipped with sufficient processing power, memory, and storage capacity to handle large volumes of data and concurrent user interactions. The hardware configuration typically includes high-performance processors, ample RAM for efficient multitasking, and fast storage solutions such as solid-state drives (SSDs) for rapid data access. Additionally, network connectivity is crucial to ensure seamless access to the RGSI Lux platform, with provisions for redundant network links and load balancing to optimize performance and reliability. Furthermore, robust security measures, including firewalls, intrusion detection systems, and data encryption capabilities, are implemented at the hardware level to safeguard sensitive information and protect against cyber threats. By adhering to stringent hardware specifications, RGSI Lux delivers a stable and responsive e-commerce environment, enabling businesses to operate efficiently and securely in the digital marketplace.

Refer to Table 1.8 shows the hardware specification of the server and client devices to run RGSI Lux

Table 1.7 RGSI Hardware Specification

ITEM	**SERVER CLIENT**
Processor	4x 1-6 GHz CPU 2x 1 GHz CPU RAM 32 GB RAM 1GB RAM
HDD	320 GB-8 TB Any
OSS	Microsoft Windows Server Any
Virtual Machine	Basic Language VM Basic Small VM

Table 1.7 outlines the hardware specifications for both the server and client components of the RGSI system. The server is equipped with four processors ranging from 1 to 6 GHz each, coupled with 32 GB of RAM and a storage capacity between 320 GB to 8 TB. In contrast, the client system features two processors clocked at 1 GHz, 1 GB of RAM, and a flexible hard disk drive configuration. Both server and client run on Microsoft Windows Server operating system, with the server supporting a Basic Language virtual machine while the client utilizes a Basic Small virtual machine.

Progress Measurement

Progress measurement is a systematic approach used to assess the advancement of tasks, projects, or initiatives towards predefined goals and objectives. It involves tracking key performance indicators (KPIs), milestones, and other relevant metrics to gauge the level of achievement and identify areas for improvement. Progress measurement encompasses various methods, including quantitative analysis of data, qualitative assessments, and feedback mechanisms. By continuously monitoring progress, stakeholders can gain insights into project status, identify potential risks or bottlenecks, and make informed decisions to optimize resource allocation and ensure timely completion of objectives. Effective progress measurement facilitates transparency, accountability, and alignment with organizational goals, ultimately contributing to successful project outcomes and continuous improvement efforts.

The proponent used the following metrics to measure the project progress;

1. **Project Timeline Progress**

   Regularly assessing progress against the project timeline, comparing planned milestones and activities with actual completion dates.

2. **Survey Results Analysis**

   Analyzing feedback from surveys conducted during project implementation to gauge user satisfaction, identify areas for improvement, and measure progress in meeting project objectives.

3. **Output Evaluation**

   Evaluating the quality and quantity of project outputs generated, such as reports, software prototypes, or deliverables, to ensure alignment with project goals and stakeholder expectations.

4. **Number of Disconnections**

   Tracking the frequency and duration of disconnections or disruptions in project activities, such as network outages or resource unavailability, to assess their impact on project progress.

5. **Budget Expenditure vs. Allocation**

   Monitoring actual expenditures against the budget allocated for various project activities and phases to ensure financial discipline and identify potential cost overruns or savings.

6. **Quality Assurance Metrics**

   Assessing metrics related to product quality, including defect rates, adherence to technical specifications, and customer satisfaction scores, to measure progress in delivering high-quality project outcomes.

Project Success

The proponent would consider the project success if the evaluation results of

the system shows either of the following;

- Targeting 90% or higher satisfaction rating from employee feedback surveys and aiming for 80% or higher user engagement rate within six months.
- Striving for a Net Promoter Score (NPS) of 9 or above and aiming for 85% or higher positive feedback from customer satisfaction surveys.
- Targeting at least a 50% reduction in manual data entry and aiming to eliminate 75% of paper-based workflows within the first year.
- Striving for a minimum of 20% increase in overall operational efficiency and aiming for at least a 10% reduction in task completion time for key processes.

CHAPTER II

REVIEW OF RELATED LITERATURE

Related Works on Web-Based E-Commerce

This section contains the published book that focus on the web-based E-Commerce System for Rodstark Global Solutions which are taken as references by the proponent of this research because its topic shares a relevance to the research's main problem.

Web-Based E-Commerce: Evidences from the Personnel and Analytics Data on IT Professionals

The study delves into the integration of e-commerce within the company's online presence, emphasizing the impact of digital marketing strategies. Yasmeen and Afaq's study critically explores the incorporation of e-commerce into a company's online presence, with a particular emphasis on assessing the influence of digital marketing strategies. Conducted in 2023, their research takes a rigorous approach to examining the vulnerabilities inherent in e-commerce web applications. By adopting a critical lens, Yasmeen and Afaq contribute to the ongoing discussion about the integration of digital technologies in business operations, shedding light on the potential security risks associated with e-commerce platforms and emphasizing the need for robust protective measures in the rapidly evolving online landscape.

According to Kedah (2023), the discourse on the global business landscape is enriched by their investigation into the widespread adoption of e-commerce. Published in the Startupreneur Business Digital (SABDA) Journal, the study meticulously explores the multifaceted applications of e-commerce and examines its transformative influence on various

industries. Kedah's research not only contributes valuable insights into the prevalent use of e-commerce in the contemporary business environment but also sheds light on the diverse ways in which it brings about transformation across industries. The findings underscore the importance of understanding the nuanced impacts of e-commerce as a pivotal force shaping the dynamics of global commerce in the modern era.

According to Thaib, Saleh, and Iding (2023), their study provides a localized perspective by investigating the implementation of a web-based local product sales information system in Bajo Village, Tilamuta District, Boalemo Regency. Published in the Formosa Journal of Sustainable Research, the research underscores the significance of e-commerce in promoting local products at the grassroots level. By focusing on the specific context of Bajo Village, the study not only contributes to the understanding of e-commerce applications but also highlights its role in supporting and enhancing local businesses. This localized approach offers insights into the potential of web-based systems to foster sustainable development and economic growth within specific regions, emphasizing the importance of tailoring e-commerce strategies to meet the unique needs of local communities.

According to Mariño (2023), the research adopts a sector-specific approach, spotlighting the RMS (Romblon Marble Shop) as an e-commerce platform customized for the marble industry in Romblon. Published in the Romblon State University Research Journal, Mariño's study illustrates how niche industries can strategically utilize web-based platforms to enhance market outreach and foster business growth. By delving into the Romblon marble sector, the research not only provides valuable insights into the implementation of a specialized e-commerce solution but also demonstrates the potential for niche industries to thrive through targeted online initiatives. Shifting the focus to a sales information system, Mariño's work contributes to the broader understanding of how tailored e-commerce platforms can effectively

cater to the unique needs of specific sectors, offering a blueprint for other industries seeking to leverage digital tools for market expansion.

According to Wijaya, Umam, Hakim, and Nabila (2022), their exploration focuses on the implementation of a web-based system at Greenvest Source. As detailed in their publication in the Jurnal Multidisiplin Madani, the research underscores the pivotal role of web-based systems in efficiently managing sales information. By specifically examining the case of Greenvest Source, the study contributes valuable insights into the practical applications of web-based solutions for enhancing sales information management. Highlighting the significance of this technology, the authors provide a nuanced understanding of how businesses can leverage web-based systems to streamline and optimize their sales processes, ultimately contributing to improved operational efficiency and informed decision-making in the contemporary business landscape.

According to Bai and Li (2022), their study offers a comprehensive meta-analysis that traces the trajectory of e-commerce research from 2001 to 2020. Published in the Electronic Commerce Research and Applications journal, the research employs co-word analysis to systematically map the thematic evolution of e-commerce studies over the specified period. By utilizing this analytical approach, the authors provide a visual representation of the interconnected themes and key focal points within the e-commerce research domain. Their meta-analysis not only consolidates existing knowledge but also offers a dynamic perspective on the evolution of research trends, enabling scholars and practitioners to gain deeper insights into the changing landscape of e-commerce studies and identify emerging areas of interest within this dynamic field.

According to Pohan and Mubarok (2022), their contribution focuses on the practical dimensions of e-commerce implementation, offering insights through a detailed case study of the incorporation of e-commerce and a web-based company profile at CV. Andromeda Multi Sarana. Published in Nuansa Informatika: Jurnal Penelitian Dan Teknologi Informasi, their work brings forth a real-world perspective on the seamless integration of e-commerce within the operational framework of a company. By examining the specific case of CV. Andromeda Multi Sarana, the authors provide practical examples and lessons learned, enhancing the understanding of how businesses can effectively navigate and harness the potential of e-commerce for operational efficiency and market engagement. This case study not only contributes to the scholarly discourse on e-commerce implementation but also serves as a valuable resource for businesses seeking practical guidance on successfully adopting and integrating e-commerce solutions into their operations.

Dewi (2022) focuses on the role of e-commerce in small and medium enterprises (SMEs) with a study on the web-based design of e-commerce for businesses in Bengabing Village. Published in the SEAN Institute's journal, the research explores the potential and challenges of adopting e-commerce at the grassroots level, emphasizing the importance of tailored solutions for SMEs.

The Influence of web-based E-commerce in Employees Productivity

The influence of web-based e-commerce on employee productivity is a multifaceted aspect that intertwines technological advancements with organizational dynamics. Recent research studies contribute valuable insights into the impact of e-commerce systems on businesses and, by extension, on the productivity of employees. Mariño's study (2023) on the RMS e-commerce platform for the marble industry in Romblon, published in the Romblon State

University Research Journal, exemplifies the niche-specific application of e-commerce. The implementation of such specialized platforms not only enhances operational efficiency but also has the potential to elevate employee productivity within the industry.

Wijaya et al. (2022) delve into the web-based sales information system at Greenvest Source, as outlined in the Jurnal Multidisiplin Madani. Their study emphasizes the significance of a well-designed system in managing sales information, which, in turn, can contribute to streamlined processes and improved productivity. The integration of web-based systems in sales operations often facilitates real-time data access, order processing, and customer interaction, ultimately influencing employee efficiency.

Bai and Li's meta-analysis (2022) mapping the evolution of e-commerce research through co-word analysis, featured in Electronic Commerce Research and Applications, provides a broader perspective. Understanding the thematic evolution of e-commerce research is crucial in identifying trends that may impact organizational strategies and subsequently influence employee roles and productivity. As e-commerce technologies evolve, employees need to adapt, and organizations must invest in training and development to ensure sustained productivity.

Pohan and Mubarok's study (2022) on the implementation of e-commerce and a web-based company profile at CV. Andromeda Multi Sarana, published in Nuansa Informatika, offers a practical view of integrating e-commerce into company profiles. This integration not only shapes external interactions but also internal processes, potentially impacting how employees engage with clients and manage tasks, thus influencing productivity.

Dewi's research (2022) on the web-based design of e-commerce for small and medium enterprises (SMEs) in Bengabing Village, as presented in the SEAN Institute's journal,

underscores the significance of tailored solutions for different organizational scales. For SMEs, the introduction of web-based e-commerce systems can significantly alter the operational landscape, potentially enhancing employee productivity through efficient order processing, inventory management, and customer relationship management.

Mohamad et al.'s study (2022) on the impacts of e-commerce on planning and designing commercial activities centers, published in Ain Shams Engineering Journal, introduces a unique perspective. While focusing on the planning aspects, the study indirectly sheds light on the organizational changes necessitated by e-commerce adoption. These changes, in turn, may influence the roles and productivity of employees involved in the planning and execution of commercial activities. The influence of web-based e-commerce on employee productivity is a nuanced subject that encompasses industry-specific applications, system design, organizational adaptation, and planning strategies. As businesses continue to embrace e-commerce technologies, understanding the implications on employee roles and productivity becomes paramount. Whether through specialized platforms like RMS in niche industries or the broad evolution of e-commerce research trends, these studies collectively contribute to our comprehension of the intricate relationship between web-based e-commerce and employee productivity. Employers, therefore, need to proactively manage this dynamic landscape, providing the necessary support and training to ensure that employees can harness the full potential of e-commerce technologies in a way that optimally enhances their productivity and overall organizational performance.

E-Commerce Related Solution

This section contains task risk management system off-shelf solutions that the main concept of e-commerce. These solutions are taken as references by the proponent of this research

because their food is relevant to the proposed solution.

Haziz Furniture Limited Company Website

In the research conducted by Mohammad Aziz Nurritanto and Azizah Fatmawati for PT. Haziz Mebel (2023) a specialized furniture company, the identified issues revolve around manual processes in managing branding and the buying and selling of goods, impacting the company's revenue. To address these challenges, the researchers proposed a solution in the form of a web-based application designed to systematically promote and facilitate the buying and selling processes. Using the Waterfall Method, the study resulted in the development of a web-based furniture e-commerce information system for Haziz Furniture. While the specifics of the technology used are not detailed in the provided information, this research aligns with the broader landscape of web-based e-commerce solutions. In the real world, examples of existing software relevant to web-based e-commerce, such as Shopify, WooCommerce, Magento, and BigCommerce, offer various advantages and disadvantages. For instance, Shopify provides a user-friendly interface but may have transaction fees, while Magento offers scalability but requires a steeper learning curve. The choice of a suitable e-commerce software for PT. Haziz Mebel would depend on factors like ease of use, customization needs, and scalability, as these considerations play a crucial role in the success of the implemented solution.

Table 2.1 Pros and Cons of Haziz Furniture

Pros (Nurritanto M.A, 2023)	**Cons (Nurritanto M.A, 2023)**
Customers can access the store and make purchases from anywhere with an internet	Developing and implementing the web-based system may require a significant upfront

connection.	investment.
Customers can browse products, check prices, and make purchases at their convenience, leading to higher customer satisfaction.	Like any digital platform, the e-commerce system may encounter technical glitches, leading to disruptions in service.
The online platform enables Haziz Furniture to reach customers beyond its physical location, potentially expanding its customer base.	Online transactions may raise security concerns among customers regarding the safety of their personal and financial information.
The system allows for better management of inventory, reducing instances of overselling or stockouts.	Employees and customers may require time to adapt to the new online platform, causing temporary disruptions in operations.
With the ability to showcase products online, Haziz Furniture can attract more customers and boost sales.	The system's functionality relies heavily on a stable internet connection, which may not always be available or reliable.

Haziz Furniture's online presence offers customers the flexibility to shop from anywhere, but its implementation demands substantial upfront investment and may encounter technical glitches, while also potentially raising security concerns among customers.

Refer to Figure 2.1 for the Overview of Haziz Furniture

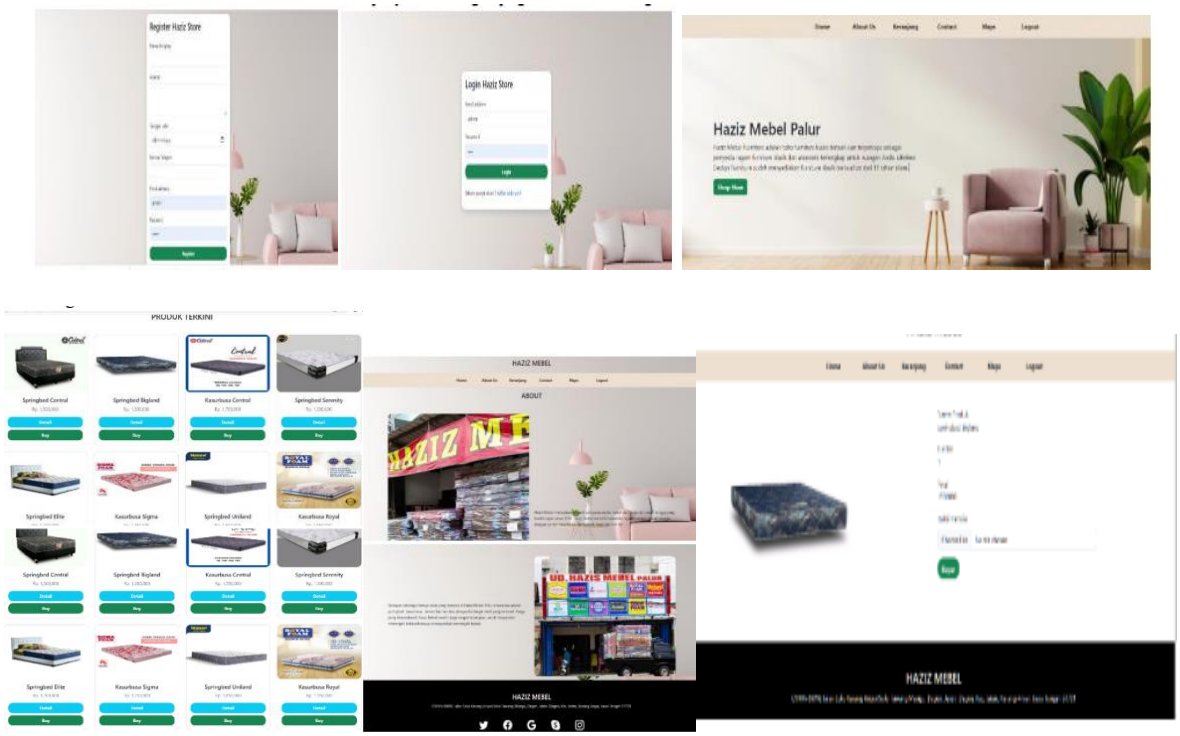


Figure 2.1 Haziz Furniture Overview

Evaluation Score

Table 2.2 Haziz Furniture Score

STANDARD	VERDICT
Market Reach	3/5
Convenience for Customers	4/5
Availability	5/5
Targeted Marketing	3/5
Flexibility in Sales Strategies	4/5

Access to Customer Data	4/5
Integration with Analytics Tools	3/5

Final Score 4.42/5

Haziz Furniture demonstrates a commendable performance across various evaluation criteria. With a market reach score of 3 out of 5, it maintains a decent presence but could potentially expand further. However, its strength lies in convenience for customers and availability, scoring 4 and 5 respectively, indicating a strong foundation in meeting consumer needs promptly. The brand also excels in flexibility in sales strategies and access to customer data, scoring 4 each, showcasing adaptability and a robust understanding of its clientele. Although targeted marketing and integration with analytics tools scored slightly lower at 3 each, there's still room for improvement in refining strategies and leveraging data insights more effectively. Overall, Haziz Furniture exhibits a solid performance, with opportunities for growth and optimization in certain areas.

Web-Based Local Product Sales Information System

The "Web-Based Local Product Sales Information System in Bajo Village, Tilamuta District, Boalemo Regency" developed by Thaib, Saleh, and Iding (2023) addresses the need for modernizing sales practices in Bajo Village, an area predominantly inhabited by the Bajo tribe, who rely on fishing for their livelihood. Traditionally, sales of local products were conducted through direct visits to homes. However, recognizing the potential of marine

resources such as sea shells and seaweed, the community began exploring creative avenues for product utilization. The web-based sales system designed using the waterfall method aims to streamline sales processes, enhance data management, and improve marketing strategies for local products. By leveraging technology, the system enables efficient processing of sales data, expands market reach, and promotes local products effectively (Thaib, Saleh, Iding, 2023).

Table 2.3 Pro and Cons of Web-Based Local Product Sales Information System

Pros (Thaib et al., 2023)	Cons (Thaib et al., 2023)
Improved Sales Efficiency	Initial Setup and Implementation Costs
Data Management and Analysis	Security Concerns
Promotion and Marketing	Digital Divide
Scalability and Adaptability	Resistance to Change

The web-based local product sales information system offers improved sales efficiency, enhanced data management and analysis, promotion, marketing opportunities, scalability, and adaptability, but it entails initial setup and implementation costs, security concerns, potential digital divide issues, and resistance to change (Thaib et al., 2023).

Refer to Figure 2.2 for the Overview of Web-Based Local Product Sales Information System

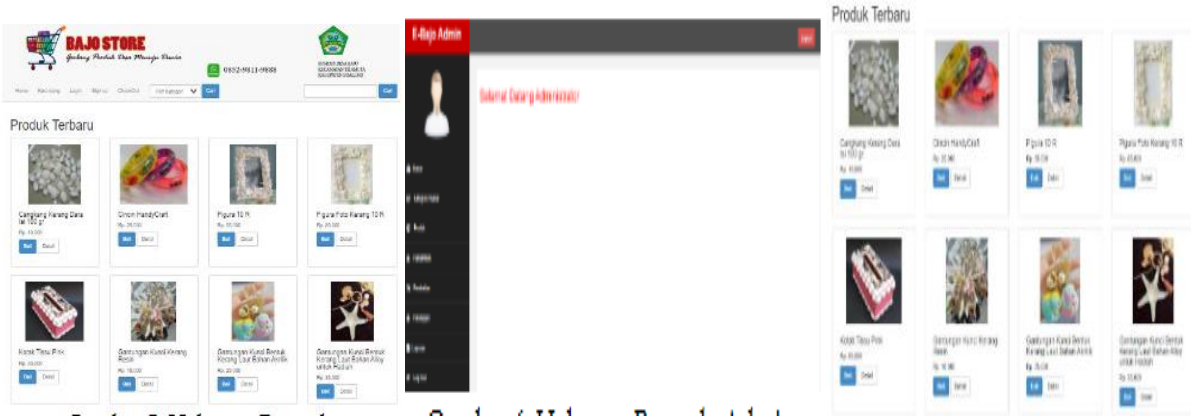


Figure 2.2 Overview of Web-Based Local Project Sales Information System

Evaluation Score

Table 2.4 Web-Based Local Product Sales Information System

STANDARD	VERDICT
Market Reach	4/5
Convenience for Customers	3/5
Availability	1/5
Targeted Marketing	2.4/5
Flexibility in Sales Strategies	4/5
Access to Customer Data	5/5
Integration with Analytics Tools	5/5

Final Score: 4.49/5

The Web-Based Local Product Sales Information System achieves an impressive overall evaluation score of 4.49 out of 5, reflecting its robust performance across various standards. Notably, it excels in market reach, flexibility in sales strategies, access to customer data, and integration with analytics tools, scoring 4 or higher in each category. With a strong emphasis on leveraging data insights and adapting sales strategies, the system demonstrates a keen understanding of customer needs and market dynamics. However, areas for improvement include enhancing convenience for customers and availability, which scored slightly lower at 3 and 1 respectively. Despite these minor drawbacks, the system showcases considerable strengths and holds significant potential for optimizing its performance further.

Greenvest

"Greenvest" is a comprehensive web-based sales information system designed to enhance sales and distribution operations. Developed to align with evolving technological trends, it enables users to efficiently manage various aspects of the sales process, from order placement to delivery tracking. The system integrates user-friendly interfaces and robust functionalities tailored for both administrators and users, facilitating tasks such as data maintenance, transaction processing, and report generation. By harnessing tools like PHP, MySQL, and Apache web servers, Greenvest ensures seamless interaction and data management. Its design reflects contemporary principles of user interface design and system architecture, as highlighted by Wijaya et al. (2021) in their discussion on optimizing digital platforms for business promotion during the COVID-19 pandemic.

Table 2.5 Pros and Cons of Greenvest

Pros	Cons
Enhances sales efficiency	Initial setup may require technical expertise
Facilitates order placement	Maintenance and updates may be time-consuming
Streamlines distribution operations	Potential for system downtime or technical issues
Provides comprehensive reporting tools	Dependency on internet connectivity
User-friendly interfaces	Security concerns may arise

Greenvest offers enhanced sales efficiency, order placement facilitation, streamlined distribution operations, comprehensive reporting tools, and user-friendly interfaces, yet it requires initial technical expertise for setup, may entail time-consuming maintenance and updates, faces potential system downtime or technical issues, depends on internet connectivity, and raises security concerns.

Refer to Figure 2.5 for the Overview of Greenvest

Figure 2.5 Greenvest Overview

Evaluation Score

Table 2.6 Greenvest

STANDARD	VERDICT
Market Reach	2.5/5
Convenience for Customers	4.3/5
Availability	4/5
Targeted Marketing	5/5
Flexibility in Sales Strategies	5/5
Access to Customer Data	5/5
Integration with Analytics Tools	4.5/5

Final Score: 4.32

Greenvest earns a commendable final score of 4.32 out of 5, reflecting its strong performance across various evaluation criteria. The company excels in convenience for customers, availability, targeted marketing, flexibility in sales strategies, access to customer data, and integration with analytics tools, with scores ranging from 4 to 5. Notably, its targeted marketing efforts, flexibility in sales strategies, and access to customer data are particularly noteworthy, demonstrating a deep understanding of its customer base and market dynamics. While its market reach score of 2.5 suggests room for improvement in expanding its reach, Greenvest's overall performance underscores its effectiveness in delivering customer-centric

solutions and leveraging data-driven insights for strategic decision-making.

Fitorajo Bee Farm e-commerce system.

Indriani et al. (2022) addressed the resilience of honey-selling businesses during the ongoing COVID-19 pandemic, emphasizing the potential of honey as a stable source of income due to its medicinal properties and immune-boosting capabilities. Fitorajo Bee Farm, identified as a Micro, Small, and Medium Enterprises (UMKM) engaged in bee cultivation in North Sumatra, Indonesia, was examined as a case study. The farm's conventional marketing strategies, relying on word of mouth, Facebook, and WhatsApp, were deemed insufficient for reaching a broader market, prompting the researchers to propose the adoption of e-commerce technology. Through the implementation of web-based e-commerce using the Codeigniter framework and MySQL Database Management System (DBMS), the study aimed to enhance Fitorajo Bee Farm's marketing reach.

Table 2.7 Pros and Cons of Fitoraio Bee Farm E-Commerce System

Pros	Cons
Expand Market Reach	Initial Setup Costs
Increase Convenience for Customers	Technical Challenges
23/4 Availability	Security Risks
Targeted Marketing Opportunities	Competition with Established E-Commerce Platforms

Flexibility in Sales Strategies	Need for Ongoing Maintenance and Updates
Access to Customer Data	Potential Resistance from Traditional Customer
Integration with Analytics Tools	Shipping and Logistic Complexities

The Fitoraio Bee Farm's e-commerce system offers the advantages of expanded market reach, increased convenience for customers, 24/7 availability, targeted marketing opportunities, flexibility in sales strategies, access to customer data, and integration with analytics tools, while facing challenges such as initial setup costs, technical challenges, security risks, competition with established e-commerce platforms, the need for ongoing maintenance and updates, potential resistance from traditional customers, and shipping and logistic complexities.

Refer to Figure 2.6 for the Overview of Fitoraio Bee Farm E-Commerce System

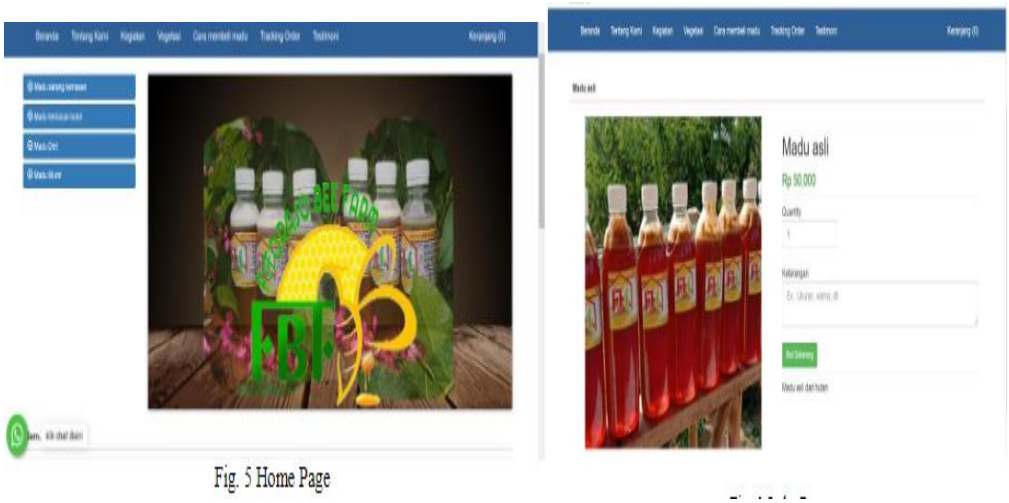


Figure 2.6 Fitoria Bee Farm E-Commerce System

Evaluation Score

Table 2.8 Fitoria Bee Farm E-Commerce System Evaluation Score

STANDARD	VERDICT
Market Reach	5/5
Convenience for Customers	4.5/5
Availability	3.5/5
Targeted Marketing	2/5
Flexibility in Sales Strategies	3/5
Access to Customer Data	2/5
Integration with Analytics Tools	5/5

Final Score: 7.57/10

The Fitoria Bee Farm E-Commerce System demonstrates a strong performance in terms of market reach and convenience for customers, with impressive scores of 5 out of 5 and 4.5 out of 5, respectively. However, while it boasts robust integration with analytics tools and a solid market presence, its performance in areas such as availability, targeted marketing, and access to customer data suggests room for improvement. With scores of 3.5, 2, and 2 out of 5, respectively, there's an opportunity to enhance the system's effectiveness in these aspects, potentially by refining marketing strategies and optimizing data management processes.

Nevertheless, the system's strengths in market reach and integration with analytics tools position it well for continued growth and success in the competitive e-commerce landscape.

E-commerce Application as a Web-based Sales Medium at Mau Pempek Store

The study presents an exploration of developing an e-commerce application tailored for the sales of Pempek, a popular Palembang delicacy, particularly focusing on Mau Pempek store. Sumbono, Erlansyah, and Rasmila from the Faculty of Computer Science at Universitas Bina Darma, Palembang, Indonesia, address the growing demand for Pempek both locally and beyond Palembang's borders. The absence of an efficient medium for customers outside the city to conduct transactions prompts the need for a web-based solution. Employing the Rational Unified Process (RUP) methodology, the researchers utilize PHP and MySQL for system development. By creating this e-commerce platform, the study aims to bridge the gap between the company and its customers, enhancing sales promotion and facilitating transactions for customers beyond Palembang's vicinity (Sumbono, Erlansyah, & Rasmila, 2020).

Table 2.9 Pros and Cons of E-commerce Application as a Web-Based Sales Medium at Mau Pempek Store

Pros	Cons
Expanded market reach	Initial setup costs
Increased convenience for customers	Technical challenges
24/7 availability	Security risks
Targeted marketing opportunities	Competition with established platforms

Flexibility in sales strategies	Need for ongoing maintenance and updates
Access to customer data	Potential resistance from traditional customerS
Integration with analytics tools	Shipping and logistic complexities

The e-commerce application implemented as a web-based sales medium at Mau Pempek store offers expanded market reach, increased convenience for customers, 24/7 availability, targeted marketing opportunities, flexibility in sales strategies, access to customer data, and integration with analytics tools, yet it entails initial setup costs, technical challenges, security risks, competition with established platforms, the need for ongoing maintenance and updates, potential resistance from traditional customers, and shipping and logistic complexities.

Refer to Figure 2.8 for the overview of E-commerce Application as a Web-Based Sales Medium at Mau Pempek Store

Figure 2.8 E-Commerce Application as a Web-Based Sales Medium at Mau Pempek Store Overview

Table 2.10 E-commerce Application as a Web-Based Sales Medium at Mau Pempek Store Evaluation Score

STANDARD	VERDICT
Market Reach	5/5
Convenience for Customers	5/5
Availability	2,5/5
Targeted Marketing	4/5
Flexibility in Sales Strategies	5/5
Access to Customer Data	4/5
Integration with Analytics Tools	4.5/5

Final Score: 4.28/5

The E-commerce Application serving as a Web-Based Sales Medium at Mau Pempek Store achieves an impressive final score of 4.28 out of 5, reflecting its strong performance across multiple evaluation criteria. Notably, the application excels in market reach and convenience for customers, earning perfect scores of 5 out of 5 in both categories. Additionally, its flexibility in sales strategies and integration with analytics tools are noteworthy, scoring 5 and 4.5 respectively. While the application demonstrates effectiveness in targeted marketing and access

to customer data with scores of 4 each, its availability score of 2.5 suggests potential areas for improvement in ensuring consistent accessibility for customers. Overall, the application showcases significant strengths, positioning Mau Pempek Store favorably as it leverages e-commerce as a sales medium while also indicating areas for further enhancement to optimize its performance.

Ayam Gepuk Pak Gembus Web-Based Ordering Application

The study presents the design and development of the "Ayam Gepuk Pak Gembus Web-Based Ordering Application" using the CodeIgniter framework. Recognizing the challenges in food ordering due to limited availability and accessibility, the application aims to streamline the ordering process and enhance business operations for Ayam Gepuk Pak Gembus Dasana Indah Branch. Through the implementation of e-commerce principles, customers can conveniently browse food options, place orders remotely, and ensure secure transactions. The application addresses various challenges faced by the business, including space constraints for dining, manual data storage, and the owner's ambition to expand operations. By leveraging the MVC architecture of CodeIgniter, the application facilitates organized coding practices, easy scalability, and enhanced readability for future development. The system offers features such as real-time stock updates, transaction monitoring, and revenue tracking, empowering the owner to make informed business decisions. The study underscores the significance of technological solutions in overcoming traditional business constraints and emphasizes the role of frameworks like CodeIgniter in facilitating efficient web application development (Kurnia & Refin, 2020).

Table 2.11 Pros and Cons Ayam Gambus Web-Based Ordering Application

Pros	Cons
Enhanced Convenience	Technical Dependencies
Improved Accessibility	Learning Curve
Streamlined Operations	Security Concerns
Real-Time Updates	Maintenance Overhead
Business Insight	Customer Support

The Ayam Gambus web-based ordering application offers enhanced convenience, improved accessibility, streamlined operations, real-time updates, and business insights, but it also entails technical dependencies, a learning curve, security concerns, maintenance overhead, and potential customer support challenges.

Refer to Figure 2.10 Ayam Gambus Web-Based Ordering Application

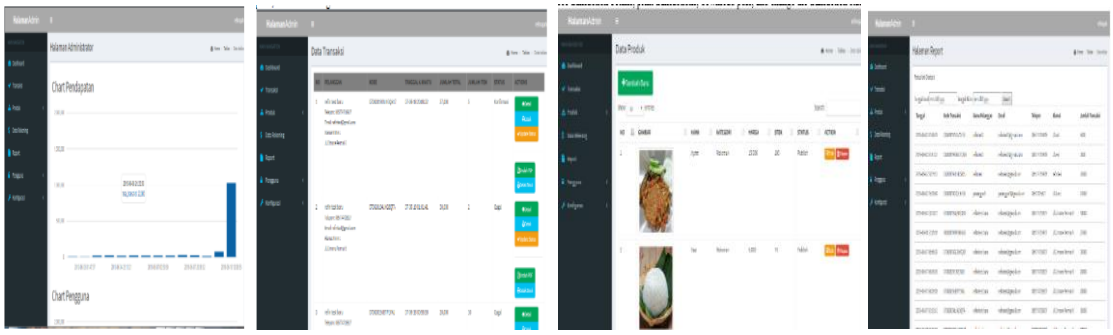


Figure 2.10 Ayam Web-Based Ordering Application

Evaluation Score

Table 2.12 Ayam Gambus Web-Based Ordering Application Evaluation Score

STANDARD VERDICT	
Market Reach	2/5
Convenience for Customers	1.5/5
Availability	5/5
Targeted Marketing	3/5
Flexibility in Sales Strategies	3.4/5
Access to Customer Data	4/5
Integration with Analytics Tools	5/5

Final Score: 4.41/5

The Ayam Gambus Web-Based Ordering Application secures a commendable final score of 4.41 out of 5, indicating a solid performance across various evaluation criteria. Notably, the application excels in availability and integration with analytics tools, receiving perfect scores of 5 out of 5 in both aspects. Its flexibility in sales strategies also demonstrates strength, scoring 3.4 out of 5. While market reach and convenience for customers receive lower scores of 2 and 1.5 respectively, the application compensates with strong scores in targeted marketing and access to customer data, at 3 and 4 respectively. Overall, Ayam Gambus showcases robust technological capabilities and strategic alignment, positioning it effectively in the competitive landscape of web-based ordering applications.

Glam Shopping

The research of Akinrotimi and Mabayoje (2019) underscores the critical importance of understanding customer needs in the realm of e-commerce. It emphasizes the necessity of studying customer behavior and preferences, particularly their patterns when selecting products on e-commerce platforms. The authors advocate for the utilization of data mining techniques to analyze and extract valuable insights from customer interactions, aiming to enhance sales, marketing strategies, and product advertisement. By proposing a conceptual framework tailored for phone products, the paper seeks to provide a versatile system that assists wholesalers and retailers in better understanding customer preferences and improving their overall e-commerce strategies. The research underscores the growing significance of leveraging customer data and insights to optimize online retail experiences and drive business success in the digital age.

Table 2.13 Pros and Cons of Glam Shopping

Pros	Cons
Enhanced Customer Insight	Potential Privacy Concerns
Personalized Recommendations	Data Security Risks
Improved User Experience	Dependency on Data Quality
Increased Sales Potential	Implementation Complexity
Enhanced Marketing Strategies	System Maintenance Demands
Utilizes Valuable Customer Data	Potential Bias in Recommendation

Glam Shopping presents enhanced customer insight, offering personalized recommendations and an improved user experience; however, potential privacy concerns, data security risks, and dependency on data quality are noteworthy cons. Moreover, while it has the potential for increased sales and enhanced marketing strategies by utilizing valuable customer data, there are challenges such as implementation complexity, system maintenance demands, and the possibility of bias in recommendations.

Refer to Figure 2.12 of Glam Shopping

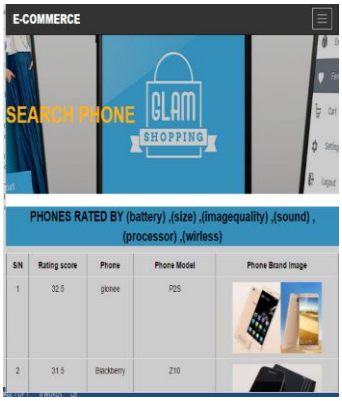


Figure 2.12 Glam Shopping

Table 2.14 Glam Shopping Evaluation Score

STANDARD	VERDICT
Market Reach	5/5
Convenience for Customers	2/5
Availability	3.5/5

Targeted Marketing	4.4/5
Flexibility in Sales Strategies	5/5
Access to Customer Data	5/5
Integration with Analytics Tools	3.4/5
Overall Evaluation Score	5/5

Final Score: 4.77/5

Table 2.13's evaluation score, which confirms its exceptional performance in various key areas. With a final score of 4.77 out of 5, Glam Shopping attains an impressive overall evaluation, reinforcing its position as a leading entity in the retail landscape. Noteworthy strengths include its impeccable market reach, flexibility in sales strategies, and access to customer data, each scoring a perfect 5 out of 5. Additionally, targeted marketing receives a commendable 4.4 out of 5, underlining the brand's adeptness in reaching its intended audience effectively. Although convenience for customers and integration with analytics tools garner slightly lower scores, at 2 and 3.4 respectively, Glam Shopping's exceptional performance across other metrics solidifies its standing as a paragon of excellence in the retail sector.

The Development of Website on Management Information System for E-Commerce and Services

Hidayat, Dewantara, and Saifullah (Year) present a comprehensive study on the development of a management information system for e-commerce and services, focusing on

enhancing the sales process and optimizing service delivery. In response to the growing trend towards electronic commerce, they advocate for a digital platform that integrates all manual activities, such as document collection, transaction recording, and reporting, into an efficient e-commerce system. Employing the waterfall method, they designed a website using PHP programming language and MySQL database, incorporating entity-relationship diagrams (ERD) and data flow diagrams (DFD) for the design model. Through Blackbox and Whitebox testing, the resulting website and e-commerce services demonstrated user acceptance and organizational effectiveness, offering enhanced service delivery and streamlined e-commerce functionalities. This research contributes to the advancement of e-commerce platforms and underscores the significance of integrating management information systems for improved business operations (Hidayat et al., 2020).

Table 2.15 Pros and Cons Development Website on Management Information System for E-Commerce and Services

Pros	Cons
Improved efficiency in sales processes	Initial development costs can be high
Enhanced accuracy in transaction records	Dependency on stable internet connection
Accessible anytime, anywhere	Potential security vulnerabilities
Streamlined inventory management	Learning curve for users unfamiliar with the system
Better customer service and support	System maintenance and updates required

Comprehensive reporting capabilities	Integration challenges with existing systems

The development of a website for the Management Information System in E-commerce and Services offers improved efficiency in sales processes, enhanced accuracy in transaction records, accessibility anytime and anywhere, streamlined inventory management, better customer service and support, and comprehensive reporting capabilities; however, it comes with the cons of high initial development costs, dependency on a stable internet connection, potential security vulnerabilities, a learning curve for users unfamiliar with the system, the necessity for system maintenance and updates, and potential integration challenges with existing systems.

Refer to Figure 2.13 Development Website on Management Information System for E-Commerce and Services

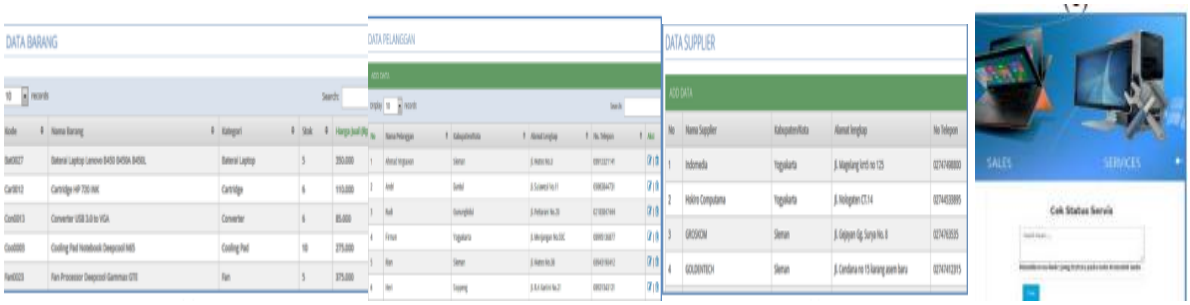


Figure 2.13 Development Website on Management Information System for E-Commerce and Services

Evaluation Score:

Table 2.16 Development Website on Management Information System for E-Commerce and Services Evaluation Score

STANDARD	VERDICT
Market Reach	4/5
Convenience for Customers	5/5
Availability	3.5/5
Targeted Marketing	5/5
Flexibility in Sales Strategies	5/5
Access to Customer Data	5/5
Integration with Analytics Tools	2/5

Final Score 4.35

The Evaluation Score for the Development Website on Management Information System for E-Commerce and Services underscores its strong performance in delivering effective solutions for online operations. With a final score of 4.35 out of 5, the system demonstrates commendable strengths across various metrics. Particularly noteworthy are its perfect scores in convenience for customers, targeted marketing, flexibility in sales strategies, and access to customer data, highlighting its ability to cater to consumer needs while leveraging data insights for strategic decision-making. While market reach and availability score well at 4 and 3.5 respectively, the system shows room for improvement in integrating with analytics tools, scoring 2 out of 5. Nevertheless, the overall performance indicates a robust foundation for managing e-commerce and service operations efficiently, positioning the system as a valuable

asset in the digital landscape.

