

CEY COIR – Enterprise Management System

PROJECT REPORT



SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

IT2080 -INFROMATION TECHNOLOGY PROJECT

Y2_S2_WD_IT_02.01

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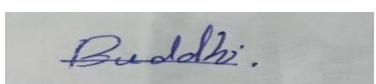
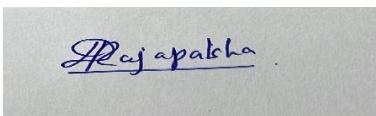
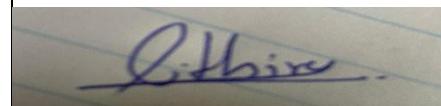
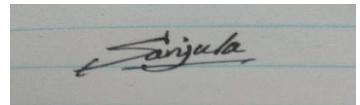
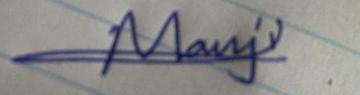
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May 2025

Declaration

This project report is our original work and the content is not plagiarized from any other resource. References for all the content taken from external resources are correctly cited. To the best of our knowledge, this report does not contain any material published or written by third parties, except as acknowledged in the text.

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Abstract

The CeyCoir Product Management System is an online system with the aim to enhance the operating efficiency of CeyCoir Pvt Ltd, a Sri Lanka-based innovative coco coir substrate producer and exporter since 2006. The system, for international hydroponic farmers, horticulturists, and greenhouse cultivators, plugs the gaps in manual product handling by a means of convenient product cataloging through an interface, order management, and generation of quotations. Key functionalities consist of a simplified interface for shopping products like grow bags and coco bricks, proofed order forms, shipping confirmation in real-time, and live PDF report creation for customer quotations. Developed based on Agile methodologies and React, Node.js, and MongoDB technologies, the solution offers scalability, usability, and customization to fulfill diverse client specifications. System testing confirmed all of the functional specifications, and users' feedback underlined the design's intuitive sense and efficient processes. The following report presents the requirements, design, development, testing, and evaluation of the system as proof of its input to CeyCoir's commitment to quality, sustainability, and customer satisfaction in international agriculture.

Acknowledgement

We would like to express our heartiest gratitude to all those who contributed to the success of the CeyCoir Product Management System project. We are most thankful to the Sri Lanka Institute of Information Technology (SLIIT) teaching staff for the motivation and direction provided to us throughout the IT2080 Information Technology Project module. We would like to extend special thanks to our project guide Ms. Geethanjali Wimalaratne for ongoing feedback and encouragement. We would like to express our gratitude to CeyCoir Pvt Ltd for their collaboration, sharing with us insights into their operations, and setting the project requirements. Our team members deserve praise for their dedication, collaboration, and tireless effort in designing, implementing, and testing the system. Finally, we would like to thank our fellow colleagues and families, whose encouragement kept us motivated. This project would not have been possible without the collective efforts of all concerned.

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Introduction

Company Background

A reputable manufacturer of coir and coco peat products in Sri Lanka, CeylonCoir is committed to creating sustainable, high-quality solutions for horticultural and agricultural applications. The company, which specializes in coconut fiber, coco peat, and coconut shell goods, has established a solid reputation in the community for providing reliable and consistently high-quality services.

CeylonCoir oversees all aspects of its production and delivery procedures internally, working out of a sizable production facility with a fully furnished warehouse. To guarantee efficient daily operations and prompt customer order fulfilment, a sizable number of highly qualified workers collaborate in the areas of manufacturing, quality assurance, packing, and logistics.

CeylonCoir provides a diverse clientele in Sri Lanka, including hydroponic growers, home gardeners, plant nurseries, and commercial producers, despite its present emphasis on island-wide shipping. By offering customizable product sizes, packaging choices, and order amounts, the company takes pride in its ability to satisfy a wide range of consumer needs.

CeylonCoir prioritizes lean operations and eco-friendly procedures to reduce waste and advance sustainability. The business is dedicated to quality, efficiency, and client happiness, and it continues to be a vital part of Sri Lanka's expanding horticultural and agricultural sectors.

Client Background

Our primary client, Mr. Pwnimal Bandara, lives in Jayawadanagama, Kalugamuwa, Sri Lanka. He is the proprietor of CeylonCoir, a business that specializes in producing coco peats and coco coir bricks and places a high priority on quality, sustainability, and client happiness. Due to its significant reliance on manual techniques for handling critical company activities, including order tracking, supply chain management, financial records, warehouse stock, and delivery coordination, CeylonCoir currently suffers operational issues. Without centralized digital system, there is data loss, inefficiency, and trouble tracking delivery and inventory in real time. Effectively managing client interactions and producing reliable reports are also hampered by these constraints. To solve these problems, our customer has asked for a computer-based system that would substitute digital platforms for manual paperwork, guaranteeing efficiency, security, and correctness in all corporate operations. By combining Supply Management, Warehouse Management, Financial Management, Customer and Order Management, and Local Delivery Systems into a single, intuitive online application, this project also known as CeylonCoir aims to optimize operations.

Mr. Pwnimal Bandara, the project's principal stakeholder, will be essential to its success by making sure the system supports CeylonCoir's corporate goals and raises productivity levels.

Problem and Motivation

Problem

Without a centralized, automated management system, CeylonCoir now faces major operating issues. The manual handling of crucial business operations, such as order processing, warehouse management, user coordination, financial tracking, and delivery logistics, results in several inefficiencies and delays.

A significant issue is the absence of an automated order and delivery system, which leads to misunderstandings, postponed order fulfilment, and unhappy customers. Ensuring timely delivery and providing consumers with order status updates are challenging without real-time tracking and coordination.

Furthermore, because warehouse operations are not automated, it is challenging to precisely track the movement of raw materials and completed goods as well as check stock levels. This frequently results in problems like shortages, overstocking, and delays in product supply. Unplanned machine downtimes caused by a lack of a maintenance tracking system also have an adverse effect on supply schedules and productivity.

Daily activities are made more difficult by the absence of an organized framework for managing users and employees. When done by hand, job coordination, responsibility assignment, and employee performance evaluation take a lot of time and are prone to mistakes. Internal communication is hampered, and workflows become ineffective as a result.

The company's reliance on manual and fragmented financial records puts it at danger financially. This configuration frequently leads to inaccurate reporting, missed transactions, and data entry errors. Effective budgeting, financial summarization, and income and expense tracking become more challenging, which could lead to long-term financial irregularities.

Furthermore, there are threats to data security when there is no secure digital infrastructure. A heavy reliance on paper records raises the risk of data loss, illegal access, and poor decision-making.

CeylonCoir must implement an integrated digital management system that automates key business processes and offers real-time visibility and control to preserve operational efficiency, guarantee on-time order fulfilment, and enhance customer happiness.

Solution

The CeylonCoir Management System, a centralized web-based application created to automate and optimize all significant business operations, can be used to successfully address CeylonCoir's operational difficulties. Order processing, inventory and warehouse monitoring, staff management, delivery logistics, and financial reporting are all combined into one platform by this integrated system.

The system provides real-time insights into production progress, inventory status, staff performance, and financial transactions by automating data gathering and processing. This increases overall corporate agility and guarantees quicker decision-making.

Key features of the system include:

- **Low Stock Alerts:** Reduces downtime and prevents production delays by automatically detecting when inventory levels drop below the predetermined reorder threshold and alerting the manager to start reordering.
- **Online order and delivery tracking:** Increases transparency and customer satisfaction by allowing employees and customers to track order status and delivery progress in real-time.
- **Employee and User Management:** Enables centralized communication, role assignment, and staff registration. Roles, responsibilities, and employee records are viewable and editable by managers.
- **Monitoring daily staff attendance and automating salary:** Computations based on roles, overtime, and working hours are two functions of attendance and salary management.
- **Machine Maintenance Alerts:** Monitors the use of equipment and plans maintenance notifications to guarantee continuous output and lower the possibility of unplanned malfunctions.
- **Product and Warehouse Management:** Facilitates the addition, modification, and classification of products. Storage space and accessibility can be maximized by arranging items in accordance with assigned warehouse locations.
- **Financial Calculations:** Monitors revenue from sales, raw material costs, and payroll disbursements, among other business expenses. This encourages trustworthy financial planning and open budgeting.

Additionally, the system minimizes the risk of data loss or unauthorized access by promoting secure data handling through robust user authentication and access control.

Benefits

Numerous advantages offered by the CeylonCoir Management System directly address present operational inefficiencies and lay the groundwork for future expansion that is both scalable and sustainable:

- **Automation of Routine Tasks:** Routine task automation speeds up commercial operations like order processing, delivery coordination, and staff payroll while lowering manual labor and human error.
- **Real-Time Monitoring:** To assist managers in making prompt and well-informed decisions, they can view real-time updates on stock availability, pending deliveries, financial status, and machine maintenance.
- **Operational Efficiency:** From acquiring raw materials to delivering the finished product, seamless transitions are ensured via workflow coordination and role-based job allocation.
- **Customer satisfaction:** A better customer experience is achieved by prompt order fulfilment, open communication, and real-time delivery tracking.
- **Financial Accuracy:** Accurate financial control is made possible by integrated financial technologies that enhance revenue analysis, salary management, and spending tracking.
- **Better Team Collaboration:** Attendance monitoring, role-based access, and centralized communication promote improved team accountability and coordination.
- **Data security:** By using encrypted databases and restricted access, sensitive company data is safely kept and safeguarded, lowering the risks connected with manual recordkeeping.

The CeylonCoir Management System is a revolutionary solution designed to meet the unique requirements of the coir manufacturing sector. It enables the business to function more effectively, nimbly, and transparently while establishing the foundation for sustained profitability, sustainability, and market leadership.

Literature Review

This investigation explores current research and developments in Information Management Systems (IMS) as they pertain to coir manufacturing. The review highlights various components relevant to the operations of coir factories, including order management, delivery tracking, stock control, accounting, quality assurance, personnel administration, and machinery maintenance. By identifying key advancements, existing challenges, and potential areas for improvement, the study supports the development of an integrated and efficient Ceylon Coir Management System.

Previous research in similar industries reveals several common obstacles in implementing IMS solutions. Among the most cited issues are insufficient system integration, outdated technologies, and limited functionality tailored to specific industry needs. Coir factories, like many traditional manufacturing sectors, often rely on manual processes that lead to inefficiencies in inventory management, order tracking, and employee coordination. These gaps result in increased operational costs, delays in order fulfillment, and inconsistent product quality.

Furthermore, earlier attempts to digitize such systems have faced problems related to poor data accuracy due to manual entry, lack of system maintenance, and inadequate user training. These factors have been directly linked to reduced system performance and a general distrust in data reliability. Similar to experiences in other agricultural and fiber-based industries, system sustainability is frequently compromised by limited technical support and a lack of continuous improvement strategies.

However, studies suggest that integrated platforms which combine user management, real-time delivery tracking, warehouse control, and financial oversight can significantly enhance operational effectiveness. For instance, inventory management systems that use automated stock monitoring and procurement alerts have proven successful in minimizing waste and optimizing raw material use. These systems also support better quality control by ensuring consistent inputs and tracking production outputs.

To address the specific needs of the coir industry, emerging solutions recommend the inclusion of automated notifications, real-time task assignments, and maintenance tracking to ensure optimal machinery performance. In addition, the integration of financial features enables accurate budgeting, expense tracking, and detailed reporting—facilitating informed decision-making for business growth.

Notably, the need for continuous user training and feedback collection is emphasized across multiple studies. This ensures not only high system usability but also promotes user engagement and accountability. Furthermore, aligning system functionalities with environmentally sustainable practices such as reducing material waste and energy consumption can help coir manufacturers meet global eco-friendly standards.

The objective of the Ceylon Coir Management System is to implement a scalable, user-friendly, and fully integrated IMS tailored to the coir industry. By incorporating features such as real-time scheduling, efficient delivery tracking, warehouse automation, personnel management, and financial reporting, the system aims to boost operational efficiency, reduce waste, and enhance customer satisfaction. Ongoing system evaluation and the inclusion of user feedback will support future scalability and continuous improvement.

Aim and Objectives

Aim

The primary aim of this project is to design and develop an integrated Ceylon Coir Management System that streamlines and automates the core operations of a coir manufacturing business. By consolidating key functions such as order management, delivery tracking, stock and inventory control, financial and accounting processes, personnel management, and quality assurance into a unified digital platform, the system seeks to enhance operational efficiency, improve customer satisfaction, and support environmentally sustainable business practices.

Objectives

- Create a scalable, end-user-friendly Ceylon Coir Management System that meets the demands of the coir manufacturing industry.
- Integrate key operation into one system, including user and employee management, order and delivery management, maintenance and machinery management , warehouse management and financial management system.
- Reduce waste for the purpose of quality by managing inventory and procuring raw materials efficiently to maximize resource use.
- Ensure efficient order processing, tracking, updating, and invoicing to raise customer satisfaction.
- To provide accurate and fast order fulfillment, use real-time scheduling and delivery tracking.
- Create accurate inventory tracking systems to increase product availability, minimize stockouts, and optimize inventory levels.
- In order to facilitate detailed reporting, budgeting, and financial analysis, incorporate financial management features.
- Simplify task assignments, scheduling, and personnel records to maximize worker output and operational effectiveness.
- To satisfy client needs, deliver orders on time and with consistent product quality.
- To guarantee longevity and peak performance, install a maintenance monitoring system for machinery and equipment.
- Reduce order cancellations and streamline production timelines to guarantee high levels of customer satisfaction.
- To increase productivity and utilization, give system users ongoing training and assistance.
- Continue to track and assess system performance, incorporating user input for incremental enhancements.

Solution Overview

In order to solve the difficulties in managing supplier interactions and raw material tracking, Cey Coir Pvt Ltd automated put in place a sophisticated computerized system to meet all of the company's requirements. The proposed solution also automates raw material collection via QR code scanning, by creating opportunities for manual entries, supplier reporting at the end of the month, and measures against fraudulent acts.

First, the company set a QR code-based system in place, in which each supplier was given a specific QR code. Each Field officer was given a mobile device that allowed them to scan the code and instantly record details like the supplier id, date, material type and their quantity. This reduced dependency on manual records and allowed fast error free data collection.

Still, this system misses an important aspect ranging from the dependency of field officers having QR codes readily available. To fill this gap, a mobile friendly manual entry feature was included which allowed officers to search suppliers by ID or name and record the relevant details manually. This ensured that all raw material transactions could be recorded seamlessly even when QR codes were absent.

In order to improve communication and transparency, reports for each supplier detailing the dates and the quantities of raw materials supplied are automatically prepared on a monthly basis. These reports can be kept for internal references or shared to foster trust and accountability with the suppliers.

Moreover, the system records all entries, both scanned and entered by hand, with the attending officer's details and time of entry. This capability offers an audit trail whenever there is an attempt to look for deviations or anomalies within the data set which decreases the chances of data manipulation or fraudulent activities. Further, an overriding tracking and alert system assists administrators in detecting entry omissions or suspect activities.

All gathered information is kept in one place, which makes it easy for the administrators to search for information, prepare reports, and make decisions quickly. With the digitization of this operational pillar, Cey Coir has streamlined collection of supplier information materials and materials easier and more accurate, while enhancing transparency.

Methodology

A systematic approach is being applied to design the internal information management system of Cey Coir Pvt Ltd. This methodology includes the following major phases: study, requirement analysis, design, implementation, testing, and deployment.

The study phase starts with attempting to define the system's goals and objectives in the form of interviews and discussions with company stakeholders. Information gaps regarding existing processes which are performed manually or through partial automation are obtained, and secondary industry benchmarks are captured to inform the proposed solution. This phase also entails diagnosing the operational obstacles associated with handling products and machinery, order tracking, and warehouse control.

In the requirement analysis phase, user requirements are collected and subdivided into categories of functional and non-functional requirements. Functional requirements encompass user tasks like employee registration, machine repair tracking, product update and order delivery status update. Non-functional requirements include usability, performance, security and availability of the system. Requirements are ranked in order of business priorities, and other constraining factors such as dependencies among other modules are considered.

The design phase forms the complete system architecture which consists of determining hardware, software, and networking requirements. Along with the Hardware, Software, and Network components, a responsive and user-friendly interface is designed with modern web standards to improve UX. The databases are designed to ensure proper and effective data management across all five system modules: User and Employee Management, Product and Machinery Management, Order and Delivery Management, Warehouse Management, and Financial Management. Future systems integration is also considered.

The implementation phase revolves around developing the system according to the design specifications. The front-end is developed in React and Tailwind CSS, while Node.js and Express are used for back-end logic development. In this phase, each module along with the database interface is implemented while ensuring data access and integrity across the entire platform.

When in the testing phase, the entire system undergoes evaluation.

Step by step, each module's individual functions like unit testing are performed. After confirming that each one operates as intended, Integration testing to ensure that the modules can work in tandem seamlessly. Also add User Acceptance Testing (UAT) whereby the end users will validate that the system meets the operational requirements and objectives. Also, check for non-functional requirements (performance and security) to ensure system reliability and data protection.

Once a system moves through the necessary testing, check that all the other requirements are met, only then should you move to the next phase, which is deployment. During deployment, the newly enhanced system is introduced in the production environment accompanied by the users training and documentation. By providing initial diagnostic technical support, you can enhance the already smooth transition and fix any problems that come up while users are trying to get accustomed to it.

With the requirements set post deployment, the system moves into and under continuous maintenance, monitoring the performance while collecting user feedback and changes to operations for scaling or adaptation. Using such a regulated approach will provide ease, effectiveness, and utmost reliability for the at Cey Coir Pvt Ltd.

Git Repo Link :

<https://github.com/Lithira-Sasmitha/ITP/tree/bugfix>

REQUIREMENTS

Stakeholder Analysis

Requirement analysis

Table 2. 1 functional requirements

Functional Requirement	Stakeholders
Login to the system	Customer/ User and Employee Manager/ Order and Delivery Manager/ Warehouse Manager/ Product and Machine Manager / Financial Manager
Generate report	User and Employee Manager/ Order and Delivery Manager/ Warehouse Manager/ Product and Machine Manager / Financial Manager
Enter details	Customer/ User and Employee Manager/ Order and Delivery Manager/ Warehouse Manager/ Product and Machine Manager / Financial Manager
Search products	Customer
Read product details	Customer/ Order and Delivery Manager
Machine Inventory Management	Product and Machine Manager
Maintenance Scheduling	Product and Machine Manager
Machine Removal process	Product and Machine Manager
Search Machine	Product and Machine Manager
Display Product items	Product and Machine Manager
Delivery process	Order and Delivery Manager
Handle shopping cart	Order and Delivery Manager
Manage scheduled orders	Order and Delivery Manager
Manage Drivers	Order and Delivery Manager
Order tracking	Order and Delivery Manager
Manage checkout process	Order and Delivery Manager
Manage orders	Order and Delivery Manager
Manage Attendance	User and Employee Manager
Manage Employees	User and Employee Manager
Manage employee leave requests	User and Employee Manager
Assign user roles	User and Employee Manager
Track Inventory	Warehouse Manager
Manage Stock	Warehouse Manager
Search items in stock	Warehouse Manager
View progress	Warehouse Manager
Invoicing and payment processing	Financial Manager
Generate QR with payment details	Financial Manager
Manage General Ledger	Financial Manager
Manage Income and Expenses	Financial Manager
Accounts	Financial Manager
View progress through graphs	Financial Manager
Manage Salary	Financial Manager

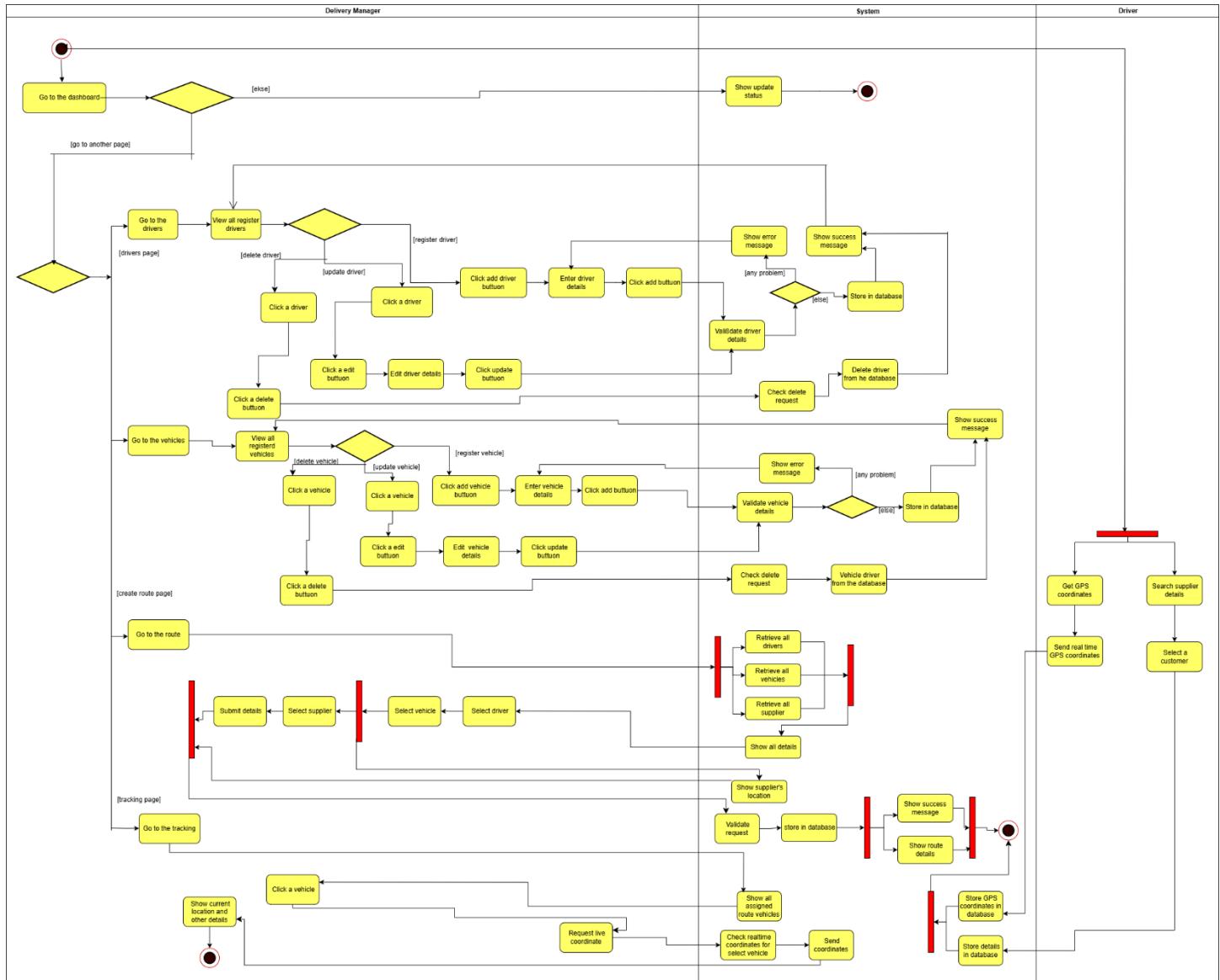
Table 2. 2 nonfunctional requirement

Non-functional requirement	Stakeholder
Availability	User and Employee Manager/ Order and Delivery Manager/ Warehouse Manager/ Financial Manager
Security	Order and Delivery Manager/ Warehouse Manager/ Financial Manager
Usability	User and Employee Manager/ Order and Delivery Manager Product and Machine Manager
Performance	Order and Delivery Manager/ Financial Manager
Accuracy	User and Employee Manager/ Product and Machine Manager / Financial Manager
Maintainability	Warehouse Manager/ Product and Machine Manager
Reliability	User and Employee Manager/ Financial Manager
Efficiency	User and Employee Manager/ Warehouse Manager/
Localization	Order and Delivery Manager/ Product and Machine Manager

