

# **Electrical and Service Management System**

## **Project Report**



Sri Lanka Institute of Information Technology  
IT2080 Information Technology Project

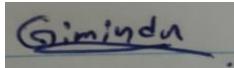
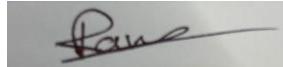
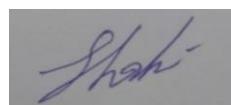
Group ITP\_WD\_B10\_G01/T141

May 2024

## **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.

### **Authors:**

<b>Author SID</b>	<b>Authors Name</b>	<b>Signature</b>
IT22028464	Jayasinghe J.A.D.T.S	
IT22059604	Wimalarathna B.P.K	
IT22898098	Gimsara W.T.G	
IT22345578	Galappaththi A G R S	
IT22575944	P.R.Reid	
IT22578396	R.D.T.N.Dayarathne	
IT22581716	Perera M.M.D.	
IT22322876	Madhubhashana M D H P	

Date 15/05/2024

## **ABSTRACT**

Newton Electrical is an innovative Electrical and Service Management System made to simplify tasks for clients, service teams, and administrative staff. This user-friendly web-based application ensures smooth interactions for all users and simplifies operations in user management, career management, customer feedback management, package management, project management schedule management and report generation. Users can handle these functions more efficiently through the implementation of this computerized system.

Moreover, by automating current tasks in the electrical industry and managing sensitive details, the system ensures data security and reduces human errors, since it is a web application, users can access the system at any time and from any location via the internet. The system was developed using technologies such as React Js, Node Js, Mongo Database and Firebase to handle files and images. The project's development process was facilitated by full integration with GitHub.

## **ACKNOWLEDGEMENT**

We would like to express our heartfelt gratitude for all those who helped us complete our project as part of the Information Technology Project (ITP) module during our second year, second semester.

Primarily, we want to thank the lecturers and instructors who worked on the Information Technology Project module, especially Mr . Their guidance, advice, and encouragement were critical to the success of our project. Their unwavering support has helped us meet the requirements and overcome challenges from the project's inception.

Furthermore, we would like to acknowledge the immense dedication and effort put forth by all the group members of ITP\_WD\_B10\_G01. Each member's unwavering commitment and maximum effort throughout the semester have culminated in the successful completion of this web application.

We are deeply grateful to everyone mentioned above, as well as everyone else who helped make our project a reality. Their contributions have been invaluable, and we are grateful for their unwavering support and guidance.

This website stands as the culmination of our collective challenging work and serves as a testament to the knowledge and skills acquired throughout this semester.

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## List of Abbreviations

Abbreviation	Description
MERN	Mongo Database, Express Js, React Js, Node Js
SDLC	Software development lifecycle
UI	User Interface
SD	Sequence Diagram
DB	Database

## Chapter 1 - Introduction

### Background

Newton Electrical, located at No. 17/A Avissawella Road, Kaduwela, is a distinguished provider of electrical goods and services. Specializing in electrical installation contracting, Newton Electrical is dedicated to offering essential services to its customers, ranging from services such as scheduling wiring projects, A/C repairs (both commercial and residential), and security camera installations for its clients. Additionally, Newton Electrical offers various other electrical-related services and provides a wide range of electrical items to its clients.

With a focus on reliability and professionalism, Newton Electrical employs a skilled service team who conduct home visits for scheduled repairs and installations. Newton Electrical is committed to providing top-notch service to its clients, whether it's ensuring the safety and efficiency of electrical systems or enhancing security with advanced camera installations, it provides efficient service to clients.

Motivated by a passion for excellence and customer satisfaction, Newton Electrical stands out as a trusted partner for both residential and commercial electrical needs. With a reputation built on quality service team and personalized service positions Newton Electrical as the preferred option for individuals and businesses who are seeking reliable electrical solutions.

As technology continues to evolve, Newton Electrical keeps evolving by embracing new innovative approaches to electrical and service management. By staying alongside industry trends and advancements, Newton Electrical ensures that its customers benefit from cutting-edge solutions tailored to their specific requirements.

## **Problem and Motivation**

### **Problem**

In today's technologically driven society, individuals often encounter numerous challenges when it comes to searching and finding essential electrical services. These challenges hinder efficiency and lead to frustration among customers. The key problems include:

- Difficulty in locating and reaching out to electrical businesses offering essential services like wiring, A/C repairs, and security camera installations.
- Absence of a centralized system for customers to easily find and contact service Providers.
- The company has relied on manual records to keep track of their service details, bookings, annual service packages and other log reports. This has made it difficult for them to access and manage past customer records, service log reports, and loyalty status.
- Inefficient management of electricals, leading to difficulties in tracking and ensuring that customers receive timely and comprehensive maintenance for their electrical systems.
- Limited accessibility to real-time updates or notifications regarding service appointments, status updates, or special offers, resulting in reduced customer satisfaction and Engagement.
- Lack of or poor communication between the service provider and the customer, leading to misunderstandings, delays, or missed services.
- The absence of a mechanism to collect overall feedback results in biased opinions from customers, affecting future business growth.

## Motivation

The motivation behind developing an Electrical and Service Management System lies in bridging the gap between customers and electrical service providers. By creating a centralized platform, customers can efficiently locate and contact business offering services such as wiring, A/C repairs, and security camera installations. Implementing such a system not only enhances customer convenience but also simplifies the process of booking required services, leading to quicker response times and improved satisfaction levels. Additionally, an Electrical and Service Management System can facilitate better communication between customers and service providers, ensuring smoother interactions and timely resolution of issues. Ultimately, the main motivation behind development of such a system aims to improve efficiency, enhance customer experience, and address the challenges currently faced in the electrical service industry.

## Literature Review

Table 1 - literature review

	Similar solutions			
Features	STRADA	Electro-serve Lanka	DNA	Service Titan
User Management	yes	non	non	yes
Career Management	yes	non	non	yes
Feedback Management	yes	yes	yes	yes
Project Management	yes	non	yes	non
Inventory Management	non	non	yes	non
Order Management	non	non	yes	non
Package Management	non	non	yes	non
Schedule Management	yes	non	yes	non

Within the domain of contemporary commercial operations, the incorporation of effective software solutions is essential for boosting efficiency and optimizing procedures. As a young company in the electrical goods sector, Newton Electricals understands how critical it is to implement a full of functions web application in order to satisfy its operational requirements. In order to make this easier, a comparison between the features of the suggested features of the Newton Electricals web application and the features of the current solutions—STRADA, Electro-serv Lanka, DNA, and Service Titan—has been carried out.

1. User Management:

STRADA: Provides features for managing users.

There are no user management tools on Electro-serv Lanka.

DNA: It is devoid of user management features, just like Electro-serv Lanka.

Service Titan: Offers features for user administration.

2. Career Management:

STRADA: Contains tools for career management.

Electro-serv Lanka: Does not provide tools for career management.

DNA: Likewise, it is devoid of career management features.

Career management features are included in the Titan service.

3. Feedback Management:

The feedback management features of all four solutions—STRADA, Electro-serv Lanka, DNA, and Service Titan—ensure effective channels of communication between stakeholders.

4. Project Management:

STRADA provides resources for Project management.

There are no project management features in Electro-serv Lanka.

DNA: Offers features for project management.

Provision of services Titan: Does not provide tools for project management.

5. Inventory Management:

STRADA: Lacks features for inventory control.

Electro-serv Lanka: It is not capable of inventory management, just like STRADA.

Tools for inventory management are included into DNA.

Provision of services Titan: Does not provide features for inventory control.

6. Order Administration:

Order management features are absent from STRADA.

Electro-serv Lanka is unable to handle orders.

DNA: Offers features for order management.

Provision of services Titan: Does not provide tools for order administration.

## 7. Package Management:

STRADA: Lacks features for package management.

Electro-serv Lanka: It is not capable of managing packages, just like STRADA.

DNA: Contains tools for managing packages.

Service Titan: Does not provide features for package management.

## 8. Schedule Management:

STRADA: Provides tools for managing schedules.

Electro-serv Lanka: No features for managing schedules.

DNA: Offers features for managing your schedule.

Provision of services Titan: Does not provide tools for managing schedules.

Comparing STRADA, Electro-serv Lanka, DNA, and Service Titan reveals a range of features and functionalities in project management, inventory management, order management, package management, schedule management, career management, and feedback management. But none of these options fully captures every characteristic that Newton Electricals requires for its operations.