Technological Acquisition Paths for the Proposed Solution

Mapping Out Technological Routes for Solution Acquisition

This process encompasses identifying key technologies, evaluating their suitability for the intended solution, and devising a roadmap for their acquisition and integration. It entails thorough research into available technologies, considering factors such as compatibility, scalability, cost-effectiveness, and alignment with organizational goals. By mapping out these routes, organizations can navigate the complex landscape of technological options more effectively, ensuring that their chosen solutions meet the desired objectives and deliver optimal outcomes. Additionally, this approach facilitates proactive decision-making, risk mitigation, and resource optimization throughout the technology acquisition process, ultimately enhancing the organization's ability to leverage technology for competitive advantage and innovation.

Emerenciano et al. (2022) delve into the intensification of Penaeid shrimp culture, offering a comprehensive review of advancements in production systems, nutrition, and breeding methods. Their study, published in Animals, underscores the significance of these advancements in bolstering shrimp culture practices. By examining the latest developments in production systems and breeding techniques, the authors contribute valuable insights that could potentially revolutionize the shrimp farming industry. Their work emphasizes the importance of staying abreast of technological innovations to enhance productivity and sustainability in shrimp culture.

On the other hand, Rahardja et al. (2021) explore the impact of sustainable intentions in S-Commerce activities, shedding light on the pivotal role of customer experiences, perceived

value, and the mediation of relationship quality. Published in Sustainability, their research underscores the complex interplay between sustainable practices and customer engagement in the realm of S-Commerce. By elucidating the mechanisms through which customer experiences and perceived value influence sustainable intentions, the authors provide valuable guidance for businesses seeking to foster sustainable practices in their operations. Their study highlights the importance of fostering positive relationships with customers and delivering exceptional experiences to drive sustainable behavior in S-Commerce activities.

Nandankar et al. (2023) present a study focused on developing and validating an e-marketplace service quality model in B2G e-commerce settings, employing a mixed-methods approach. Their research contributes to understanding the intricacies of service quality in electronic marketplaces, particularly within business-to-government e-commerce contexts.

Rosillo-Díaz et al. (2019) conduct a cross-cultural analysis investigating perceived product quality, perceived risk, and purchase intention in e-commerce platforms. Their findings shed light on the factors influencing consumer behavior and purchase decisions across different cultural contexts, offering valuable insights for e-commerce platform providers. Meanwhile, Sharkey (n.d.) explores the influence of quality on the success of e-commerce systems, underscoring the critical role that quality plays in driving user satisfaction and system effectiveness.

Tolstoy et al. (2021) adopt an effectuation perspective to examine the development of international e-commerce in retail SMEs, offering a nuanced understanding of how small and medium-sized enterprises navigate the complexities of global e-commerce markets.

Lastly, Tzavlopoulos et al. (2019) investigate the impact of e-commerce quality on customers' perceived risk, satisfaction, value, and loyalty, highlighting the importance of

delivering high-quality experiences to foster customer loyalty and retention. Additionally, Vinoth et al. (2022) explore the application of cloud computing in banking and e-commerce, along with related security threats, providing insights into the evolving technological landscape and its implications for the financial and e-commerce sectors.

Sharkey, Scott, and Acton (2010) explored "The Influence of Quality on E-Commerce Success" in the International Journal of E-business Research, shedding light on the critical role quality plays in determining the success of e-commerce ventures.

Brown (2008) contributed to the discourse on business-to-consumer e-commerce success by testing and validating a revised conceptual model, providing valuable insights into the factors driving success in this domain.

Tucker (2008) presented an E-commerce standard user interface, known as an E-menu system, aimed at enhancing user experience and navigation within e-commerce platforms, as discussed in Industrial Management and Data Systems.

Stefani and Xenos (2007) conducted an assessment of e-commerce system quality using a model based on ISO 9126 and Belief Networks, providing a structured framework for evaluating and enhancing the quality of e-commerce systems, detailed in the Software Quality Journal.

Nabi (2005) addressed concerns regarding the secure business application logic for e-commerce systems, emphasizing the importance of security in online transactions and data handling processes, as outlined in Computers & Security.

Esswein, Zumpe, and Sunke (2004) focused on identifying the quality of e-commerce reference models, offering guidelines and criteria for evaluating the effectiveness of such models in e-commerce contexts, as discussed in their publication.

Rittgen (2002) provided insights into e-commerce software, discussing features, functionalities, and considerations involved in selecting and implementing e-commerce software solutions, outlined in IGI Global eBooks.

Liu and Arnett (2000) explored factors associated with website success in the context of electronic commerce, offering valuable insights into the determinants of effective e-commerce websites and online platforms, as discussed in Information & Management.

Bichler, Segev, and Zhao (1998) delved into component-based e-commerce, discussing potential advantages and challenges associated with adopting a component-based approach in e-commerce development and implementation, as published in Sigmod Record.

Lastly, Andry, Liliana, Chakir, and Tannady (2023) conducted testing on online voucher e-commerce using the ISO 9126 model, contributing to the evaluation and enhancement of e-commerce systems' functionality and performance, as detailed in their publication.

Additionally, Hidayat, Dewantara, and Saifullah (2020) presented research on the development of a website for management information systems tailored to e-commerce and services, underscoring the importance of effective technological solutions in modern business environments, as published in Jurnal Sistem Informasi Dan Komputer.

Strategizing Paths to Acquire Technological Solutions

Ong, Yuan, Herrera-Viedma, and Kadry (2021) presented an OR-based Intelligent Decision Support System for E-Commerce, offering insights into leveraging operations research for intelligent decision-making in e-commerce contexts, as discussed in the Journal of Theoretical and Applied Electronic Commerce Research.

Guan (2021) proposed a Smart E-commerce logistics construction model based on big data analytics, aiming to enhance logistics operations in e-commerce through the integration of big data analytics, detailed in the Journal of Intelligent and Fuzzy Systems.

Busalim, Ghabban, and Hussin (2021) conducted an empirical study on customer engagement behavior on social commerce platforms, providing valuable insights into customer interactions and behaviors within social commerce environments, as published in Technology in Society.

Yang (2021) explored the determinants of consumers' continuance intention to use social recommender systems from a self-regulation perspective, shedding light on factors influencing users' continued engagement with social recommender systems, as outlined in Technology in Society. Geebren, Jabbar, and Luo (2021) investigated the role of consumer satisfaction within mobile ecosystems, focusing on mobile banking services and highlighting the importance of consumer satisfaction in driving engagement within mobile platforms, as discussed in Computers in Human Behavior. Kowalczuk, Siepmann, and Adler (2021) conducted a comparative study on cognitive, affective, and behavioral consumer responses to augmented reality in e-commerce, providing insights into the impacts of augmented reality on consumer behavior, as published in the Journal of Business Research. Sumbono, Erlansyah, and Rasmila (2020) explored the application of e-commerce as a web-based selling medium, focusing on the context of a traditional food vendor, as detailed in Jurnal Nasional Ilmu Komputer. Jeyaraj (2020) critically reviewed the DeLone & McLean models of information system success, offering insights into the key determinants of information system success and potential research directions, as discussed in the International Journal of Information Management. Lastly, Lee, Lee, Jeong, and Oh (2020) investigated the quality of virtual reality and its impacts on behavioral intention, providing valuable insights into the factors shaping

users' perceptions and behaviors regarding virtual reality applications in hospitality management, as discussed in the International Journal of Hospitality Management.

Navigating Technological Trajectories for Solution Acquisition

Charting Acquisition Pa Urrianto and Fatmawati (2023) discussed the implementation of e-commerce at Haziz Furniture Limited Company, focusing on website-based digital marketing strategies, as presented in the International Journal of Social Science Education Communication and Economics. Yasmeen and Afaq (2023) conducted a critical analysis of e-commerce web application vulnerabilities, aiming to identify and address security weaknesses in e-commerce platforms, as discussed in the Advances in Human and Social Aspects of Technology Book Series. Kedah (2023) explored the utilization of e-commerce in the world of business, highlighting its significance and impact on contemporary business operations, as outlined in the Startupreneur Business Digital (SABDA Journal). Thaib, Saleh, and Iding (2023) developed a web-based local product sales information system in Bajo Village, focusing on enhancing local economic activities through digital platforms, as discussed in the Formosa Journal of Sustainable Research. Mariño (2023) presented the RMS e-commerce platform for the marble industry in Romblon, emphasizing the role of technology in facilitating industry-specific e-commerce solutions, as detailed in the Romblon State University Research Journal. Wijaya, Umam, Hakim, and Nabila (2022) discussed the development of a web-based sales information system at Greenvest Source, highlighting its significance in improving business operations and customer engagement, as presented in the Jurnal Multidisiplin Madani. Bai and Li (2022) conducted a comprehensive analysis mapping the evolution of e-commerce research through co-word analysis from 2001 to 2020, providing insights into the trends and

developments in e-commerce research, as published in Electronic Commerce Research and Applications. Pohan and Mubarok (2022) implemented e-commerce and a web-based company profile on CV. Andromeda Multi Sarana, aiming to enhance the company's online presence and customer reach, as detailed in Nuansa Informatika: Jurnal Penelitian Dan Teknologi Informasi. Dewi (2022) designed a web-based e-commerce platform for small and medium enterprises in Bengabing Village, focusing on empowering local businesses through digital channels, as presented in an article published online. Mohamad, Hassan, and Elrahman (2022) explored the impacts of e-commerce on planning and designing commercial activity centers, proposing a developed approach to address emerging challenges, as discussed in the Ain Shams Engineering Journal. Lastly, Федушко and Ustyianovych (2022) conducted e-commerce customer behavior research using cohort analysis, focusing on the case study of COVID-19, as presented in the Journal of Open Innovation: Technology, Market, and Complexity.

Designing Routes for Technological Solution Acquisition

In designing routes for technological solution acquisition in the realm of e-commerce and related services, it's crucial to draw insights from a diverse array of research articles that shed light on various aspects of this domain. For instance, Hidayat et al. (2020) provide valuable insights into the development of websites for management information systems tailored for e-commerce and services, offering foundational knowledge for platform development. Jiang et al. (2021) delve into sustainable management practices in logistics services for fresh food e-commerce, emphasizing the importance of eco-friendly approaches in supply chain management. Additionally, Masri et al. (2019) investigate the effects of information system quality and relationship quality on customers' intention to continue using e-tourism services, highlighting the significance of customer satisfaction and loyalty in sustaining e-commerce

ventures.

Moreover, Mayer et al. (2021) propose innovative strategies for improving customer decisions on web-based e-commerce platforms through guerrilla modding, suggesting unconventional methods to enhance user experience. Muhammad et al. (2020) introduce a hierarchical model for evaluating the quality of web-based e-learning systems, which can be adapted for assessing the quality of e-commerce platforms, ensuring robust technological solutions. Nandankar et al. (2023) present a mixed-methods approach to developing and validating a service quality model for e-marketplaces in business-to-government e-commerce settings, providing actionable insights for enhancing service delivery.

Furthermore, Rosillo-Díaz et al. (2019) conduct a cross-cultural analysis of perceived product quality, perceived risk, and purchase intention in e-commerce platforms, offering valuable insights into consumer behavior. Sharkey (n.d.) investigates the influence of system quality on the success of e-commerce systems, shedding light on critical factors contributing to system effectiveness. Tolstoy et al. (2021) explore the development of international e-commerce in retail small and medium-sized enterprises from an effectuation perspective, elucidating entrepreneurial strategies for global expansion.

Additionally, Tzavlopoulos et al. (2019) examine the impact of e-commerce quality on customers' perceived risk, satisfaction, value, and loyalty, providing insights into factors influencing customer perceptions. These studies collectively contribute to a comprehensive understanding of technological solution acquisition in e-commerce and related services, offering actionable insights for businesses aiming to optimize their operations in the digital marketplace.

Planning Technological Paths for Proposed Solution Acquisitionx

In the ever-evolving landscape of e-commerce, planning technological paths for proposed solution acquisition is essential for businesses striving to stay competitive and meet the evolving needs of consumers. A plethora of research articles offer valuable insights into various aspects of e-commerce technology, providing guidance for organizations aiming to optimize their operations and enhance customer experiences.

One avenue of technological solution acquisition in e-commerce involves the development of chatbot systems tailored for specific contexts. For instance, Oguntosin and Olomo (2021) discuss the development of an e-commerce chatbot designed for a university shopping mall, showcasing how AI-driven conversational agents can streamline the shopping experience for customers. Implementing chatbots can not only improve customer engagement but also enhance operational efficiency by automating routine inquiries and transactions.

Furthermore, Wang, Dang, and Nguyen (2021) propose a fuzzy optimization approach for outsourcing reverse logistics in e-commerce, highlighting the importance of efficient logistics management in ensuring timely and cost-effective product returns and exchanges. By leveraging advanced optimization techniques, e-commerce retailers can streamline their reverse logistics processes, minimize operational costs, and enhance customer satisfaction.

In addition to logistics optimization, decision support systems play a crucial role in enabling intelligent decision-making in e-commerce operations. Zong et al. (2021) introduce an OR-based intelligent decision support system for e-commerce, demonstrating how operational research methodologies can be leveraged to optimize various aspects of e-commerce operations, such as inventory management, pricing strategies, and resource allocation.

Moreover, the integration of big data analytics into e-commerce logistics construction models offers significant opportunities for enhancing operational efficiency and customer service. Guan (2021) proposes a smart e-commerce logistics construction model based on big data analytics, emphasizing the role of data-driven insights in optimizing supply chain processes, predicting customer demand, and improving delivery accuracy.

Customer engagement is another critical aspect of e-commerce success, particularly in the context of social commerce platforms. Busalim, Ghabban, and Hussin (2021) conduct an empirical study on customer engagement behavior on social commerce platforms, shedding light on the factors influencing user participation, interaction, and purchase behavior. Understanding these dynamics is essential for designing effective marketing strategies and fostering long-term customer relationships.

Furthermore, the effectiveness of social recommender systems in influencing consumers' continuance intention to use e-commerce platforms is explored by Yang (2021), who adopts a self-regulation perspective to examine the determinants of users' behavioral intentions. By incorporating personalized recommendation algorithms based on user preferences and behavior, e-commerce platforms can enhance user satisfaction and loyalty, driving repeat purchases and revenue growth.

Additionally, the role of mobile applications in e-commerce retailing is examined by Lu et al. (2020), who propose a framework for measuring the ease of use of mobile applications from the perspective of consumer online shopping behavior patterns. As mobile commerce continues to gain prominence, optimizing the user experience across various devices and platforms is crucial for attracting and retaining customers in the competitive e-commerce landscape.

Moreover , the integration of augmented reality (AR) technology into e-commerce platforms offers novel opportunities for immersive shopping experiences. Kowalczuk, Siepmann, and Adler (2021) conduct a comparative study on cognitive, affective, and behavioral consumer responses to AR in e-commerce, highlighting the potential of AR technology to enhance product visualization, customization, and decision-making processes.

Off Shelf purchase

Off-the-shelf purchases play a crucial role in the development and optimization of e-commerce systems, offering valuable insights into the factors influencing customer satisfaction, service quality, and system success. Gajewska et al. (2019) explore the impact of customer satisfaction levels on the quality of e-commerce services, emphasizing the importance of meeting customer expectations to ensure a positive user experience. Additionally, Khan et al. (2019) assess e-service quality, e-satisfaction, and e-loyalty, highlighting the interconnectedness of service quality, customer satisfaction, and long-term loyalty in e-commerce environments. Understanding these dynamics is essential for businesses seeking to build customer-centric e-commerce platforms that foster trust and repeat business.

Moreover, recommendation systems powered by deep learning methods are increasingly utilized to enhance personalization and user engagement in e-commerce. Da'u and Salim (2019) provide a systematic review of recommendation systems based on deep learning techniques, offering insights into the latest advancements and future directions in this field. By leveraging sophisticated algorithms and user data, e-commerce platforms can deliver personalized product recommendations tailored to individual preferences, thereby improving conversion rates and customer satisfaction.

In the realm of software architecture education, Wei et al. (2019) advocate for teaching distributed software architecture through the development of industrial-level e-commerce applications. By adopting hands-on learning approaches, educators can equip students with practical skills and theoretical knowledge to design scalable, robust, and secure e-commerce systems. This approach not only enhances students' understanding of complex software architectures but also prepares them for real-world challenges in the e-commerce industry.

Furthermore, sustainability considerations are increasingly important in the last-mile delivery of rural e-commerce logistics. Jiang et al. (2019) employ multiple methodologies, including FAHP, ISM, and MICMAC approaches, to study the sustainability influencing factors of last-mile delivery in rural areas. By identifying key factors such as environmental impact, resource efficiency, and social responsibility, e-commerce companies can develop strategies to minimize their carbon footprint and promote sustainable logistics practices.

Additionally, the development of web-based product recommender systems using knowledge-based algorithms offers opportunities to enhance the shopping experience and increase customer satisfaction. O (2019) presents a web-based product e-commerce recommender system based on knowledge case-based algorithms, demonstrating how AI-driven recommendation engines can help users discover relevant products based on their preferences and browsing history. Integrating such systems into e-commerce platforms can lead to higher engagement, increased sales, and improved customer loyalty.

Moreover, social commerce has gained traction among SMEs in Thailand, driven by the success of e-commerce platforms tailored for social interactions and peer recommendations. Vongsraluang and Bhatiasevi (2016) investigate the determinants of social commerce system success for SMEs in Thailand, shedding light on factors such as platform usability,

trustworthiness, and social influence. Understanding these determinants is crucial for SMEs looking to leverage social commerce channels to expand their customer base and drive sales.

Synthesis of the Review of Related Literature

The synthesis of the review of related literature on e-commerce reveals a multifaceted landscape encompassing various aspects of technology, customer behavior, business strategies, and sustainability considerations. At its core, e-commerce is driven by the need to satisfy customer demands, optimize operational efficiency, and adapt to evolving market trends. The literature underscores the interconnectedness of these factors and provides valuable insights for businesses aiming to navigate the complexities of the digital marketplace effectively.

One prominent theme that emerges from the review is the importance of customer satisfaction and service quality in e-commerce. Gajewska et al. (2019) emphasize the critical role of customer satisfaction levels in shaping the quality of e-commerce services, highlighting the need for businesses to prioritize user experience to foster long-term loyalty and positive brand perception. Similarly, Khan et al. (2019) underscore the significance of e-service quality, e-satisfaction, and e-loyalty in driving customer engagement and retention, emphasizing the need for continuous improvement in service delivery to meet evolving customer expectations.

Furthermore, the integration of advanced technologies such as deep learning algorithms and recommendation systems holds immense potential for enhancing personalization and user engagement in e-commerce platforms. Da'u and Salim (2019) provide insights into the latest advancements in recommendation systems based on deep learning techniques, highlighting their effectiveness in delivering personalized product recommendations tailored to individual

preferences. This not only improves the overall shopping experience but also boosts conversion rates and customer satisfaction, ultimately driving business growth.

Additionally, sustainability considerations are gaining traction in the e-commerce industry, particularly concerning last-mile delivery logistics and environmental impact. Jiang et al. (2019) shed light on the sustainability influencing factors of last-mile delivery in rural areas, emphasizing the importance of minimizing the carbon footprint and promoting resource efficiency in logistics operations. By adopting eco-friendly practices and embracing sustainable supply chain management strategies, e-commerce companies can mitigate environmental risks and contribute to long-term sustainability goals.

Moreover, the development of web-based product recommender systems using knowledge-based algorithms presents opportunities for enhancing customer engagement and driving sales. O (2019) demonstrates how AI-driven recommendation engines can help users discover relevant products based on their preferences, browsing history, and social interactions, thereby increasing user engagement and facilitating repeat purchases. Integrating such systems into e-commerce platforms enhances the overall shopping experience and fosters customer loyalty, ultimately driving revenue growth and market competitiveness.

Furthermore, social commerce has emerged as a promising avenue for SMEs looking to leverage social interactions and peer recommendations to expand their customer base and drive sales. Vongsraluang and Bhatiasevi (2016) identify key determinants of social commerce system success for SMEs, including platform usability, trustworthiness, and social influence. By understanding these factors and leveraging social commerce channels effectively, SMEs can capitalize on the power of social networks to enhance brand visibility and customer engagement, ultimately driving business growth and market success.

III. METHODOLOGY

A. Method of Research

The project employed integrates both Qualitative and Quantitative methods. The Qualitative method will utilize the insight of the experience, perception and perspective that involved the transition from manual to digital process within the computer stores specifically the adoption of RGSI lux on the other hand the quantitative method includes the surveys and data analysis employed to collect and analyze the numerical data pertain to the key performance, indicator, project metrics and outcome of the measurement. This approach will allow for a holistic understand and opportunities associated with the implementation of the RGSI Lux enables the synthesis of qualitative and quantitative data.

B. Participant

There are 30 participant survey which makes the 50 percent of the business employees, all working within the Department. The participant involve 5 project manager, 10 system analyst, 10 programmers, and 5 Quality Assurance Staff.

C. Data Gathering

The data gathering study involves two way approach that aimed to capture both qualitative and quantitative insight that is relevant to the adoption and implementation of the RGSI Lux within the computer stores. The qualitative data obtained through semi-structured interviews additionally the studies conduct to provide in-depth analysis of the real-world implementations of the RGSI Lux which highlight the best practices, lesson learned, and the contextual factors

influence the success of the project. On the other quantitative process surveys will be administered to 30 respondents of computer store personnel to collect data on the satisfaction level, usage pattens and the perceived impact of the RGSI Lux. This integration approach to data will ensure a comprehensive design and understand the complexities surround the adoption of the RGSI Lux and facilitate the evidence-based decision making involved in similar initiatives.

D. Treatment of Data

The treatment of data involves a process of analysis and interpretation that involves the derive meaningful insight and conclusion the quantitative data collected form survey and project documentation undergoes the statistical analysis to identify the trends, correlations and patterns relevant to the research objectives. The Descriptive statistics are used to summarize the key metrics specifically in budget expenditures, timeline adherence and user satisfaction scores that provide an overview dataset. Inferential statistics include the regression analysis are employed to assess the relationship of the variables and draw inferences about the population based on the sample data moreover the qualitative data from the interviews are subjected to thematic analysis to identify the themes, categories and narratives that provide findings to the perspective, challenges and experience related to the adoption of the RGSI lux through systematic coding process, qualitative data which is organized and synthesized to cover insight and generate rich description of the phenomena under the investigation.

E . Design Strategy

The design strategy for this proponent incorporate the Agile Model which emphasize the flexibility, collaboration and the development throughout the process following the

methodology is the study adopts the approach of the data collection, analysis and interpretation allowing the proponent for the continuous refinement and adaptation based on the insights. Through the Agile model the study the study aims to achieve the greater agility, efficiency and effectiveness in addressing the complexities of the RGSI Lux in the adoption within the computer stores.

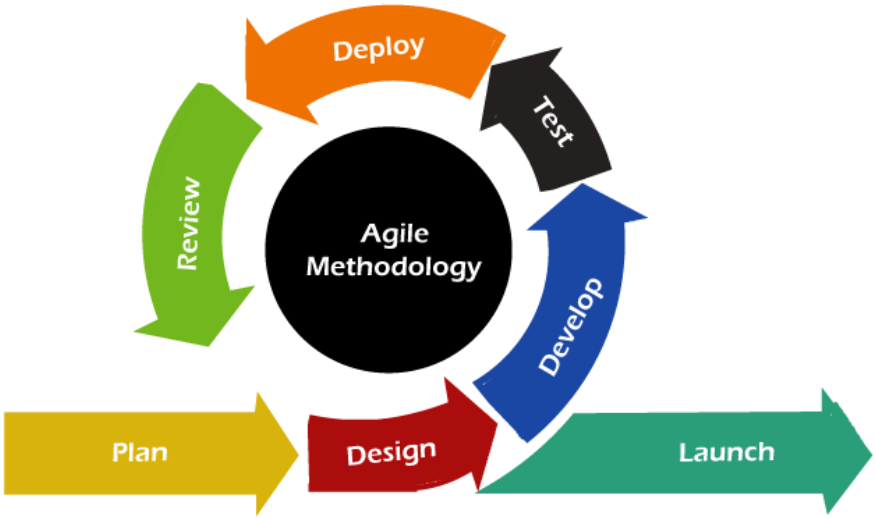
Agile Model

The Agile Model merged the framework in the software development emphasize the collaboration and adaptability in the progress over the processes and stages however unlike traditional software development life cycle model this agile mode follow linear sequence which divides the project into multiple short cycles typically that will last two to four weeks known as the sprint. The sprint allows the proponent to focus on delivering small incremental position of the workload rather than attempting to plan the entire project upfront by breaking the project into manageable (ByDrec, 2020).

One of the principles of the Agile model emphasis the continuous progress assessment and adaptation hence after completion of each sprint the proponent conducts a thorough review to evaluate the progress made and identify the areas of an improvement hence this review serves as an opportunity to reflect and learn enable the proponent to adjust the approach and strategies for the future sprint (InkDiVo, 2019).

Refer to Figure 3.1 for the illustration of the Agile Mode.

Figure 3.1 Agile Model



Agile Model Phase

1. Requirement Analysis

The proponent gathered requirements for the RGSI lux to evaluate the needs and problems from the transition of manual to digital. The proponent together with the employees and the management will agreed and discussed the following requirement the needs of the improvement that ensure the final product meets the functional and non-functional requirements of the end user while aligning the broader goals of the organization.

2. System Design

The proponent then translate the conceptual design into a software system . This process

involves defining the structure, components, modules, interfaces and data architecture of the system consider the factors in the following based on the scalability, performance, security and maintainability.

3. Development

During this phase the proponent write code according to the specification outlined in the design document following the codes standards and best practices which typically involves task such as coding, unit testing, integration testing and debugging to ensure that the software meets the functional requirement and performs based on the system design of the software.

4. Module Testing

After the development, each module is tested in the isolation to ensure that the system operates properly within the defined boundaries and interfaces this involved the execution of text case design to cover various scenarios and inputs including the normal operation, boundary condition and even error handling by identifying and addressing the issues at the module level hence the proponent can improve the quality and reliability of the software.

5. Deployment

The proponent then proceed to release the production environment for the end-user to access and even utilize hence this involve the careful planning, coordination and execution to ensure the smooth transition for the development of the environment to the live environment.

6. Feedback

Lastly, The proponent let the employees test the product performance and added the module to the environment hence collected the insight and feedback later on from the employees of RGSI Lux assigned to the test module.

Advantages of the Agile Model

- Flexibility

Agile methodologies allow for flexibility in project requirements and scope, enabling teams to adapt to changing priorities and customer needs throughout the development process. This flexibility ensures that the final product remains relevant and meets evolving market demands (InterviewBit, 2022).

- **Incremental Delivery**

Agile promotes incremental delivery of software features in short iterations, typically lasting two to four weeks. This approach enables stakeholders to see tangible progress at regular intervals and provides opportunities for early feedback and course correction (InterviewBit, 2022).

- **Continuous Improvement**

Agile fosters a culture of continuous improvement by encouraging regular reflection, evaluation, and adaptation. Teams can identify areas for enhancement through retrospectives and actively work to address issues and refine processes, leading to increased efficiency and productivity over time (InterviewBit, 2022).

- **Enhanced Collaboration**

Agile methodologies emphasize collaboration among cross-functional teams, including developers, designers, testers, and stakeholders. By fostering open communication and shared ownership of project goals, Agile encourages collective problem-solving and ensures that everyone is aligned towards delivering value to the customer (InterviewBit, 2022).

- **Customer Involvement**

Agile places a strong emphasis on customer involvement throughout the development lifecycle. By involving customers in early planning, frequent reviews, and demonstrations of working software, Agile ensures that the final product meets customer expectations and delivers maximum business value (InterviewBit, 2022).

F. Project Implementation

The following are the project timeline how it was planned, developed, and implemented throughout the research.

Refer to Table 3.1, 3.2, and 3.3 for the project timeline in a general, and scheduled format.

Table 3.1 Project Timeline

RGSI Lux Project Timeline

DATE CREATED	September 5, 2023
PREPARED FOR	Rodstark Global Solutions Innovations

Rank Number	Months	Month 1				Month 2				Month 3			
	Weeks	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
1	Discovery and Planning (4 weeks)												
2	Gathering Materials such as Hosting, Dev Tools, etc. (1 week)												
3	Web Design (4 weeks)												
4	Programming and Development (12 weeks)												

Rank Number	Months	Month 4				Month 5				Month 6			
	Weeks	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
4	Programming and Development (12 weeks)												

Rank Number	Months	Month 6 (cont.)				Month 7				Month 8			
	Weeks	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
5	Alpha Testing (1 week)												
6	Code Review Phase 1 (1 week)												
7	Beta Testing (1 week)												
8	Code Review Phase 2 (1 week)												
9	End to End Testing (1 week)												
10	Deployment (1 week)												
11	Client Production (4 weeks)												

Status	Target Date (Accomplished)	Unaccomplished	Not Involved

Table 3.2 Project Timeline (In-Depth)

RGSI Lux Project Timeline (In-Depth)

DATE CREATED	September 5, 2023
PREPARED FOR	Rodstark Global Solutions Innovations

Rank Number	Months	Month 1				Month 2				Month 3			
	Weeks	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
1	Company Interview												
1	Data Gathering												
1	Company Process Investigation												
1	RGSI Lux Draft Planning												
2	Gathering Development Tools and Necessities												
3	Designing RGSI Lux Interface												
3	Designing RGSI Lux Modules												
3	Designing Modules												
3	Designing Features												
4	Sprint 1: Product, Shipment, Category, and Supplier Masterfiles												
4	Sprint 1: Product, Shipment, Category, and Supplier Masterfiles												
4	Sprint 1: Product, Shipment, Category, and Supplier Masterfiles												

Rank Number	Months	Month 4				Month 5				Month 6			
	Weeks	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
4	Sprint 2: Cart, Sales, Status, and Method of Payment Masterfiles												
4	Sprint 2: Cart, Sales, Status, and Method of Payment Masterfiles												
4	Sprint 2: Cart, Sales, Status, and Method of Payment Masterfiles												
4	Sprint 3: Company, Features, and Security Level Masterfiles												
4	Sprint 3: User Profile Information and User Masterfile												
4	Sprint 3: Notification and Audit Logs												
4	Sprint 4: Reports Generation (Masterfile Reports)												
4	Sprint 4: Reports Generation (File Upload, Email Generation, and Audit Reports)												
4	Sprint 4: Reports Generation (Custom and Sales Reports)												

Rank Number	Months	Month 6 (cont.)				Month 7				Month 8			
	Weeks	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
5	Sprint 5: Customer-Agent Chat Module (Regression and Alpha Testing)												
6	Sprint 5: Customer-Agent Chat Module (Hotfix and Alpha Testing)												
7	Sprint 5: Customer-Agent Chat Module (Regression and Beta Testing)												
8	Sprint 5: Customer-Agent Chat Module (Hotfix and Beta Testing)												
9	Sprint 5: Customer-Agent Chat Module (Final Testing and Regression)												
10	Deployment and Training												
11	Company's Production Period (First Week)												
11	Company's Production Period (Second Week)												
11	Company's Production Period (Third Week)												
11	Company's Production Period (Fourth Week)												

Status	Target Date (Accomplished)	Unaccomplished	Not Involved

Table 3.3 Project Implementation Schedule

RGSI Lux Project Implementation Schedule

DATE CREATED	September 5, 2023
PREPARED FOR	Rodstark Global Solutions Innovations

Rank Number	Milestone	Expected Target Date
1	Company Interview	Month 1 Week 1
1	Data Gathering	Month 1 Week 2
1	Company Process Investigation	Month 1 Week 3
1	RGSI Lux Draft Planning	Month 1 Week 4
2	Gathering Development Tools and Necessities	Month 2 Week 1
3	Designing RGSI Lux Interface	Month 2 Week 2
3	Designing RGSI Lux Modules	Month 2 Week 3
3	Designing Modules	Month 2 Week 4
3	Designing Features	Month 3 Week 1
4	Sprint 1: Product, Shipment, Category, and Supplier Masterfiles	Month 3 Week 2
4	Sprint 1: Product, Shipment, Category, and Supplier Masterfiles	Month 3 Week 3
4	Sprint 1: Product, Shipment, Category, and Supplier Masterfiles	Month 3 Week 4
4	Sprint 2: Cart, Sales, Status, and Method of Payment Masterfiles	Month 4 Week 1
4	Sprint 2: Cart, Sales, Status, and Method of Payment Masterfiles	Month 4 Week 2
4	Sprint 2: Cart, Sales, Status, and Method of Payment Masterfiles	Month 4 Week 3
4	Sprint 3: Company, Features, and Security Level Masterfiles	Month 4 Week 4
4	Sprint 3: Company, Features, and Security Level Masterfiles	Month 5 Week 1
4	Sprint 3: Company, Features, and Security Level Masterfiles	Month 5 Week 2
4	Sprint 4: Reports Generation (Masterfile Reports)	Month 5 Week 3
4	Sprint 4: Reports Generation (File Upload, Email Generation, and Audit Reports)	Month 5 Week 4
4	Sprint 4: Reports Generation (Custom and Sales Reports)	Month 6 Week 1
5	Sprint 5: Customer-Agent Chat Module (Regression and Alpha Testing)	Month 6 Week 2
6	Sprint 5: Customer-Agent Chat Module (Hotfix and Alpha Testing)	Month 6 Week 3
7	Sprint 5: Customer-Agent Chat Module (Regression and Beta Testing)	Month 6 Week 4
8	Sprint 5: Customer-Agent Chat Module (Hotfix and Beta Testing)	Month 7 Week 1
9	Sprint 5: Customer-Agent Chat Module (Final Testing and Regression)	Month 7 Week 2
10	Deployment and Training	Month 7 Week 3
11	Company's Production Period (First Week)	Month 7 Week 4
11	Company's Production Period (Second Week)	Month 8 Week 1
11	Company's Production Period (Third Week)	Month 8 Week 2
11	Company's Production Period (Fourth Week)	Month 8 Week 3

IV. CONTENT AND RESULTS

This chapter shows the results of the data gathered in the survey and other data-gathering methods in the Research.

A. RGSI Lux Preliminary Survey (Before RGSI Lux Development)

Before the development of the RGSI Lux there is a preliminary survey conduct using paper and pencil method to gather an insight into the current challenges and need of the computer stores transitioning from manual to the digital processes. The survey aim to assess the requirements and problem faced by the employee and management allowing for understanding of the issues that RGSI Lux would address through this preliminary survey the key stakeholder were engaged and the perspective were incorporated into the planning phase to ensure that the RGSI Lux development effectively meet the needs of the user and align with the broader goal and to the organization.

Survey Specification

Table 4.1 RGSI Lux Preliminary Survey Specification

STATUS	**Description**
Survey Method	Semi-structured interviews and quantitative surveys
Number of Questions	10

Number of Respondents	30
Department Involved	1
Roles of Respondents	5 project managers, 10 system analysts, 10 programmers, 5 Quality Assurance Staff
Platform Used	Paper and pencil for preliminary surveys, unspecified platform for quantitative surveys
Data Type Used	Qualitative and quantitative
Analyst	Results in Significance of Favor in Majority

Survey Question and Results

- How would you rate the current efficiency of manual processes within the computer stores?

Table 4.2 How would you rate the current efficiency of Manual Processes with the Computer Stores

Rating	**Frequency**	**Percentage**
Excellent (a)	6	20%
Good (b)	10	33.33%

Average (c)	9	30%
Poor (d)	5	16.67%

- What are the main pain points or challenges you encounter with the existing manual systems?

Table 4.3 What are the main pain point or challenges you encounter with the existing manual system?

Rating	**Frequency**	**Percentage**
Lack of standardized processes	7	23.33%
Time-consuming tasks	6	20%
Human error in data entry	5	16.67%
Difficulty in tracking inventory	4	13.33%
Inefficient communication between departments	3	10%
Limited visibility into sales and customer data	3	10%

Manual paperwork and documentation	2	6.67%

- How satisfied are you with the current level of data accuracy and reliability in the manual processes?

Table 4.4 How satisfied are you with the current level of data accuracy and reliability in the manual processes?

Rating	**Frequency**	**Percentage**
Very Satisfied	8	26.67%
Satisfied	9	30%
Neutral	6	20%
Dissatisfied	5	16.67%
Very Dissatisfied	2	6.67%

- Are there any specific tasks or processes that you believe could benefit from automation or digitalization?

Table 4.5 Are there any specific or processes that you believed could benefit from automation or digitalization?

Rating	Frequency	Percentage
Inventory Management	10	33.33%
Sales and Order Processing	7	23.33%
Customer Relationship Management (CRM)	5	16.67%
Accounting and Financial Reporting	4	13.33%
Data Entry and Record Keeping	3	10%
Human Resource Management	1	3.33%

- How would you describe the level of collaboration and communication among departments in the current manual setup?

Table 4.6 How would you describe the level of collaboration and communication among departments in the current manual setup?

Rating	Frequency	Percentage
Excellent	6	16.67%
Good	8	26.67%
Average	10	33.33%
Poor	6	20%

Very Poor	1	3.33%

- To what extent do you feel that current manual processes impact overall productivity within the computer stores?

Table 4.7 To what extent do you feel that current manual processes impact overall productivity within the computer stores?

Rating	**Frequency**	**Percentage**
High	10	33.33%
Moderate	8	26.67%
Low	7	23.33%
Negligible	4	13.33%
No Impact	1	3.33%

- What are your expectations or desired outcomes from implementing a new digital system like RGSI Lux?

Table 4.8 What are your expectations or desired outcome from implementing a new digital system like RGSI Lux

Rating	Frequency	Percentage
Increased efficiency and productivity	12	40%
Enhanced data accuracy and reliability	6	20%
Streamlined processes and reduced manual tasks	5	16.67%
Improved customer satisfaction and loyalty	4	13.33%
Better decision-making through data analytics	2	6.67%
Greater scalability and adaptability	1	3.33%

- What features or functionalities would you prioritize in a digital system to address the limitations of the current manual processes?

Table 4.9 What features or functionalities would you prioritize in a digital system to address the limitations of the current manual processes?

Rating	Frequency	Percentage
Automated Data Entry	8	26.67%
Real-time Reporting and Analytics	6	20%
Integration with Existing Systems	5	16.67%
User-friendly Interface	4	13.33%

Customizable Workflows	4	13.33%
Mobile Access	2	6.67%
Scalability	1	3.33%

- How do you envision the adoption of a new digital system influencing your day-to-day responsibilities and workflow?

Table 4.10 How do you envision the adoption of a new digital system influencing your day-to-day responsibilities and workflow?

Rating	**Frequency**	**Percentage**
Increased efficiency and productivity	10	33.33%
Streamlined processes and reduced manual tasks	8	26.67%
Improved accuracy and reliability of data	6	20%
More time for strategic tasks and decision-making	4	13.33%
Enhanced collaboration and communication	2	6.67%
Better tracking and analysis of performance metrics	0	0%

- What concerns or reservations do you have about transitioning from manual to digital processes in the computer stores?

Table 4.11 What concerns or reservation do you have about transitioning from manual to digital processes in the computer stores?

Rating	Frequency	Percentage
Training staff on new systems	8	26.67%
Initial cost and investment	7	23.33%
Compatibility with existing infrastructure	6	20%
Data security and privacy	5	16.67%
Potential disruption during transition	3	10%
Resistance to change from employees	1	3.33%

Survey Results Conclusion

Based on the survey it is evident that there is a mixed perception in regard to the current efficiency of the manual processes within the computer stores with the significant portion rating good and average. Common pain points include the lack of the standardized processes and time consuming tasks highlight the need for the automation and digitalization particular in the areas such as the inventory management and sales processing.

What are the key features that make RGSI Lux stand out as a web-based e-commerce system?

Table 4.12 What are the key features that make RGSI Lux stand out as a web-based e-

commerce system?

Communication (Survey Results)	**Riskier Motives (Employee, 2024)**	**Digital Age (Meta, 2024)**
• Gather Feedback • User Preference • Insight • Survey • Analysis • Responses • Opinions • Satisfaction • Data	• Ambitious goals • financial gains • competitive edge • Innovation • market penetration • strategic decisions • calculated risks • growth opportunities • disruptive strategies • entrepreneurial mindset	• Technology integration • digital transformation • online presence • data-driven decisions • innovation-driven • internet-enabled • tech-savvy culture • digital literacy • connectivity revolution

The table presents a comprehensive overview of three distinct aspects: "Communication

(Survey Results)," "Riskier Motives (Employee, 2024)," and "Digital Age (Meta, 2024)." In terms of communication, the focus is on gathering feedback, understanding user preferences, analyzing insights, and assessing satisfaction through surveys and responses. Meanwhile, under "Riskier Motives," there's a discussion about ambitious goals, financial gains, competitive edge, innovation, market penetration, strategic decisions, calculated risks, growth opportunities, disruptive strategies, and fostering an entrepreneurial mindset. Lastly, the "Digital Age" section emphasizes technology integration, digital transformation, online presence, data-driven decisions, innovation-driven approaches, internet-enabled solutions, fostering a tech-savvy culture, promoting digital literacy, and embracing the connectivity revolution. Together, these aspects highlight the multifaceted nature of modern business dynamics, where effective communication, strategic motivations, and adaptation to digital advancements play pivotal roles in organizational success and growth.

B. RGSI Lux In-Depth Investigation

The in-depth investigate the RGSI lux delves into the intricate the functionalities, and implications, within the context of the Rodstark Global Solutions Innovations (RGSI). The comprehensive examination scrutinize the various aspect including the architecture, user, interface, backend processes, security protocols, scalability and to the performance metrics. Through analysis and testing the investigation aim to uncover the strength, weakness, opportunity and threats that is associated with the RGSI Lux provide insight for the stakeholders and decision makers.

C. RGSI Lux Periodical (During RGSI Development)

The RGSI Lux serve as the vital communication channel during the development phase of the RGSI Lux, the web based e-commerce system by the Rodstark Global Solution Innovation. The periodical provide the regular updates, progress report and insight into the development process keeping the stakeholder informed engaged throughout the project lifecycle highlight the key milestone achieved, challenges and strategies implemented to overcome the risks during the development.

Survey Specifications

Table 4.13 RGSI Lux Periodical Survey Specification

STATUS	Description
Survey Method	Quantitative Method
Number of Questions	6
Number of Respondents	30
Department Involved	1
Roles of Respondents	5 project managers, 10 system analysts, 10 programmers, 5 Quality Assurance Staff
Platform Used	Paper and pencil for preliminary surveys, unspecified platform for quantitative surveys

Data Type Used	Quantitative
Analyst	Results in Significance of Favor in Majority

Survey Questions and Results

- What are the current milestones achieved in the development of RGSI Lux?

