

**TRADERS: A WEB-BASED TRANSACTION AND
DOCUMENT REPOSITORY SYSTEM**

A Capstone Project Presented to the Faculty of
College of Computer, Information and Communications Technology Department
Cebu Technological University – Main Campus

In Partial Fulfillment of the Requirements
for the degree Bachelor of Science in Information System

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May 2024

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ACKNOWLEDGEMENT

Ms. Noreen B. Fuentes, our research adviser, for her invaluable guidance and approachability. Her insights and support were crucial in steering our research in the right direction.

Our client, who generously participated in providing essential details about their company. Their cooperation and willingness to share information were vital to the success of our study.

To the individuals who inspired and contributed significantly to the success of this paper, your encouragement and support did not go unnoticed.

Our families, for their unwavering support—financially, mentally, and emotionally. Your belief in us kept us motivated and determined to complete this research.

Lastly, we thank God for providing us with the strength and wisdom to persevere and successfully conduct this study. Your presence was a constant source of comfort and inspiration.

DEDICATION

This study is wholeheartedly dedicated to our beloved parents. Your unwavering support and encouragement have been our source of inspiration and strength, especially during the times when we felt like giving up. Your continuous provision of moral, spiritual, emotional, and financial support has been the backbone of our journey.

We also extend our heartfelt dedication to our brothers, sisters, and relatives, whose constant support and understanding have been instrumental in our progress. To our mentor, friends, and classmates, your words of advice, encouragement, and camaraderie have played a crucial role in helping us complete this study.

Additionally, we dedicate this research study to the Almighty God. We are profoundly grateful for Your guidance, strength, and the clarity of mind You have bestowed upon us. Your protection, provision of skills, and the blessing of good health have enabled us to undertake and complete this research. We offer all our efforts and successes to You, in profound gratitude for Your everlasting support and love.

To everyone who has been part of this journey, thank you for your significant contributions and unwavering belief in us.

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CHAPTER I

INTRODUCTION

Rationale of the Study

In the last two decades, Information Technology has emerged in the world affecting our personal, social and public life and has made a significant impact on the quality' of life. It handles data and information represented in digital, text, image, graphics or voice media and deals with communication, storage, processing, and printing or exhibition in the manner and find as desired by the users. It is an outcome of the advances in telecommunication and computer technology (O'Brian et al., 2006).

The rapid advancements in information technology have transformed how businesses operate, highlighting the inefficiencies in traditional methods. Ronyx Trading Engineering and Services, which was established on June 20, 2011, supports the semiconductor, electronics, and manufacturing industries with quality tooling and fabrication services. The company currently manages transactions, communications, and document storage manually using Microsoft Office 365 and Yahoo Mail. This process involves creating quotations, purchase orders, billing statements, and other documents manually, which is time-consuming and prone to errors. Documents are stored physically or on computers, and organizing or retrieving them is inefficient, often leading to confusion and document loss. Inter-branch communication also relies on email or other platforms, further complicating document management.

The Traders system aims to address these challenges by automating transaction processes, improving efficiency, and reducing errors. It replaces the current process with a centralized communication platform, enhancing security and communication efficiency. Traders also provides a robust document management system with features like folder management and collaboration tools, simplifying document organization and retrieval, and ensuring easy access to critical information. Additionally, it offers a centralized platform for managing business operations across Manila, Cebu, and Palawan branch, ensuring real-time insights and seamless coordination. The system also prioritizes data security with encryption, access controls and promotes teamwork with shared documents.

Objectives of the Study

The main goal of this study is to create centralized platform for the admin, the one who manages the transaction process and the branch (staff) and to the customers.

The study specifically aims to:

1. Develop a system that will automate transaction processes, centralize communication, and streamline document management, significantly enhancing efficiency, accuracy, and coordination.
2. Develop an admin module to enable admin to efficiently manage services, service requests, products, orders, payments, inquiry tickets, user accounts, manpower, sales reports, folders, transaction documents, dashboard and feedback.
3. Develop a staff module to equip staffs with tools to manage services, service requests, orders, inquiry tickets, manpower, transaction documents, dashboard, payments, customer profiles, branch sales report and feedback related to services, inquiry tickets, and orders.
4. Develop a customer interaction module allowing customers to view dashboard, services, products, payment statuses, and service requests, as well as request services and transaction documents, order products, raise inquiry ticket, provide feedback, and access requested documents.

Scope and Limitations of the Study

1. Develop a system that

1. 1 The admin will manage:

1.1.1 Service Requests

- 1.1.1.1 View Service Details
- 1.1.1.2 Update Service Details
- 1.1.1.3 Accept Service
- 1.1.1.4 Decline Service
- 1.1.1.5 Assign Staff

1.1.2 Products

- 1.1.2.1 Add Product
- 1.1.2.2 Delete Product
- 1.1.2.3 View Product Details
- 1.1.2.4 Update Product Details

1.1.3 Orders

- 1.1.3.1 View Order Details
- 1.1.3.2 Update Order Details
- 1.1.3.3 Accept Order
- 1.1.3.4 Decline Order
- 1.1.3.5 Assign Staff

1.1.4 Payments

- 1.1.4.1 View Payment Details
- 1.1.4.2 View Receipt
- 1.1.4.3 Update Payment Details
- 1.1.4.4 Download Receipt

1.1.5 Inquiry Tickets

- 1.1.5.1 View Ticket Details
- 1.1.5.2 Update Ticket Details

1.1.6 User Accounts

1.1.10.1 Users

- 1.1.6.1.1 Add User
- 1.1.6.1.2 Delete User
- 1.1.6.1.3 Update User Details
- 1.1.6.1.4 Change Password

1.1.10.2 Role

- 1.1.6.2.1 Add Role
- 1.1.6.2.2 Delete Role

1.1.7 Sales report

- 1.1.7.1 View Sales Report
- 1.1.7.2 Generate Company Sales Report

1.1.8 Transaction Documents

- 1.1.8.1 Document
 - 1.1.8.1.1 Upload Document
 - 1.1.8.1.2 Share Document
 - 1.1.8.1.3 Delete Document
 - 1.1.8.1.4 Download Document
 - 1.1.8.1.5 View Document
- 1.1.8.2 View Document Requests

1.1.9 Manpower

- 1.1.9.1 Add Manpower
- 1.1.9.2 Delete Manpower
- 1.1.9.3 View Manpower Details
- 1.1.9.4 Update Manpower Details
- 1.1.9.5 Update the availability of Manpower

1.1.10 Services

- 1.1.10.1 View Service Details
- 1.1.10.2 Add Service
- 1.1.10.3 Remove Service
- 1.1.10.4 Update Service Details

1. 2 The admin will view:

- 1.2.1 Feedback
- 1.2.2 Notification
 - 1.2.2.1 Remove Notification
- 1.2.3 Dashboard
 - 1.2.3.1 View KPI's

2. Develop a system that

2.1 The staff will manage:

2.1.1 Service Requests

- 2.1.1.1 View Service Details
- 2.1.1.2 Update Service Details
- 2.1.1.3 Schedule a Service
- 2.1.1.4 Assign Manpower

2.1.2 Orders

- 2.1.2.1 View Order Details
- 2.1.2.2 Update Order Details

2.1.3 Inquiry Tickets

- 2.1.3.1 View Ticket Details
- 2.1.3.2 Update Ticket Details

2.1.4 Manpower

- 2.1.4.1 View Manpower Details
- 2.1.4.2 Update Manpower Details
- 2.1.4.3 Update the availability of Manpower

2.1.5 Customer Accounts

- 2.1.5.1 Update Customer Details
- 2.1.5.2 View Customer Details

2.1.6 Products

- 2.1.6.1 View Product Details
- 2.1.6.2 Update Product Details

2.1.7 Payments

- 2.1.7.1 View Payment Details
- 2.1.7.2 View Receipt

2.1.7.3 Update Payment Details

2.1.7.4 Download Receipt

2.1.8 Transaction Documents

2.1.8.1 Document

2.1.8.1.1 Upload Document

2.1.8.1.2 Share Document

2.1.8.1.3 Delete Document

2.1.8.1.4 Download Document

2.1.8.1.5 View Document

2.1.8.2 View Document Request

2.1.9 Profile

2.1.9.1 Update Account Details

2.1.9.2 View Account Details

2.1.10 Branch Sales Report

2.1.10.1 Generate Sales Report

2.1.10.2 View Sales Report

2.1.11 Services

2.1.11.1 View Service Details

2.1.11.2 Update Service Details

2.2 The staff will view:

2.2.1 Feedback

2.2.2 Notification

2.2.2.1 Remove Notification

2.2.3 Dashboard

2.2.3.1 View KPI's

3. Develop a system that

3.1 The customer will:

3.1.1 Order Product

- 3.1.1.1 View Product
- 3.1.1.2 Add to Cart
- 3.1.1.3 Remove to Cart
- 3.1.1.4 View Cart
- 3.1.1.5 Checkout Product
- 3.1.1.6 Give Feedback
- 3.1.1.7 View Order Details

3.1.2 Process Payment

- 3.1.2.1 Download Receipt
- 3.1.2.2 View Receipt
- 3.1.2.3 View Payment Details

3.1.3 Request Service

- 3.1.3.1 View Services
- 3.1.3.2 View Service Details
- 3.1.3.3 Give Feedback

3.1.4 Raise Inquiry Ticket

- 3.1.4.1 View Ticket Details
- 3.1.4.2 Give Feedback

3.1.5 Request Transaction Document

- 3.1.5.1 View Document
- 3.1.5.2 Download Document

3.1.6 Manage Account

- 3.1.6.1 Create an Account
- 3.1.6.2 Verify Email
- 3.1.6.3 View Profile Account
- 3.1.6.4 Update Account Details
- 3.1.6.5 Change Password

3.1.7 View Notification

3.1.7.1 Remove Notification

3.1.8 View Dashboard

3.1.8.1 View KPI's

Limitations:

- 1) The system doesn't support different languages.
- 2) Refunds of service and orders once the payment takes place will never be done.
- 3) Only the Admin, and Staff can upload Document in the system.
- 4) The payment method offers three options: Bank Transfer, Cash on Delivery, and Check.
- 5) The system does not support third-party payment processing when it comes to Bank Transfer.

Significance of the Study

The study aims to solve client challenges like manual transactions, poor communication, and disorganized document management. It proposes a web-based solution to streamline operations, boost efficiency, and improve overall performance by analyzing current processes and recommending a comprehensive system.

The study will provide the benefits of the following:

Business Owner. The system provides the business owner with real-time insights into operations, enhancing decision-making capabilities and allowing for better resource allocation, while also streamlining processes to reduce costs associated with manual tasks and ultimately contributing to increased profitability and business growth.

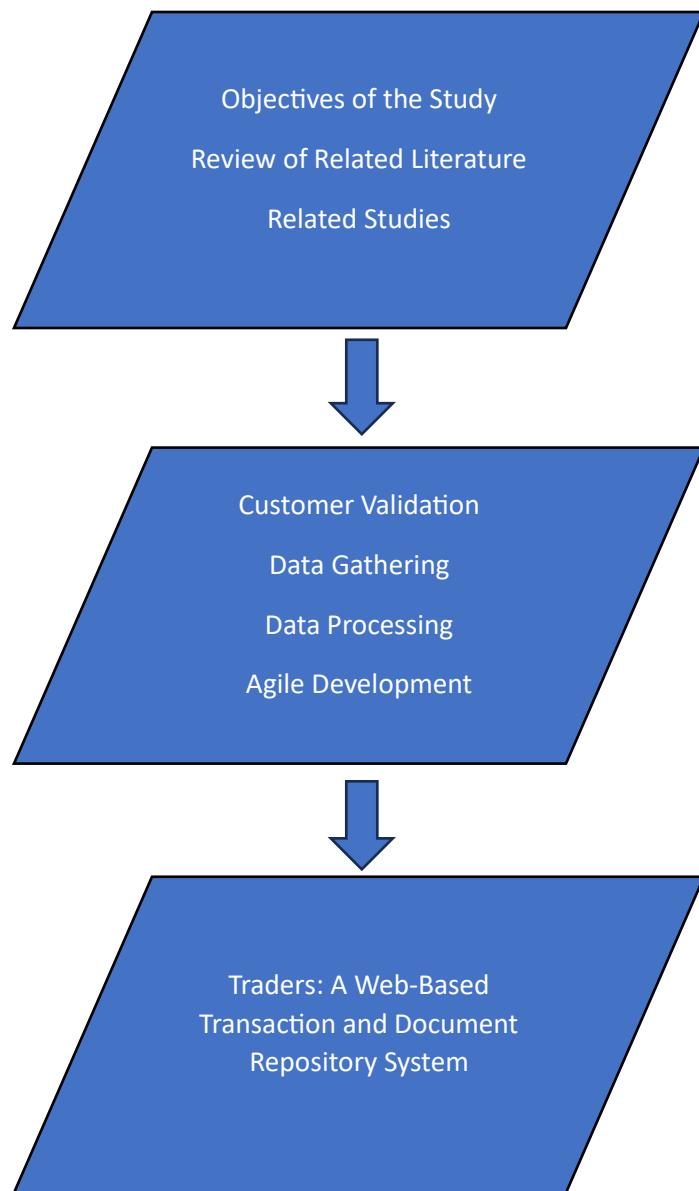
Staffs. It benefits them in the system's automation of manual processes, reducing repetitive tasks and allowing them to focus on more strategic activities, while also enhancing collaboration through centralized communication channels and shared document repositories, leading to improved productivity and job satisfaction.

Customers. The system benefits them in improved service efficiency, experiencing faster response times to inquiries and streamlined transaction processes, while also enjoying enhanced communication channels that facilitate better interaction with the business, ultimately leading to higher satisfaction levels and increased loyalty.

Trading and Engineering Services Companies. The proposed system offers trading and engineering services companies specialized tools for managing complex transactions and documents, improving accuracy and reducing errors, while also streamlining communication and collaboration within these companies, facilitating smoother project management and ensuring timely delivery of services.

Researchers. This will help them as a case study in business process optimization and technological integration, providing insights into the effectiveness of automated systems in improving efficiency, while also offering valuable data on the impact of technology on business operations, serving as a basis for further analysis and exploration.

Future Researchers. The proposed system will benefit them as a reference point for studying the long-term effects of technology adoption on business performance, while also providing a framework for investigating the scalability and adaptability of automated systems in various business contexts, offering insights for future research and development endeavors.

FLOW OF THE STUDYFigure 1: **Flow of the Study**

Definition of Terms

Document Repository. Is a shared digital storage space that can be accessed by approved employees.

Microsoft Office 365. Is a cloud-based subscription service that provides access to popular Microsoft Office application such as Word, Excel, PowerPoint, Outlook, and more, along with cloud storage, and collaboration tools.

Receipt. Is a proof of payment given to a customer, showing details of the transaction

Traders. Is a comprehensive software solution designed to automate transaction processes, streamline communication, and improve document management within businesses, particularly tailored for trading and engineering services companies.

Trading and Engineering Services. Refers to businesses that engage in the exchange of goods or services and provide engineering-related solutions or services.

Transaction. Is a business activity involving the exchange of goods, services, or assets between parties in return for something value.

Web or World Wide Web. Is a global system of interconnected computer networks that allows users to access and share information, resources, and services over the internet using web browsers.

Yahoo. Is a multinational technology company known for its web services, including a search engine, email platform, news aggregator, and various online services.

Cloud Server. Is a virtual server hosted in a cloud computing environment, providing scalable and on-demand access to computing resources over the internet.

Manpower. Refers to the number of people available or employed to work, particularly in terms of their collective labor and skills.

Payment Method. Is a way by which a transaction is completed, involving the transfer of money from one party to another.

Feedback. Is information or opinions about performance, behavior, or work, provided to help someone improve or to indicate satisfaction or areas for improvements.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RELATED STUDIES

This chapter presents the relevant literature and studies that the researchers considered in strengthening the importance of the Transaction and Document Repository System. It also provides a summary of the art to help readers grasp the subject better. The Related Literature and Related Studies are important because they provide significant ideas on how to improve the application's appeal, usability, and user friendliness. Comprehensive research is undertaken to gain a deeper understanding of the Transaction and Document Repository System.

Related Literature

The introduction of Transaction and Document Repository System signifies a significant departure from the client's current manual processes, offering an automated solution to address key pain points and inefficiencies. By streamlining transaction document creation, enhancing communication channels, and introducing a robust document management system, Transaction and Document Repository System aims to revolutionize the client's operational landscape. With a focus on collaboration, and real-time insights, Transaction and Document Repository System promises to elevate efficiency, reduce errors, and foster business growth.

The IT market is a network of technologies that can have a large amount of free space for both buyers and sellers to conduct information transactions and other performances at various times and durations. People used their perceptions of social impact to estimate their utility. Consumer trust in a system has the potential to improve workgroup productivity and improve individual customer satisfaction. The amount of technology experience one has a significant influence on how one feels about new technology. The ramifications are that while developing, testing, or implementing models of new technology adoption and use, prior experience with an IT service is an important consideration. One theory is that behavior is directly influenced by experience (Albayati et. al., 2020).

According to Rainer et al. (2020), A transaction processing systems supports the monitoring, collection, storage, and processing of data from the organization's basic business transactions, each of which generates data. A transaction is anything that changes the firm's database.

Electronic Commerce systems are another type of interorganizational information system. These systems enable organizations to conduct transactions, called business to business electronic commerce, and customers to conduct transactions with businesses, called business to consumer electronic commerce (Rainer et al., 2020).

According to Yan (2021), With the rapid development of e-commerce industry, online shopping has become a craze. With the rapid growth of transaction volume on e-commerce platforms, a large amount of transaction data has been accumulated. From the transaction information of these users, a lot of very valuable information can be mined, such as the defects of products and the actual needs of users.

With the rapid development of e-commerce systems, the centralized service model gradually fails to meet the needs of SMEs. In the existing centralized e-commerce system, users' transaction data and reputation scores are stored in a centralized cloud server, which has high storage cost, low processing efficiency, and the data is vulnerable to attacks and leaks (Xiao, 2022).

According to Al-Zubaidie, M., & Ghanami, S. (2023), Technology advancements have driven a boost in electronic commerce use in the present day due to an increase in demand processes, regardless of whether goods, products, services, or payments are being bought or sold. Various goods are purchased and sold online by merchants (Ms) for large amounts of money. Nonetheless, during the transmission of information via electronic commerce, Ms' information may be compromised or attacked.

Cross-border transactions have been more and more popular around the world. However, the current cross-border transactions still have risks and challenges, e.g., differences in regulation policies and unbalanced profits of banks. (Fu, 2021).

The rapid development of artificial intelligence technology has led to rapid development in various fields. It has many hidden related customer behavior information

and future development trends in the e-commerce information system. The data mining technology can dig out useful information and promote the development of e-commerce (Zhang, 2020).

According to Yukonhiatou (2020), Due to the recent prevalence of IoT (Internet of Things) technologies, various IoT devices connect to the Internet and continuously send their generated data to remote processing computers such as video data or sensor data. The transaction rate is one of the main factors to improve the performance of some IoT applications. For instance, in surveillance systems, the probability to catch a thief increases as the processing computer analyzes the video with a higher transaction rate. To improve the transaction rate, some methods reduce the transaction time between a processing computer and stream data sources under a static transaction interval. However, the transaction rate can be further improved by changing the transaction interval dynamically depending on the transaction time.

One of the key activities of any company is the management of documents, which are created on a daily basis. Classic document management cannot follow the needs of the market for companies with a desire to be agile and modern. Therefore, companies need to offer employees a solution that allows them to carefully store and archive documentation, while at the same time giving them enough time to perform their main daily tasks. Electronic management of documents not only influences companies' workflows, savings and adaptions to market needs but also influences their digital transformation. It is also necessary to consider the influences on the environment. The influence of the production and use of paper in daily business has burdened the environment a lot in the past and it is about time that this matter is addressed. Implementation of a document management system (DMS) is now almost a must-have for companies wanting to be competitive in the market and with a desire to digitalise its processes, and is also surely a good step in the right direction for the environment (Jordan, 2022).

According to Sprague (2021), Harnessing information technology to manage documents is one of the most important challenges facing IS managers in this decade. It is important because most of the valuable information in organizations is in the form of documents such as business forms, reports, letters, memos, policy statements, contracts,

agreements, etc. Moreover, most of the important business processes in organizations are based on, or driven by, document flows. Electronic Document management (EDM) promises major productivity and performance increases by applying new technology to documents and document processing.

Document management as a technology and discipline traditionally extends the capabilities of a computer's file system. Document management is the process of storing, locating, updating, and sharing data to advance the workflow and achieve business results. Centralized data sharing and storage across specific servers helps organizations gain effective access to information along with data protection. Programs and servers are used in the document management process (Abbasova, 2020).

According to Abbasova (2020), Any large company will sooner or later feel the need for any electronic document management system (EDMs) to control their ever-increasing number of different documents and drawings. Companies often resist "this desire" and are constrained by the costs and complexities of implementing EDMs. Useful EDMs should not only control documents, but also ensure access to them throughout the company and even to clients or other project participants via the Internet. The EDMs should also centralize data in an easily accessible environment, allowing users to easily and quickly store, access, and modify information

The topical problem in the development of electronic document management systems (EDMS) is their adaptation and personalization to the individual characteristics of the user (Obukhov, 2020).

According to Abebe et al. (2020), The owner of the document creates the initial version of the provenance history when it is added to the system. The restriction that the owner of the document retains total control over who may access and add provenance trails for their creations is upheld by the agreement. It is not possible to transfer access permissions to another individual using the current Smart Provenance solution. In addition to the main methods, Document Tracker includes help methods for granting access to a document and steps to change the document owner.

According to Regla (2020), One factor that would increase productivity and promote fast solutions in a workplace is when employees intend to work together. To date, mobility is important for professionals to accomplish everyday tasks alongside with the capability to access important files and documents. These maybe in the form of collaborative activity feedback reports, approved policies, memos, requests, payrolls and applications. In most entities, documents are the building blocks of daily operations which entail reviews and approval administrative functions. It does play a central role in administering proper delivery of services as well as operational decision making.

With the daily increase in document flow, as well as the transition to paperless document management around the world, the demand for electronic document management systems is increasing. This significantly requires optimization of these systems in terms of quality document information retrieval and document management (Sambetbayeva, 2022).

Review of Related Studies

Dotloop

Dotloop is a cloud-based transaction management platform primarily used in real estate transactions. It provides tools for real estate professionals to manage the entire transaction process electronically, from document creation and editing to signing and storage. Dotloop aims to streamline the paperwork involved in real estate transactions, making the process more efficient, secure, and transparent for all parties involved, including agents, clients, and brokers. Some key features of Dotloop include e-signatures, document storage, task management, compliance tracking, and integration with other real estate software systems.

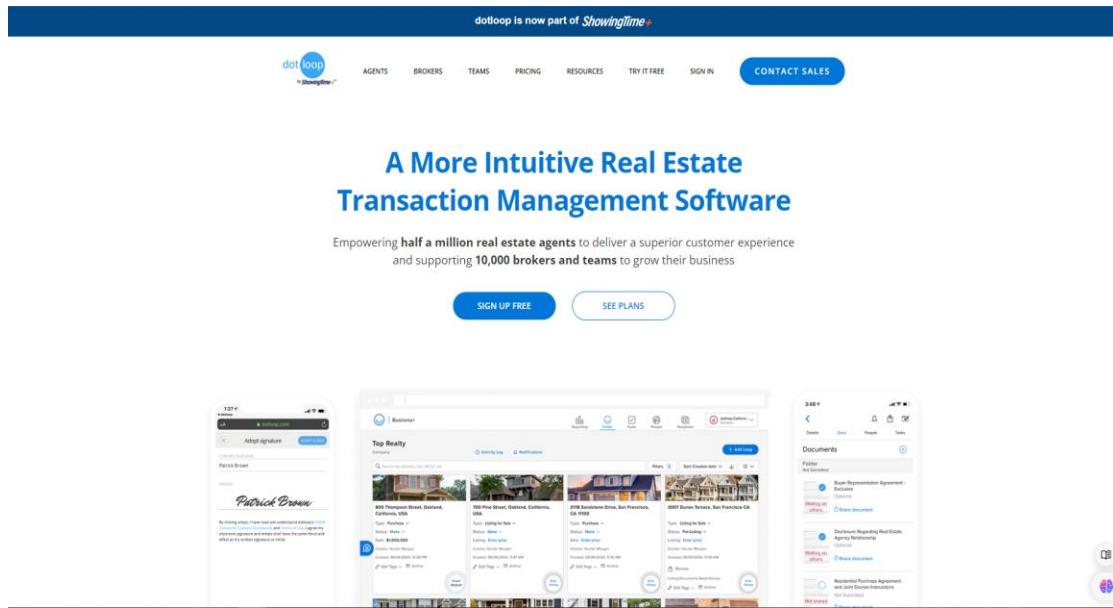


Figure 2: [Dotloop's Homepage](#)

Paperless Pipeline

Paperless Pipeline is a transaction management software specifically designed for real estate professionals and brokerages. It offers a digital platform to manage real estate transactions and streamline administrative tasks associated with the buying and selling process.

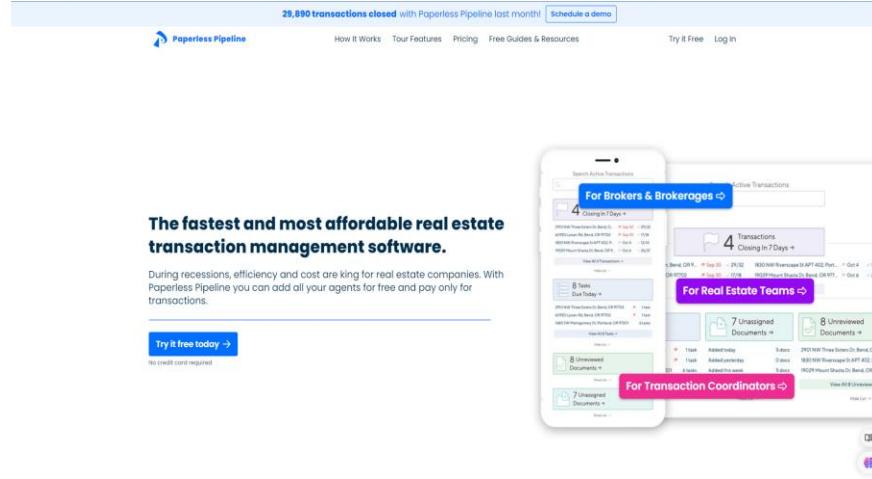


Figure 3: Paperless Pipeline

Form Simplicity

Form Simplicity is a transaction management solution primarily used in the real estate industry. It provides tools for real estate professionals to create, manage, and store transaction documents electronically.

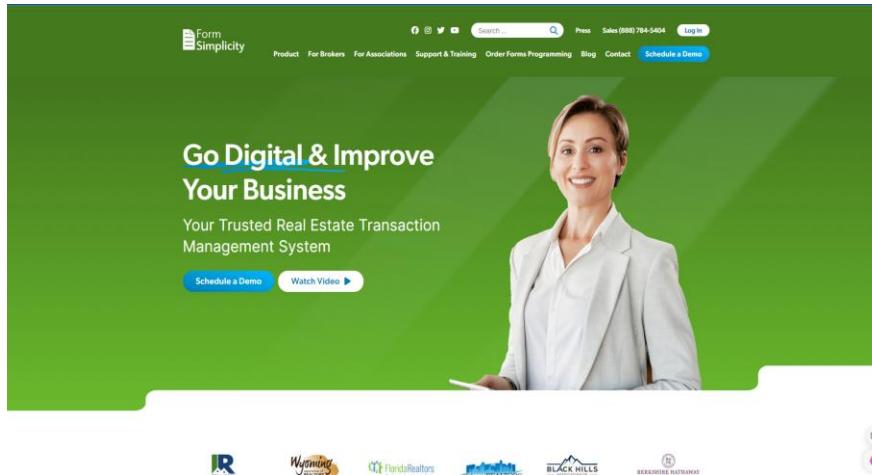


Figure 4: Form Simplicity

Table 1
Comparative Matrix

	Form Simplicity	Paperless Pipeline	Dotloop	Traders	Total
Admin Database	✓	✓	✓	✓	100%
Customer Database	✓	✓	✓	✓	100%
Notification		✓	✓	✓	75%
Web Support	✓	✓	✓	✓	100%
Admin and Customer Communication		✓	✓	✓	75%
Request Service				✓	25%
Track Documents	✓	✓	✓	✓	100%
Online Registration	✓	✓	✓	✓	100%
Fast Transaction Creation	✓		✓	✓	75%
Order Products				✓	25%
Total	70%	70%	80%	100%	

Table 2
Competitor Analysis

Related Studies		Description	Features / Strength
Name	Form Simplicity		
URL	Form Simplicity - Real Estate Transaction Management Software	Form Simplicity is a leading digital transaction management platform designed specifically for real estate professionals. It offers a comprehensive suite of tools to streamline the entire real estate transaction process, from creating and managing forms to facilitating	Features: Form Simplicity is a real estate transaction solution that offers features such as digital transaction management, e-signatures, forms management, and compliance tools. It provides customizable
Year Launched	2003		

		electronic signatures and compliance management.	forms, templates, and workflows to streamline real estate transactions. Strengths: Form Simplicity is known for its user-friendly interface and comprehensive set of tools tailored specifically for real estate professionals. It offers robust security features to ensure the confidentiality and integrity of sensitive transaction data.
Name	Paperless Pipeline	Paperless Pipeline is a trusted transaction management system designed specifically for real estate brokerages. It offers a centralized platform for managing all aspects of real estate transactions, from document storage and compliance tracking to task automation and reporting.	Features: Paperless Pipeline is a transaction management system for real estate brokerages. It offers features such as document management, task automation, compliance tracking, reporting, and integration with popular real estate software and platforms.
URL	Real Estate Transaction Management & Coordinator Software - Paperless Pipeline		Strengths: Paperless Pipeline is known for its simplicity and efficiency in managing real estate transactions for brokerages of all sizes. It provides customizable workflows and automation tools to streamline transaction
Year Launched	2009		

			processes, improve productivity, and ensure compliance with industry regulations.
Name	Dotloop		
URL	Dotloop Real Estate Transaction Management Software	Dotloop is a dynamic transaction management platform revolutionizing the way real estate transactions are handled. It provides a collaborative workspace where agents, clients, and other stakeholders can seamlessly work together to complete transactions faster and more efficiently.	Features: Dotloop is a transaction management platform designed for real estate professionals. It offers features such as document storage, e-signatures, task management, collaboration tools, and integration with various real estate software and platforms. Strengths: Dotloop is praised for its intuitive interface and ease of use. It facilitates seamless collaboration between agents, clients, and other stakeholders involved in real estate transactions. Its integration capabilities make it a versatile tool for real estate professionals.
Year Launched	2009		

Review of Legal Basis

The review of legal basis for the business process improvement study serves as a critical framework for addressing challenges faced by the client in their current business operations. The study aims to analyze existing processes, understand shortcomings, and propose solutions leveraging modern technology. This review examines the legal

foundations underpinning the need for improved processes in areas such as manual transaction processes, communication methods, and document management.

In many jurisdictions, legal compliance is mandatory for businesses. Manual transaction processes may raise concerns regarding accuracy, transparency, and compliance with laws and regulations. For instance, in industries like finance and healthcare, strict regulations govern data handling and storage. Inefficient communication methods may impede compliance with contractual obligations or regulatory reporting requirements. Disorganized document management can lead to legal risks such as data breaches, loss of sensitive information, or non-compliance with document retention regulations.