Therefore, the Newton Electricals web application that is being offered seeks to combine the key features that have been found in these current solutions in order to provide a customized, all-inclusive platform that maximizes operational effectiveness and makes it easier to handle different parts of the organization.

## **Aims and Objectives**

### **Aims**

The main goals of an electric service company are to create a system that helps owners and managers run their operations smoothly, automate paperwork, and provide great service to customers.

#### **Smooth Service for Everyone:**

- Aim: Make it easy for the company to handle service requests, assignments, and completion. The system should be user-friendly for both customers and employees.

#### **Project Planning and Control:**

- Aim: Help company staff plan and keep track of electrical projects effectively. The system should help organize tasks, assign work to electricians, manage tools, and give real-time updates on project progress.

#### **Manage Resources Better:**

- Aim: Keep an eye on the company's supplies, tools, and equipment. The system should remind us when things need replacement and help keep everything in order.

#### Simple Billing and Finances:

- Aim: Make billing easy and accurate based on what customers use. The system should handle different ways to pay, keep track of money coming in, and show customers clear billing details.

#### Keep Track of Progress:

- Aim: Keep an eye on how projects and services are doing by looking at important numbers and timelines. The system should provide useful information for managers to make smart decisions.

#### Help Employees Work Well:

- Aim: Help manage employee schedules, pay, and how well they're doing at their jobs. The system should also make it easy for employees to work together and talk to each other and effectively engage with the management.

#### Stay Connected with Customers:

- Aim: Give customers a way to talk to the company and each other. Customers should get updates, news, and event information through the system, making it easy for them to stay engaged.

## Objectives

The objectives of a management system for an electric service company are adaptable to the specific needs and goals of the organization. While these objectives may vary based on individual requirements, the following represent common goals for an effective electric service company management system

#### Easy Member Management:

- Objective: Keep track of customer information, memberships, attendance, billing, and renewals. The system should be user-friendly and accessible to a large number of users.

#### Efficient Class Scheduling:

- Objective: Allow staff to plan and manage various electrical projects effectively. The system should support scheduling for specific projects, assign tasks to electricians, manage equipment, and provide real-time updates.

#### Resource Tracking:

- Objective: Monitor and manage the company's resources, such as supplies and equipment. The system should track resource usage, send notifications for replacements, and maintain an organized inventory.

#### Billing Automation:

- Objective: Automate billing processes to ensure accurate invoicing based on service plans and usage. The system should support multiple payment methods and keep track of payments and balances.

#### Performance Monitoring:

- Objective: Monitor the progress of projects and services by tracking key performance indicators, project timelines, and resource utilization. The system should provide data for informed decision-making.

#### Employee Management:

- Objective: Manage schedules, compensation, and performance of electric service personnel. The system should support collaboration and communication among employees.

#### Enhanced Member Engagement:

- Objective: Provide customers with a platform for communication and information. Members should receive updates, promotions, and event notifications through the system, fostering engagement.

## **Solution overview**

## **Methodology**

Agile methodology is an iterative software development process that puts a focus on adaptability, flexibility, and teamwork. In contrast to waterfall methodologies, which work in a straight line, Agile divides projects into smaller portions called "sprints," which usually span between one and four weeks.

This is how Agile functions:

**Iterative Development:** Agile breaks the project up into more manageable, smaller work packages called features or user stories. Delivering a functional product increment is the main goal of each iteration.

**Customer Collaboration:** Agile places a strong emphasis on keeping customers informed at every stage of the development process. Iterations are made with input from stakeholders and customers to make sure the end product fulfills their needs.

**Cross-Functional Teams:** Agile teams are usually made up of developers, testers, designers, and other essential personnel. They are also usually small and cross-functional. This arrangement promotes cooperation, exchange of ideas, and joint project ownership.

Agile's adaptability acknowledges that needs and priorities may change over time and welcomes change. Teams maintain their adaptability and receptivity to evolving opportunities, consumer input, and shifting market conditions.

**Continuous Improvement:** At the conclusion of each iteration, agile promotes introspection and adaptability. Teams use retrospectives to find areas for growth and make adjustments to improve workflow and output.

**Transparency:** Throughout the development process, agile fosters visibility and transparency. Stakeholders can keep an eye on the project's status in real-time by using tools like task boards and burndown charts to measure progress.

All things considered, teams using the Agile methodology are able to produce high-quality software more quickly, adapt to change, and ultimately meet client needs more successfully than they could with traditional development techniques.

A revolutionary approach to software development is provided by integrating Agile technique into the creation of Newton Electricals' online application. Newton Electricals can enhance its ability to deliver high-quality web applications that meet the changing needs of its workforce and clients more quickly by adopting Agile principles, which include iterative development, customer collaboration, cross-functional teams, adaptability, continuous improvement, and transparency. The web application is well-positioned to promote corporate growth and success in the highly competitive electrical products industry thanks to this agile-driven approach, which also improves the process' efficiency and effectiveness.

## **Tools and Technology**

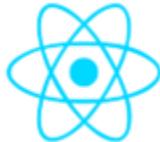
Our web application uses the MERN stack for building our web applications. It includes MongoDB for handling databases, Express JS for making servers work smoothly, React JS for creating interactive user interfaces, and Node JS for running the backend efficiently.



MongoDB is a flexible and scalable NoSQL database that stores data in JSON-like documents, providing high performance and flexibility for handling various types of data



Express.js is a minimalist and flexible Node.js web application framework that provides a robust set of features for building web and mobile applications.



React JS is a JavaScript library for building user interfaces, developed by Facebook. It allows developers to create reusable UI components that can efficiently update and render data changes.



Node.js is a cross-platform, open-source JavaScript runtime environment. It allows developers to run JavaScript code outside of a web browser, making it ideal for building scalable and high-performance server-side applications.

## **The structure of the report**

### **Section 1:**

The initial segment of the report outlines the challenges associated with the manual system and proposes a solution wherein the system will provide support and fulfill the anticipated outcomes expected by its users.

### **Section 2:**

The second part of the report encompasses Requirement Analysis, Design, Implementation, and Testing phases. Utilization of Use Case diagrams and Activity diagrams illustrates the Requirement Analysis process. The system's overall design is depicted through ER diagrams, Class diagrams, and Interfaces. The Implementation section elaborates on module structures and the test cases employed in the system.

### **Section 3:**

The third section comprises references utilized to successful completion of the final project report.

## **GitHub Repository Link**

**Link - [https://github.com/ThisaraJayas/ITP\\_Project\\_NewtonElectrical](https://github.com/ThisaraJayas/ITP_Project_NewtonElectrical)**

## **Chapter 2 – Requirements**

### **Stakeholder Analysis**

Stakeholder analysis is an essential step in the development of any system or project. It involves knowing and understanding the individuals, groups, or organizations who have a stake in or will be impacted by the system under development. End-users, customers, management, employees, government agencies, and other relevant parties are examples of stakeholders.

#### **Customers:**

Customers are interested in accessing efficient electrical services and products that meet their needs. They have a significant influence on the success of the electrical system as their satisfaction and engagement drive business growth.

#### **Service Provider:**

Electrical service providers, which is the system owner, play a crucial role in delivering services and maintaining customer satisfaction, thereby impacting the reputation and success of the electrical system. Service providers are involved in managing service requests, optimizing resource allocation, and delivering high-quality services to customers.

#### **Administrators:**

Administrators are interested in effectively managing user accounts, monitoring system performance. They have significant control over system operations, including user management, data security, and overall system functionality.

## **Regulatory Authorities:**

Regulatory authorities are interested in ensuring compliance and guidance with industry standards, laws, and regulations. Regular audits, documentation of compliance efforts, and active communication with regulatory authorities can enhance trust and cooperation.