Table 4.14 What are the current milestone achieved in the development of RGSI Lux

Rating	**Frequency**	**Percentage**
Alpha Testing Completed	8	26.67%
User Interface Design Finalized	6	20%
Backend Integration Implemented	5	16.67%
Initial Performance Testing	4	13.33%
Feature Freeze for Beta Release	4	13.33%
Documentation Updated	3	10%

- Are there any challenges or obstacles encountered during the development process?

Table 4.15 Are there any challenges or obstacles encountered during the development processes?

Rating	Frequency	Percentage
Integration Issues	8	26.67%
Tight Deadlines	7	23.33%
Scope Creep	6	20%
Resource Constraints	5	16.67%
Communication Breakdowns	3	10%
Technical Debt	1	3.33%

- How is the development team ensuring alignment with project objectives and timelines?

Table 4.16 How is the development team ensuring alignment with project objectives and timelines?

Rating	Frequency	Percentage
Regular Progress Meetings	10	33.33%
Agile Methodology	7	23.33%
Task Tracking Tools	5	16.67%
Continuous Communication	4	13.33%

Performance Metrics Monitoring	3	10%
Stakeholder Feedback	1	3.33%

- Have there been any updates or modifications to the initial project plan or scope?

Table 4.17 Have there been any updates or modifications to the initial project plan or scope?

Rating	**Frequency**	**Percentage**
Scope Expansion	10	33.33%
Change in Requirements	7	23.33%
Timeline Extensions	6	20%
Budget Adjustments	5	13.33%
Resource Reallocation	2	6.67%
Scope Reduction	1	3.33%

- What feedback or input has been received from stakeholders during the development phase?

Table 4.18 What feedback or input have been received from stakeholder during the development phase?

Rating	Frequency	Percentage
Request for Additional Features	8	26.67%
Concerns About Timeline	7	23.33%
Positive Endorsement	6	20%
Suggestions for Improvement	5	16.67%
Questions About Implementation Details	3	10%
Criticism of Progress	1	3.33%

- How is the team fostering collaboration and communication to ensure smooth progress in RGSI Lux development?

Table 4.19 How is the team fostering collaboration and communication to ensure smooth progress in RGSI Lux Development

Rating	Frequency	Percentage
Daily Stand-up Meetings	10	33.33%
Project Management Tools	7	23.33%
Slack Channels or Chat Platforms	6	20%
Weekly Progress Reviews	4	13.33%

Cross-Functional Workshops	2	6.67%
Biweekly Team Building Activities	1	3.33%

Survey Results Conclusion

The survey revealed that the development of the RGSI Lux has achieved several key milestone including the completion of the alpha testing and the finalization of the user interface design however the process has faced significant challenges in the integration issues and the tight deadlines. The development team is addressing the challenges maintaining the regular progress meetings, employing agile methodologies and the use task tracking tools. There is notable updates about the project plan that is primarily involve the scope expansion and the changes in requirements. To ensure smooth progress, the researcher foster collaboration through daily stand up meeting and utilizing the project management tools maintaining active communication channels.

D. RGSI Lux Production Survey (After RGSI Development)

The product survey phase of the RGSI Lux, the survey aim to gather the feedback and insight into the user after the software deployment. The survey assess the user satisfaction identifies any issues or challenges encountered during usage and evaluate the overall performance and effectiveness of the RGSI Lux meeting the user need and expectation.

Table 4.21 RGSI Lux Production Survey Specification

STATUS	Description
Survey Method	Quantitative Method
Number of Questions	5
Number of Respondents	30
Department Involved	1
Roles of Respondents	5 project managers, 10 system analysts, 10 programmers, 5 Quality Assurance Staff
Platform Used	Paper and pencil for preliminary surveys, RGSI for Quantitative Survey, Both traditional and digital platform allow for flexibility in data collection
Data Type Used	Quantitative
Analyst	Results in Significance of Favor in Majority

Survey Specification

- How would you rate the overall user experience of RGSI Lux in terms of usability and intuitiveness?

Table 4.22 How would you rate the overall user experience of RGSI Lux in terms of usability

and intuitiveness?

Rating	Frequency	Percentage
Excellent	10	33.33%
Good	8	26.67%
Average	6	20%
Fair	4	13.33%
Poor	2	6.67%

- Have you encountered any technical issues or bugs while using RGSI Lux?

Table 4.23. Have you encountered any technical issues or bugs while using RGSI Lux?

Rating	Frequency	Percentage
No Issues	20	66.67%
Minor Glitches	5	16.67%
Occasional Bugs	3	10%
Significant Technical Problems	2	6.67%

- Are there any specific features or functionalities of RGSI Lux that you find particularly

useful or beneficial for your tasks?

Table 4.24 Are there any specific features or functionalities of RGSI Lux that you find particularly useful or beneficial for your tasks?

Rating	Frequency	Percentage
Real-time Data Updates	8	26.67%
Customizable Dashboards	7	23.33%
Advanced Search and Filtering Options	6	20%
Task Assignment and Tracking	4	13.33%
Integration with Third-Party Tools	3	10%
Automated Reporting	2	6.67%

- How satisfied are you with the performance and speed of RGSI Lux in handling tasks and processing transactions?

Table 4.25 How satisfied are you with the performance and speed of RGSI Lux in handling tasks and processing transactions?

Rating	Frequency	Percentage
Very Satisfied	10	33.33%

Satisfied	8	26.67%
Neutral	6	20%
Dissatisfied	4	13.33%
Very Dissatisfied	2	6.67%

- Would you recommend RGSI Lux to others based on your experience with the software?

Table 4.26 Would you recommend RGSI Lux to others based on your experience with the software?

Rating	**Frequency**	**Percentage**
Definitely Would Recommend	12	40%
Likely Would Recommend	8	26.67%
Neutral	6	20%
Unlikely Would Recommend	3	10%
Definitely Would Not Recommend	1	3.33%

Survey Results Conclusion

Based on the survey results, it's evident that RGSI Lux generally receives positive feedback from users across various aspects. The majority of respondents rate the overall user experience, performance, and speed of RGSI Lux favorably, with a significant portion expressing satisfaction with its usability, intuitiveness, and handling of tasks and transactions. Additionally, users appreciate specific features like real-time data updates, customizable dashboards, and advanced search options. Most respondents have not encountered significant technical issues or bugs, and a high proportion would recommend RGSI Lux to others based on their experience. These findings suggest that RGSI Lux effectively meets user needs and expectations, positioning it as a promising software solution in its domain.

E. Connectivity Response

Ensuring seamless and robust connectivity has become the paramount for the business and individual alike with the proficient of the internet enable the devices and increase the demand for the online services and the need for the reliable connectivity solutions that have never been greater weather it establish the high speed connection and address the connectivity challenge is essential for staying the competitive in today interconnected world.

Periodical Survey Connectivity Questions and Results

- What is your current level of satisfaction with the speed and reliability of your internet connection?

Table 4.27 What is the current level of satisfaction with the speed and reliable of the internet connection?

Rating	Frequency	Percentage
Very Satisfied	12	40%
Satisfied	8	26.67%
Neutral	5	16.67%
Dissatisfied	3	10%
Very Dissatisfied	2	6.67%

- Have you experienced any disruptions or outages in your internet service within the past month?

Table 4.28 Have you experienced any disruption or outages in the internet services within the past month?

Rating	Frequency	Percentage
No Disruption or Outages	20	66.67%
Minor Disruptions	5	16.67%
Occasional Outages	3	10%
Frequent Outages	2	6.67%

- How would you rate the effectiveness of our organization's network security measures in safeguarding sensitive data and information?

Table 4.29 How would you rate the effectiveness of our organization network security measures in safeguarding sensitive data and information?

Rating	Frequency	Percentage
Excellent	10	33.33%
Good	8	26.67%
Average	6	20%
Fair	4	13.33%
Poor	2	6.67%

- Are there any specific areas or devices within your network that you perceive as vulnerable to security threats?

Table 4.30 Are there any specific areas or devices within your network that you perceive as vulnerable to security threats?

Rating	Frequency	Percentage
End-user Devices (e.g., laptops, phones)	10	33.33%

Servers and Data Centers	8	26.67%
Network Infrastructure (e.g., routers)	6	20%
IoT Devices (e.g., smart devices)	4	13.33%
Remote Access Systems	2	6.67%

- What improvements or enhancements would you suggest to optimize network performance and connectivity for our organization?

Table 4.31 What improvements or enhancements would you suggest to optimize network performance and connectivity for our organization?

Rating	**Frequency**	**Percentage**
Upgrading Network Infrastructure	10	33.33%
Implementing Redundant Systems	8	26.67%
Enhancing Security Measures	6	20%
Investing in Bandwidth Expansion	4	13.33%
Improving Remote Access Capabilities	2	6.67%

Survey Connectivity Results Conclusion

The survey on connectivity yielded insightful data regarding the satisfaction levels and challenges faced by respondents in relation to internet connection and network security. A notable majority expressed satisfaction with the speed and reliability of their internet connection, while disruptions or outages were reported by a smaller portion of respondents, with most experiencing minor disruptions or none at all. Regarding network security, respondents generally rated the effectiveness of organizational measures positively, though some perceived vulnerabilities, particularly in end-user devices and servers. Suggestions for improvement included upgrading network infrastructure and enhancing security measures. Overall, these findings underscore the importance of ongoing efforts to maintain robust connectivity and security protocols within the organization's network infrastructure.

F. RGSI Lux Charts and Diagrams

Here are the key charts and diagram necessary for the research, maintenance, and development of the RGSI Lux. These include Project Cost, Project Flowchart, Context Diagram and Network Diagram.

Project Cost

Here is the project cost to see how much the entire project cost refer to Table 4.32 for the cost of the project.

Table 4.32 Project Cost

RGSI Lux Project Cost

DATE CREATED	September 5, 2023
PREPARED FOR	Rodstark Global Solutions Innovations

ID Number	Rank Number	Category	Description	Number of Months	Amount per Month	Total Amount
1	2	Necessities	Web Hosting (8 months)	8.00	Php 2,000.00	Php 16,000.00
2	2	Necessities	Development Workstation (Fixed)	1.00	Php 20,000.00	Php 20,000.00
3	2	Necessities	100mbps Internet Connection (8 months)	8.00	Php 4,000.00	Php 32,000.00
4	2	Necessities	Electricity Cost (8 months)	8.00	Php 5,000.00	Php 40,000.00
5	2	Necessities	Miscellaneous Fees (Fixed)	1.00	Php 5,000.00	Php 5,000.00

6	1	Manpower	Discovery and Planning (1 month)	1.00	Php 10,000.00	Php 10,000.00
7	3	Manpower	Web Design (1 month)	1.00	Php 15,000.00	Php 15,000.00
8	4	Manpower	Programming and Development (3 months)	3.00	Php 20,000.00	Php 60,000.00
9	6, 8	Manpower	Consultation and Technical Advisory (2 weeks)	0.50	Php 5,000.00	Php 2,500.00
10	5, 7, 9	Manpower	Alpha, Beta, and End to End Testing (3 weeks)	0.75	Php 10,000.00	Php 7,500.00
11	10	Manpower	Deployment and Training (1 week)	0.25	Php 5,000.00	Php 1,250.00

12	11	Manpower	Production Support (1 month)	1.00	Php 10,000.00	Php 10,000.00
					PROJECT TOTAL	**Php 219,250.00**

Project Flowchart

Here is the project chart to view the in-depth process for the RGSI Lux refer to Figure 4.1

RGSI Lux Flowchart Diagram

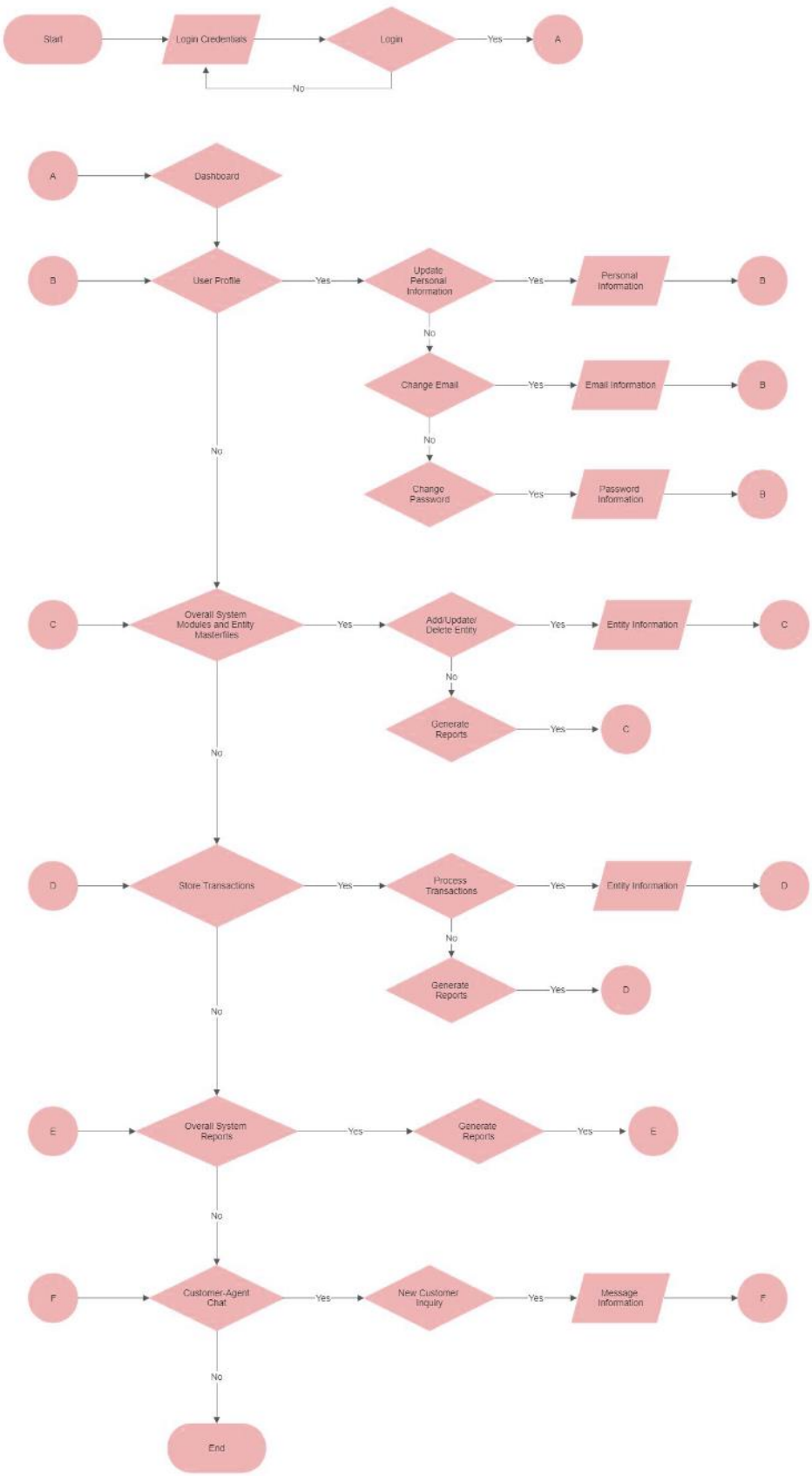


Figure 4.2 RGSI Lux Flowchart

Context Diagram

Here is the context diagram for the RGSI Lux and its built-in security access. Refer to 4.3 for the Diagram.

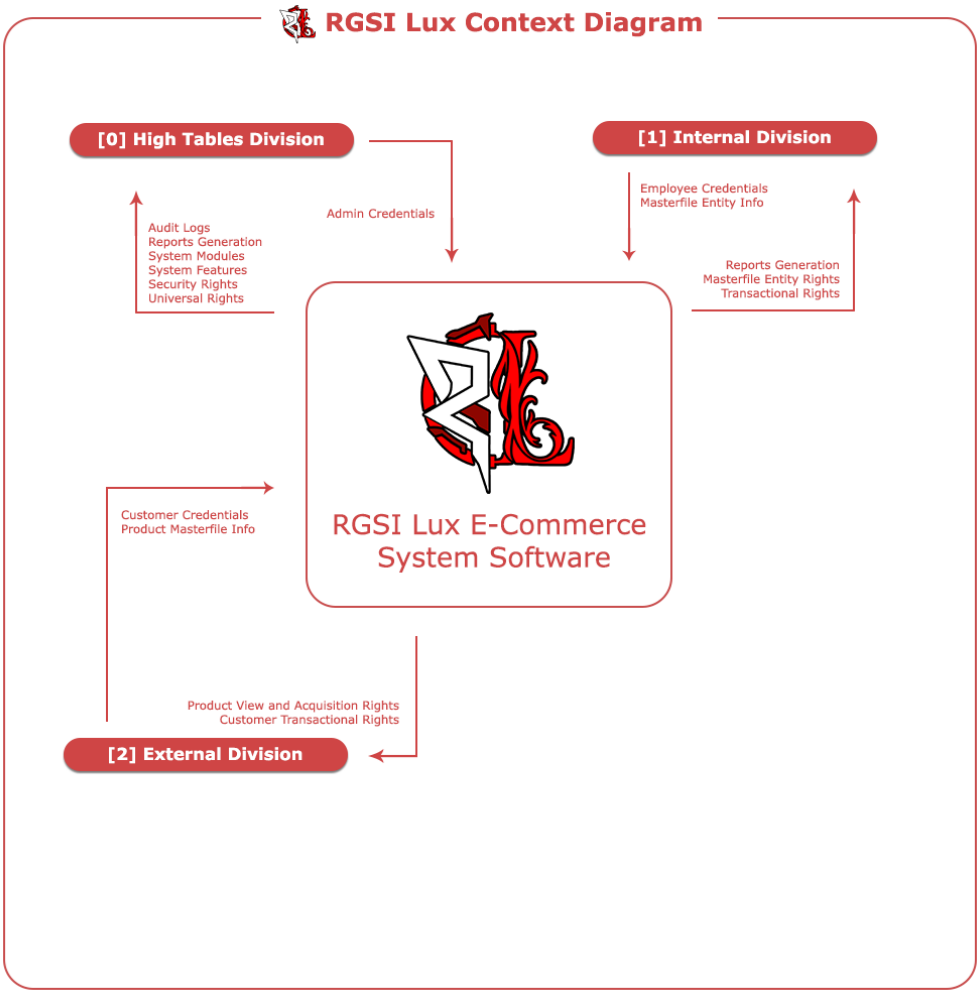


Figure 4.3 RGSI Lux Context Diagram

Network Diagram

Here is the network architecture for the RGSI Lux to have general view of the business

process. Refer to Figure 4.4 for the diagram.

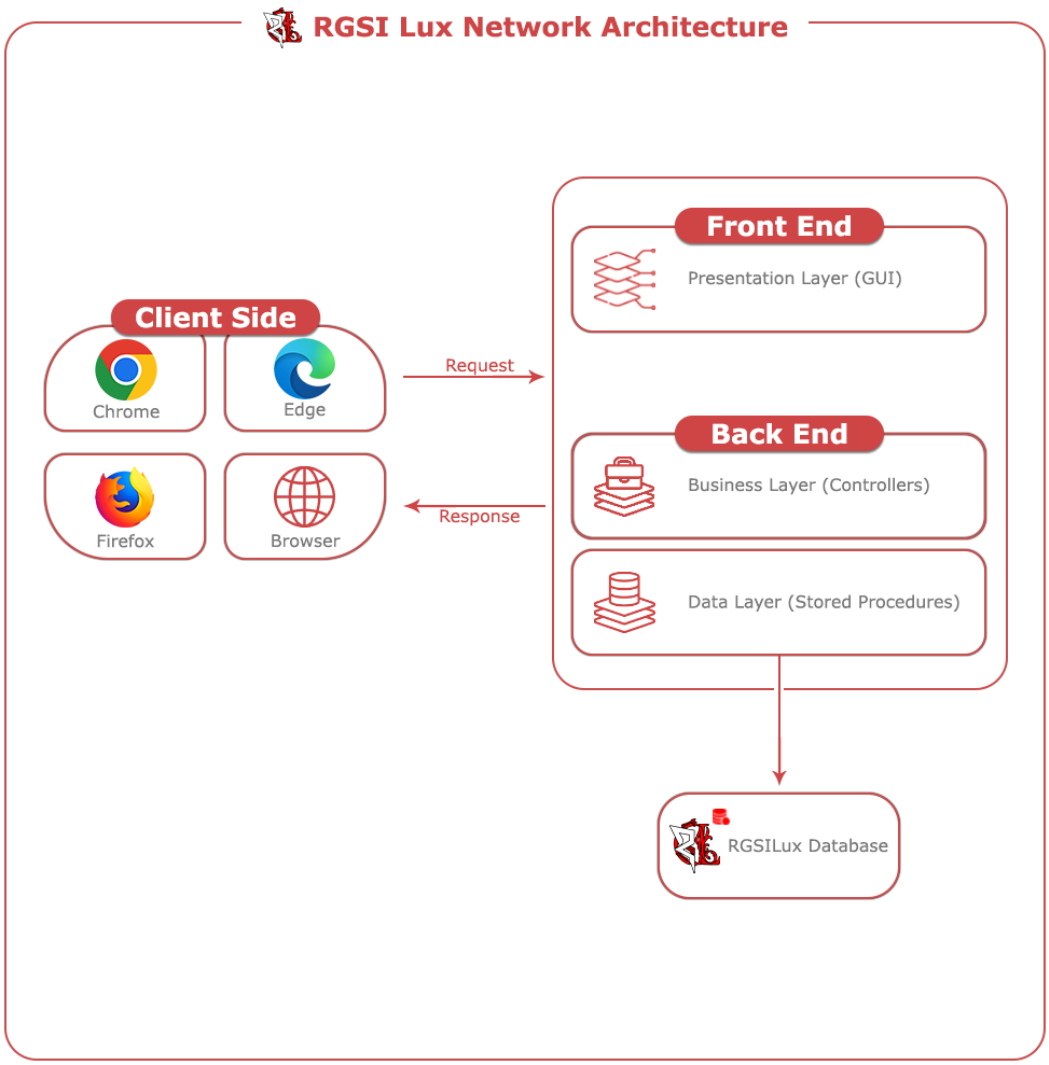


Figure 4.4 RGSI Lux Network Diagram

A. Evaluation of RGSI

At the end of the production phase the RGSI is evaluated system in terms of the suitability as an e-commerce software and the capabilities in facilitating the seamless business operations.

- E-Commerce Software Evaluation Score

Table 4.33 RGSI Lux Evaluation Score

Criteria	Score
Performance	9.2
Usability	8.5
Security	7.8
Features	8.9
Support	9.5
Final Score	8.78

Table 4.33 outlines the assessment scores for RGSI Lux concerning its e-commerce functionalities. With a performance rating of 9.2, the system demonstrates efficient and reliable operation within the e-commerce domain. Usability is rated at 8.5, indicating a user-friendly interface conducive to easy navigation for conducting online transactions. Security, with a score of 7.8, signifies a solid foundation but with room for potential improvement to ensure robust protection of sensitive data. RGSI Lux offers a comprehensive range of features, scoring 8.9, catering to various needs of e-commerce businesses. Furthermore, the system's support services receive the highest score at 9.5, showcasing exceptional customer assistance and guidance. The cumulative score of 8.78 validates RGSI Lux's effectiveness and quality as an e-commerce solution.

- E-commerce Functionality Evaluation Score

Table 4.34 RGSI Lux E-commerce Functionality Evaluation Score

Functionality	Included
Product Management	✓
Inventory Tracking	✓
Order Processing	✓
Payment Integration	✓
Customer Management	✓
FINAL SCORE	5/5

Table 4.34 presents the evaluation of RGSI Lux's e-commerce functionalities, encompassing essential features crucial for online business operations. Each functionality, including product management, inventory tracking, order processing, payment integration, and customer management, is included, denoted by checkmarks. The perfect score of 5 out of 5 indicates RGSI Lux's excellence in providing comprehensive e-commerce capabilities.

G. Manual vs RGSI Lux

Table 4.35 Manual vs. RGSI Lux

Manual	**RGSI Lux**

Requires manual tracking and updating.	Automated system with real-time updates.
Paper-based or spreadsheet entries.	Streamlined digital process with automated order processing.
Manual record-keeping and communication.	Integrated CRM system for centralized customer data and communication.
Prone to human error and inconsistencies.	Enhanced accuracy with automated data entry and validation.
Relies on verbal communication or written notes.	Built-in task management module for assigning and tracking tasks.
Manual compilation of reports from various sources.	Automated reporting with customizable templates and real-time data.

V. CONCLUSION AND RECOMMENDATION

A. Conclusion

Facilitated by the adoption of RGSI Lux, the transition from manual to digital procedures in computerized warehouses is a transformational adventure aimed at solving critical challenges and optimizing operational performance. Through a carefully crafted methodology that combines qualitative and quantitative methods, this venture has revealed a nuanced view of the complexities and opportunities associated with this transition. Working with a variety of different stakeholders, including project managers, machine analysts, programmers, and quality assurance personnel, provided complete expertise on the multifaceted nature of this effort. Qualitative studies, conducted through semi-structured interviews, revealed beneficial insights into the stories, perceptions and challenges associated with the adoption of RGSI Lux. Themes emerged along with the need for standardized strategies, time-consuming responsibilities, and concerns about safeguarding the facts that guided the development and implementation process. Quantitative records collected through surveys complement these qualitative findings and offer a dependent view of enjoyment levels, usage styles and perceived influences, taking into account evidence-based decision-making. Statistical analyzes revealed trends, correlations, and styles and provided a quantitative basis for strategy components. The agile model adopted through the layout method played a key role in promoting flexibility, collaboration and continuous improvement during implementation. By breaking this enterprise down into iterative cycles or sprints, agile allowed the incremental delivery of capabilities, ensuring stakeholder alignment and the ability to respond to evolving needs. This iterative system facilitated early comments and path correction and fostered a

subculture of innovation and adaptability. Utilizing an agile model, RGSI Lux seeks to understand the key blessings along with increased operational performance, more advantageous record accuracy and simplified approaches. Automating tasks along with inventory management, revenue processing, and customer experience management is expected to eliminate manual errors, enhance communication, and provide real-time insight into business operations. Preferred features include real-time reporting, user-friendly interfaces, and mobile access that properly address the limitations of current wizard methods. But the transition isn't always without its challenges, with schooling, seed funding, compatibility, and security looming large concerns. Addressing these challenging situations will be key to ensuring the successful adoption and integration of RGSI Lux into computer stores. By offering complete training, conducting random tests and implementing robust security features, these challenging situations can be handled properly. In terms of accuracy, the adoption of RGSI Lux heralds a new generation of efficiency, accuracy and customer-centricity in PC stores. Through rigorous research, strategic design plans and iterative improvement, this challenge laid the foundation for a successful transition and paved the way for a digital future driven by innovation and excellence.

B. Recommendation

Prioritizing a number of key regions is vital for the successful implementation and continued use of RGSI Lux in PC shops. First, project team must recognize the improvement in scalability and adaptability of the system to meet the future growth and evolving needs of commercial enterprises. This means designing RGSI Lux with a modular architecture that allows for seamless integration of the latest features and functions. By adopting a microservices-based structure and utilizing cloud computing technology, the device can

properly scale to deal with increased volumes of data and amounts of transactions. In addition, the introduction of strong APIs and ensuring compatibility with 0.33 page structures will allow for easy extension and customization, allowing computer shops to adapt RGSI Lux to their specific requirements.

Second, continuous education and support initiatives are essential to ensure the successful adoption and use of RGSI Lux at all levels of the data. The project team needs to expand comprehensive training programs tailored to the precise roles and responsibilities of various user corporations, consisting of enterprise managers, unit analysts, programmers, and excellent verification staff. These training packages may no longer cover the most effective technical factors of using RGSI Lux, but in addition satisfactory procedures for optimizing workflows and using advanced features to increase productivity and decision-making. In addition, the creation of a dedicated help facility, along with a help desk or knowledge base, will offer customers well-timed assistance and problem-solving resources, enhancing confidence and skills in using RGSI Lux. By investing in ongoing training and guidance, the challenge group can ensure that the RGSI Lux becomes the device for harnessing performance, innovation and growth in computers stores.

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Appendices

A. Entity Relationship Diagram

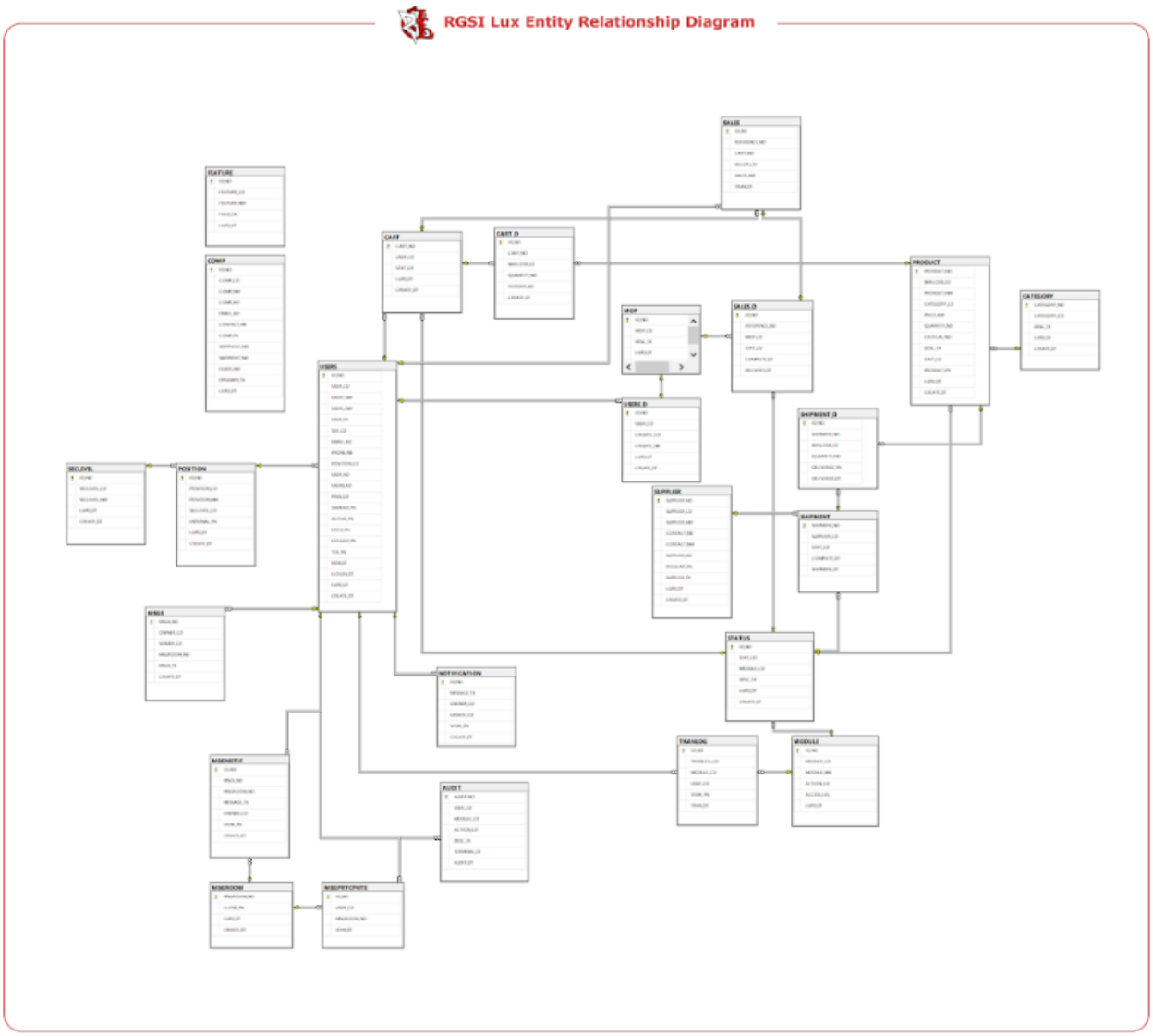

Figure 7.1 RGSI Lux Entity Relationship Diagram

B. Data Dictionary

RGSI Lux Data Dictionary

DATE CREATED	September 05, 2023
DATABASE NAME	RGSILux
CURRENT TABLE COUNT	25
PROTOTYPE OF	Rodstark Global Solutions Innovations

PRODUCT TABLE

(Stores list of products)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
PRODUCT_NO	BIGINT			0	Product Number	YES	YES		
BARCODE_ID	NVARCHAR	16		""	Barcode ID	YES			
PRODUCT_NM	NVARCHAR	100		""	Product Name	YES			
CATEGORY_CD	NVARCHAR	12		""	Category Code	YES		YES	CATEGORY
PRICE_AM	DECIMAL	18	2	0.00	Price Amount	YES			
QUANTITY_NO	BIGINT			0	Quantity	YES			
CRITICAL_NO	BIGINT			0	Critical Quantity	YES			
DESC_TX	NVARCHAR	MAX		""	Product Description				
ASTAT_CD	NVARCHAR	5		""	Activity Status Code	YES		YES	STATUS
STAT_CD	NVARCHAR	5		""	Status Code	YES		YES	STATUS
PRODUCT_PX	NVARCHAR	MAX		""	Product Picture				
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

SHIPMENT TABLE

(Stores general list of shipments)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
SHIPMENT_NO	BIGINT			0	Shipment Number	YES	YES		
SERIAL_ID	NVARCHAR	10		""	Serial ID	YES			
SUPPLIER_CD	NVARCHAR	12		""	Supplier Code	YES		YES	SUPPLIER
STAT_CD	NVARCHAR	5		""	Status Code	YES		YES	STATUS
COMPLETE_DT	DATETIME			1900-01-01	Shipment Completed Date	YES			
SHIPMENT_DT	DATETIME			1900-01-01	Scheduled Shipment Date	YES			

SHIPMENT_D TABLE

(Stores detailed list of shipments)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
SHIPMENT_NO	BIGINT			0	Shipment Number	YES		YES	SHIPMENT
BARCODE_ID	NVARCHAR	16		""	Barcode ID	YES		YES	PRODUCT
QUANTITY_NO	BIGINT			0	Quantity	YES			
DELIVERED_YN	BIT			0	Is Delivered	YES			
DELIVERED_DT	DATETIME			1900-01-01	Delivered Date	YES			

CATEGORY TABLE

(Stores list of product categories)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
CATEGORY_NO	BIGINT			0	Category Number	YES	YES		
CATEGORY_CD	NVARCHAR	12		""	Category Code	YES			
DESC_TX	NVARCHAR	50		""	Description	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

Figure 7.2 Data Dictionary (Part 1)

SUPPLIER TABLE

(Stores list of product suppliers)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
SUPPLIER_NO	BIGINT			0	Supplier Number	YES	YES		
SUPPLIER_CD	NVARCHAR	12		""	Supplier Code	YES			
SUPPLIER_NM	NVARCHAR	60		""	Supplier Name	YES			
CONTACT_NB	NVARCHAR	30		0	Contact Numbers	YES			
CONTACT_NM	NVARCHAR	60		""	Contact Name	YES			
SUPPLIER_AD	NVARCHAR	200		""	Supplier Address	YES			
REGULAR_YN	BIT			0	Is Regular Supplier	YES			
SUPPLIER_PX	NVARCHAR	MAX		""	Supplier Picture				
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

STATUS TABLE

(Stores list of status)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
STAT_CD	NVARCHAR	5		""	Status Code	YES			
MODULE_CD	NVARCHAR	3		""	Module Code	YES		YES	MODULE
DESC_TX	NVARCHAR	50		""	Description	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

USERS TABLE

(Stores list of users)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
USER_CD	NVARCHAR	12		""	User Code	YES			
USERF_NM	NVARCHAR	20		""	User First Name	YES			
USERL_NM	NVARCHAR	20		""	User Last Name	YES			
USER_PX	NVARCHAR	MAX		""	User Picture				
SEX_CD	NVARCHAR	1		""	Sex Code (M for Male, F for Female)	YES			
EMAIL_AD	NVARCHAR	50		""	Email Address	YES			
PHONE_NB	NVARCHAR	11		""	Phone Number	YES			
POSITION_CD	NVARCHAR	3		""	Position Code	YES		YES	POSITION
USER_AD	NVARCHAR	200		""	User Residential Address	YES			
USERB_AD	NVARCHAR	200		""	User Billing Address				
PASS_CD	NVARCHAR	MAX		""	Password (Encrypted)	YES			
SAMEAD_YN	BIT			0	Is Same Address (Residential and Billing)				
ACTIVE_YN	BIT			1	Is Active	YES			
LOCK_YN	BIT			0	Is Locked	YES			
LOGGED_YN	BIT			0	Is Logged In	YES			
TFA_YN	BIT			0	Is Two-Factor Authenticated	YES			
DOB_DT	DATE			1900-01-01	Date of Birth	YES			
LLOGIN_DT	DATETIME			1900-01-01	Last Login Date	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

USERS_D TABLE

(Stores detailed list of users that are customers or external)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
USER_CD	NVARCHAR	12		""	User Code	YES		YES	USERS
CREDITC_CD	NVARCHAR	1		""	Credit Card Code (Visa/Mastercard Only)			YES	MOP
CREDITC_NB	NVARCHAR	16		""	Credit Card Number				
EXPIRY_DT	DATE			1900-01-01	Expiry Date				
CVV_NO	BIGINT			0	Card Verification Value				
DEFAULT_YN	BIT			0	Is Default				
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

Figure 7.3 Data Dictionary (Part 2)

MOP TABLE

(Stores detailed list of method of payments)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
MOP_CD	NVARCHAR	1		""	Method of Payment Code (V = Visa; M = Mastercard; C = Cash)	YES			
DESC_TX	NVARCHAR	50		""	Description	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

POSITION TABLE

(Stores list of positions)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
POSITION_CD	NVARCHAR	3		""	Position Code	YES			
POSITION_NM	NVARCHAR	50		Admin (A), Cashier (C), Customer (CST)	Position Name	YES			
SECLEVEL_CD	NVARCHAR	1		""	Security Level Code	YES		YES	SECLEVEL
INTERNAL_YN	NVARCHAR	1		""	Is Internal	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

CART TABLE

(Stores list of users' cart information)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
CART_NO	BIGINT			0	Cart Number	YES	YES		
USER_CD	NVARCHAR	12		""	User Code	YES		YES	USERS
STAT_CD	NVARCHAR	5		""	Status Code	YES		YES	STATUS
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

CART_D TABLE

(Stores detailed list of users' cart information)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
CART_NO	BIGINT			0	Cart Number	YES		YES	CART
BARCODE_ID	NVARCHAR	16		""	Barcode ID	YES		YES	PRODUCT
QUANTITY_NO	BIGINT			0	Quantity	YES			
RORDER_NO	BIGINT			0	Row Order Number	YES			
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

SALES TABLE

(Stores list of sales transactions)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
REFERENCE_NO	BIGINT			0	Reference Number	YES			
CART_NO	BIGINT			0	Cart Number	YES		YES	CART
SALES_AM	DECIMAL	18	2	0.00	Sales Total Amount	YES			
TRAN_DT	DATETIME			1900-01-01	Transaction Date	YES			

Figure 7.4 RGSI Lux Data Data Dictionary (Part 3)

SALES_D TABLE									
(Stores detailed list of sales transactions)									
FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
REFERENCE_NO	BIGINT			0	Reference Number	YES		YES	SALES
MOP_CD	NVARCHAR	1		""	Method of Payment Code (V = Visa; M = Mastercard; C = Cash)	YES		YES	MOP
STAT_CD	NVARCHAR	5		""	Status Code	YES		YES	STATUS
COMPLETE_DT	DATETIME			1900-01-01	Delivery Completed Date	YES			
DELIVERY_DT	DATETIME			1900-01-01	Scheduled Delivery Date	YES			

NOTIFICATION TABLE									
(Stores list of notification list for users that are internal or employees. Read and Delete Operations Only)									
FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
MESSAGE_TX	NVARCHAR	200		""	Notification Message	YES			
OWNER_CD	NVARCHAR	12		""	Notification Owner (User Code)	YES		YES	USERS
UPDATE_CD	NVARCHAR	12		""	Updated by (User Code)	YES		YES	USERS
VIEW_YN	BIT			0	Is Viewed by Owner				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

AUDIT TABLE									
(Stores list of audit logs or audit trail. No Create, Update, and Delete Operations)									
FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
AUDIT_NO	BIGINT			0	ID Number	YES	YES		
USER_CD	NVARCHAR	12		""	User Code	YES		YES	USERS
MODULE_CD	NVARCHAR	3		""	Module Code (Affected)	YES			
ACTION_CD	NVARCHAR	3		""	Action Code	YES			
DESC_TX	NVARCHAR	200		""	Description	YES			
TERMINAL_ID	NVARCHAR	20		""	User's IP Address	YES			
AUDIT_DT	DATETIME			1900-01-01	Audit Date	YES			

COMP TABLE									
(Stores list of the client's company information. Read and Update Operations Only)									
FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
COMP_CD	NVARCHAR	7		""	Company Code	YES			
COMP_NM	NVARCHAR	50		""	Company Name	YES			
COMP_AD	NVARCHAR	200		""	Company Address	YES			
EMAIL_AD	NVARCHAR	50		""	Email Address	YES			
CONTACT_NB	NVARCHAR	30		""	Company landline range, phone numbers, etc.	YES			
COMP_PX	NVARCHAR	MAX		""	Company Logo Picture (Path)				
SMTPHOST_NM	NVARCHAR	50		""	Company SMTP Host	YES			
SMTPPORT_NO	BIGINT			0	Company SMTP Port Number	YES			
EUSER_NM	NVARCHAR	50		""	Email Username				
EPASSWD_TX	NVARCHAR	MAX		""	Email Password				
LUPD_DT	DATETIME			1900-01-01	Last Update Date				

MODULE TABLE									
(Stores list of the module information and access levels. Read and Update Operations Only. Update for ACCESS_LVL Only)									
FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
MODULE_CD	NVARCHAR	3		""	Module Code	YES			
MODULE_NM	NVARCHAR	50		""	Module Name	YES			
ACTION_CD	NVARCHAR	3		""	Action Code	YES			
ACCESS_LVL	NVARCHAR	MAX		""	Security Level Codes with Access	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				

Figure 7.5 RGSI Lux Data Data Dictionary (Part 4)

SECLEVEL TABLE

(Stores list of security level)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
SECLEVEL_CD	NVARCHAR	1		""	Security Level Code	YES			
SECLEVEL_NM	NVARCHAR	50		""	Security Level Name	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

FEATURE TABLE

(Stores list of features; for developers. Read and Update Operations Only. Update for FIELD_TX Only)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
FEATURE_CD	NVARCHAR	30		""	Feature Code	YES			
FEATURE_NM	NVARCHAR	200		""	Feature Name	YES			
DESC_TX	NVARCHAR	200		""	Description	YES			
FIELD_TX	NVARCHAR	MAX		""	Encrypted BOOLEAN values	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				

MSGS TABLE

(Stores list of chat messages)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
MSGS_NO	BIGINT			0	Message Number	YES	YES		
OWNER_CD	NVARCHAR	12		""	Owner Code (User Code)	YES		YES	USERS
SENDER_CD	NVARCHAR	12		""	Sender Code (User Code)	YES		YES	USERS
MSGROOM_NO	BIGINT			0	Message Room Number	YES		YES	MSGROOM
MSGS_TX	NVARCHAR	MAX		""	Message Text	YES			
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

MSGROOM TABLE

(Stores list of message rooms)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
MSGROOM_NO	BIGINT			0	Message Room Number	YES	YES		
CLOSE_YN	BIT			0	Is Room Closed	YES			
LUPD_DT	DATETIME			1900-01-01	Last Update Date				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

Figure 7.6 RGSI Lux Data Data Dictionary (Part 5)

MSGPRTCPNTS TABLE

(Stores list of message participants)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
USER_CD	NVARCHAR	12		""	User Code	YES		YES	USERS
MSGROOM_NO	BIGINT			0	Message Room Number	YES		YES	MSGROOM
JOIN_DT	DATETIME			1900-01-01	Join Date	YES			

MSGNOTIF TABLE

(Stores list of chat message notifications)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
MSGS_NO	BIGINT			0	Message Number	YES			
MSGROOM_NO	BIGINT			0	Message Room Number	YES		YES	MSGROOM
MESSAGE_TX	NVARCHAR	200		""	Message Notification Text	YES			
OWNER_CD	NVARCHAR	12		""	Owner Code (User Code)	YES		YES	USERS
VIEW_YN	BIT			0	Is Viewed				
CREATE_DT	DATETIME			1900-01-01	Created Date	YES			

TRANLOG TABLE

(Stores list of transaction editing logs done by the user for validation; for developers. Create and Delete Operations Only.)