Requirements modelling

Activity diagram

IT23308602



II. IT23276932

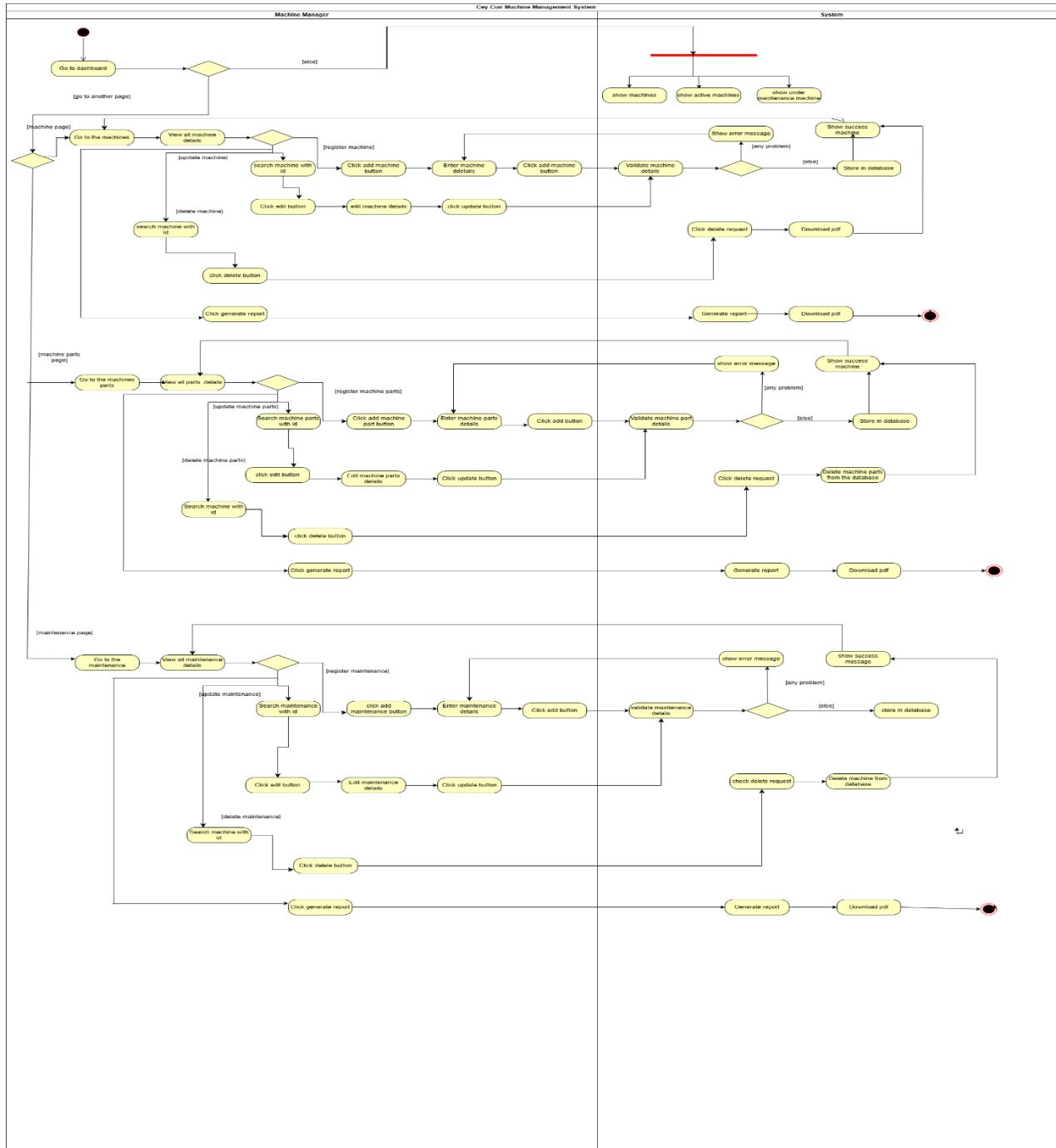


Figure2. 2 activity diagram Raw material transport

III. IT23311640

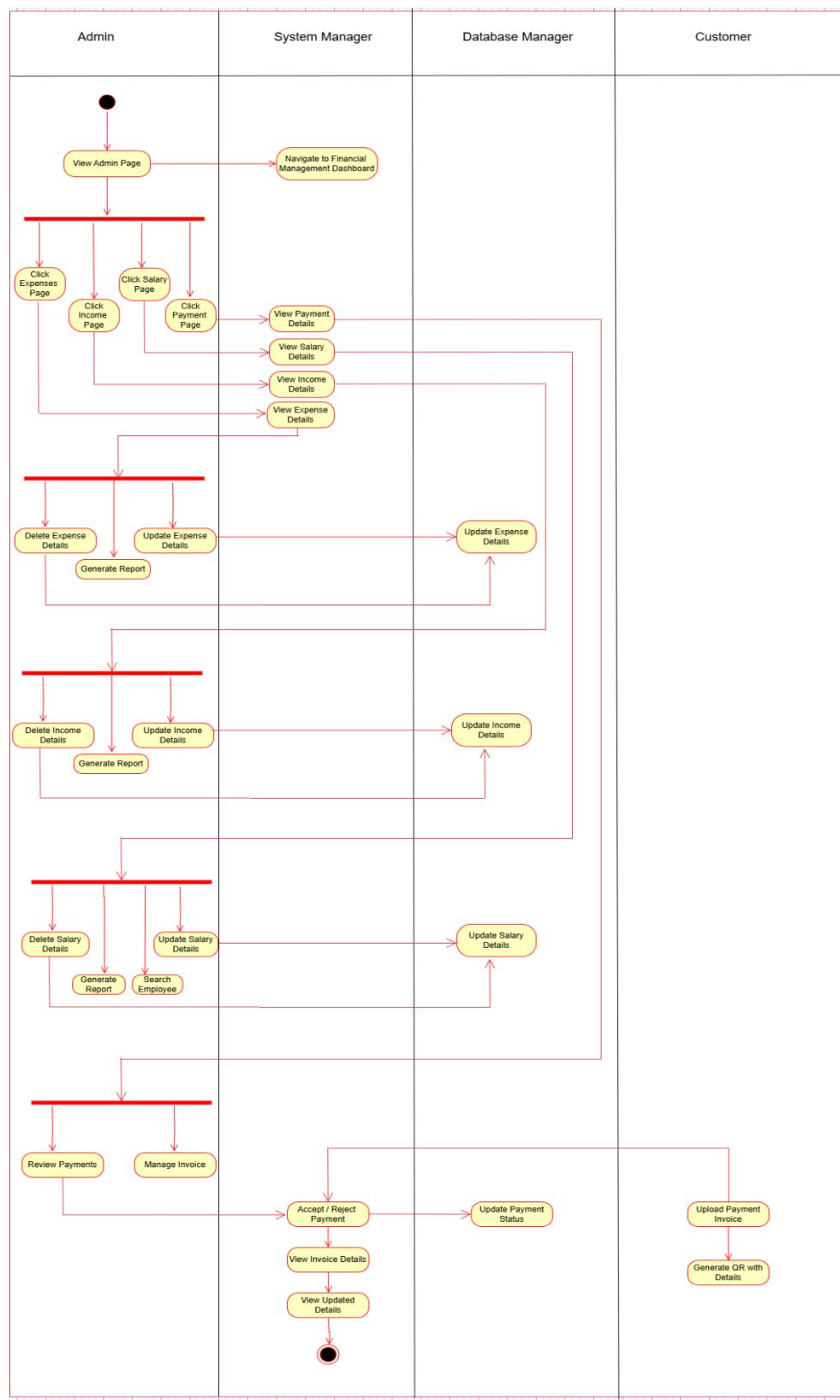


Figure2. 3 activity diagram supplier payment diagram

IV. IT23218062

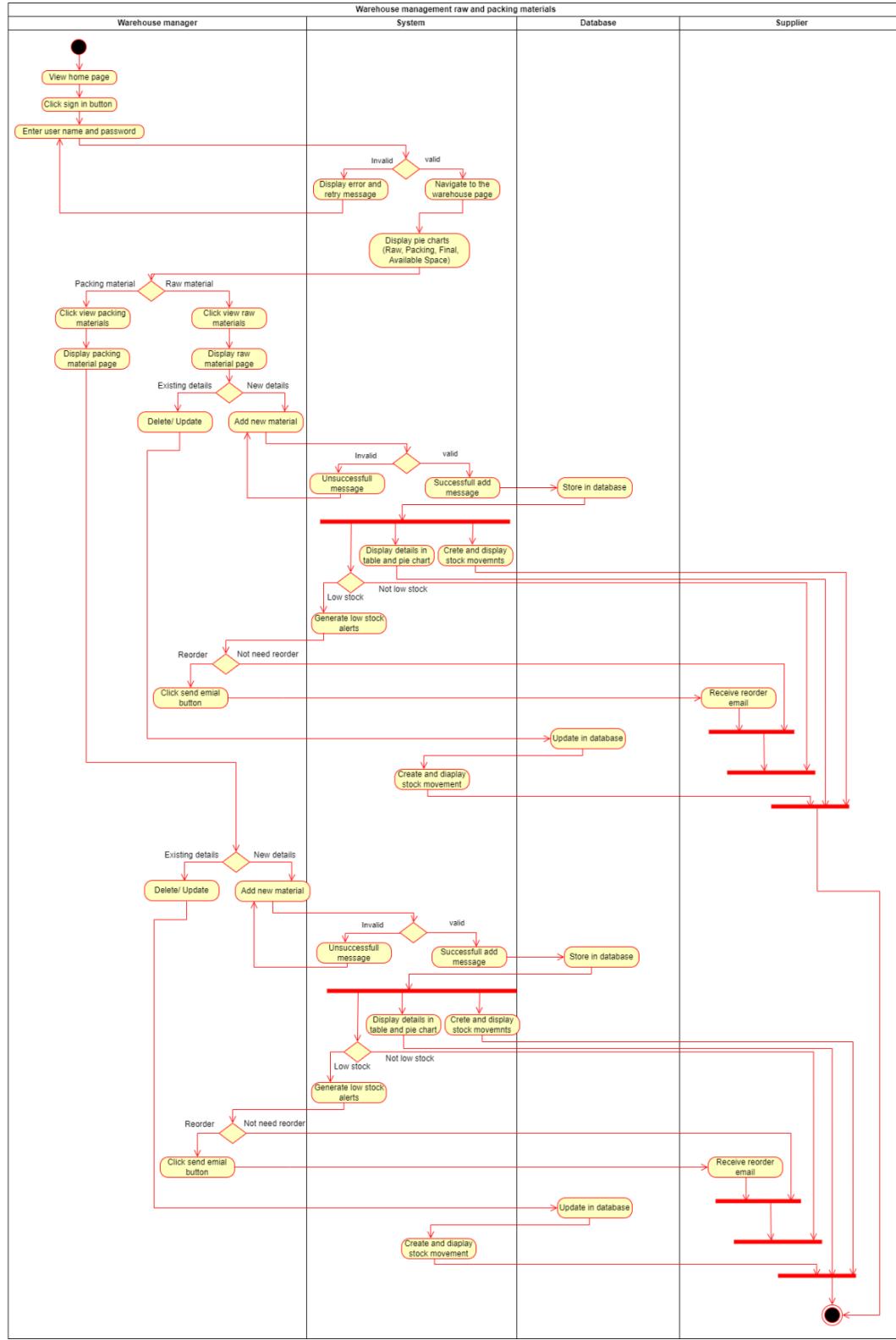


Figure2. 4 activity diagram warehouse management

V. IT23218062

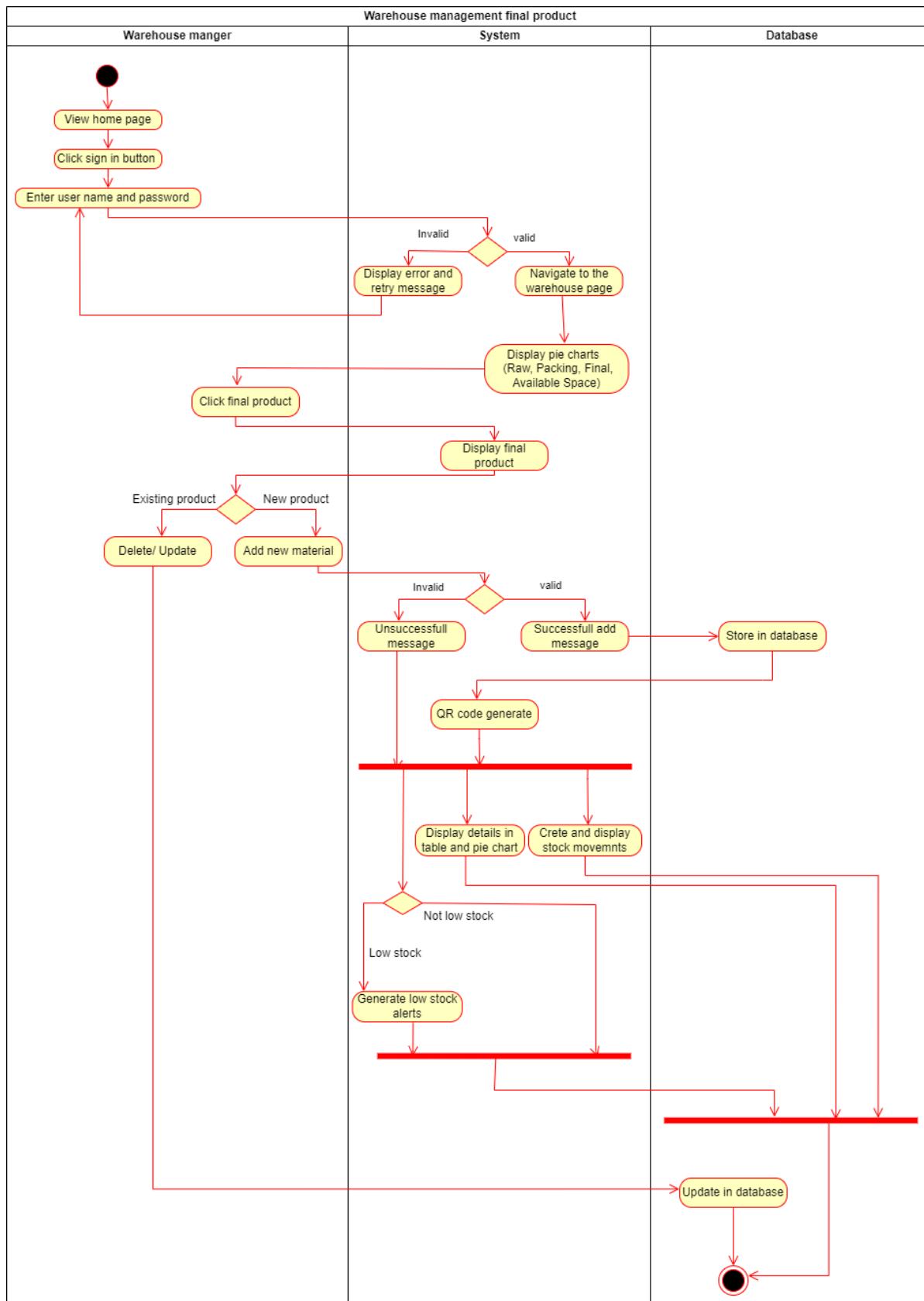
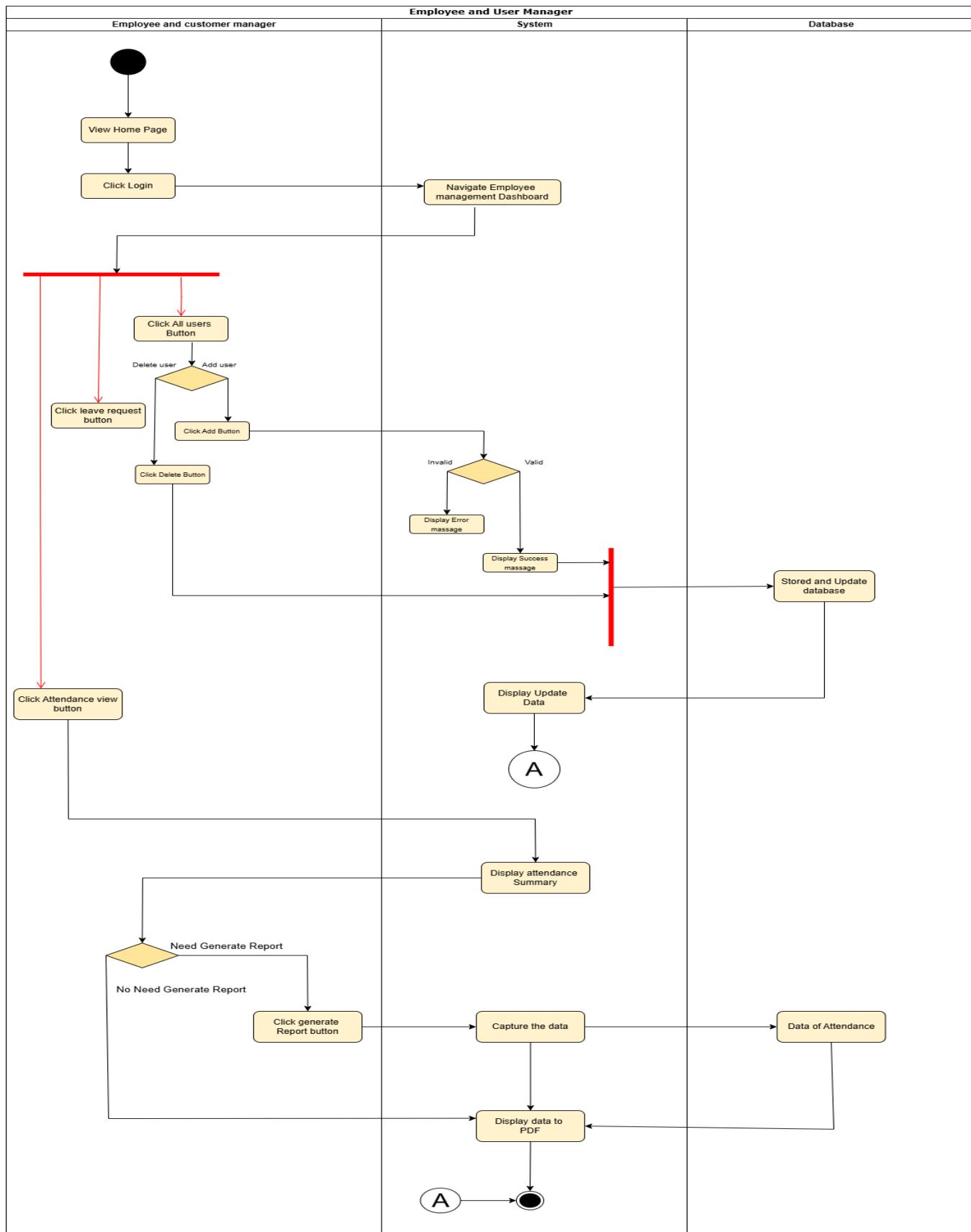