With the increasing focus on data protection laws globally, such as the General Data Protection Regulation (GDPR) in the European Union and the California Consumer Privacy Act (CCPA) in the United States, businesses must ensure that their processes comply with data protection requirements. Manual processes and disorganized document management increase the risk of data breaches and non-compliance with data protection laws. Leveraging modern technology to streamline operations can enhance data security and facilitate compliance with data protection regulations. Business transactions often involve contractual agreements that impose obligations on parties involved. Inefficient communication methods and manual transaction processes can hinder the timely fulfillment of contractual obligations, leading to disputes or legal liabilities. By implementing a comprehensive system that improves communication and automates transaction processes, businesses can mitigate the risk of contractual breaches and enhance compliance with contractual obligations.

In conclusion, the legal basis for the business process improvement study underscores the importance of compliance with laws, regulations, and contractual obligations. By addressing challenges related to manual transaction processes, inefficient communication methods, and disorganized document management, businesses can enhance legal compliance, mitigate risks, and improve overall business performance. Leveraging modern technology to streamline operations is essential for achieving these objectives and ensuring sustainable growth in today's regulatory environment.

CHAPTER III

RESEARCH METHODOLOGY

Software Engineering Methodology

Methodology is a contextual framework for study that explains methodologies, techniques and designs in detail, highlighting those employed throughout the study to influence the researchers and other users make decisions. The phrase technique indicates how the data will be gathered and the instruments for gathering data, system approach, the proposed input and output, users and system development tools. System development is a strategy used to demonstrate. How the suggested system will be created. In this chapter, the researchers need to choose a software engineering methodology. The researchers chose one sort of approach to apply in the study, Agile Development.

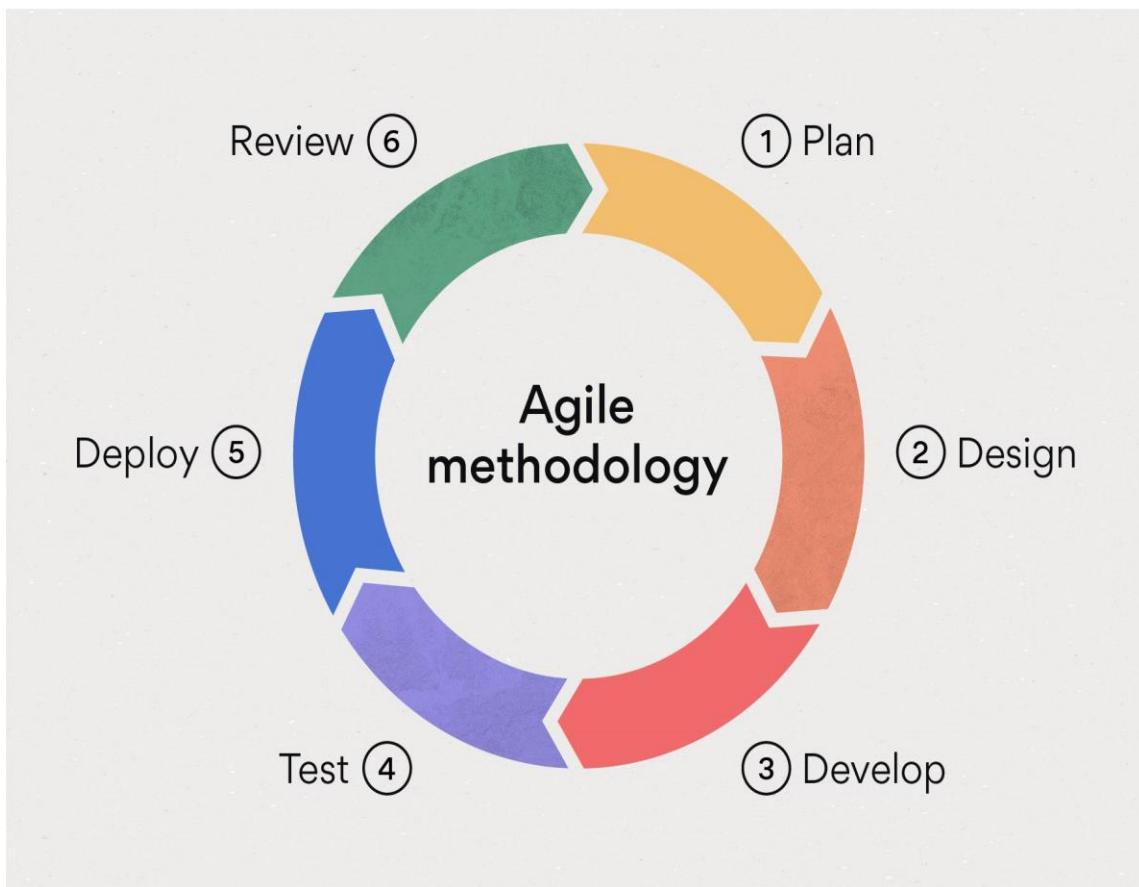


Figure 5: **Agile Methodology**

Beginning in the mid-1990s, a number of consultants independently created and evolved what later came to be known as agile software development methodologies. Agile methodologies and practices emerged as an attempt to more formally and explicitly embrace higher rates of change in software requirements and customer expectations. Some prominent agile methodologies are Adaptive Software Development, Crystal, Dynamic Systems Development Method, Extreme Programming (XP), Feature-Driven Development (FDD), Pragmatic Programming, and Scrum (Williams, 2010).

According to Dyba (2008), Agile software development represents a major departure from traditional, plan-based approaches to software engineering. Today's business environment is very much dynamic, and organizations are constantly changing their software requirements to adjust with new environment. They also demand for fast delivery of software products as well as for accepting changing requirements. In this aspect, traditional plan-driven developments fail to meet up these requirements. Though traditional software development methodologies, such as life cycle-based structured and object-oriented approaches, continue to dominate the systems development few decades and much research has done in traditional methodologies, Agile software development brings its own set of novel challenges that must be addressed to satisfy the customer through early and continuous delivery of the valuable software. It is a set of software development methods based on iterative and incremental development process, where requirements and development evolve through collaboration between self-organizing, cross-functional teams that allows rapid delivery of high-quality software to meet customer needs and also accommodate changes in the requirements (Moniruzzaman, 2013).

In this project, the Researchers used Adaptive Software Development because Agile: Adaptive Software Development offers an ideal methodology for the Traders system due to its inherent adaptability and collaborative nature. Traders seeks to address diverse pain points within the client's business operations, a task that may entail evolving requirements and priorities. Adaptive Software Development emphasis on adaptability ensures that the development process can swiftly accommodate these changes, maintaining alignment with the client's evolving needs. Moreover, the collaborative aspect of Adaptive Software Development facilitates close engagement with stakeholders, including the client,

enabling regular feedback loops that guide development iterations. This collaborative approach not only ensures that Traders remains tailored to the client's specific pain points but also fosters a sense of ownership and commitment to the project's success among all stakeholders.

Planning Phase

Program workflow

Admin

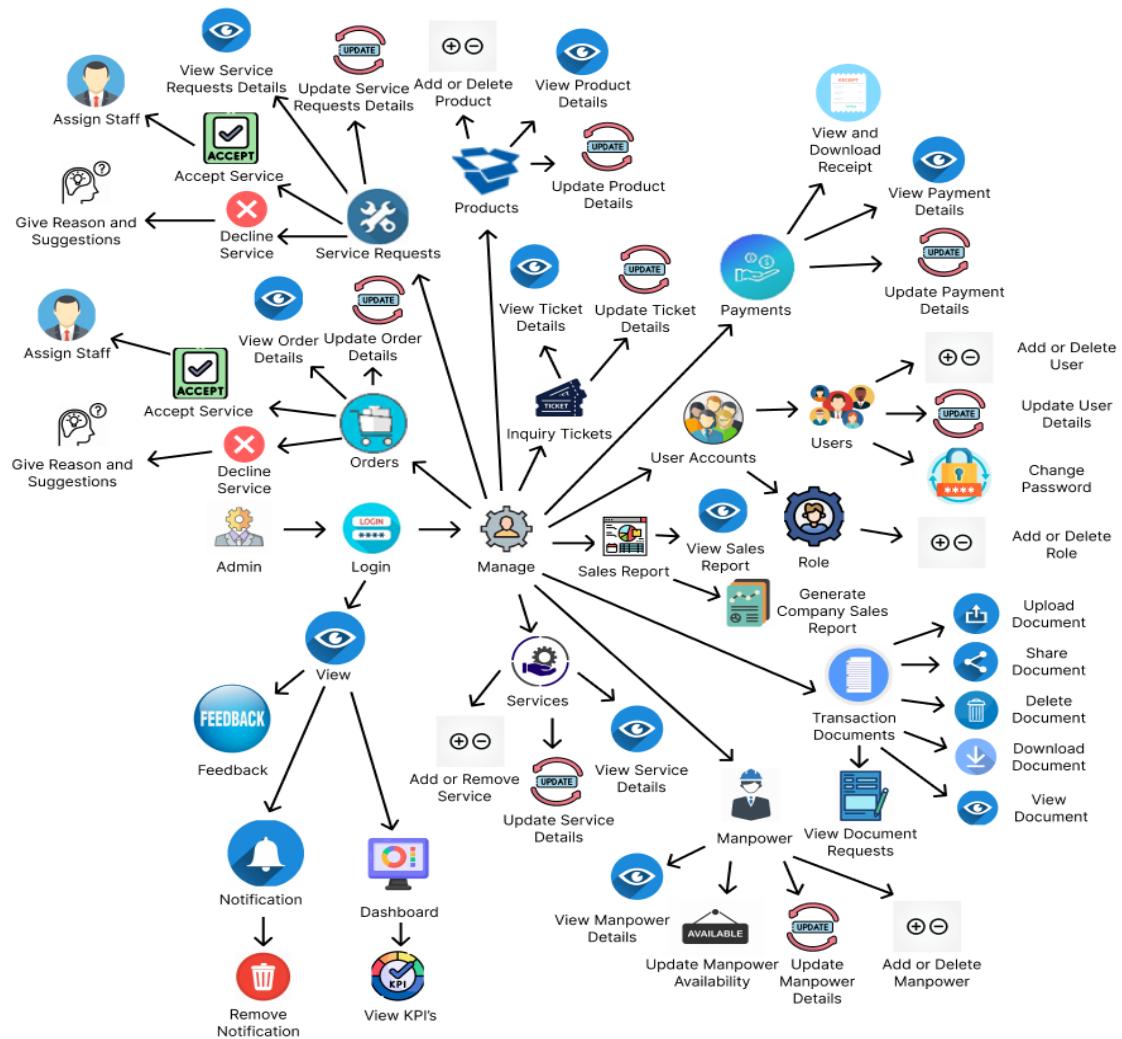


Figure 6: **Program Workflow for Admin**

Figure 6 illustrates the program workflow for admin in the system. Admin start by logging in, which takes them to the central manage hub. From there, admin can access modules like Products, Service Requests, Orders, Inquiry Tickets, Payments, User Accounts, Sales Reports, Services, Manpower, Transaction Documents, Feedback, Notifications, and the Dashboard. Each module has specific functions, such as adding, updating, viewing, or deleting details related to products, services, orders, payments, users, manpower, documents, and more.

Staff



Figure 7: **Program Workflow for Staff**

Figure 7 illustrates the program workflow for staff in the system. Staff log in to access the central manage hub, from which they can navigate to various modules. These include Products, Service Requests, Orders, Inquiry Tickets, Payments, Customer Accounts, Sales Reports, Services, Manpower, Transaction Documents, Feedback, Notifications, and the Dashboard. Each module allows specific actions like viewing, updating, adding, or deleting details related to products, services, orders, payments, users, manpower, and documents.

Customer

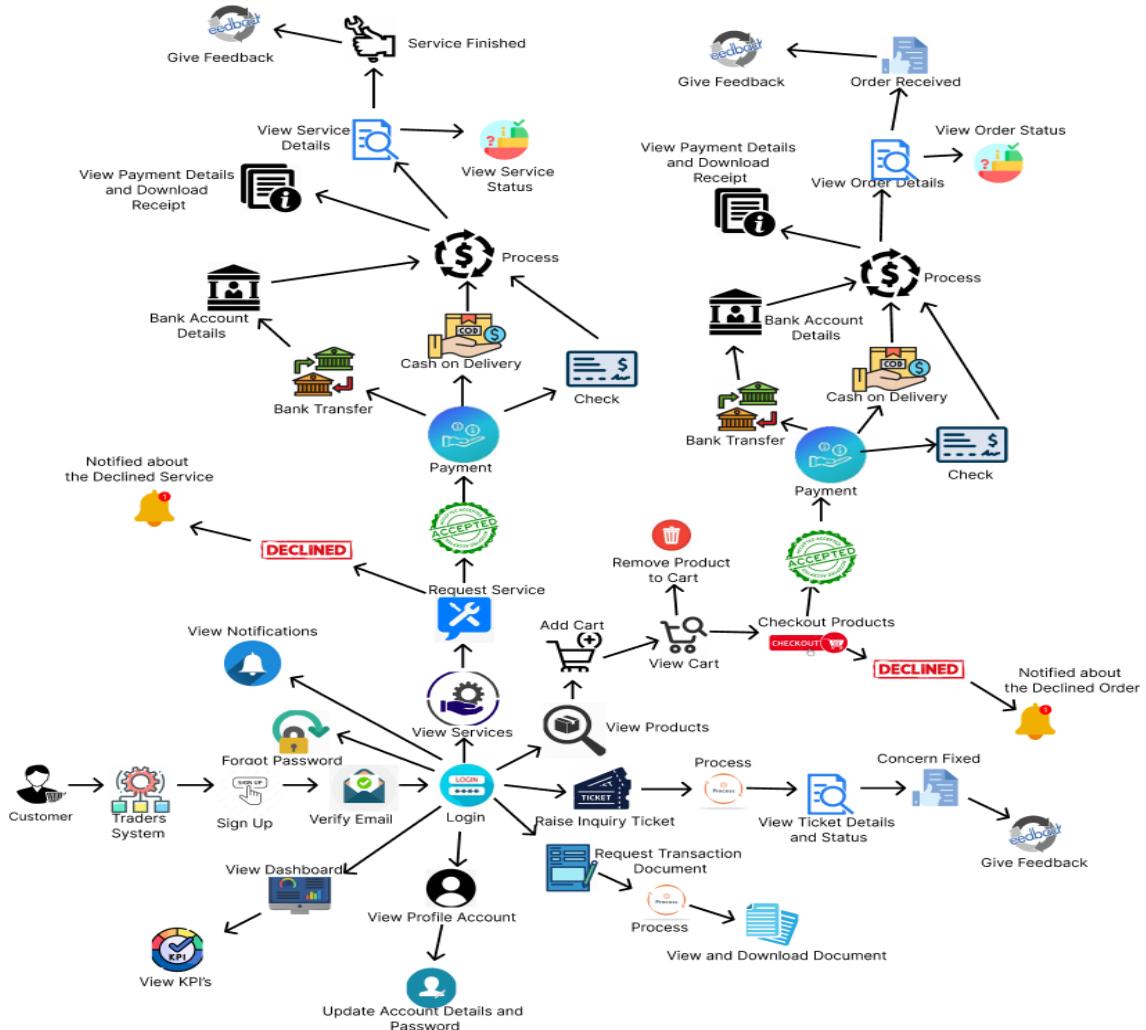


Figure 8: Program Workflow for Customer

Figure 8 illustrates a customer starting with the logging into the Traders System, which involves signing up, verifying email, and logging in. From there, customer can view its profile, update account details and passwords, view the dashboard, and KPIs. Customer can view products, add them to the cart, and checkout. Payment options include bank transfer, cash on delivery, and check. Customer can also request services, view notifications, and raise inquiry tickets. The system processes orders and services, notifies customer of acceptance or decline, and allows viewing payment details, service, and order statuses. After completion, customer can give feedback, view ticket, service or order statuses, and download receipts. The system is designed to streamline customer interactions, payments, and feedback processes comprehensively.

Gantt Chart

The table below are the timeframe and a representation of the schedules and the length in creating this research.

Table 3

Capstone 1: Gantt Chart

Plan Duration					Duration in							
Completed					2024							
Traders: A Web-Based Transaction and Document Repository System					March			April			May	
TASK ID	TASK NAME	TASK LEAD	START DATE	END DATE	1-7	8 - 14	15 - 21	22-31	1 - 7	8 - 14	15- 21	22 - 30
A	IDEA SELECTION											
1.1	Pitch Deck	ALL	01-Mar-24	06-Mar-24	Blue	Green						
1.2	Title Hearing	ALL	07-Mar-24	08-Mar-24	Blue	Green						
B	DOCUMENTATION PAPER											
2	CHAPTER 1											
2.1	Rationale of the Study	HIPSTER	11-Mar-24	13-Mar-24		Blue	Green					
2.2	Objective of the Study	HIPSTER	11-Mar-24	14-Mar-24		Blue	Green					
2.3	Scope and Limitation	HIPSTER	11-Mar-24	14-Mar-24		Blue	Green					
2.4	Significance of the Study	HIPSTER	11-Mar-24	15-Mar-24		Blue	Green					
2.5	Flow of the Study	HIPSTER	11-Mar-24	12-Mar-24		Blue	Green					
2.6	Definition of Terms	HIPSTER	11-Mar-24	15-Mar-24		Blue	Green					
3	CHAPTER 2											
3.1	Review of Related Literature	HUSTLER	18-Mar-24	28-Mar-24		Blue	Green					
3.2	Review of Related Studies	HUSTLER	18-Mar-24	28-Mar-24		Blue	Green					
3.3	Comparative Matrix	HUSTLER	28-Mar-24	31-Mar-24		Blue	Green					
4	CHAPTER 3											
4.1	Software Engineering Methodology	HUSTLER	03-Apr-24	07-Apr-24				Blue	Green			
4.2	PLANNING PHASE							Blue	Green			
4.2.1	Business Model Canvas	HUSTLER	03-Apr-24	08-Apr-24				Blue	Green			
4.2.2	Program Workflow	HUSTLER	03-Apr-24	09-Apr-24				Blue	Green			

Table 4

Capstone 2: Gantt Chart

Plan Duration					Duration In 2024 - 2025															
Completed																				
Traders: A Web-Based Transaction and Document Repository System					September			October			November			December		January 2025				
TASK ID	TASK NAME	TASK LEAD	START DATE	END DATE	1 - 7	8 - 14	15 - 21	22 - 30	1 - 7	8 - 14	15 - 21	22 - 31	1 - 7	8 - 14	15 - 21	22 - 30	1 - 7	8 - 15	3 - 9	10 - 11
A	DOCUMENTATION PAPER																			
1	CHAPTER 1																			
1.1	TESTING PHASE																			
1.1.1	Unit Testing	HUSTLER	01-Sept-24	07-Sept-24	01-Sept-24	07-Sept-24	14-Sept-24	21-Sept-24	28-Sept-24	04-Oct-24	11-Oct-24	18-Oct-24	25-Oct-24	01-Nov-24	08-Nov-24	15-Nov-24	22-Nov-24	29-Nov-24	06-Dec-24	
1.1.2	Integration Testing	HUSTLER	08-Sept-24	14-Sept-24	08-Sept-24	14-Sept-24	21-Sept-24	28-Sept-24	04-Oct-24	11-Oct-24	18-Oct-24	25-Oct-24	01-Nov-24	08-Nov-24	15-Nov-24	22-Nov-24	29-Nov-24	06-Dec-24		
1.1.3	Alpha Testing	HIPSTER	15-Sept-24	21-Sept-24	15-Sept-24	21-Sept-24	28-Sept-24	04-Oct-24	11-Oct-24	18-Oct-24	25-Oct-24	01-Nov-24	08-Nov-24	15-Nov-24	22-Nov-24	29-Nov-24	06-Dec-24			
1.1.4	Acceptance Testing	HIPSTER	22-Sept-24	30-Sept-24	22-Sept-24	28-Sept-24	04-Oct-24	11-Oct-24	18-Oct-24	25-Oct-24	01-Nov-24	08-Nov-24	15-Nov-24	22-Nov-24	29-Nov-24	06-Dec-24				
1.2	IMPLEMENTATION /DEVELOPMENT PHASE																			
1.2.1	Software Specification	HACKER	01-Oct-24	08-Oct-24	01-Oct-24	08-Oct-24	15-Oct-24	22-Oct-24	29-Oct-24	05-Nov-24	12-Nov-24	19-Nov-24	26-Nov-24	03-Dec-24	10-Dec-24	17-Dec-24	24-Dec-24	31-Dec-24	07-Jan-25	
1.2.2	Hardware Specification	HACKER	01-Oct-24	13-Oct-24	01-Oct-24	13-Oct-24	20-Oct-24	27-Oct-24	03-Nov-24	10-Nov-24	17-Nov-24	24-Nov-24	01-Dec-24	08-Dec-24	15-Dec-24	22-Dec-24	29-Dec-24	05-Jan-25		
1.2.3	User Guide	HIPSTER	01-Oct-24	20-Oct-24	01-Oct-24	20-Oct-24	27-Oct-24	03-Nov-24	10-Nov-24	17-Nov-24	24-Nov-24	01-Dec-24	08-Dec-24	15-Dec-24	22-Dec-24	29-Dec-24	05-Jan-25			
1.2.4	Installation Guide	HACKER	01-Oct-24	27-Oct-24	01-Oct-24	27-Oct-24	04-Nov-24	11-Nov-24	18-Nov-24	25-Nov-24	02-Dec-24	09-Dec-24	16-Dec-24	23-Dec-24	30-Dec-24	06-Jan-25	13-Jan-25			
1.2.5	Roadmap	HUSTLER	27-Oct-24	04-Nov-24	27-Oct-24	04-Nov-24	11-Nov-24	18-Nov-24	25-Nov-24	02-Dec-24	09-Dec-24	16-Dec-24	23-Dec-24	30-Dec-24	06-Jan-25	13-Jan-25	20-Jan-25			
B	PREPARATION																			
2.1	Assign Tasks	HUSTLER	05-Nov-24	08-Nov-24	05-Nov-24	08-Nov-24	12-Nov-24	19-Nov-24	26-Nov-24	02-Dec-24	09-Dec-24	16-Dec-24	23-Dec-24	30-Dec-24	06-Jan-25	13-Jan-25	20-Jan-25			
2.2	Development Plan	HUSTLER	09-Nov-24	20-Nov-24	09-Nov-24	20-Nov-24	27-Nov-24	04-Dec-24	11-Dec-24	18-Dec-24	25-Dec-24	01-Jan-25	08-Jan-25	15-Jan-25	22-Jan-25	29-Jan-25	05-Feb-25			
2.3	Installation of Software	HACKER	09-Nov-24	26-Nov-24	09-Nov-24	26-Nov-24	03-Dec-24	10-Dec-24	17-Dec-24	24-Dec-24	01-Jan-25	08-Jan-25	15-Jan-25	22-Jan-25	29-Jan-25	05-Feb-25				

Functional Decomposition Diagram

Functional decomposition diagram is a method of analysis that dissects a complex process in order to examine its individual elements. A function, in this context, is a task in a larger process whereby decomposition breaks down that process into smaller, easier to comprehend units.

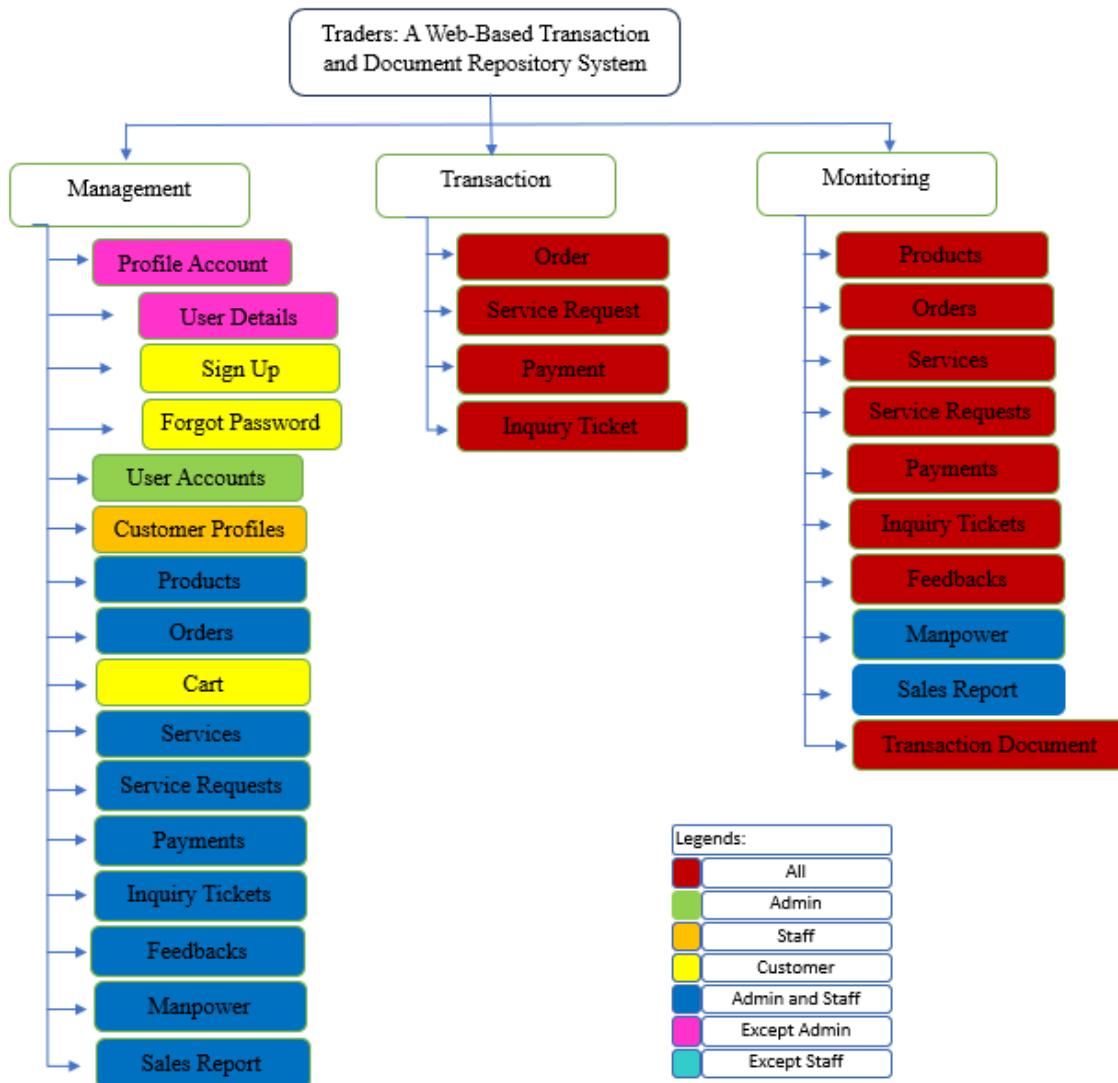


Figure 9: **Functional Decomposition Diagram**

Analysis Phase

Use Case Diagram

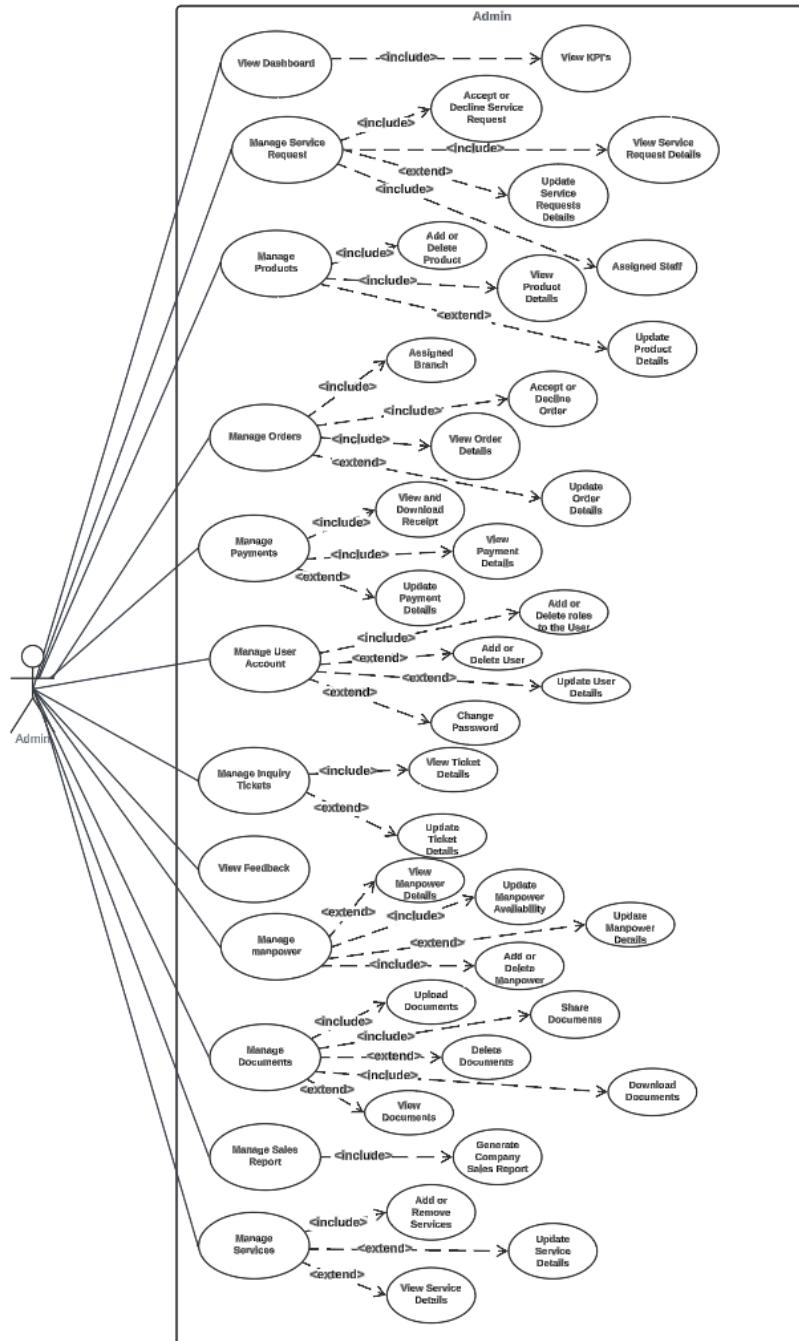


Figure 10: **Use Case Diagram for Admin**

Figure 10 demonstrates how the admin can navigate various sections of the system to manage service requests, products, orders, payments, inquiry tickets, user accounts, services, sales report, transaction documents, dashboard, manpower, and notification.