## **Requirements Analysis**

### **1. User Management:**

- The system should allow users to create new accounts and register with the system
- The system should provide a login and authentication mechanism for users to access the system.
- The system should provide different accounts for users and admins where admins have access for more features in the system
- The system should allow users to update their personal information through the user profile

### **2. Career Management:**

- Give a well curated list of Newton Electricals' open positions.
- Complete job descriptions should be posted by the HR manager (admin).
- Robust search features to filter job postings by area, department, or title.
- Priority access to staff resumes should be granted to clients interested in electrical services.
- It should be possible for clients to look through applicant profiles and choose qualified applicants.
- The HR manager should evaluate applications, verify employment, and let candidates know.
- Make use of the internal communication system (phone numbers or emails found in profiles, for example).
- Integrated email and phone functions to facilitate easy communication between applicants and clients.
- Permit the scheduling of interviews for potential employees and clients.
- robust alerting system to boost responsiveness and user engagement.
- Notify recipients of updates on service requests, new job applications, and other relevant information.
- Make sure there is prompt communication and response to significant events.
- Tasks should be able to be checked off in the system by HR managers to demonstrate accomplishments and progress.
- To ascertain the total amount of work completed by staff members, use task completion data.
- For pay raises and performance assessments, provide comprehensive reports.
- Encourage data-driven decision-making and accountability inside the organization.

### **3. Feedback Management:**

- Enable easy feedback submission through various channels like surveys, reviews, or direct messaging. Ensure user-friendly interfaces and data validation for accurate feedback collection.
- Implement secure authentication mechanisms for user access. Differentiate between regular users and administrators, granting admins access to advanced features for feedback analysis and management.
- Design the system to handle increasing volumes of feedback data efficiently. Ensure fast response times for feedback submission and analysis to maintain user satisfaction. Implement security measures to protect feedback data from unauthorized access. Provide intuitive interfaces for feedback submission and analysis to enhance user experience and encourage participation.

### **4. Inventory Management:**

- The system should support categorization options, enabling users to filter items according to their specific needs and preferences.
- Administrators should have the ability to add new items to the inventory which will then display to customers through the store page.
- Inventory Manager should ensure accurate and up-to-date information for users, facilitating the seamless integration of new products into the system
- The system should display the availability status of each item on the store page, indicating whether it is in stock or out of stock, to assist customers in making informed decisions.

### **5. Service Schedule Management:**

- The system should offer users an easy-to-navigate interface to book their appointments conveniently.
- Users should be presented with a calendar displaying available time slots, allowing them to choose the most suitable appointment time.
- The system should provide users with the option to cancel or reschedule appointments as needed, ensuring flexibility and convenience
- For users, there should be a user-friendly interface allowing them to view their booking details and track the status of their appointments effortlessly.
- Managers should have access to a dedicated interface where they can efficiently view and manage booking statuses.
- Additionally, the system should feature a search function enabling schedule managers to quickly find specific booking details when necessary

### **6. Package Management:**

- The system should provide different types of packages with services that customers frequently need.

- The system should provide monthly and annual subscription plans.
- The system should allow the package manager to add new packages, edit the package details, and delete unnecessary packages from the system.
- The system should allow customers to buy and add selected packages to the cart.
- The system should allow unregistered users to view the package list.

## **7. Project Management:**

- The system should provide users like customers and employees with an intuitive interface to efficiently view project details like status, cost, duration, count of projects separately as "Ongoing" and "Previous", etc.
- The system should provide access to a project manager to oversee and manage all project-related tasks.
- The system should provide access for Project Manager to a dedicated interface where they can efficiently view and manage the lifecycle of projects, including adding, editing, and deleting projects details as necessary and must be able to search projects details, generate reports and view the count of projects separately as "Ongoing" and "Previous" in those interface.

## **8. Order Management:**

- The system should only allow registered users to access OMS features.
- The system should provide the option to place orders for both products and services.
- The system should provide shopping cart functionalities for both products and services.
- Customers should be able to choose between different delivery options and payment methods.
- The system should provide options to provide customers with a satisfactory after sales service.
- Managers should have access to a comprehensive manager dashboard with searching and sorting functionalities which allows them to efficiently view and manage orders and transactions.
- The system should automatically detect fraud or misleading transactions and notify managers.
- All sensitive information of customers such as shipping addresses and payment details should be handled in a secure manner to prevent being compromised.

## **Requirements Modeling**

### **1. User Management:**

- The system shall allow users to create new accounts and register with the system
- The system shall provide a login and authentication mechanism for users to access the system.
- The system shall provide different accounts for users and admins where admins have access for more features in the system
- The system shall allow users to update their personal information through the user profile

### **2. Career Management:**

- Create a page for job listings that has filters for area, department, and job title.
- Provide a search function so customers can locate particular job postings.
- Make a resume database available to HR managers and clients.
- Provide an HR manager assessment and selection procedure.
- Include phone and email features in the system.
- Make an interview scheduling tool.
- Install an alerting system so that users can receive notifications.
- Make sure the notifications are pertinent and timely.
- Put in place a task management system so that HR managers may sign off on assignments.
- Provide tools for reporting so that job completion data can be used to create performance reports.

### **3. Feedback Management:**

- The system shall allow users to submit feedback and suggestions. Users should have the capability to provide feedback or suggestions through a designated interface within the system.
- The system shall provide a login and authentication mechanism for users to submit feedback. To ensure authenticity and accountability, users should be required to log in before submitting feedback.
- The system shall distinguish between regular users and administrators, with admins having access to additional feedback management features. Administrators should have the ability to access and manage all feedback submissions, while regular users may only view and manage their own submissions.
- The system shall allow users to track the status of their feedback submissions and receive updates. Users should be able to monitor the progress of their feedback, receiving notifications or updates when there are changes in its status.

- The system shall provide analytical tools for administrators to analyze feedback trends and generate reports. Administrators should be able to extract insights from feedback data, identifying common issues, trends, and areas for improvement through reporting functionalities.

#### **4. Inventory Management:**

- The system shall support categorization options, enabling users to filter items according to their specific needs and preferences.
- The system shall display the availability status of each item on the store page, indicating whether it is in stock or out of stock,
- The system shall allow inventory manager to generate inventory report based on the inventory information

#### **5. Service Schedule Management:**

- The system shall feature an intuitive interface facilitating easy navigation for users to book appointments conveniently.
- Users shall be presented with a calendar displaying available time slots, allowing them to choose the most suitable appointment time.
- The system shall provide users with the option to cancel or reschedule appointments as needed, ensuring flexibility and convenience.
- For users, there shall be a user-friendly interface allowing them to view their booking details and track the status of their appointments effortlessly.
- Managers shall have access to a dedicated interface where they can efficiently view and manage booking statuses.
- Additionally, the system shall feature a search function enabling schedule managers to quickly find specific booking details when necessary.
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- The system shall provide access to a project manager to oversee and manage all project-related tasks.
- The system shall provide access for Project Manager to a dedicated interface where they can efficiently view and manage the lifecycle of projects, including adding, editing, and deleting projects details as necessary and must be able to search projects details, generate reports and view the count of projects separately as "Ongoing" and "Previous" in those interface.