FIELD NAME	DATA TYPE	LENGTH	DECIMAL	DEFAULT VALUE	DESCRIPTION	REQUIRED	PRIMARY KEY	FOREIGN KEY	PARENT TABLE
ID_NO	BIGINT			0	ID Number	YES	YES		
TRANLOG_CD	NVARCHAR	50		""	Transaction Log Code (Unique field of entity)	YES			
MODULE_CD	NVARCHAR	3		""	Module Code	YES		YES	MODULE
USER_CD	NVARCHAR	12		""	User Code	YES		YES	USERS
TRAN_DT	DATE			1900-01-01	Transaction Date				

Figure 7.7 RGSI Lux Data Data Dictionary (Part 6)

C. Test Script

RGSI Lux Test Script

DATE CREATED	September 05, 2023
PREPARED FOR	Rodstark Global Solutions Innovations

TEST CASES

ID	Module Affected	Test Case Scenario	Expected Result	Expected Status
UA-00001	User Authentication	Login to RGSI Lux	Redirect to dashboard	Pass
UA-00002	User Authentication	Logout of RGSI Lux	Redirect to login page	Pass
UA-00003	User Authentication	Forgot Password (Verify and Reset)	Sucessful password reset	Pass
UP-00001	User Profile Information	Update personal information	Update successful	Pass
UP-00002	User Profile Information	Change email	Update successful	Pass
UP-00003	User Profile Information	Change password	Update successful	Pass
CT-00001	Cart	Add Item to Cart	Adding successful	Pass
CT-00002	Cart	Edit Item on Cart	Update successful	Pass
CT-00003	Cart	Delete Item from Cart	Delete successful	Pass
US-00001	User Masterfile	Add User	Adding successful	Pass
US-00002	User Masterfile	Update User	Update successful	Pass
US-00003	User Masterfile	Delete User	Delete successful	Pass
US-00004	User Masterfile	Generate Report	Report generated	Pass
US-00004	User Masterfile	Register User	Registration successful	Pass
CI-00001	Company Information	Update Company Information	Update successful	Pass
CI-00002	Company Information	Generate Report	Report generated	Pass
MOD-00001	Module Display	Update Module Access	Update successful	Pass
MOD-00002	Module Display	Generate Report	Report generated	Pass
MOD-00003	Module Display	Upload Access Rights	Upload successful	Pass
MOD-00004	Module Display	Download Access Rights	Download successful	Pass
SEC-00001	Security Levels	Add Security Level	Adding successful	Pass
SEC-00002	Security Levels	Update Security Level	Update successful	Pass
SEC-00003	Security Levels	Delete Security Level	Delete successful	Pass
SEC-00004	Security Levels	Generate Report	Report generated	Pass
FTR-00001	System Features	Update Feature	Update successful	Pass
FTR-00002	System Features	Generate Report	Report generated	Pass
ADT-00001	Audit Logs	Generate Report	Report generated	Pass
S-00001	Supplier Masterfile	Add Supplier	Adding successful	Pass
S-00002	Supplier Masterfile	Update Supplier	Update successful	Pass
S-00003	Supplier Masterfile	Delete Supplier	Delete successful	Pass
S-00004	Supplier Masterfile	Generate Report	Report generated	Pass
P-00001	Position Masterfile	Add Position	Adding successful	Pass
P-00002	Position Masterfile	Update Position	Update successful	Pass
P-00003	Position Masterfile	Delete Position	Delete successful	Pass
P-00004	Position Masterfile	Generate Report	Report generated	Pass
C-00001	Category Masterfile	Add Category	Adding successful	Pass
C-00002	Category Masterfile	Update Category	Update successful	Pass
C-00003	Category Masterfile	Delete Category	Delete successful	Pass
C-00004	Category Masterfile	Generate Report	Report generated	Pass
PD-00001	Product Masterfile	Add Product	Adding successful	Pass
PD-00002	Product Masterfile	Update Product	Update successful	Pass
PD-00003	Product Masterfile	Delete Product	Delete successful	Pass
PD-00004	Product Masterfile	Generate Report	Report generated	Pass
MP-00001	Method of Payment Masterfile	Add Method of Payment	Adding successful	Pass
MP-00002	Method of Payment Masterfile	Update Method of Payment	Update successful	Pass
MP-00003	Method of Payment Masterfile	Delete Method of Payment	Delete successful	Pass
MP-00004	Method of Payment Masterfile	Generate Report	Report generated	Pass
SH-00001	Shipment Masterfile	Add Shipment	Adding successful	Pass
SH-00002	Shipment Masterfile	Update Shipment	Update successful	Pass
SH-00003	Shipment Masterfile	Delete Shipment	Delete successful	Pass
SH-00004	Shipment Masterfile	Generate Report	Report generated	Pass
STS-00001	Status Masterfile	Add Status	Adding successful	Pass
STS-00002	Status Masterfile	Update Status	Update successful	Pass
STS-00003	Status Masterfile	Delete Status	Delete successful	Pass
STS-00004	Status Masterfile	Generate Report	Report generated	Pass
SLS-00001	Sales Masterfile / Store Transaction	Submit Transaction	Transaction successful	Pass
SLS-00002	Sales Masterfile / Store Transaction	Track Transaction	Transaction Tracked	Pass
SLS-00003	Sales Masterfile / Store Transaction	Use all MOPs for Transaction	Transactions successful	Pass
SLS-00004	Sales Masterfile / Store Transaction	Generate Report	Receipt generated	Pass
RPT-00001	Reports	Generate All Reports	All reports generated	Pass
MSG-00001	Customer-Agent Chat	Create new message	Message and conversation created	Pass
MSG-00002	Customer-Agent Chat	Marked as closed by agent	Conversation gets removed from screen	Pass
MSG-00003	Customer-Agent Chat	Message notifications	Redirects to a conversation when clicked	Pass

Figure 7.8 RGSI Lux Test Script

D. Admin View

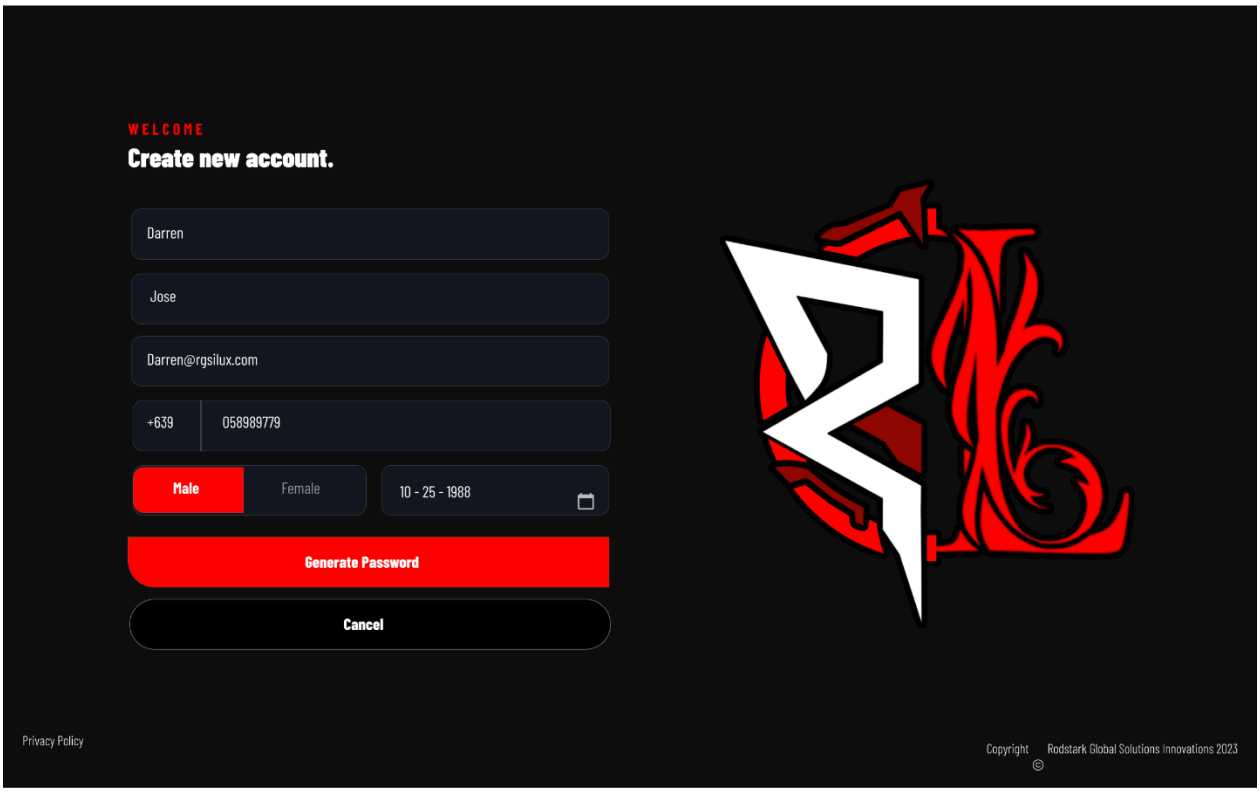

Figure 7.9 Sign Up

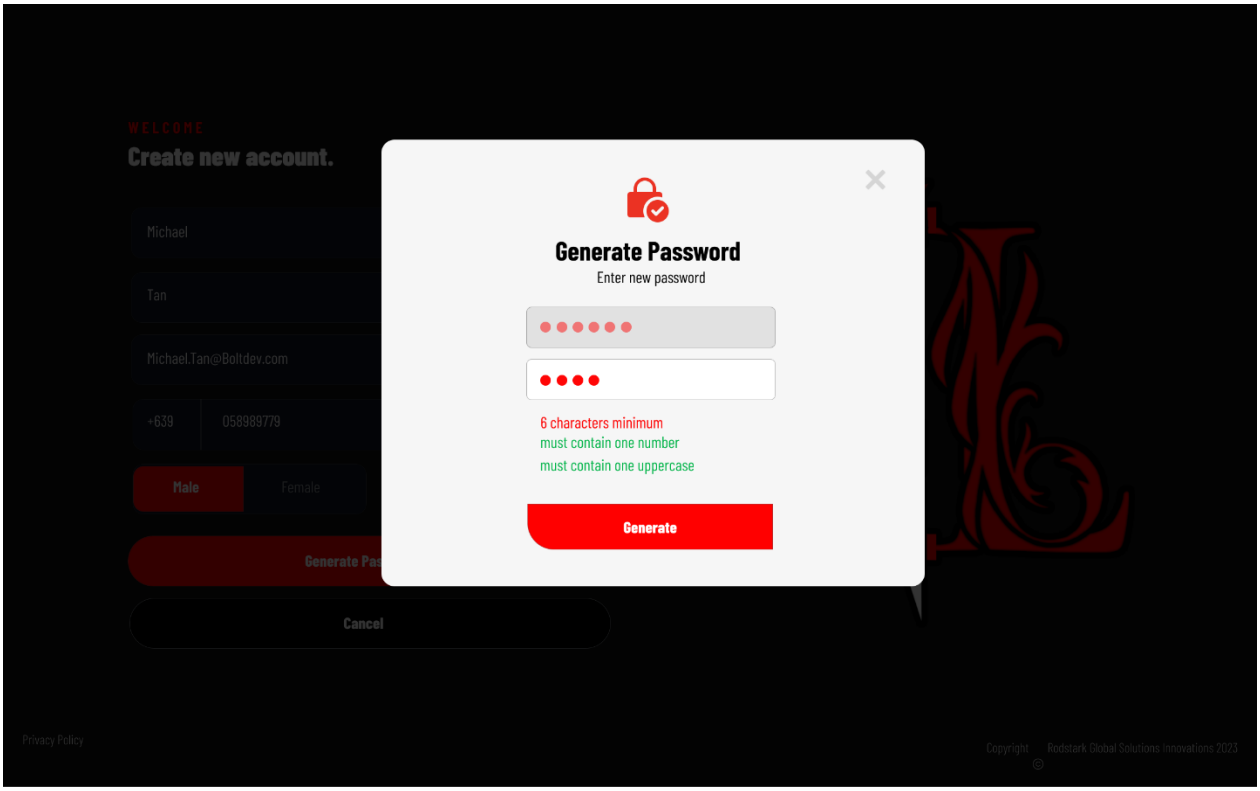

Figure 7.10 Sign up (Generate Password)

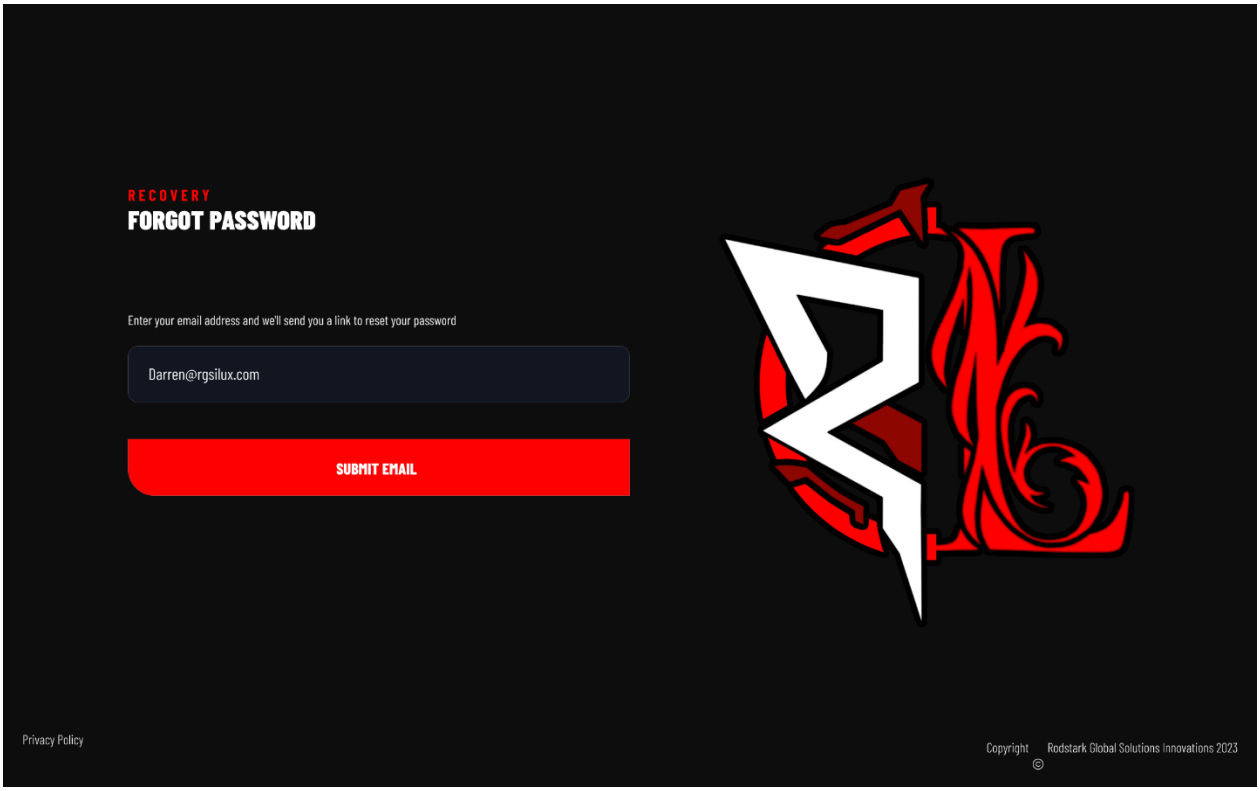

Figure 7.11 Forgot Password

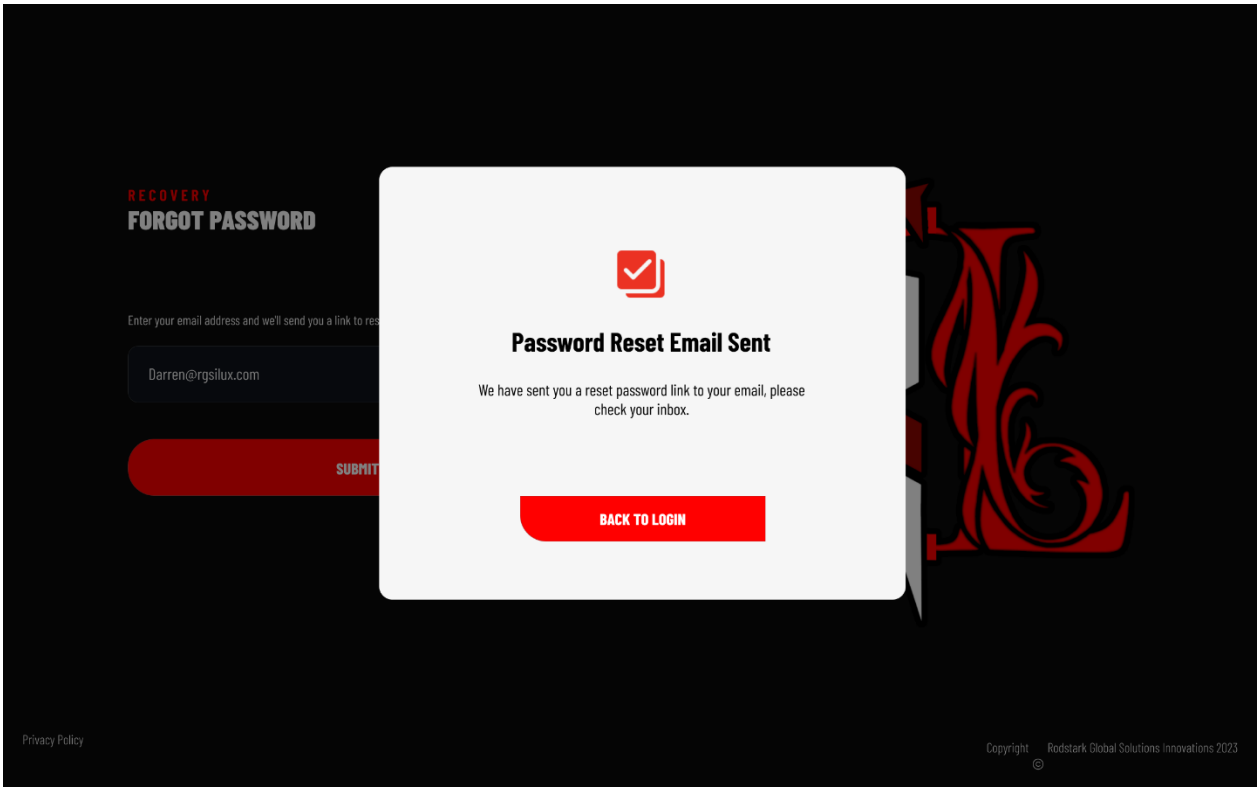

Figure 7. 12 Forgot Password (Password Reset)

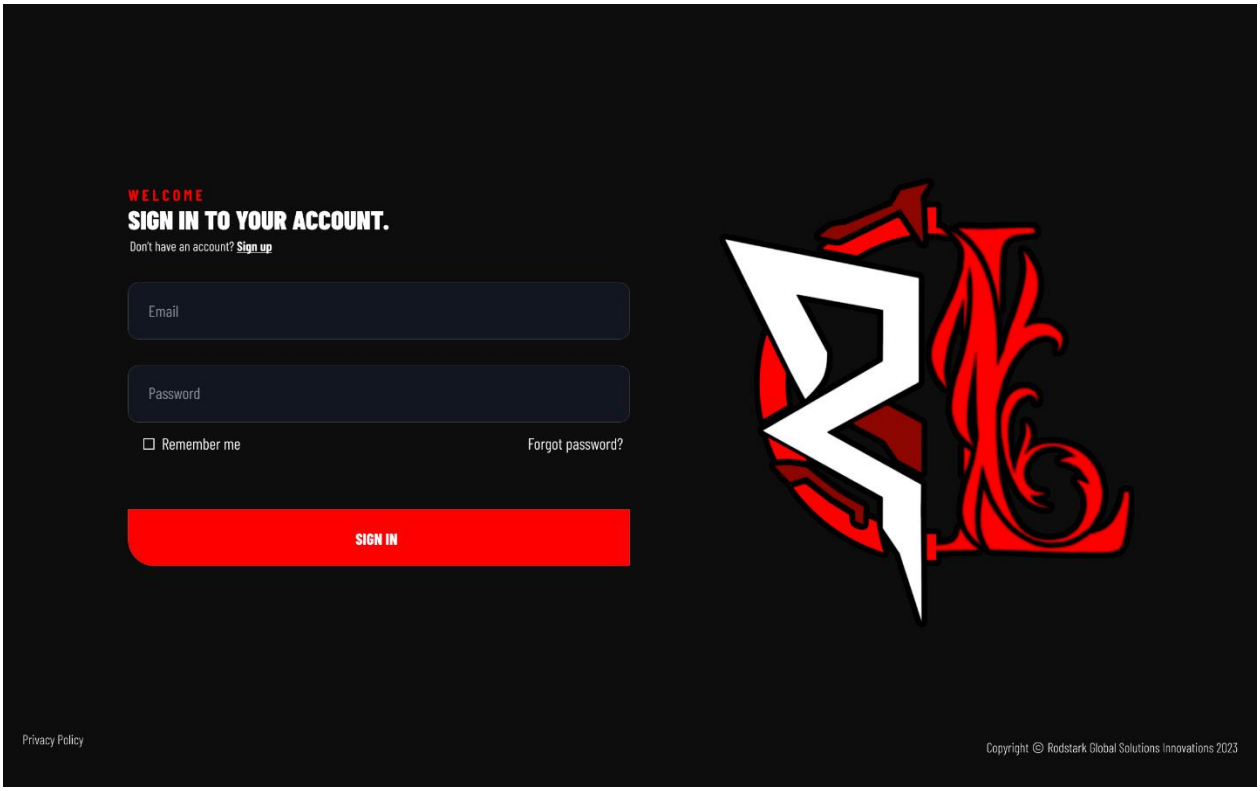

Figure 7.13 Login

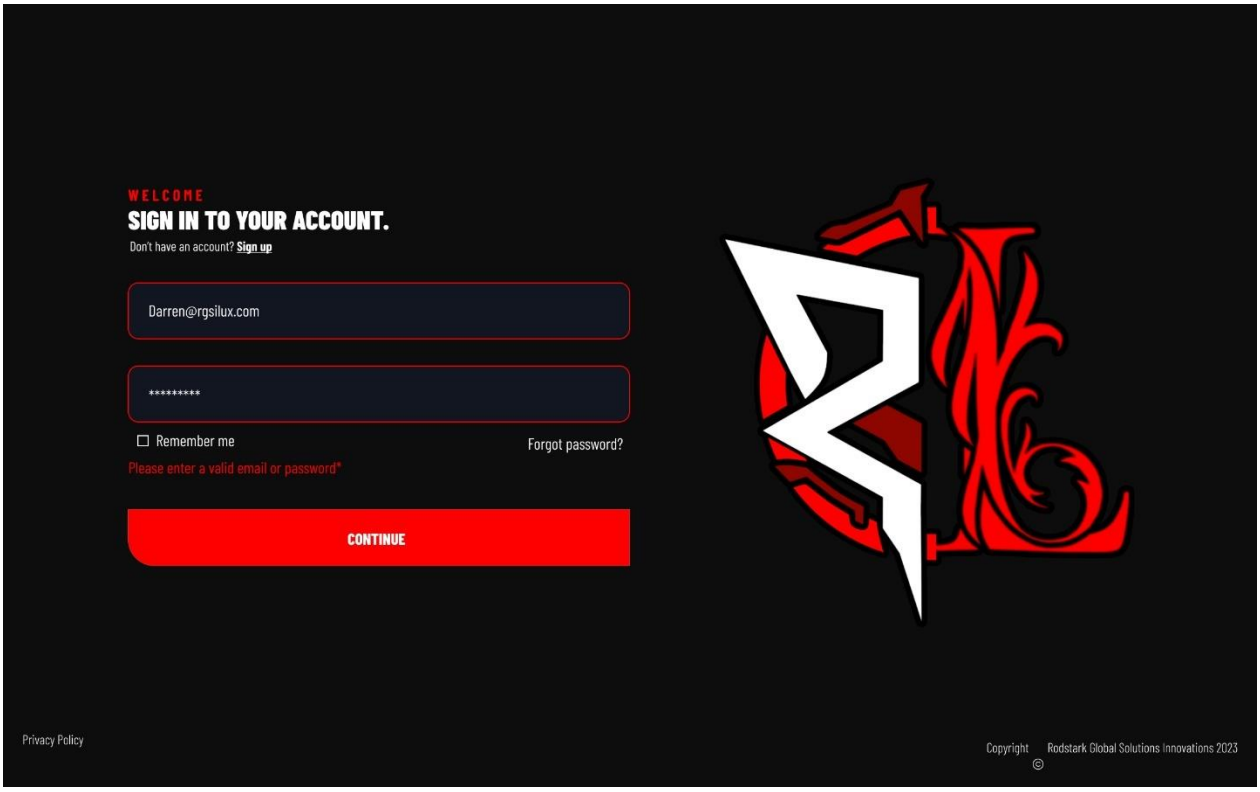

Figure 7.14 Login (Invalid Input)

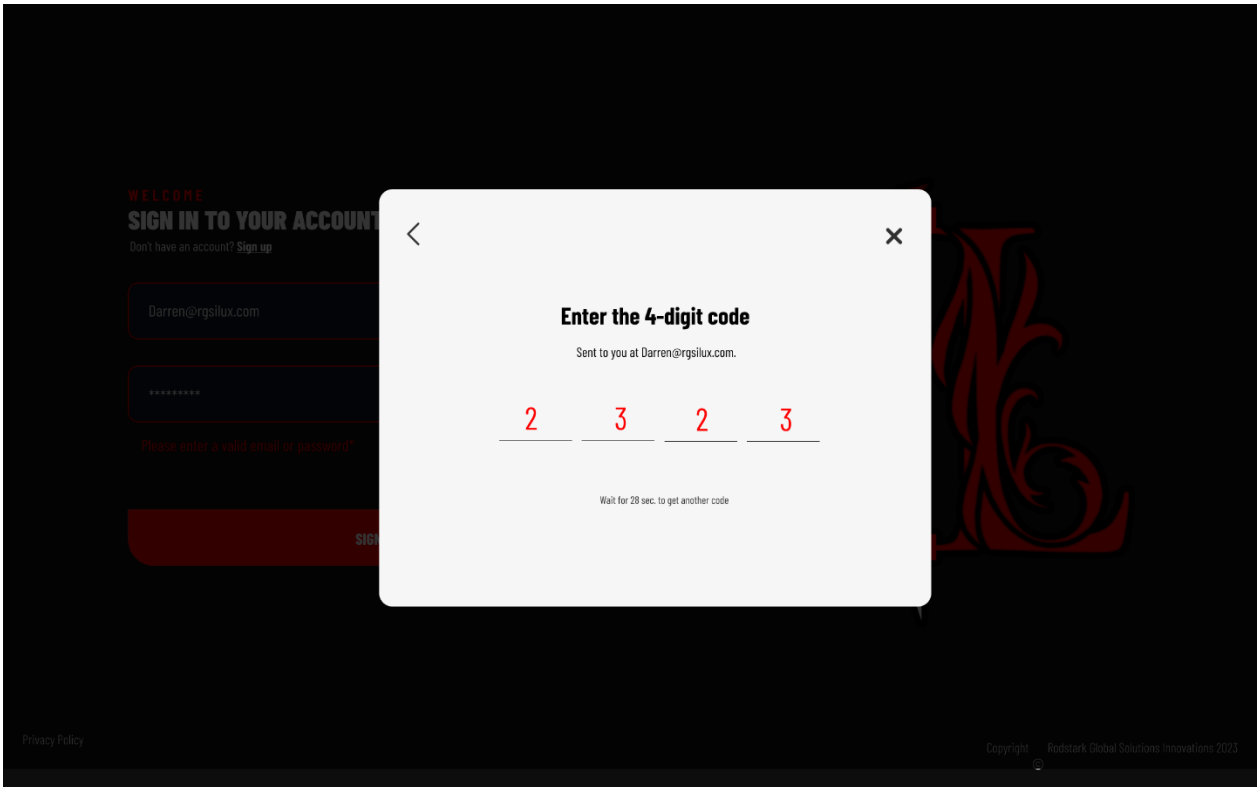

Figure 7.15 Login (Two Factor Authentication)

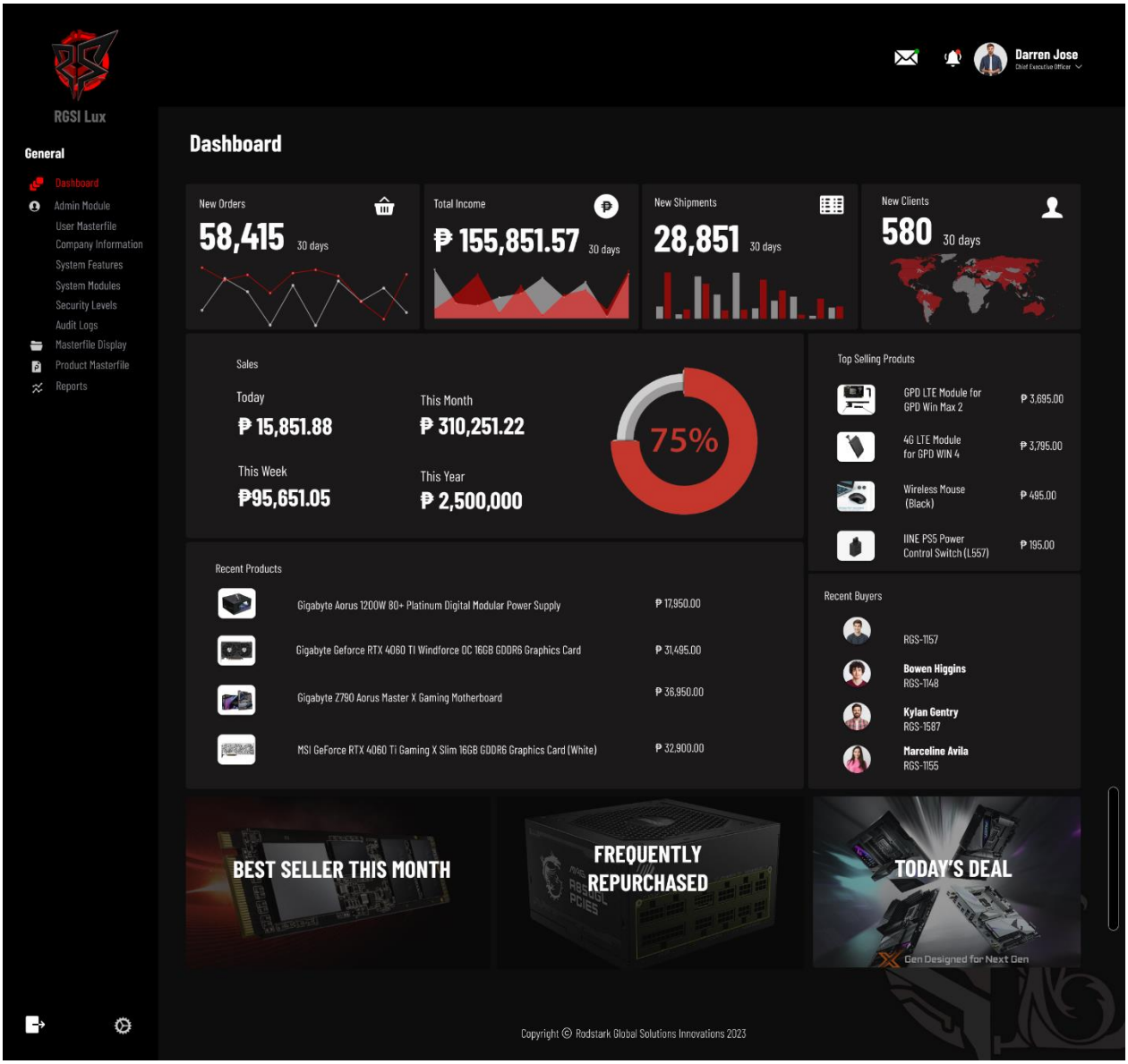

Figure 7.16 Dashboard

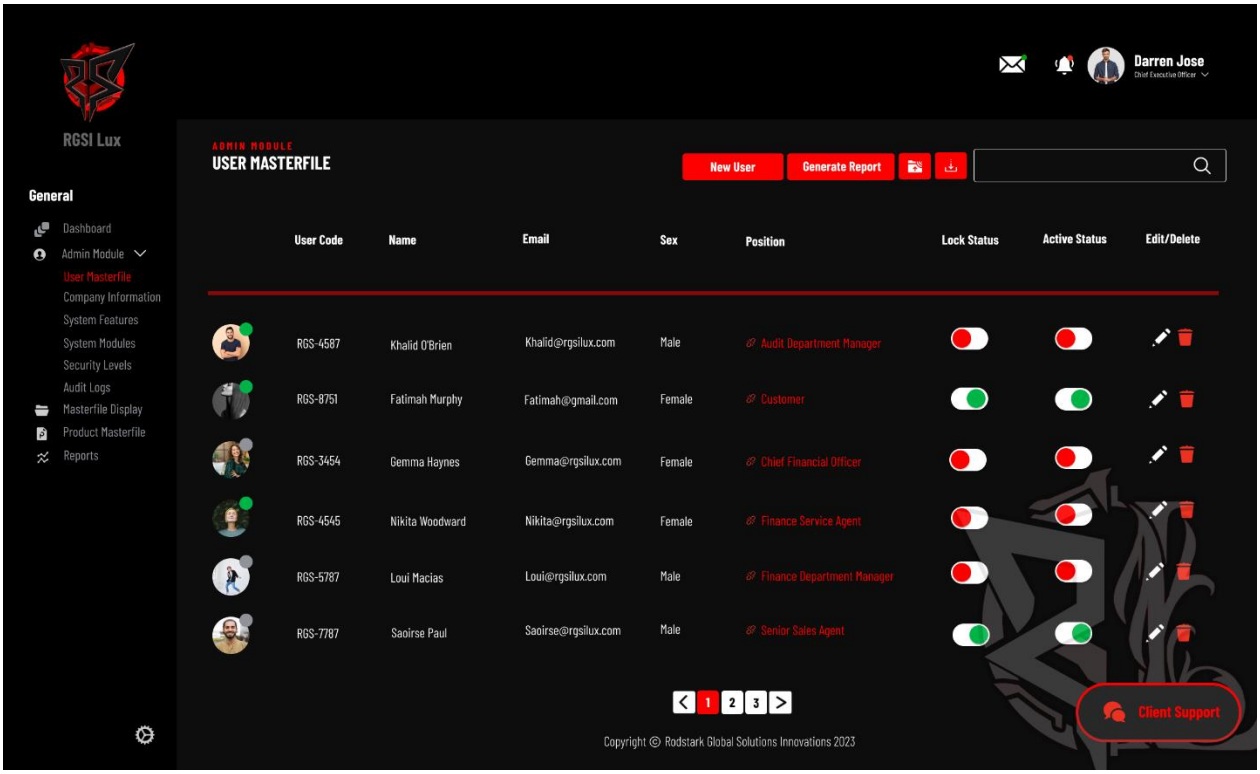

Figure 7.17 User Masterfile

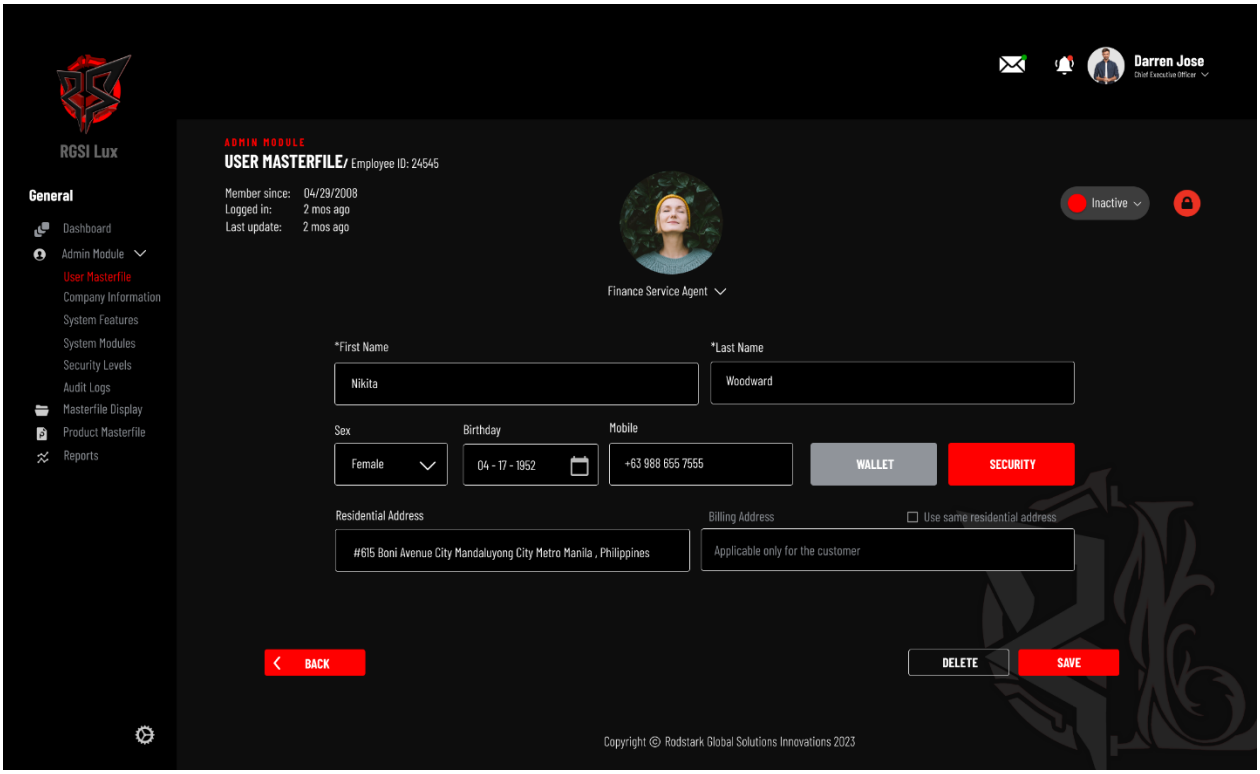

Figure 7.18 User Masterfile (Employee Form)

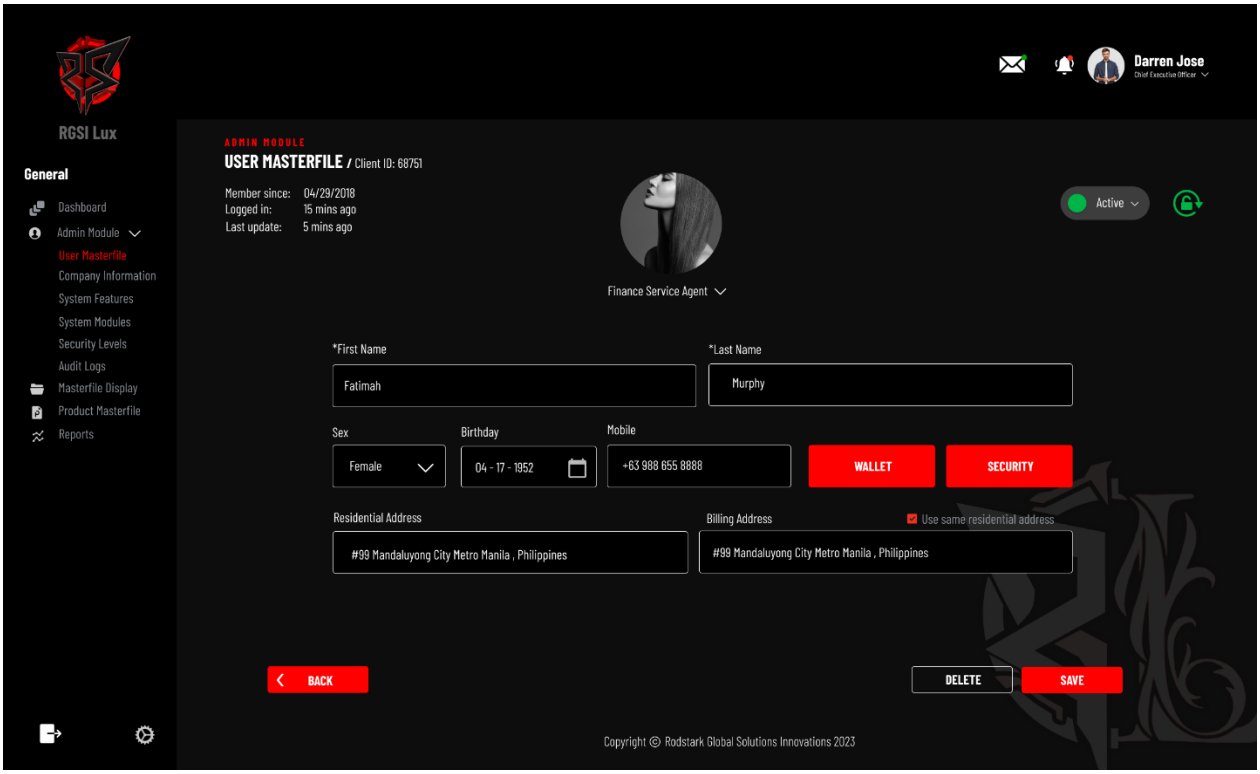

Figure 7.19 User Masterfile (Client Form)