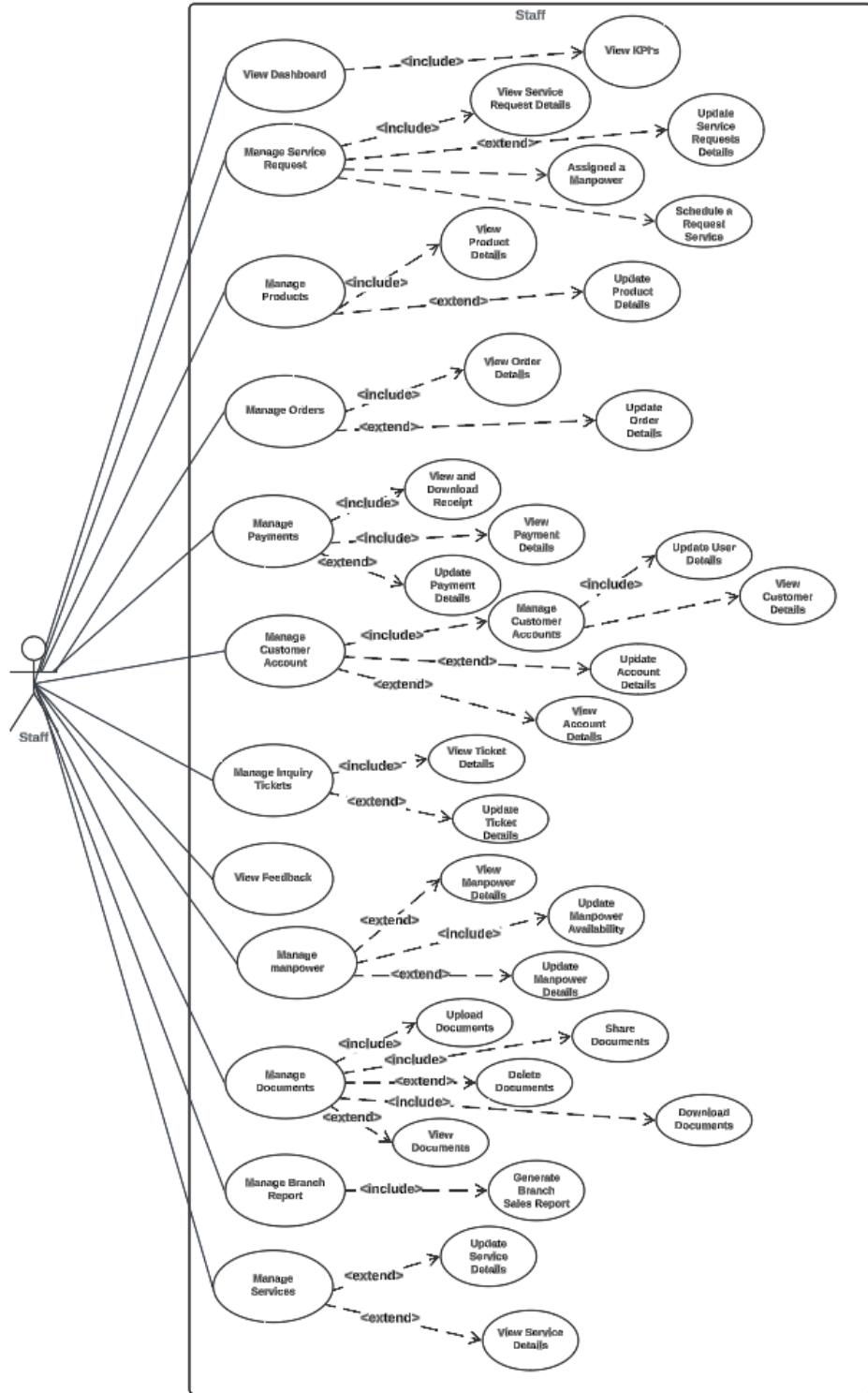


Figure 11: **Use Case Diagram for Staff**

Figure 11 demonstrates how the staff can navigate various sections of the system to manage service requests, services, products, orders, payments, inquiry tickets, customer accounts, profile, transaction documents, dashboard, manpower, and notification.

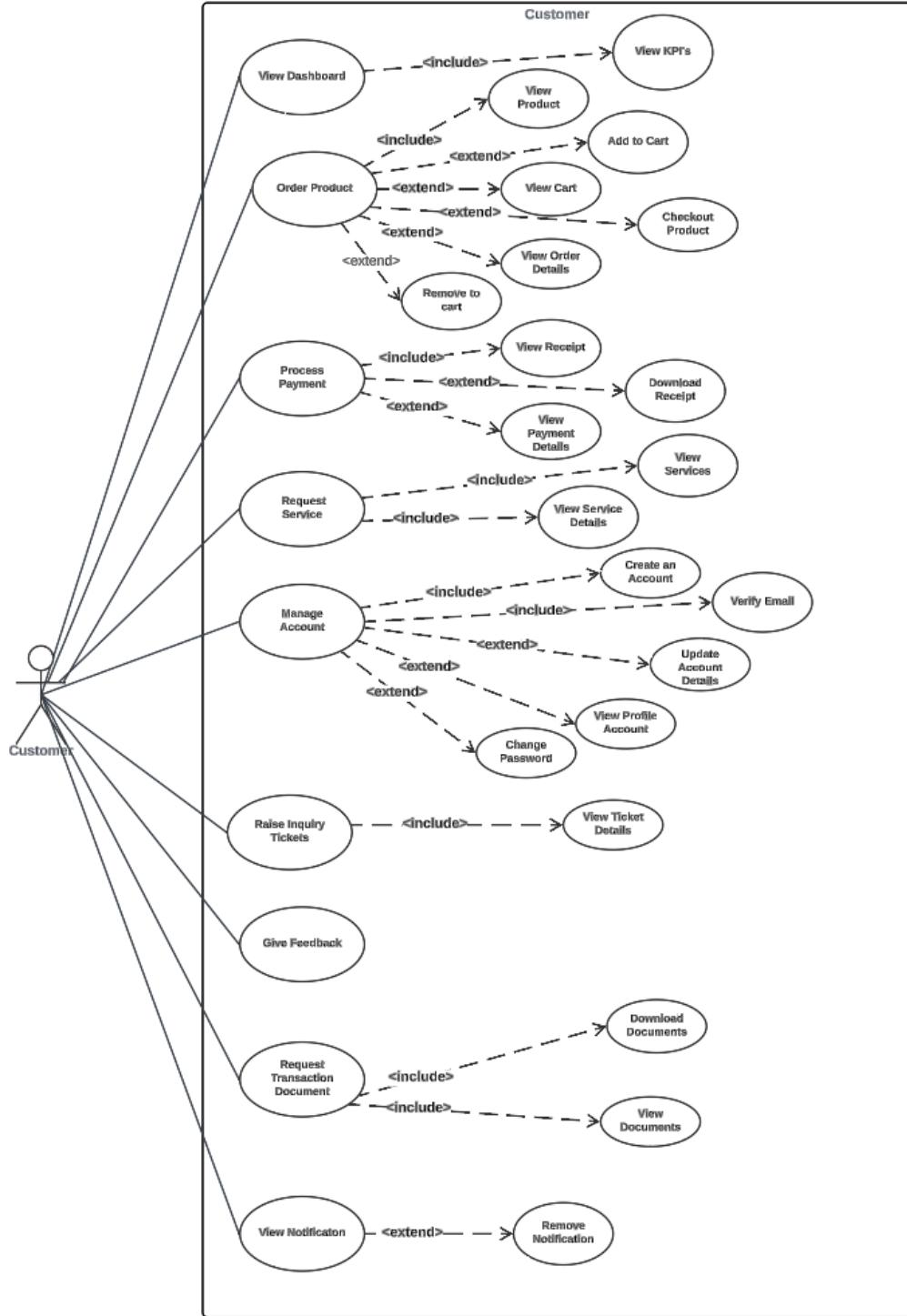


Figure 12: Use Case Diagram for Customer

Figure 11 demonstrates how the customer can navigate various sections of the system to manage order, payment, dashboard, service, inquiry ticket, transaction documents, account, and notification.

Storyboard

Admin

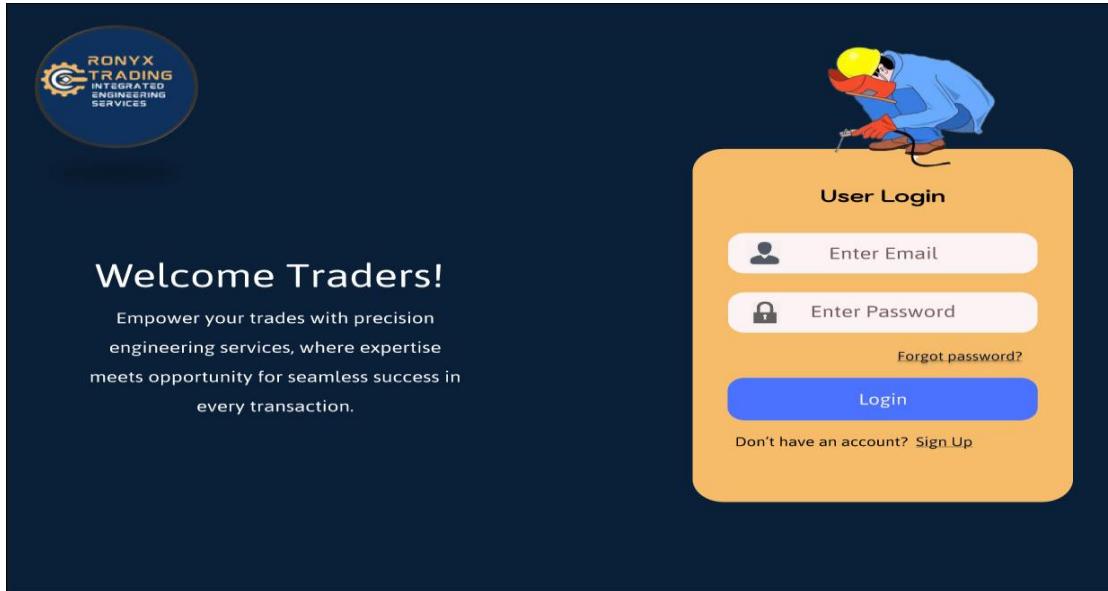


Figure 13: [Admin Login](#)

This is where admin log in.

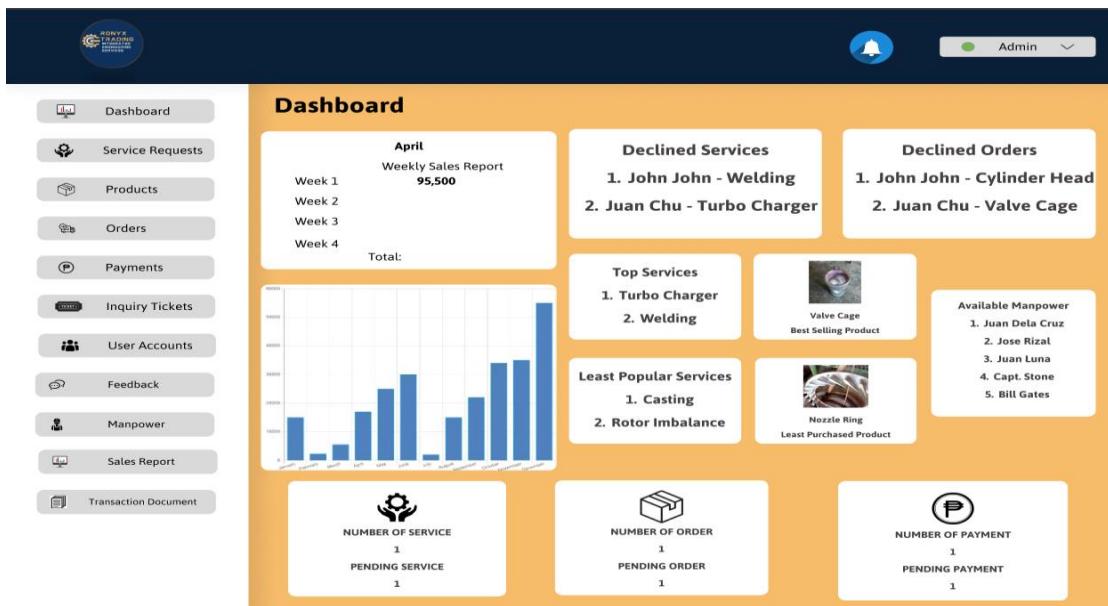


Figure 14: [Dashboard Page](#)

When admin logs in, it will redirect to dashboard page.

The screenshot shows the 'Service Requests' page for an admin user. On the left is a sidebar with various menu items: Dashboard, Service Requests (selected), Products, Orders, Payments, Inquiry Tickets, User Accounts, Feedback, Manpower, Sales Report, and Transaction Document. The main area is titled 'Service Requests' and contains a table with one row. The table columns are: Service Number, Customer Name, Service Type, Product Name, Schedule, Status, and Action. The data in the table is as follows:

Service Number	Customer Name	Service Type	Product Name	Schedule	Status	Action
SRVC-0001	John John	Exhaust Gas Turbo Charger Parts	Exhaust Valve Spindle	04/09/2024	In-Progress	Details

At the bottom right of the table are navigation buttons: 'Previous', '1', and 'Next'.

Figure 15: Service Requests Page

Service Requests Page, where admin can view service requests details.

The screenshot shows the 'SERVICE DETAILS' page for the service request from Figure 15. The left sidebar is identical to Figure 15. The main content area has a title 'SERVICE DETAILS' and a 'Back' button. It displays the following service details:

- Customer Name: John John
- Address: M.J. Cuenco Ave. Corner R. Palma St., Cebu City
- Assigned Manpower: Bill Gates
- Staff-In-Charge: Steve Jobs
- Service Code: SRVC-0001
- Service Type: Exhaust Gas Turbo Charger Parts
- Product: Exhaust Valve Spindle x1
- Description: Repair and Reface
- Payment Number: PYMT-0001
- Payment Option: Bank Transfer
- Amount: 52,000
- Payment Date: 04/08/2024
- Balance: 36,400
- Service Schedule: 04/09/2024

On the right side, there is a 'In-Progress' section with a timeline showing three events:

- Service Accepted (6 April 2024 15:30)
- Service Started (10 April 2024 10:25)
- In-Progress (10 April 2024 15:23)

A large 'Update' button is located at the bottom left of the main content area.

Figure 16: Service Details Page

When admin clicks details, it will redirect to service details page, where admin can update service details.

The screenshot shows a web application interface for managing service requests. At the top right, there is a green circular icon with a white dot and the word "Admin". On the left, a vertical sidebar contains ten menu items with corresponding icons: Dashboard, Service Requests (selected), Products, Orders, Payments, Inquiry Tickets, User Accounts, Feedback, Manpower, Sales Report, and Transaction Document. The main content area is titled "Pending Service Requests". It features a table with the following columns: Request Number, Customer Name, Service Type, Product Name, Description, and Action. There is one row in the table with the following data:

Request Number	Customer Name	Service Type	Product Name	Description	Action
1	John John	Exhaust Gas Turbo Charger Parts	Exhaust Valve Spindle	Repair and Reface	<button>Accept</button> <button>Decline</button> <button>Details</button>

At the bottom right of the main content area, there are buttons for "Previous", "1", and "Next".

Figure 17: Pending Service Requests

When admin clicks pending service requests, it will redirect to pending service requests, where admin can accept, decline, and view additional details.

The screenshot shows the "Service Requests Details" page, which is a modal window overlaid on the "Pending Service Requests" page. The modal has a dark blue header with the title "Service Requests Details" and a "Back" button. The main content area of the modal displays the following service details:

- Customer Name: John John
- Address: M.J. Cuenco Ave. Corner R. Palma St., Cebu City
- Service Type: Exhaust Gas Turbo Charger Parts
- Product: Exhaust Valve Spindle
- Price: 50,500
- Quantity: 1
- Description: Repair and Reface
- Payment Option: Bank Transfer
- Pay: Partial
- Payable: 15,600
- Total Amount: 50,500

The background of the modal is dark, making the white text stand out. The "Pending Service Requests" table and navigation buttons are visible at the bottom of the modal window.

Figure 18: Service Requests Details

When admin clicks details, it will redirect to service requests details, where admin can view service details.

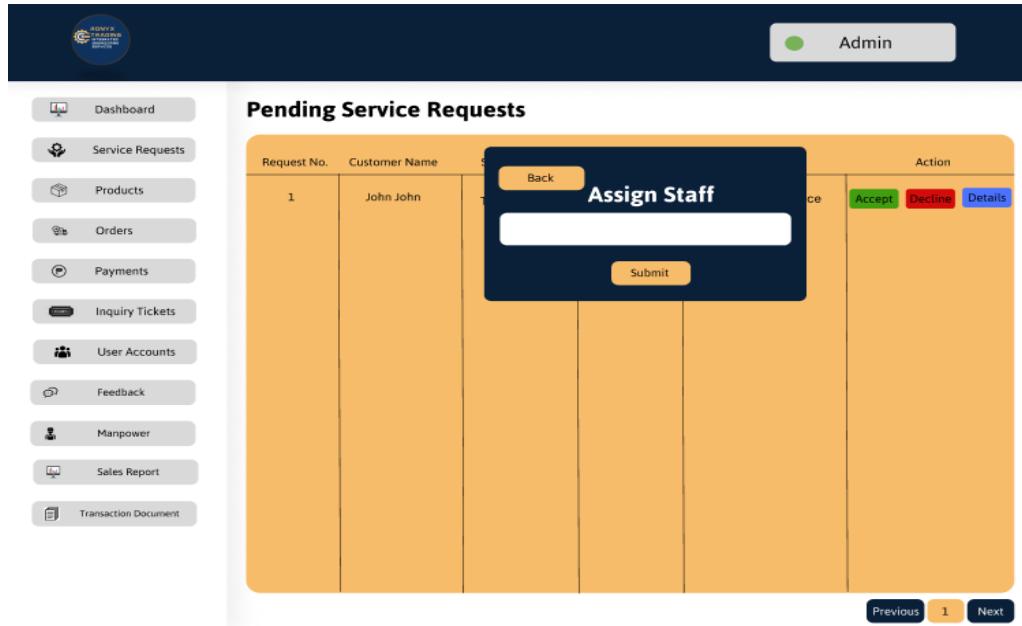


Figure 19: Assign Staff

When admin clicks accept, it will redirect to assign staff, where admin can assign staff of the service.

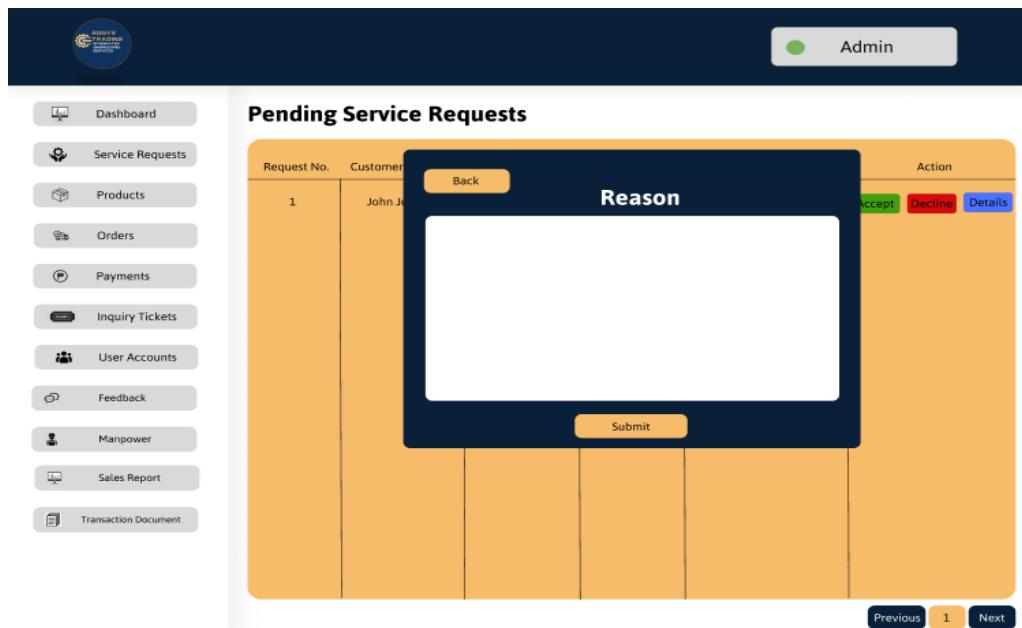


Figure 20: Decline Reason

When admin clicks decline, it will redirect to decline reason, where admin can state the reason of the declined service and give suggestions.

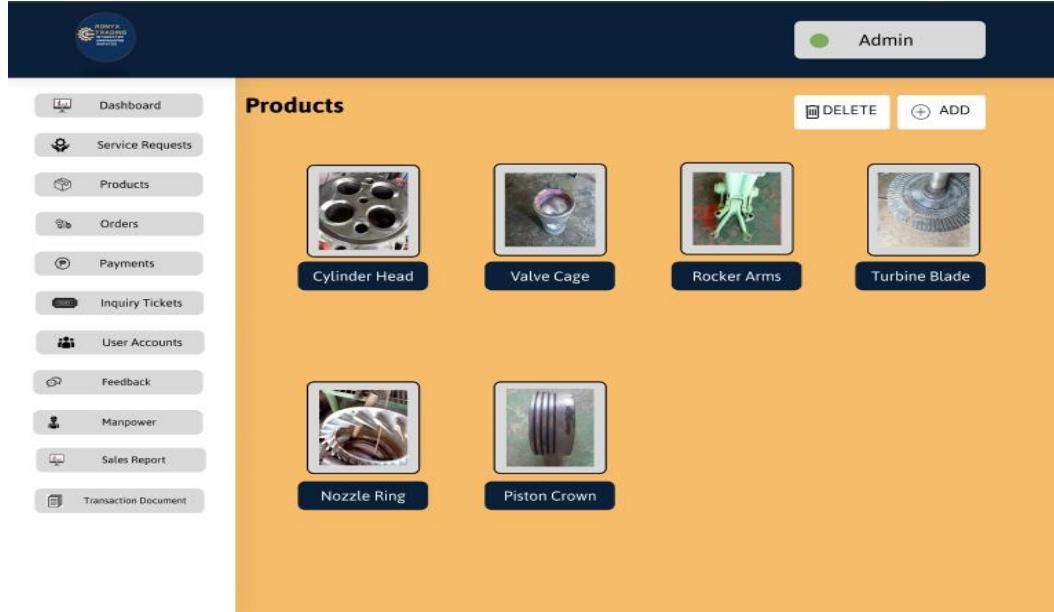


Figure 21: **Product Page**

Products page, where admin view and manage products.

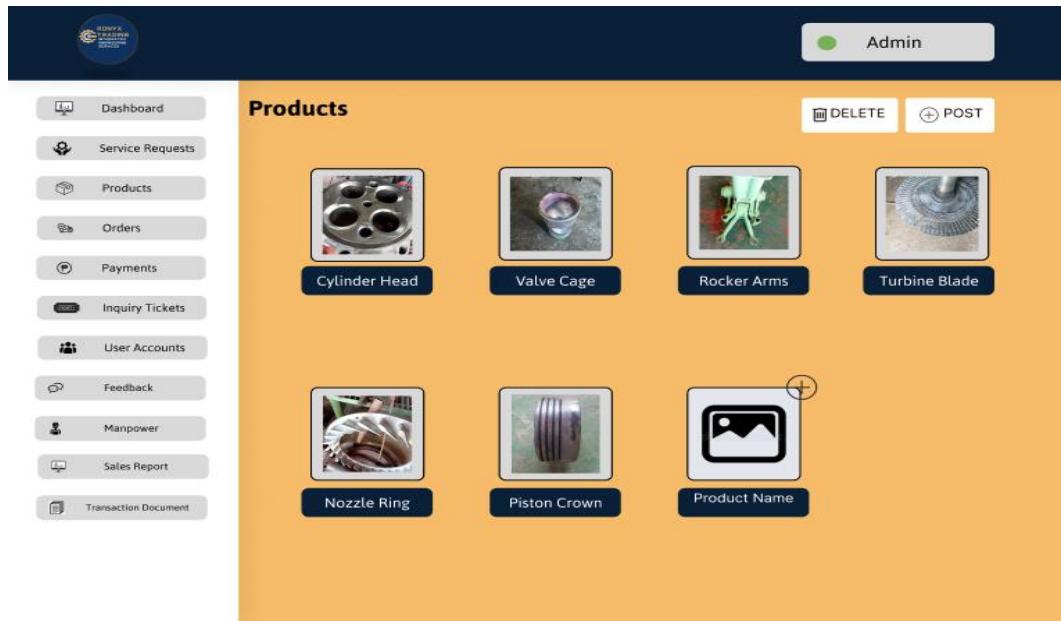


Figure 22: **Add and Delete Product**

Add and Delete Product, where admin can add, post, delete product and its details.

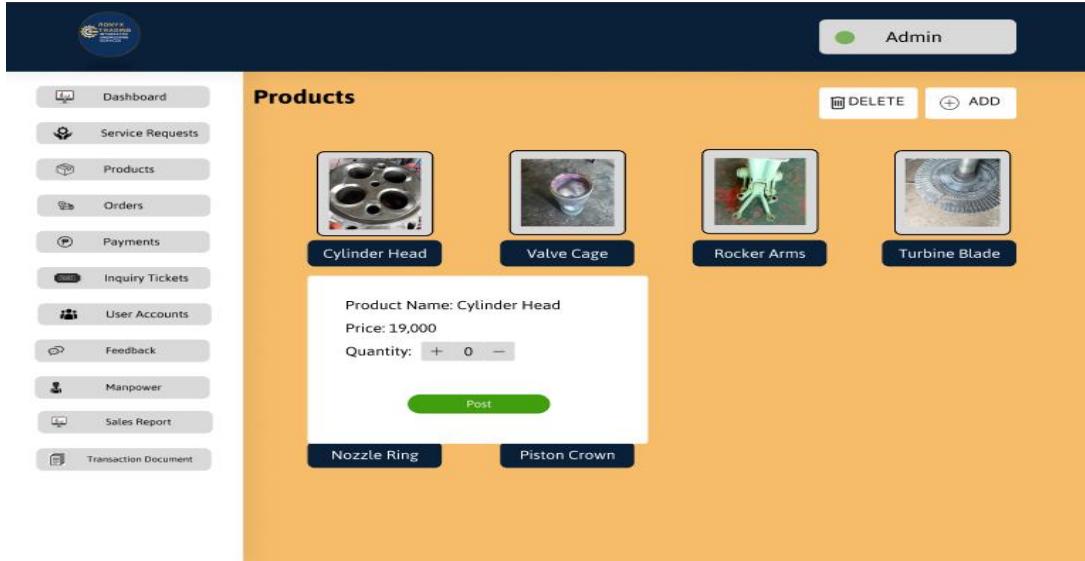


Figure 23: Update Product

Update Product, where admin can add product quantity and update product price.

Order Code	Customer Name	Product Info	Delivery Info	Amount	Status	Action
ORD-0001	John John	Exhaust Cylinder Head x2, Valve Cage x1	Address: M.J. Cuenco Ave. Corner R. Palma St., Cebu City	44,500	To be Delivered	Details

Figure 24: Orders Page

Orders page, where admin can view order details.

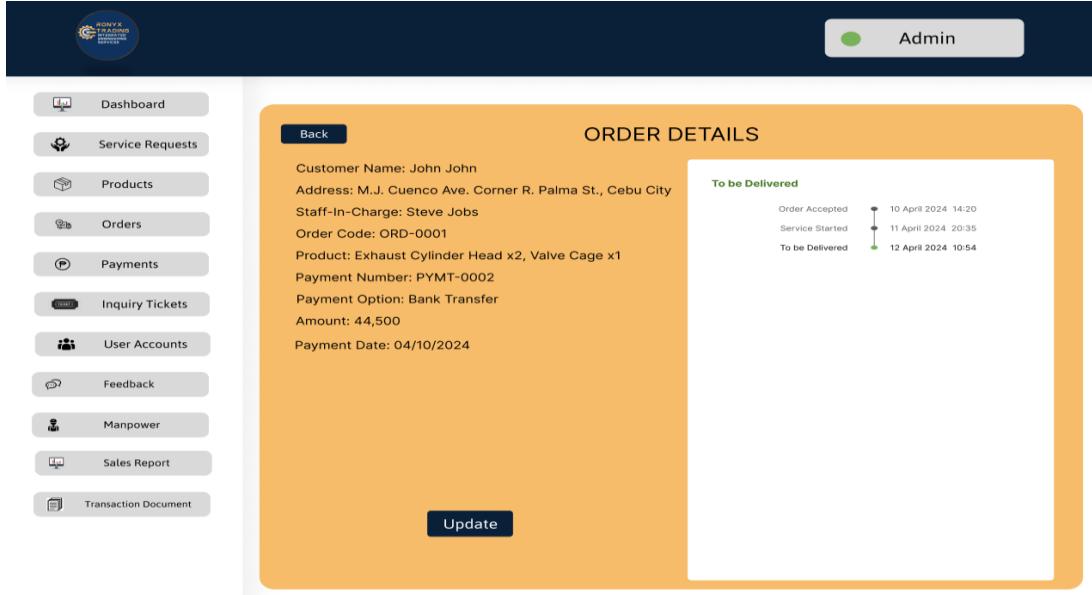


Figure 25: **Order Details Page**

When admin clicks details, it will redirect to order details page, where admin can update order details.

Pending Order Request						Back
Order Code	Customer Name	Product Info	Delivery Info	Amount	Action	
ORD-0001	John John	Exhaust Cylinder Head x2, Valve Cage x1	Address: M.J. Cuenco Ave. Corner R. Palma St., Cebu City	44,500	<button>Accept</button> <button>Decline</button> <button>Details</button>	

Previous 1 Next

Figure 26: **Pending Order Requests**

When admin clicks pending order requests, it will redirect to pending order request, where admin can accept, decline, and view additional details of order

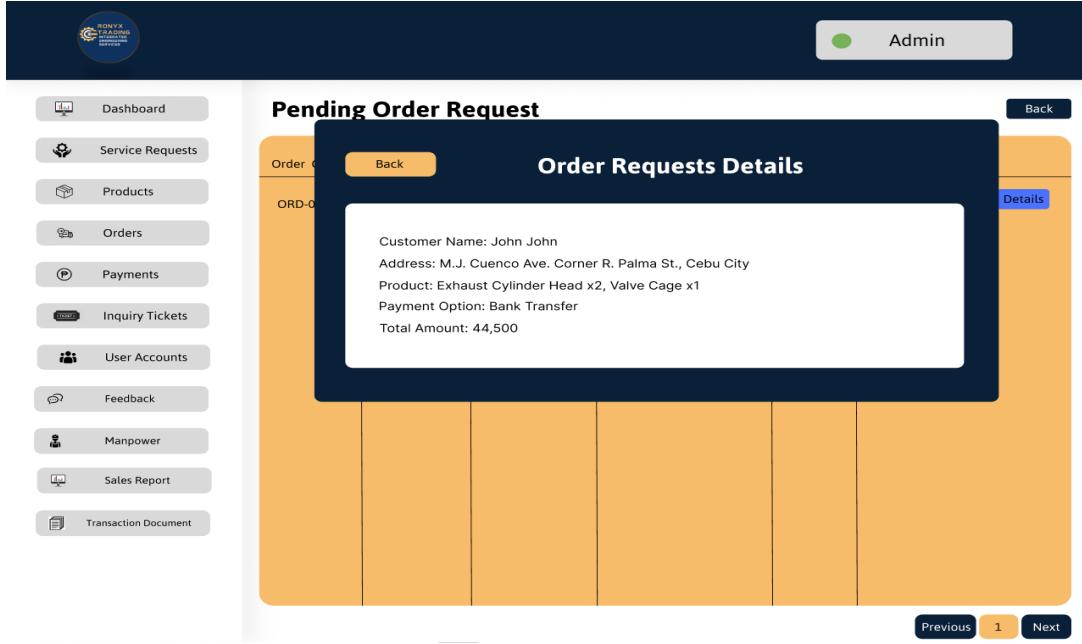


Figure 27: Order Requests Details

When admin clicks order requests details, it will redirect to order requests details, where admin can view additional details of order request.

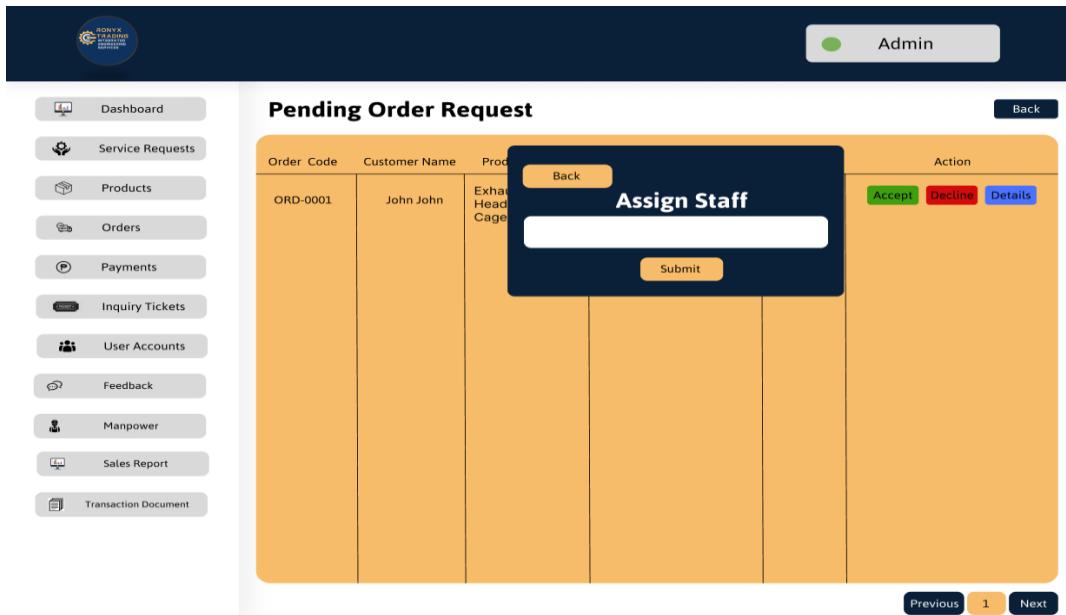


Figure 28: Assign Staff

When admin clicks accept, it will redirect to assign staff, where admin can assign staff to what branch the available product is.