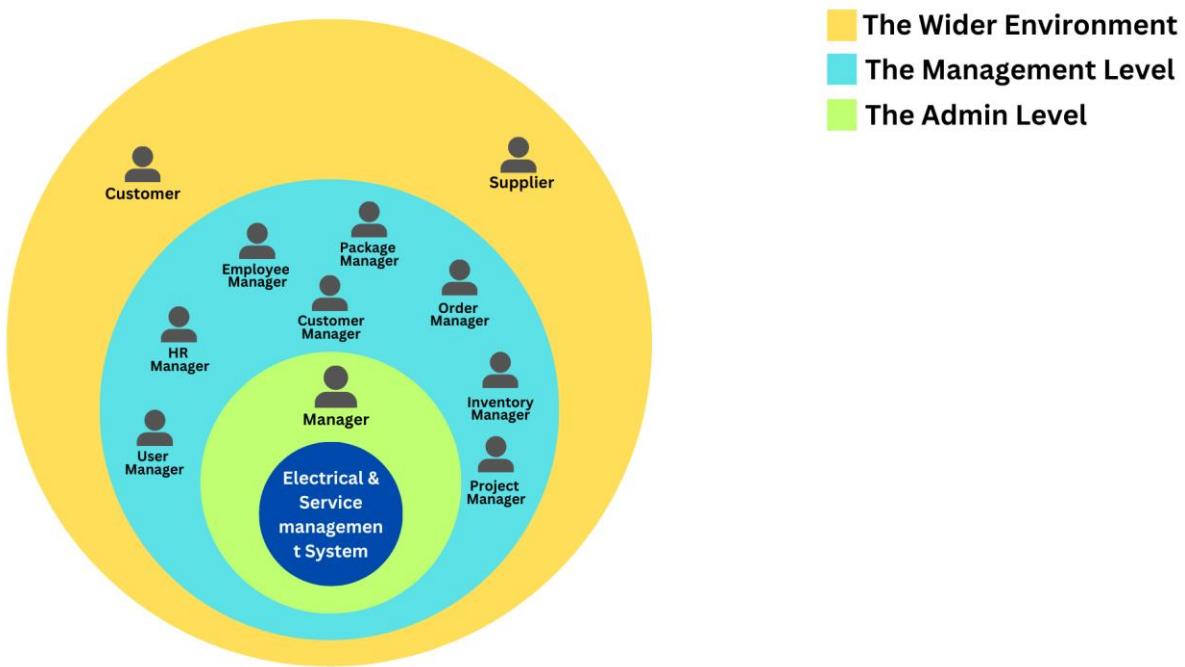
## **8. Order Management:**

- The system should only allow registered users to access OMS features.
- The system should provide the option to place orders for both products and services.
- The system should provide shopping cart functionalities for both products and services.
- Customers should be able to choose between different delivery options and payment methods.
- The system should provide options to provide customers with a satisfactory after sales service.
- Managers should have access to a comprehensive manager dashboard with searching and sorting functionalities which allows them to efficiently view and manage orders and transactions.
- The system should automatically detect fraud or misleading transactions and notify managers.
- All sensitive information of customers such as shipping addresses and payment details should be handled in a secure manner to prevent being compromised.

## Chapter 3 - Designing and Development

### Onion Diagram of Actors

Figure1 - Actor onion diagram



# Diagram of Components

## User Management

User management handles various tasks related to user interactions in the system. It lets users sign up by giving needed information and log in using their details. and admins take care of managing all user accounts. Users have the freedom to modify their accounts and profiles, and any modifications to details will also be notified to users through emails, enhancing the system's security. Additionally, users can view their activity history. Admins can generate user reports, providing details on user information and activities. Users can easily check and download these reports, maintaining transparency and encouraging them to stay active on the platform. Furthermore, both admins and users have the ability to delete their accounts when necessary.

### Use Case Scenario

Table 2 - User management use case scenario

Name	User register to the System	
Summary	Unregistered users visit the Newton Electricals website and navigate to the Registration option. They fill out the form and log in.	
Priority	02	
Pre-conditions	User has internet access and device capable of accessing the electrical service portal	
Post-conditions	User successfully registered for the portal and can now access its features and services	
Primary Actors(s)	Unregistered user, Admin	
Main Scenario	Step	Action
	1	User visiting the newton electrical web portal
	2	System displays the home page with options to login or register
	3	User select the signup button
	4	Unregistered user redirect into the registration form

	5	User fill in the registration form with their personal details.
	6	After, user click on the register button
	7	System displays message asking user to verify their email
	8	User enter email and click on verify
	9	User will receive an email to their registered email address
	10	User click verify button
	11	System navigates to login page of the web portal
	12	User enter email and password that have registered with
	13	User click on the login button
	14	System navigates to home screen
Extensions	Step	Action
	4a	If user already registered redirect to login page
	4b	Enter login details and login to the system
	6a	If entered details are incorrect or not in format display invalid message
	7a	If email is already used, the System shows email is already exited.
	12a	If the username or password incorrect
	12a.1	Display “Invalid username or password” message
	12a.2	Allow three attempts
	12a.3	After three attempts also username or password is Incorrect display message create a new password