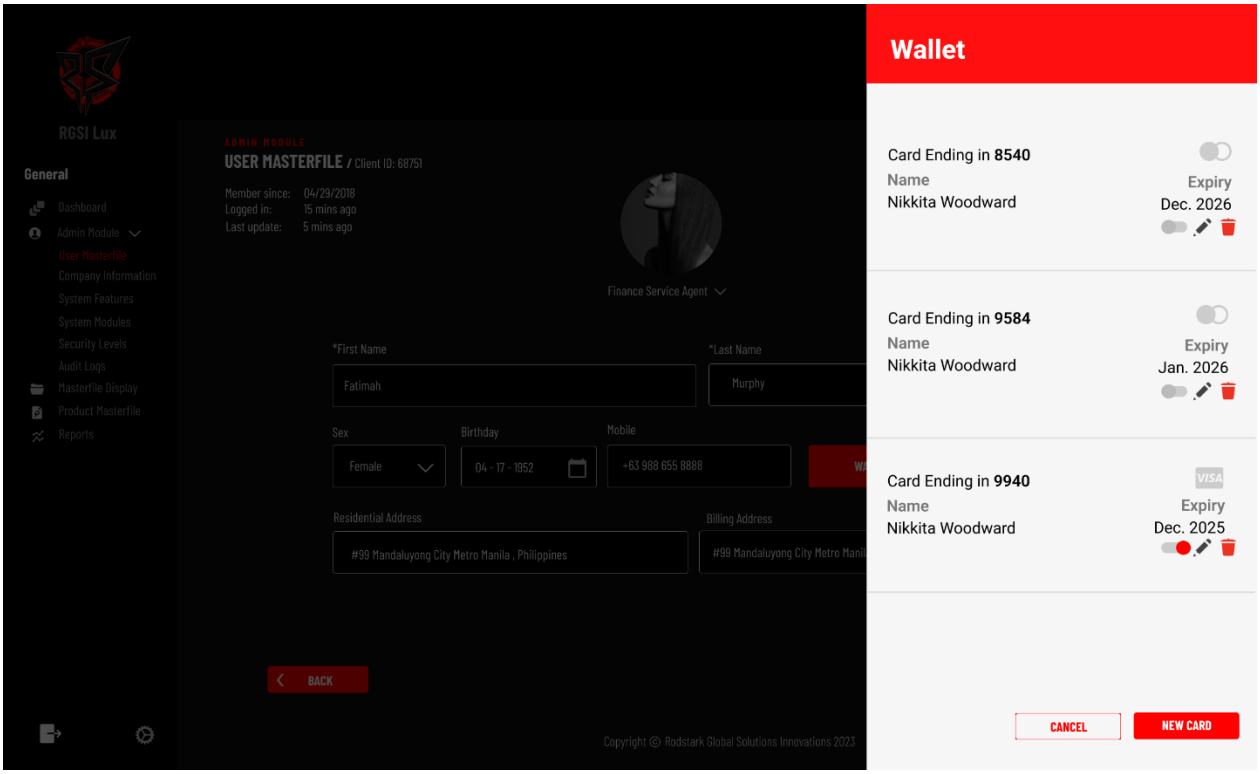

Figure 7.20 User Masterfile (Client Wallet)

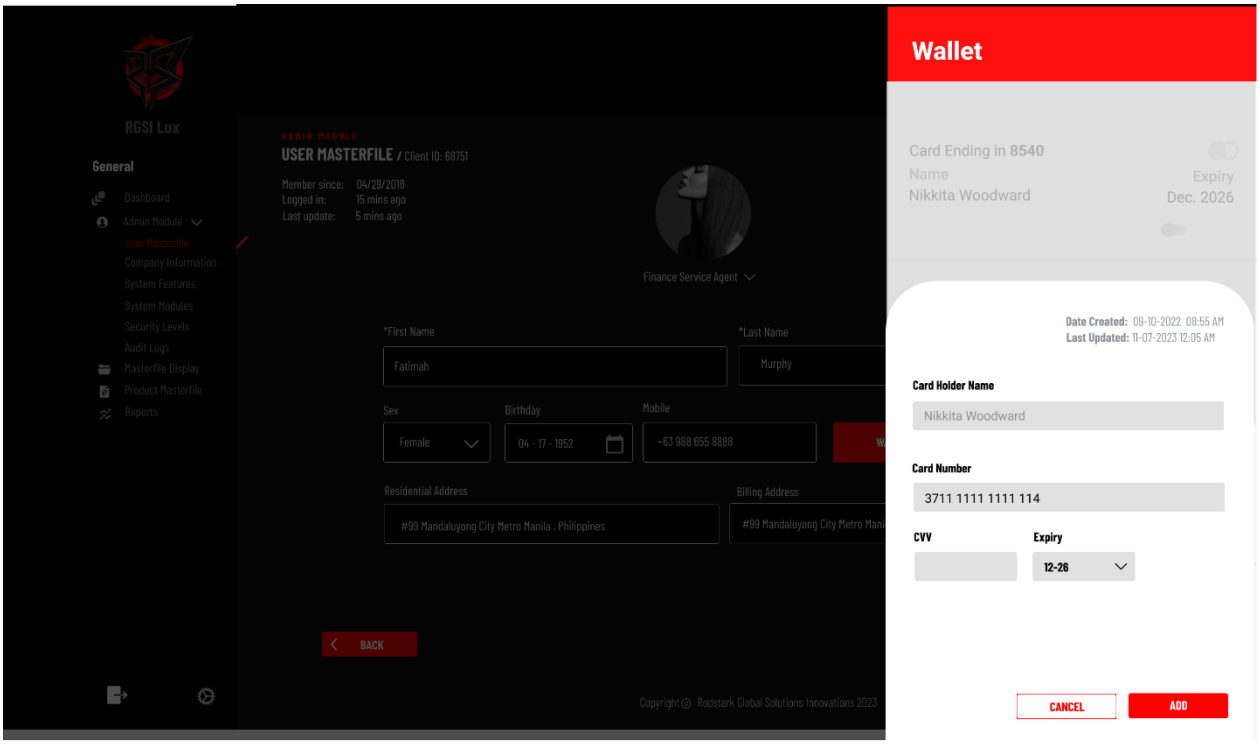

Figure 7.21 User Masterfile (Clients Wallet Form)

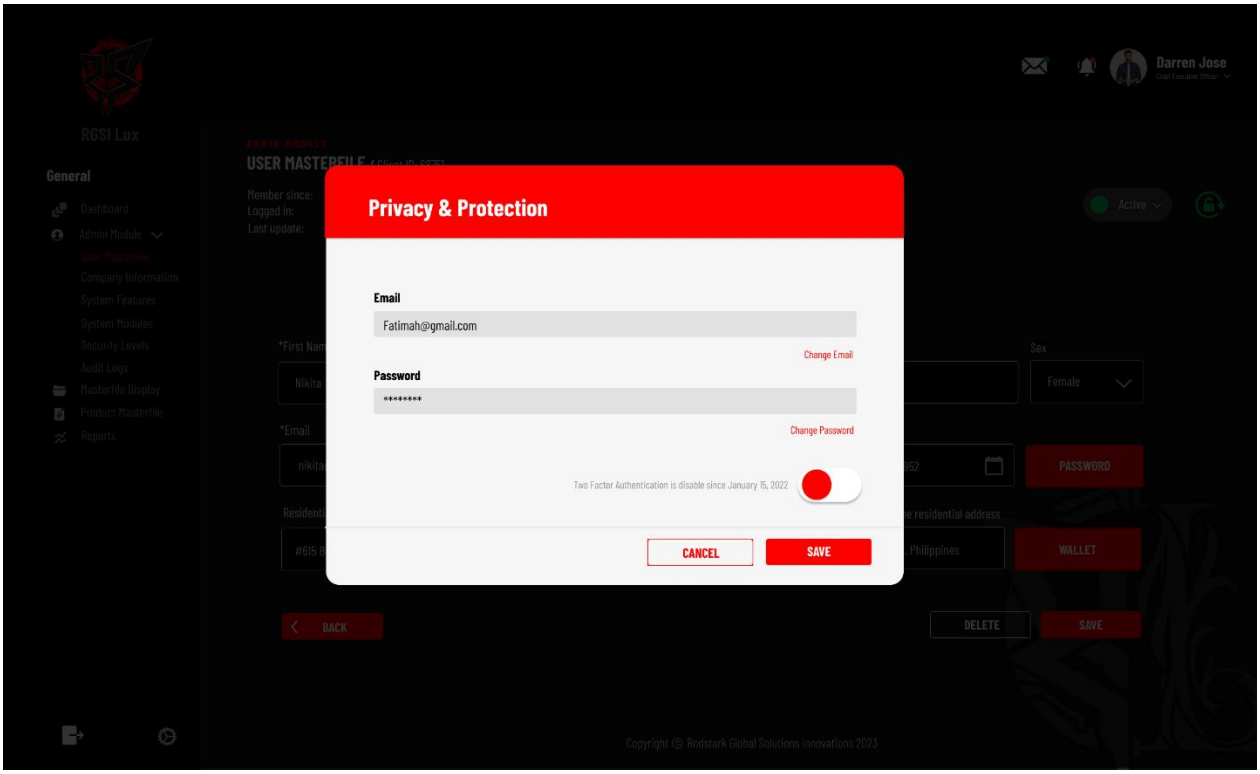

Figure 7.22 User Masterfile (Security)

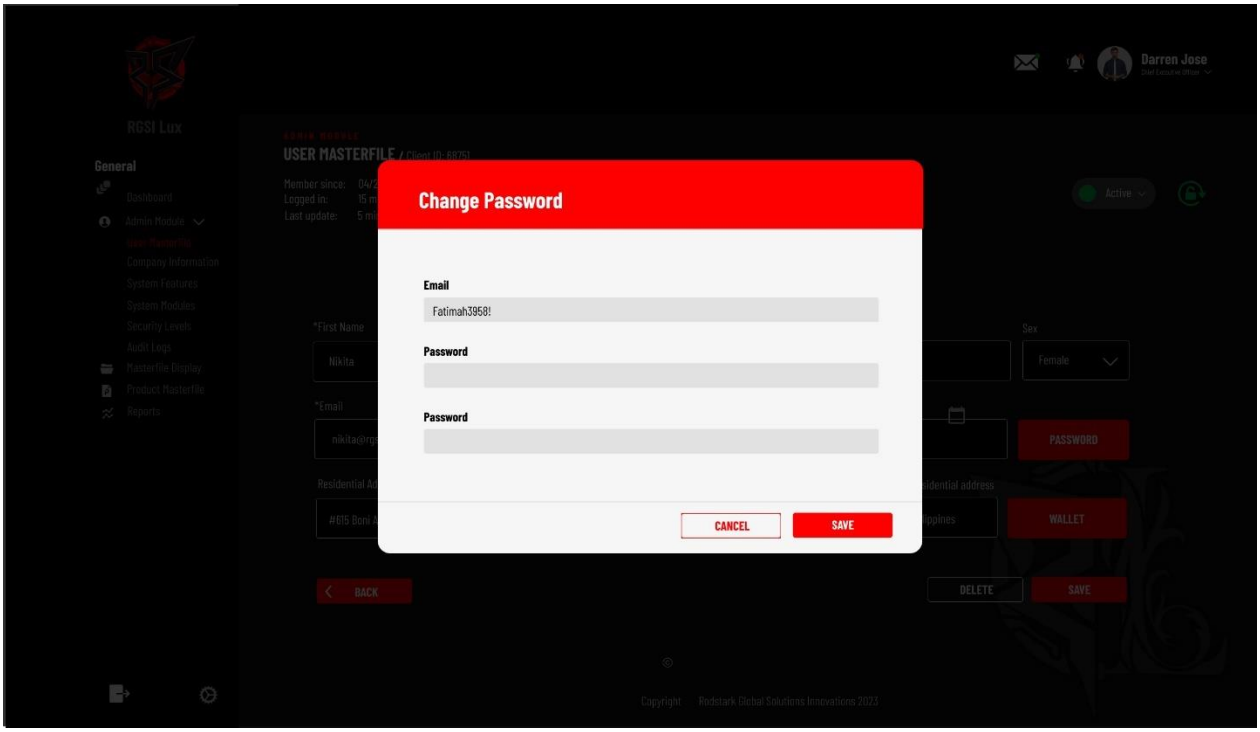

Figure 7.23 User Masterfile (Change Password)

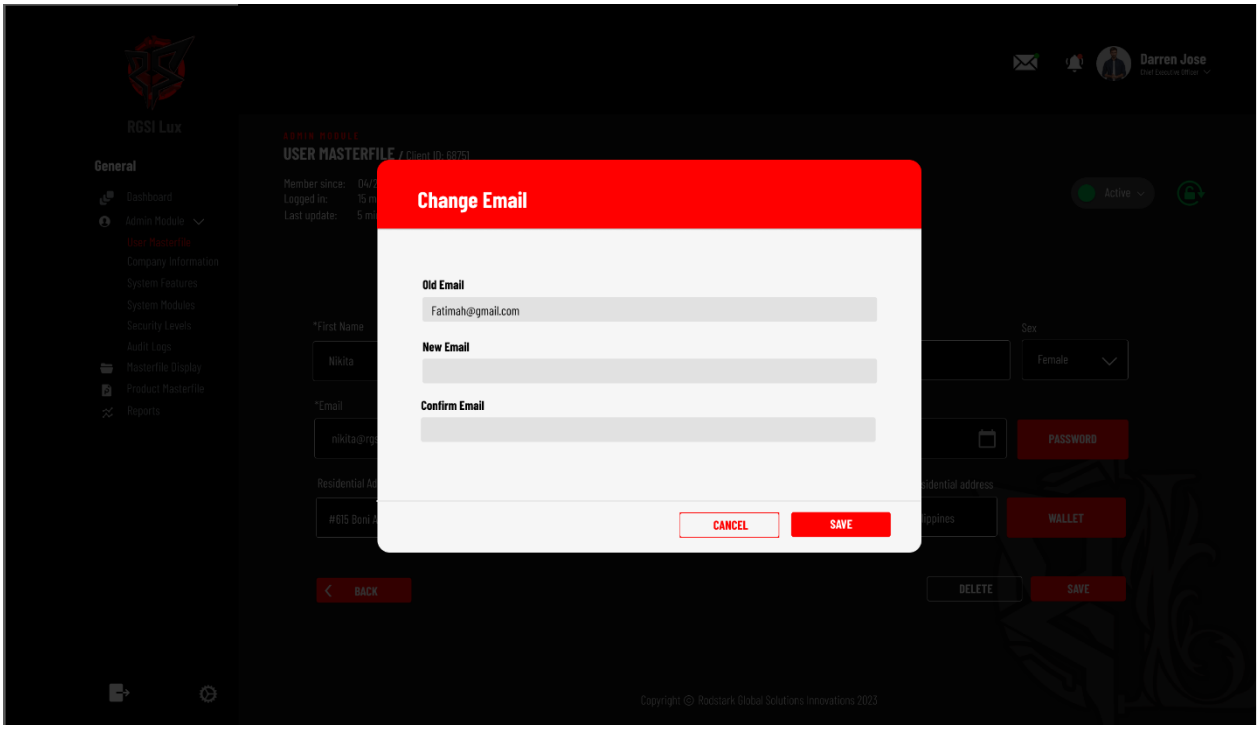

Figure 7.24 User Masterfile (Change Email)

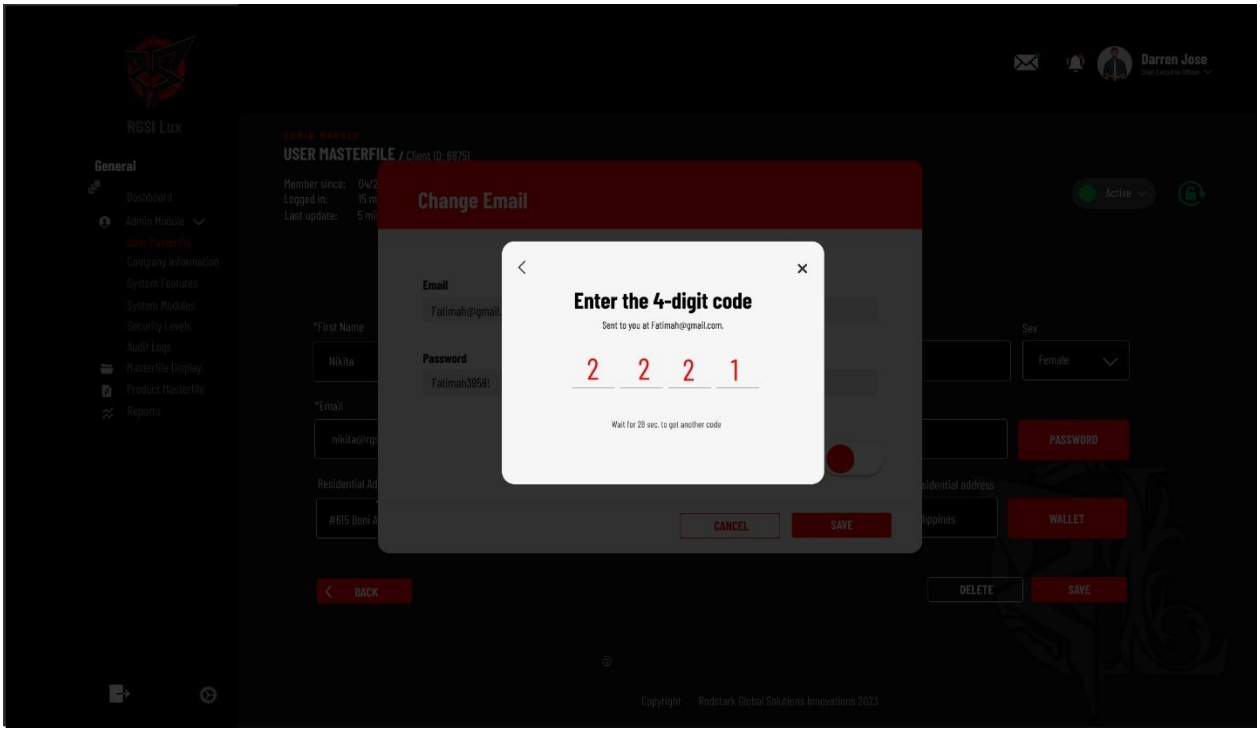

Figure 7.25 User Masterfile (Change Email Authentication)

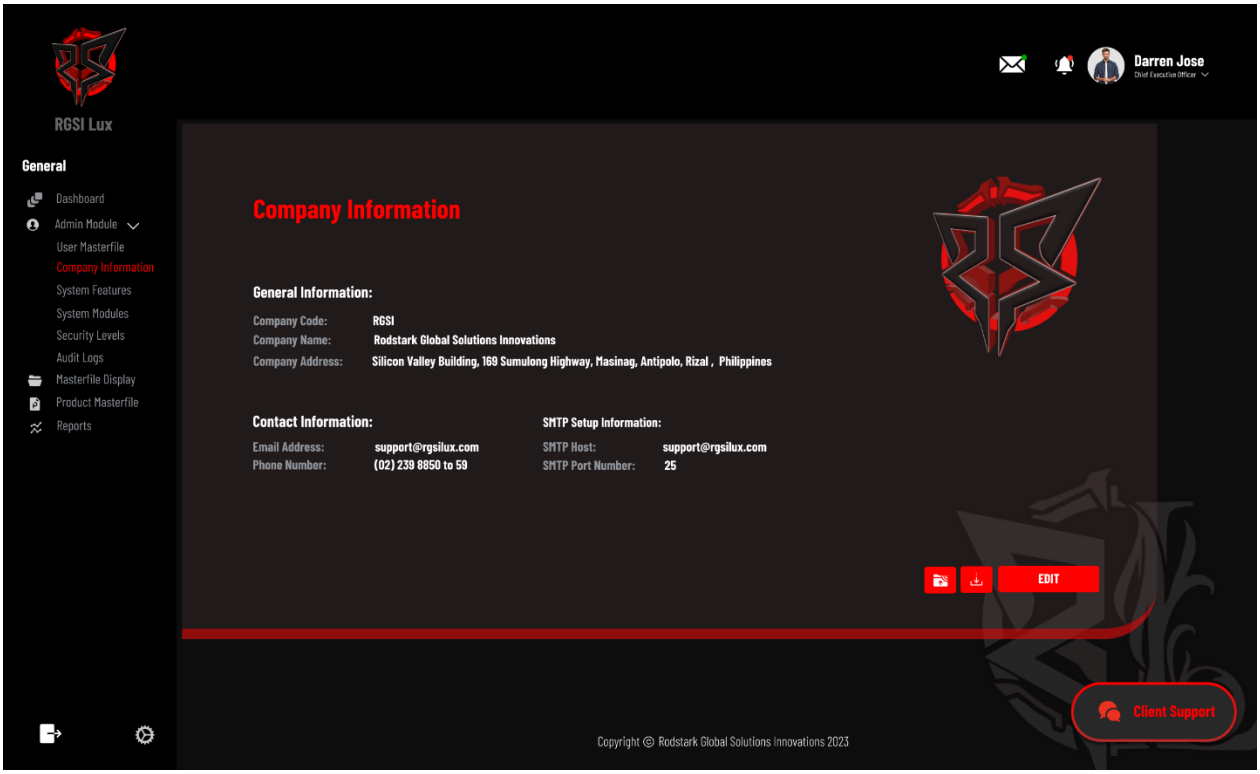

Figure 7.26 Company Information

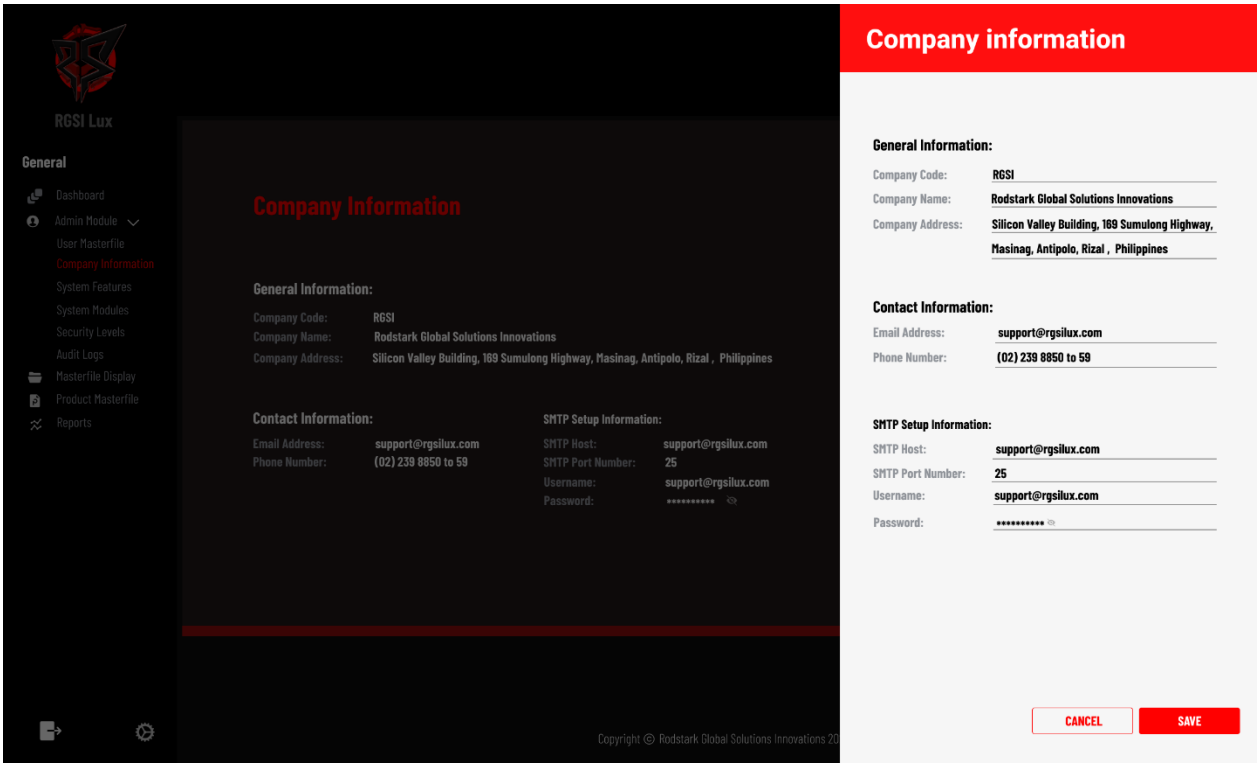

Figure 7.27 Company Information (Form)

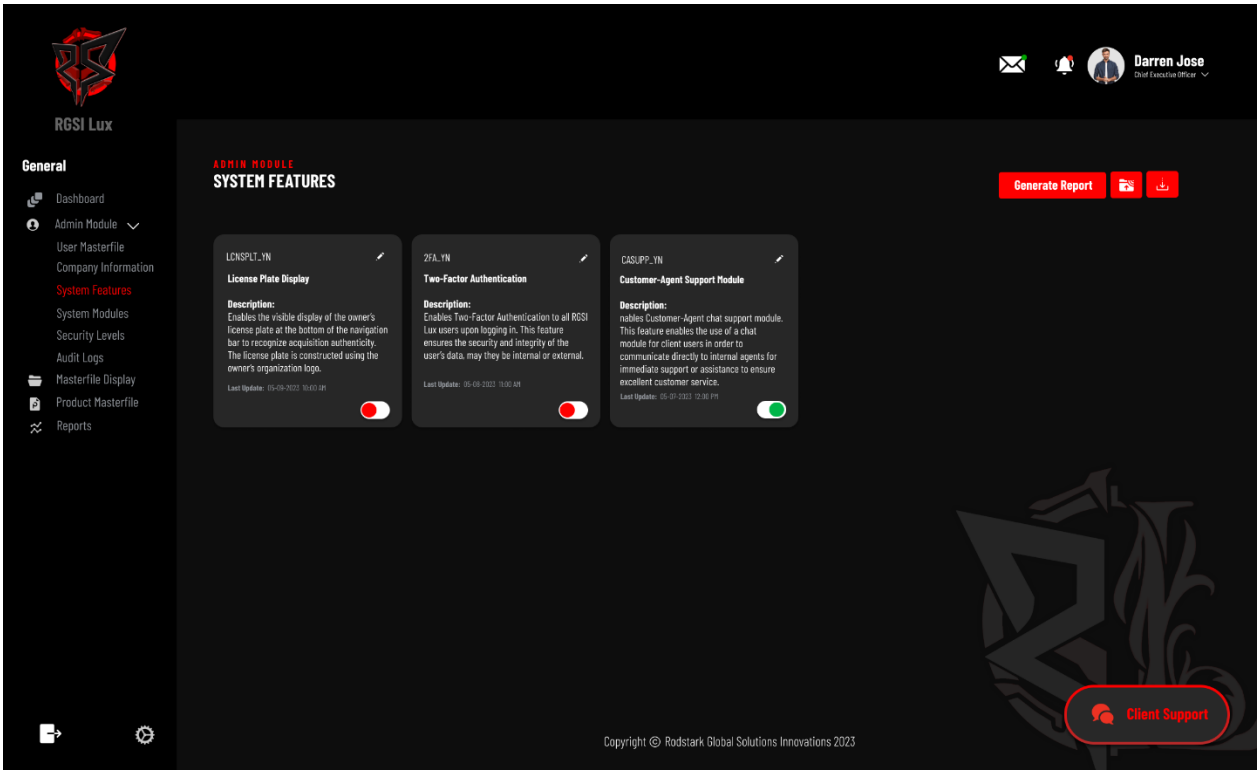

Figure 7.28 System Features

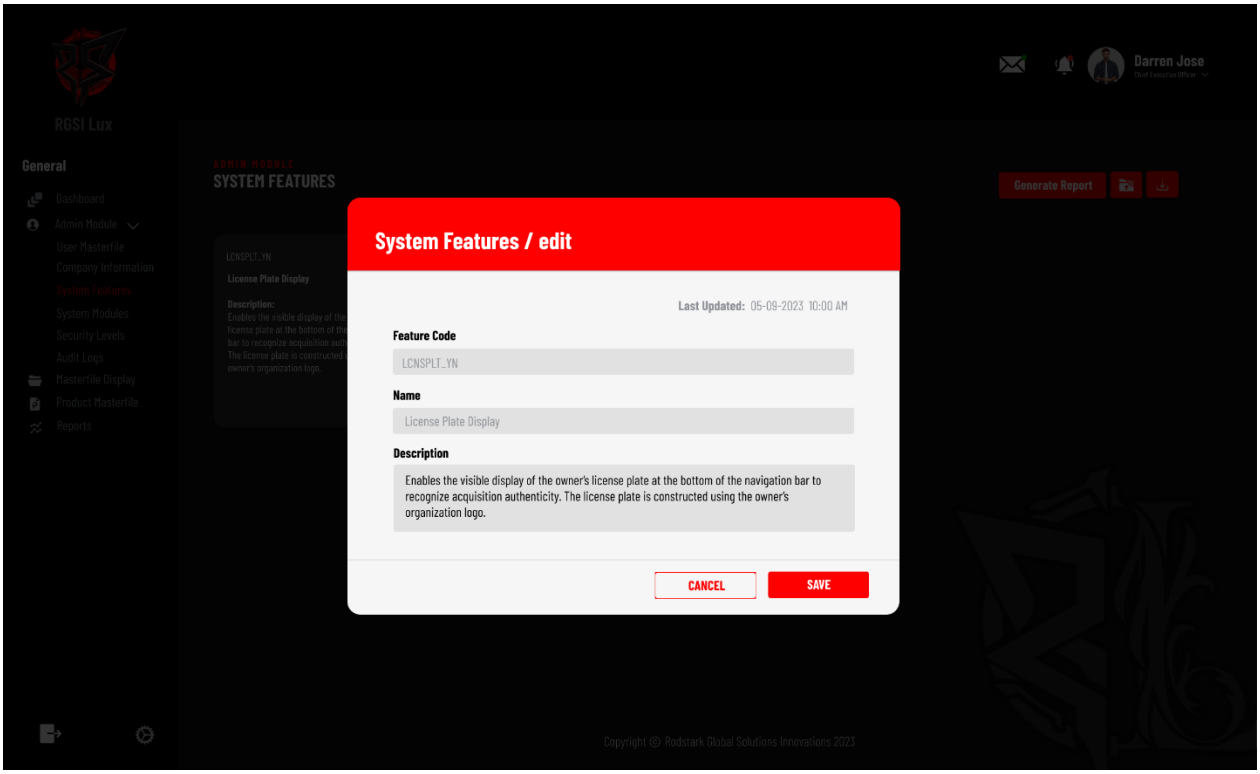

Figure 7.29 System Features (Form)

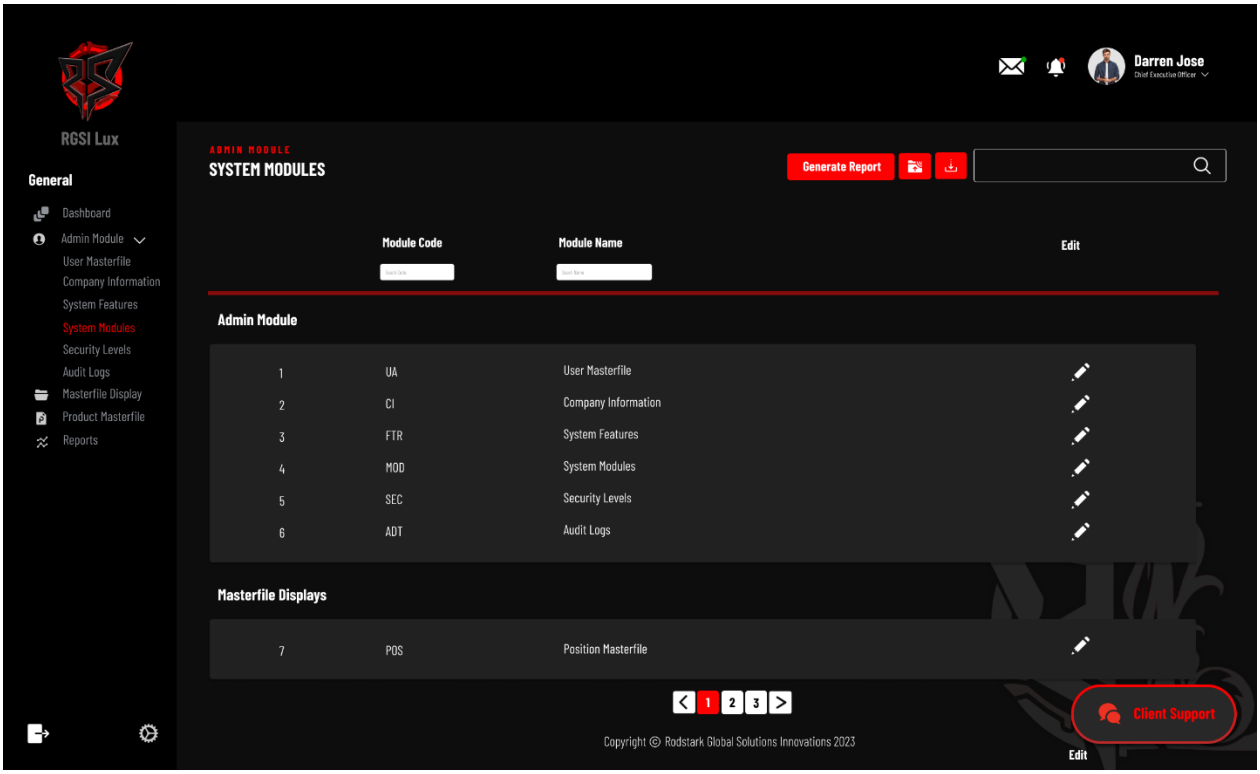

Figure 7.30 System Modules

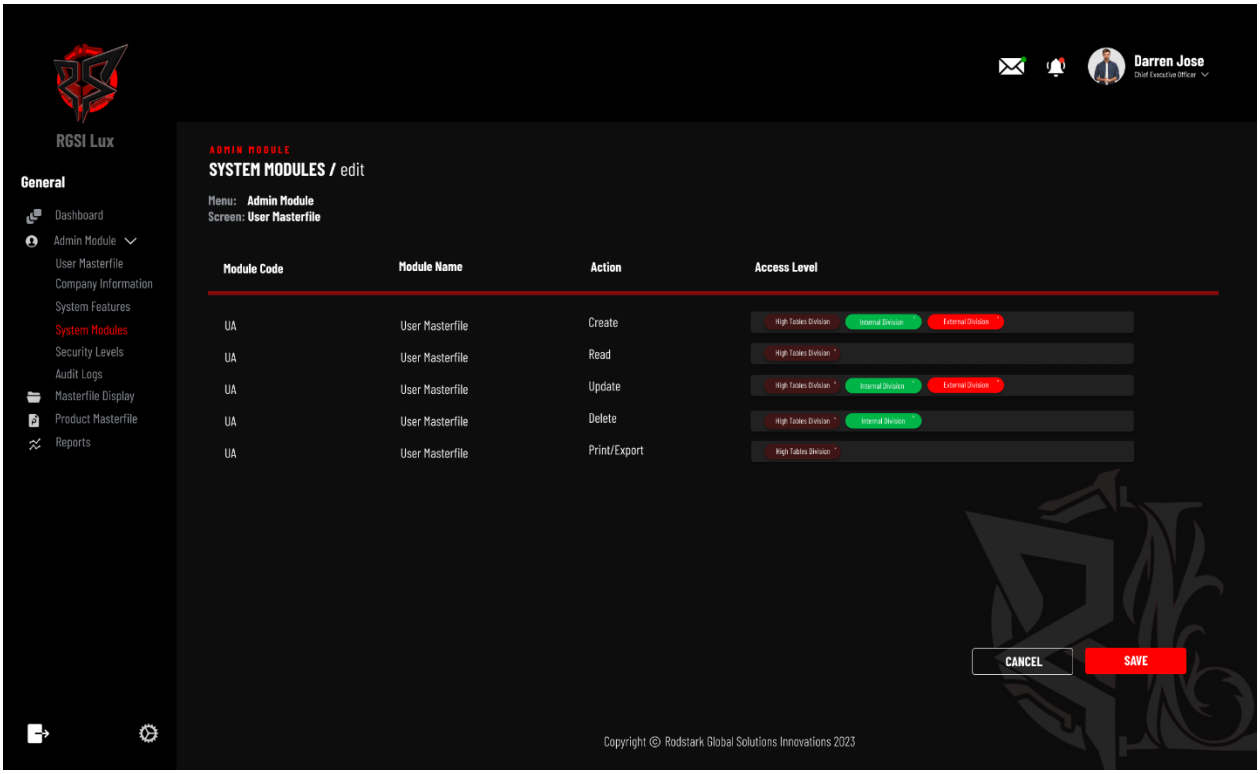

Figure 7.31 System Module (Form)

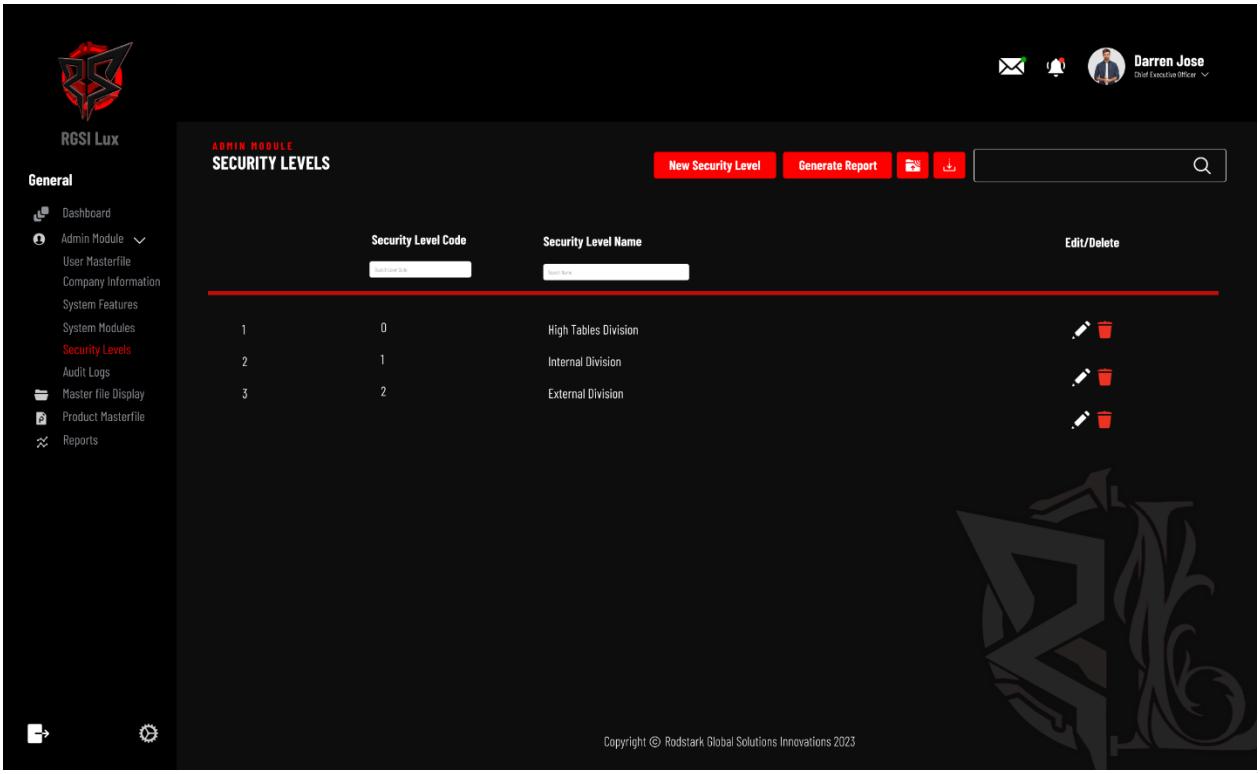

Figure 7.32 Security Levels

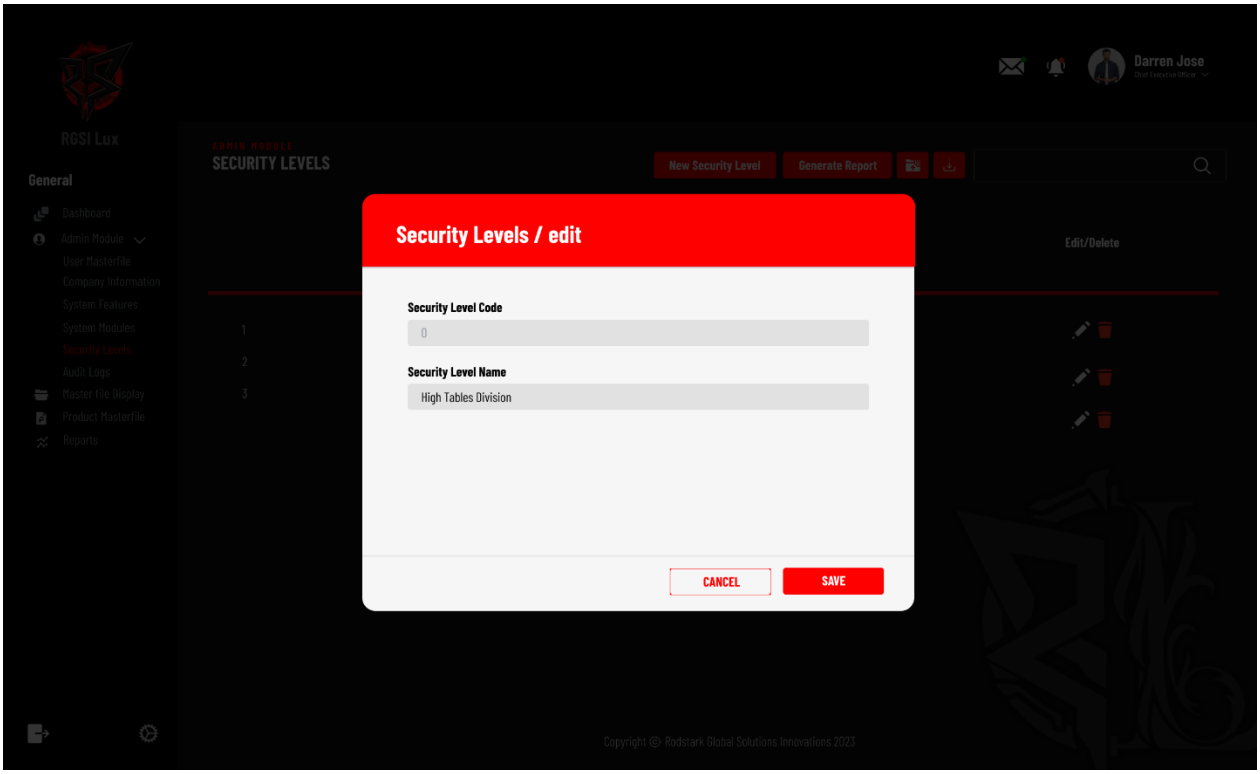

Figure 7.33 Security Levels (Form)