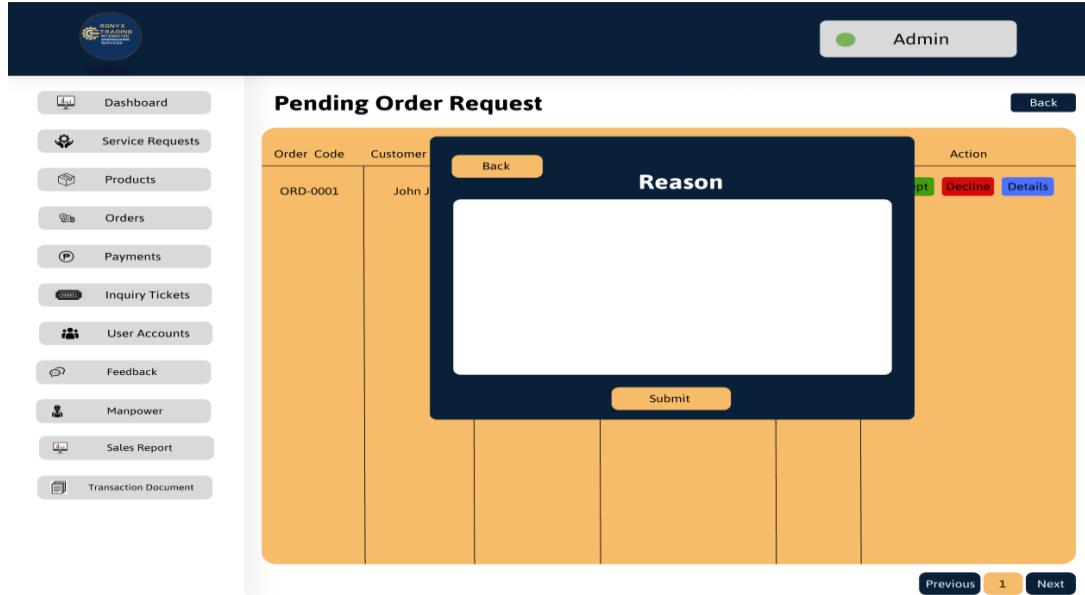


Figure 29: Decline Reason

When admin clicks decline, it will redirect to decline reason, where admin can state the reason of the declined order and give suggestions.

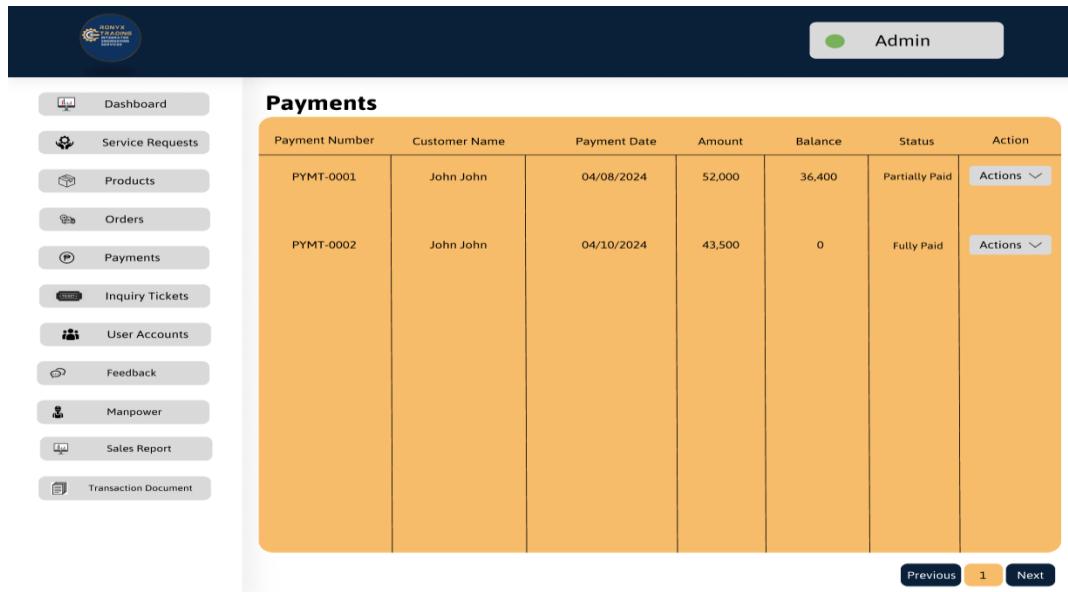


Figure 30: Payment Page

Payment Page, where admin can view payment details and download receipt.

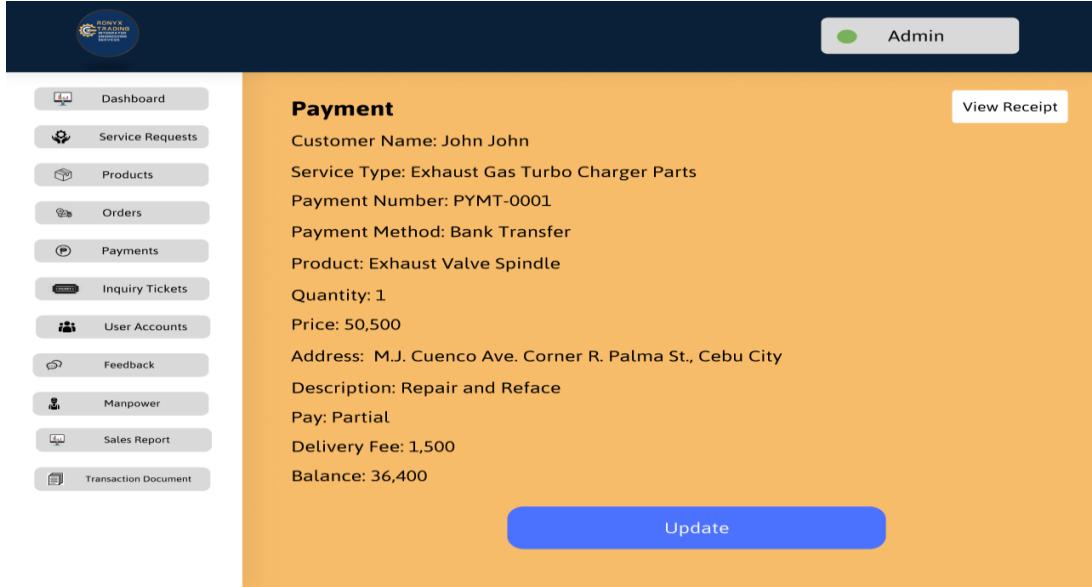


Figure 31: **Payment Details Page**

When admin clicks details, it will redirect to payment details page, where admin can update payment details and view receipt.

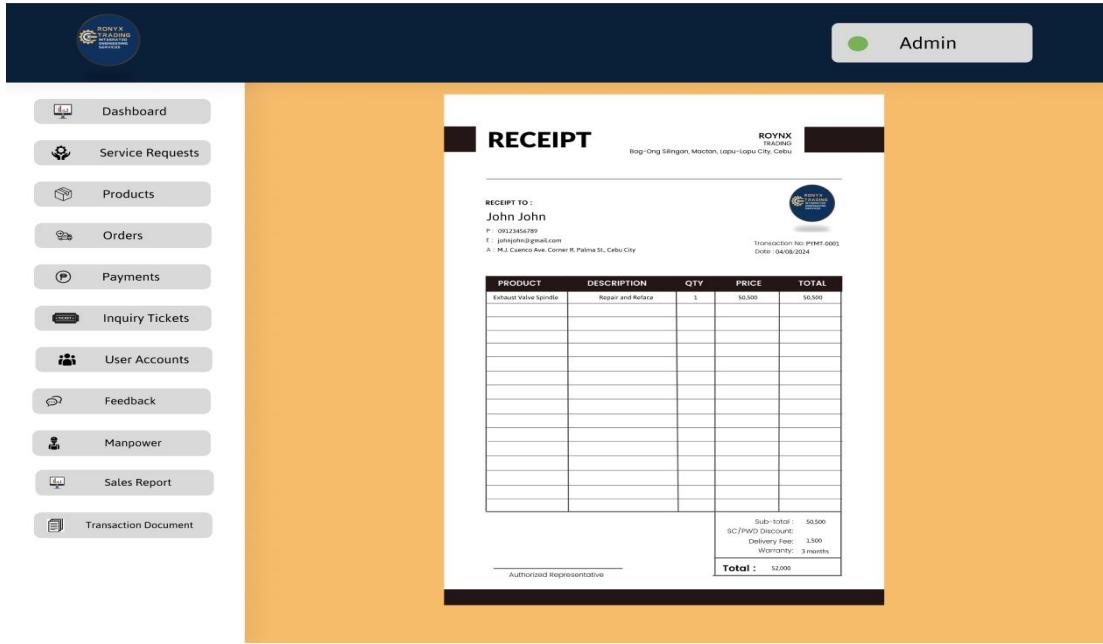


Figure 32: **Payment Details-Receipt Page**

When admin clicks view receipt, it will redirect to payment details-receipt page, where admin can view receipt details.

The screenshot shows a web-based application interface for managing tickets. At the top, there is a dark header bar with the Ronyx Trading logo on the left and an 'Admin' status indicator on the right. Below the header is a sidebar on the left containing ten menu items with corresponding icons: Dashboard, Service Requests, Products, Orders, Payments, Inquiry Tickets (which is the active page), User Accounts, Feedback, Manpower, Sales Report, and Transaction Document. The main content area is titled 'Inquiry Ticket' and displays a single ticket entry in a table format. The table has columns for Ticket Number, Customer Name, Title, Description, Date Issued, Status, and Action. The data in the table is as follows:

Ticket Number	Customer Name	Title	Description	Date Issued	Status	Action
TKCT-0001	John John	Delay	I didn't receive the item yet.	04/20/2024	Being Processed	<button>Done</button>

At the bottom of the main content area, there are navigation buttons labeled 'Previous', '1', and 'Next'.

Figure 33: **Inquiry Ticket Page**

Inquiry Ticket Page, where admin can view ticket details.

The screenshot shows a web-based application interface for managing feedback. At the top, there is a dark header bar with the Ronyx Trading logo on the left and an 'Admin' status indicator on the right. Below the header is a sidebar on the left containing ten menu items with corresponding icons: Dashboard, Service Requests, Products, Orders, Payments, Inquiry Tickets (which is the active page), User Accounts, Feedback (which is the active page), Manpower, Sales Report, and Transaction Document. The main content area is titled 'Feedbacks' and displays a single feedback entry in a table format. The table has columns for Feedback Number, Customer Name, Transaction Type, Description, and Feedback Date. The data in the table is as follows:

Feedback Number	Customer Name	Transaction Type	Description	Feedback Date
0001	John John	Service	Fast Service	04/19/2024

At the bottom of the main content area, there are navigation buttons labeled 'Previous', '1', and 'Next'.

Figure 34: **Feedbacks Page**

Feedbacks Page, where admin view and remove feedback details.

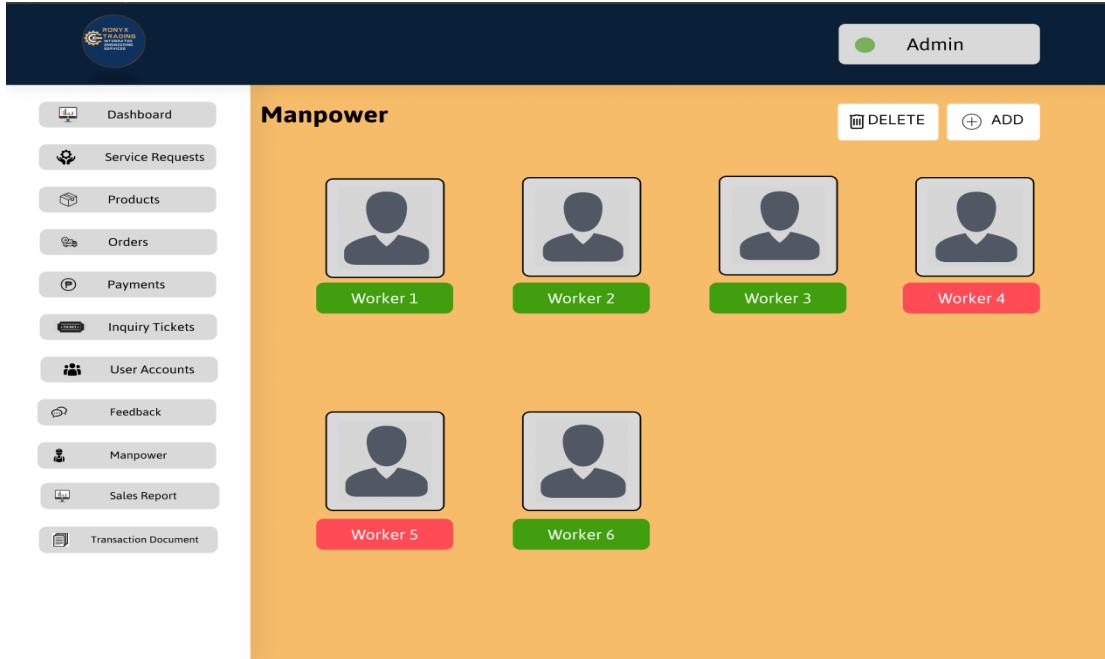


Figure 35: **Manpower Page**

Manpower Page, where admin can view manpower details

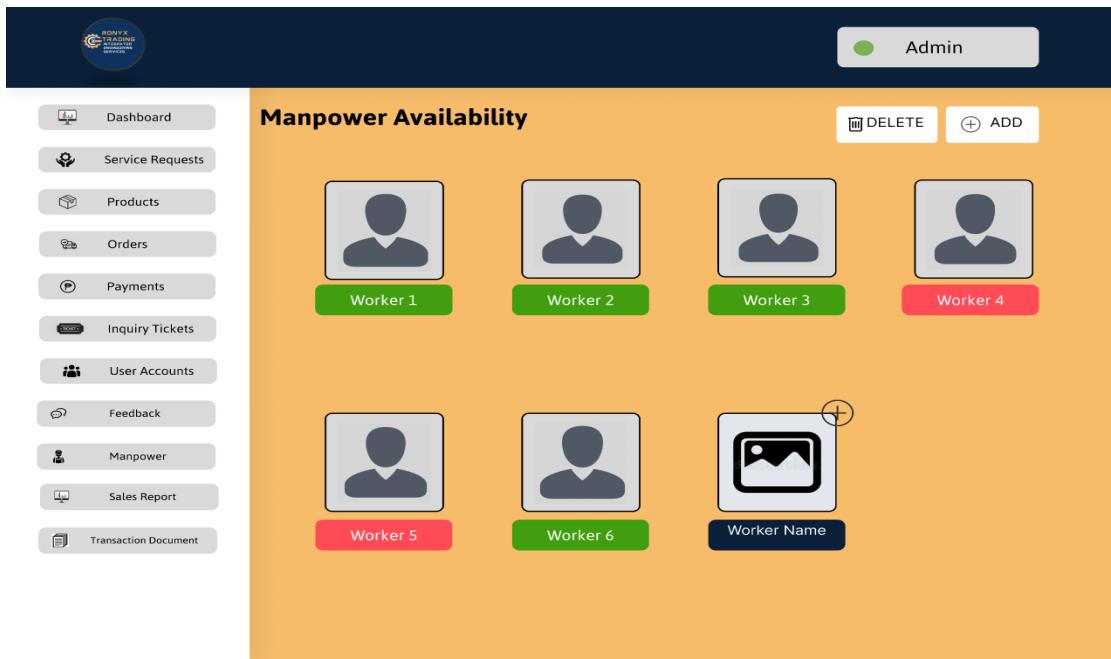


Figure 36: **Update Manpower**

Update Manpower, where admin can delete and add manpower, and update manpower details.



Figure 37: Sales Report Page

Sales Report Page, where admin can manage company sales report.

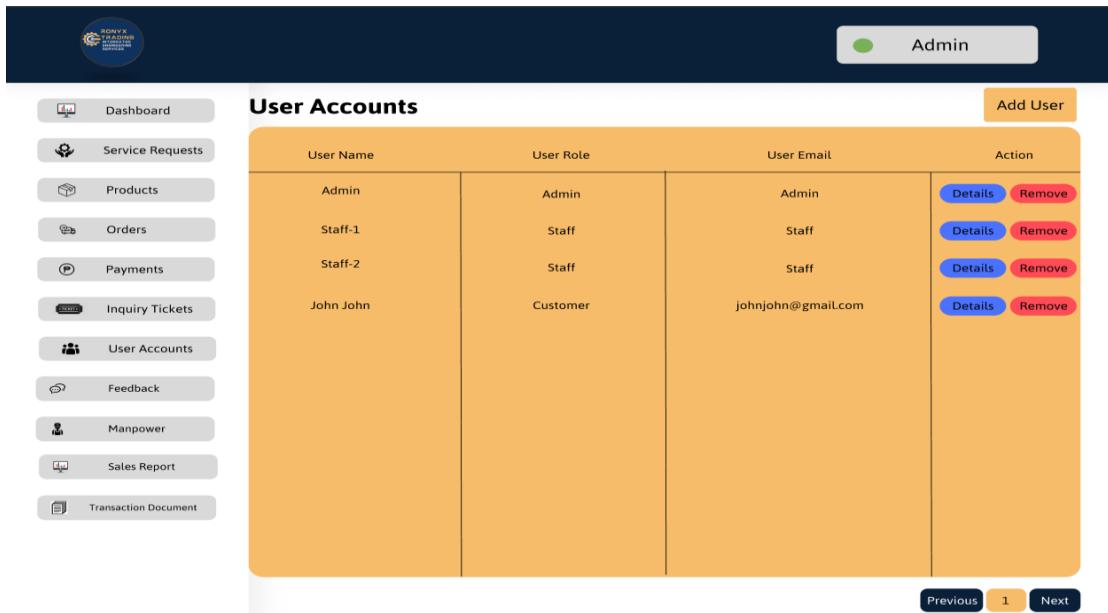


Figure 38: User Accounts Page

User Accounts Page, where admin can view, update user details and add and remove user.

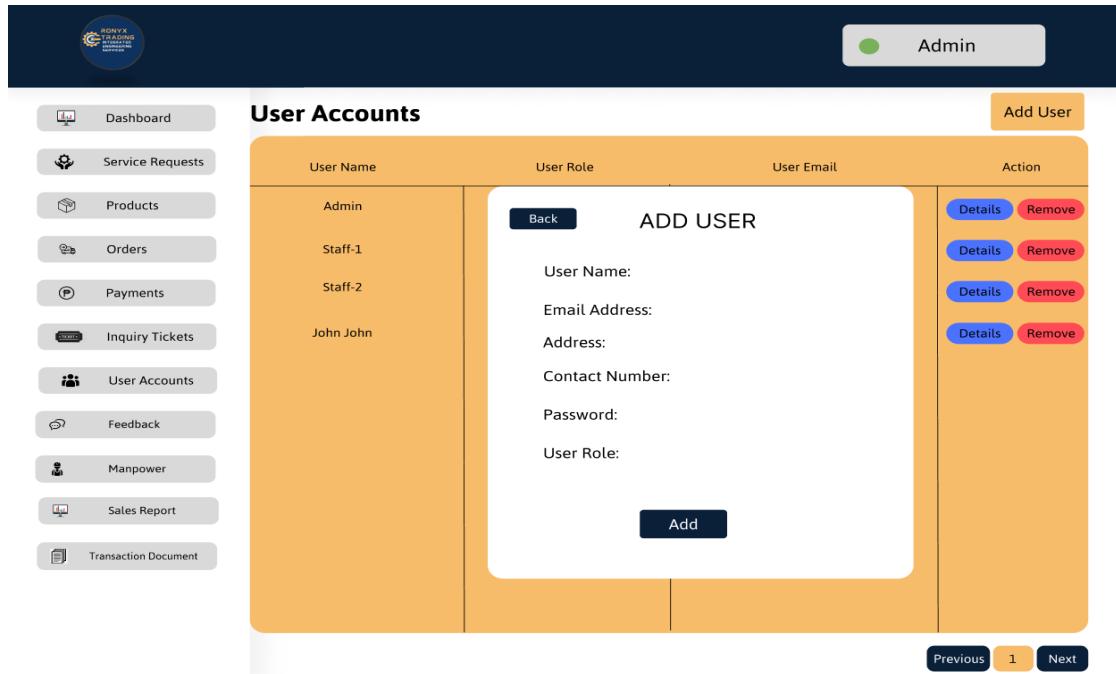


Figure 39: Add User

Add User, where admin can add user.

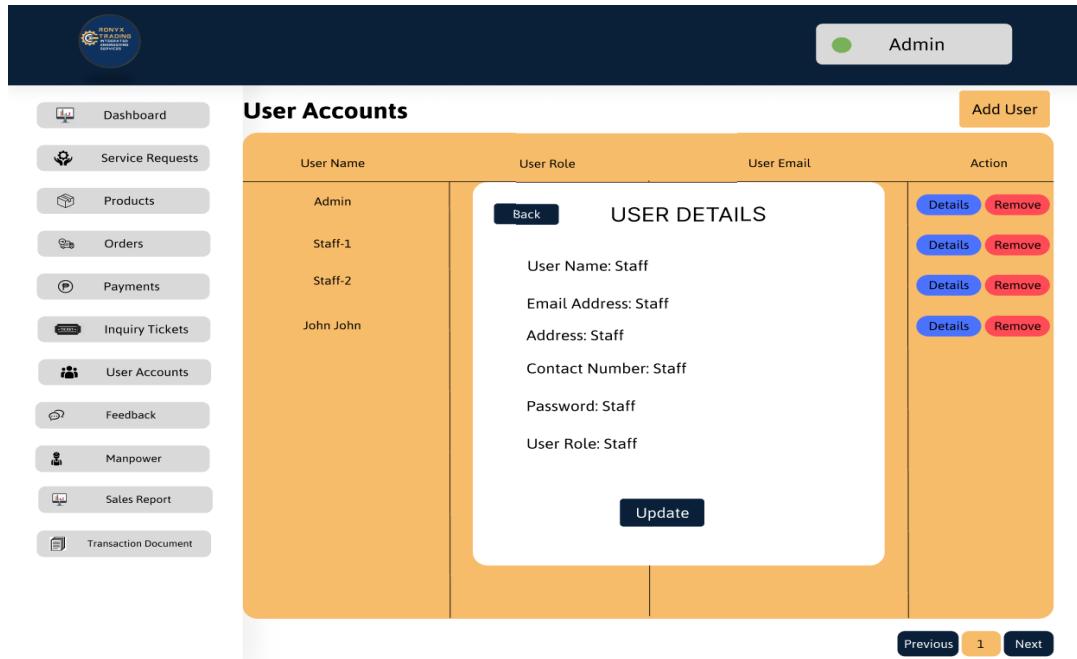


Figure 40: User Details

User Details, where admin can view user details.

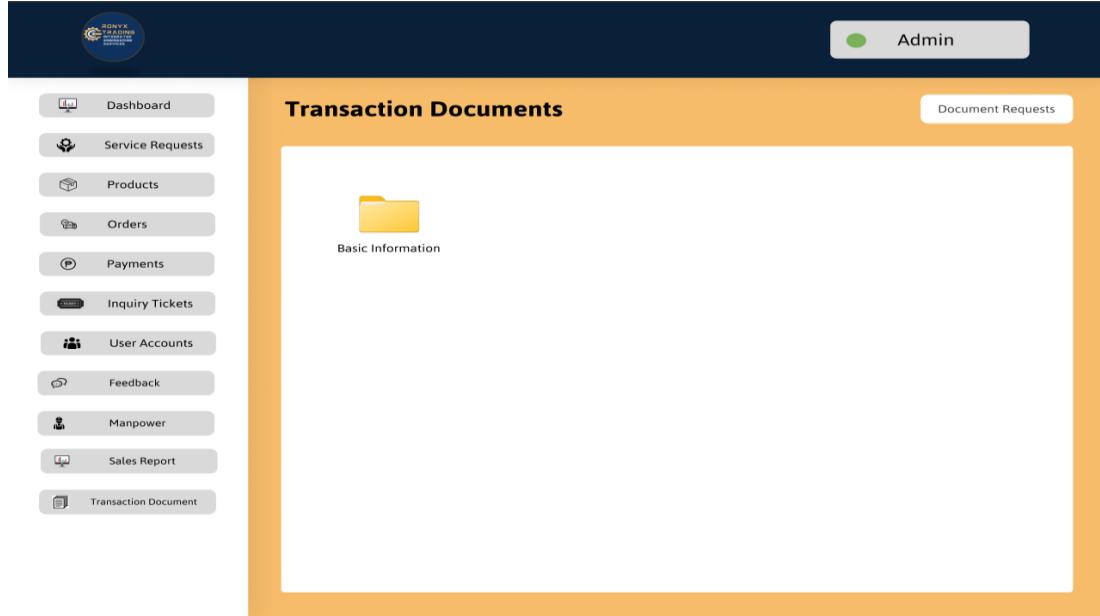


Figure 41: **Transaction Document Page**

Transaction Document Page, where admin can view upload, delete, share, copy and paste documents.

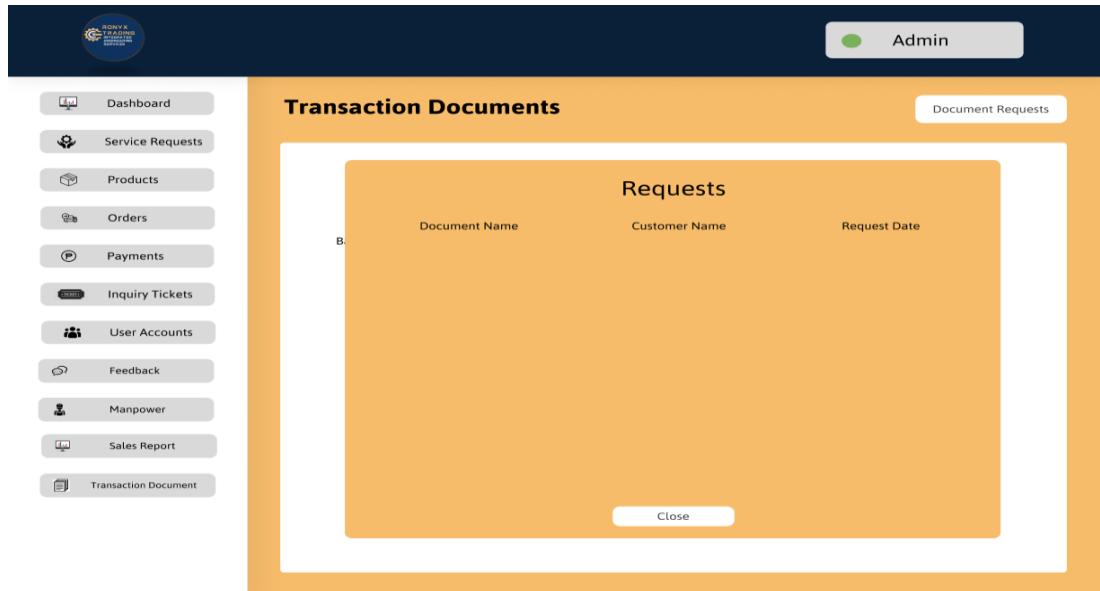


Figure 42: **Document Requests**

When admin clicks document requests, it will redirect to document requests, where admin can view request details.

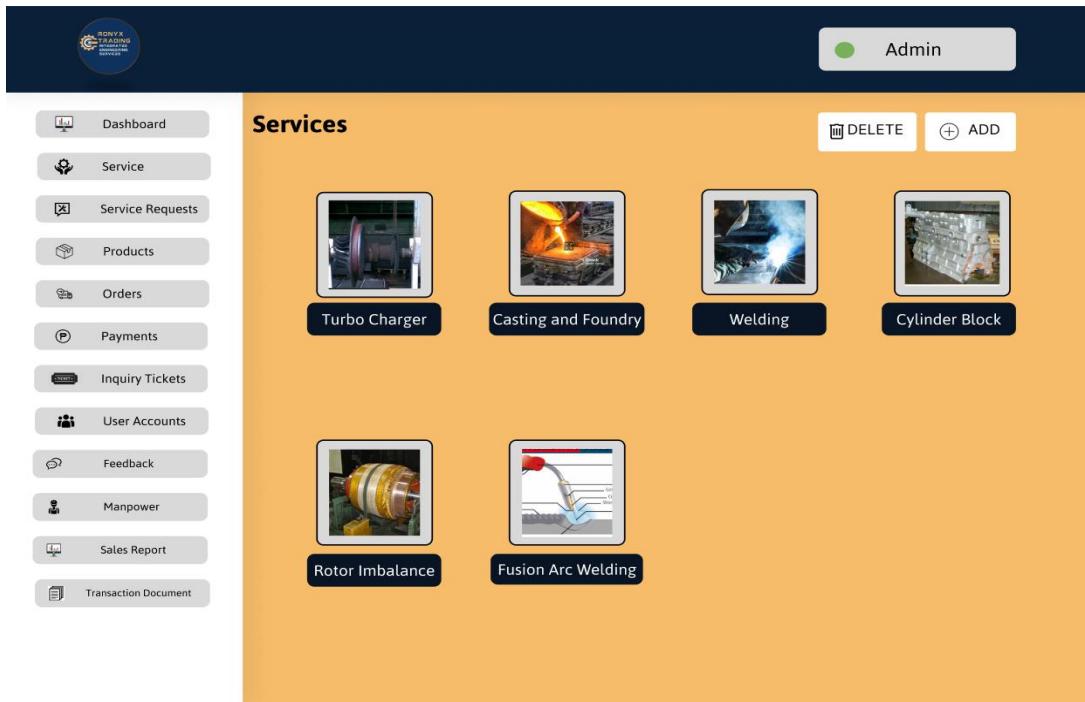


Figure 43: **Services Page**

Services Page, where admin can view services and manage services.

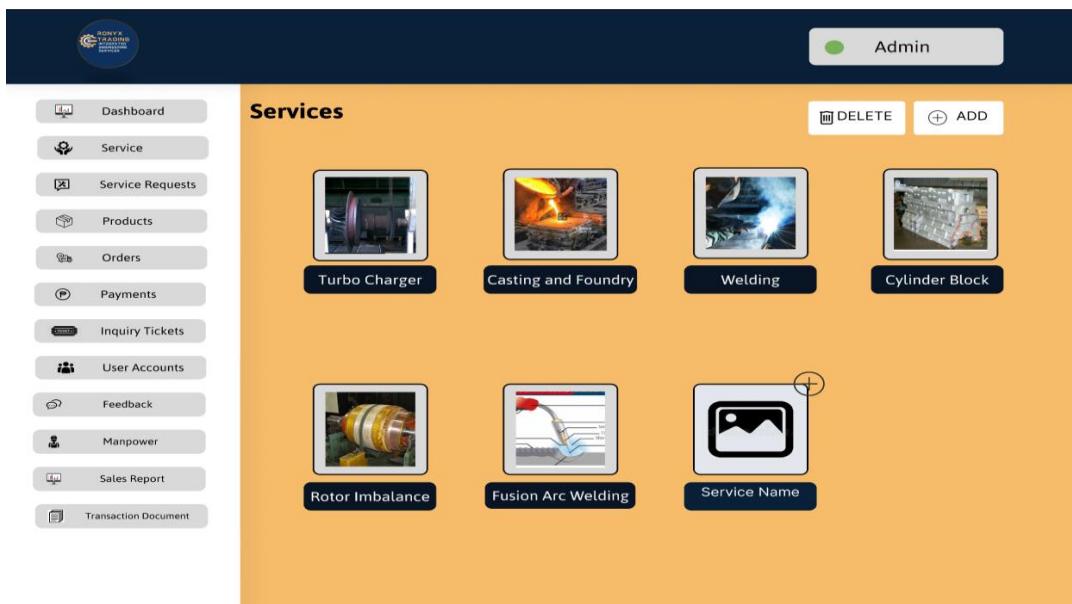


Figure 44: **Update Services**

Update Services, where admin can delete and add manpower, and update service details.