Figure2. 5 activity diagram warehouse management

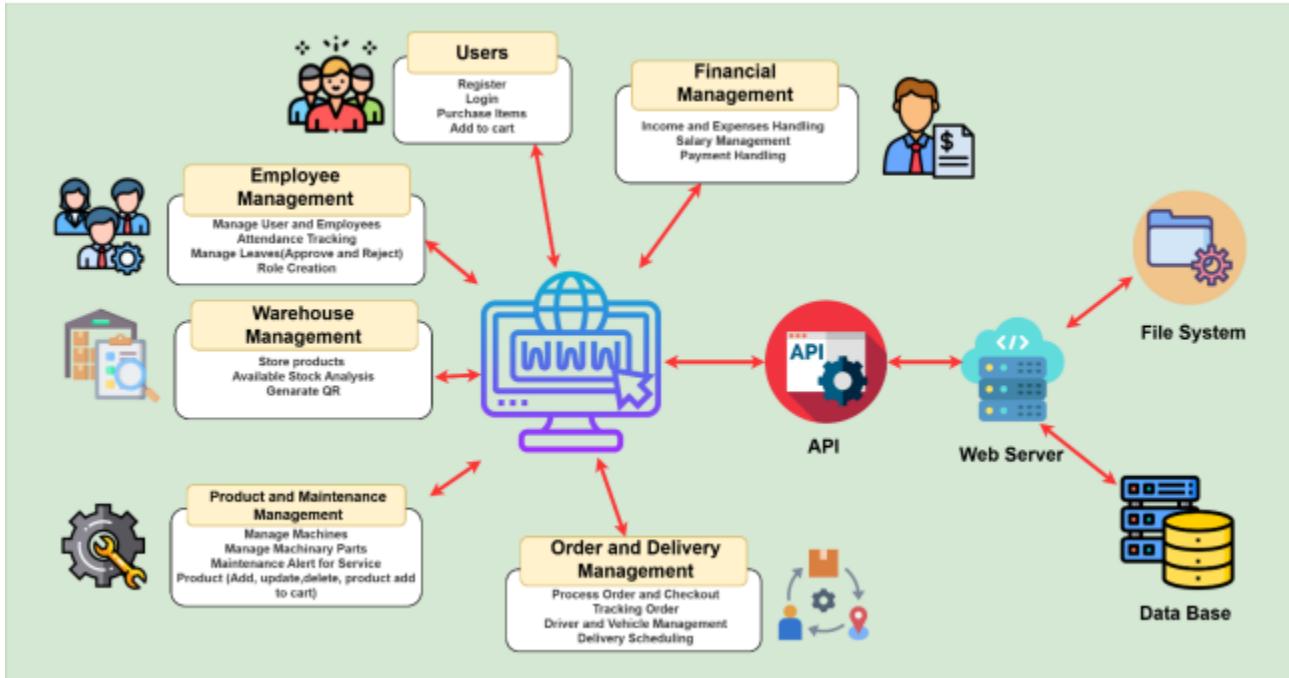
VI. IT23312630



Design and Development

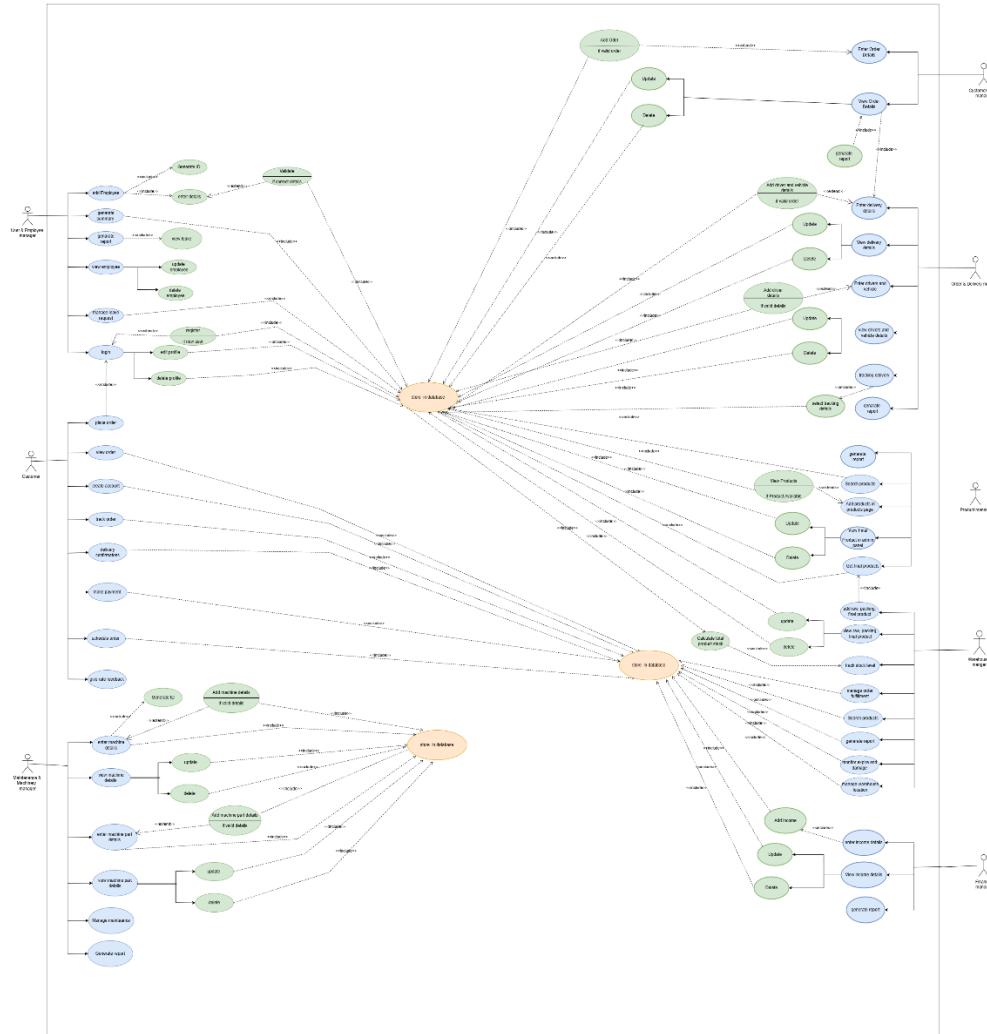
Diagrams Of Components

System overview



Figuren3. 1 system overview

Use case diagram



Figuren3. 2 use case diagram

Class diagram

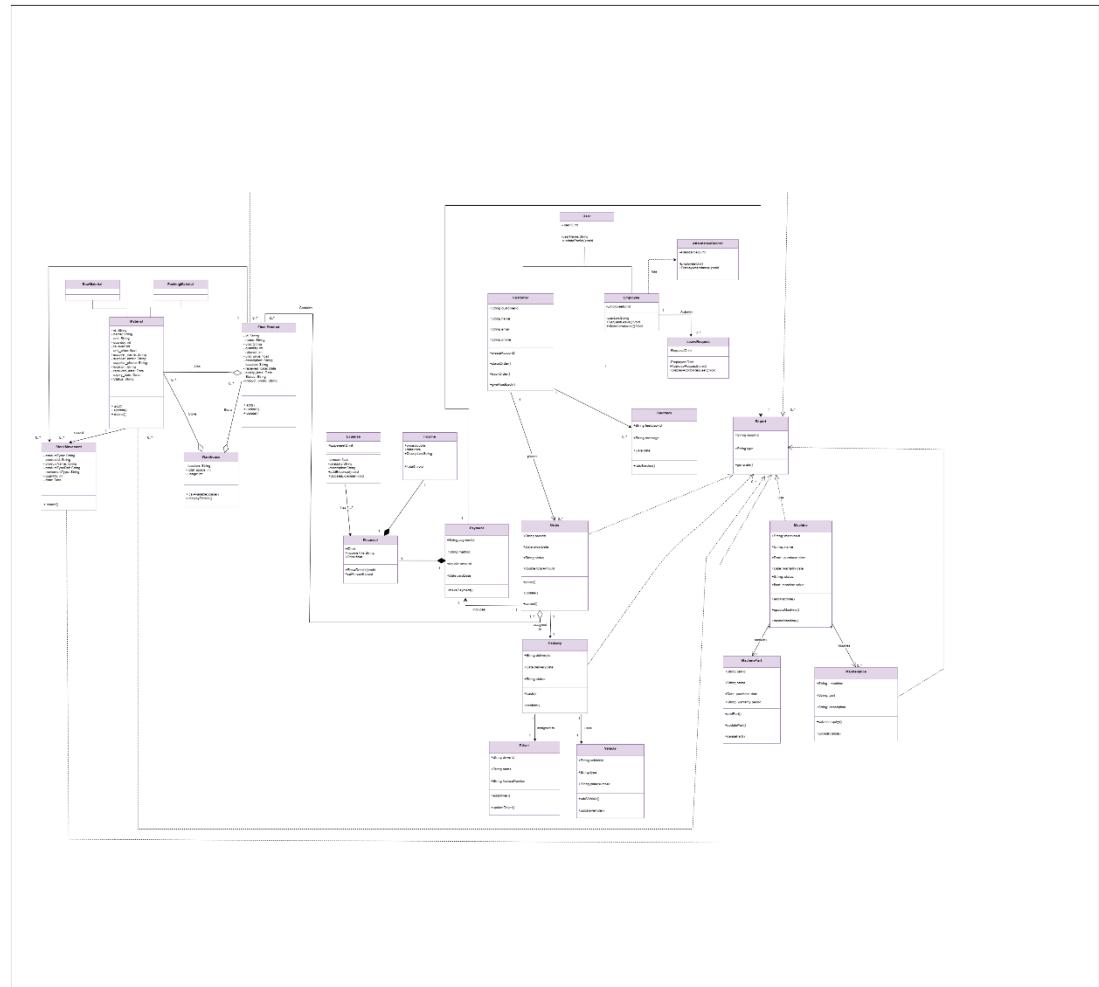
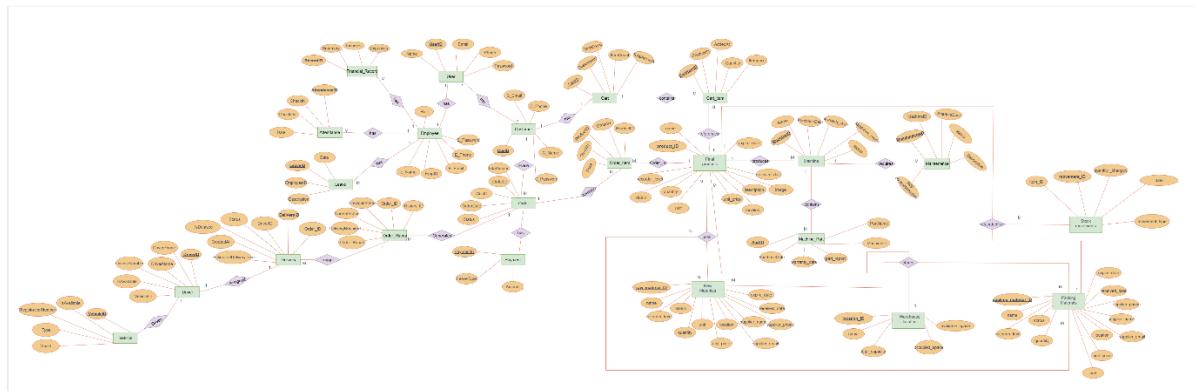


Figure 3.3 class diagram

https://app.diagrams.net/#G1Mt9dQuWnBh7QrdIWp03EEUQFTvXfERla%7B%22pageId%22%3A%22W_Vs5vunVKDDJMBtEz4S%22%7D

ER Diagram



Figuren3. 4 ER diagram

<https://drive.google.com/file/d/1ZkzBsKUj9W76tz8lH3NEokgpDy2xzuuO/view?usp=sharing>

Processes Workflows

Task	February				March				April				May			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Analysis																
Requirement Gathering	Y															
Requirement Analysis		Y														
Preparing Charter Document			Y													
Preparing Proposal Presentation				Y												
Preparing Proposal Document					Y											
SCRUM						Y										
Design																
Proposal Evaluation						Y										
Wireframe Drawing							Y									
User Interface Design								Y								
Database Design (ER)									Y							
Database Development										Y						
Document Design Specifications											Y					
Development																
Develop System Modules												Y				
Integrate System Modules													Y			
Perform Initial Testing														Y		
Progress Evaluation															Y	
Testing																
Perform System Testing																
Debugging																
Implementation																
Final Report Writing																
Final Presentation and Viva																
Final Report Submission																
System Implementation																

Figuren3. 5 grant chat

Database

- Necessary Implementation Details:

MongoDB, Express, React, and Node.js are all components of the MERN stack, which is used to create the CEY COIR – Enterprise Management System. A complete and effective foundation for creating a solid web application is offered by this stack. Due to its scalability and versatility, MongoDB is chosen as the DBMS since it enables the storing and retrieval of data in a document-oriented manner. While React.js's component-based design is in charge of creating the user experience, Express.js takes care of routing and API endpoints. The backend runtime environment, which uses Node.js, enables serverside logic and communication with the MongoDB database.

- Choice of DBMS and Implementation Languages:

CEY COIR – Enterprise Management System chose MongoDB as its DBMS because of its versatility for managing a variety of data types and its capacity to scale as the system expands. Information on products, inventory, orders, quotations, and other topics may be easily stored and retrieved due to its document-oriented data model. The main implementation language for both frontend and backend development is JavaScript. Due to its adaptability and robust ecosystem, JavaScript is a well-liked option for web development. It provides a wide range of libraries, frameworks, and tools that improve development productivity and efficiency.

- Code for Special Algorithms:

Special algorithms are used by the CEY COIR – Enterprise Management System to handle particular features. The Inventory Management Algorithm is one such algorithm that manages numerous inventory-related operations, including monitoring stock levels, adding new inventory items, changing numbers, and creating reports. The algorithm makes sure that inventory management is precise and current, enabling effective supply chain operations. This algorithm's code contains operations for obtaining current inventory, carrying out appropriate computations, and updating the inventory entries in the MongoDB database. The manufacturing Planning Algorithm is another tool used, and it optimizes the manufacturing process based on variables including demand, resource availability, and production restrictions. This algorithm generates the most productive production plan to satisfy demand while reducing resource waste. To create an optimized production plan, which is subsequently saved in the MongoDB database for reference and execution, the production planning algorithm's code uses computations and optimization algorithms. These algorithms enhance the CEY COIR – Enterprise Management System's intelligence and automation, simplifying processes, lowering human labor requirements, and boosting overall effectiveness. To give managers and employees of coir factories access to real-time information and assistance in making decisions, they are created using JavaScript and easily incorporated into the system's design.

TESTING

Test cases and Result

Table 4. 1 Testcase

Testing Function: Order and Delivery Management - Add a New Order										
Test Case ID: ORD001	Test Case Designed By ID: IT23308602 Name: J.A.B.G.Jayawickrama									
Test Priority (High/Medium/Low):	High									
Test Description:	Add a new order (single or bulk) and verify confirmation email									
Preconditions: <ul style="list-style-type: none"> - User must be logged into the system as a customer. - Stock availability must be pre-verified in the system. - Email service must be configured and operational. 										
Test Steps: <ol style="list-style-type: none"> I. Click the Order and Delivery Management module. II. Navigate to the Dashboard. III. Go to the order page. IV. Click "Place New Order" button. V. Enter order details (select Single or Bulk order type). VI. Click "Submit Order" button. VII. Validate order details (e.g., stock availability, dynamic pricing). VIII. Order details are stored in the database. IX. System sends a confirmation email to the customer. X. Show success message on the order page. 										
Pass Conditions:										
Test ID	Test Inputs									
001	Add Order INPUTS: Customer enters order details (e.g., item, quantity, type) and submits	If all details are valid, the system stores the order, sends a confirmation email, and displays a success message. The order page updates with the new order.	The order is stored successfully, email is sent, success message is displayed, and the order page updates correctly.	Pass	Order ID is automatically generated. Email sent and order displayed on the order page.					

Table 4. 2 Testcase

Testing Function: Order and Delivery Management - Auto-Assign Driver										
Test Case ID: DEL001	Test Case Designed By ID: IT23308602 Name: J.A.B.G.Jayawickrama									
Test Priority (High/Medium/Low):	High									
Test Description:	Automatically assign a driver to a delivery based on workload and availability									
<p>Preconditions:</p> <ul style="list-style-type: none"> - At least one order must be in the system with status "Pending Delivery." - Drivers and vehicles must be registered in the system. - Driver availability and workload data must be up-to-date. 										
<p>Test Steps:</p> <ol style="list-style-type: none"> I. Click the Order and Delivery Management module. II. Navigate to the Dashboard. III. Go to the order page. IV. Click "Place New Order" button. V. Enter order details (select Single or Bulk order type). VI. Click "Submit Order" button. VII. Validate order details (e.g., stock availability, dynamic pricing). VIII. Order details are stored in the database. IX. System sends a confirmation email to the customer. X. Show success message on the order page. 										
Pass Conditions:										
Test ID	Test Inputs	Expected Outputs	Actual Output	Result	Comments					
002	Auto-Assign Driver INPUTS: System processes a pending order for delivery assignment	The system assigns a driver based on workload, optimizes the route, updates the status, notifies the driver, and displays a success message.	Driver is assigned correctly, route is optimized, status updated to "Assigned," driver notified, and success message displayed.	Pass	Driver assignment considers workload and availability Route optimization applied successfully					

Table 4. 31 Testcase

Testing Function: Product and Machine Management-Add a New Product with Cart and User View					
Test Case ID: PM001	Test Case Designed By ID: IT23276932 Name: D.O.Rajapaksha				
Test Priority (High/Medium/Low):	High				
Test Description:	Add a new product to the system, attach it to a cart, and allow the user to view the cart				
Preconditions: <ul style="list-style-type: none"> - User must be logged into the system as an admin to add the product. - User must switch to a customer role to access the cart. - Product categories and inventory database must be accessible. - Cart functionality must be enabled in the system. 					
Test Steps: <ol style="list-style-type: none"> I. Click the Product and Machine Management module. II. Navigate to the Dashboard. III. Go to the product page. IV. Click "Add Product" button. V. Enter product details (e.g., name, category, quantity, price). VI. Click "Add" button. VII. Validate product details (e.g., category match, quantity availability). VIII. Product details are stored in the database. IX. Show success message on the product page. X. Switch to customer role and navigate to the product list. XI. Select the newly added product and click "Add to Cart" button. XII. Validate cart addition (e.g., product quantity, price). XIII. Cart details are stored in the database. XIV. Go to the cart page and click "View Cart." XV. Verify cart contents (e.g., product name, quantity, total price). XVI. Show cart summary on the cart page. 					
Pass Conditions:					
Test ID	Test Inputs	Expected Outputs	Actual Output	Result	Comments
001	Add Product INPUTS: Admin enters product details (e.g., "Coir Mat", 100, \$50) and submits; Customer adds product to cart and views it	If all details are valid, the system stores the product, updates the inventory, displays a success message, adds the product to the cart, stores cart details, and shows the cart contents accurately.	Product is stored successfully, inventory updated, success message displayed, product added to cart, cart details stored, and cart contents shown correctly.	Pass	Product ID is automatically generated. Database stores product and cart details. Cart displays product name, quantity , and price . User can view and edit cart contents.

Table 4. 33 Testcase

Testing Function: Product and Machine Management Predictive Maintenance Scheduling for Machines Based on Usage Data										
Test Case ID: PM002	Test Case Designed By ID: IT23276932 Name: D.O.Rajapaksha									
Test Priority (High/Medium/Low):	High									
Test Description:	Predict maintenance needs for a machine using usage data, schedule maintenance, and notify the admin									
<p>Preconditions:</p> <ul style="list-style-type: none"> - User must be logged into the system as an admin. - At least one machine must be registered with usage data (e.g., runtime hours, last maintenance date). - Predictive algorithm (e.g., threshold-based on runtime hours) must be configured. - Notification system (e.g., email or dashboard alert) must be active. 										
<p>Test Steps:</p> <ol style="list-style-type: none"> I. Click the Product and Machine Management module. II. Navigate to the Dashboard. III. Go to the machine page. IV. Select a machine with usage data . V. System analyzes usage data against maintenance threshold . VI. System predicts maintenance need . VII. Schedule maintenance automatically for the next available slot. VIII. Validate maintenance schedule (e.g., date, time, assigned technician). IX. Store maintenance schedule in the database. X. Notify the admin of the scheduled maintenance (e.g., via dashboard alert). XI. Show confirmation message on the machine page. 										
Pass Conditions:										
Test ID	Test Inputs	Expected Outputs	Actual Output	Result	Comments					
004	Predictive Maintenance INPUTS: System analyzes a machine with 500 runtime hours against a relevant hour threshold	The system predicts maintenance is due, schedules it for the next available slot, stores the schedule, notifies the admin, and displays a confirmation message.	System predicts maintenance due in relevant hours, schedules it for the next day, stores details, sends a dashboard alert, and displays confirmation message.	Pass	Prediction aligns with usage data. Admin receives timely notification.					

Table 4. 5 Testcase

Testing function: financial manager:-:Add Income									
Test case ID:FD001		Test case designed by ID: IT23311640 Name: Sasmitha V G L							
Test Priority (High/Medium/Low)		High							
Test description: ADD NEW INCOME									
Preconditions:									
Test Steps-									
VIII. Click the login using relevant credential IX. Navigate to the Dashboard. X. Go to the Income page. XI. Enter income details. XII. Click “Submit” button. XV. Validate user details. XVI. User details store in database. XVII. Show success message.									
Pass conditions:									
Test ID	Test Inputs	Expected Outputs	Actual Output	Result	Comments				
Test_001	Add Income INPUTS	If all of the given information has been verified, pressing the "Submit" button , it will display the Success massage.	The validations are working well. The amount of income is immediately updated separately after adding a new income, the pie chart also automatically updated.	Pass	<ul style="list-style-type: none"> □ The database effectively stores the specified inputs. □ The freshly uploaded user records are appropriately shown on the Dashboard. 				

Table 4. 35 Testcase

Testing function: financial manager:- Add Employee Salary									
Test case ID:FD001		Test case designed by ID: IT23311640 Name: Sasmitha V G L							
Test Priority (High/Medium/Low)		High							
Test description: Add EMPLOYEE SALARY									
Preconditions:									
Test Steps-									
<p>I. Navigate to the profile Dashboard.</p> <p>II. Go to the salary page.</p> <p>III. Click “Add Salary” button.</p> <p>IV. Enter Employee Details. V. Click “Add” button.</p> <p>VI. Validate details.</p> <p>VII. Salary details store in database.</p> <p>VIII. Show success message.</p>									
Pass conditions:									
Test ID	Test Inputs	Expected Outputs	Actual Output	Result	Comments				
Test_001	Add Salary INPUTS	If all of the given information has been verified, pressing the "Add Salary" button , it will display the Success massage.	The validations are working well. The success message will display.Financial manager can search them with any field and get a report as well.	Pass	<ul style="list-style-type: none"> □ Using the search function , can filter details with any field. □ The database effectively stores the specified inputs. 				

Table 4. 36 Testcase

Testing function: Warehouse manager: - Add final product									
Test case ID: WM001		Test case designed by ID: IT23218062 Name: Mohotti W.C.M.S.K.							
Test Priority (High/Medium/Low)		High							
Test description: Add new final product									
Preconditions: <ul style="list-style-type: none"> • The warehouse Manager must be logged in • Access to Dashboard and Final Product section 									
Test Steps <ol style="list-style-type: none"> 1. Login with warehouse manager credentials 2. Navigate to the Dashboard 3. Click “View Final Product” 4. Click “Add Final Product” button 5. Enter product details (name, quantity, unit, price, etc.) 6. Click “Add” button 7. System checks for duplicates 8. Save product if not existing 9. Generate QR code for the product 10. Show success message 									
Pass Conditions <ul style="list-style-type: none"> • Product added successfully • No duplication errors • QR code generated • Product appears in product list • Pie chart and stock levels updated • Create new stock movements (IN) 									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result	Comments				
Test_001	Final product details	Product is successfully saved in the database If product if already exists display error message QR code is generated and displayed Final product pie chart updates	Product entry is available in the database QR code is stored and downloadable Charts reflect new stock status Available space updated and display on dashboard	Pass	Ensure expiry date is in the future and no duplicate product exists All fields fill clearly				

Table 4. 37 Testcase

Testing function: Warehouse manager: - Low Stock Alert and Reorder										
Test case ID: WM002	Test case designed by ID: IT23218062 Name: Mohotti W.C.M.S.K.									
Test Priority (High/Medium/Low)	High									
Test description: System should trigger low stock alert and allow reorder email to supplier when product quantity falls below reorder level										
Preconditions:										
<ul style="list-style-type: none"> • Raw or packing material must exist in the system • Reorder level must be set for the material • Valid supplier email must be configured for the material 										
Test Steps										
<ol style="list-style-type: none"> 1. Login as Warehouse Manager 2. Navigate to "Raw Material Section" 3. Select a material and reduce its quantity below the reorder level 4. Save changes 5. Observe system alert 6. Click "Send Reorder Email" 										
Post Conditions										
<ul style="list-style-type: none"> • System detects quantity drop below record level • Low stock alert is displayed on Raw material page • Email prompt/button appears • Email is successfully sent to supplier 										
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result	Comments					
Test_002	Raw material details	Low stock warning displayed Email reorder option available Email sent confirmation shown	Low stock warning triggered Reorder email sent successfully Raw material page displays warning Email sent confirmation message display Email sent successfully	Pass	The system correctly tracks the recorder level Alert is user-friendly Email sent without delay					

Table 4. 38 Testcase

Testing function: Warehouse manager: - Automated Stock Movement History Test Case									
Test case ID: WM006		Test case designed by ID: IT23218062 Name: Mohotti W.C.M.S.K.							
Test Priority (High/Medium/Low)		High							
Test description: Ensure that the system automatically logs stock movement history (IN/OUT) when raw material, packing material and final product is added, updated, or deleted									
Preconditions:									
<ul style="list-style-type: none"> Final product scheme and stock movement scheme are set up Stock Movement service is integrated User is logged in as Warehouse Manager 									
Test Steps									
<ul style="list-style-type: none"> Login as Warehouse Manager Navigate to "Final Products" Add a new final product Update the quantity of an existing product Delete a product 									
Post Conditions									
<ul style="list-style-type: none"> "IN" record is created when product is added "IN/OUT" record is created correctly on update (based on quantity change) "OUT" record on delete 									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result	Comments				
Test_003	Add new final product details Update final product <ul style="list-style-type: none"> a. Quantity increase b. Quantity decrease Delete final product	Stock movement display IN, IN, OUT, OUT respectively	Stock movement display correctly	Pass	All actions correctly generate automated stock movement entries Data stored and displayed in the movement history UI or logs				

Table 4. 10Testcase

Testing function: Employee and user manager:-Add User								
Test case ID: RT001		Test case designed by ID: IT23312630 Name: Kavishan H K M						
Test Priority (High/Medium/Low)		High						
Test description: Add new user								
Preconditions:								
Test Steps- <ol style="list-style-type: none"> I. Click the login using relevant credential II. Navigate to the Dashboard. III. Go to the All user page. IV. Click “Add User” button. V. Enter user details. VI. Click “Add” button. VII. Validate user details. VIII. User details store in database. IX. Show success message. 								
Pass conditions:								
Test ID	Test Inputs	Expected Outputs	Actual Output	Result	Comments			
Test_001	Add User INPUTS	If all of the given information has been verified, pressing the "Add user" button will display the Success massage.	The validations are working well. The number of users is immediately updated after adding a new user, the all users pie chart automatically updated.	Pass	<ul style="list-style-type: none"> • The User ID is successfully and automatically produced. • The database effectively stores the specified inputs. • The freshly uploaded user records are appropriately shown on the All users page. 			