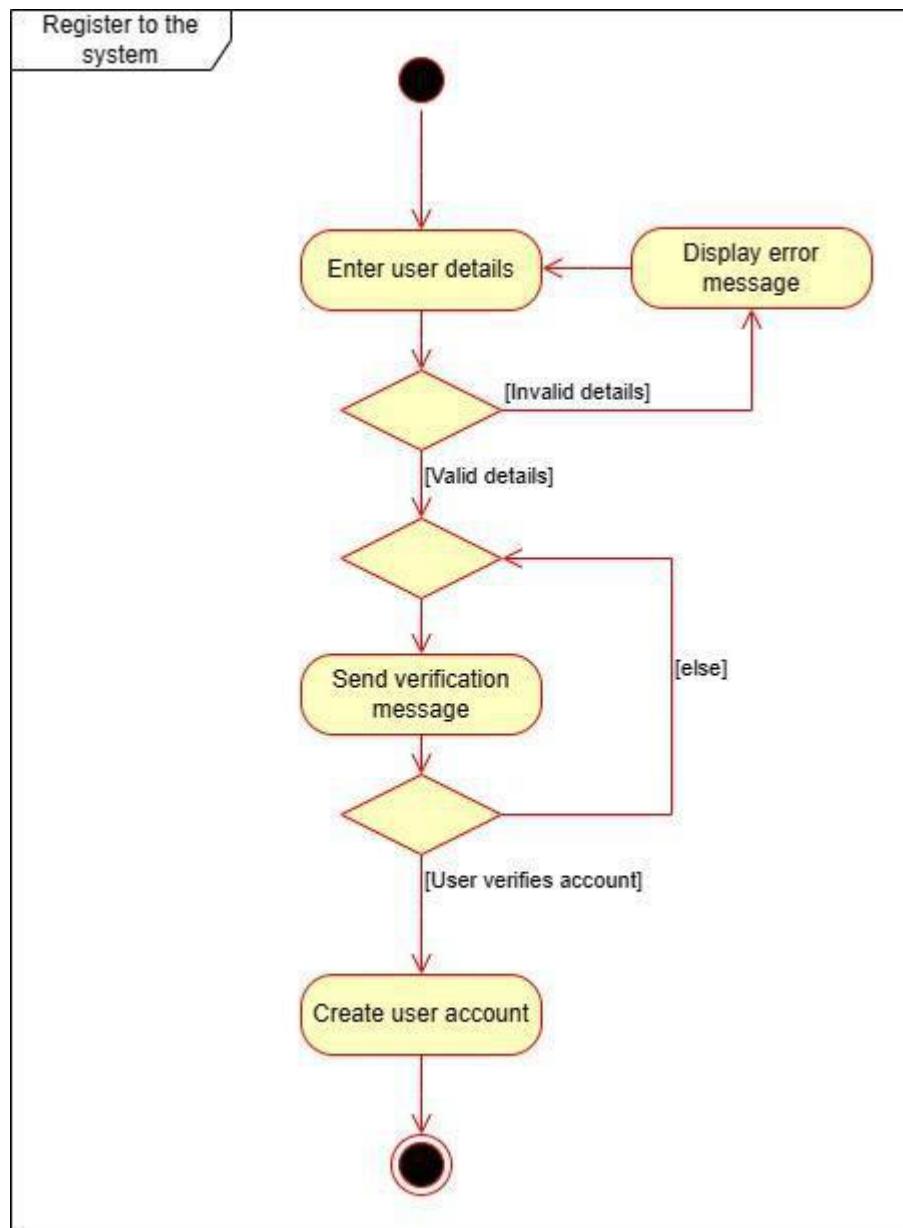
## Use Case Diagram

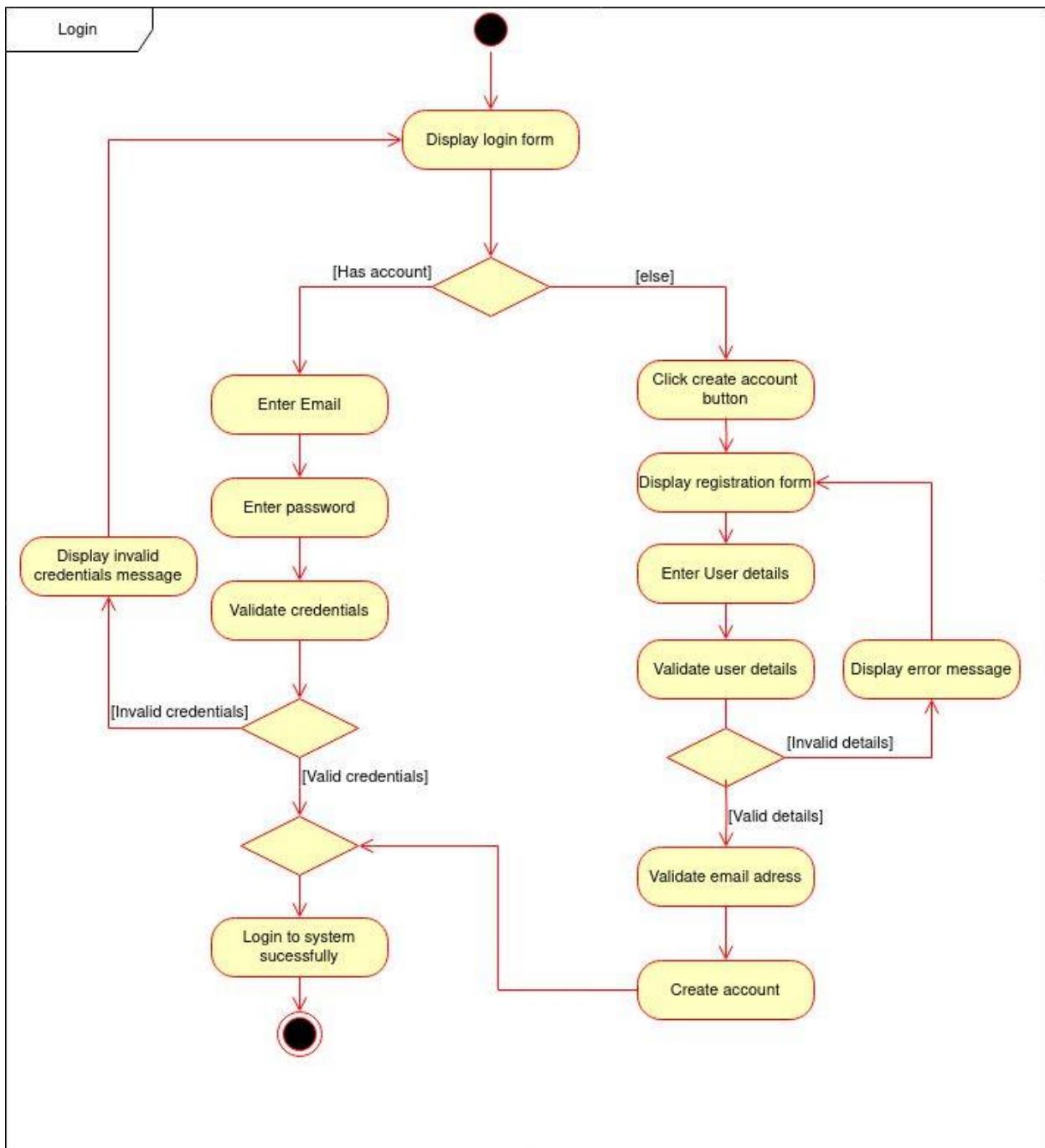
Figure 2 - User management use case diagram



## Activity Diagram

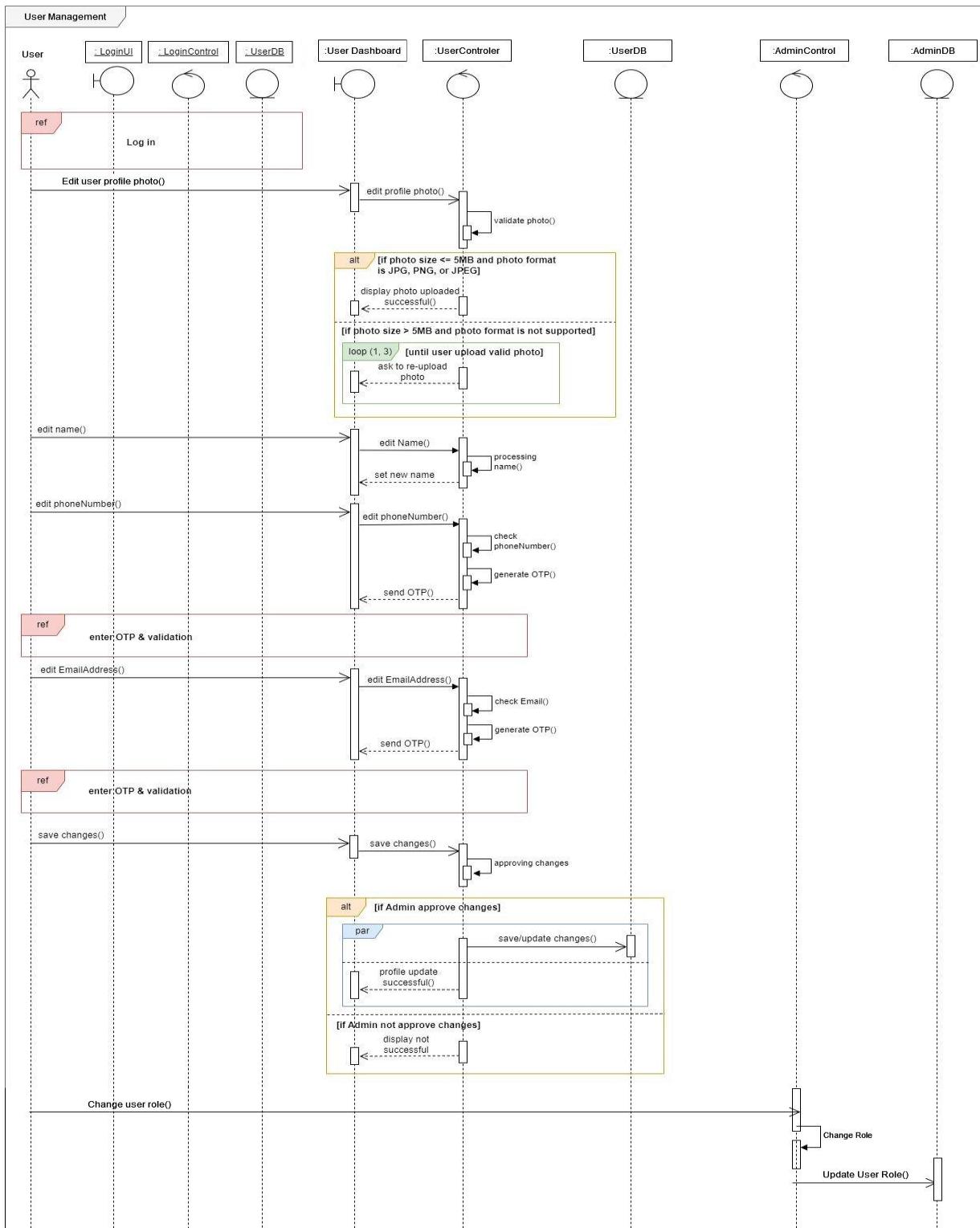
Figure 3 - User management Activity Diagram





## Sequence Diagram

Figure 4 - User management Sequence diagram



# **Career Management**

## **Use Case Scenario**

Newton Electricals understands that in order to optimize talent development, retention, and acquisition, robust career management solutions are essential. Newton Electricals' career management approach strives to align company goals with employee abilities and customer needs. It has features including job posting and search functionality, resume retrieval, communication tools, task fulfillment and reporting, user registration and profile creation, and notifications. This system facilitates efficient people management and talent acquisition procedures at Newton Electricals, as well as smooth operations and improved customer satisfaction.