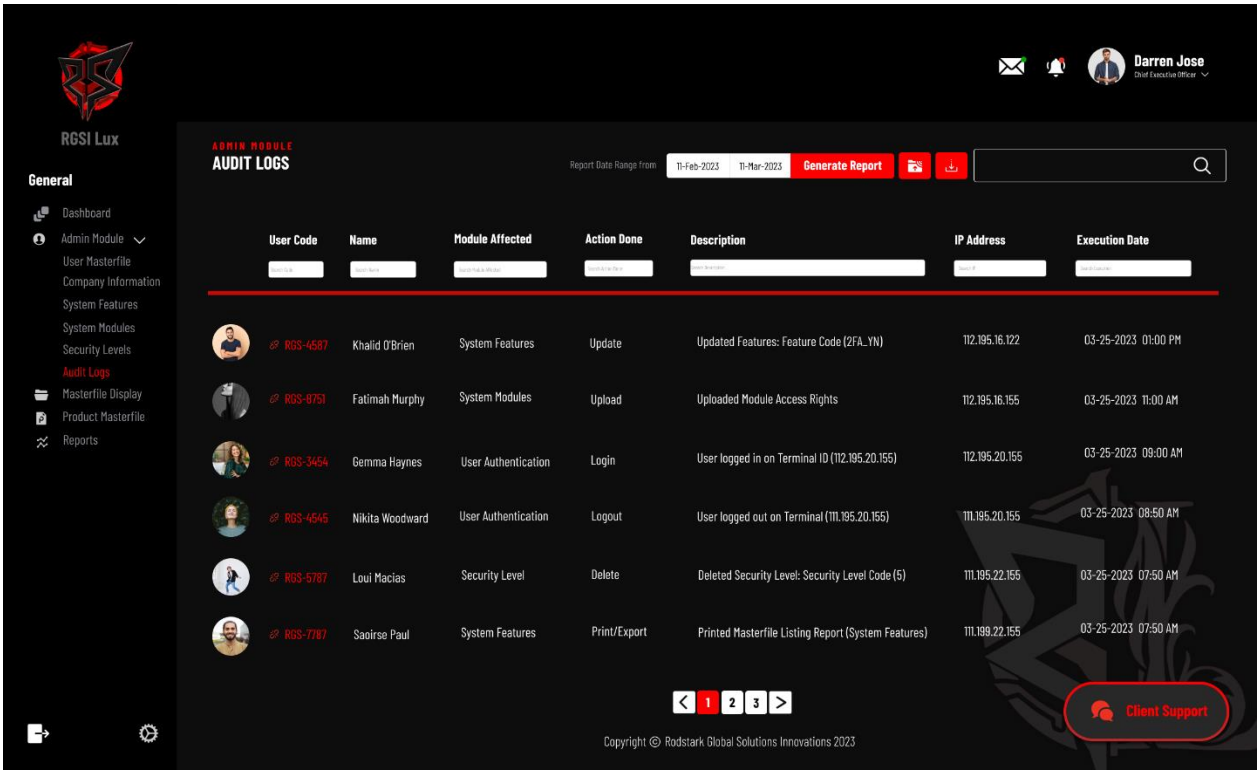

Figure 7.34 Activity Logs

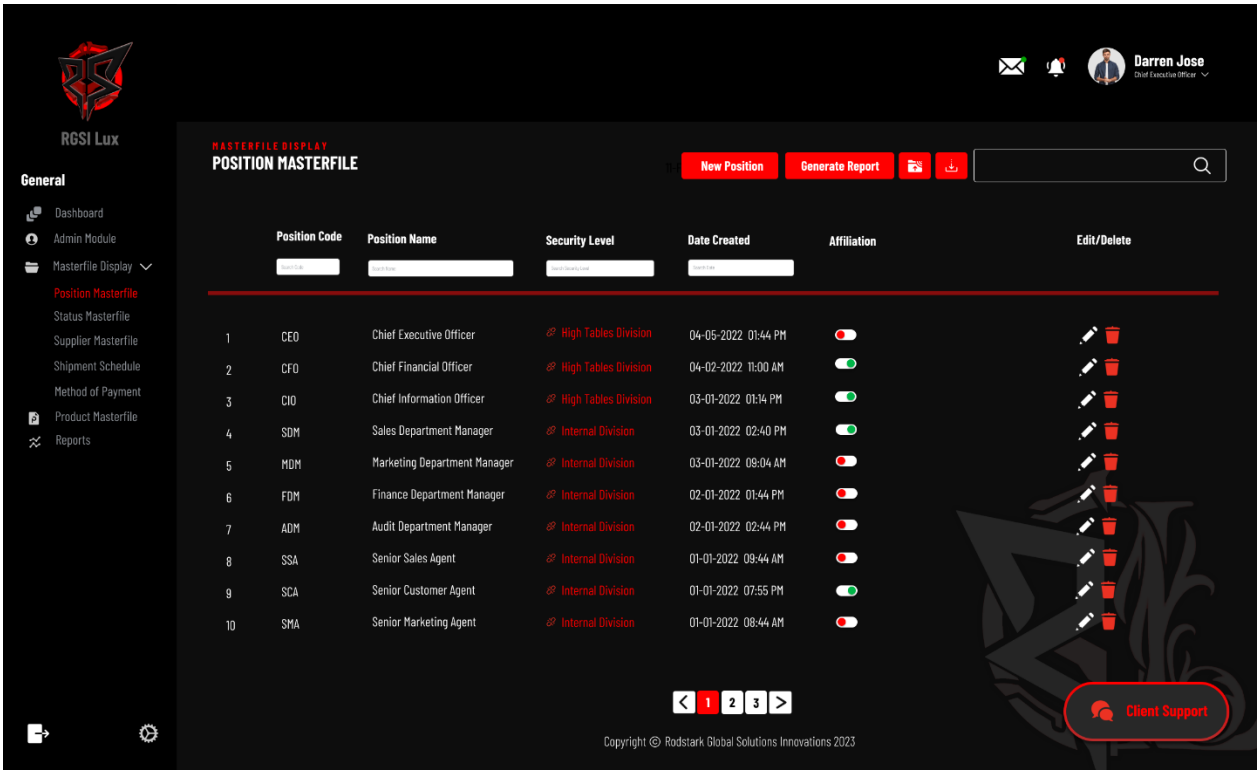

Figure 7.35 Position Masterfile

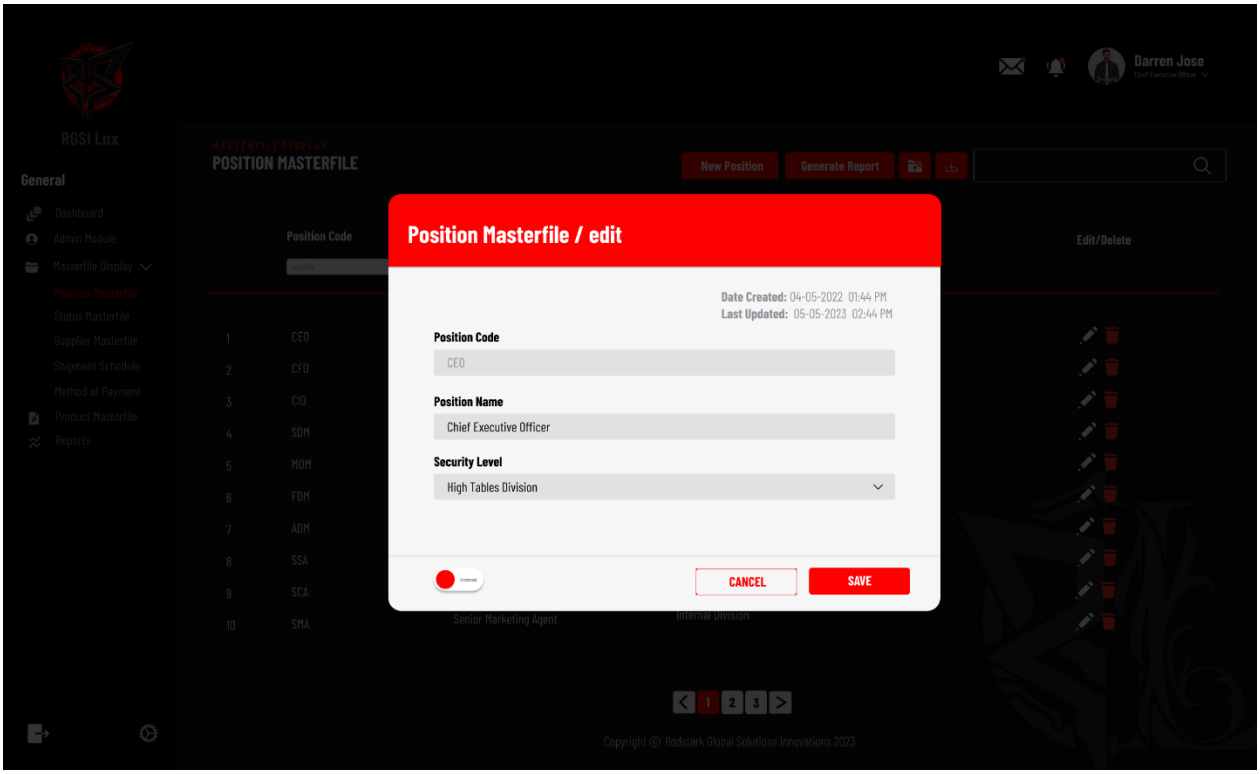

Figure 7.36 Position Masterfile (Form)

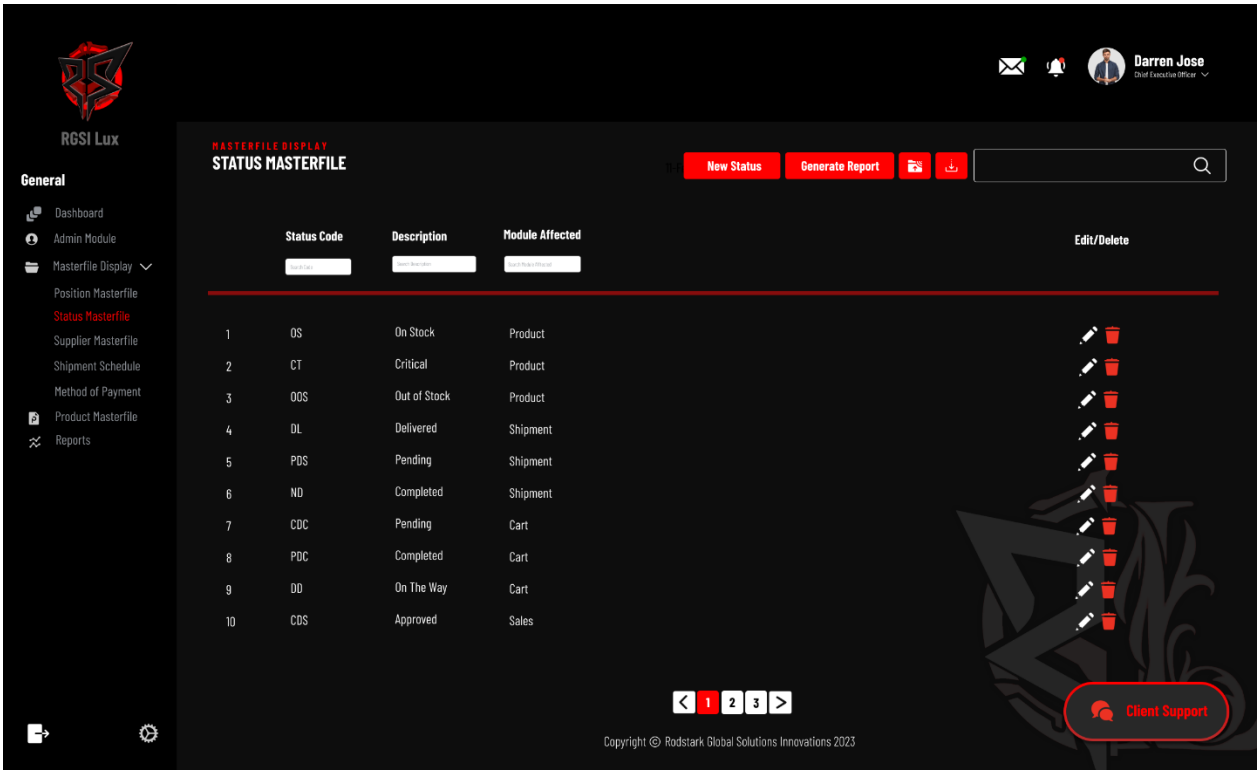

Figure 7.37 Status Masterfile

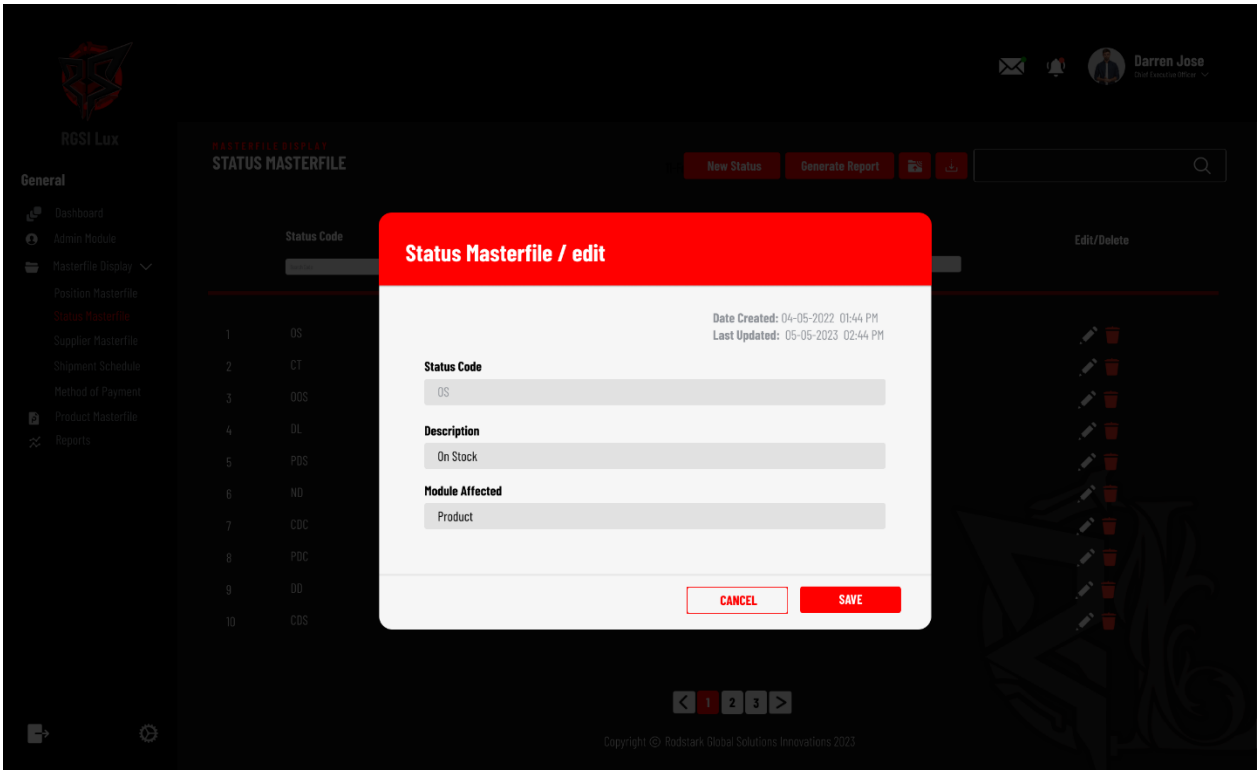

Figure 7.38 Status Masterfile (Form)

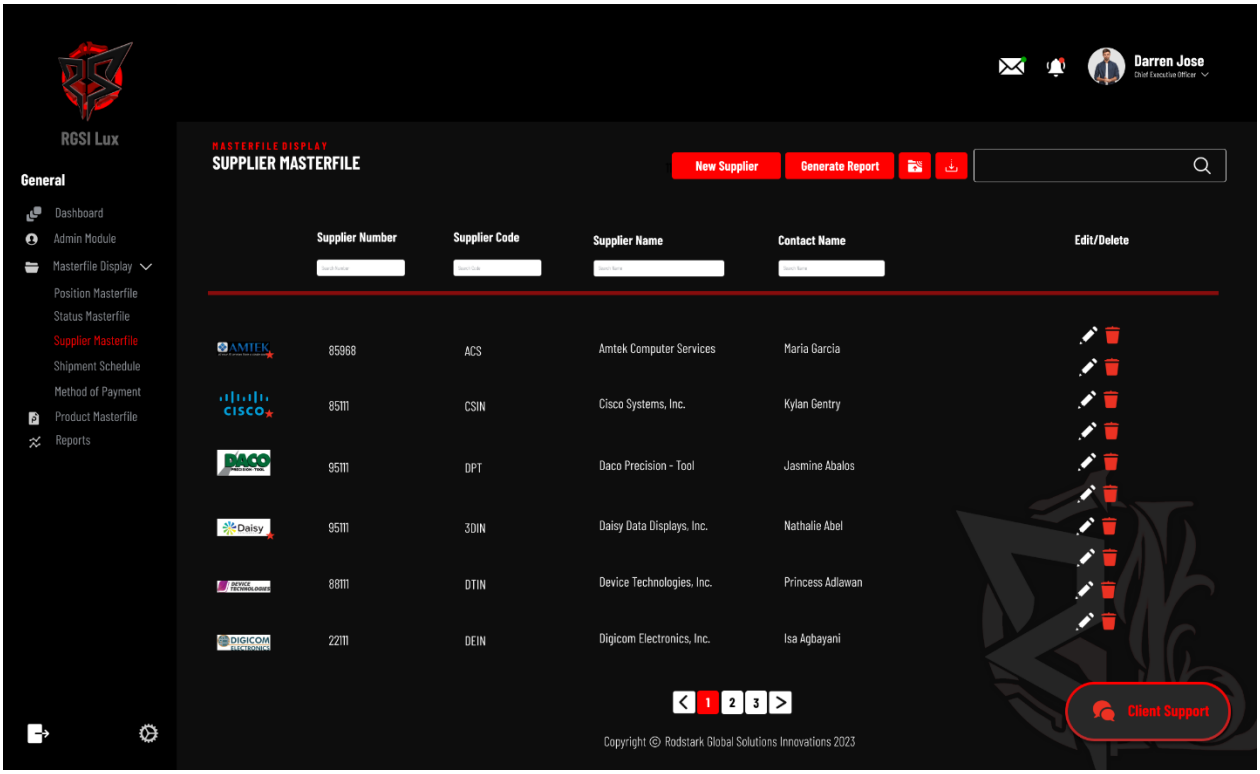

Figure 7.39 Supplier Masterfile

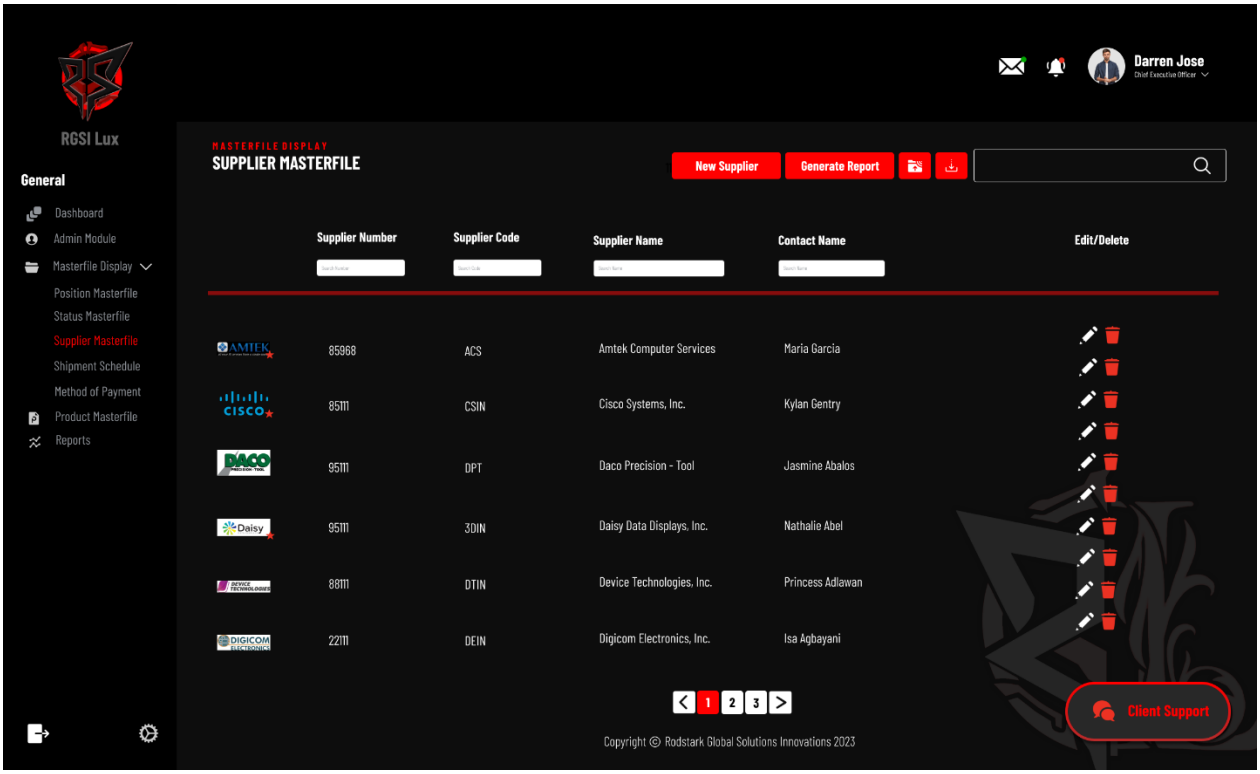

Figure 7.40 Supplier Masterfile (Form)

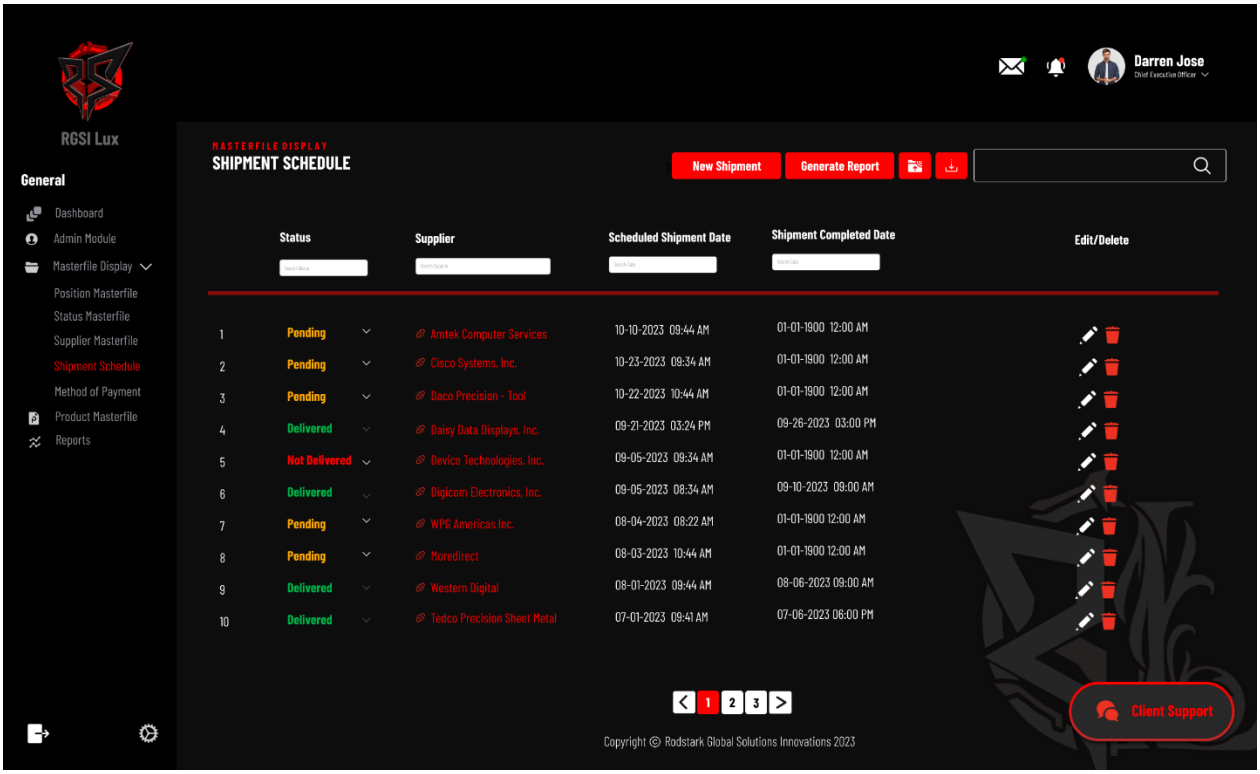

Figure 7.41 Shipment Schedule

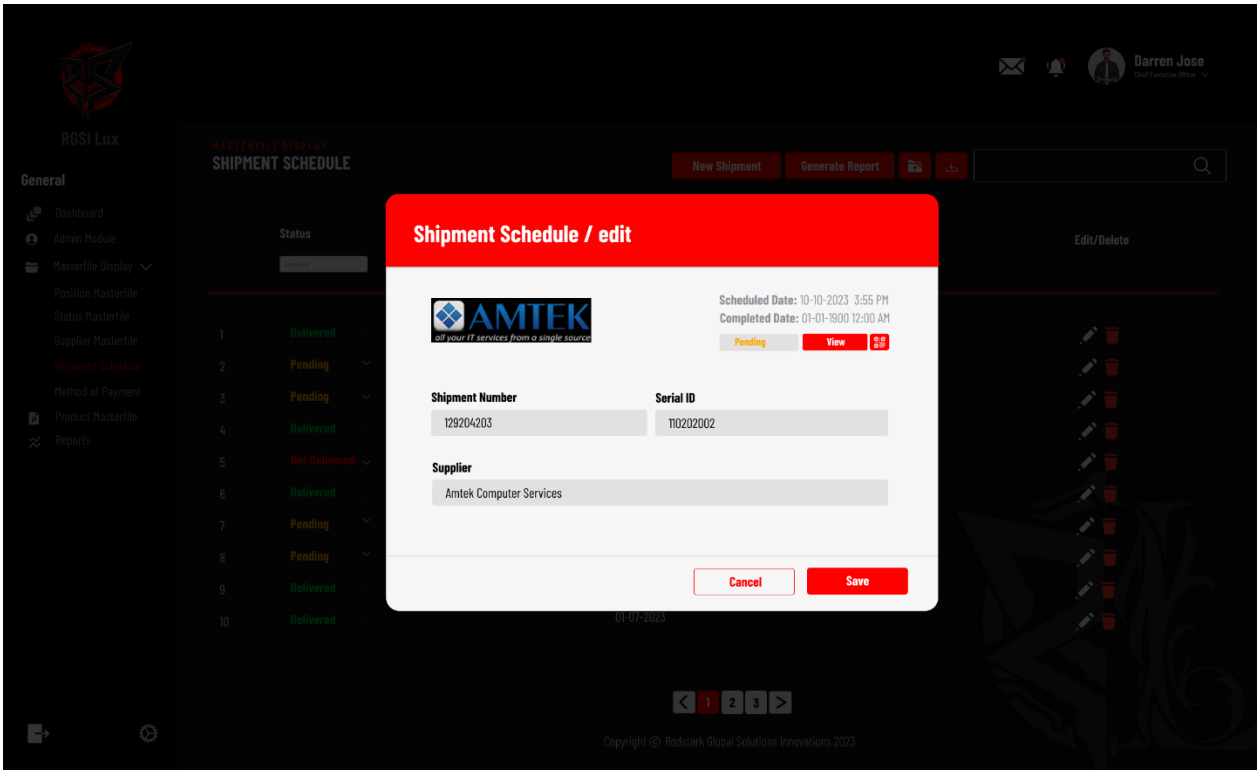

Figure 7.42 Shipment Schedule (Form)

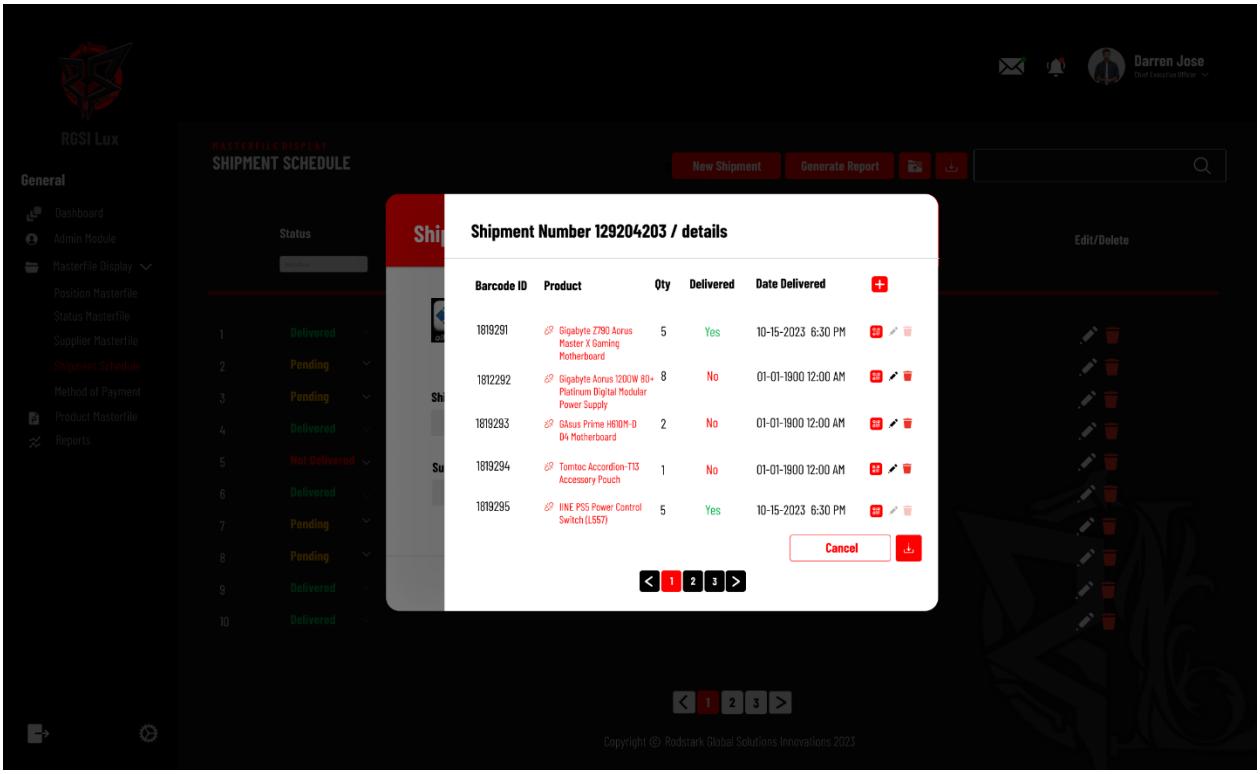

Figure 7.43 Shipment Schedule (Details)

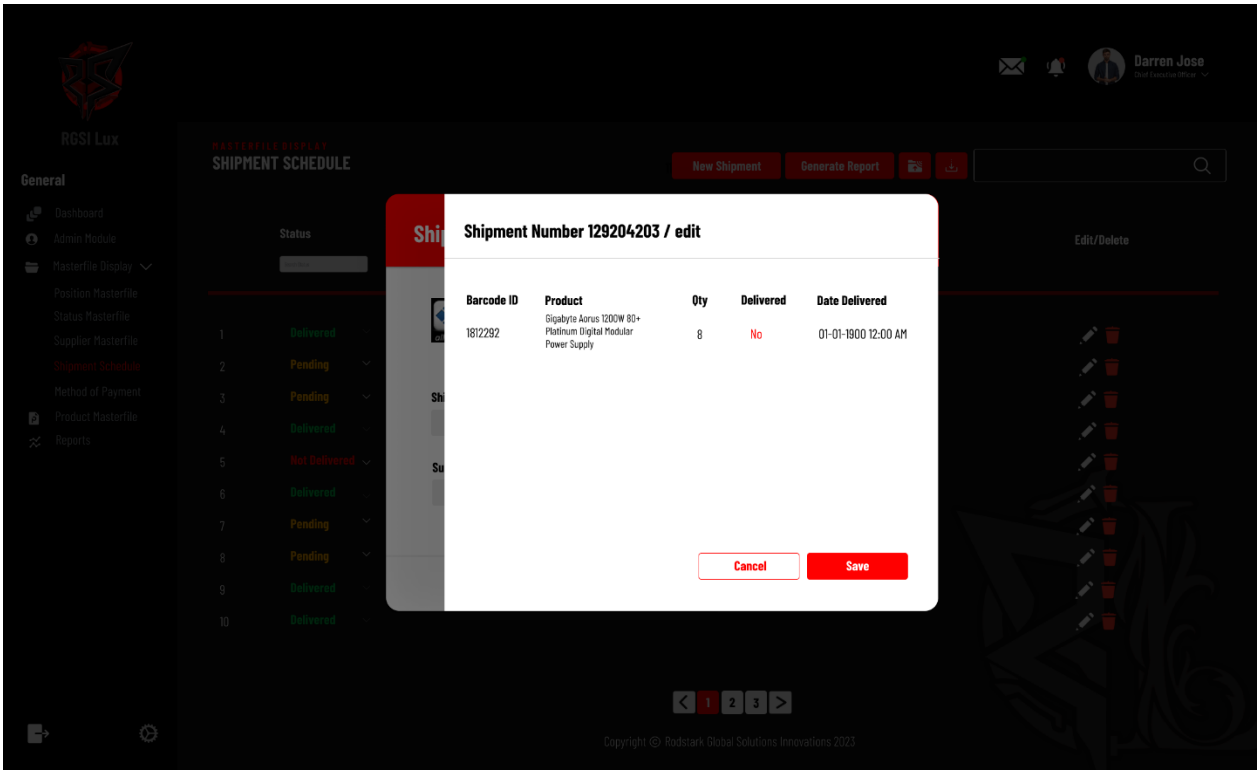

Figure 7.44 Shipment Schedule (Details Form)

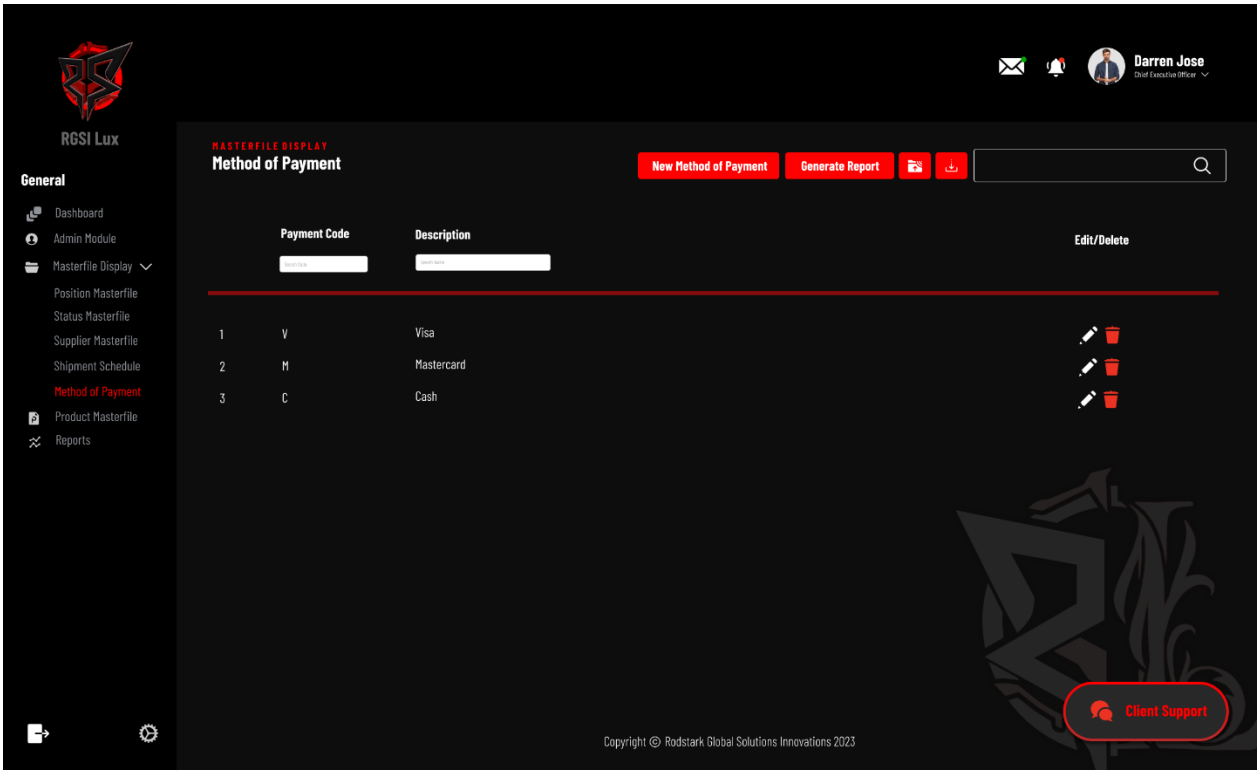

Figure 7.45 Method of Payment

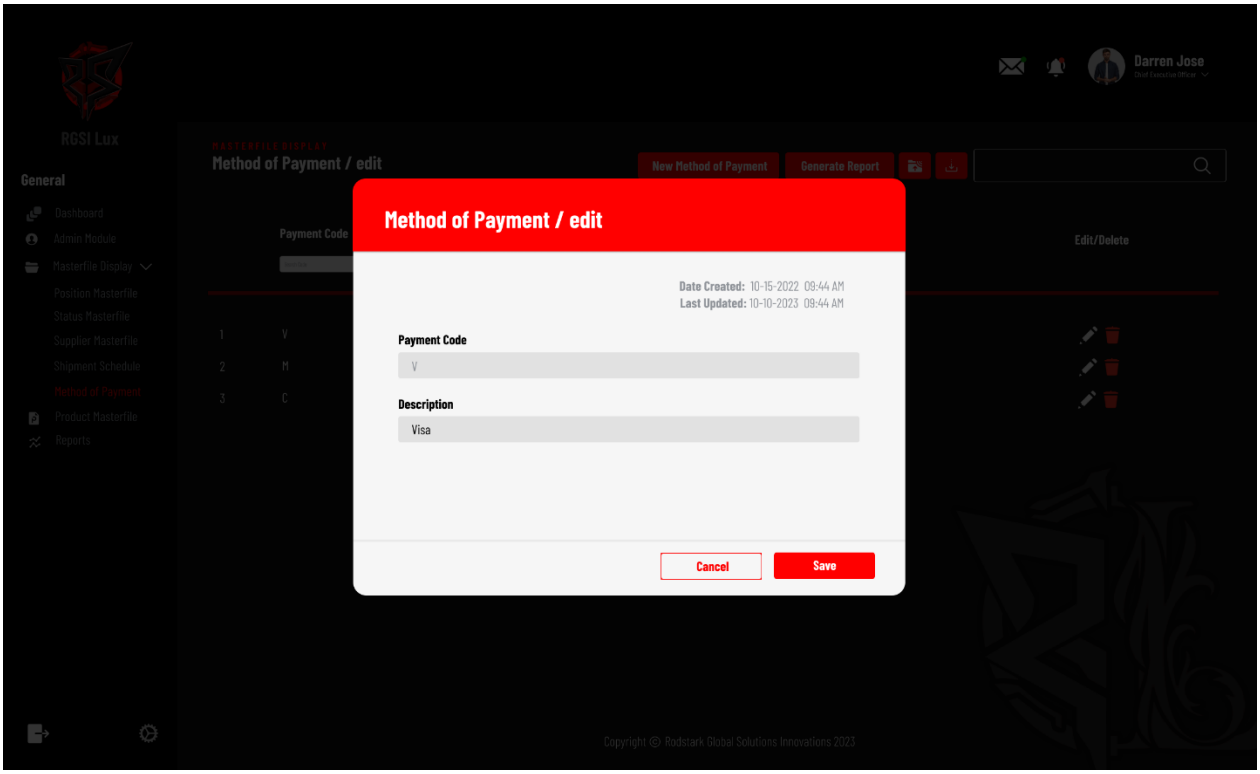

Figure 7.46 Method of Payment (Form)