Table 4. 11 Testcase

Testing function: Employee and costumer manager:- Add leave								
Test case ID: RT002		Test case designed by ID: IT23312630 Name: Kavishan H K M						
Test Priority (High/Medium/Low)		High						
Test description: Add leave request								
Preconditions:								
Test Steps- III. Click the user profile icon IV. Navigate to the profile Dashboard. III. Go to the Leave request page. IV. Click “Add Leave” button . V. Enter Leave details.(date ,reason) X. Click “Add” button. XI. Validate leave details. XII. Leave details store in database. XIII. Show success message.								
Pass conditions:								
Test ID	Test Inputs	Expected Outputs	Actual Output	Result	Comments			
Test_001	Add Leave INPUTS	If all of the given information has been verified, pressing the "Add Leave" button will display the appropriate leave status record.	The validations are working well. The number of leaves is immediately updated after adding a new leave, the leave page is presented, and a success message is displayed summary of leave request on the profile dashboard page.	Pass	<ul style="list-style-type: none"> The Leave ID is successfully and automatically produced. The database effectively stores the specified inputs. The freshly uploaded leave records are appropriately shown on the leave page. 			

EVALUTION AND CONCLUTION

The main aims of the application have been met. All function areas of Cey Coir Pvt Ltd enhanced efficiencies with real-time updates and single source digital records, enhanced information systems can increase efficiencies in inventory management with better information and less chances of over/under ordering with the ability to order inventory in a timelier and more timely manner.

In the Product and Machinery Management module the applications' real-time approach is helpful with scheduling and planning maintenance, which minimizes equipment downtime and increases productivity. The Order and Delivery Management system provides visibility to the customers' real order status and also allows for true tracking of orders processed and delivery, improving customer satisfaction. The Warehouse Management module improves inventory utilization and efficiency by tracking inventory stock visibility, reducing the chance of error to as little manual processes as possible. Financial transaction recording systems are more accurate and transparent and thus improve financial controls and budgeting.

Not long after this, the challenges of depending on an internet connection still exist. The developer has a potential solution with offline capabilities that would sync the accumulated data with the server when internet connectivity is restored. Furthermore, the ability to integrate with popular online tools, such as accounting platforms or logistical systems, would further increase organizational efficiency. Furthermore, more extensive user education and customer support would aid in the overall adoption of the system in contributing to the full capabilities.

In closing, the internal information management system for Cey Coir Pvt Ltd has improved the caliber of data collected by the company, improved efficiencies in the work processes, and allowed for better decision making. Further improvements, such as offline capabilities, external integration of applications, and further commitment of user education, the system has the potential to be a fully scaled and fully adaptable enterprise solution that can support Cey Coir on its operational and strategic goals for the long-term.

REFERENCES

- 1] Mr. Pawnimal Bandara (the owner) ,CEY- Coir Factory in Kurunegala,pawnimalbandara@gmail.com,0373984146

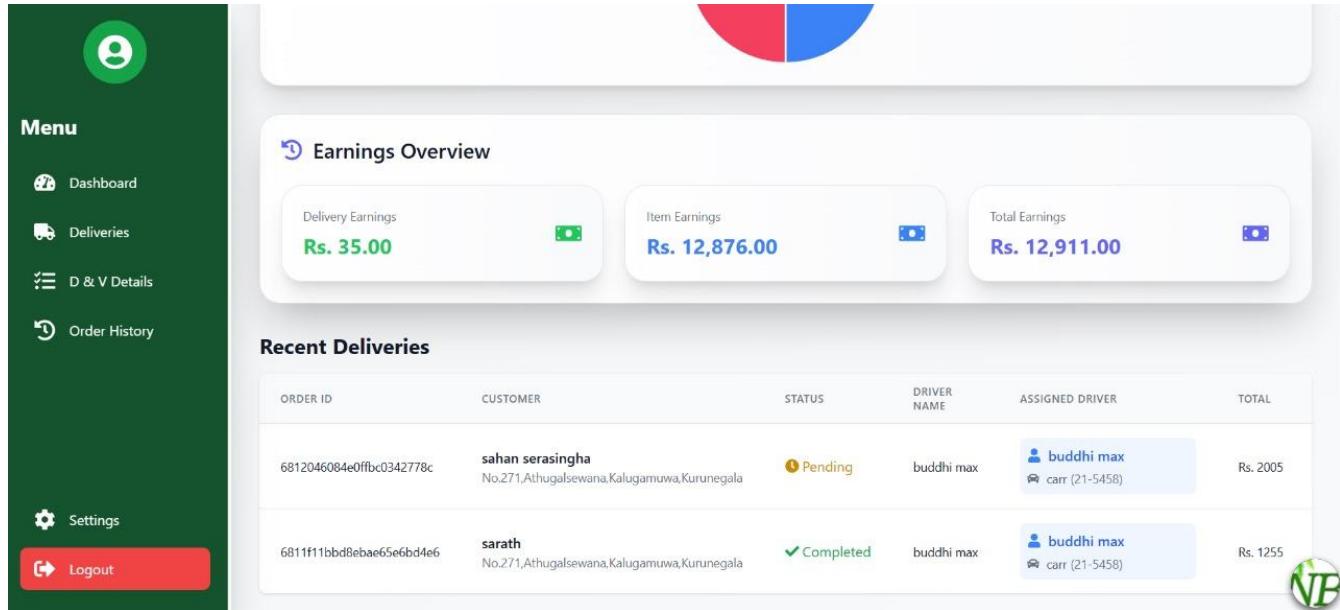
User Interfaces

IT23308602

The image displays two versions of a mobile application interface for 'Order & Deliver Home'.
Top Screenshot (Welcome Screen):
 - **Header:** 'My Profile' button in the top right.
 - **Left Sidebar (Menu):** Includes 'Dashboard', 'Deliveries', 'D & V Details', 'Order History', 'Settings', and 'Logout' (red button).
 - **Main Content:** 'Welcome to Order & Deliver Home' in large green text, followed by 'Your one-stop solution for all your delivery needs' in smaller white text.
 - **Bottom Right:** A black bar with 'Hi! What can I help you with?' and a circular profile icon.
Bottom Screenshot (Order & Deliver Dashboard):
 - **Header:** 'Order & Deliver Dashboard' and 'Order & Delivery Management Overview'.
 - **Left Sidebar (Menu):** Same as the top screen.
 - **Main Content:**
 - **Metrics:** Four cards: 'Total Deliveries' (2), 'Pending' (1), 'Completed' (1), and 'Delayed' (0).
 - **Delivery Status:** A pie chart showing 'Completed Deliveries' (blue) and 'Other Deliveries' (red).
 - **Bottom Right:** 'Hi! What can I help you with?' and a circular profile icon.

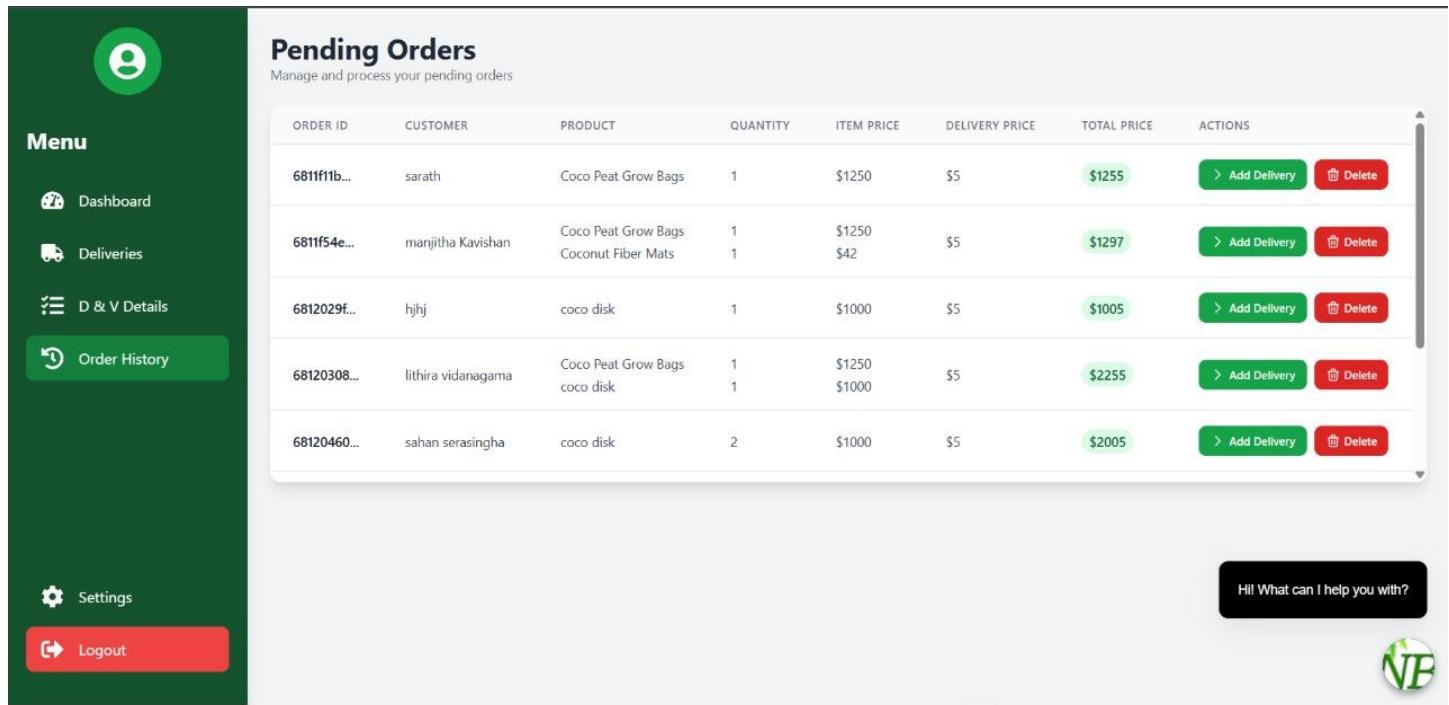
Figuren3. 6 interface

This order management dashboard provides a centralized view of all customer orders, displaying key metrics such as pending, processing, and delivered orders. It allows the Order and Delivery Manager to monitor order statuses in real-time, filter orders by type , and access detailed order information for efficient processing. This page allows customers and managers to monitor the real-time status of orders, including estimated delivery times and driver assignments. The interface provides transparency by showing order progress and supports notifications for updates.



Figuren3. 7 interface

The driver assignment interface automates the allocation of drivers to pending deliveries based on workload and availability. It displays driver schedules, optimizes delivery routes, and sends notifications to drivers, enhancing the efficiency of the delivery process.



Figuren3. 8 interface

The pending order interface displays a success message after a new order is submitted, summarizing order details such as product, quantity, and total price. It also provides a link to track the order and confirms that a confirmation email has been sent to the customer.

Add New Delivery

create a new delivery record for order tracking

Order Information

Order ID	ORD329818	Order Date	2025/04/12
Confirm Order Date	05/06/2025	Order Status	Success

Customer Information

Customer Name	Dewmi Rajapakshe	Telephone	0717071306
Address	no.271,ethugalsewana		
Postal Code	60096	Delivery Status	Pending

Pricing Details

Quantity	One Item Price
2	\$ 12
Items Total Price	\$ 56
Delivery Price	\$ 2
Total Price:	\$ 04

Customer Information

Customer Name	Dewmi Rajapakshe	Telephone	0717071306
Address	no.271,ethugalsewana		
Postal Code	60096	Delivery Status	Pending

Pricing Details

Quantity	One Item Price
2	\$ 12
Items Total Price	\$ 56
Delivery Price	\$ 2
Total Price:	\$ 04

H! What can I help you with?

NB

Figuren3. 9 interface

The add delivery interface displays a success message after a new order is submitted, summarizing order details such as product, quantity, and total price.

The screenshot shows the 'Delivery Management' interface. On the left is a dark green sidebar menu with icons for Dashboard, Deliveries, D & V Details, Order History, Settings, and Logout. The main area has a light green header with the title 'Delivery Management' and a subtitle 'Manage and track all deliveries'. Below the header is a search bar with placeholder text 'Search Deliveries by Order ID'. A message '2 deliveries found' is displayed above a table. The table has columns: ORDER ID, DATE, CUSTOMER, ADDRESS, POSTAL, TEL, QTY, ITEMS \$, DEL \$, and TOTAL. Two rows of data are shown:

ORDER ID	DATE	CUSTOMER	ADDRESS	POSTAL	TEL	QTY	ITEMS \$	DEL \$	TOTAL
6812046084e0ffbc0342778c	2025-04-30	sahan serasingha	No.271,Athugalsewana,Kalugamuwa,Kurunegala	6009654	0717071306	2	\$2000	\$5	\$2005
6811f11bbd8ebae65e6bd4e6	2025-04-30	sarith	No.271,Athugalsewana,Kalugamuwa,Kurunegala	6009654	0717071306	1	\$1250	\$5	\$1255

A horizontal scrollbar is visible below the table. In the bottom right corner of the main area, there is a black button with white text 'Hi! What can I help you with?'. The bottom right corner of the entire interface features a green circular logo with 'NF' in white.

Figuren3. 10 interface

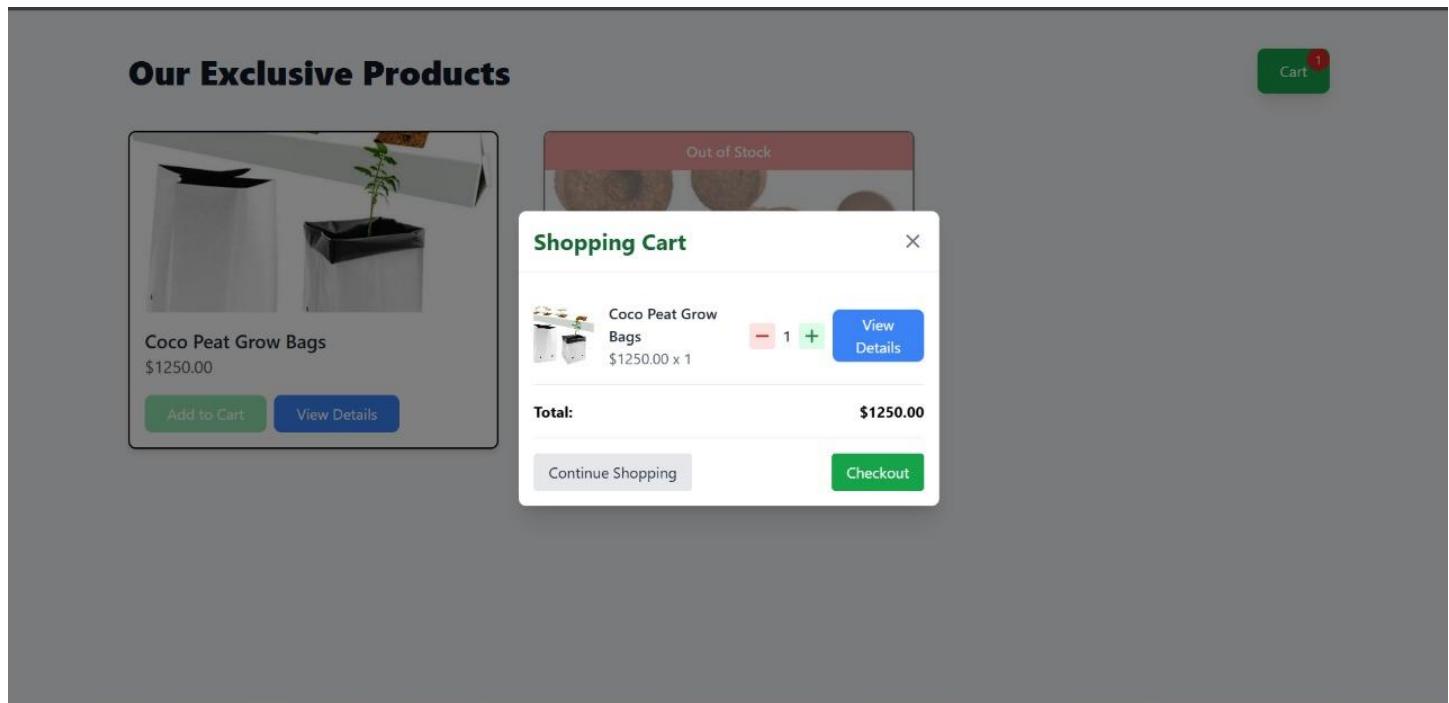
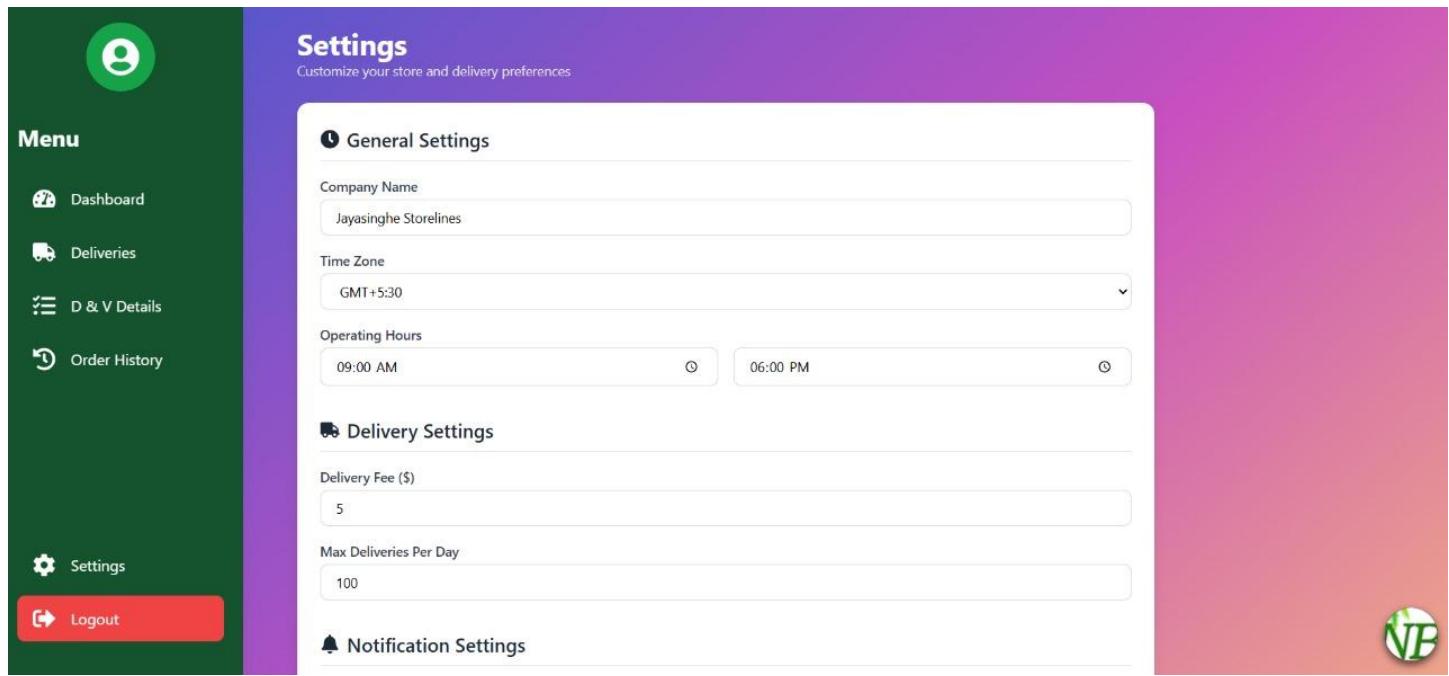
The order status update interface allows managers to manually update order statuses. It ensures accurate communication with customers by syncing updates with the tracking system and sending automated notifications.

The screenshot shows the 'New Driver' interface. On the left is a dark green sidebar menu with icons for Dashboard, Deliveries, D & V Details, Order History, Settings, and Logout. The main area has a light green header with the title 'New Driver'. Below the header is a form for entering driver information. The form is divided into sections: 'Personal Information' and 'Vehicle Information'. The 'Personal Information' section contains fields for Name (with validation 'English letters only'), Date of Birth (format mm/dd/yyyy), and Telephone/Mobile Number (format 07X-XXXXXX). The 'Vehicle Information' section contains fields for Vehicle Registration Number (format 12-1234 or AB-1234 or ABC-1234) and License Number (format 1234567). At the bottom right of the form are 'Cancel' and 'Add Driver' buttons. The bottom right corner of the interface features a green circular logo with 'NF' in white.

Figuren3. 11 interface

This driver registration interface allows the Order and Delivery Manager to add new drivers by entering details such as name, date of birth, telephone/mobile number, and vehicle registration number. It includes validation for English letters only in the name field and

supports submission with an "Add Driver" button, ensuring efficient management of delivery personnel within the CeyCoir Product Management System.



Figuren3. 12 interface

The bulk order management interface facilitates the creation and tracking of large-scale orders for commercial clients. It includes features for bulk product selection, quantity adjustments, and integration with inventory checks to prevent stockouts.

The image displays two screenshots of a mobile application interface for placing an order. The top screenshot shows a confirmation message: "Order Placed Successfully!" with an order ID (681a3d172ca36cdb1f822ee5). It includes sections for Customer Information (Name: Dewmi Rajapakshe, Phone: 0717071306; Address: no.271,ethugalsewana, Postal Code: 60096) and Order Details (Coco Peat Grow Bags: 1 x \$1250 = \$1250.00, Delivery Price: \$5, Total: \$1255). Buttons for "Continue Shopping" and "Proceed to Payment" are present. The bottom screenshot shows input fields for Address (no.271,ethugalsewana), Phone Number (0717071306), and Postal Code (60096). An "Order Summary" section at the bottom lists the same items and total as the top screenshot, with a "Submit Order" button.

Order Placed Successfully!