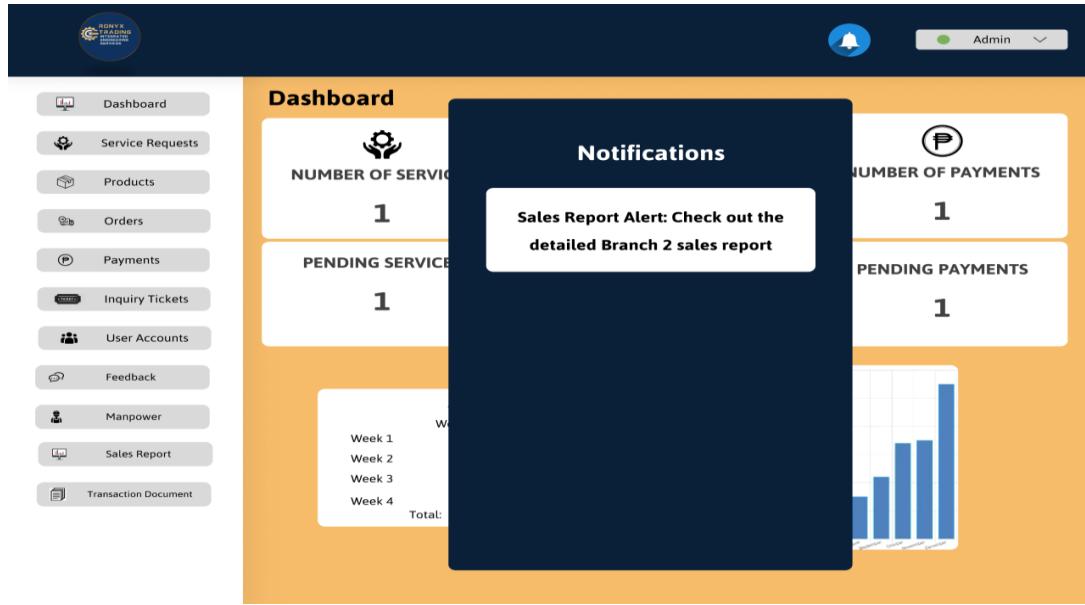


Figure 45: Notifications

Notifications, where the admin can view the updates of the transactions and other activities.

Staff

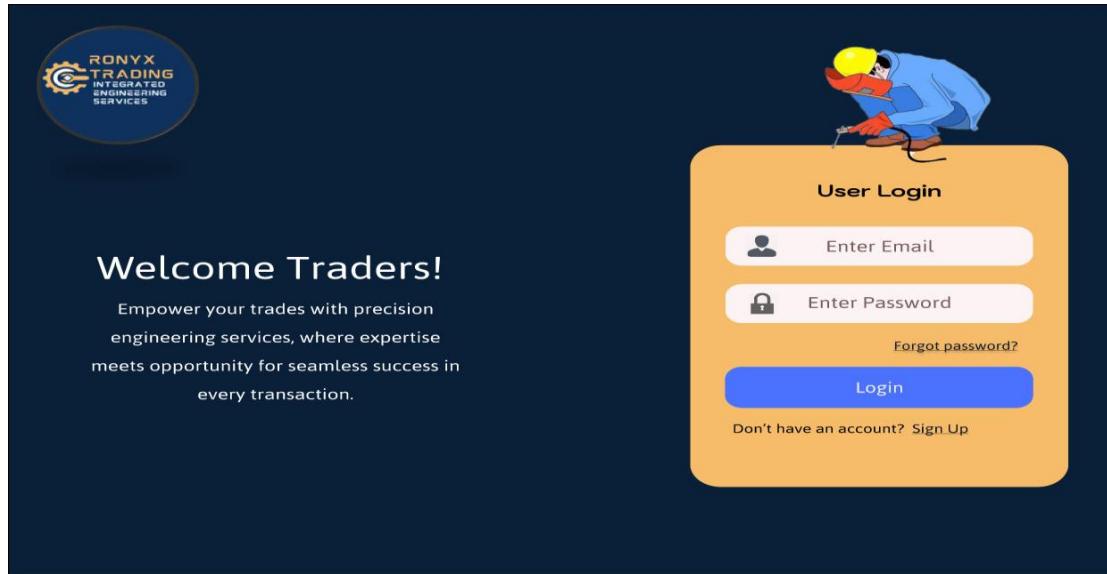


Figure 46: Staff Login

This is where staff log in.

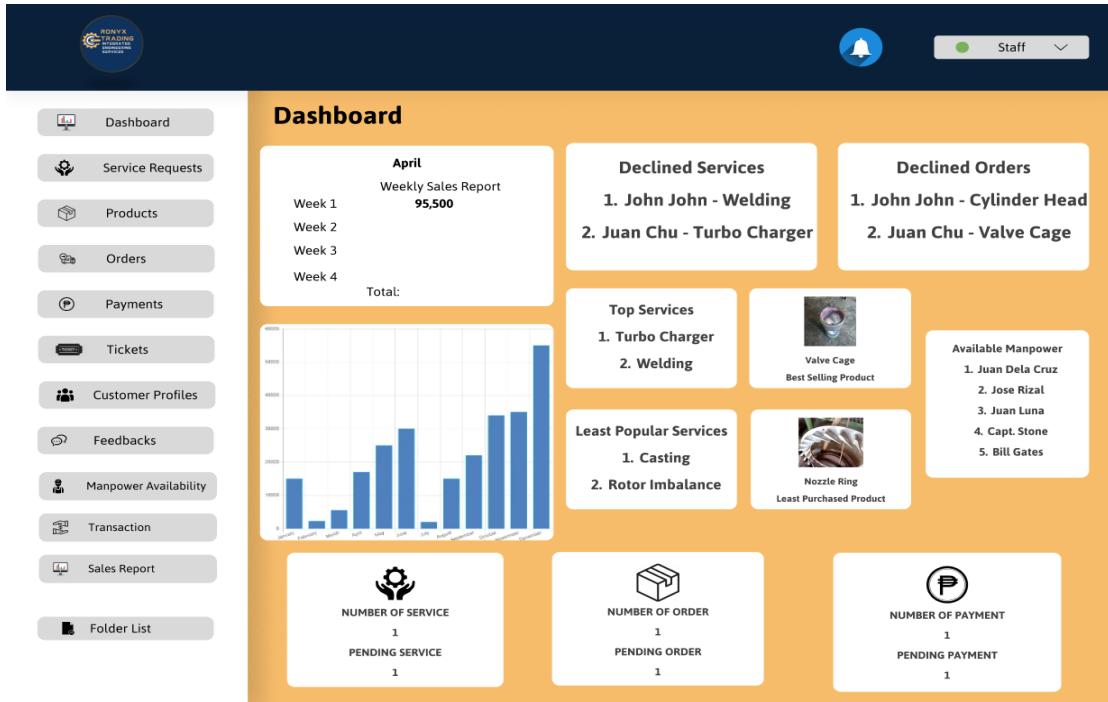


Figure 47: **Dashboard Page**

When staff logs in, it will redirect to dashboard page.

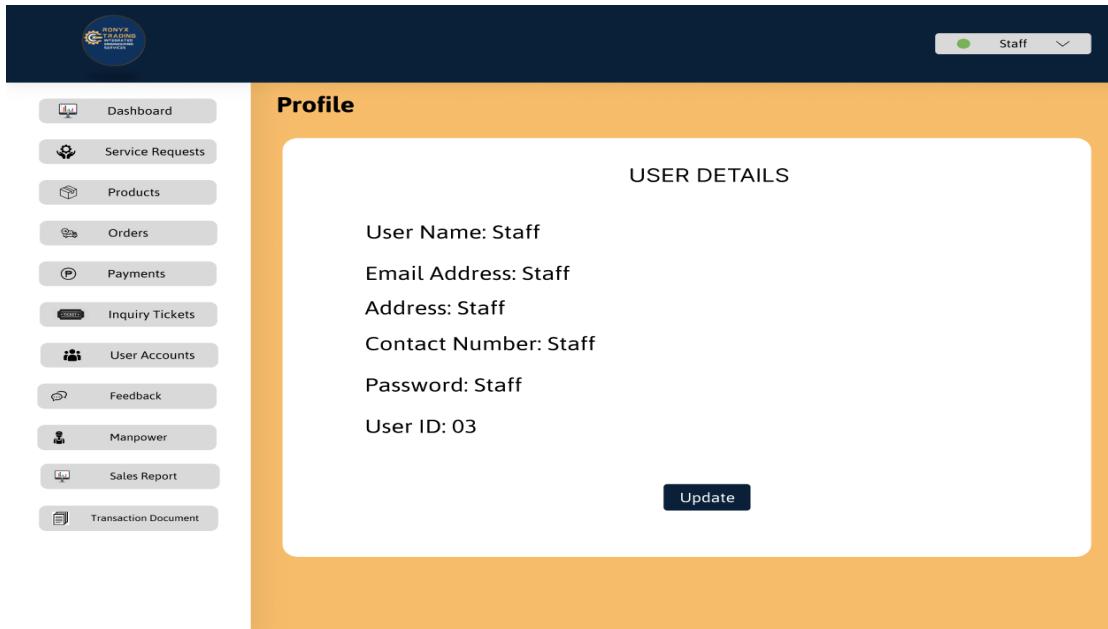


Figure 48: **Staff Profile Page**

Profile page, where staff can update its details except password.

The screenshot shows the 'Service Requests' page for staff. At the top right, there is a 'Staff' button with a green dot. On the left, a sidebar lists various menu items: Dashboard, Service Requests (selected), Products, Orders, Payments, Inquiry Tickets, Customer Profile, Feedback, Manpower, Sales Report, and Transaction Document. The main area is titled 'Service Requests' and contains a table with one row. The table columns are: Service Code (SRVC-0001), Customer Name (John John), Service Type (Exhaust Gas Turbo Charger Parts), Product Name (Exhaust Valve Spindle), Schedule (04/09/2024), Status (In-Progress), and Action (Details). Below the table are navigation buttons: Previous, 1, and Next.

Service Code	Customer Name	Service Type	Product Name	Schedule	Status	Action
SRVC-0001	John John	Exhaust Gas Turbo Charger Parts	Exhaust Valve Spindle	04/09/2024	In-Progress	Details

Figure 49: Staff Service Requests Page

Service Requests Page, where staff can view service requests details

The screenshot shows the 'Service Details' page for staff. At the top right, there is a 'Staff' button with a green dot. On the left, a sidebar lists various menu items: Dashboard, Service Requests (selected), Products, Orders, Payments, Inquiry Tickets, Customer Profile, Feedback, Manpower, Sales Report, and Transaction Document. The main area is titled 'SERVICE DETAILS' and contains a 'Back' button. It displays customer information: Name (John John), Address (M.J. Cuenco Ave. Corner R. Palma St., Cebu City), Assigned Manpower (Bill Gates), Staff-In-Charge (Steve Jobs), Service Code (SRVC-0001), Service Type (Exhaust Gas Turbo Charger Parts), Product (Exhaust Valve Spindle x1), Description (Repair and Reface), Payment Number (PYMT-0001), Payment Option (Bank Transfer), Amount (52,000), Payment Date (04/08/2024), Balance (36,400), and Service Schedule (04/09/2024). To the right, there is a 'In-Progress' section with a timeline: Service Accepted (6 April 2024 15:30), Service Started (10 April 2024 10:25), and In-Progress (10 April 2024 15:23). At the bottom is an 'Update' button.

Figure 50: Staff Service Details Page

When staff clicks details, it will redirect to staff service details page, where staff can update service details.

Request Number	Customer Name	Service Type	Product Name	Description	Action
1	John John	Exhaust Gas Turbo Charger Parts	Exhaust Valve Spindle	Repair and Reface	<button>Assign</button> <button>Details</button>

Figure 51: **Staff-Pending Service Requests**

When admin clicks pending order requests, it will redirect to staff-pending order request, where staff can assign and view additional details of service request.

Figure 52: **Service Requests Details**

When staff clicks details, it will redirect to service requests details, where staff can view service details.

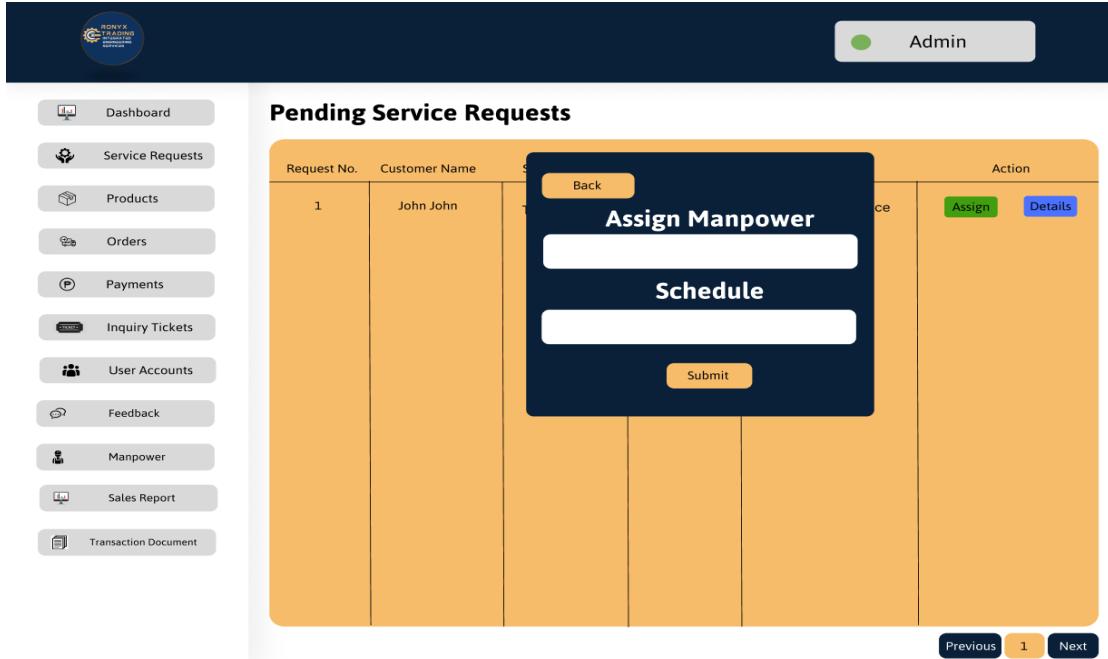


Figure 53: Assign Manpower and Schedule

When staff clicks assign, it will redirect to assign staff and schedule, where staff can assign manpower and give schedule of the service.

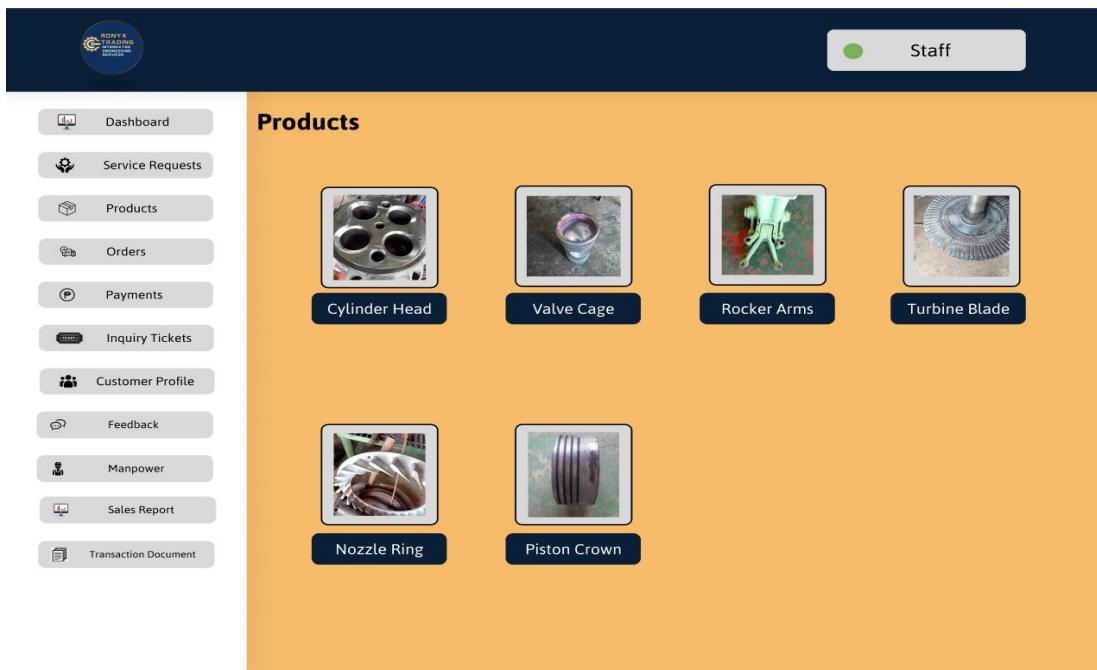


Figure 54: Staff-Product Page

Staff Products page, where staff view and manage products.

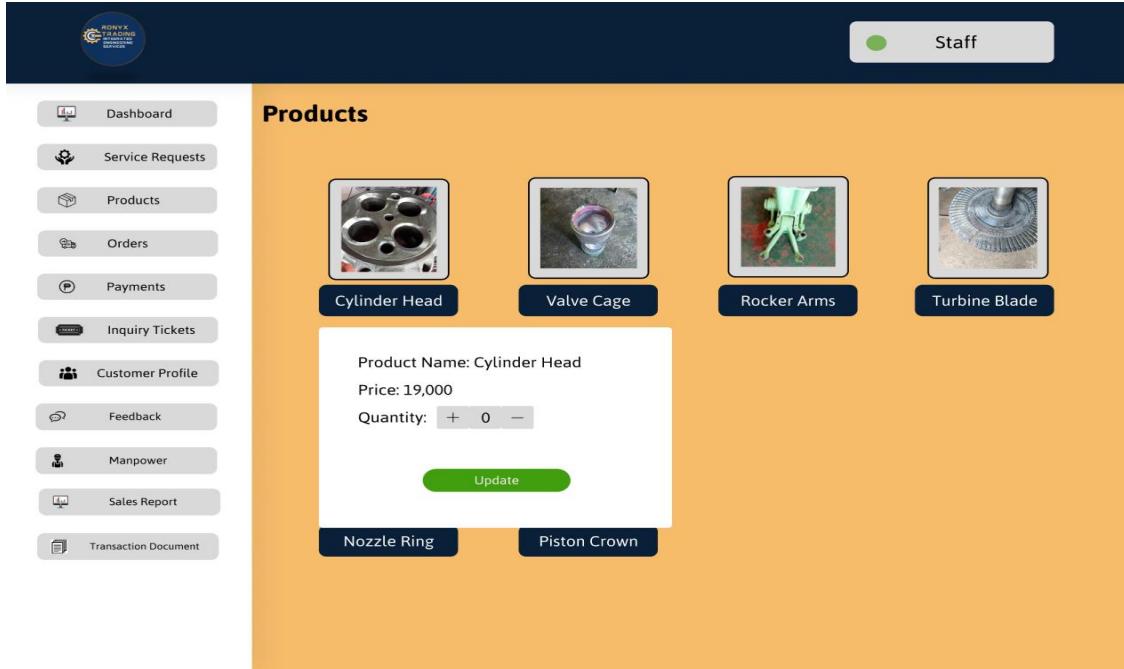


Figure 55: **Staff-Update Product**

Update Product, where staff can add product quantity and update product price.

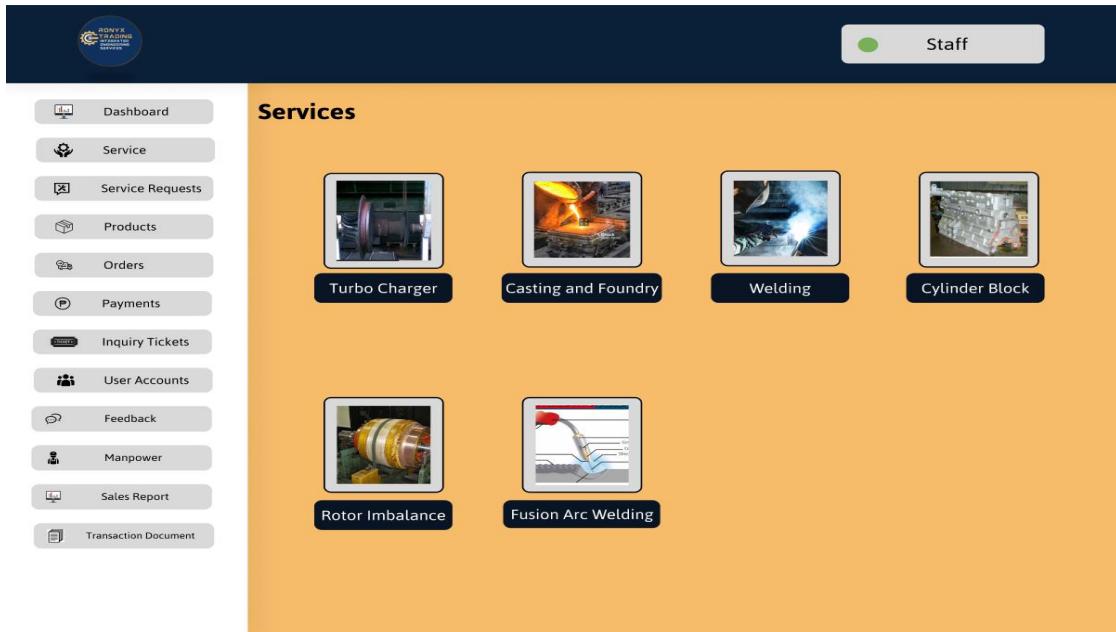


Figure 56: **Staff-Services Page**

Services Page, where staff can view services.

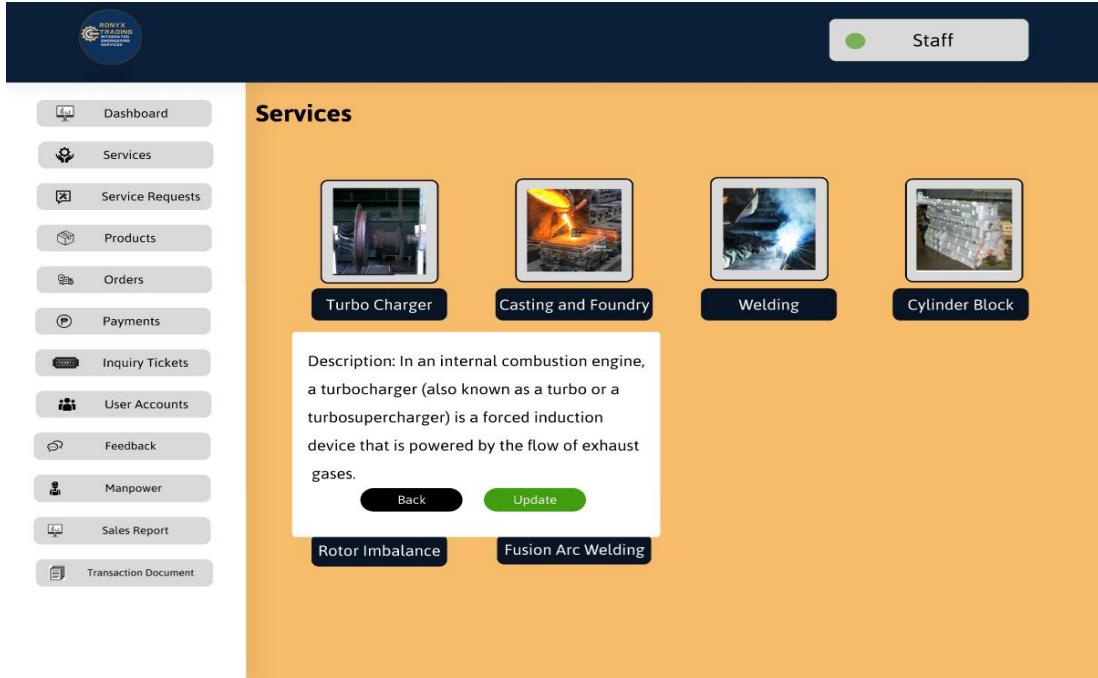


Figure 57: **Staff-Update Service Details**

Update Product, where staff can update service details.

Order Code	Customer Name	Product Info	Delivery Info	Amount	Status	Action
ORD-0001	John John	Exhaust Cylinder Head x2, Valve Cage x1	Address: M.J. Cuenco Ave, Corner R. Palma St., Cebu City	44,500	To be Delivered	Details

Figure 58: **Staff Orders Page**

Staff Orders page, where staff can view order details.

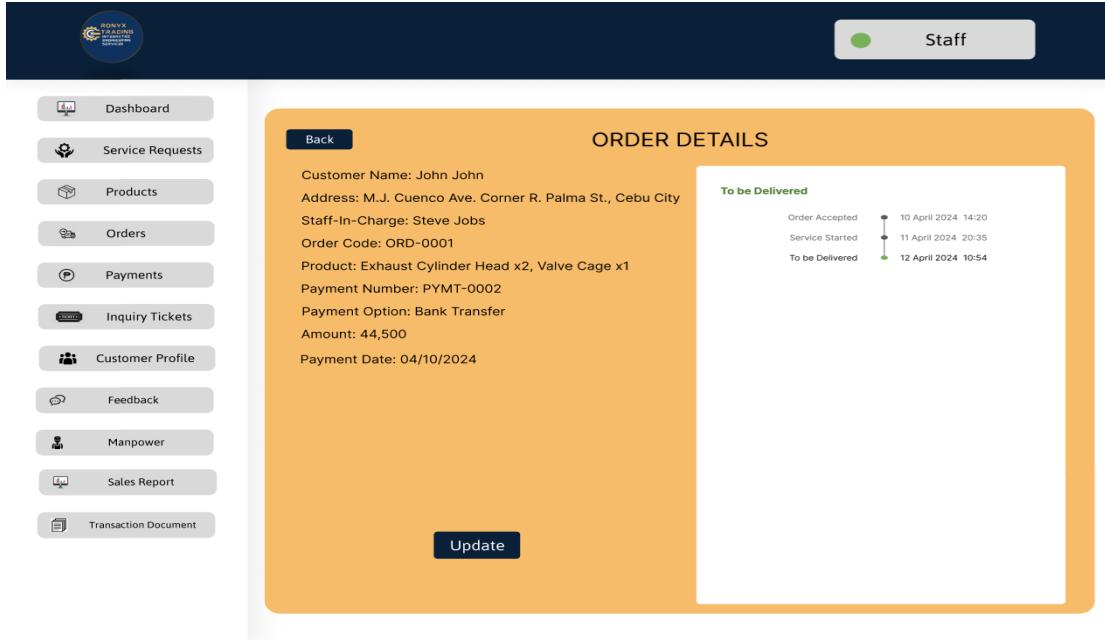


Figure 59: **Staff Order Details Page**

When staff clicks details, it will redirect to staff order details page, where staff can update order details.

Payments						
Payment Number	Customer Name	Payment Date	Amount	Balance	Status	Action
PYMT-0001	John John	04/08/2024	52,000	36,400	Partially Paid	Actions ▾
PYMT-0002	John John	04/10/2024	43,500	0	Fully Paid	Actions ▾

Previous 1 Next

Figure 60: **Staff Payment Page**

Staff Payment Page, where staff can view payment details and download receipt.

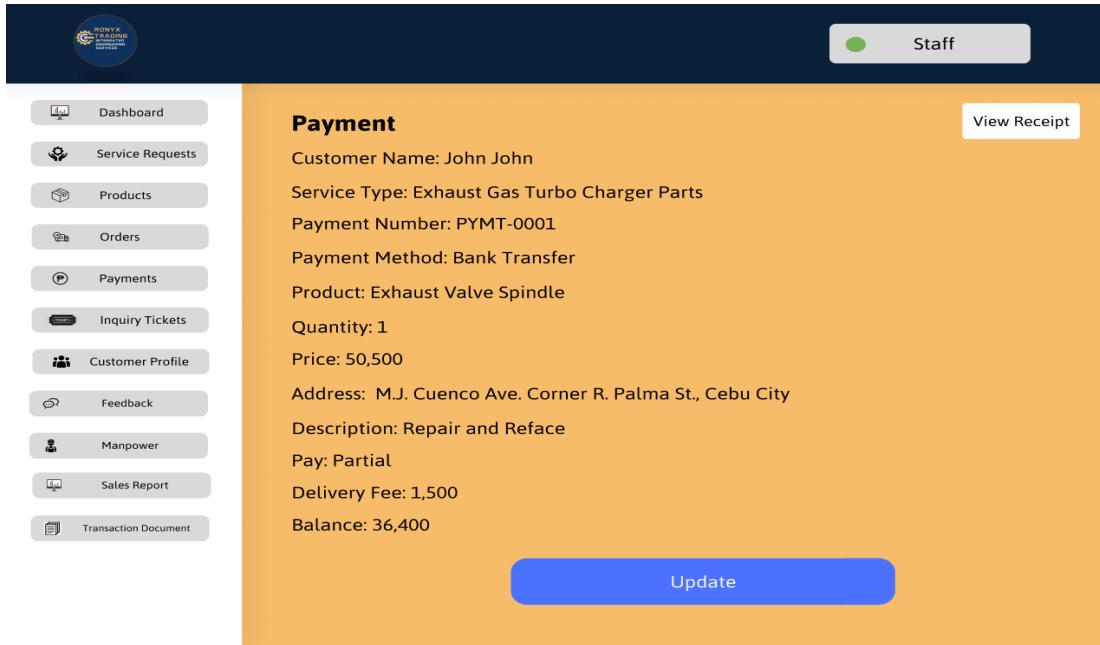


Figure 61: Staff Payment Details Page

When staff clicks details, it will redirect to staff payment details page, where staff can update payment details and view receipt.

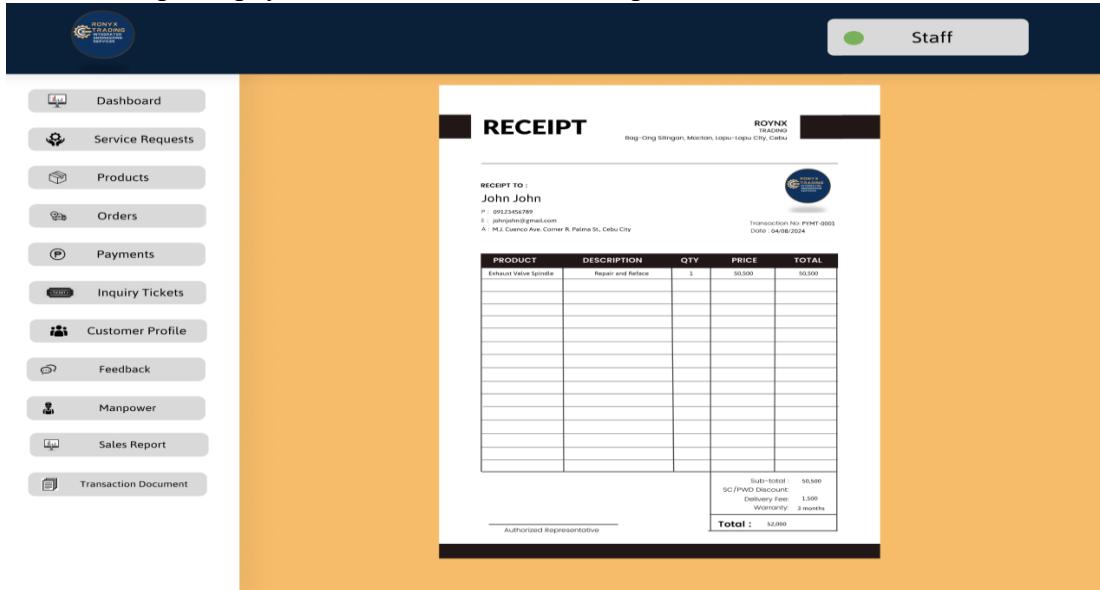


Figure 62: Staff Payment Details-Receipt Page

When staff clicks view receipt, it will redirect to staff payment details-receipt page, where staff can view receipt details.