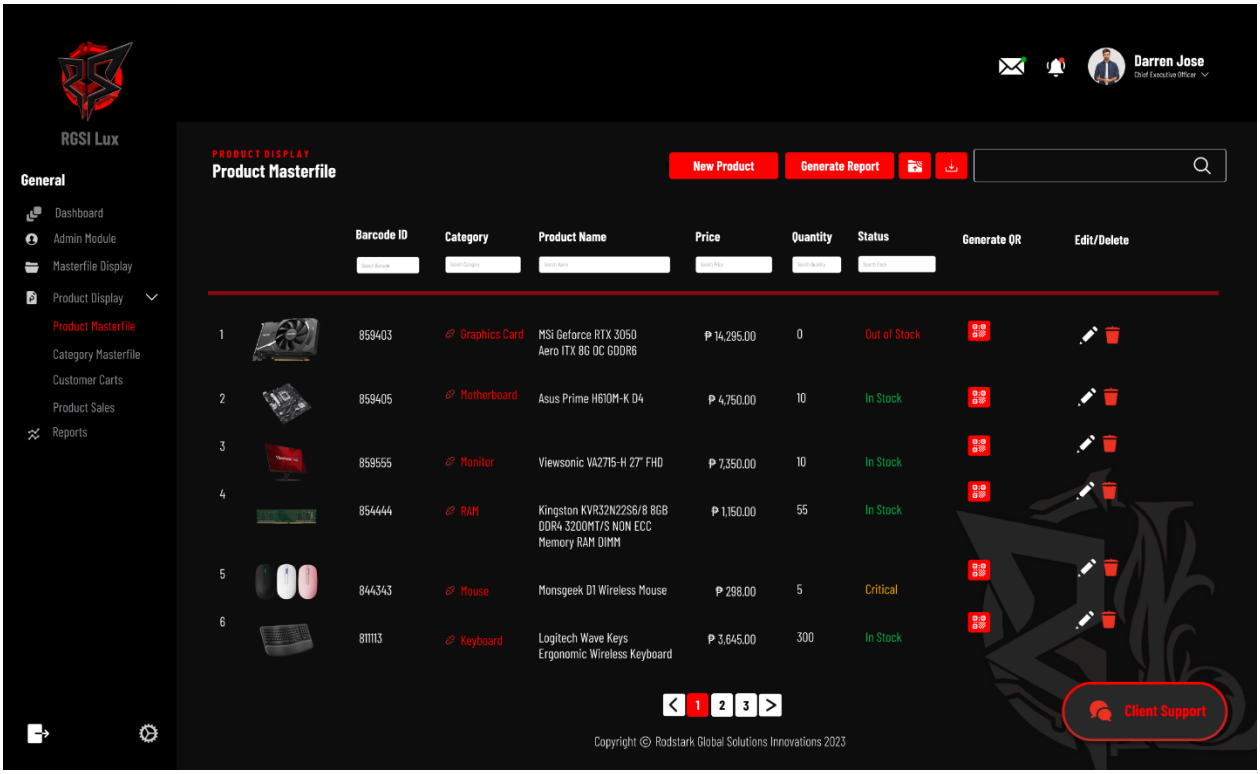

Figure 7.47 Product Masterfile

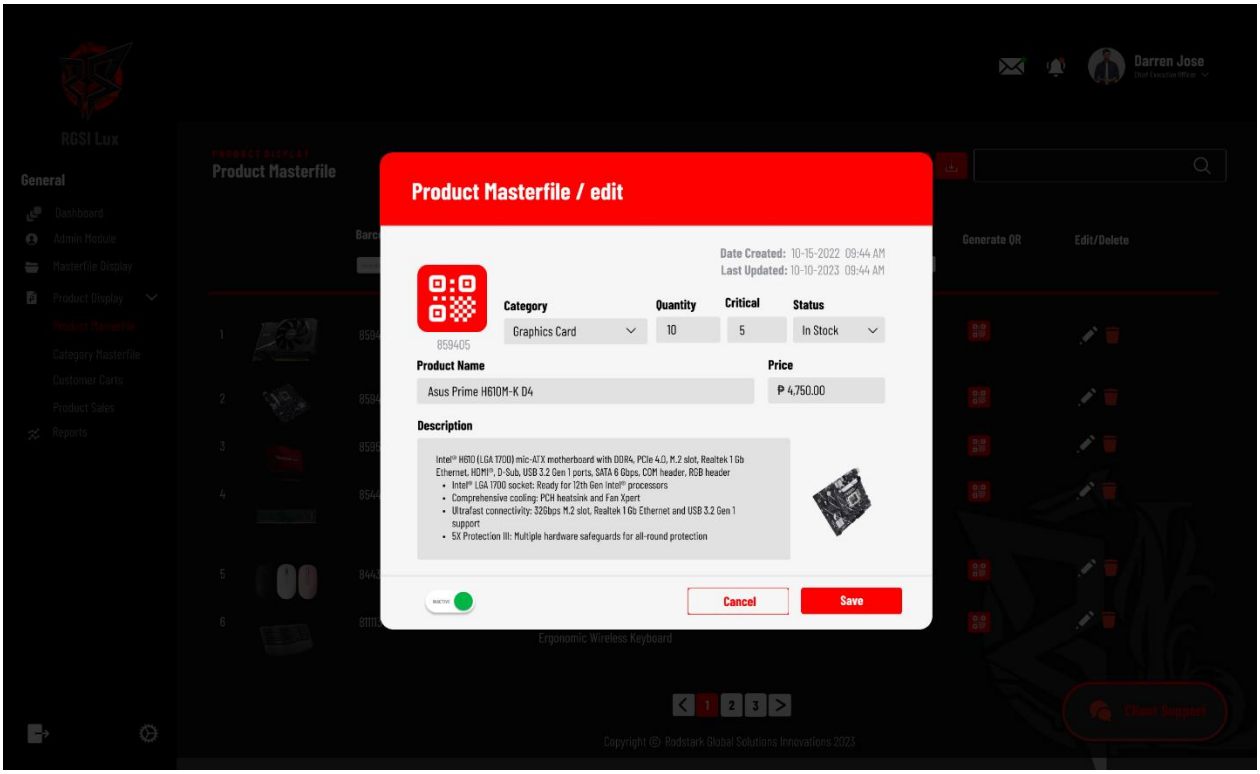

Figure 7.48 Product Masterfile (Form)

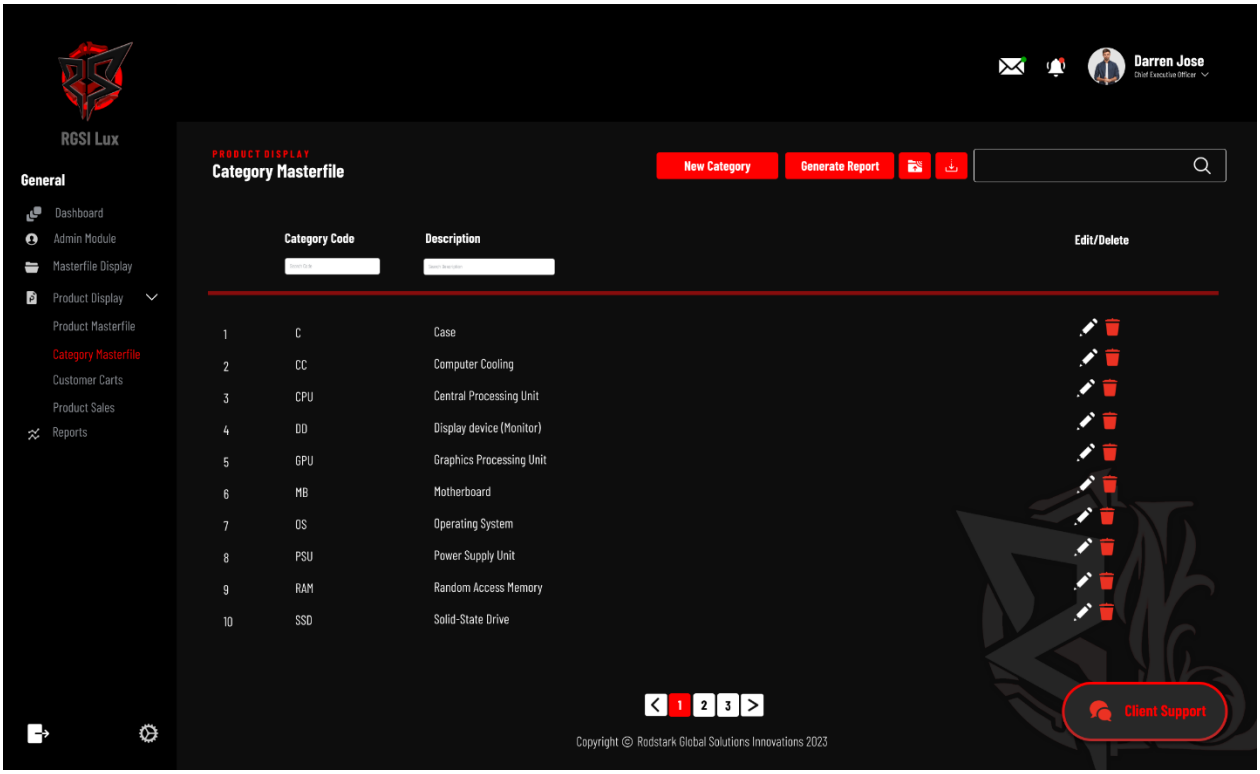

Figure 7.49 Category Masterfile

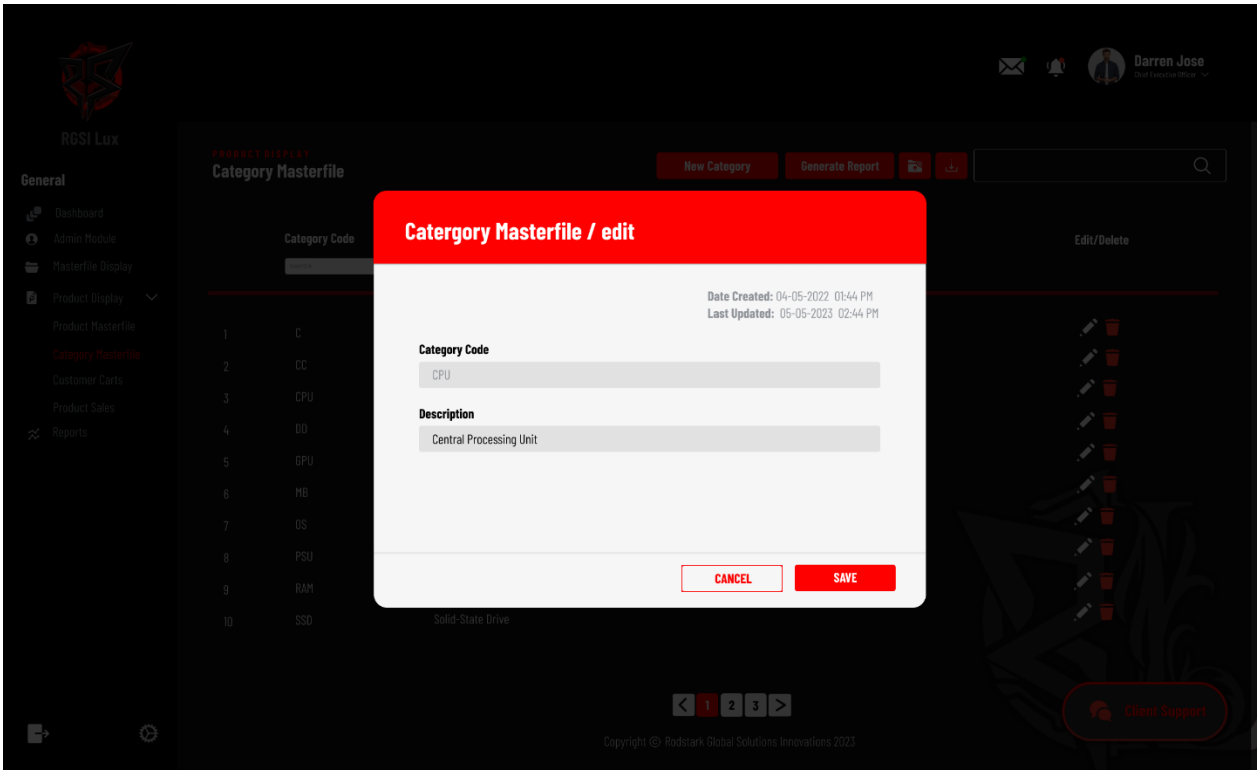

Figure 7.50 Category Masterfile (Form)

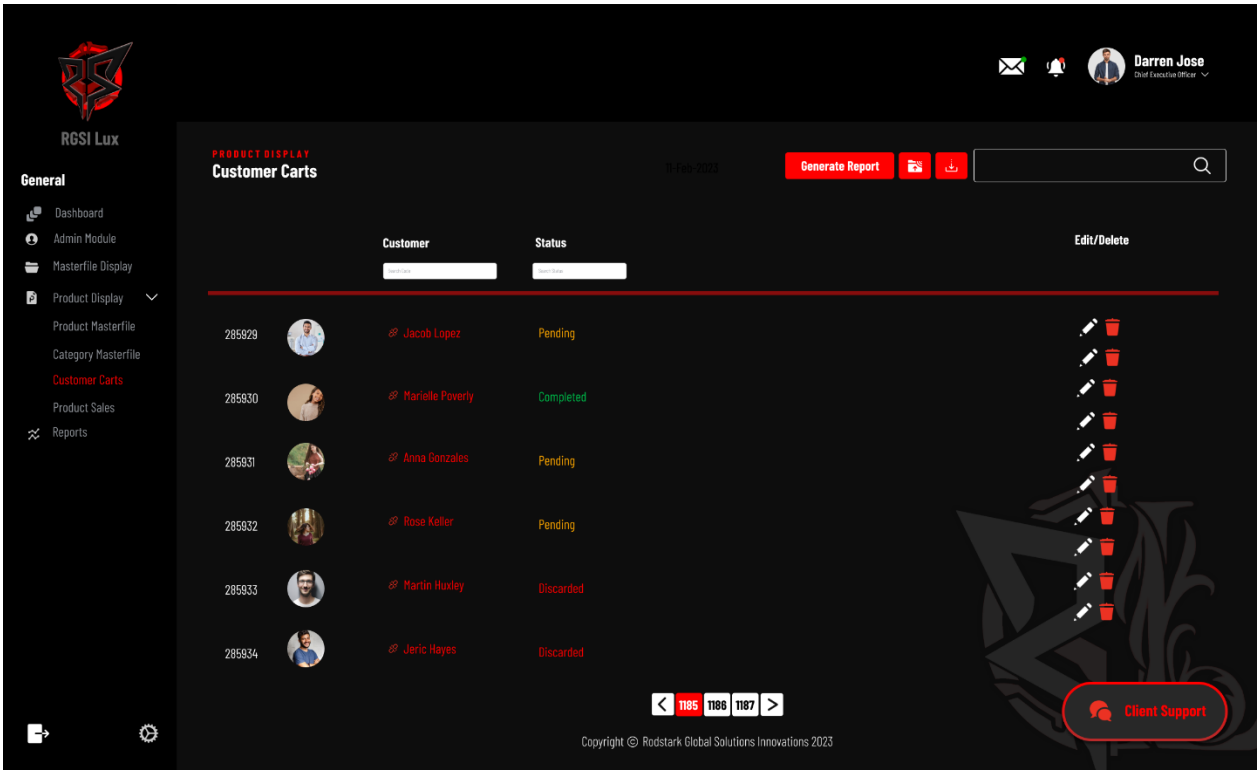

Figure 7.51 Customer Carts

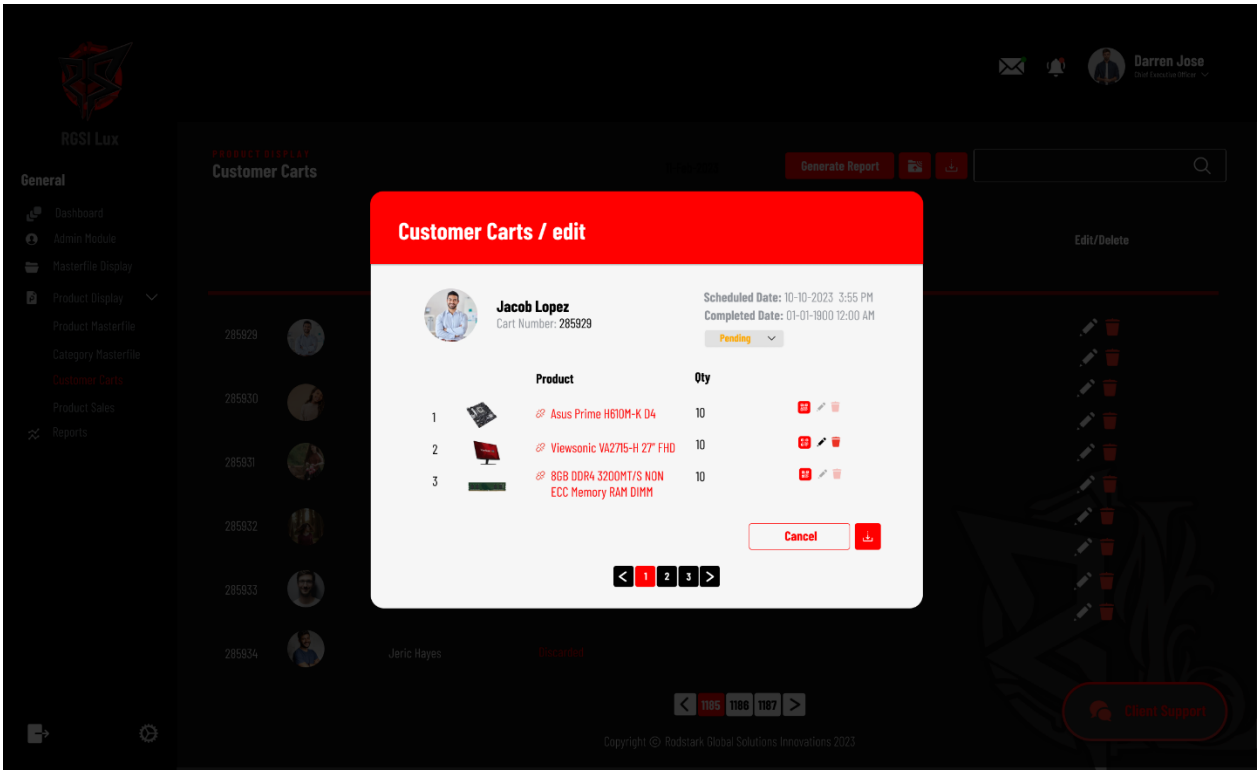

Figure 7.52 Customer Carts (Form)

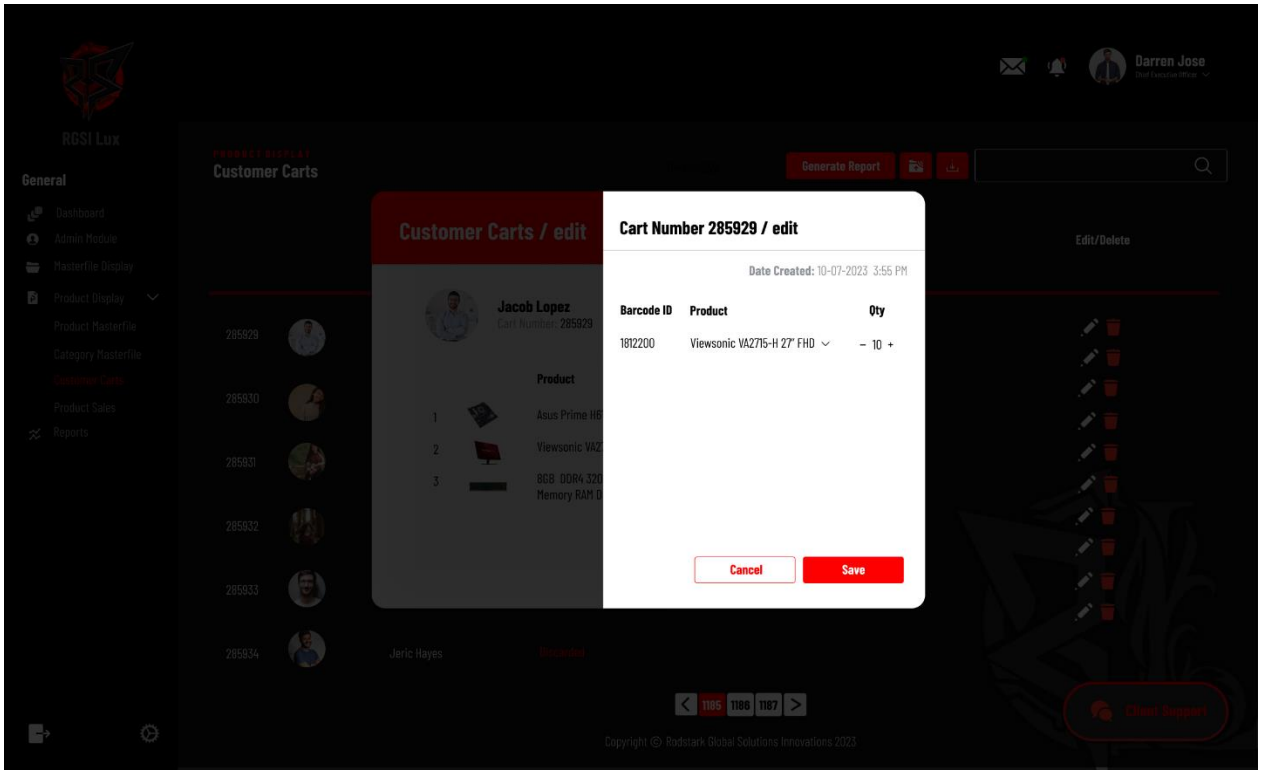

Figure 7.53 Customer Cart (Details Form)

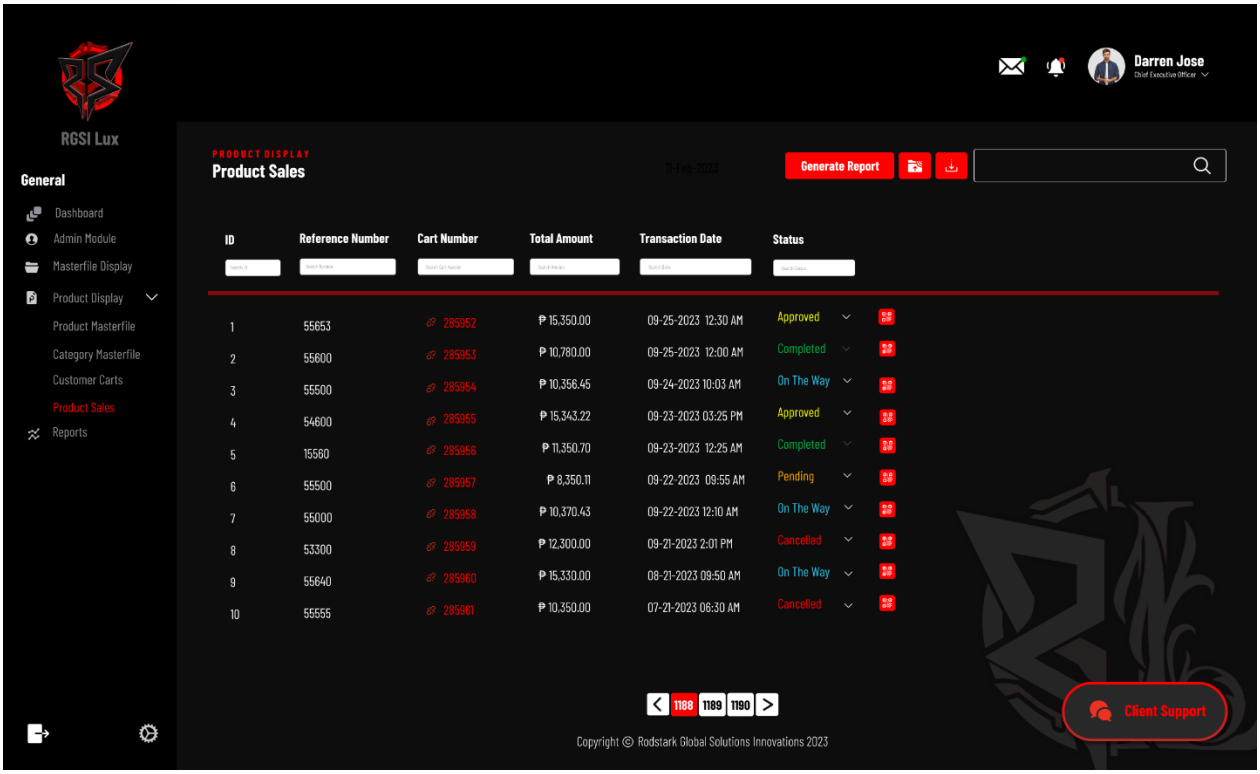

Figure 7.54 Product Sales

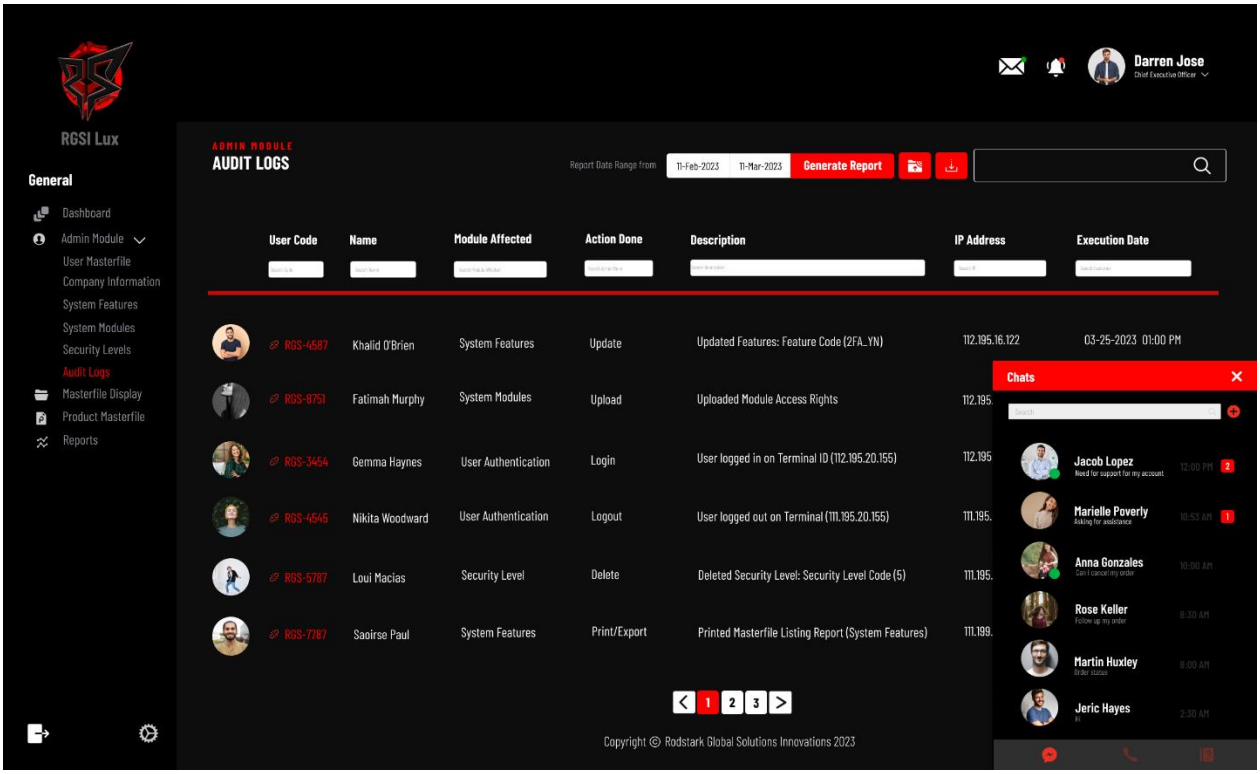

Figure 7.55 Chat Support

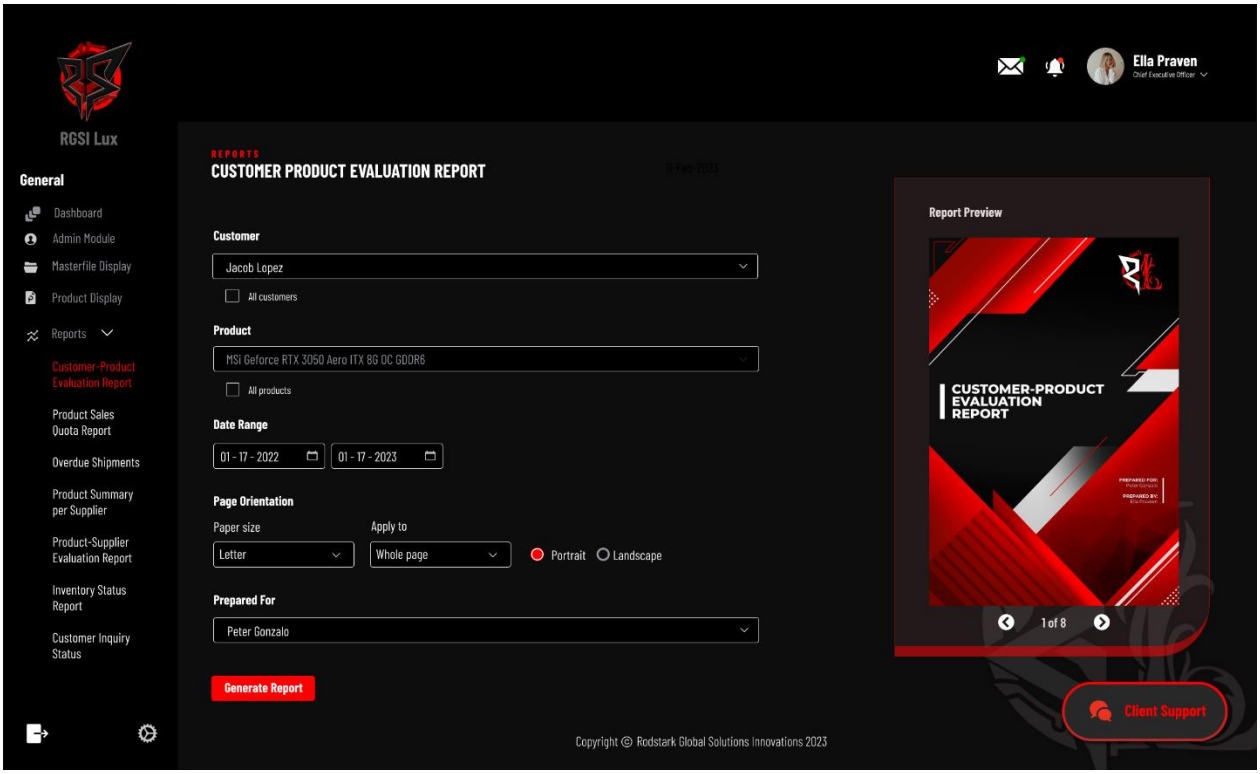

Figure 7.56 Reports

Figure 7.57 Report Layout (Cover)

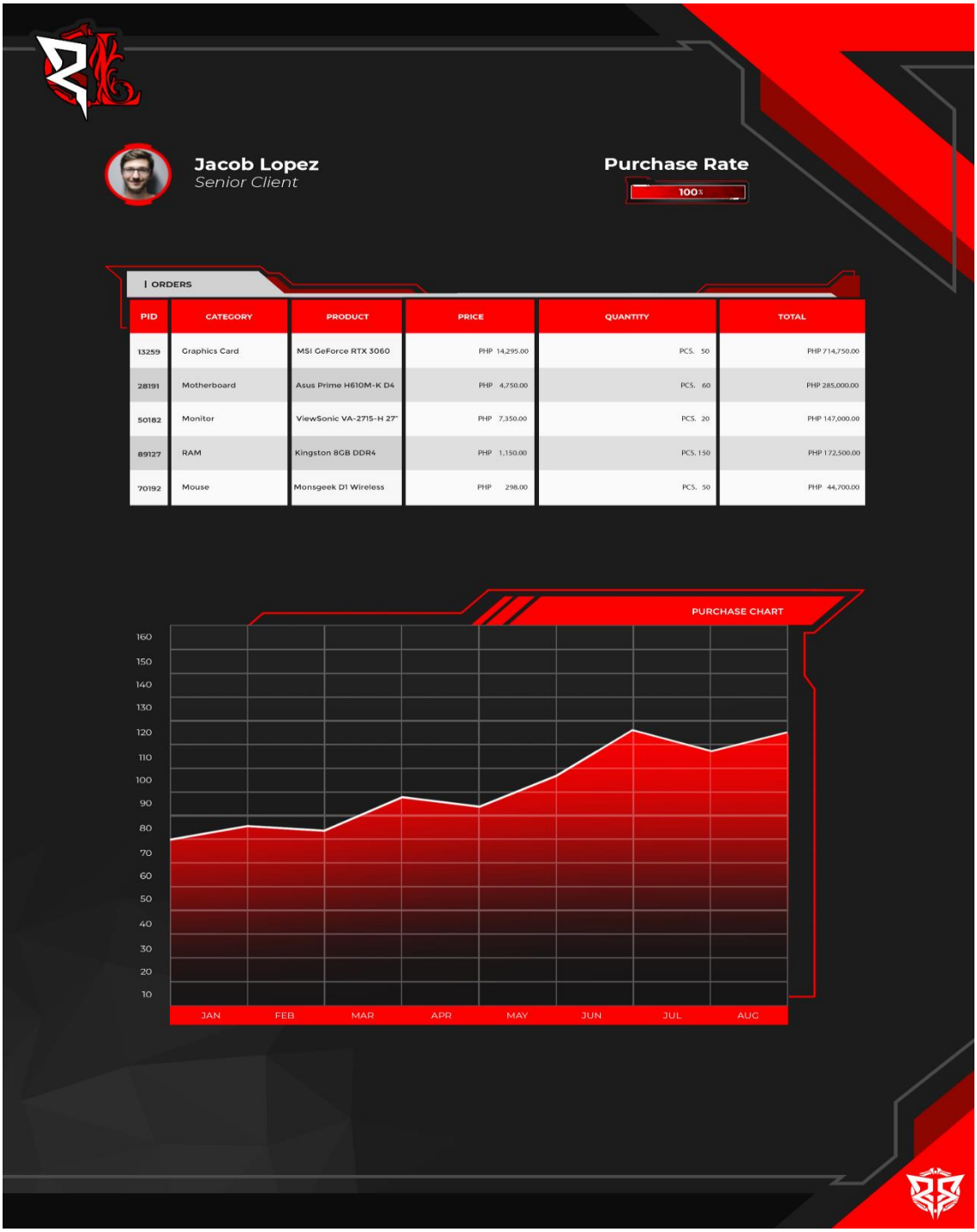

Figure 7.58 Report Layout (Content)

Figure 7.59 Report Layout (End)

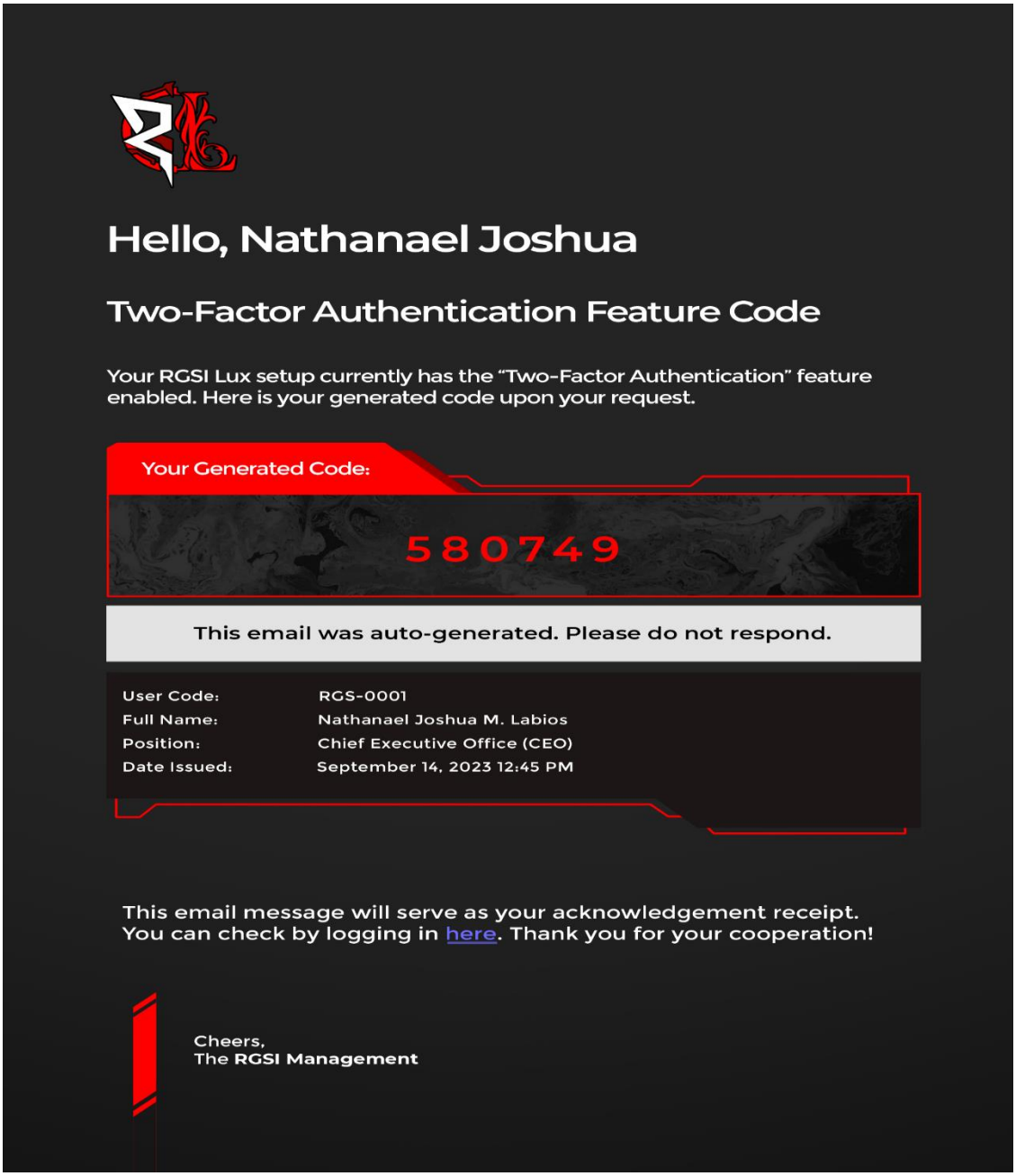

Figure 7.60 Email Layout

E. Customer View

Figure 7.61 Website Home Page

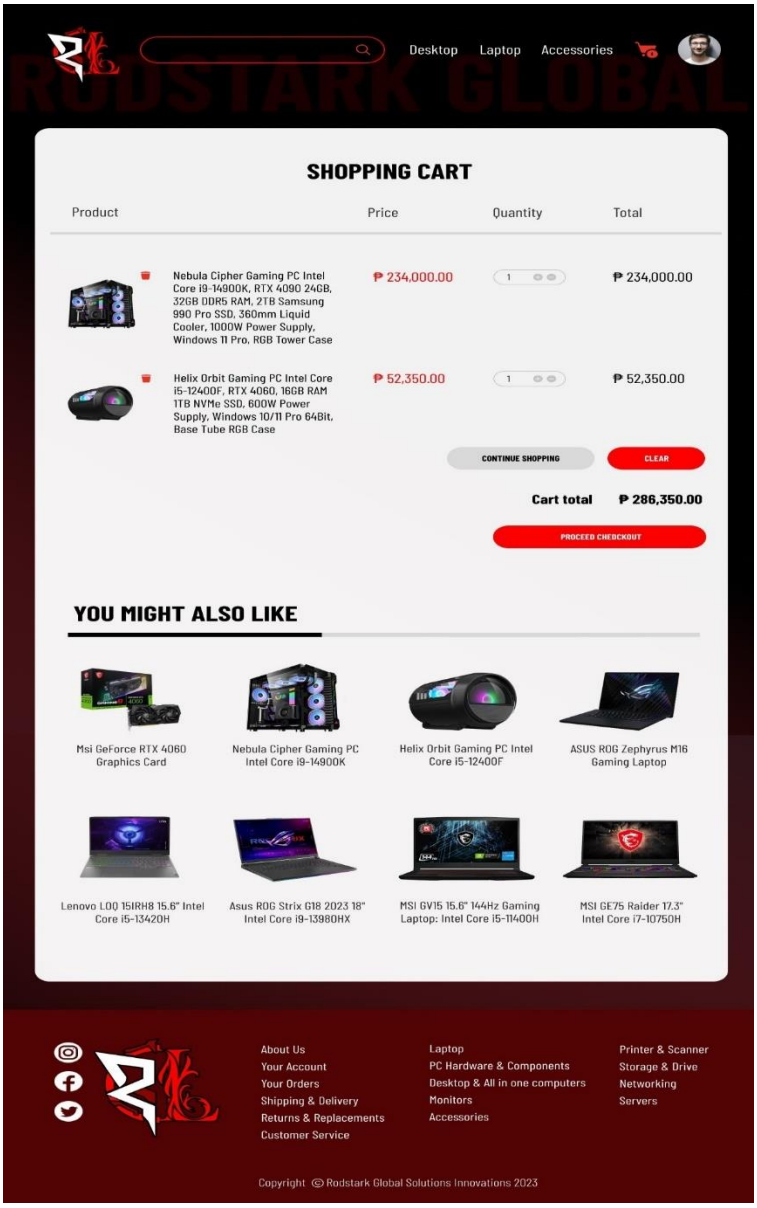

Figure 7.62 Check Out

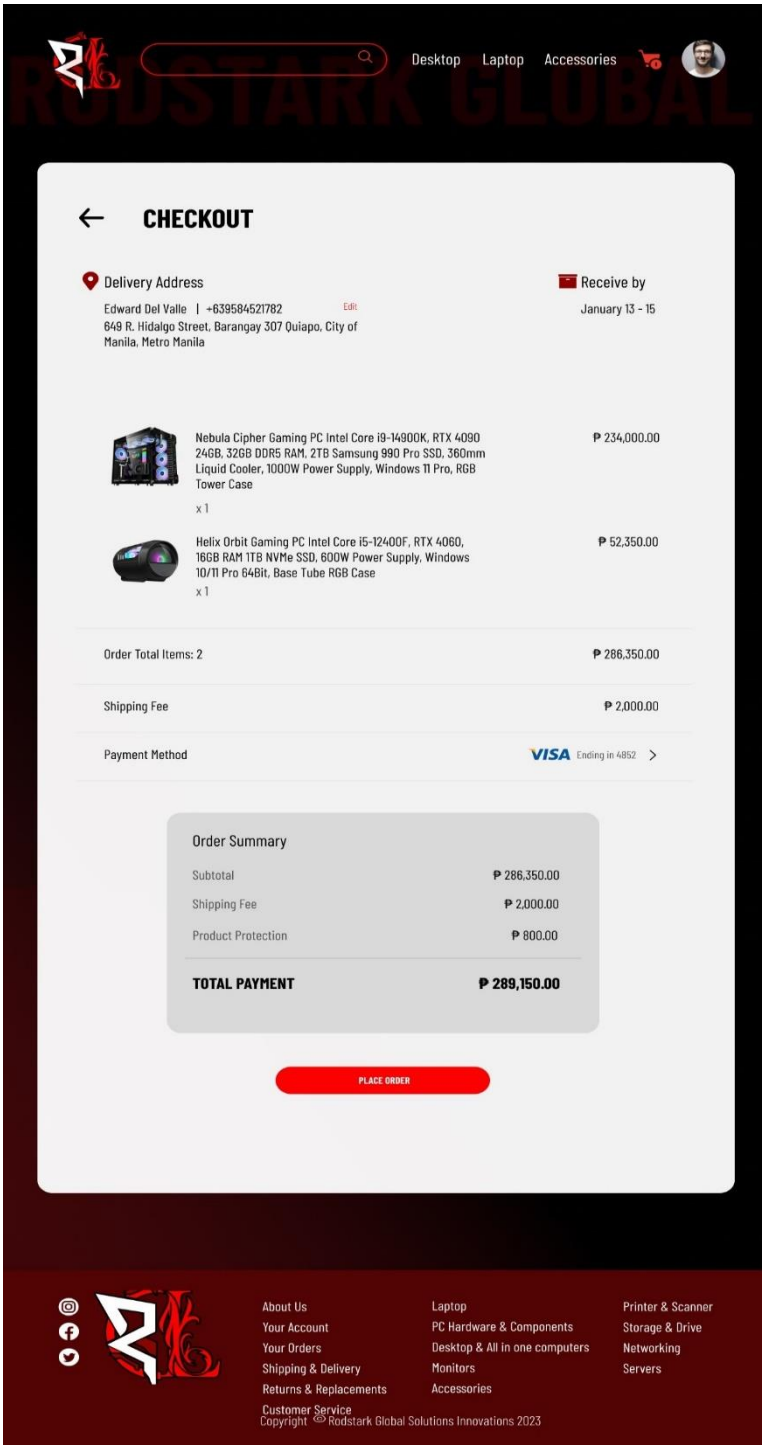

Figure 7.63 Check Out (Place Order)