Order ID
681a3d172ca36cdb1f822ee5

Customer Information

Name Dewmi Rajapakshe	Phone 0717071306
Address no.271,ethugalsewana	Postal Code 60096

Order Details

Coco Peat Grow Bags	1 x \$1250 = \$1250.00
Delivery Price	\$5
Total	\$1255

Continue Shopping **Proceed to Payment**

Address
no.271,ethugalsewana

Phone Number
0717071306

Postal Code
60096

Order Summary

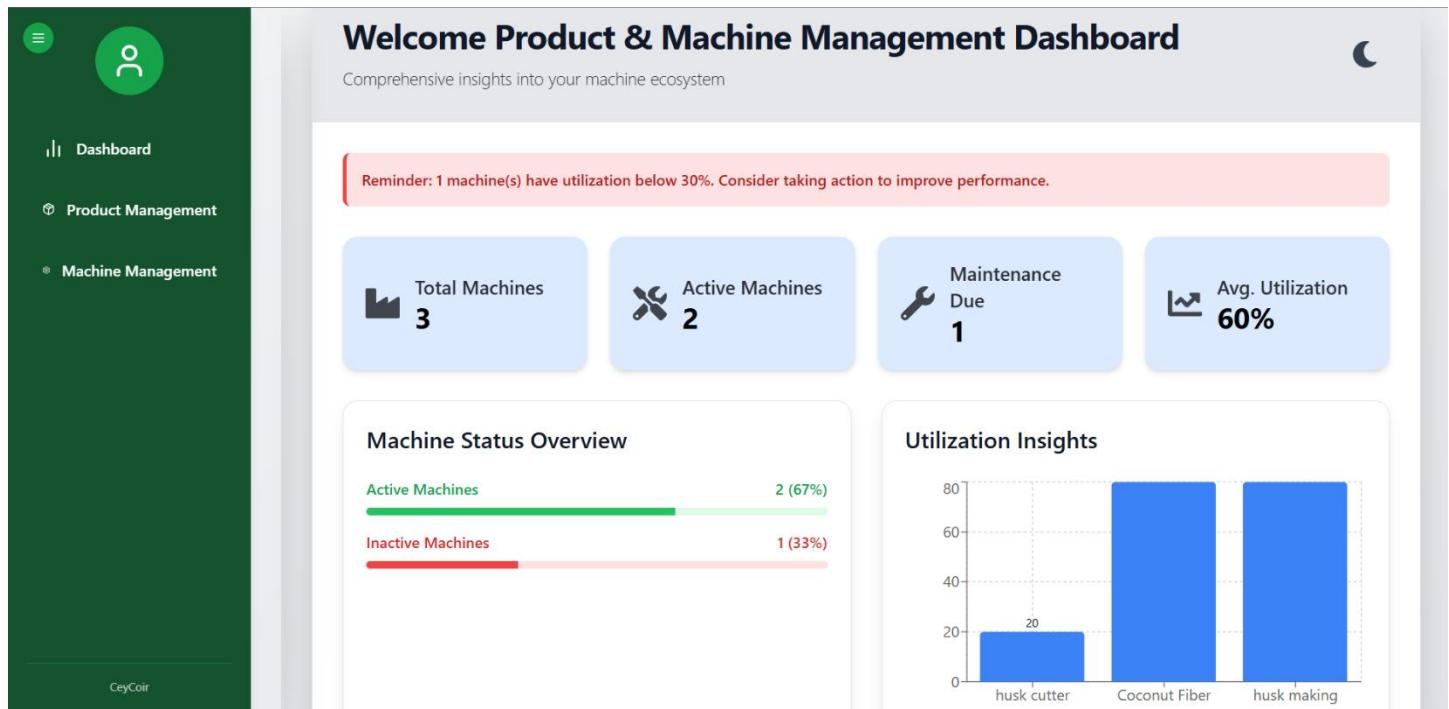
Coco Peat Grow Bags	1 x \$1250.00 = \$1250.00
Delivery Price	\$5
Total	\$1255

Submit Order

Figuren3. 13 interface

This customer order summary page provides a detailed view of a specific order, including product details, delivery address, and payment status. It supports actions like order cancellation or modification, enhancing customer control and satisfaction.

IT23276932



Figuren3. 14 interface

The Product & Machine Management Dashboard gives a clear overview of machine operations. It shows total machines, active machines, maintenance due, and average utilization. A warning highlights machines with low performance (below 30%). It includes a status overview with active/inactive machine counts and a chart showing machine utilization for different types. The dashboard also supports easy navigation to Product and Machine Management sections. Overall, it helps track performance, manage maintenance, and improve productivity.

The interface shows a dark green sidebar with a user icon and navigation links for Dashboard, Product Management, and Machine Management. The main area has a search bar "Search final products...". On the left, there are three product cards: "Coconut Fiber Mats" (Price: \$42, Stock: 12, Status: Low), "Coco Peat Grow Bags" (Price: \$1450, Stock: 25, Status: In Stock), and "coco disk" (Price: \$1000, Stock: 21, Status: Out of Stock). On the right, the "Manage Products" section has a heading "Add New Product" and fields for "Product Name" (Coconut Fiber Mats), "Product Price" (42), and "Product Description" (Coco coir grow bags are indeed an excellent choice for plant cultivation, offering a range of). There is also a "Product Image" section with a "Choose File" button and a placeholder "No file chosen".

The screenshot shows a user interface for managing products. On the left, a dark green sidebar contains a user icon, a 'Dashboard' link, a 'Product Management' link (which is currently active), and a 'Machine Management' link. Below the sidebar, the text 'CeyCoir' is visible. The main area has a light gray header with 'Cancel' and 'Add Product' buttons. A 'Product List' section features a search bar and a table with columns for Image, Name, Price, Description, and Actions. The table contains one row for 'Coco Peat Grow Bags' with a price of \$1250.00. The description for this item is a detailed paragraph about coco coir grow bags. Action buttons 'Edit' and 'Delete' are located at the bottom right of the table row.

Image	Name	Price	Description	Actions
	Coco Peat Grow Bags	\$1250.00	Coco coir grow bags are indeed an excellent choice for plant cultivation, offering a range of benefits tailored to the needs of farmers. Plants can be directly planted and grown in coco coir grow bags, simplifying the planting process and eliminating the need for separate containers. This saves time and labor while providing a convenient growing environment for the plants. Here's a more detailed overview incorporating the additional information you provided:	Edit Delete

Figuren3. 15 interface

The "Manage Products" page, a core feature of the Product Management module, integrates seamlessly with the inventory management system to provide a comprehensive solution for product and stock oversight. On the left sidebar, the "Inventory Management Final Product" section fetches and displays real-time details of final products like Coconut Fiber Mats, Coco Peat Grow Bags, and Coco Disk, including their prices (e.g., \$42, \$1250.00, \$1000), stock status (e.g., Low, In Stock, Out of Stock), and quantities (e.g., 12, 25, 21), with a search bar for quick filtering. The right section features an "Add New Product" option with a form layout, allowing users to save new entries via "Add Product" or cancel with "Cancel," without detailing specific input fields. Upon adding a product, its details are automatically updated in the "Inventory Management Final Product" section, ensuring real-time synchronization. Below the form, the "Product List" section presents all products in a table format, showing the image, name, price, description, and actions (Edit or Delete), with a "Download PDF" option for reporting purposes. This page enhances both product management and inventory tracking by combining real-time stock updates with efficient product handling capabilities.

The interface consists of two main sections. The left sidebar is dark green with a user icon, a three-dot menu, and navigation links for Dashboard, Product Management, and Machine Management. The Machine Management link is currently selected. The right section has a light gray header 'Add New Machine'. It contains several input fields with validation stars (*): 'Machine Name' (value: 'husk cutter'), 'Machine ID' (value: '3'), 'Machine Status' (value: 'Active'), 'Purchase Date' (value: '05/09/2025'), 'Warranty Period' (value: '06/06/2027'), and 'Machine Value' (value: '123'). Below the form are 'Cancel' and 'Add Machine' buttons. The bottom section shows a 'Machine List' table with one row:

Name	ID	Status	Purchase Date	Warranty Date	Value	Actions
husk cutter	3	Inactive	4/1/2025	6/17/2026	\$1234	<button>Edit</button> <button>Delete</button>

Below the table is a 'Download PDF' button.

Figuren3. 16 interface

The Add New Machine page is part of the Machine Management module. It allows users to input details of a new machine, including the machine name, ID, status, purchase date, warranty period, and machine value. After filling in the form, the user can click "Add Machine" to save the record or "Cancel" to discard the entry. Below the form, a Machine List section displays all added machines in a table format, showing their name, ID, status, purchase and warranty dates, and value. Users can also edit or delete existing machine records and download the machine list as a PDF for reporting purposes. This page helps streamline the process of managing and tracking machine information efficiently.

The screenshot displays two pages of the CeyCoir software interface, both featuring a dark green sidebar with navigation links: Dashboard, Product Management, and Machine Management. The top page is titled "Add New Machine Part" and contains fields for selecting a machine, entering part details, and setting a purchase date. The bottom page is titled "Machine Parts List" and shows a table of added parts with columns for Name, ID, Machine, Purchase Date, Warranty Period, Value, and Actions (Edit and Delete).

Add New Machine Part

- Select Machine *
- husk cutter (ID: 3)
- Part Name *
- Oshadi
- Part ID *
- 123
- Purchase Date
- 05/16/2025
- Warranty Period (months) *
- 6
- Part Value *
- 569

Cancel **Add Part**

Machine Parts List

Name	ID	Machine	Purchase Date	Warranty Period	Value	Actions
cutter nails	9	matte cutter	4/1/2025	6 months	\$122	Edit Delete
cutter	10	husk cutter	4/8/2025	6 months	\$122	Edit Delete
cutter	6	husk cutter	4/2/2025	3 months	\$1234	Edit Delete
Oshadi	123	husk cutter	5/16/2025	6 months	\$569	Edit Delete

Download PDF

Figuren3. 17 interface

The Add New Machine Part page is a key feature within the Machine Management module. It enables users to input detailed information about a new machine part, including the selection of a machine, part name, part ID, purchase date, warranty period, and part value. After completing the form, users can click "Add Part" to save the record or "Cancel" to discard the entry. Below the form, the "Machine Parts List" section presents all added parts in a table format, displaying details such as part name, ID, associated machine, purchase date, warranty period, value, and available actions (edit or delete). Additionally, users can download the parts list as a PDF for reporting purposes. This page enhances the efficiency of managing and tracking machine part information effectively.

Dashboard

Product Management

Machine Management

Machine Maintenance

Report machine issues and request support

Report Maintenance Issue

Select Machine *

husk cutter (ID: 3)

Select Part *

cutter (ID: 10)

Issue Description *

arderghyujkkky

Submit Inquiry

Dashboard

Product Management

Machine Management

Update Maintenance Status

Maintenance Inquiry *

Select Inquiry

Maintenance Status *

Select Status

Update Status

Dashboard

Product Management

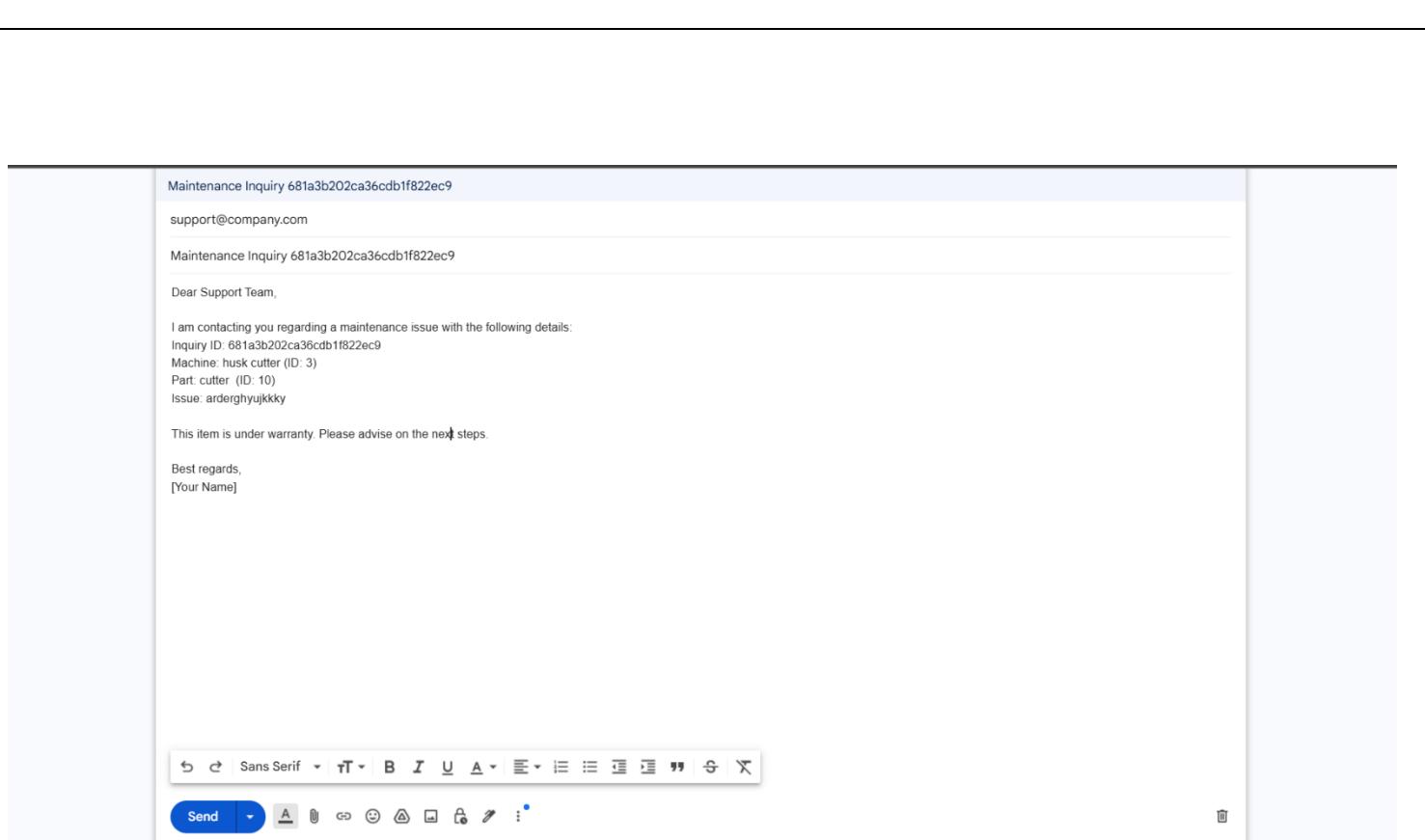
Machine Management

Maintenance Inquiries

Machine Name	Machine ID	Part Name	Part ID	Issue	Warranty Status	Status	Date Submitted	Actions
husk cutter	3	cutter	10	arderghyujkkky	Under Warranty	Complete	5/6/2025, 10:08:56 PM	Delete Send Email
husk cutter	3	cutter	10	braek the machine	Under Warranty	Pending	4/30/2025, 4:47:25 PM	Delete Send Email
husk cutter	3	cutter	10	break down the machine	Under Warranty	Pending	4/30/2025, 3:46:17 PM	Delete Send Email

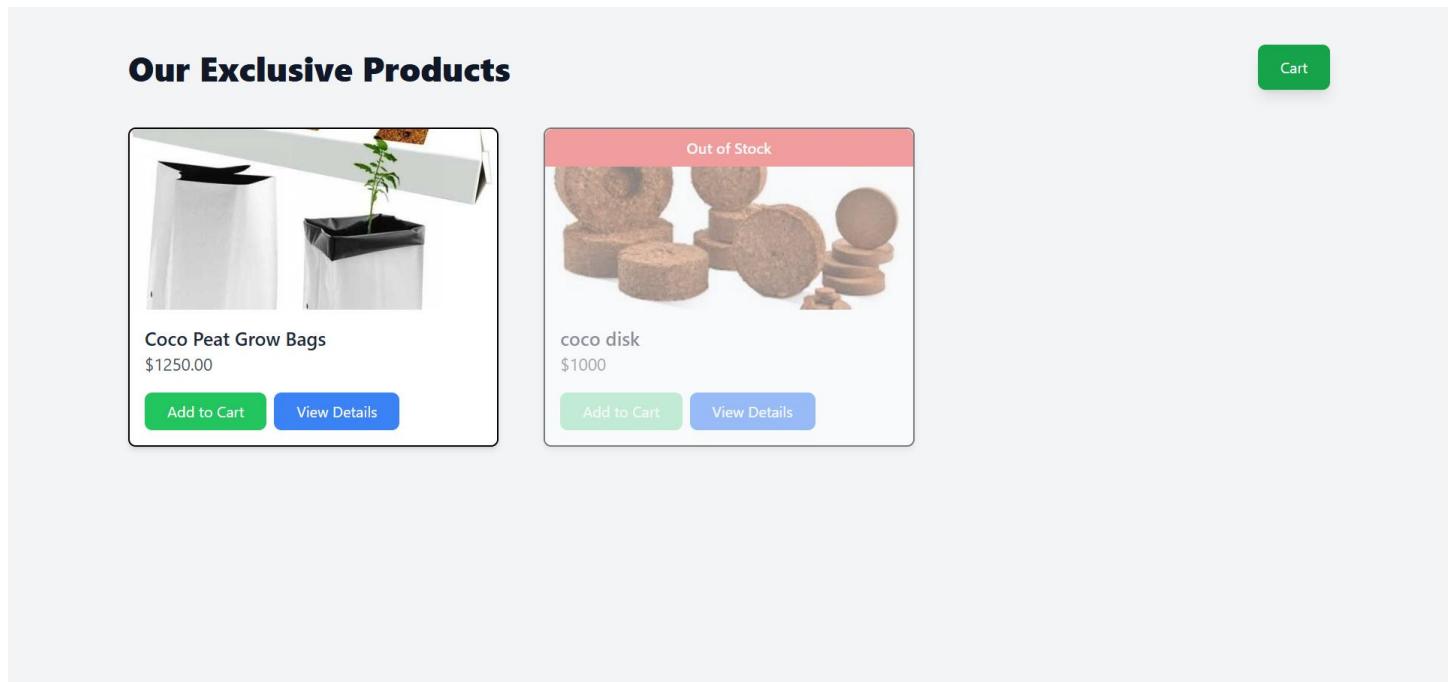
Figuren3. 18 interface

The "Schedule Maintenance" page is an essential component of the Machine Management module, designed to facilitate the scheduling of maintenance tasks for machines. It allows users to select a machine (e.g., husk cutter) and a specific part, input the maintenance type (e.g., routine check or repair), set a scheduled date, and add any additional notes or comments about the task. Users can submit the schedule by clicking "Schedule Maintenance" to save the entry or "Cancel" to discard it. Below the scheduling form, a "Scheduled Maintenance List" section displays all planned maintenance tasks in a table format, showing details like the machine name, part name, maintenance type, scheduled date, notes, and options to edit or delete each task. Additionally, users can download the scheduled maintenance list as a PDF for record-keeping and reporting purposes. This page simplifies the process of organizing and monitoring maintenance activities to ensure timely upkeep of machines and parts.



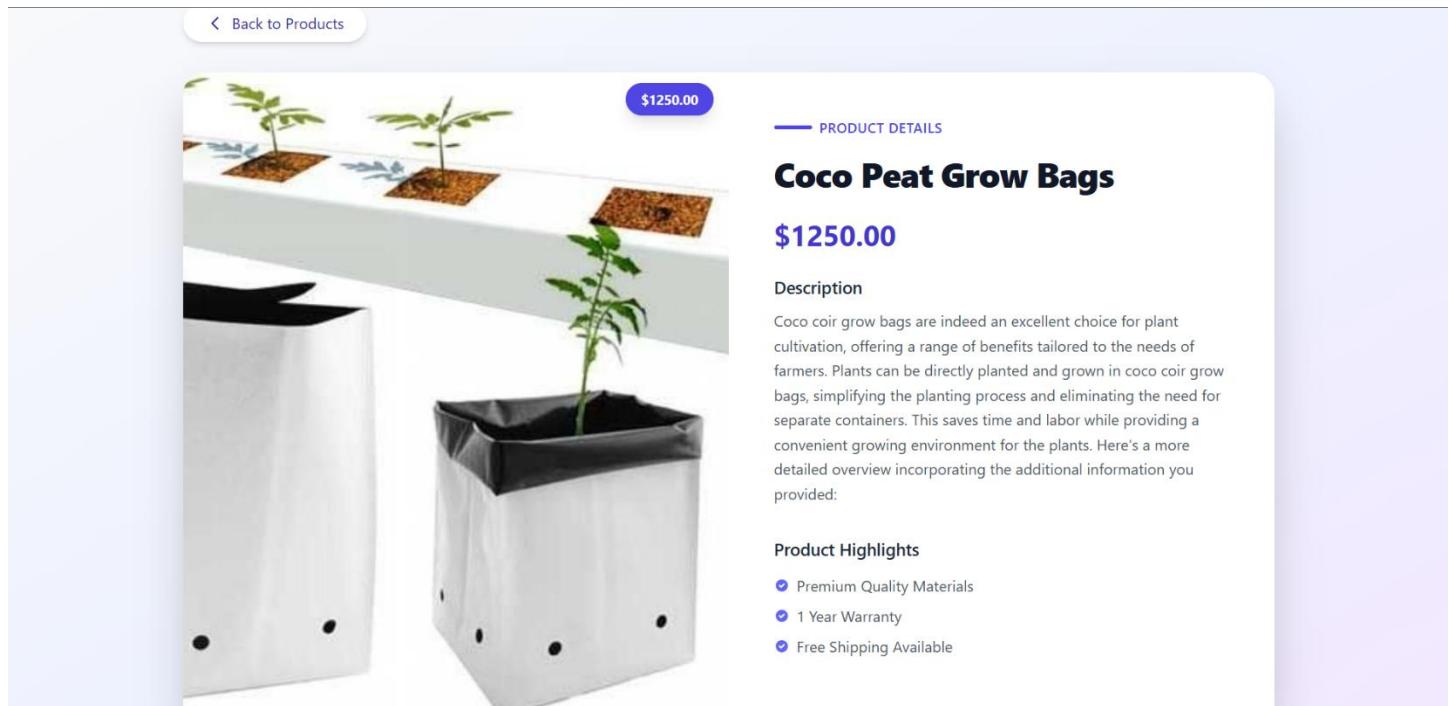
Figuren3. 19 interface

The Maintenance Inquiry Email page is part of the Maintenance Management module. It provides a streamlined interface for sending warranty-related maintenance inquiries to the support team. The page displays a pre-formatted email with recipient address automatically set to support@company.com and subject line containing the unique inquiry ID. The email body includes essential maintenance details in paragraph format, presenting the inquiry ID, machine name and ID, part information, and issue description in a clear, professional manner. Users can review the message content in the preview section before clicking the "Send Email" button to submit their inquiry. This page ensures all critical maintenance information is properly communicated to the support team, facilitating faster resolution of warranty-covered issues and eliminating the need to manually compose emails with the required technical details.