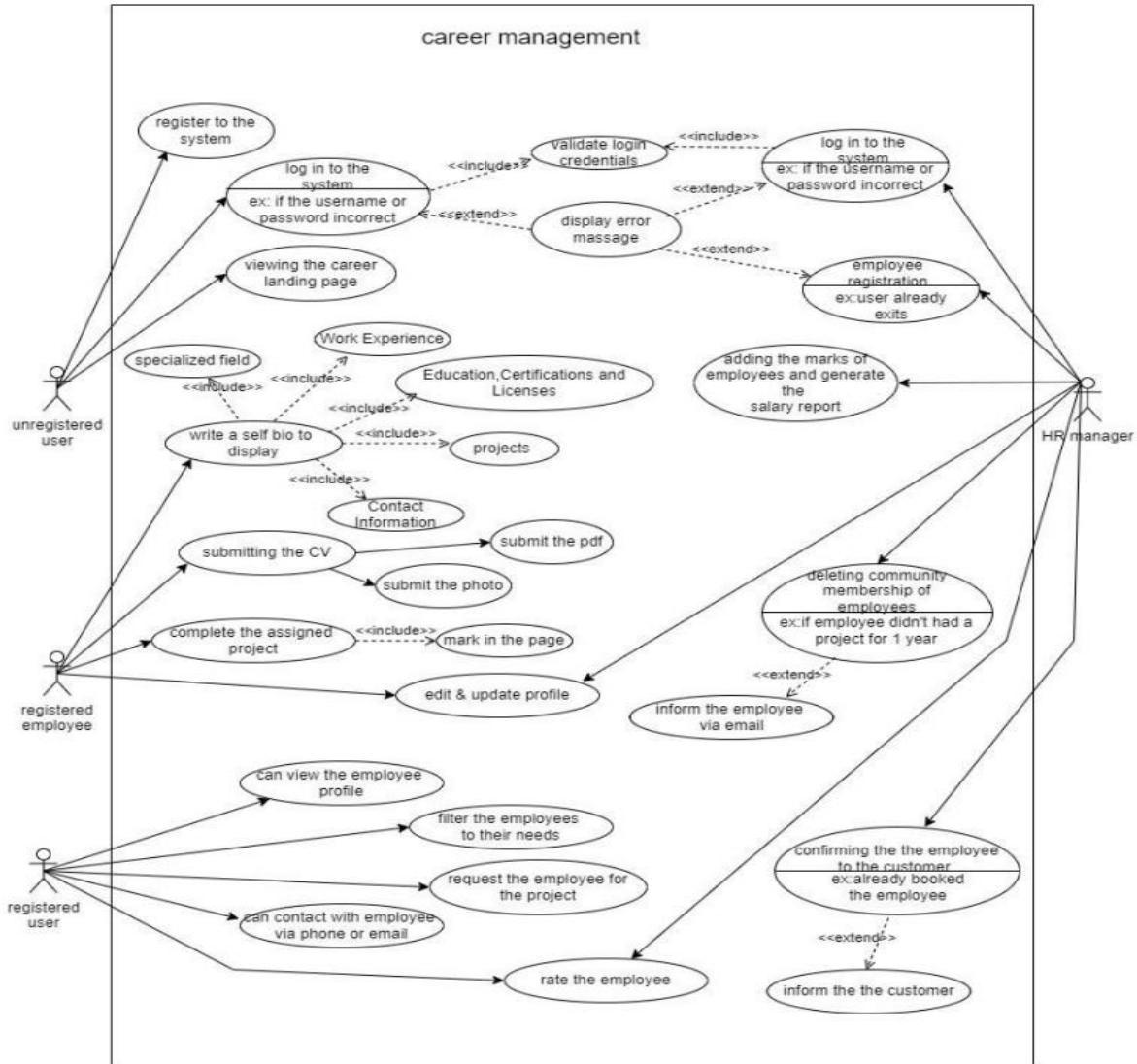
Name	Career Management	
Summary	Managing the employees	
Priority	01	
Pre-conditions	The HR manager should be logged in to the system.	
Post-conditions	Employees should receive an email confirming the registration.	
Primary Actors(s)	HR manager, customer , employee	
Main Scenario	Step	Action
	1	Registered user land to career page.
	2	The user who wants to be a employee should registered to the community first
	3	Employees should log in to the community first.
	4	Employees should create a brief biography about him/ herself.
	5	Employee should submit the CV in desired format
	6	Customers can filter the employees according to their needed service.
	7	Customers can book an appointment to the selected employee.
	8	HR manager logs in to the system

	9	HR manager admits the registrations of the employees
	10	The HR manager admits the request of the customer.
	11	Once the assigned project is done, the employee should update his mark to the system.
	12	HR manager calculates the sum of the marks and do check the salary increments.
	13	The HR manager generates the salary report.
Extensions	Step	Action
	3a	System check whether entered username and password are valid or invalid.
	3b	If invalid, the system will show an error message and ask to re-enter login credentials.
	8a	System checks if the employee already exists.
	6b	If it exists, the system will show an error message..
	10a	Checks the employees schedule and make sure there's a vacant the Employee.

## Use Case Diagram

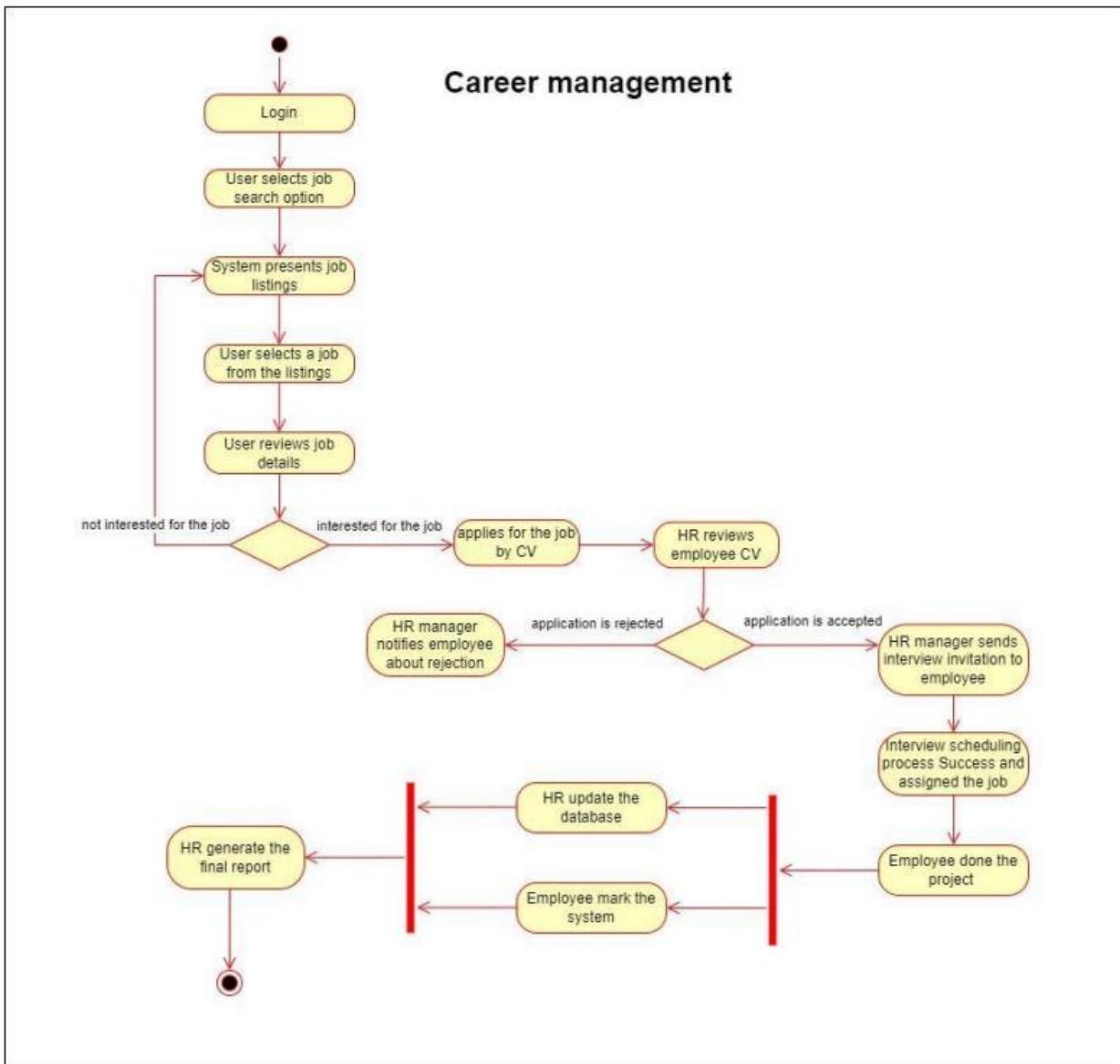
Figure 5 - Career management use case diagram