The screenshot shows a staff interface for managing inquiry tickets. At the top right, there is a 'Staff' button with a green profile icon. On the left, a vertical sidebar lists various menu items: Dashboard, Service Requests, Products, Orders, Payments, Inquiry Tickets (which is the active tab), Customer Profile, Feedback, Manpower, Sales Report, and Transaction Document. The main content area is titled 'Inquiry Ticket' and displays a single row in a table:

Ticket Number	Customer Name	Title	Description	Date Issued	Status	Action
TCKT-0001	John John	Delay	I didn't receive the item yet.	04/20/2024	Being Processed	<button>Done</button>

At the bottom right of the table are navigation buttons: 'Previous', '1' (highlighted in orange), and 'Next'.

Figure 63: **Staff Inquiry Ticket Page**

Staff Inquiry Ticket Page, where staff can view ticket details.

The screenshot shows a staff interface for managing customer feedback. At the top right, there is a 'Staff' button with a green profile icon. On the left, a vertical sidebar lists various menu items: Dashboard, Service Requests, Products, Orders, Payments, Inquiry Tickets (which is the active tab), Customer Profile, Feedback (which is the active tab), Manpower, Sales Report, and Transaction Document. The main content area is titled 'Feedbacks' and displays a single row in a table:

Feedback Number	Customer Name	Transaction Type	Description	Feedback Date
0001	John John	Service	Fast Service	04/19/2024

At the bottom right of the table are navigation buttons: 'Previous', '1' (highlighted in orange), and 'Next'.

Figure 64: **Staff Feedbacks Page**

Staff Feedbacks Page, where staff view feedback details.

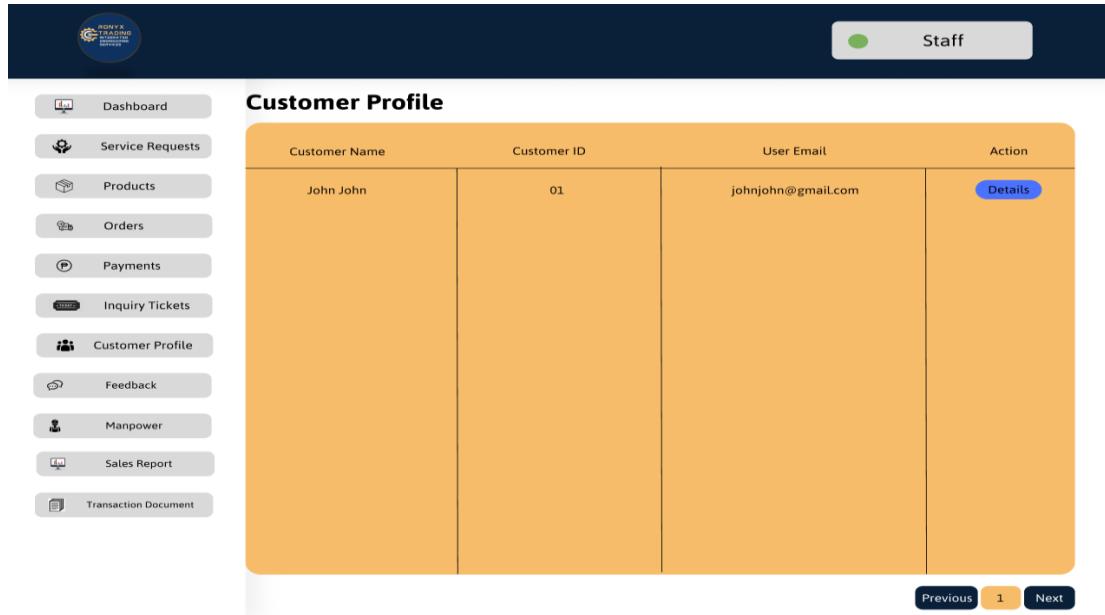


Figure 65: **Staff Customer Profile Page**

Staff Customer Profile Page, where staff can view, update customer details.

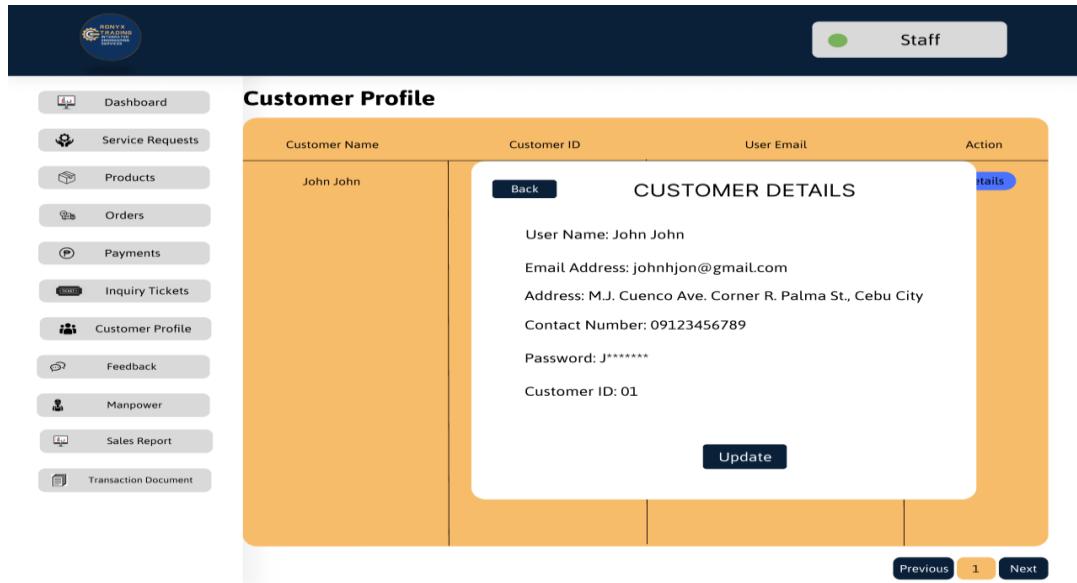


Figure 66: **Staff Customer Details**

When staff clicks details, it will redirect to staff customer details, where staff can view, update customer details.

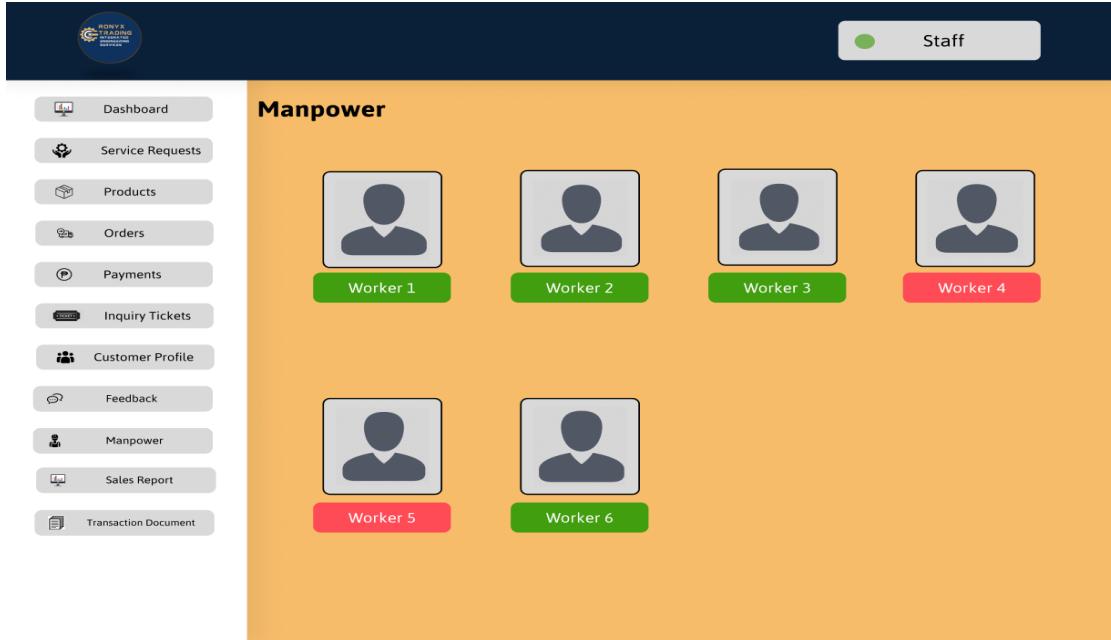


Figure 67: **Staff Manpower Page**

Staff Manpower Page, where staff can view and update manpower details, and update manpower availability



Figure 68: **Staff Branch Sales Report**

Staff Branch Sales Report, where the staff can generate sales report and view its branch report.

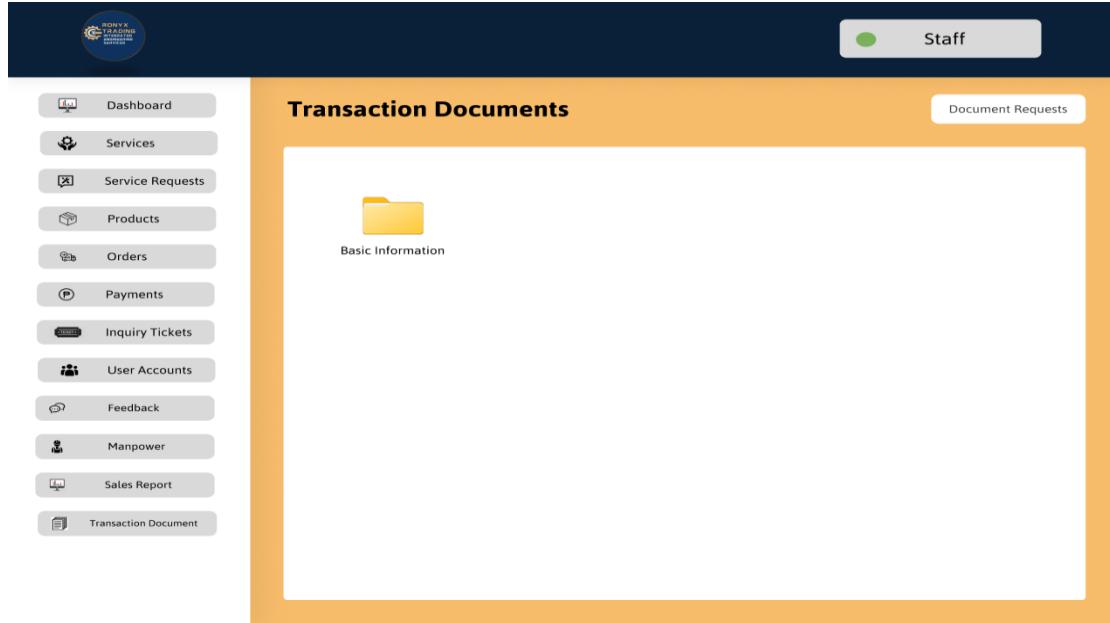


Figure 69: **Staff Transaction Documents Page**

Staff Transaction Documents Page, where staff can view upload, delete, share, copy and paste documents.

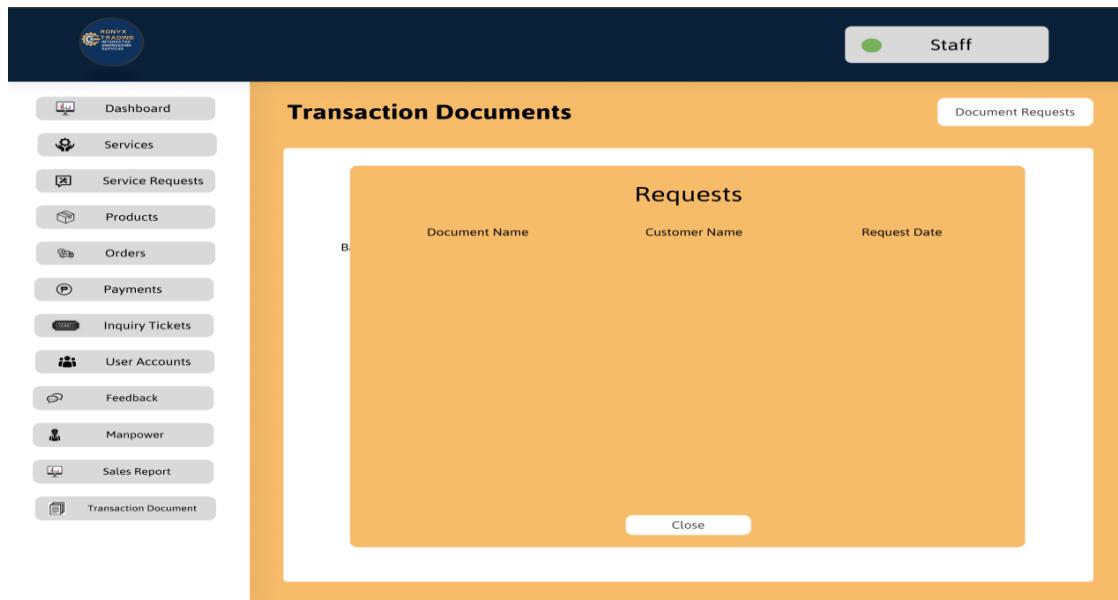


Figure 70: **Staff Document Requests**

When staff clicks document requests, it will redirect to staff document requests, where admin can view request details.

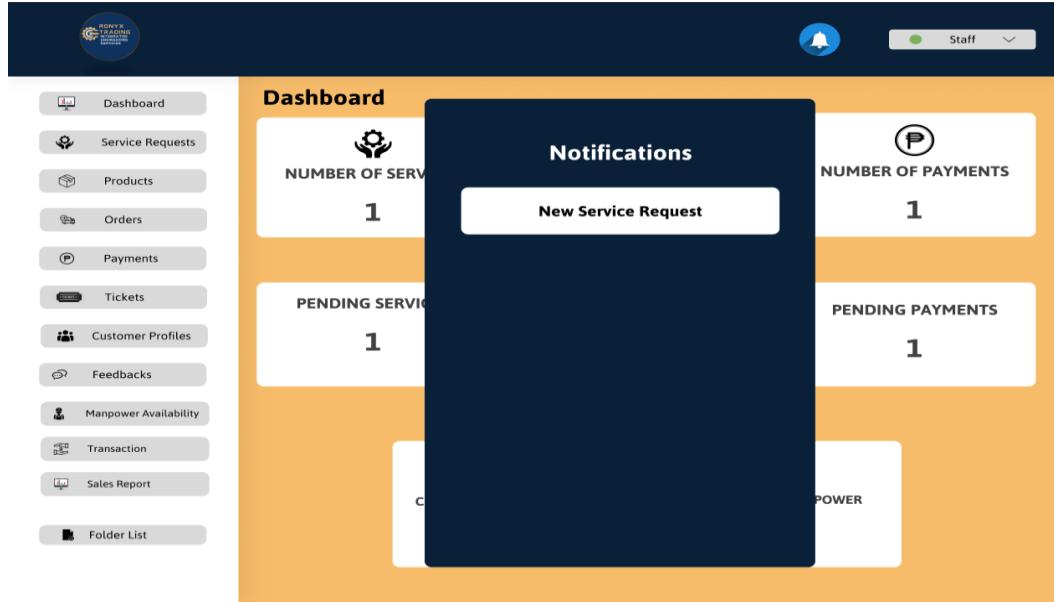


Figure 71: **Staff Notifications**

Staff Notifications, where the staff can view the updates of the transactions and other activities.

Customer

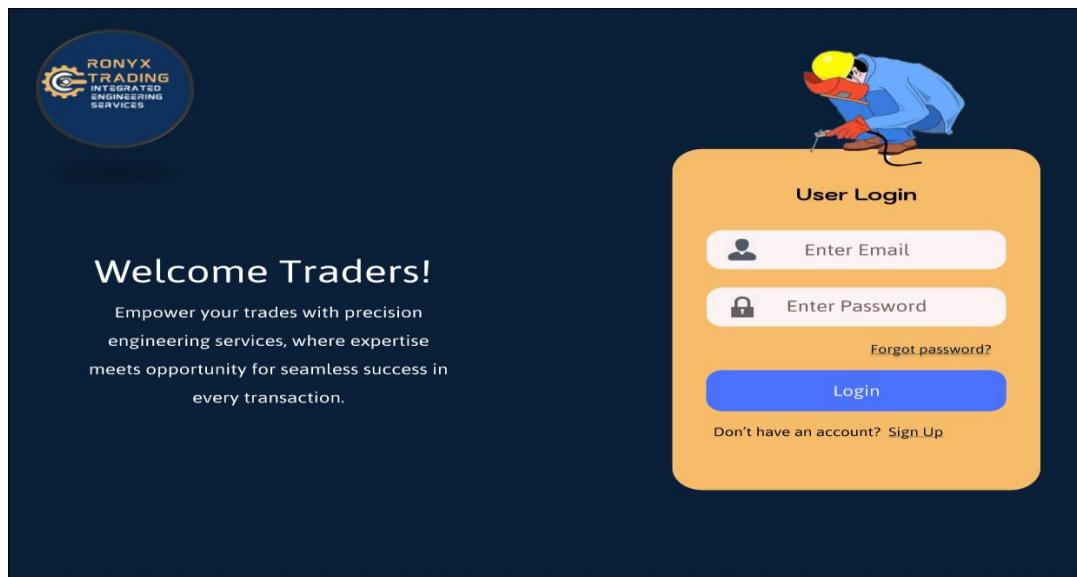


Figure 72: **Customer Login**

This is where customer log in.

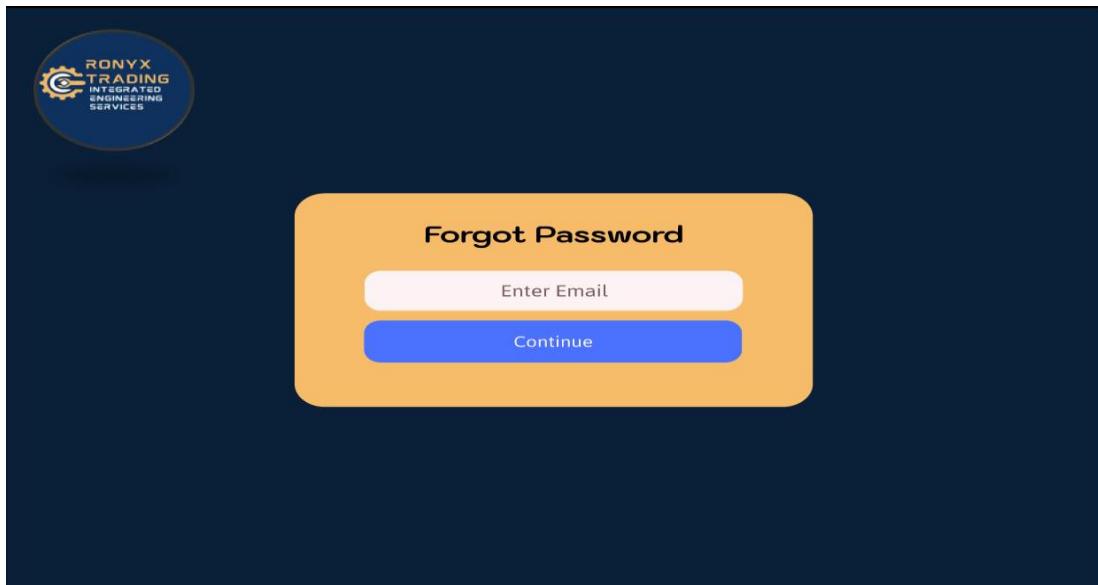


Figure 73: **Forgot Password**

This is where customer enter its email for forgot password.

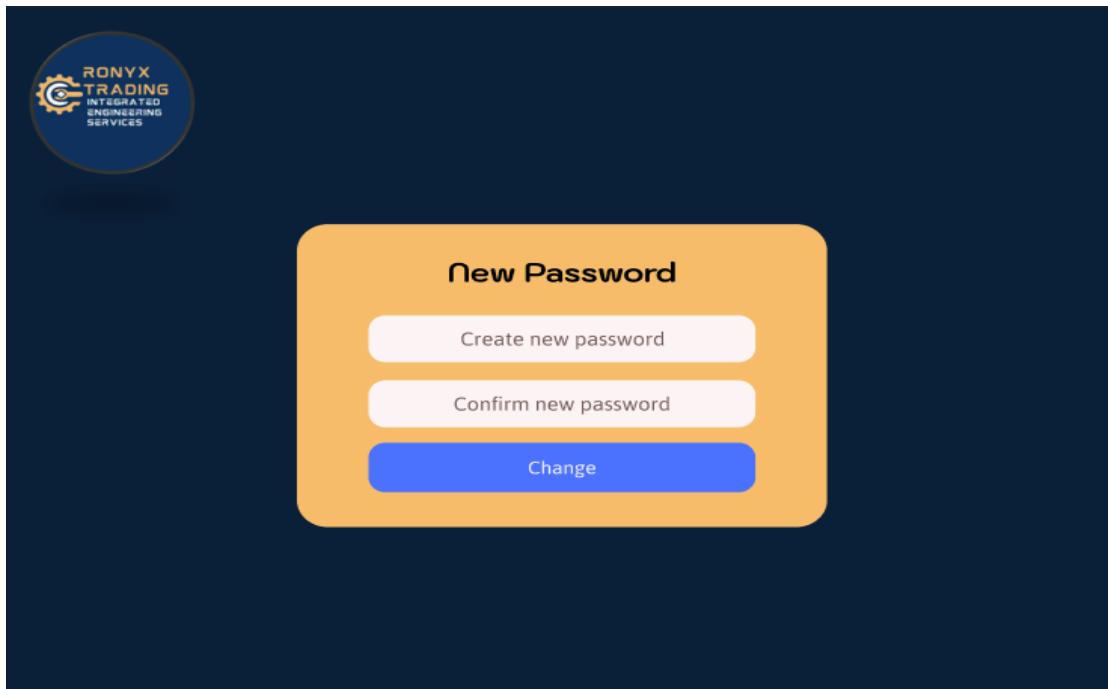


Figure 74: **Create New Password**

This is where customer create new password.

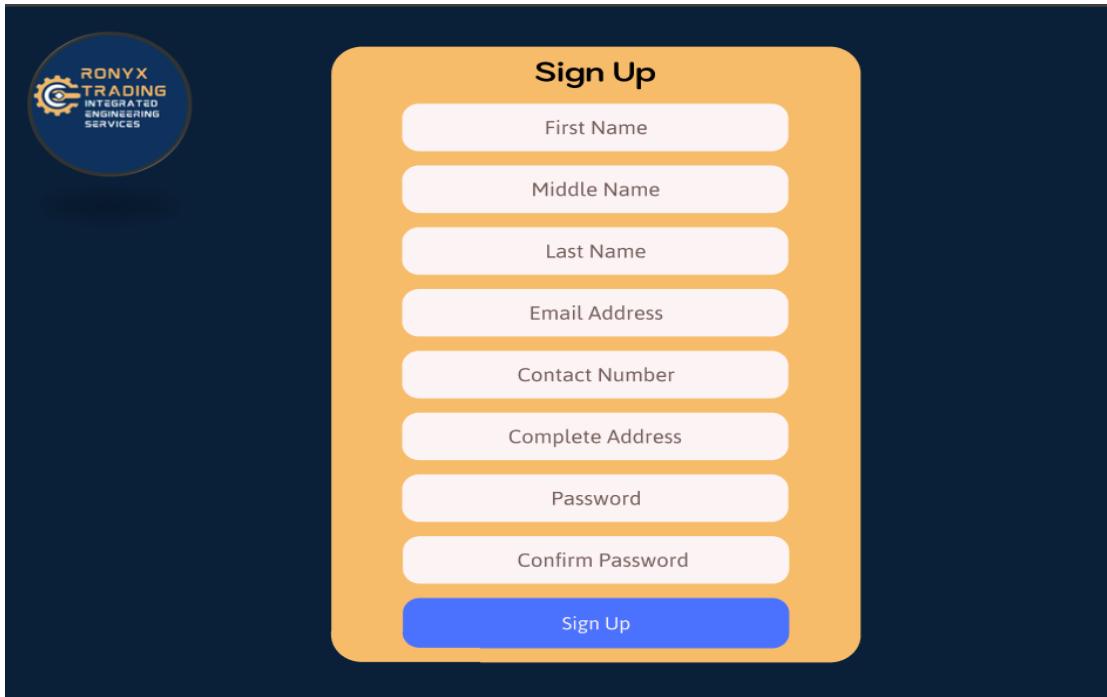


Figure 75: **Sign Up**

This is where customer sign up and enter the required details.

Figure 76: **Customer Profile Page**

Customer Profile page, where customer can update its details.

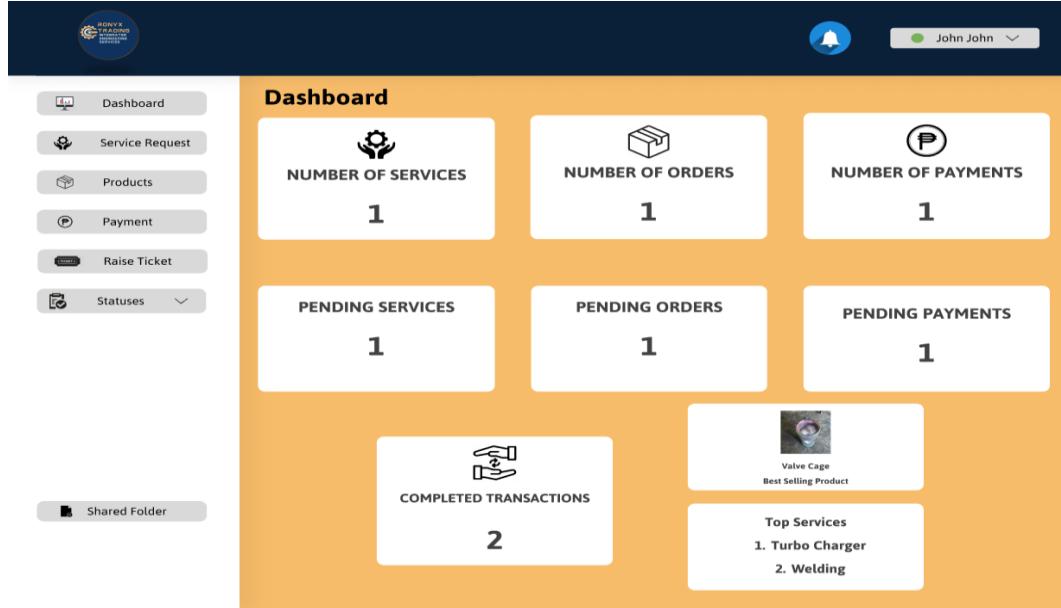


Figure 77: **Dashboard Page**

When customer logs in, it will redirect to dashboard page.

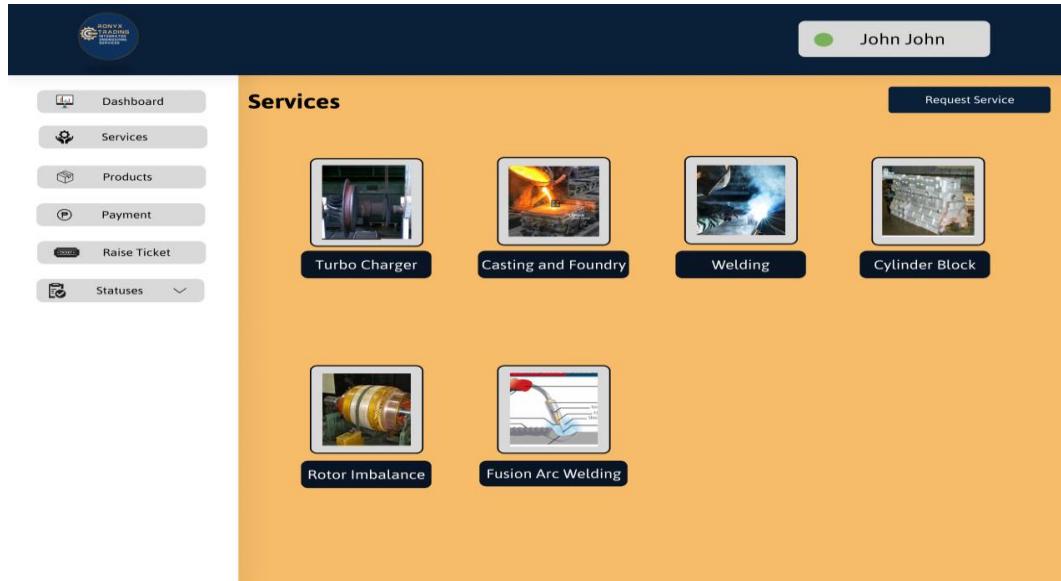


Figure 78: **Customer-Services Page**

Customer Services Page, where customer can view services and request service.

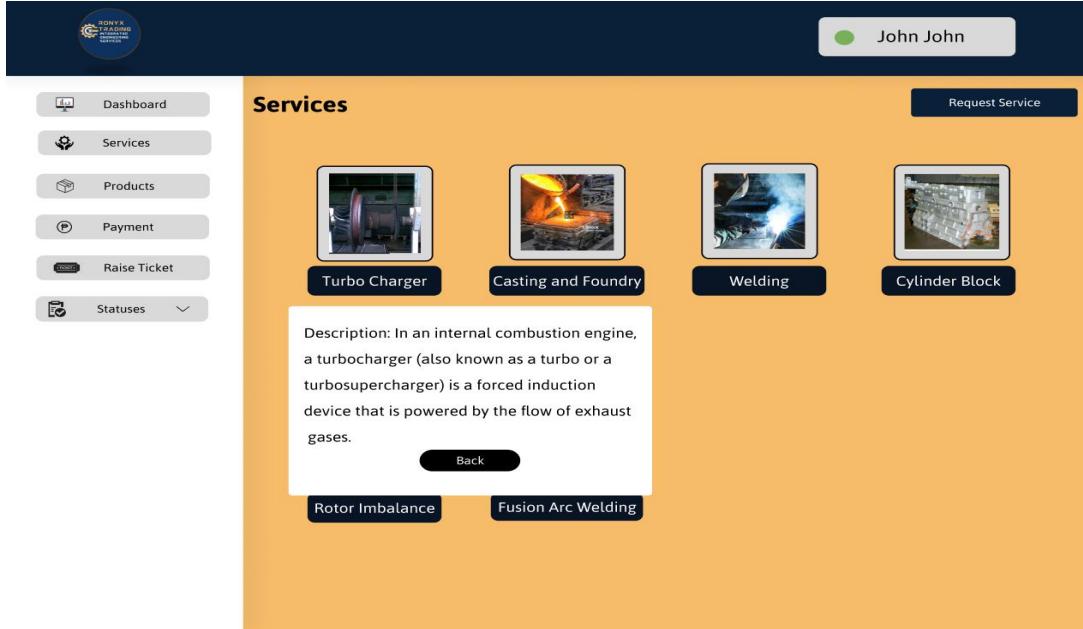


Figure 79: Customer-Service Details Page

Customer Service Details Page, where customer can view service details.