Figuren3. 20 interface

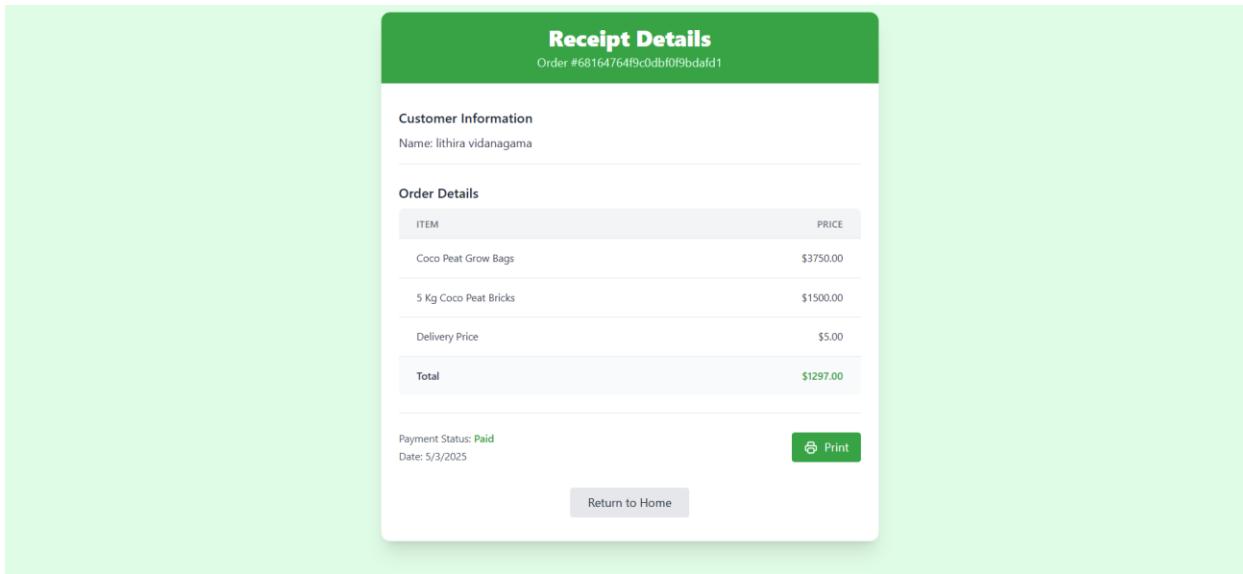
This products view page for customers displays a catalog of available products (e.g., grow bags, coco bricks) with details like name, price, and stock status, integrated with inventory management to highlight out-of-stock items. It allows customers to browse, filter by category, and add products to their cart, ensuring a seamless shopping experience.



Figuren3. 21 interface

specific product, including description, specifications, price, and stock availability, sourced directly from the inventory system. It includes options to add the product to the cart or view related items, enhancing customer decision-making and engagement.

IT23311640



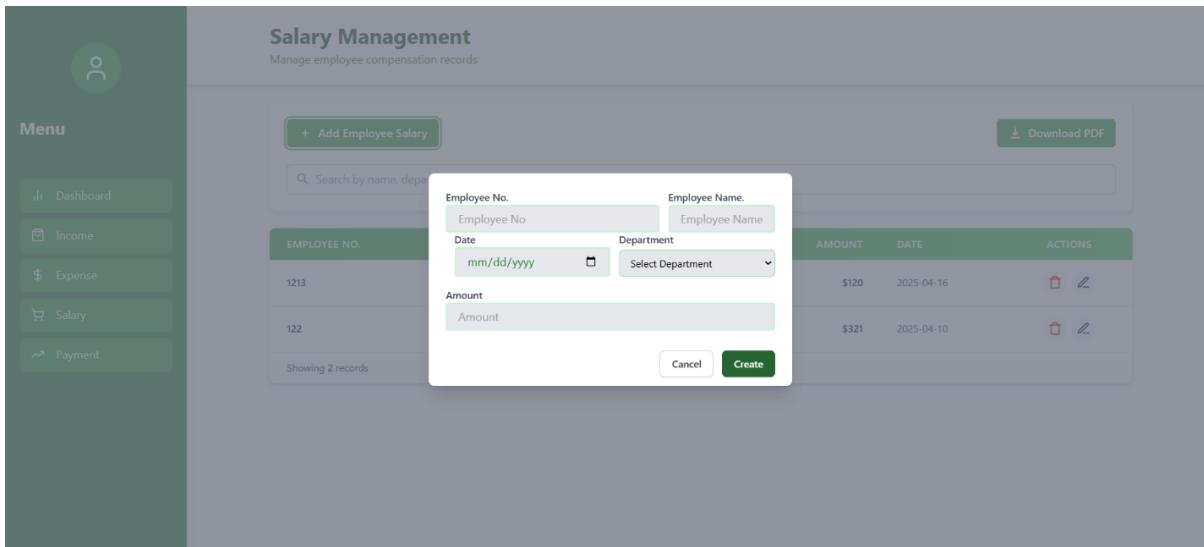
Figuren3. 22 interface

The Receipt Details Interface of the system offers a centralized and organized summary of a customer's completed transaction. Designed for clarity and ease of use, this MERN stack component presents essential purchase details within a clean and structured card layout. At the top, the order number is prominently displayed, followed by customer information for quick reference. The core section outlines the order breakdown, including itemized products, individual prices, delivery charges, and a clearly highlighted total amount. This allows both customers and system users to verify the transaction accurately. Beneath the order summary, the payment status is shown using a clear, color-coded , along with the transaction date to ensure complete transparency. To enhance user interaction, the interface provides two key action buttons "Print" and "Return to Home"—supporting efficient post-purchase processes and seamless navigation. This well-structured layout enables users to confirm purchases effortlessly, promoting a smooth and professional receipt management experience.

Payment Management						
Manage Payment records						
<input placeholder="Search by Name or Order ID..." type="text"/> Download PDF						
ORDER ID	NAME	TOTAL AMOUNT	PAYMENT STATUS	CREATED AT	ACTIONS	
6811d40fd021b7ee5093dcee	lithira vidanagama	131 \$	Complete	4/30/2025	✓ Complete	✗ Rejected
6811eb38fa3d6adc106125c4	sarath	1,255 \$	Complete	4/30/2025	✓ Complete	✗ Rejected
6811f54eb6d11676f26bc074	manjitha Kavishan	1,297 \$	Complete	4/30/2025	✓ Complete	✗ Rejected
68120308f23ed4e0fef4598a	lithira vidanagama	2,255 \$	Pending	4/30/2025	✓ Complete	✗ Rejected
6812046084e0ffbc0342778c	sahan serasingha	2,005 \$	Pending	4/30/2025	✓ Complete	✗ Rejected
68164764f9c0dbf0f9bdafdf1	lithira vidanagama	1,297 \$	Pending	5/3/2025	✓ Complete	✗ Rejected

Figuren3. 23 interface

The Payment Management Dashboard in the Ceylon Coir MERN stack system offers a centralized view for managing and tracking customer payments efficiently. This interface is designed to streamline financial oversight by displaying a dynamic, tabular summary of all payment records in a clear and structured format. At the top, a search bar allows administrators to filter records by name or order ID, ensuring quick access to specific transactions. Below, the table presents detailed information for each payment, including the Order ID, Customer Name, Total Amount, Payment Status, Created Date, and available Actions. Payment status is visually distinguished using color-coded labels—green for "Complete" and yellow for "Pending"—enabling users to assess payment progress at a glance. The Actions column provides interactive buttons to either confirm the payment as "Complete" or mark it as "Rejected", allowing for real-time status updates. Additionally, a Download PDF button at the top-right corner facilitates effortless reporting and record-keeping. With its user-friendly design and actionable components, this interface empowers finance teams to monitor transactions, validate payments, and maintain up-to-date financial records across the system.



Figuren3. 24 interface

The Salary Management Interface in the Ceylon Coir MERN stack system provides a centralized platform for managing employee compensation records. Designed for administrative efficiency, the dashboard displays a structured table of employee salaries along with actionable tools for seamless record handling. At the center of the interface is a modal form that appears when adding a new salary entry. This form captures essential employee details, including Employee Number, Employee Name, Date of Payment, Department, and Salary Amount. A dropdown menu for selecting the department and a date picker enhances user convenience and data accuracy. The main table beneath the form lists all recorded salary entries, showing each employee's number, payment amount, date, and associated action buttons for editing or deleting records. A search bar at the top allows filtering by name, department, or employee number, streamlining navigation across large datasets.

Salary Management
Manage employee compensation records

+ Add Employee Salary Download PDF

EMPLOYEE NO. EMPLOYEE NAME DEPARTMENT AMOUNT DATE ACTIONS

1213	Dewmi	Finance	\$120	2025-04-16	
122	lithiraa	IT	\$321	2025-04-10	

Showing 2 records

Figuren3. 25 interface

The Salary Management interface presents a streamlined employee compensation tracking system with a professional green and white color scheme. The main dashboard displays a clean tabular view of salary records organized by employee numbers, names, departments, compensation amounts, and payment dates. The system offers efficient record management through its intuitive search functionality, the “Add Employee Salary” button for creating new entries, and PDF export option for reporting purposes. Each record in the table includes edit and delete action buttons for quick modifications. A vertical navigation menu on the left provides access to related modules like Dashboard, Income, Expense, and Payment, completing this comprehensive HR management solution designed for straightforward payroll administration and data visualization.

Expense
Manage your finances with ease

Add Transaction

Transaction Name
Enter Your Transaction

Transaction Type
Select Type

Amount
Enter amount

Transaction Date
mm/dd/yyyy

Make Transaction

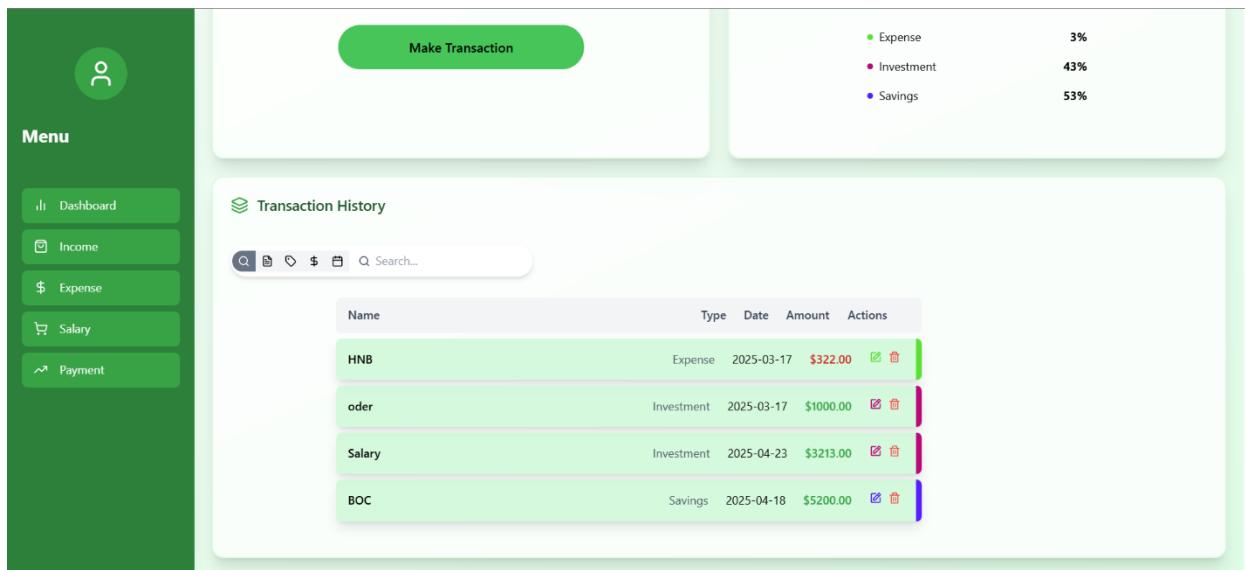
Expense Overview

Total \$9735

Expense: 3% Investment: 43% Savings: 53%

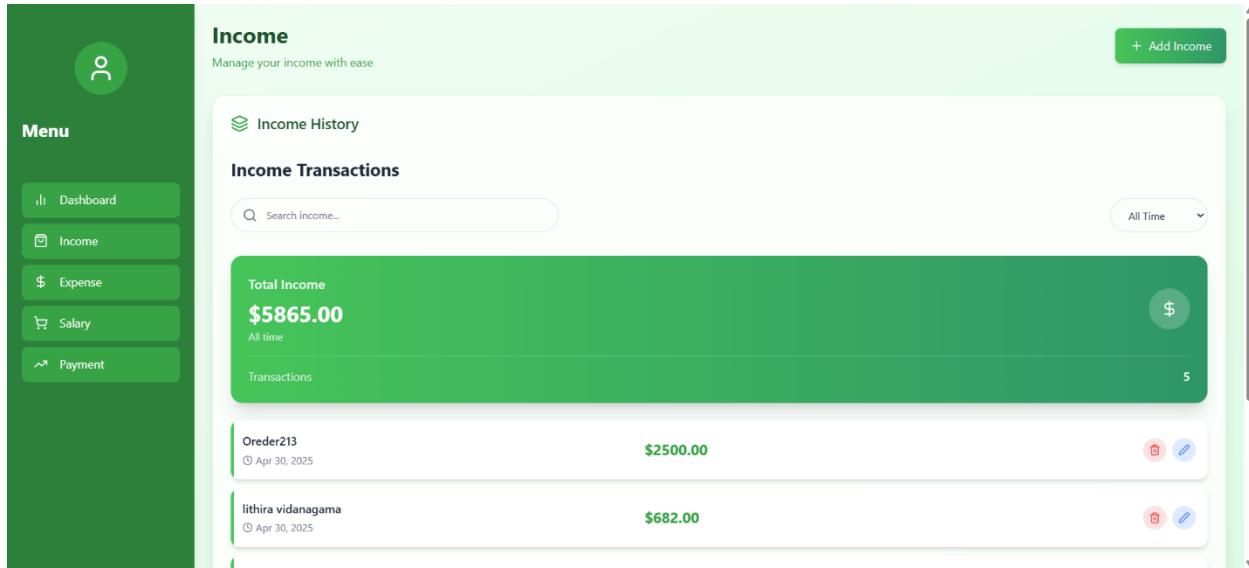
Figuren3. 26 interface

The Expense interface features a clean, dual-panel design with the familiar green navigation sidebar. The left panel contains a transaction entry form titled "Add Transaction" with fields for Transaction Name, Transaction Type (via dropdown), Amount (with placeholder text "Enter amount"), and Transaction Date (with date picker). A prominent green "Make Transaction" button appears at the bottom of the form for submission. On the right panel, an "Expense Overview" section displays a colorful circular progress chart showing the total amount in the center, surrounded by a ring that visually represents different financial categories with distinct colors. The chart includes a legend below that identifies each category with corresponding percentage allocations. This balanced layout provides both data entry functionality and visual financial analytics in a single, user-friendly dashboard, allowing users to both record transactions and immediately see their financial distribution.



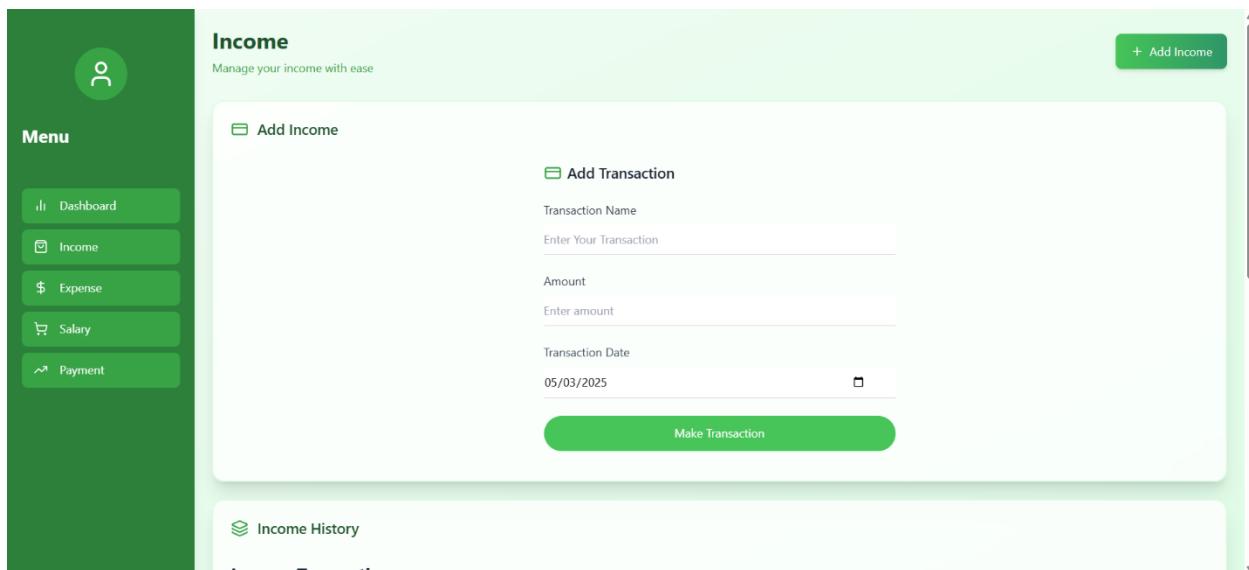
Figuren3. 27 interface

The image shows the lower portion of the Expense interface featuring a "Transaction History" section. At the top of this section is a green "Make Transaction" button and a legend displaying three categories. Below this is a data table with transaction records, accompanied by search and filter tools. The table displays organized columns for Name, Type, Date, Amount, and Actions. Four transaction records are visible in the table, each with a colored vertical stripe on the left edge corresponding to its category type. Each record includes edit and delete action buttons for data management. The familiar green navigation sidebar remains visible on the left side of the interface, providing consistent access to the system's various modules.



Figuren3. 28 interface

The Income interface displays a financial tracking dashboard with the consistent green navigation sidebar on the left. The main content area features a header titled "Income" with the subtitle "Manage your income with ease." In the top-right corner is a green "Add Income" button with a plus icon. Below the header, an "Income History" section displays "Income Transactions" with a search bar on the left and a time filter dropdown set to "All time" on the right. A prominent green summary card shows the "Total Income" along with a transaction count indicator. Below this summary card, individual income transactions are listed as separate cards with transaction names, dates, and action buttons (delete and edit) aligned to the right of each entry. The overall layout provides a clean, organized view of income data with clear navigation and management tools.



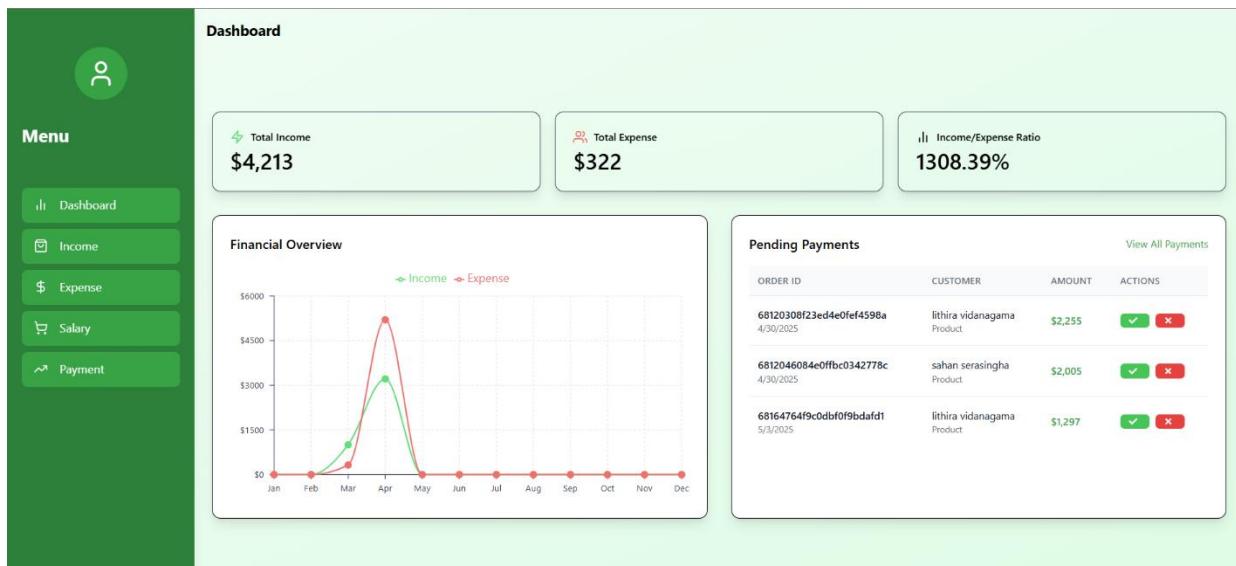
Figuren3. 29 interface

The interface displays an "Income" management section, designed to help users "Manage your income with ease." On the left, a vertical navigation menu in a dark green background offers options like "Dashboard," "Income" (which is currently highlighted), "Expense," "Salary," and "Payment."

In the main content area, the heading "Add Income" is visible, indicating the current function. Below this, a section titled "Add Transaction" provides fields for entering income details. These fields include:

- "Transaction Name" with a placeholder "Enter Your Transaction."
- "Amount" with a placeholder "Enter amount."
- "Transaction Date," which is pre-filled includes a calendar icon for date selection.

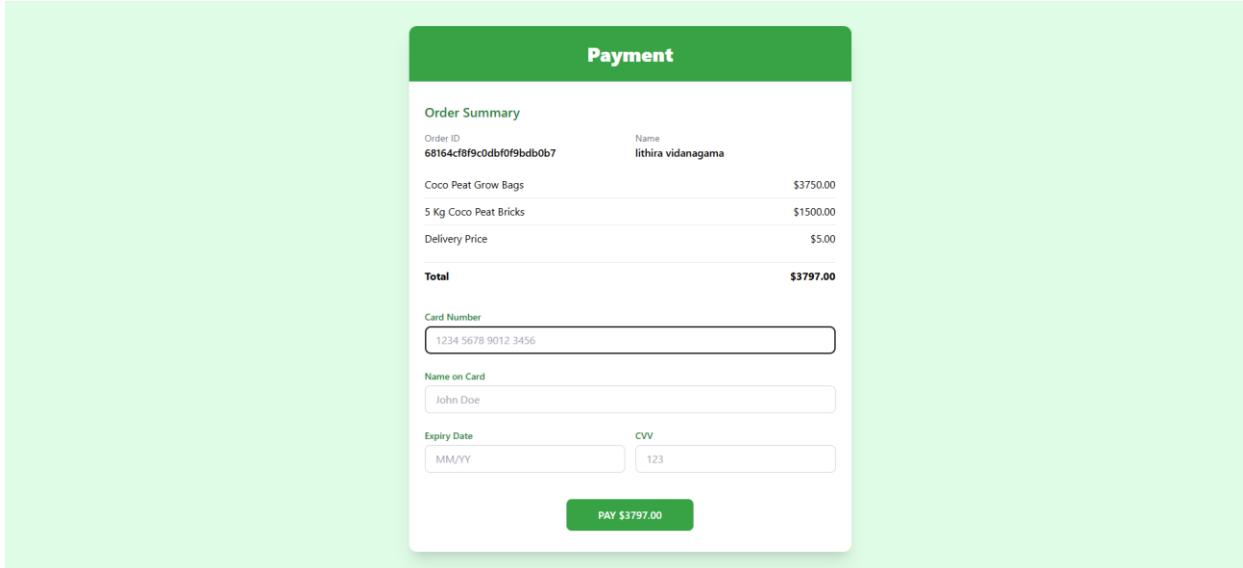
A prominent green button labeled "Make Transaction" is positioned below the date field, likely used to submit the entered income information. Further down the page, a section titled "Income History" suggests a display of past income entries. Below this heading, the text "Income Transactions" appears, implying a list or table of individual income records would be shown here. However, this section is currently empty in the image. At the top right of the main content area, a green button labeled "+ Add Income" is present, offering another way to access the income entry form. The overall design is clean and uses a light green background for the content area, contrasting with the dark green sidebar. The interface appears to be focused on allowing users to easily record new income transactions and potentially review their income history.