### 3.Career management



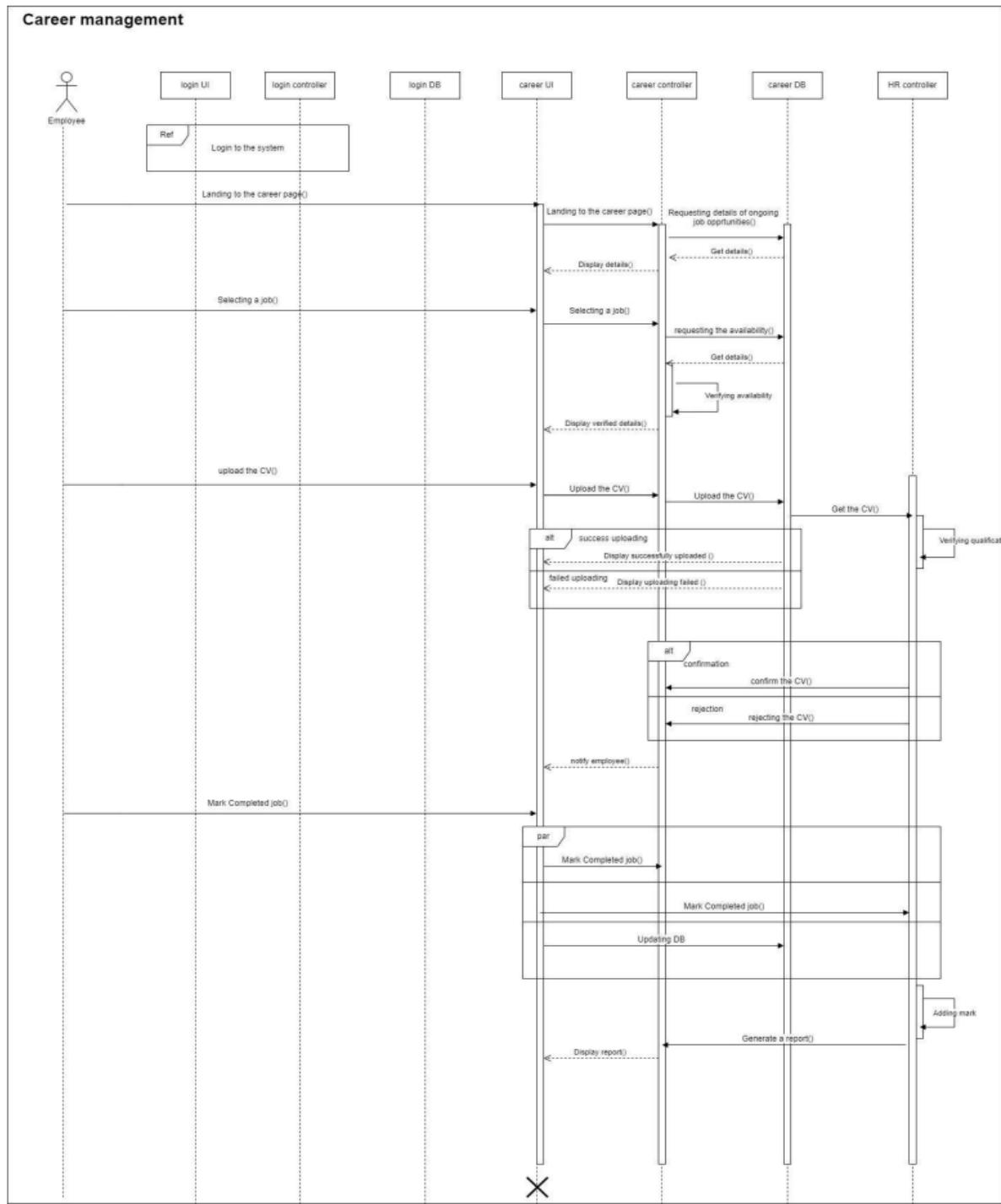
## Activity Diagram

Figure 6 - Career management activity diagram



## Sequence Diagram

Figure 7 - Career management Sequence diagram



## **Feedback Management**

Newton Electricals' Feedback Management System development progresses steadily, focusing on special solutions for efficient feedback handling within its service management system. Key features include database schema establishment and user-friendly interface creation for seamless feedback submission and management. Prioritizing user experience enhancements like email notifications and analytics tools, the Feedback Management System aims to optimize service quality and operational efficiency iteratively and to enhance customer satisfaction.

### **Use Case Scenario**

*Table 4 - Feedback management use case scenario*

Name	Feedback Management	
Summary	Customer can provide feedback for the services received and can request quote and contact the business	
Priority	02	
Pre-conditions	User has internet access to the system	
Post-conditions	The customer's feedback is recorded and available for review and user gets the successful message for the feedback form submission	
Primary Actors(s)	Customer	
Main Scenario	Step	Action
	1	Customer visit the website
	2	System displays the home page
	3	The customer navigates to the feedback section
	4	Customer click the feedback button
	5	After system display the feedback options
	6	Optionally customer can click on contact now button to inquire information from the business
	7	Customer select the feedback option required

	8	The customer submits their feedback.
	9	The system displays a success message to the user
	10	Records the feedback and associates it with the customers transaction history
	11	System sends a confirmation email to the customer acknowledging receipt of their feedback.
	12	System updates its website based on the feedback received.
Extensions	Step	Action
	3a	If user require to contact business
	3b	User click on get quote button
	8a	If entered details are incorrect or not in format ask to enter correctly
	8b	If email structure is invalid ask user to enter valid email address
	9a	If the submission failed display failed message
	12a	If it violate guidelines send for review