Figure 80: Request Service Page

When the customer clicks request service, it will redirect Request Service Page, where customer fill up the required details for service.



Figure 81: **Customer Product Page**

Customer Products page, where customer view and order product.

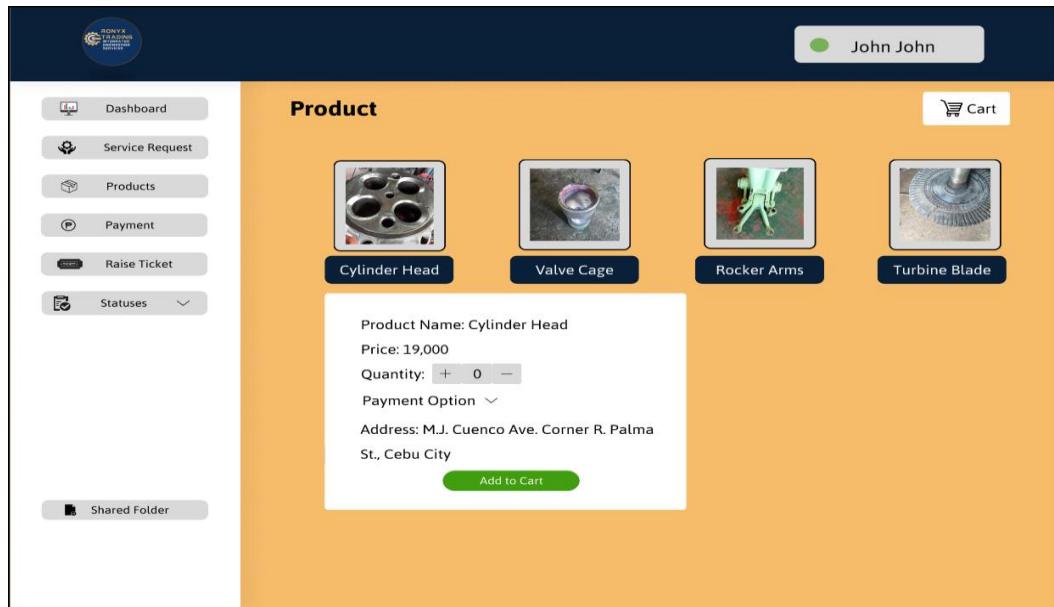


Figure 82: **Product Order**

Product Order, where customer can view product price and manage order.

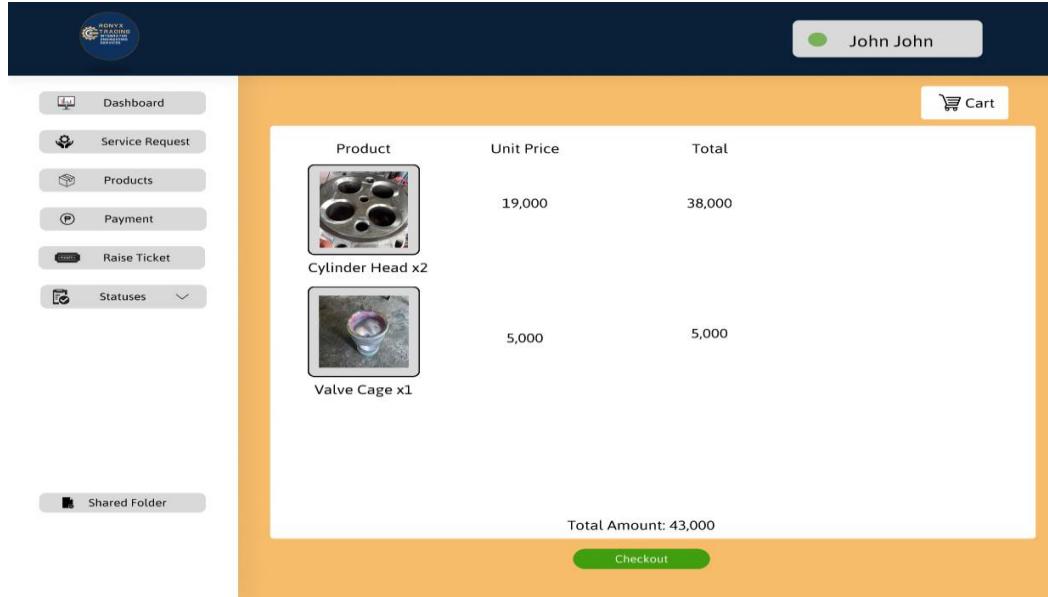


Figure 83: Cart

Cart, where customer can view ordered product details and checkout.

Payment						
Payment Number	Transaction Code	Payment Date	Amount	Balance	Status	Action
PYMT-0001	TRSCN-0001	04/08/2024	52,000	36,400	Partially Paid	Actions
PYMT-0002	TRSCN-0002	04/10/2024	44,500	0	Fully Paid	Actions

Previous 1 Next

Figure 84: Customer Payment Page

Customer Payment Page, where customer can view payment details and download receipt.


John John

Payment

Customer Name: John John

Address: M.J. Cuenco Ave. Corner R. Palma St., Cebu City

Service Type: Exhaust Gas Turbo Charger Parts

Description: Repair and Reface

Payment Method: Bank Transfer

Product: Exhaust Valve Spindle

Quantity: 1

Price: 50,500

Delivery Fee: 1,500

Pay: Partial

Submit

 Transaction Document

Figure 85: **Customer Submit Service Payment**

Customer Submit Service Payment, where customer can submit the payment.

Figure 86: **Customer Confirm Service Receipt**

Customer Confirm Service Receipt, where customer can confirm the receipt.

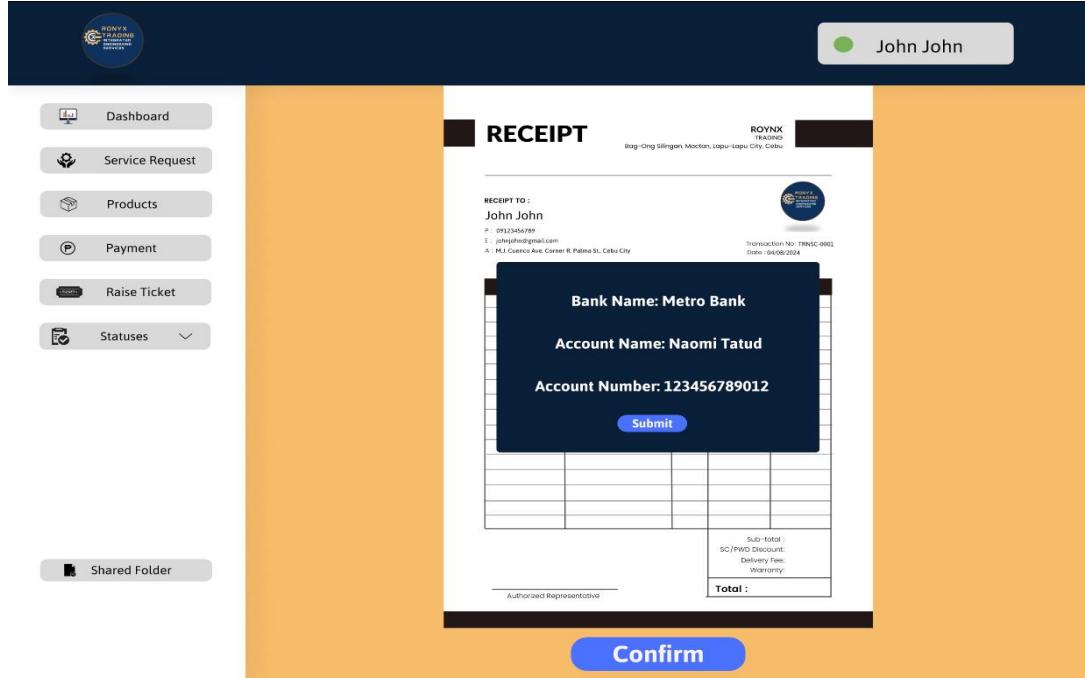


Figure 87: **Bank Transfer Details**

Bank Transfer Details, where customer can view the bank transfer details.

Service Requests								
Service Code	Service Type	Product Name	Schedule	Amount	Balance	Status	Action	
SRVC-0001	Exhaust Gas Turbo Charger Parts	Exhaust Valve Spindle	04/09/2024	52,000	36,400	In-Progress	Details	

Previous 1 Next

Figure 88: **View Service Page**

After payment transaction, it will redirect to view service page, where customer can view service details.



**RONYX
AUTOMOTIVE
SYSTEMS**

Dashboard

Services

Products

Payment

Raise Ticket

Statuses ▾

Payment

Customer Name: John John

Address: M.J. Cuenco Ave. Corner R. Palma St., Cebu City

Staff-In-Charge: Steve Jobs

Order Code: ORD-0001

Product: Exhaust Cylinder Head x2, Valve Cage x1

Payment Number: PYMT-0002

Payment Option: Bank Transfer

Amount: 43,000

Delivery Fee: 1,500

Total Amount: 44,500

Submit

Figure 89: **Customer Submit Order Payment**

Customer Confirm Order Payment, where customer can confirm the payment.

Figure 90: **Customer Confirm Order Receipt**

Customer Confirm Order Receipt, where customer can confirm the receipt.

Raise Ticket

Title:

Description

Submit

Figure 91: **Raise Ticket**

Raise Ticket, where customer can raise ticket and fill up the title and description.

View Ticket

Ticket Number	Title	Description	Date Issued	Status	Action
TKCT-0001	Delay	I didn't receive the item yet.	04/20/2024	Being Processed	Give Feedback

Previous 1 Next

Figure 92: **Customer Ticket Page**

Customer Ticket Page, where customer can view ticket details and give feedback to ticket.

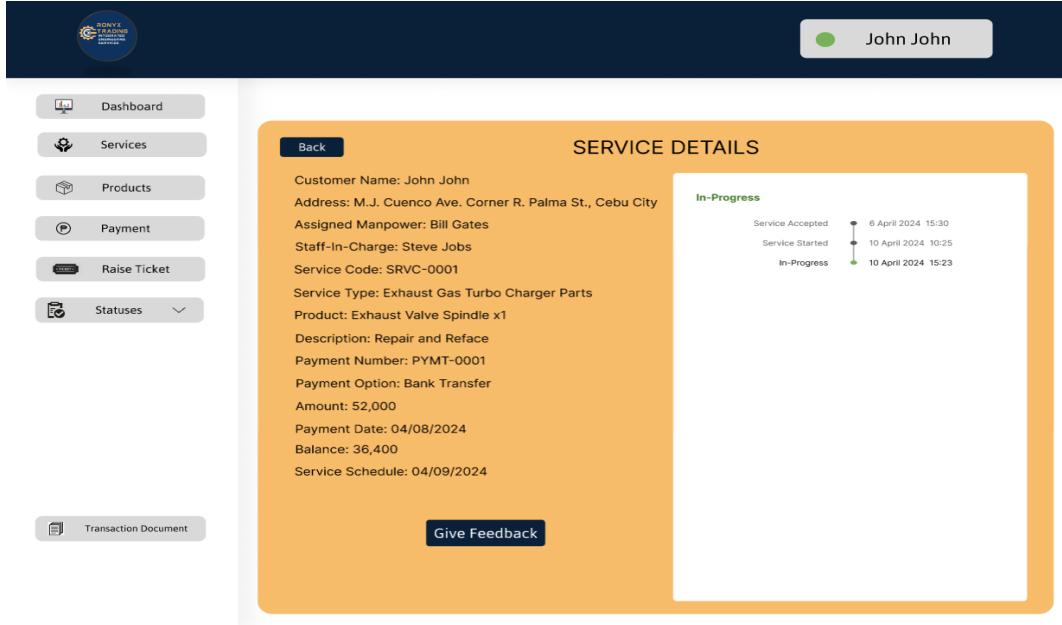


Figure 93: Customer Service Details Page

When customer clicks details, it will redirect to customer service details page, where customer give feedback after service.

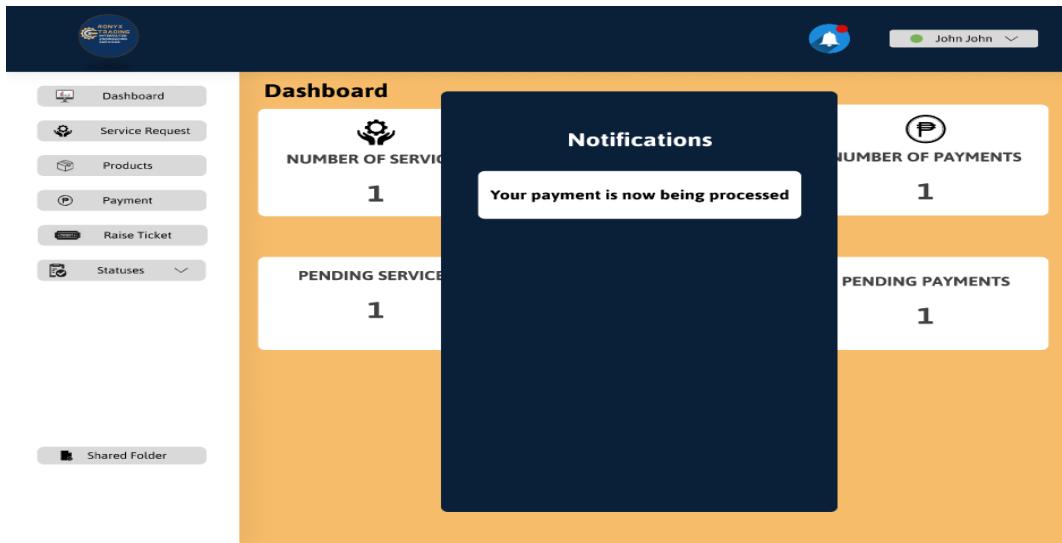


Figure 94: Customer Notifications

Customer Notifications, where the customer can view the updates of the transactions and other activities.

The screenshot shows a service details page for a customer named John John. The page includes a sidebar with various menu options like Dashboard, Service Request, Products, Payment, Raise Ticket, Statuses, View Service, View Order, View Ticket, and Shared Folder. The main content area displays service details such as Customer Name, Address, Assigned Manager, Staff-In-Charge, Transaction ID, Service Code, Service Type, Product, Description, Payment Number, Payment Option, Amount, Payment Date, and Balance. A large text area labeled 'Feedback' is present, with a 'Submit' button at the bottom right and a 'Give Feedback' link below it.

Figure 95: **Customer Service Feedback**

When customer clicks feedback after service, it will redirect to customer feedback, where customer can give feedback.

The screenshot shows an orders page with a sidebar containing links for Dashboard, Services, Products, Payment, Raise Ticket, Statuses, and Transaction Document. The main content area is titled 'Orders' and displays a table with columns: Order Code, Product Info, Delivery Info, Amount, Balance, Status, and Action. One row is shown with the following data:

Order Code	Product Info	Delivery Info	Amount	Balance	Status	Action
ORD-0001	Exhaust Cylinder Head x2, Valve Cage x1	Address: M.J. Cuenco Ave, Corner R. Palma St., Cebu City	44.500	0	To be Delivered	Details

At the bottom, there are navigation buttons for Previous, 1, and Next.

Figure 96: **View Order Page**

After payment transaction, it will redirect to view order page, where customer can view order details.

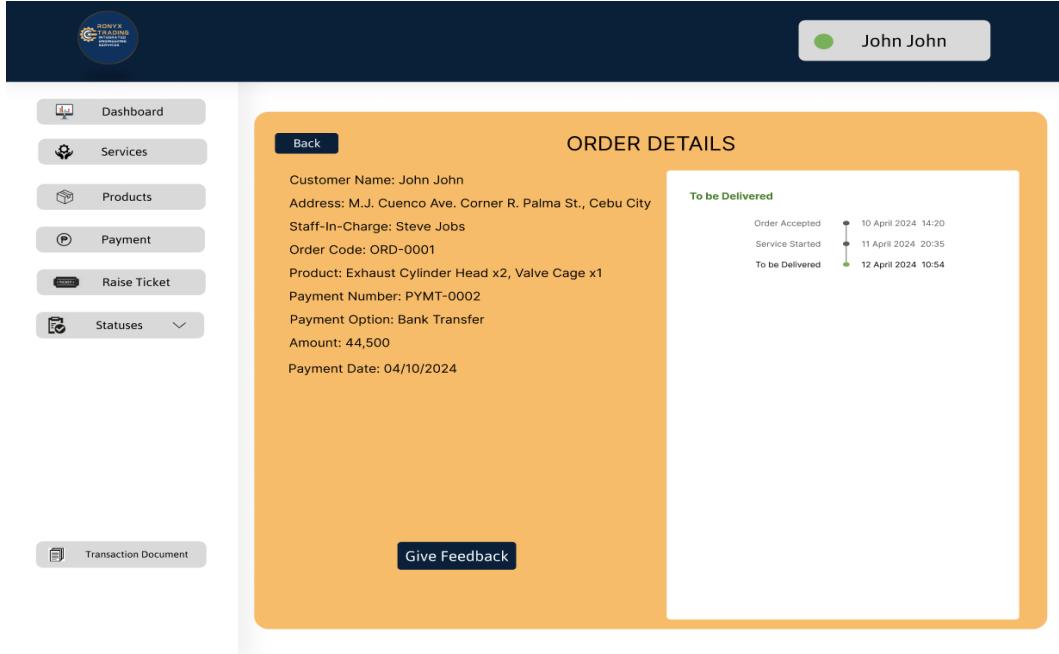


Figure 97: **Customer Order Details Page**

When customer clicks details, it will redirect to customer order details page, where customer give feedback after service.

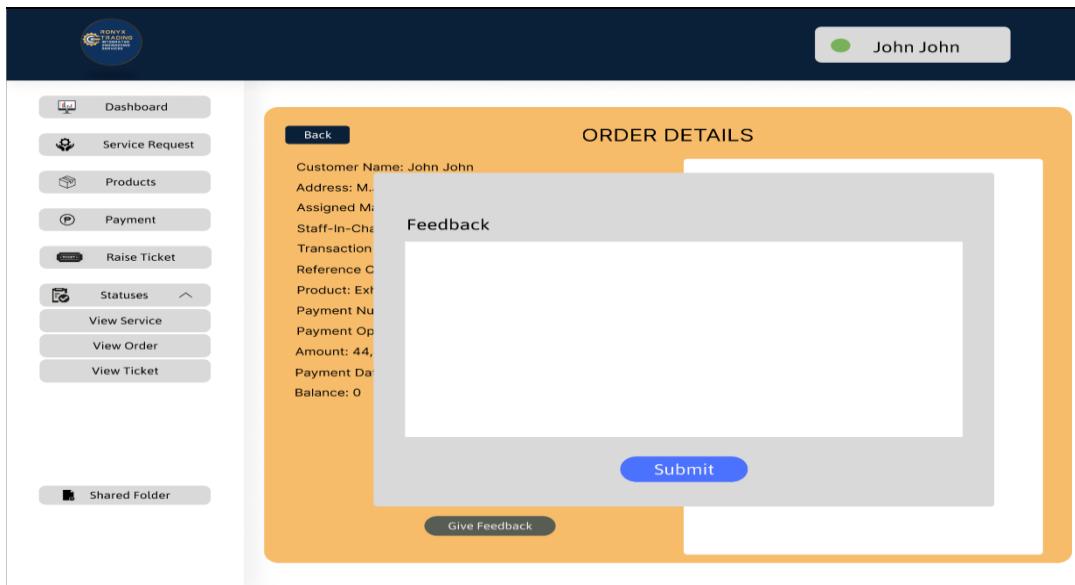


Figure 98: **Customer Order Feedback**

When customer clicks feedback after order, it will redirect to customer feedback, where customer can give feedback.

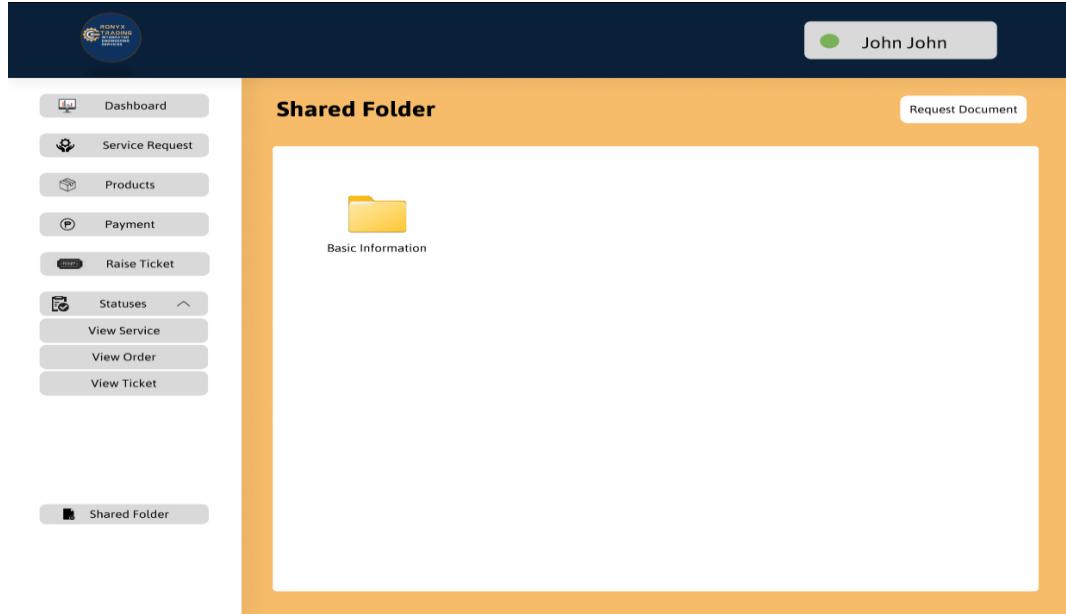


Figure 99: **Shared Folder Page**

Shared Folder Page, where customer can view and download shared documents.

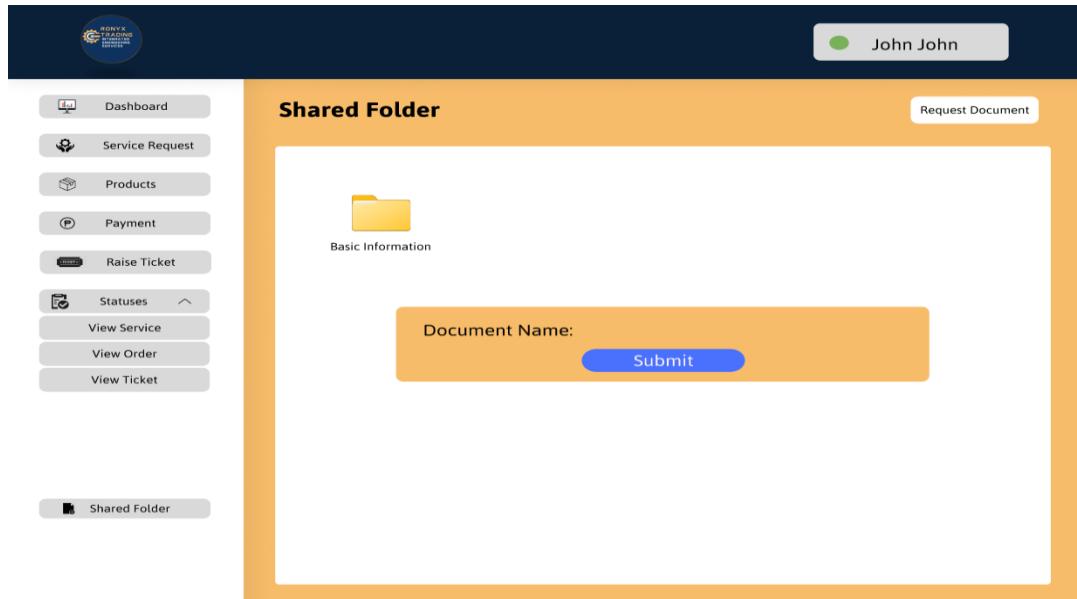


Figure 100: **Request Document**

Request Document, where customer can request document and fill up the document name.

Database Design

Entity-Relationship Diagram

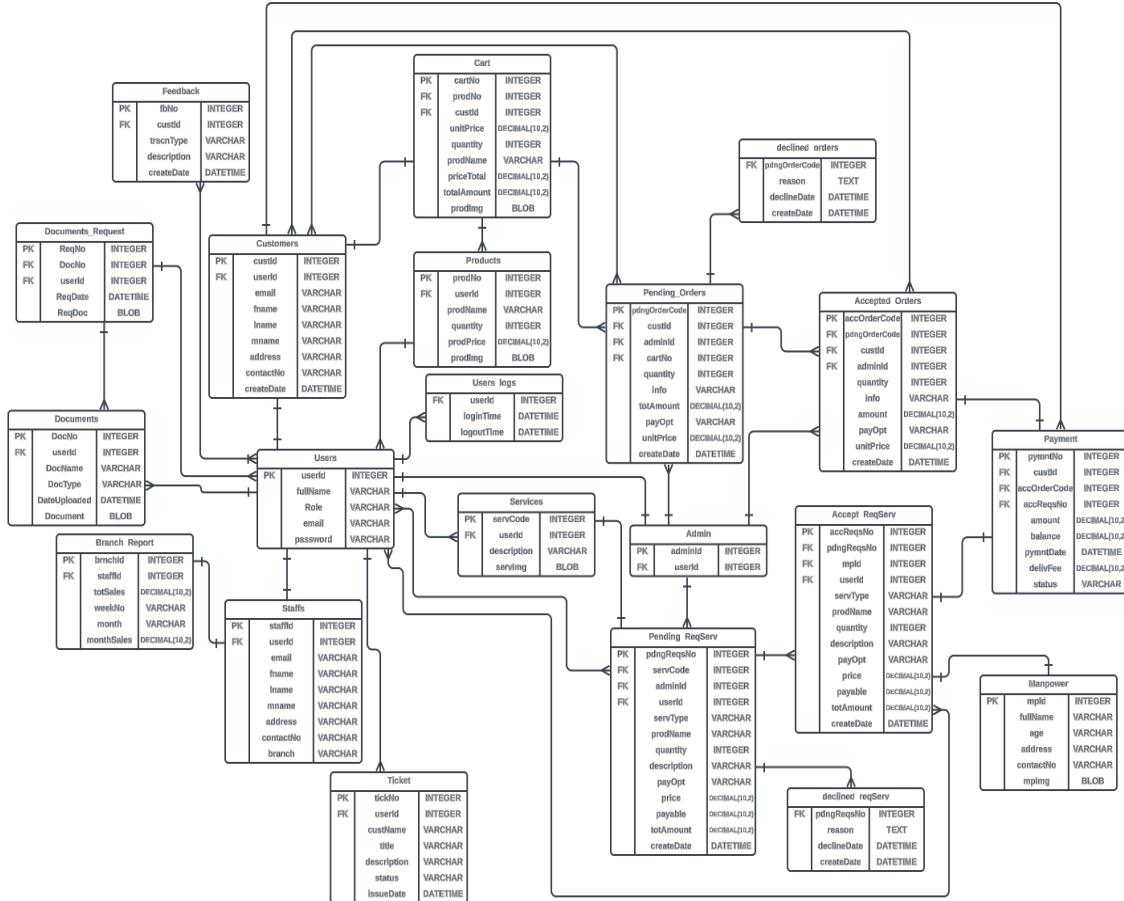


Figure 101: Entity-Relationship Diagram

Data Dictionary

Table 5
Data Dictionary

Table Name	Attribute Name	Content	Type	Format	Range	Required	FK or PK	FK reference table
Feedback	fbNo custId trscnType description createDate	Primary Key Foreign Key	INTEGER INTEGER VARCHAR VARCHAR DATETIME	XXXXXXXXXX XXXXXXXXXX AAAAAAAAAA AAAAAAAAAA 23-02-2023 09:55:30	1-11 1-11 1-255 1-255	Yes Yes Yes Yes Yes	PK FK	customers
Document_request	reqNo docNo userId reqDate reqDoc	Primary Key Foreign Key Foreign Key	INTEGER INTEGER INTEGER DATETIME BLOB	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX 23-02-2023 09:55:30	1-11 1-11 1-11	Yes Yes Yes Yes Yes	PK FK FK	Documents Users
Documents	docNo userId docName doctype dateUploaded document	Primary Key Foreign Key	INTEGER INTEGER VARCHAR VARCHAR DATETIME BLOB	XXXXXXXXXX XXXXXXXXXX AAAAAAAAAA AAAAAAAAAA 23-02-2023 09:55:30	1-11 1-11 1-255 1-255	Yes Yes Yes Yes Yes	PK FK	users
Branch_report	brchId staffId totSales weekNo month monthSales	Primary Key Foreign Key	INTEGER INTEGER DECIMAL(10,2) VARCHAR VARCHAR DECIMAL(10,2)	XXXXXXXXXX XXXXXXXXXX XXXX.XX AAAAAAAAAA AAAAAAAAAA XXXXXX.XX	1-11 1-11 1-50 1-255 1-255 1-50	Yes Yes Yes Yes Yes Yes	PK FK	Staffs
Customers	custId userId email fname lname mname address contactNo createDate	Primary Key Foreign Key	INTEGER INTEGER VARCHAR VARCHAR VARCHAR VARCHAR VARCHAR VARCHAR DATETIME	XXXXXXXXXX XXXXXXXXXX AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA 23-02-2023 09:55:30	1-11 1-11 1-255 1-255 1-255 1-255 1-255 1-255	Yes Yes Yes Yes Yes Yes Yes Yes	PK FK	Users
Users	userId fullName role email password	Primary Key	INTEGER VARCHAR VARCHAR VARCHAR VARCHAR	XXXXXXXXXX AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA	1-11 1-255 1-255 1-255 1-255	Yes Yes Yes Yes Yes	PK	
Staffs	staffId userId email fname lname mname address contactNo	Primary Key Foreign Key	INTEGER VARCHAR VARCHAR VARCHAR VARCHAR VARCHAR VARCHAR VARCHAR	XXXXXXXXXX AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA	1-11 1-255 1-255 1-255 1-255 1-255 1-255 1-255	Yes Yes Yes Yes Yes Yes Yes Yes	PK FK	Users

	branch		VARCHAR	AAAAAAAAAA	1-255	Yes		
Tickets	tickNo userId custName title description status issueDate	Primary Key Foreign Key	INTEGER INTEGER VARCHAR VARCHAR VARCHAR VARCHAR DATETIME	XXXXXXXXXX XXXXXXXXXX AAAAAAA AAAAAAA AAAAAAA AAAAAAA 23-02-2023 09:55:30	1-11 1-11 1-255 1-255 1-255 1-255	Yes Yes Yes Yes Yes Yes	PK FK	Users
Cart	cartNo prodNo custId unitPrice quantity prodName priceTotal totalAmount prodImg	Primary Key Foreign Key Foreign Key	INTEGER INTEGER INTEGER DECIMAL(10,2) INTEGER VARCHAR DECIMAL(10,2) DECIMAL(10,2) BLOB	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXX.XX XXXXXXXXXX AAAAAAA XXXX.XX XXXX.XX	1-11 1-11 1-11 1-50 1-11 1-255 1-50 1-50	Yes Yes Yes Yes Yes Yes Yes Yes	PK FK FK	Products Customer
Products	prodNo userId prodName quantity prodPrice prodImg	Primary Key Foreign Key	INTEGER INTEGER VARCHAR INTEGER DECIMAL(10,2) BLOB	XXXXXXXXXX XXXXXXXXXX AAAAAAA XXXXXXXXXX XXXX.XX	1-11 1-11 1-255 1-11 1-50	Yes Yes Yes Yes Yes	PK FK	Users
Users_logs	userId loginTime logoutTime	Foreign Key	INTEGER DATETIME DATETIME	XXXXXXXXXX 23-02-2023 09:55:30 23-02-2023 12:55:30	1-11	Yes Yes Yes	FK	Users
Services	servCode userId description servImg	Primary Key Foreign Key	INTEGER INTEGER VARCHAR BLOB	XXXXXXXXXX XXXXXXXXXX AAAAAAA AAAAAAA	1-11 1-255 1-255	Yes Yes Yes	PK FK	Users
Pending_orders	pdngOrderCode custId adminId cartNo quantity info totAmount payOpt unitPrice createDate	Primary Key Foreign Key Foreign Key Foreign Key	INTEGER INTEGER INTEGER INTEGER INTEGER VARCHAR DECIMAL(10,2) VARCHAR DECIMAL(10,2) DATETIME	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX AAAAAAA XXXX.XX AAAAAAA XXXX.XX 23-02-2023 12:55:30	1-11 1-11 1-11 1-11 1-11 1-255 1-50 1-255 1-50	Yes Yes Yes Yes Yes Yes Yes Yes Yes	PK FK FK FK	Customers Admin Carts
Admin	adminId userId	Primary Key Foreign Key	INTEGER INTEGER	XXXXXXXXXX XXXXXXXXXX	1-11 1-11	Yes Yes	PK FK	Users
Pending_reqServ	pdngReqNo servCode adminId userId servType	Primary Key Foreign Key Foreign Key Foreign Key	INTEGER INTEGER INTEGER INTEGER VARCHAR	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX AAAAAAA	1-11 1-11 1-11 1-11 1-255	Yes Yes Yes Yes Yes	PK FK FK FK	Services Admin Users

	prodName quantity description payOpt price payable totAmount createDate		VARCHAR INTEGER VARCHAR VARCHAR DECIMAL(10,2) DECIMAL(10,2) DECIMAL(10,2) DATETIME	AAAAAAAAAA XXXXXXXXXX AAAAAAAAAA AAAAAAAAAA XXXXXX.XX XXXXXX.XX XXXXXX.XX 23-02-2023 12:55:30	1-255 1-11 1-255 1-255 1-50 1-50 1-50 Yes		
Declined_orders	pdngOrderCode reason declineDate createDate	Foreign Key	INTEGER TEXT DATETIME DATETIME	XXXXXXXXXX AAAAAAAAAA 23-02-2023 12:55:30 23-02-2023 16:55:30	1-11 1-255 Yes Yes Yes Yes	FK	Pending_orders
Accepted_orders	accOrderCode pdngOrderCode custId adminId quantity info amount payOpt unitPrice createDate	Primary Key Foreign Key Foreign Key Foreign Key	INTEGER INTEGER INTEGER INTEGER INTEGER VARCHAR DECIMAL(10,2) VARCHAR DECIMAL(10,2) DATETIME	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX AAAAAAAAAA XXXXXX.XX AAAAAAAAAA XXXXXX.XX 23-02-2023 16:55:30	1-11 1-11 1-11 1-11 1-11 1-255 1-50 1-255 1-50 Yes	PK FK FK FK	Pending_orders Customer Admin
Declined_reqServ	pdgnReqsNo reason declineDate createDate	Primary Key	INTEGER TEXT DATETIME DATETIME	XXXXXXXXXX AAAAAAAAAA 23-02-2023 19:55:30 23-02-2023 15:55:30	1-11 1-255 Yes Yes Yes Yes	PK	
Payment	pymntNo custId accOrderCode accReqsNo amount balance pymntDate delivFee status	Primary Key Foreign Key Foreign Key Foreign Key	INTEGER INTEGER INTEGER INTEGER DECIMAL(10,2) DECIMAL(10,2) DATETIME DECIMAL(10,2) VARCHAR	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXX.XX XXXXXX.XX 23-02-2023 19:55:30 XXXXXX.XX AAAAAAAAAA	1-11 1-11 1-11 1-11 1-50 1-50 1-50 1-255 Yes	PK FK FK FK	Customers Accepted_orders Accepted_reqServ
Manpower	mpld fullName age address contactNo mplmg	Primary Key	INTEGER VARCHAR VARCHAR VARCHAR VARCHAR BLOB	XXXXXXXXXX AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA	1-11 1-255 1-255 1-255 1-255 Yes	PK	