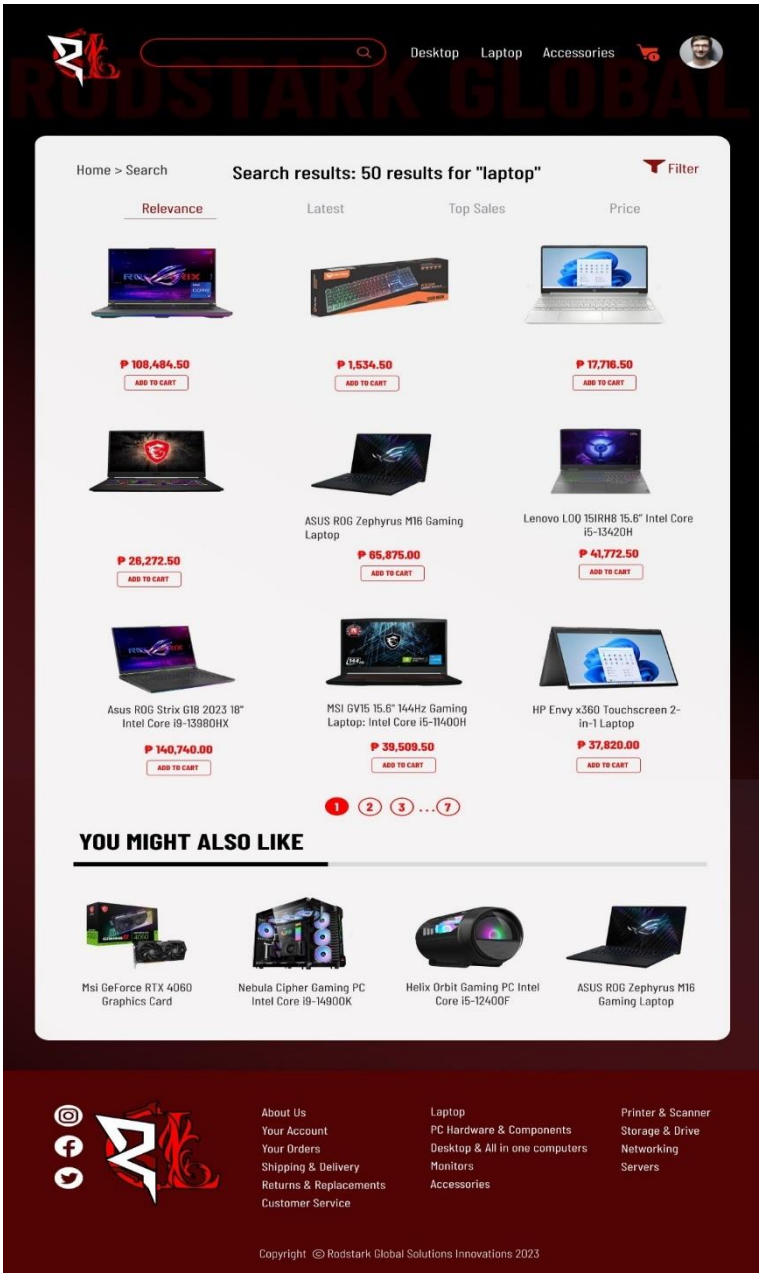

Figure 7.64 Store Overview

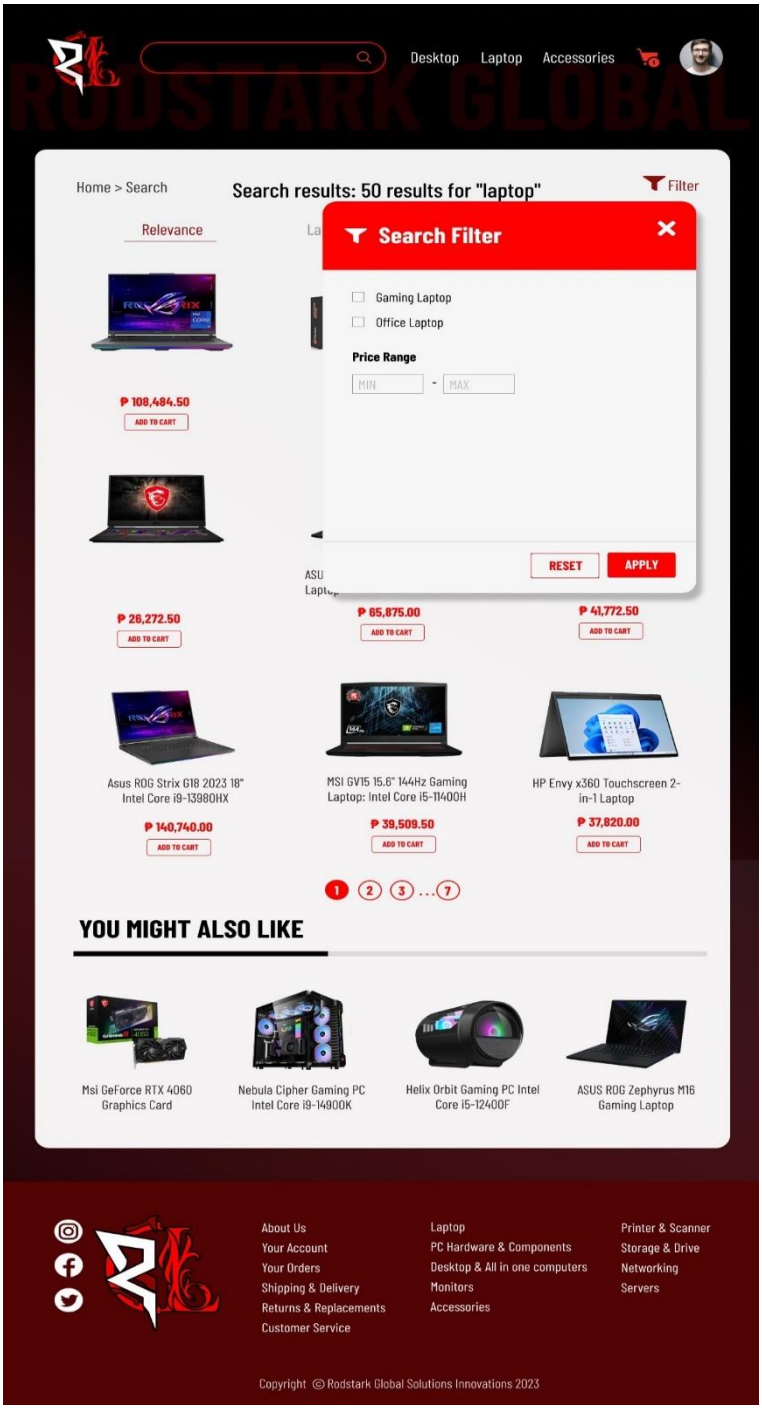

Figure 7.65 Store Overview (Filter)

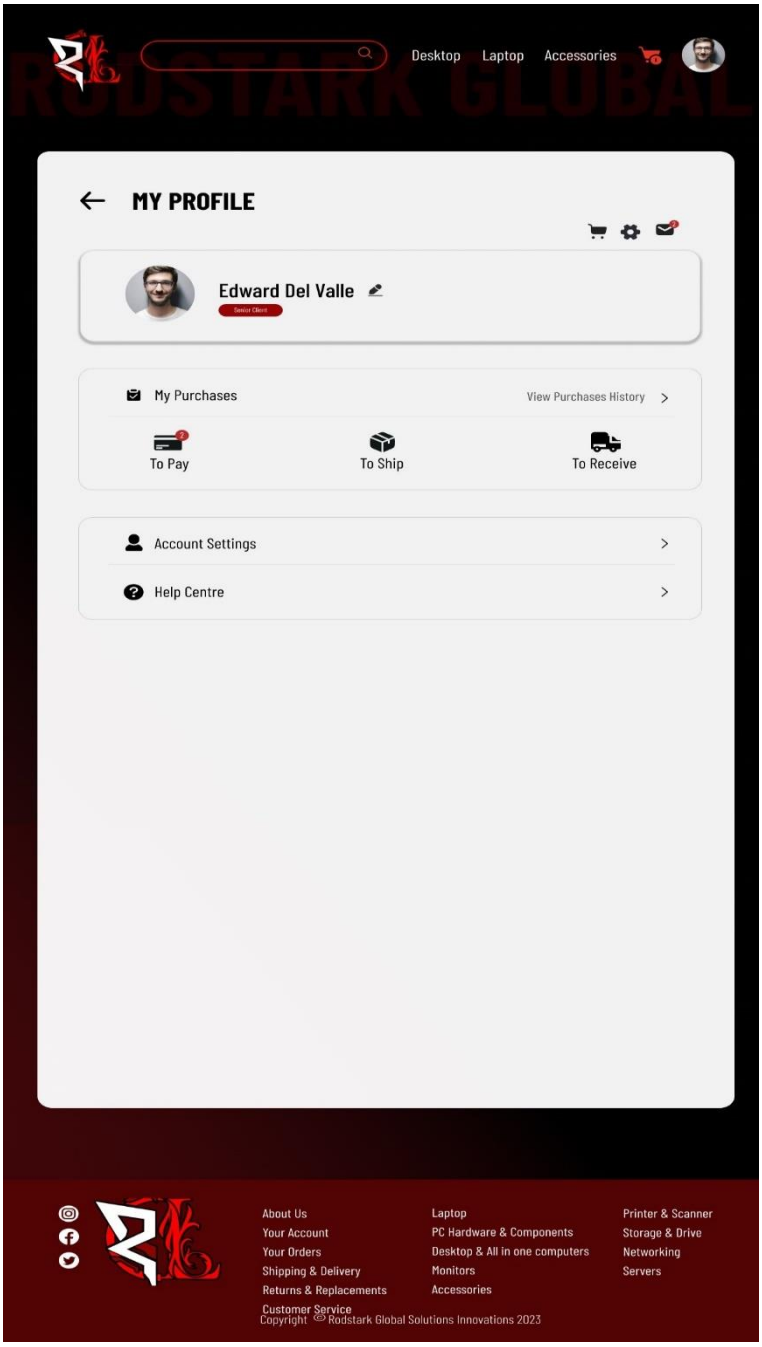

Figure 7.66 User Profile

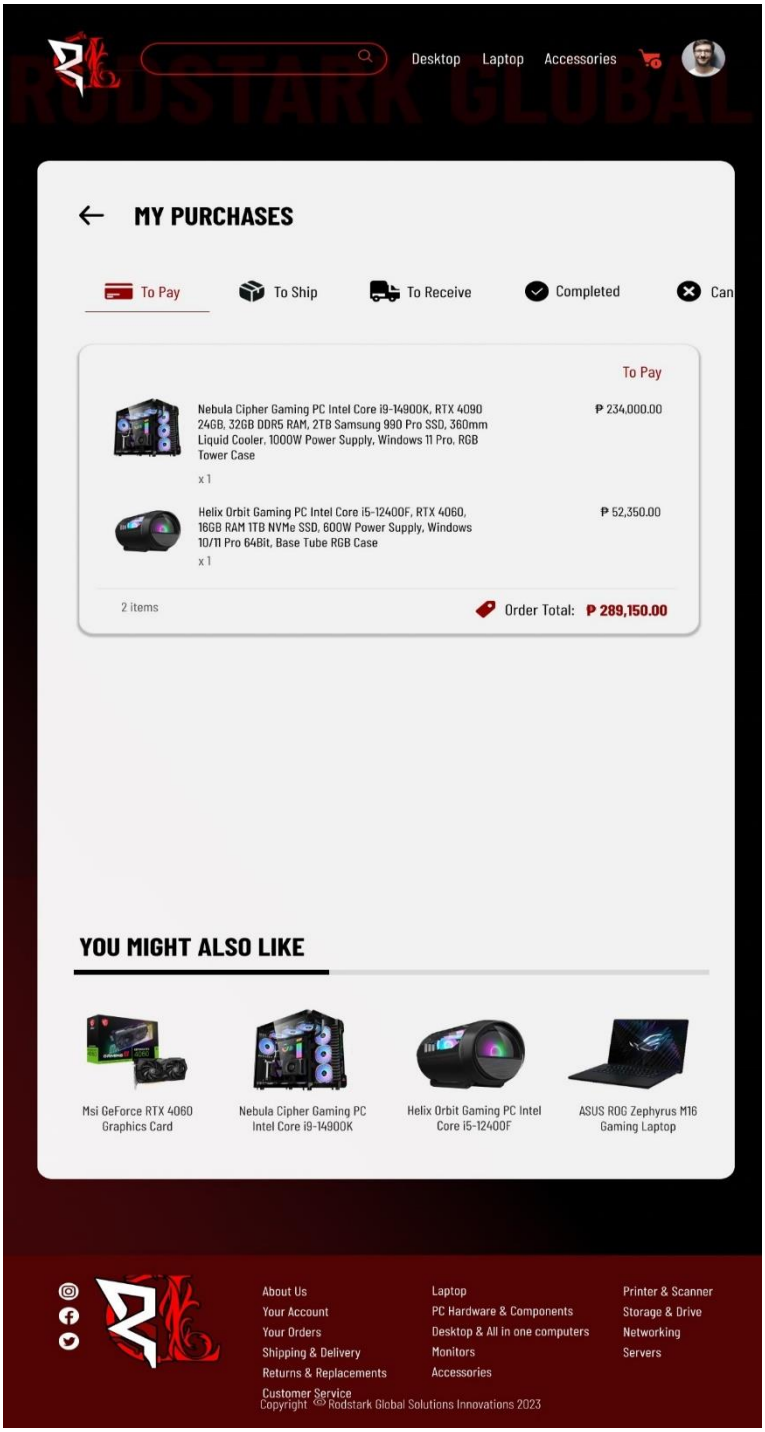

Figure 7.67 Order Overview

F. Service Hub

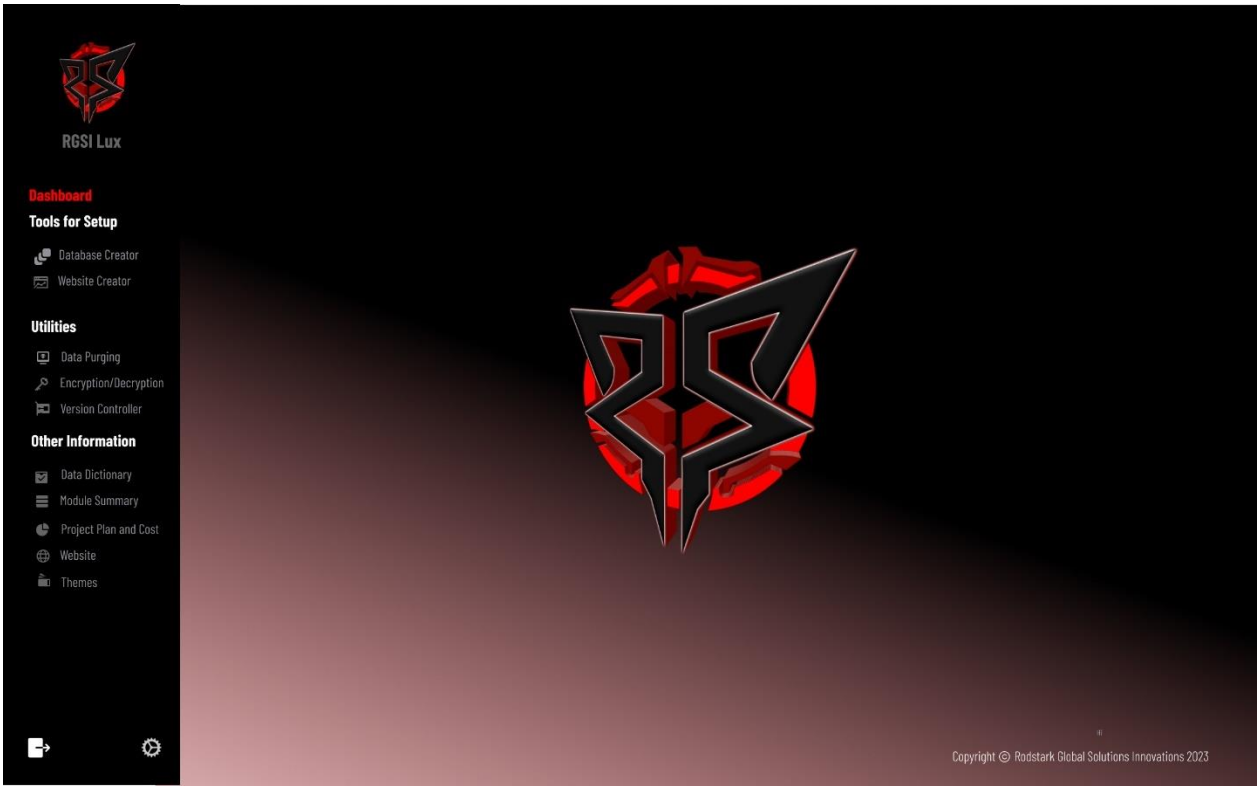

Figure 7.68 RGSI Lux Service Hub Dashboard

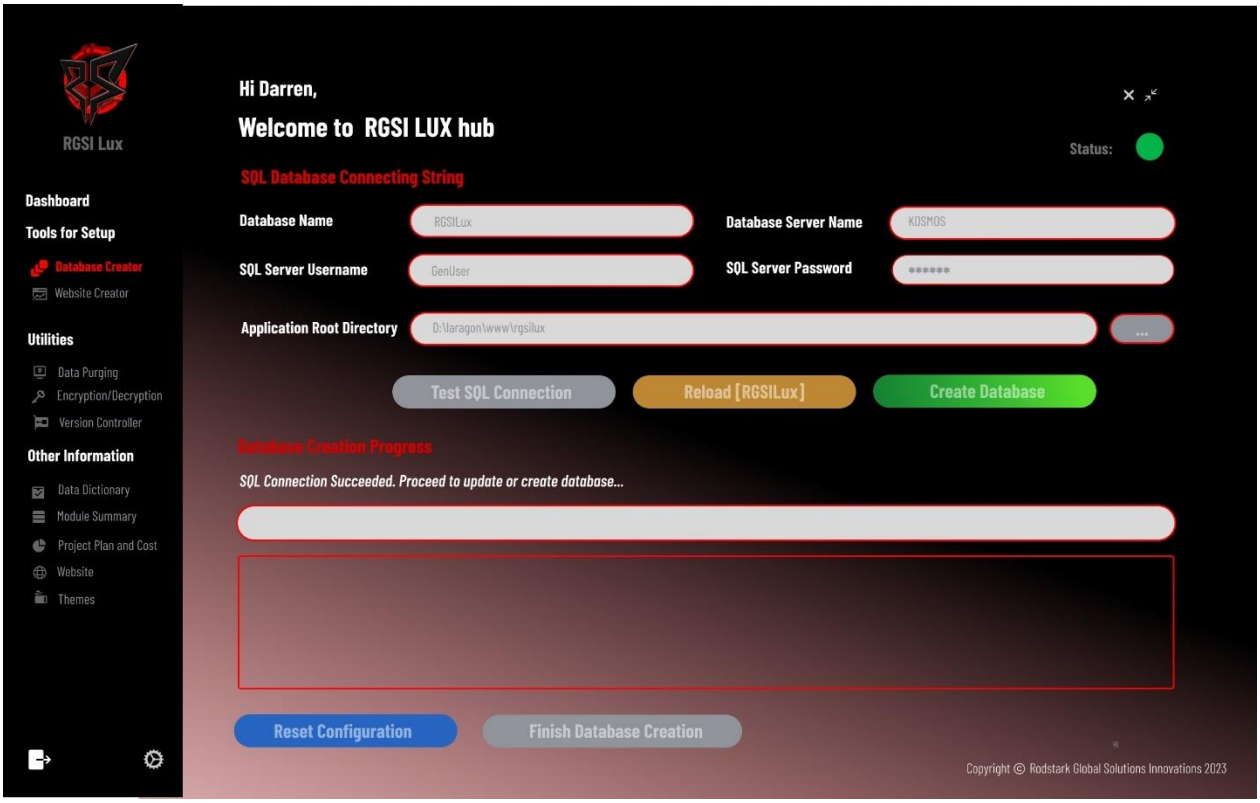

Figure 7.69 RGSI Lux Service Hub Database Creator

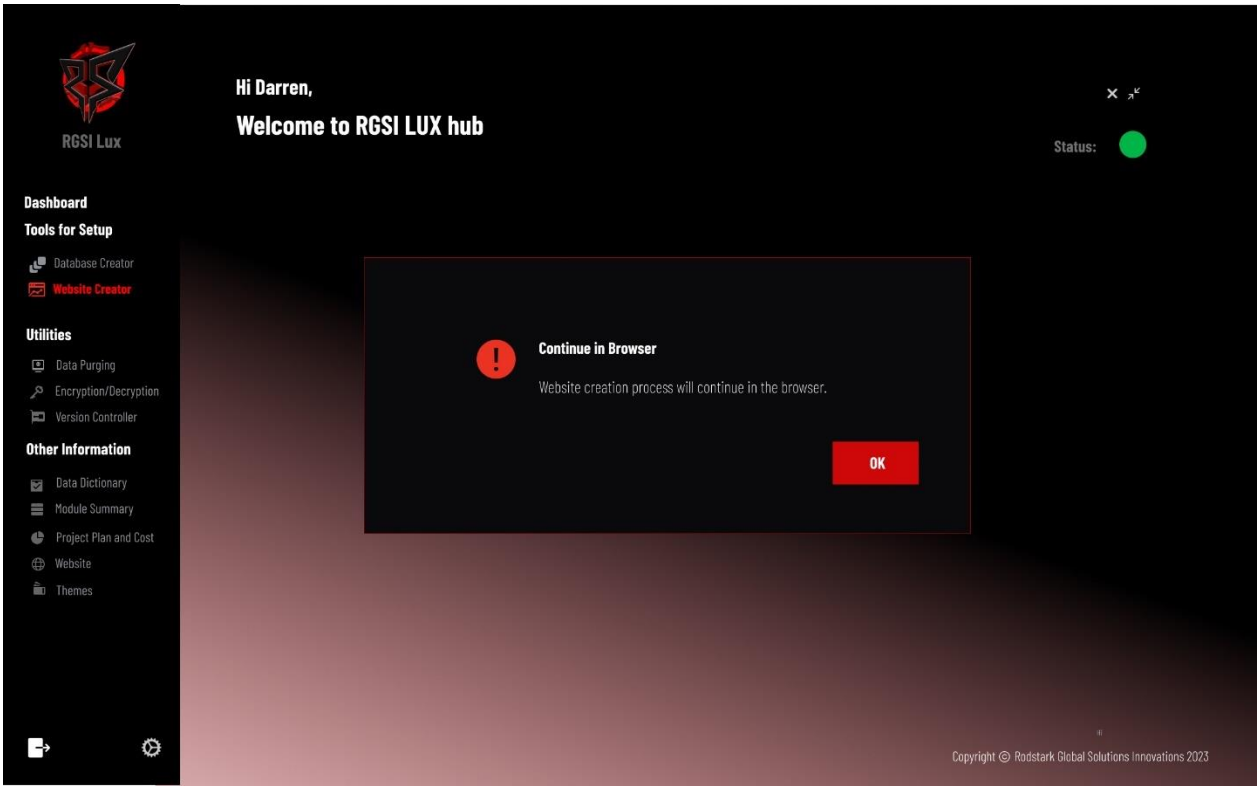

Figure 7.70 RGSI Lux Service Hub Creator

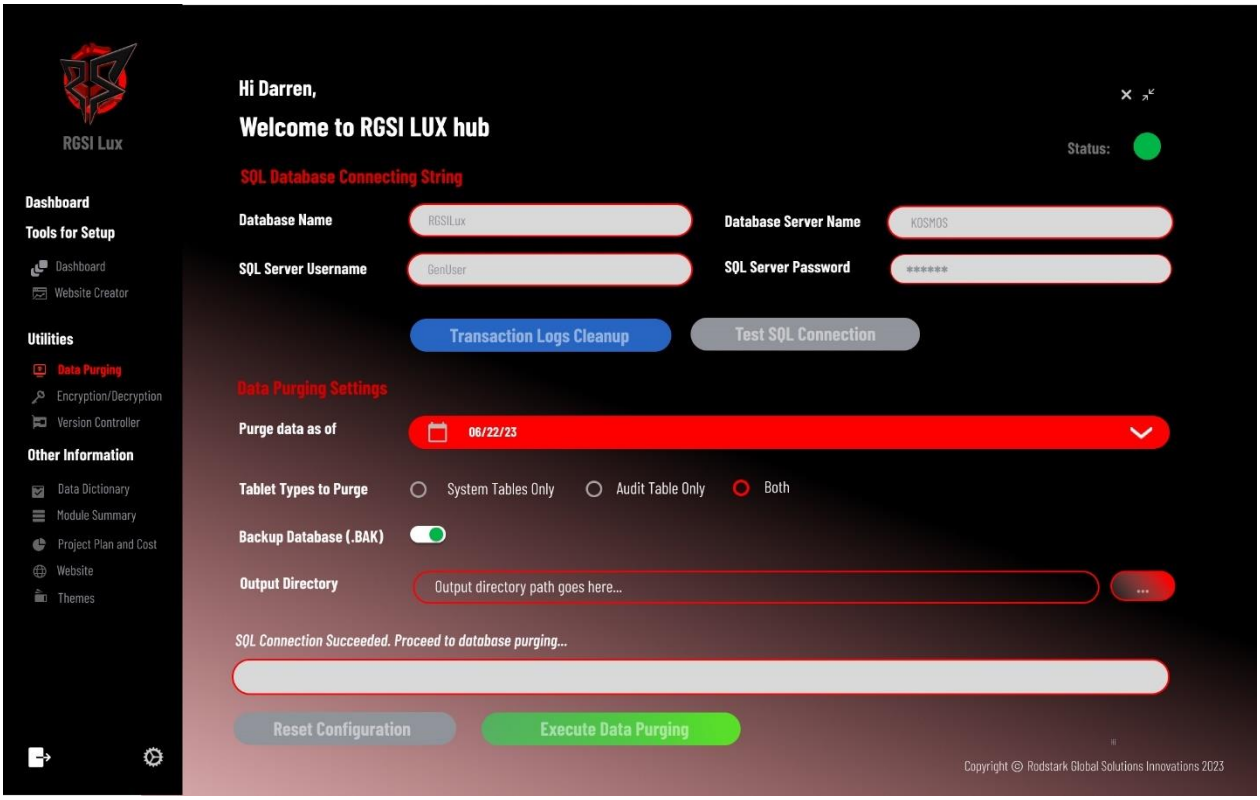

Figure 7.71 RGSI Lux Service Hub Data Purging Utility

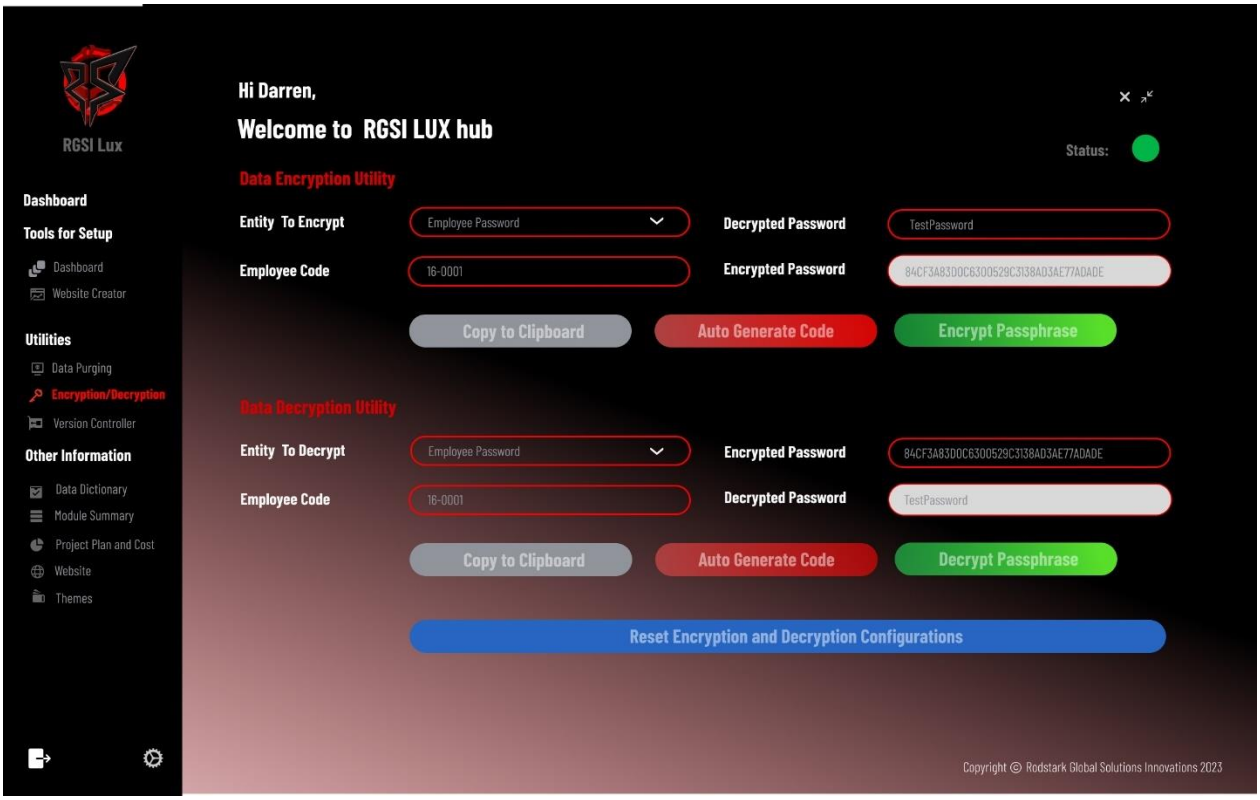

Figure 7.72 RGSI Lux Service Hub Encryption/ Decryption Utility

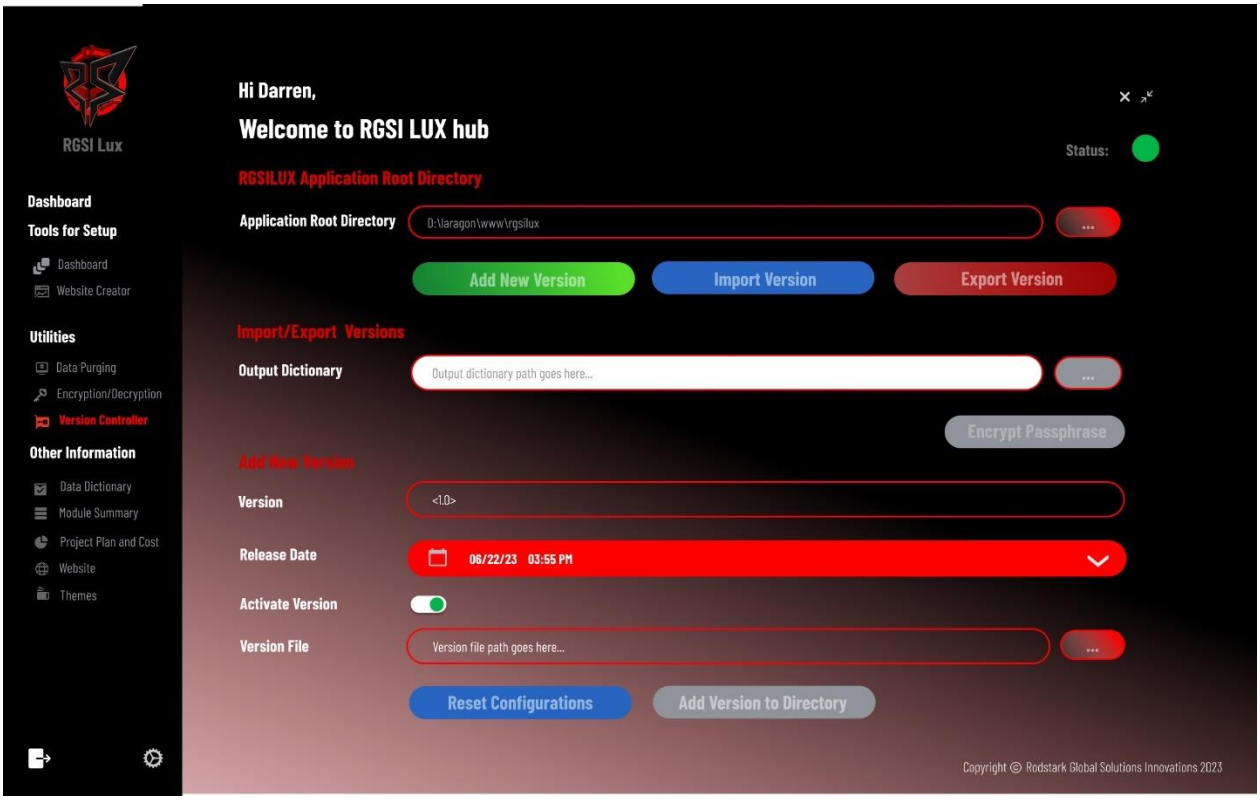

Figure 7.73 RGSI Lux Service Hub Version Controller

G. Researcher Profile

Figure 7.74 Researchers Profile (Part 1)

NATHANAEL JOSHUA M. LABIOS, MIT
SENIOR FULL STACK DEVELOPER

CONTACT ME

0968-851-7848
joshualabios92@gmail.com
122 Alfonso Street Ortigas Extension, Barangay. Rosario, Pasig City, Metro Manila, Philippines, 1609

PERSONAL BACKGROUND

Gender	Male
Birthdate	November 23, 1998
Birthplace	Manila
Age	24 years old
Height	5'8"
Weight	89 kg.
Religion	Roman Catholic
Nationality	Filipino
Civil Status	Single

LINKS

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www.facebook.com/Joshua.Rodstark.Labios
www.twitter.com/itsmfknlucy
www.upwork.com/users/_~012076f0dc62b30281
www.about.me/joshualabios

EXPERIENCE (cont.)

- Prepares and installs solutions by determining and designing system specifications, standards, and programming.
- Improves operations by conducting systems analysis and recommending changes in policies and procedures.
- Updates job knowledge by studying state-of-the-art development tools, programming techniques, and computing equipment, and by participating in educational opportunities, reading professional publications, maintaining personal networks, and participating in professional organizations.
- Provides information by collecting, analyzing, and summarizing development and service issues.
- Accomplishes engineering and organization mission by completing related results as needed.
- Supports and develops software engineers by providing advice, coaching, and educational opportunities.

August 2018 - August 2020 • SFI
Software Engineer | Software Farm International, Inc.

- Trained to industry programming and documentation development.
- Trained weekly in order to be updated to current coding standards, conventions, methods, and procedures.
- Created utility softwares to automate implementation procedures.
- Created several utilities to automate daily company procedures.
- Coded, fixed, designed, and developed company implemented modules.
- Assigned to several number of clients for software installation, implementation, maintenance and updates.
- Deals with direct client business calls and emails regarding certain software concerns.
- Assigned to train newly hires regarding the company software and procedure walkthrough.
- Published documentations such as user module and utility guides.
- Implemented state-of-the-art coding that adapts to the current company coding standards.
- Assigned to be the company representative and programmer for clients' "Go-Live" stage.
- Conferred with system analysts and project managers to obtain information and advice on limitations or capabilities regarding future module implementation and software updates.
- Assigned to minimal system testing and validation procedures.

May 2018 – August 2018 •
Software Developer | Internal Project

- Title:
  - RGS Documentation Generator
- Modules:
  - Auto Generation of Company Documents
  - Autofill of Employment Contract
  - Personnel E-Signature Implementation
  - Contract Management System
  - Predictive Data Analytics (Dividends and Profit)
  - Investor and Employee Management System
- Preview:

Figure 7.75 Researchers Profile (Part 2)

Figure 7.76 Researchers Profile (Part 3)

NATHANAEL JOSHUA M. LABIOS, MIT
SENIOR FULL STACK DEVELOPER

CONTACT ME

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LINKS

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www.facebook.com/Joshua.Rodstark.Labios
www.twitter.com/itsmfknlucy
www.upwork.com/users/_~012076f0dc62b30281
www.about.me/joshualabios

TECHNICAL KNOWLEDGE AND SKILLS

Programming Languages
- C++ (5 years)
- C# (5 years)
- Visual Basic (5 years)
- PHP (3 years)
- Python (2 years)
- Java (2 years)
- JavaScript (2 years)
- TypeScript (1 year)

Database Management Systems
- MySQL (5 years)
- Microsoft SQL Server (5 years)
- SQLite (5 years)
- Microsoft Access (3 years)
- PostgreSQL (2 years)
- NoSQL (2 years)
- MariaDB (2 years)
- Oracle (2 years)
- MongoDB (2 years)

Frameworks
- Metro Framework (UI)
- Guna Framework (UI)
- DevExpress (UI)
- Bunifu (UI)
- .NET Framework (LINQ)
- ASP.NET (Web Application)
- ASP.NET Core (Web Application)
- Laravel (Web Application)
- Angular (Web Application)
- Terraform (IaC)
- Entity Framework (ORM)
- Eloquent (ORM)

Web Development Tools
- JQuery
- Node.js
- Vue.js
- AngularJS
- CSS
- HTML
- SASS
- GitHub
- Bootstrap Framework
- Azure DevOps
- REST API
- SOAP API

Reporting Tools
- HTML Reports
- SAP Crystal Reports

Encryption Algorithms
- Message-Digest Algorithm
- Secure Hashing Algorithm
- Advanced Encryption Standard
- Rivest-Shamir-Adleman (RSA)
- Digital Signature Algorithm
- Triple Data Encryption Algorithm
- Diffie-Helman Key Exchange
- Blowfish Encryption

Other Proficiencies
- Stored Procedures
- N-Tier Architecture
- Internet Information Services
- Microservices
- Windows Services
- Application Programming Interface

Publications
- iTEAMS: Web-Based Task Management System
- NoSQL - Deeper Exploration Towards the Current Silver Bullet for Big Data Anomalies
- Sta.Lucia East Grand Mall Billiard and Bowling Hall Management System
- Maics Gym Management System

Languages
- English (Fluent)
- Filipino (Native)

Figure 7.77 Researchers Profile (Part 4)

NATHANAEL JOSHUA M. LABIOS, MIT
SENIOR FULL STACK DEVELOPER

CONTACT ME

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www.facebook.com/Joshua.Rodstark.Labios
www.twitter.com/itsmfknlucy
www.upwork.com/users/_~012076f0dc62b30281
www.about.me/joshualabios

EDUCATION

2020 - 2023 •
Tertiary | University of Asia and the Pacific
- Master in Information Technology (MIT)
- General Weighted Average (GWA) : **1.508**
- Thesis Title : iTEAMS Task Management System

2015 – 2018 •
Tertiary | Informatics International College Cainta
- Bachelor of Science in Information Technology (BSIT)
- General Weighted Average (GWA) : **1.656**
- Best in Thesis Candidate : Sta. Lucia East Grand Mall Billiard and Bowling Hall Management System

2011 – 2015 •
Secondary | ADT Montessori School
- 4th Year : 5th Honor
- 3rd Year : 5th Honor
- 1st Year : 8th Honor

2003 – 2011 •
Primary | Mona Lisa Academy
- Grade 6 : Valedictorian
- Grade 1 - 5 : 1st Honor

PERSONAL ATTRIBUTES

- Strong Determination
- Strong Interpersonal Skills
- Good Communication Skills
- Good Problem Solving Skills
- Works Under Pressure
- Willing to Learn
- High End Focus
- Passionate for Work
- Dependable
- Responsible
- Open Minded
- Positive Attitude
- Well Organized
- Modern Leadership Skillset

SEMINARS / WEBINARS ATTENDED

Computer Science for Business Professionals
Harvard University
June 2022

AWS Certified Developer Associate Assessment
Eduonix Learning Solutions
March 2022

AWS Solution Architect Associate Assessment
Eduonix Learning Solutions
March 2022

Be A White Hat Hacker and Pen Tester
Eduonix Learning Solutions
March 2022

Become A Certified Web Developer From Scratch
Eduonix Learning Solutions
March 2022

Cybersecurity Assessment
Eduonix Learning Solutions
March 2022

Figure 7.78 Researchers Profile (Part 5)

NATHANAEL JOSHUA M. LABIOS, MIT
SENIOR FULL STACK DEVELOPER

CONTACT ME

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www.twitter.com/itsmfknlucy
www.upwork.com/users/_~012076f0dc62b30281
www.about.me/joshualabios

SEMINARS / WEBINARS ATTENDED (cont.)

Cybersecurity E-Degree
Eduonix Learning Solutions
March 2022

Deep Learning Assessment
Eduonix Learning Solutions
March 2022

Ethical Hacking Exams
Eduonix Learning Solutions
March 2022

Learn PHP and MySQL Development by Building Projects
Eduonix Learning Solutions
March 2022

Python Assessment
Eduonix Learning Solutions
March 2022

Python with Numpy for Data Science and Machine Learning
Eduonix Learning Solutions
March 2022

Laravel 5.5 : Become A Master Developer Online Course
Eduonix Learning Solutions
August 2019

Object Oriented PHP By Building a Website Online Course
Eduonix Learning Solutions
August 2019

Projects In Laravel : Laravel Building 10 Projects Online Course
Eduonix Learning Solutions
September 2018

JavaScript and JQuery from Scratch Online Course
Eduonix Learning Solutions
August 2018

PHP and MySQL Development from Scratch Online Course
Eduonix Learning Solutions
August 2018

PHP Fundamentals from Scratch Online Course
Eduonix Learning Solutions
August 2018

Career Symposium
Informatics International College Cainta
May 2018

ACCOLADES

Best in Programming
Informatics International College Cainta
May 17, 2018

Figure 7.79 Researchers Profile (Part 6)

NATHANAEL JOSHUA M. LABIOS, MIT
SENIOR FULL STACK DEVELOPER

CONTACT ME

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PERSONAL BACKGROUND

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www.upwork.com/users/_~012076f0dc62b30281
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REFERENCES

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Dr. Aldin Bautista Jr. | Vice President / DIT Graduate
Advance Aviation Services, Inc.
Email : aldin.bautistajr@gmail.com
Phone : (+63) 915-312-2518

Figure 7.80 Researchers Profile (Part 7)