Figuren3. 30 interface

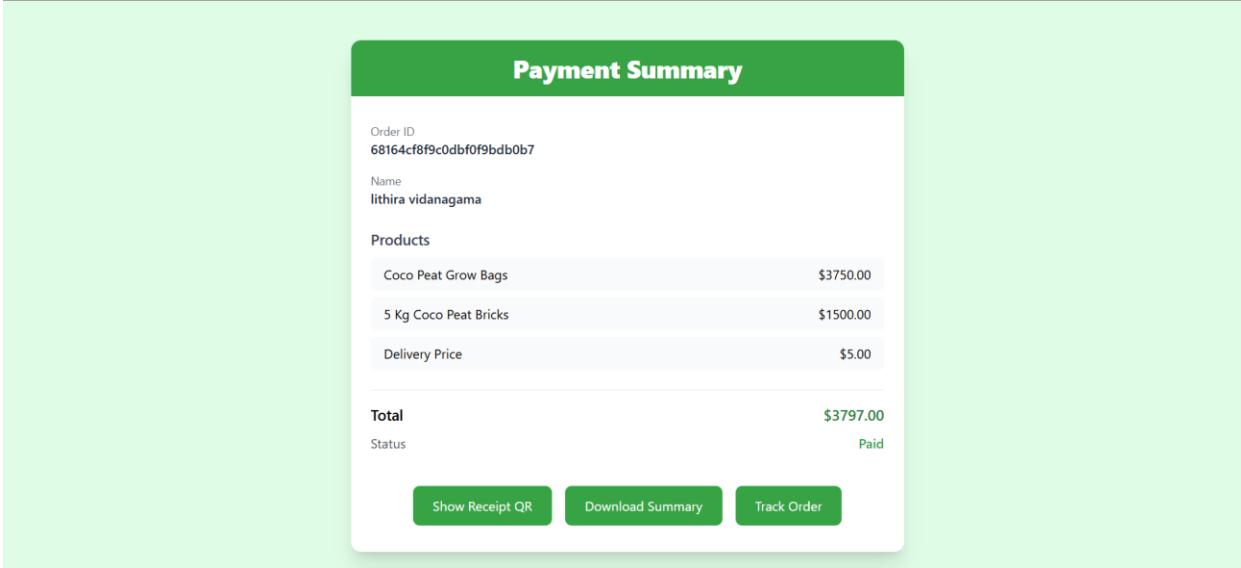
The interface displays a "Dashboard" offering a financial overview. A dark green vertical menu on the left allows navigation through "Dashboard", "Income", "Expense", "Salary", and "Payment." At the top of the main content area, key financial metrics are displayed in individual boxes labeled "Total Income," "Total Expense," and "Income/Expense Ratio." Below these metrics, a Financial Overview chart illustrates income and expense trends over time, represented by distinct lines and plotted against months from January to December. To the right of the chart, a "Pending Payments" section lists outstanding payments in a table format. The table includes columns for "ORDER ID" (with a date below), "CUSTOMER" (with a "Product" label underneath), "AMOUNT," and "ACTIONS." Each row details a pending payment with

corresponding action buttons: a green checkmark and a red "X," likely for payment processing. A "View All Payments" link is available at the top right of this section. The dashboard provides a summarized view of income, expenses, the income/expense relationship, a visual representation of financial trends, and a list of pending payments requiring attention.



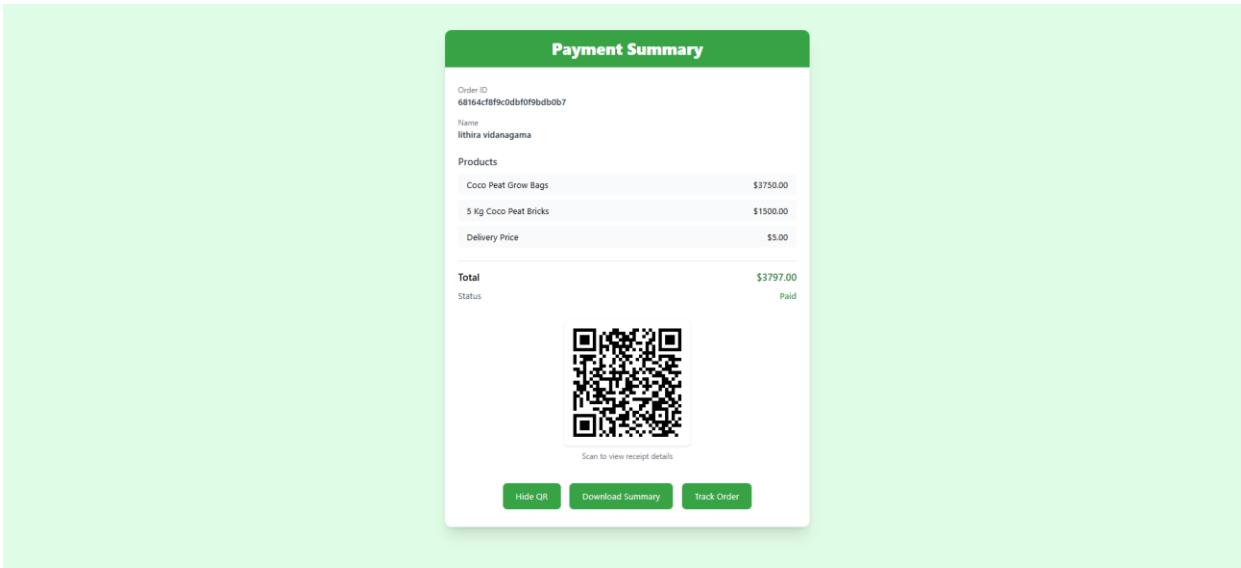
Figuren3. 31 interface

The interface displays a "Payment" section with a green header. Below, an "Order Summary" shows the "Order Id" and "Name." The items in the order are listed with their corresponding prices. A "Total" amount is presented at the bottom of the summary. Following the order summary, a "Card Number" field is provided for payment details, with a placeholder indicating the expected format. The "Name on Card" field is below this. The "Expiry Date" and "CVV" fields are arranged side-by-side for entering card validity information. Finally, a prominent green "PAY" button displays the total amount to be paid. The interface is designed to guide the user through reviewing their order and entering payment information.



Figuren3. 32 interface

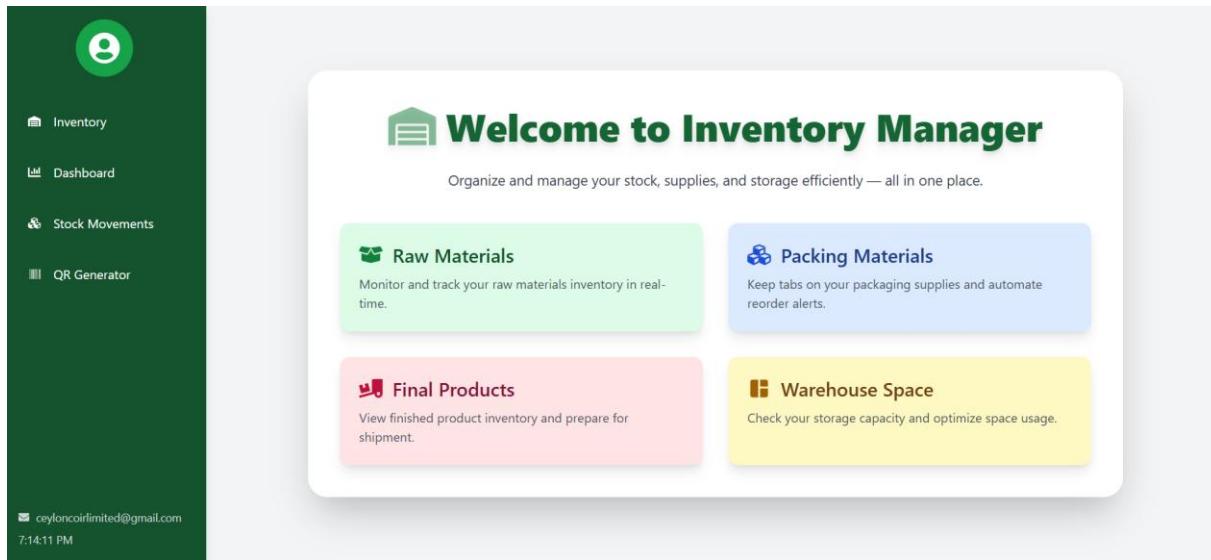
The interface displays a "Payment Summary" section with a green header. Below, it shows the "Order ID" and "Name." A "Products" section lists the items ordered with their respective prices. A "Total" amount is displayed, and the "Status" of the payment is indicated as "Paid" in green. At the bottom, three green buttons are available: "Show Receipt QR," "Download Summary," and "Track Order." This interface provides confirmation of a completed payment with options to view a receipt QR code, download a summary, and track the order.



Figuren3. 33 interface

The interface shows an updated "Payment Summary" section with a green header. It displays the "Order ID" and "Name." A "Products" section lists the ordered items along with their prices. The "Total" amount is shown, and the payment "Status" is indicated as "Paid" in green. A prominent QR code is now visible with the label "Scan to view receipt details." Below the QR code, three green buttons are present: "Hide QR," "Download Summary," and "Track Order." This updated view of the payment summary includes a QR code for accessing receipt details, along with options to hide the QR code, download the summary, and track the order.

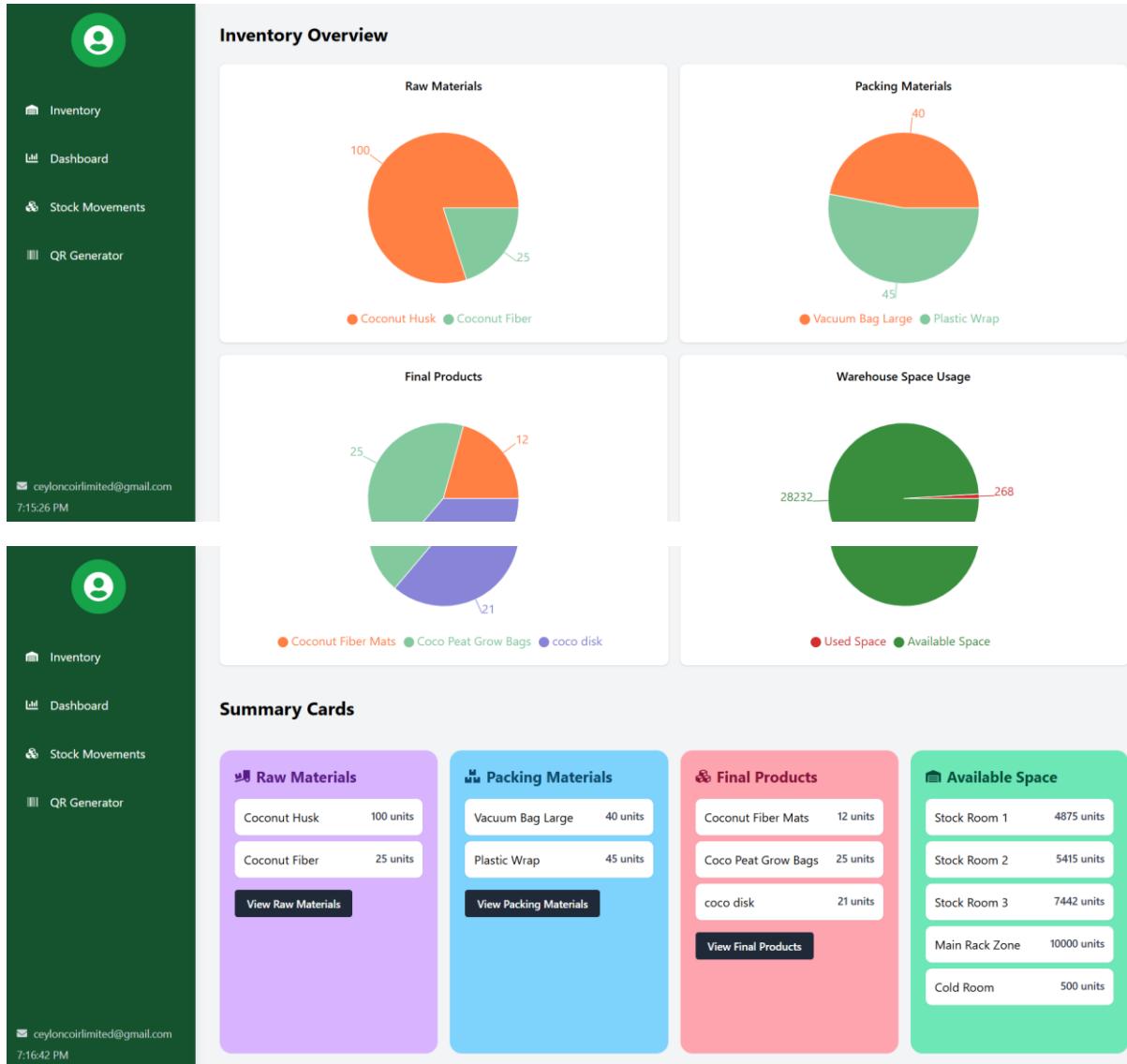
IT23218062



Figuren3. 34 interface

The CeylonCoir MERN stack project's warehouse management function is made to effectively manage the business's inventory in three primary categories: finished products, packing materials, and raw materials. With real-time stock tracking, it offers customers the ability to add, view, update, and delete inventory items for every category. To provide accurate historical records, every stock change is immediately recorded as a stock movement and classified as either IN or OUT. Warehouse placement analysis is another feature of the system that provides visual insights through charts that illustrate how inventory is allocated across various storage spaces and how much space is available. To assist managers in making well-informed decisions, a dynamic dashboard displays visual indicators, low-stock alerts based on reorder levels, and category-wise summaries. The system may also automatically send reorder emails to suppliers when essential stock levels are reached, guaranteeing smooth inventory replenishment.

The CeylonCoir warehouse management system's Warehouse Sidebar offers a straightforward and intuitive navigation panel for easy access to important functions. It makes switching between the Dashboard, Stock Movement History, and QR Code Generator pages simple for users. With only a few clicks, warehouse managers and employees can navigate the system more easily thanks to its simplified interface, which enhances productivity and workflow.



Figuren3. 35 interface

A centralised, visual overview of the company's entire stock condition is provided by the Inventory Management Dashboard of the CeylonCoir MERN stack system. Managers can quickly see the stock balance and storage usage thanks to an interactive pie chart at the top that breaks down inventory distribution among raw materials, packing materials, finished items, and the remaining warehouse space. A thorough list of inventory by warehouse location is shown behind the graphic. It includes the precise amounts of raw, packed, and finished goods kept in each region as well as the amount of space that is available. Each summary card, which emphasises important metrics like total quantities and category-wise stock, has a "View" button to improve usability and navigation. This button enables users to swiftly navigate to the relevant inventory segment (Raw, Packing, or Final). With a single, user-friendly interface, this architecture enables managers to effectively monitor inventory levels, evaluate space utilisation, and make well-informed decisions on stock allocation and replenishment.

Add Raw Material

Name Coconut Shell	Quantity 120
Unit kg	Reorder Level 100
Unit Price 280	Supplier Name EcoCoco Suppliers
Supplier Email info@ecococo.com	Supplier Phone 0789876543
Location Storage Room 2	Received Date 04/27/2025
Expiry Date 06/07/2025	Status In Stock

Update Raw Material

Name Coconut Husk	Quantity 100
Unit kg	Reorder Level 20
Unit Price 5	Supplier Name Tropical Agro Suppliers
Supplier Email sales@tropicalagro.com	Supplier Phone 0714235678
Location Storage Room 1	Received Date 07/01/2024
Expiry Date 08/23/2025	Status In Stock

Figuren3. 36 interface

The CeylonCoir warehouse management system's Raw Material List page is an effective way to keep an eye on and manage raw materials. Any items that have dropped below their reorder threshold are marked with a Low Stock Alert at the top of the page. A "Send Email" button allows the inventory manager to immediately send a reorder request to the appropriate supplier. Summary cards, which are located directly beneath this, offer a brief overview of important metrics, such as the overall number of raw materials, the number of low-stock goods, the total number of suppliers, and the range of raw material kinds. Users can easily find documents by name, type, or location using a search bar. Additionally, the manager can download an inventory report in its entirety for documentation or analysis, as well as add additional raw materials.

All of the raw ingredients that are currently in stock are listed in a comprehensive table beneath the summary section. The material name, current quantity, supplier email, and a set of action buttons for each item are displayed in each table row. The manager can use these buttons to remove, change, or download specific material details as a PDF report. This guarantees simple administration and responsibility for every item in the inventory. A pie chart is shown underneath the table to improve data visualization. It gives a clear graphical depiction of the distribution of raw material kinds, enabling the manager to swiftly evaluate stock proportions and trends immediately. Inventory management is made simple and effective by its hybrid architecture, which guarantees both operational control and data-driven insights.

Managers may quickly input or change product details in the inventory using the Add and Update Form page in the CeylonCoir warehouse management system. Important information such product name, quantity, unit, reorder level, unit price, supplier name, supplier email, and supplier phone are all entered in the form. The warehouse location, receipt date, expiration date, and current stock status are also recorded.

The screenshot displays the 'View Packing Materials' page of the CeylonCoir system. At the top, there's a summary card with the following data:

- Total Quantity: 85
- Low Stock: 1
- Total Suppliers: 2
- Material Types: 2

Below this is a table listing packing materials:

Name	Quantity	Supplier Email	Actions
Vacuum Bag Large	40	sanjulakalpani1212@gmail.com	
Plastic Wrap	45	akashsathsara01@gmail.com	

A 'Send Email' button is located at the top right of the main content area. Below the table is a search bar labeled 'Search packing materials.' and two buttons: '+ Add Packing Material' and 'Download Report'.

On the right side, there are two forms: 'Add Packing Material' and 'Update Packing Material'. The 'Add Packing Material' form includes fields for Material Name (Vacuum Bag Large), Quantity (120), Unit (kg), Reorder Level (100), Unit Price (200), Supplier Name (EcoCoco Suppliers), Supplier Email (sales@tropicalfibers.com), Supplier Contact (0771234567), Warehouse Location (Storage Room 2), Received Date (04/27/2025), Expiry Date (06/07/2025), and Status (In Stock). The 'Update Packing Material' form shows similar fields for Vacuum Bag Large, with updated values like Quantity (40), Unit (pieces), Reorder Level (15), Unit Price (122), and Supplier Name (EcoCoco Suppliers).

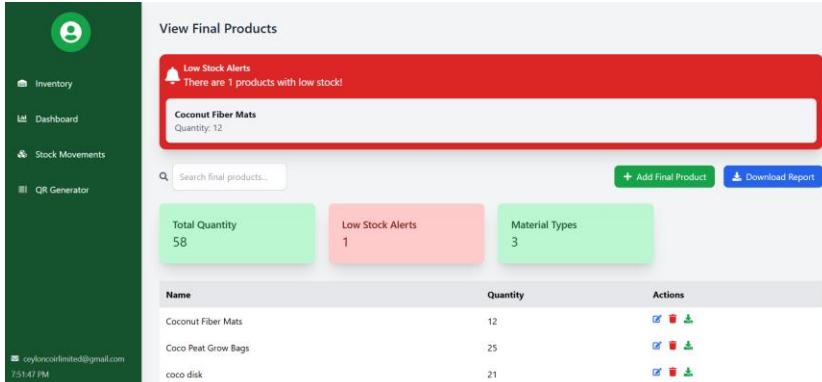
Figuren3. 37 interface

The CeylonCoir warehouse management system's Packing Material List page offers an extensive and intuitive interface for handling all inventories connected to packing. A "Send Email" button at the top of the page enables the inventory management to promptly alert the relevant supplier for restocking, and a Low Stock Alert emphasises any packaging materials that have fallen below their specified reorder levels. Essential facts including the overall amount of packing materials, the number of low-stock products, the total number of suppliers, and the range of packing material kinds currently in stock are shown on summary cards beneath this.

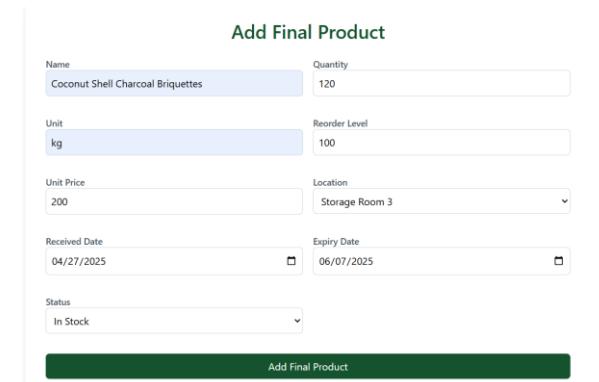
To enable quick material screening by supplier, type, or name, a search box is incorporated. Additionally, the system offers the ability to download a complete inventory report in PDF format for analysis or documentation, as well as the ability to add new packaging materials. All packaging materials are listed in a comprehensive table, with action buttons to update, remove, or download individual material reports displayed in each row along with the material name, available quantity, and supplier email.

In addition, a pie chart that provides a visual breakdown of the packing material stock by kind or category is positioned at the bottom of the page. Managers may rapidly determine which resources are plentiful and which ones might need attention with the aid of this graphic. All things considered, this page guarantees effective management, prompt restocking, and full insight into the inventory of packing materials.

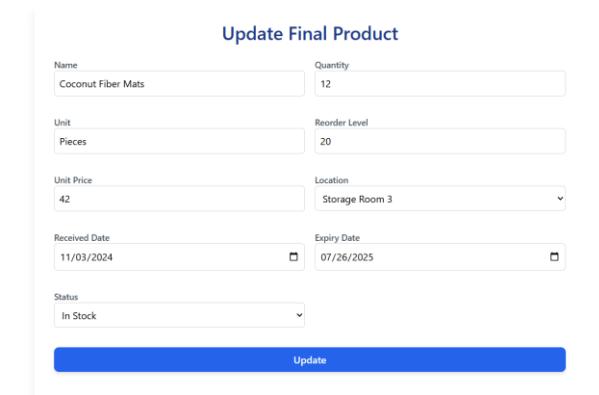
Managers may quickly input or change product details in the inventory using the Add and Update Form page in the CeylonCoir warehouse management system. Important information such product name, quantity, unit, reorder level, unit price, supplier name, supplier email, and supplier phone are all entered in the form. The warehouse location, receipt date, expiration date, and current stock status are also recorded.