Network Design

Network Model

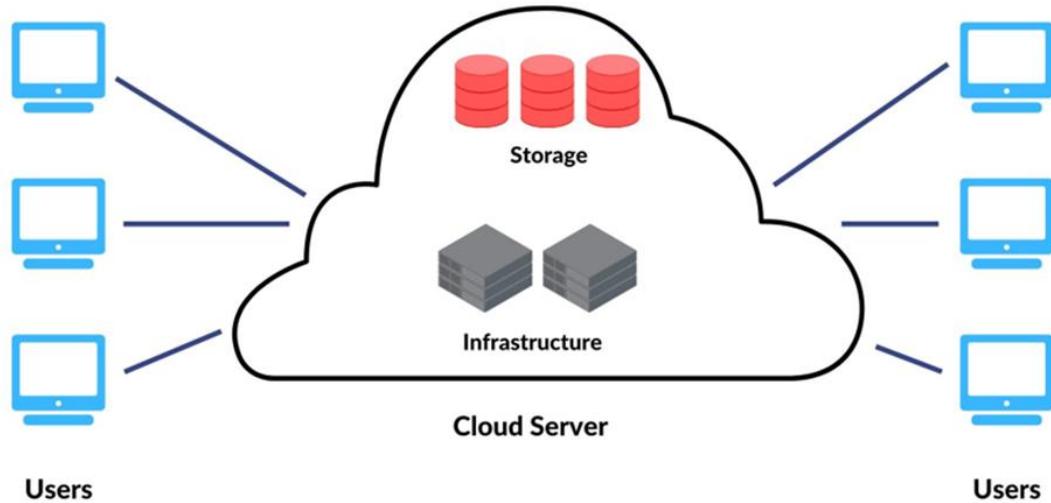


Figure 102: **Network Model**

A network model refers to the conceptual or mathematical representation of how data flows between different nodes or devices within a network. It encompasses various elements such as nodes, connections, protocols, and topologies. A cloud server is well-suited for a system due to its scalability, flexibility, and accessibility. According to Jones IT (2023), A cloud server is typically built using virtualization, which allows the creation of virtual machines capable of mimicking the functions of physical hardware. Cloud servers use specialized software called a hypervisor to run multiple virtual machines on a single physical machine. By leveraging cloud servers, organizations can easily adjust resources according to their needs, whether scaling up during peak demands or scaling down during quieter periods, thereby optimizing costs. Moreover, cloud servers offer robust security measures, data redundancy, and reliability, ensuring the integrity and availability of the system's data and services. Additionally, cloud servers enable seamless remote access, allowing users to interact with the system from anywhere with internet connectivity, promoting collaboration and productivity. Overall, the cloud server's adaptable infrastructure aligns well with the dynamic and evolving requirements of modern network models.

Network Topology

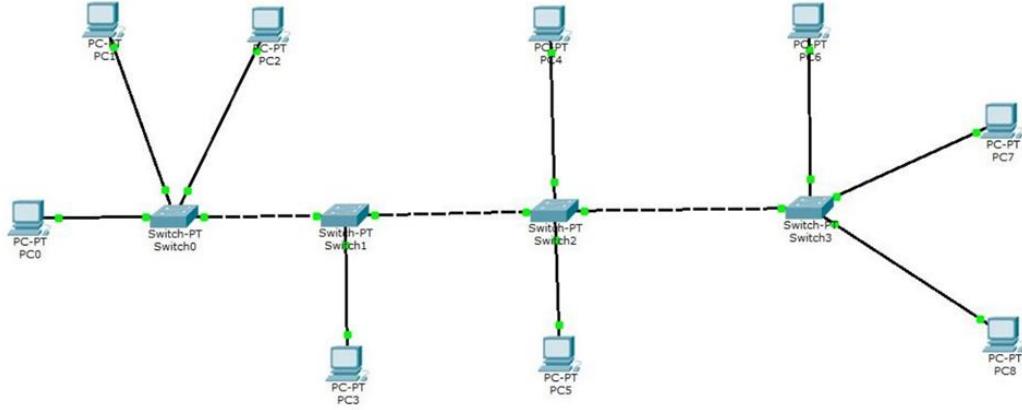


Figure 103: **Network Topology**

A hybrid topology is well-suited for implementing Traders due to its ability to seamlessly integrate both cloud-based and on-premises infrastructure, addressing the diverse needs of the client's business operations. Cloud servers are utilized for automating manual processes such as document generation, ensuring efficiency and reducing errors. Additionally, the centralized communication platform and document management system provided by Traders benefit from the scalability and reliability of cloud servers, enabling secure access and collaboration from anywhere. With a hybrid approach, the system can efficiently manage various business operations across branches, leveraging real-time data synchronization and coordination between different locations. Moreover, the prioritization of data security and privacy through encryption and access controls ensures that sensitive information remains confidential. Overall, the hybrid topology optimally combines the advantages of cloud technology with on-premises infrastructure, offering a comprehensive solution that enhances operational efficiency, communication, and collaboration while safeguarding data integrity and confidentiality.

Development Phase

Technology Stack Diagram

A technology stack comparison the layers of components of services that are used to provide a software solution or application. The figure below shares the required specification for the user's web:

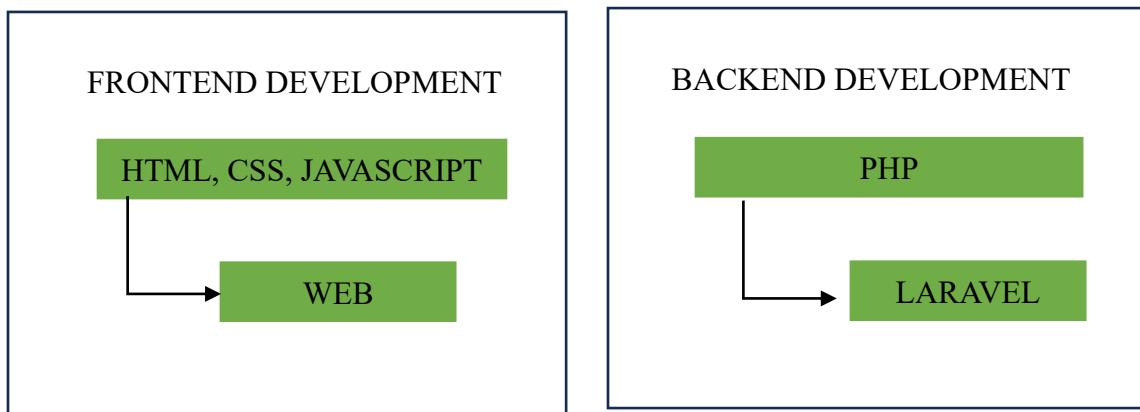


Figure 104: **Technology Stack Diagram**

Software Specification

Below are the selected software specification that are specified by the researcher's essentials in the development phase. Traders will develop web platform.

The table below shows the software specification for the web application development.

Table 6

Software Specification: Web Application Development

WEB APPLICATION DEVELOPMENT	
Front End Languages	HTML, CSS, JavaScript
Back End Languages	PHP, Laravel
DBMS	PhpMyAdmin, MySQL
Operating System	Windows 11
Text Editing Tool	Sublime Text, Visual Studio Code
Image Editor	Adobe Photoshop
Web Browser	Google Chrome, Microsoft Edge
Web Development Environment	XAMPP

Hardware Specification

Below are the hardware specification requirements that enables the systems expected function work.

The table below shows the specification that are required for the web client user.

Table 7

Hardware Specification: Server

SERVER HARDWARE SPECIFICATION	
Processor	AMD or Intel
Memory RAM	8 – 16 GB RAM (or higher)
Hard Disk Drive	1 TB HDD / 256 SSD (or higher)
Monitor	15” – 19” Monitor
Keyboard	Generic Keyboard
Mouse	Generic Mouse
USB Port	2.0 USB Port or 3.0 USB Port

Client

The table below shows the recommended systems hardware specifications that the user needs in order for them to use the system features.

Table 8

Hardware Specification: Client – Web Application

WEB HARDWARE SPECIFICATION	
Processor	AMD or Intel
Memory RAM	4 – 8 GB RAM / 16 GB RAM (or higher)
Storage	512 HDD / 256 SSD (or higher)
Internet	Ethernet Cable, Wi-Fi

Program Specifications

The program specifications will be the guide of the researchers in implementing the system.

Table 9
Program Specifications

DESKTOP – PC
<ul style="list-style-type: none"> • Windows 8 and up to the latest windows. • 4 GB RAM or higher • Storage - 512 HDD / 256 SSD (or higher)

List of Modules

The table below are the modules of web and mobile platform by the researcher's proposed system.

Table 10
LIST OF MODULES

Programmer	Modules	Admin	Staff	Customer
Account				
	1. Login/Logout	•	•	•
	2. Sign Up			•
	3. Forgot Password			•
	4. User Name, Email, Address, Contact, Password, and User ID (Read & Update)		•	•
	No. of Points (<i>1 point per module per user</i>)	1	1	1
User Account				
	1. View User Details	•		
	2. Add and Remove User	•		
	3. Update User Details	•		
	4. Add and Remove User Role	•		
	No. of Points (<i>1 point per module per user</i>)	1		
Customer Profiles				
	1. View Customer Details		•	
	2. Update Customer Details		•	

No. of Points (<i>1 point per module per user</i>)		1	
Profile Account			
1. Update User Details		•	•
2. Change Password			•
No. of Points (<i>1 point per module per user</i>)		1	1
Services			
1. View Services	•	•	•
2. Add and Delete Service	•		
3. Update Service Details	•	•	
4. Request Service			•
5. View Service Request Details	•	•	•
6. Update Service Request Details	•	•	
7. Accept and Decline Service Request	•		
8. Give Feedback			•
No. of Points (<i>1 point per module per user</i>)	1	1	1
Products			
1. View Product	•	•	•
2. Add and Delete Product	•		
3. Update Product Details	•	•	
4. Add to Cart Product			•
No. of Points (<i>1 point per module per user</i>)	1	1	1
Cart			
1. View Ordered Product			•
2. Checkout Order			•
3. Remove Product to Cart			
No. of Points (<i>1 point per module per user</i>)			1
Orders			
1. View Order Details	•	•	•
2. Update Order Details	•	•	
3. Give Feedback			•
No. of Points (<i>1 point per module per user</i>)	1	1	1
Payments			
1. View Payment Details	•	•	•
2. Submit Payment			•
3. Receipt Download	•	•	•
4. View Receipt	•	•	•
5. Create Receipt	•		
6. Update Payment Details	•	•	

	No. of Points (<i>1 point per module per user</i>)	1	1	1
Inquiry Tickets				
1. Raise Ticket				•
2. View Ticket Details	•	•	•	
3. Give Feedback				•
4. Update Ticket Details	•	•		
No. of Points (<i>1 point per module per user</i>)	1	1	1	
Feedback				
1. View Feedback Details	•	•		
No. of Points (<i>1 point per module per user</i>)	1	1		
Transaction Documents				
1. Request Document				•
2. Upload, Share Document	•	•		
3. Document Requests List	•	•		
4. View Documents	•	•	•	
No. of Points (<i>1 point per module per user</i>)	1	1	1	
Manpower				
1. View Manpower	•	•		
2. Add and Delete Manpower	•			
3. Update Manpower Details	•	•		
4. Update Manpower Availability	•	•		
No. of Points (<i>1 point per module per user</i>)	1	1		
Sales Report				
1. View Sales Report	•	•		
2. Generate Sales Report	•	•		
No. of Points (<i>1 point per module per user</i>)	1	1		
Dashboard				
1. Notifications	•	•	•	
2. KPI's	•	•	•	
No. of Points (<i>1 point per module per user</i>)	1	1	1	
Number of Modules per User (equals no. of points per user)	12	13	10	
Total Number of Modules	35			

Testing Phase

Unit Testing

Unit testing involves testing individual components or units of the system to ensure they function as expected. Each module is tested in isolation to verify its functionality and confirm that it produces the correct output. The primary objective of unit testing is to validate the behavior and logic of each unit, identifying any discrepancies between expected and actual outcomes.

Integration Testing

Integration testing focuses on testing the interaction and connectivity between different modules or components of the system. It aims to uncover any integration issues that may arise when combining these modules. By performing integration testing, the team ensures that the integrated modules function seamlessly together before advancing to subsequent testing stages.

Alpha Testing

Before the final release of the application, alpha testing is conducted to evaluate the system as a whole. This comprehensive test involves assessing the entire system, including its integrated modules, from the perspective of end users. The goal is to identify any defects or usability issues and address them before the official release. Alpha testing provides valuable insights into the system's performance and user experience.

Acceptance Testing

Acceptance testing is the final stage of testing and involves validating whether the system meets the specified requirements and is ready for deployment. Unlike alpha testing, which is conducted internally, acceptance testing is performed by clients and end users. This testing ensures that the system meets user expectations, complies with all requirements, and is fit for release. Acceptance testing serves as the ultimate validation of the system's readiness before it is delivered to the client.

Implementation/Deployment Phase

Software Specification

Below are the selected software specifications that are specified by the researcher's essentials in implementation/deployment phase. Traders will deploy a web platform. The table below shows the software specifications for the user's web when the system is going to be deployed:

Table 11

Software Specification: Web Application Development

USER'S WEB DEPLOYMENT	
Web Browser	<ul style="list-style-type: none"> • Google Chrome • Microsoft Edge

Hardware Specification

Below are the hardware specification requirements that enables the systems expected functions work.

The table below shows the specification that are required for the web client server.

Table 12

Hardware Specification: Server

SERVER HARDWARE SPECIFICATION	
Processor	AMD or Intel
Memory RAM	8 – 16 GB RAM (or higher)
Hard Disk Drive	1 TB HDD / 256 SSD (or higher)
Monitor	15" – 19" Monitor
Keyboard	Generic Keyboard
Mouse	Generic Mouse
USB Port	2.0 USB Port or 3.0 USB Port

Client

The table below shows the recommended systems hardware specification that the user needs in order for them to use the system features.

Table 13

Hardware Specification: Client – Web Application

WEB HARDWARE SPECIFICATION	
Processor	AMD or Intel
Memory RAM	4 – 8 GB RAM / 16 GB RAM (or higher)
Storage	512 HDD / 256 SSD (or higher)
Internet	Ethernet Cable, Wi-Fi

User-Guide

Admin

1. Go to website “www.ronyxtraders.com”
2. After entering the website, admin can now login using the said account.
3. The admin will now be directed to the dashboard, where they can choose features from the sidebar menu and view KPI’s.
4. In the “Services”, the admin can view services, add and delete service, update service details.
5. By selecting "Service Requests", the admin can access details of service requests and can click pending service request and details for further information.
6. Upon clicking on a service request action detail, the admin can access additional details such as delivery status and update the service information.
7. By clicking Pending Service Request, the admin can accept, decline, and view details of the service request.
8. If the service request is accepted the admin can assign staff, and if declined the admin will state the reason and give a suggestion.
9. Under "Products," the admin can view product, add new products, update prices and details, and remove products.

10. In the "Orders" section, the admin can view order details and access more information by clicking on details under action and also accept and decline orders in pending order request.
11. Upon clicking on details under action, the admin can view into order specifics, including delivery status, and make necessary updates.
12. By clicking pending order request, the admin can accept, decline, and view details of the request order
13. If the order request is accepted the admin can assign staff, and if declined the admin can state the reason and give a suggestion.
14. Within "Payments," the admin can view payment details, download transaction receipts for completed payments, and access further payment information.
15. After selecting details on action, the admin can access additional details, including the option to view the receipt and make necessary updates.
16. Under "Inquiry Tickets," the admin can view ticket details and can make indicator the ticket when is done.
17. Within "User Accounts," the admin can view, update, add, or remove user accounts and their details.
18. Clicking on "Feedback" allows the admin to review feedback details.
19. If selecting "Manpower Availability," the admin can review manpower details, make additions or deletions, and update status.
20. Opting for "Sales Report" allows the admin to view branch sales reports and generate new ones.
21. Accessing the "Transaction Document" enables the admin to manage documents, including viewing, uploading, deleting, sharing, copying, and pasting, as well as reviewing document requests.
22. Upon selecting "Transaction Document Requests," the admin can view details of requests made.
23. Clicking on the notification bell provides the admin with updates and activities within the system.
24. In the profile dropdown menu, the admin can choose to log out.
25. Logging out will return the admin to the login page.

Staff

1. Go to website “www.ronyxtraders.com”
2. After entering the website, staff can now login using created account by the admin.
3. The staff will now be directed to the dashboard, where they can choose features from the sidebar menu and view KPI’s.
4. In the “Services”, the staff can view and update service details.
5. By selecting "Service Requests," staff can access the details of service click on details for further information.
6. Upon clicking on a service request action detail, the staff can access additional details such as delivery status and update the service information.
7. By clicking Pending Service Request, the staff can assign manpower and schedule.
8. Under "Products," the staff can view and update prices and details.
9. In the "Orders" section, staff can access the additional details by clicking on details under action.
10. Upon clicking on details under action, the staff can view into order specifics, including delivery status, and make necessary updates.
11. Within "Payments," the staff can view payment details, download transaction receipts for completed payments, and access further payment information.
12. After selecting details on action, the staff can access additional details, including the option to view the receipt and make necessary updates.
13. Under "Inquiry Tickets," the staff can view ticket details and access further information by clicking on details under action.
14. Within "Customer Profile," the staff can view and update customer details.
15. Clicking on "Feedback" allows the staff to review feedback details.
16. By selecting "Manpower Availability," the staff can review manpower details and update availability and details.
17. Upon Clicking “Sales Report”, the staff can view and generate branch sales report and can send it to admin for company sales report.
18. Accessing the "Transaction Documents" enables the staff to manage documents, including viewing, uploading, deleting, sharing, copying, and pasting, as well as reviewing document requests.

19. Upon selecting "Document Requests," the staff can view details of requests made.
20. Clicking on the notification bell provides the staff with updates and activities within the system.
21. In the profile dropdown menu, the staff can choose to log out or view their profile.
22. Upon selecting "Profile," the staff can view and update their user profile details.
23. Logging out will return the staff to the login page.

Customer

1. Go to website “www.ronyxtraders.com”
2. After entering the website, customer can now see the login page. If the customer doesn't have an existing account, the customer can click the sign up to create account.
3. If the customer already has an existing account and forgot its password, the customer can click the forgot password.
4. After creating an account or new password, the customer will verify its email address before logging in and after verifying the customer can login using its created account.
5. The customer will now be directed to the dashboard, where they can choose features from the sidebar menu and view KPI's.
6. In the “Services”, the customer can view service details and request service.
7. By selecting “Request Service”, the customer will fill up the required details for service and submit.
8. After submitting, the customer will wait for the acceptance of the request before proceeding to payment.
9. Before having access to receipt, the customer must finish its payment transaction first for the payment be processed.
10. After the payment transaction is done the customer can already download receipt and will be redirected to View Service, where the customer can view service details and delivery status.
11. Once the service is done, the customer can give their honest feedback of the service.

12. By selecting “Products”, the customer can view, add to cart products and choose payment option for ordering the products.
13. Upon Clicking Cart, the customer can view the added products, remove product, and checkout.
14. After checking out the products, the customer will wait for the order to be accepted then proceed to payment, where the customer will process payment transaction.
15. Before having access to receipt, the customer must finish its payment transaction first for the payment be processed.
16. After the payment transaction is done, the customer can already download receipt and will be redirected to View Order, where the customer can view order details and delivery status.
17. Once the order is done, the customer can give their honest feedback of the order.
18. By selecting “Raise Inquiry Ticket”, the customer will fill up the required details for raising ticket.
19. After submitting the ticket, the customer will be redirected to view ticket, where the customer can view ticket details and give feedback once the concern is fixed.
20. By selecting “Transaction Documents”, the customer can view and download shared documents and if the customer request for a document it will fill up the required details for requesting document.
21. Clicking on the notification bell provides the customer with updates and activities within the system.
22. In the profile dropdown menu, the customer can choose to log out or view their profile.
23. Upon selecting "Profile," the customer can view and update their user profile details.
24. Logging out will return the customer to the login page.
25. In the profile dropdown menu, the customer can choose to log out or view their profile.
26. Upon selecting "Profile," the customer can view and update their user profile details.
27. Logging out will return the customer to the login page.

Installation Guide

Installation guide is a technical communication document intended to assist people on how to install a particular program. An installation guide may give general instruction. Information on the minimum system requirements and installation methods. In this case, the purpose of this documentation is to guide users on how to install Traders: A Web-Based Transaction and Document Repository System. In order for the system to install correctly, requirements must be met:

Requirements:

1. Composer
2. XAMPP
3. Laravel

Steps:

1. Install XAMPP, Composer, and Laravel on your computer or laptop.
2. Extract the traders.rar file on your desired location.
3. Launch the XAMPP control panel and start the Apache and MySQL services. This will start the web server and database server required to run your Laravel project.
4. Open your file explorer and navigate to the directory where your Laravel project is installed. This is typically located within the htdocs directory of your XAMPP installation.
5. Open the command prompt or terminal and navigate to your project directory using the ‘cd’ command: cd C:\xampp\htdocs\traders
6. Install Composer Dependencies. Run the following command to install the PHP dependencies specified in your Laravel project’s ‘composer.json’ file: composer install
7. If your project doesn’t have a ‘.env’ file, you need to create one. You can copy the ‘.env.example’ file and rename it: cp .env.example .env
8. Run the following command to generate an application key for your Laravel application:

`Php artisan key:generate`

9. If your project uses a database and has migrations, you may need to run them to set up the database schema: `php artisan migrate`
10. Laravel provides a development server that you can use to serve your application locally. Run the following command: `php artisan serve`
11. Once the setup is done, open your web browser and navigate to '<http://localhost:8000>' then you will see your Laravel application running.

Roadmap

A project roadmap provides a visual summary of a project's objective without delving into specific details, presenting outcomes along a timeline. It acts as a strategic overview of the project's progress and offers a glimpse into how the system will evolve in the coming years. Here shows the Traders roadmap:

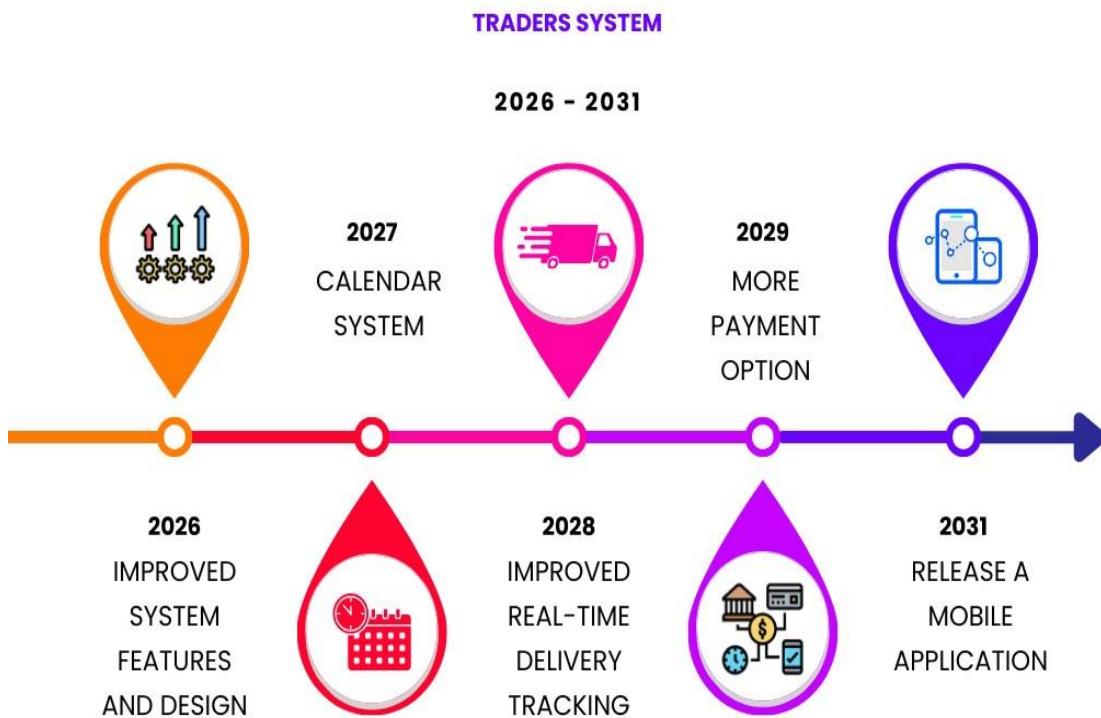


Figure 105: Roadmap

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EDUCATION	YEAR GRADUATED
CEBU TECHNOLOGICAL UNIVERSITY – MAIN CAMPUS <i>College</i>	In progress
UNIVERSITY OF CEBU – BANILAD <i>Senior High School</i>	2020
TALAMBAN NATIONAL HIGH SCHOOL <i>Junior High School</i>	2018
DOVER ACADEMIC CENTER FOR EXCELLENCE <i>Elementary School</i>	2014

Field of Study	Bachelor of Science in Information System		
Relevant Work Experience	None		
Skills / Qualifications	Computer Skills: <ul style="list-style-type: none"> • Well verse in Microsoft Word, Microsoft Excel, and Microsoft PowerPoint • Css • Html • Python • Java • Php • Mysql 		
Special Awards / Honors / Certificates	<ul style="list-style-type: none"> • With Honors Awardee SY. 2017-2018 • Valedictorian SY. 2013-2014 • Certificate of Completion 2023 - 2024 TESDA (Computer Systems Servicing) 		
Activities & Interests	<ul style="list-style-type: none"> • Chess • Basketball • Online Games • Volleyball • Animes & Movies • Manga & Manhwa 		

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CEBU TECHNOLOGICAL UNIVERSITY – MAIN CAMPUS <i>College</i>	In progress
UNIVERSITY OF CEBU LAPU-LAPU AND MANDAUE CAMPUS <i>Senior High School</i>	2020
MACTAN NATIONAL HIGH SCHOOL <i>Junior High School</i>	2018
SOONG ELEMENTARY SCHOOL <i>Elementary School</i>	2014

Field of Study	Bachelor of Science in Information System
Relevant Work Experience	PRODUCTION WORKER 2021-2022 Production worker with a proven track record of feeding raw materials into machinery, assembling goods on production lines, and monitoring the process.
Skills / Qualifications	Computer Skills: <ul style="list-style-type: none"> • Troubleshooting Computers • Python • HTML • CSS • MySQL • Basic Networking • Information Security
Special Awards / Honors / Certificates	<ul style="list-style-type: none"> • NC 2 (Computer System Servicing) • With Honors (Elementary) • Top 8 in class(Grade 9 and 10) • Top 10 in class(Grade 11 2nd semester) • Top 9 in class (Grade 12 1st semester)

Activities & Interests	<ul style="list-style-type: none">• <i>Swimming</i>• <i>Basketball</i>• <i>Online Games</i>• <i>Installing OS</i>• <i>Building Computers</i>
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EDUCATION	YEAR GRADUATED
CEBU TECHNOLOGICAL UNIVERSITY – MAIN CAMPUS <i>College</i>	In progress
ADVANCE INSTITUTE OF TECHNOLOGY INC. <i>Senior High School</i>	2020
EMD CARMELITE SCHOOL INC. (EAST) <i>Junior High School</i>	2018
MACTAN ELEMENTARY SCHOOL <i>Elementary School</i>	2014

Field of Study	Bachelor of Science in Information System
Relevant Work Experience	None
Skills / Qualifications	Computer Skills: <ul style="list-style-type: none"> • Well verse in Microsoft Word, Microsoft Excel, and Microsoft PowerPoint • Css • Html • Python • Java • Php • Mysql
Special Awards / Honors / Certificates	<ul style="list-style-type: none"> • With Honors Awardee S.Y 2019-2020

Activities & Interests	<ul style="list-style-type: none">• <i>Football</i>• <i>Basketball</i>• <i>Online Games</i>• <i>Volleyball</i>• <i>Animes and Movies</i>
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