The screenshot shows the 'View Final Products' page. At the top, a red banner displays a 'Low Stock Alerts' message: 'There are 1 products with low stock!' with an exclamation icon. Below this, a summary card for 'Coconut Fiber Mats' shows a quantity of 12. A search bar is at the top right. Below the summary card is a table with columns: Name, Quantity, and Actions. The table lists three items: 'Coconut Fiber Mats' (Quantity 12), 'Coco Peat Grow Bags' (Quantity 25), and 'coco disk' (Quantity 21). Each item has an 'Actions' column with edit and delete icons.



The screenshot shows the 'Add Final Product' form. It includes fields for Name ('Coconut Shell Charcoal Briquettes'), Quantity ('120'), Unit ('kg'), Reorder Level ('100'), Unit Price ('200'), Location ('Storage Room 3'), Received Date ('04/27/2025'), Expiry Date ('06/07/2025'), and Status ('In Stock'). A large green 'Add Final Product' button is at the bottom.



The screenshot shows the 'Update Final Product' form, identical to the add form but with different values: Name ('Coconut Fiber Mats'), Quantity ('12'), Unit ('Pieces'), Reorder Level ('20'), Unit Price ('42'), Location ('Storage Room 3'), Received Date ('11/03/2024'), Expiry Date ('07/26/2025'), and Status ('In Stock'). A large blue 'Update' button is at the bottom.

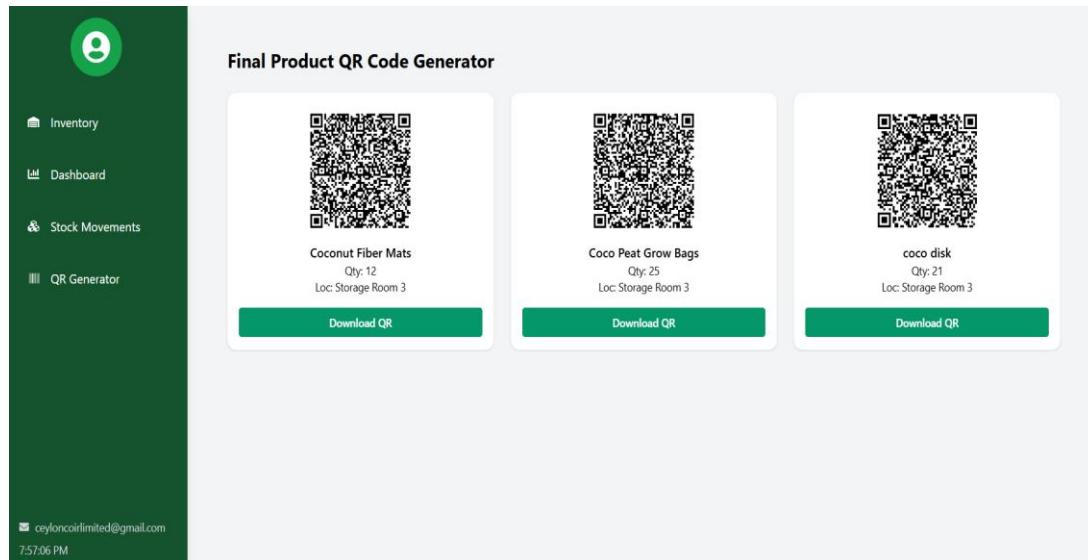
Figuren3. 38 interface

The CeylonCoir warehouse management system's Final Product List page is intended to provide a lucid and well-structured overview of the business's finished goods stock. For final products that have fallen below their reorder level, a Low Stock Alert is shown at the top of the page, allowing the inventory management to promptly identify items that require attention. Since replenishing of finished products is usually handled internally through production processes, this page does not have a send email button like raw and packing materials do.

Key information, such as the overall number of finished products, the number of low-stock items, and the range of finished product categories presently in storage, are highlighted on a series of summary cards located just beneath the alert area. Users may quickly locate particular products by name, type, or location with the use of a search box. In addition, the management has the ability to download a comprehensive inventory report for analysis or recording and add new finished items to the system.

Below is a comprehensive table that includes columns for product name, quantity, unit price, location, expiration date, and action buttons to download, edit, or remove specific item details. A pie chart at the bottom of the page shows how final products are distributed by kind or category, which makes it easier for the manager to immediately determine the makeup of the inventory. This design facilitates proactive decision-making, makes inventory control easier, and expedites tracking of finished products.

Managers may quickly input or change product details in the inventory using the Add and Update Form page in the CeylonCoir warehouse management system. Important information such product name, quantity, unit, reorder level, unit price are all entered in the form. The warehouse location, receipt date, expiration date, and current stock status are also recorded.



Figuren3. 39 interface

The CeylonCoir warehouse management system's QR Code page provides a practical and effective means of monitoring and controlling the storage of finished goods. A unique QR code including crucial product information, such as the product name, amount, and storage location, is created for every finished product kept in the warehouse. By using a mobile device to scan the QR code that is displayed on the page, warehouse managers and staff can quickly obtain information on the product that is being stored. The manager can download the QR code for every product by clicking on the download option on the page. By giving staff members instant access to comprehensive product information, improving inventory control, and cutting down on the amount of time spent manually looking up product details, this feature helps to optimise warehouse operations. The QR code is a useful tool for product identification that enhances warehouse throughput and accuracy.

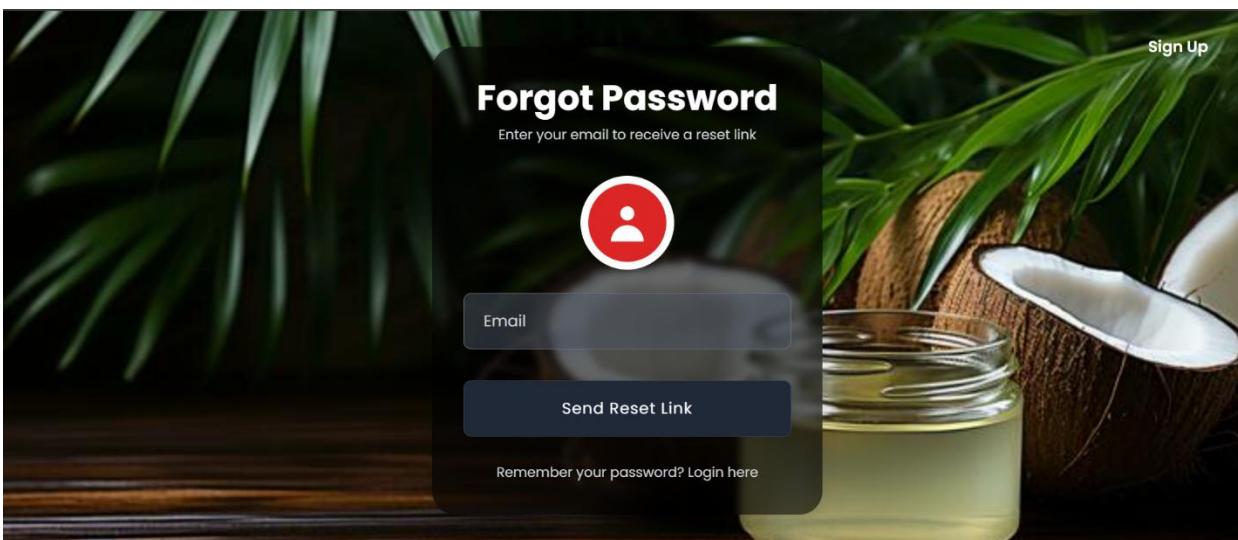
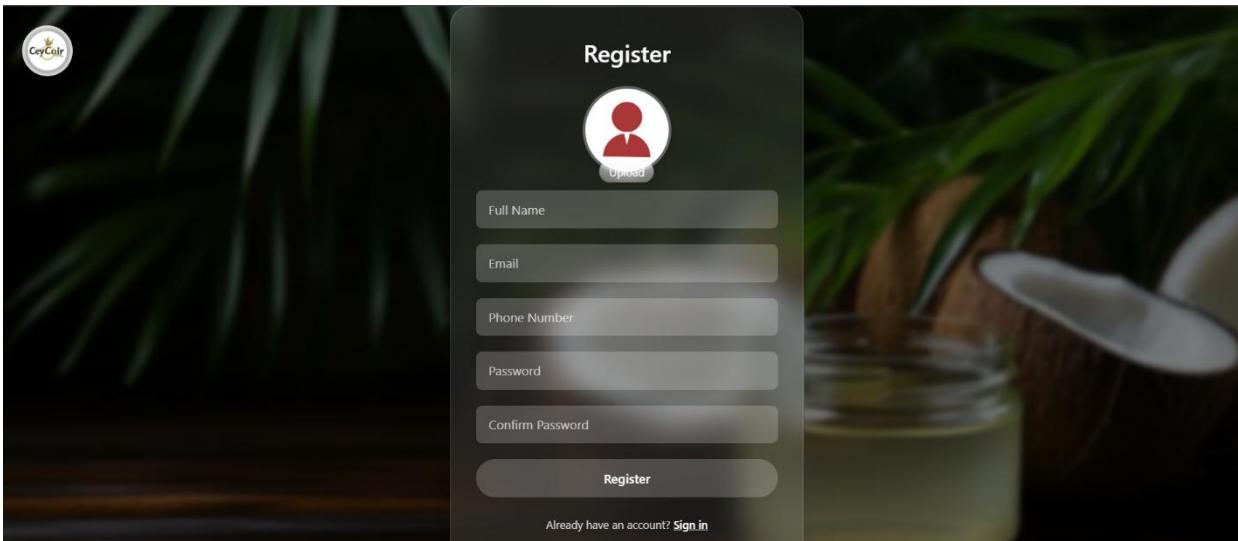
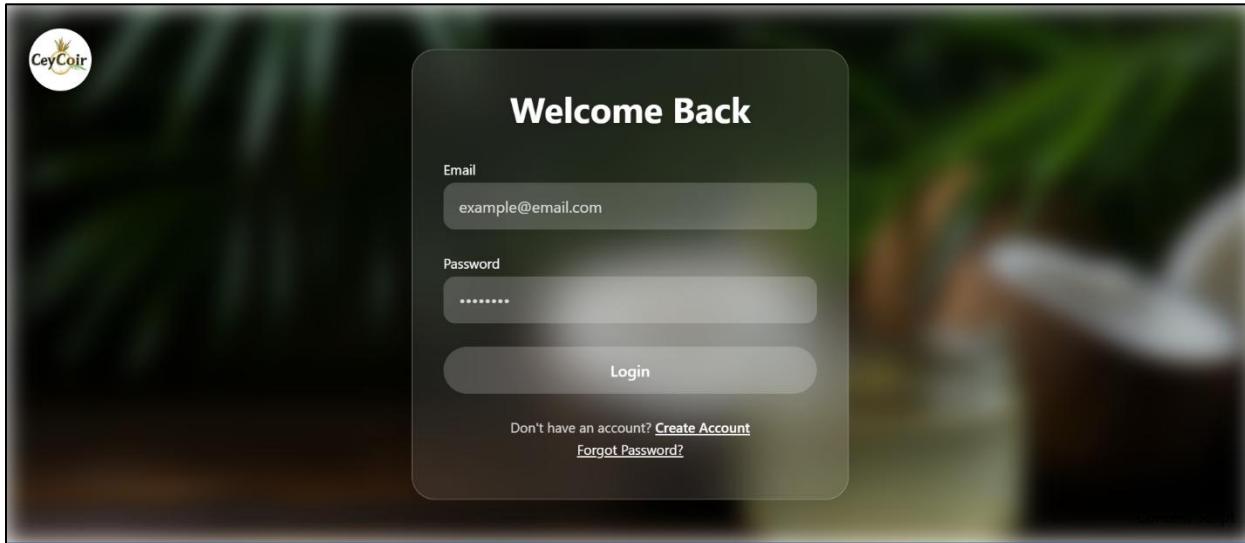
#	Product Name	Product Type	Movement Type	Quantity	Date	Actions
1	Coconut Fiber Mats	Final	OUT	1	5/3/2025, 10:36:00 PM	<button>Delete</button>
2	Coco Peat Grow Bags	Final	OUT	3	5/3/2025, 10:35:59 PM	<button>Delete</button>
3	Coconut Fiber Mats	Final	OUT	1	5/3/2025, 10:12:12 PM	<button>Delete</button>
4	Coco Peat Grow Bags	Final	OUT	1	5/3/2025, 10:12:11 PM	<button>Delete</button>
5	coco disk	Final	OUT	2	4/30/2025, 4:37:11 PM	<button>Delete</button>
6	coco disk	Final	OUT	1	4/30/2025, 4:31:28 PM	<button>Delete</button>
7	Coco Peat Grow Bags	Final	OUT	1	4/30/2025, 4:31:27 PM	<button>Delete</button>
8	coco disk	Final	OUT	1	4/30/2025, 4:29:43 PM	<button>Delete</button>

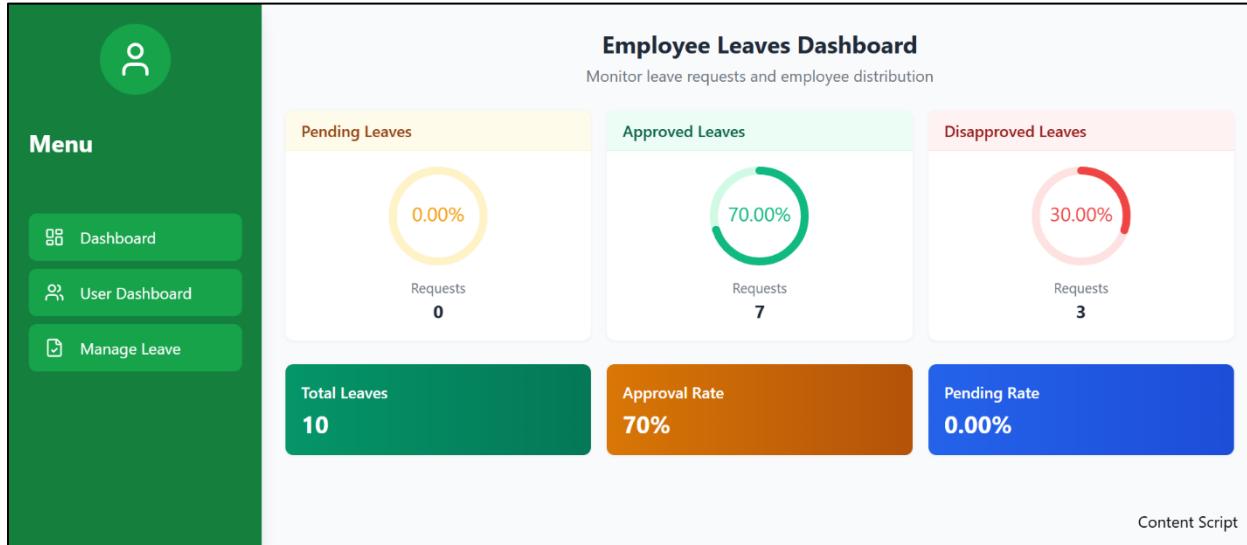
Figuren3. 40 interface

A thorough record of all inventory changes pertaining to raw materials, packing materials, and finished goods can be seen on the CeylonCoir warehouse management system's Stock Movement History page. An automatic entry is noted as a "IN" movement whenever a product is added or modified with a larger amount. Likewise, a "OUT" movement is noted when a product is changed with a lower amount or eliminated. This guarantees real-time tracking of each stock adjustment. A search bar on the page allows users to quickly access information by filtering movements by product name, kind, or date.

A detailed table containing columns for Product Name, Product Type (Raw, Packing, Final), Movement Type (IN/OUT), Quantity, Date of Movement, and an Action button to remove specific movement records if necessary is presented with all stock movement records. With just one click, customers may easily download the complete history as a CSV or PDF report to aid with documentation and analysis. This page gives managers complete control over stock movement and adjustments, improving accountability and transparency in inventory operations.

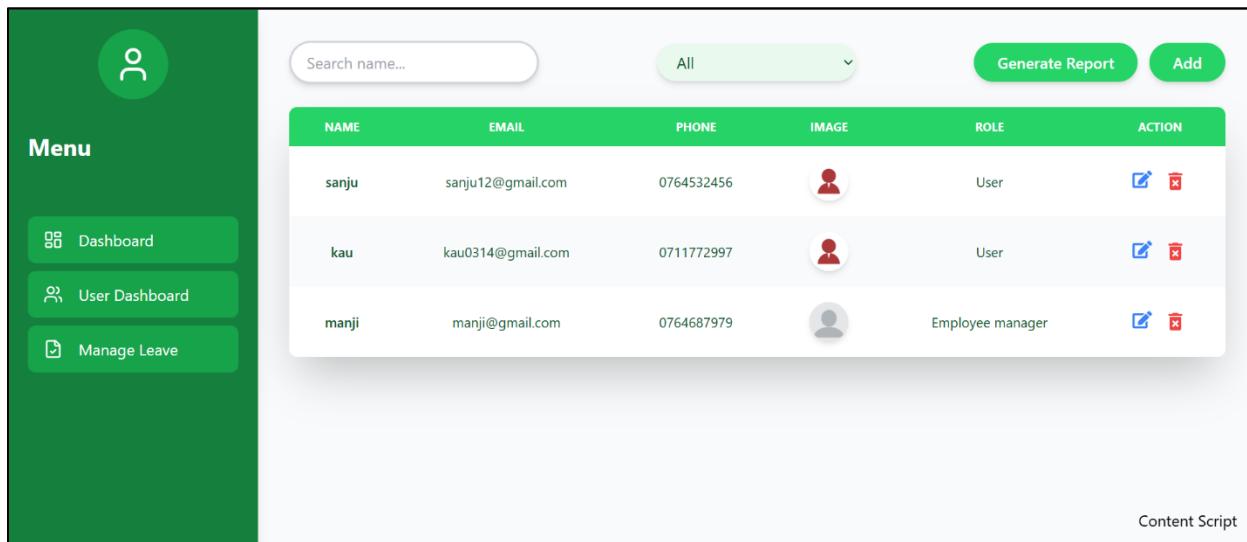
IT23312630





Figuren3. 41 interface

This employee manager dashboard displays total leave requests, approval rate, and pending rate to monitor and manage employee leave status.



Figuren3. 42 interface

This user management dashboard displays employee details including name, email, phone, role, and profile image. It provides options to search, filter roles, add new users, edit information, delete users, and generate reports.

Leave Management

Pending Requests	Approved Requests	Rejected Requests
0 (0.00%)	7 (70.00%)	3 (30.00%)

Search by employee or re... Filter by Status Start date End date Refresh

Employee Name	From Date	To Date	Duration	Reason	Status	Actions
_LOADING...	27-03-2025	15-04-2025	20 days	dscdcdsc...	Approved	
>Loading...	30-04-2025	31-05-2025	32 days	fgdf bcfhf...	Approved	Content Script

Figuren3. 43 interface

Employee Profile Board
Tuesday, May 6, 2025

My Profile

- Profile Board
- Edit Profile
- Attendance
- Leave Request
- Logout

Calendar

< < May 2025 > >>

MON	TUE	WED	THU	FRI	SAT	SUN
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1

Attendance Tracker

05:58:35 PM
Sri Lankan Standard Time

Check In

Check Out

Edit Profile Information
Update your personal details and contact information

My Profile

- Profile Board
- Edit Profile
- Attendance
- Leave Request
- Logout

Back to Profile

manji

manji@gmail.com

manji wellcome ! Your Profile

Full Name

Email Address

Phone Number

Enter a 10-digit phone number without spaces or dashes

Figuren3. 44 interface

This employee profile management interface allows administrators to edit personal details, view attendance records, and process leave requests through an organized sidebar menu system.

The screenshot shows the 'Employee Attendance Dashboard' with a search bar at the top. Below it is a table with columns: Employee Name, Date, Check In, Check Out, and Work Hours. The data is as follows:

EMPLOYEE NAME	DATE	CHECK IN	CHECK OUT	WORK HOURS
Unknown	2025-04-30	10:45:18	10:45:23	0h 0m 5s
Unknown	2025-04-30	10:48:32	12:01:28	1h 12m 56s
Unknown	2025-04-30	12:01:11	12:02:26	0h 1m 15s
Unknown	2025-04-30	12:02:21	14:31:25	2h 29m 4s
Unknown	2025-04-30	14:31:17	16:22:17	1h 51m 0s

Figuren3. 45 interface

The employee attendance tracking system documents precise work periods by recording check-in and check-out times with calculated duration metrics. Managers can monitor workforce productivity through comprehensive time logs, identifying attendance patterns and calculating total hours worked for each employee. The searchable interface enables filtering by name or date for efficient workforce management and accurate payroll processing.

The screenshot shows the 'Leave Management' section. It includes a header with a calendar icon and the text 'Leave Management'. Below it is a sub-header 'Submit and track your leave requests efficiently' and a welcome message 'Welcome, manji'. The main area has two input fields: 'Select Date Range' (with 'Start date' and 'End date' dropdowns) and 'Leave Reason' (a text area with placeholder 'Describe the reason for your leave request'). A green button labeled 'Submit Leave Request' with a checkmark icon is located to the right. At the bottom, there's a section titled 'Your Leave Requests' with a small calendar icon and a link 'Content Script'.

Figuren3. 46 interface

This leave management interface enables employees to submit time-off requests by selecting date ranges and providing justifications, while maintaining a clear separation of duties where only designated employee managers retain exclusive authority to approve or reject these submissions through the streamlined system.

The screenshot shows a user profile update form titled "Update User Profile". The form includes fields for User ID (6819fed9c8483eace174971c), Full Name (manji), Email Address (manji@gmail.com), Phone Number (0764687979), and Role (Employee manager). A green "Update User Information" button is at the bottom.

User ID	6819fed9c8483eace174971c
Full Name	manji
Email Address	manji@gmail.com
Phone Number	0764687979
Role	Employee manager

Content Script

Figuren3. 47 interface

This employee profile management interface allows administrators to edit personal details and assign specialized roles like employee manager, financial manager, or order manager through a streamlined form with secure user identification and contact information fields.

APPENDIX

Work done by each member

Name	Student ID	Work distribution
J.A.B.G.Jayawickrama	IT23308602	<p>Order and customer management</p> <ul style="list-style-type: none"> • User interface development. • Back-end development • Implementing related create, update, retrieve and delete function. • Creating database • Generating report
D.O.Rajapaksha	IT23276932	<p>Product and machine management</p> <ul style="list-style-type: none"> • User interface development. • Back-end development • Implementing related create, update, retrieve and delete function. • Creating database • Generating report
W.C.M.S.K.Mohotti	IT23218062	<p>Warehouse manager</p> <ul style="list-style-type: none"> • User interface development. • Back-end development • Implementing related create, update, retrieve and delete function. • Creating database • Generating report
Sasmitha V G L	IT23311640	<p>Financial Management</p> <ul style="list-style-type: none"> • User interface development. • Back-end development • Implementing related create, update, retrieve and delete function. • Creating database • Generating report • Generating QR

Kavishan H K M	IT23312630	Employee and Customer Management <ul style="list-style-type: none">• User interface development.• Back-end development• Implementing related create, update, retrieve and delete function.• Creating database• Generating report
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