## Use Case Diagram

Figure 8 - Feedback management use case diagram

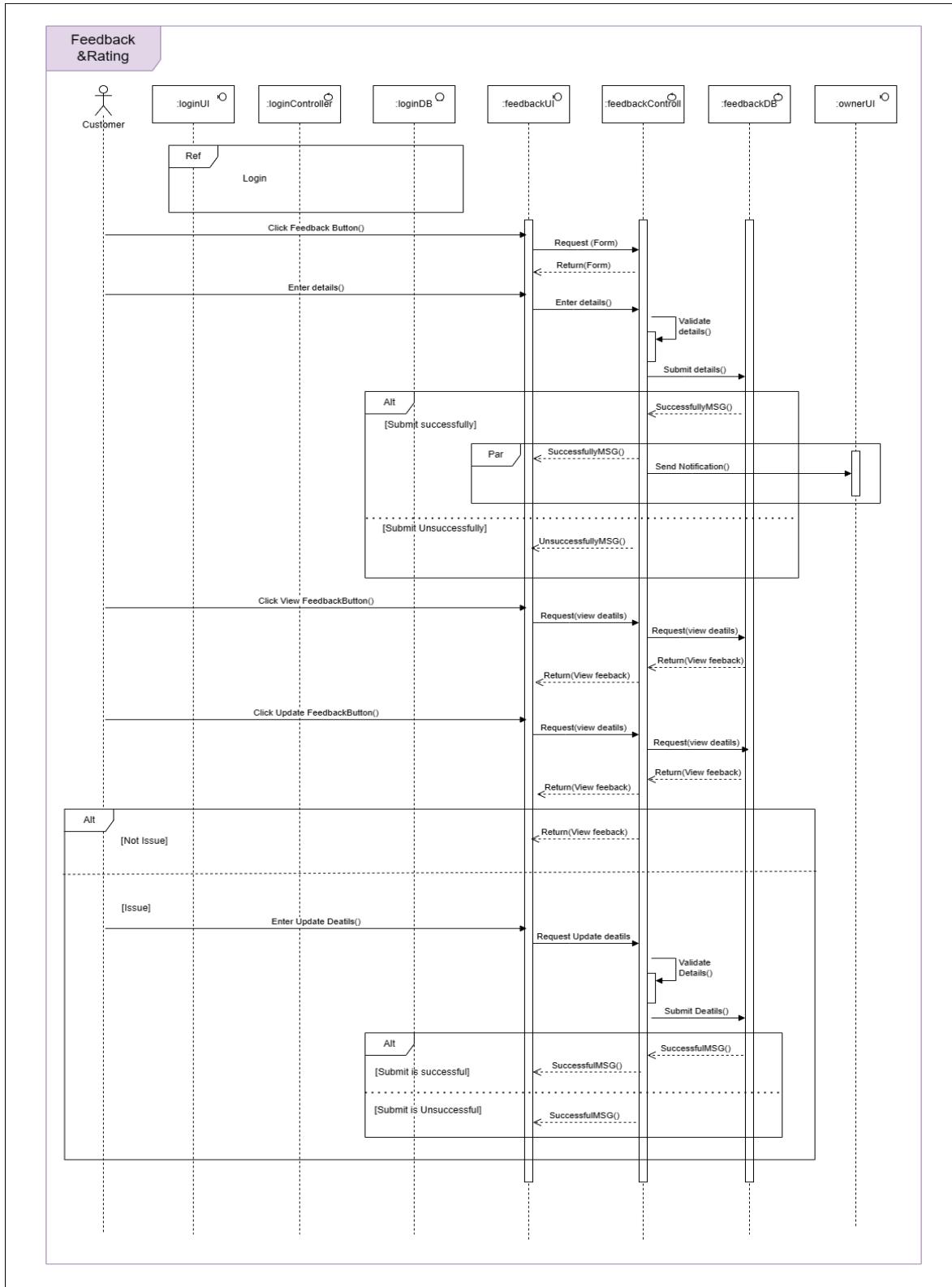
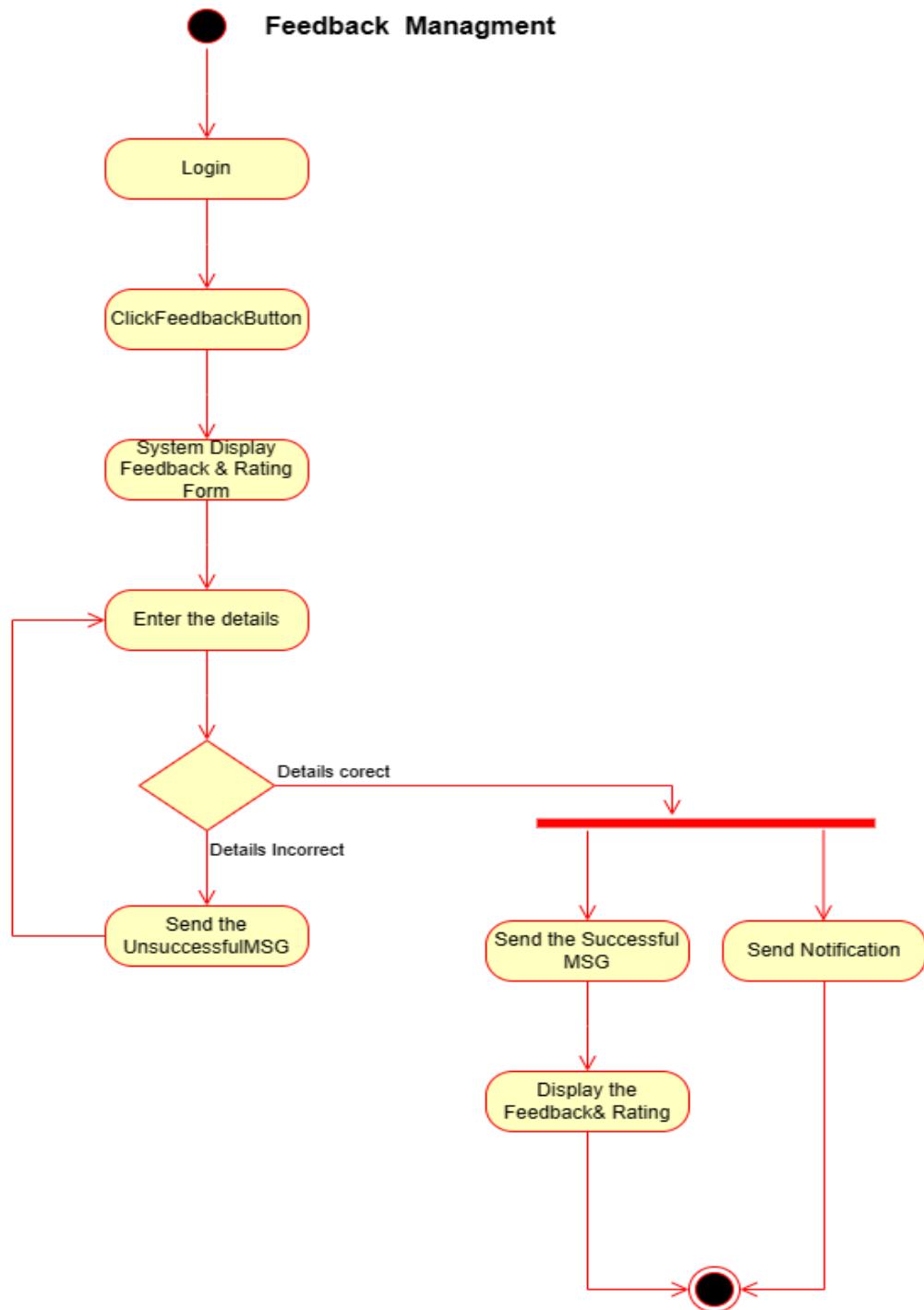
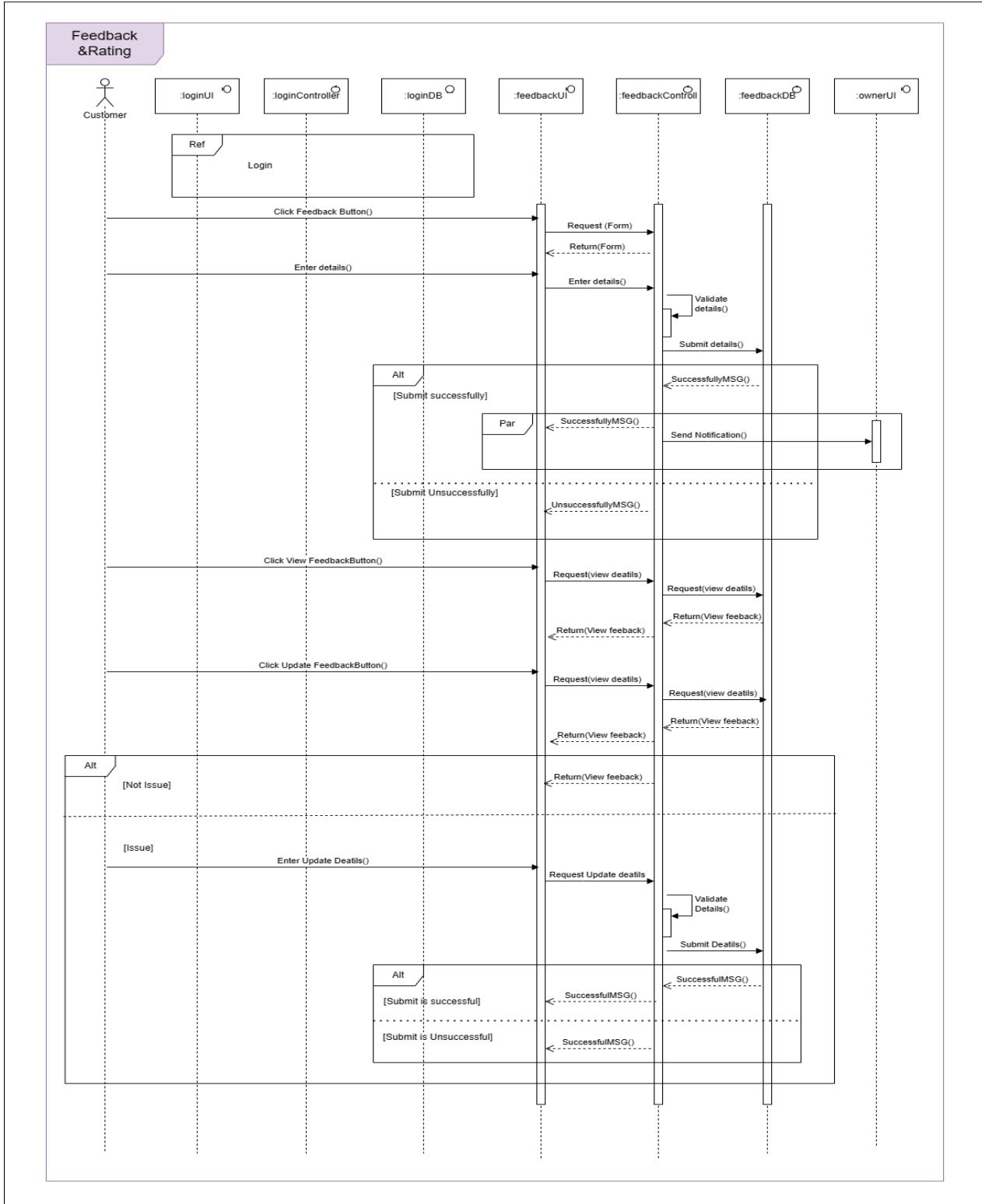


Figure 9 - Feedback management activity diagram



## Sequence Diagram

Figure 10 - Feedback management Sequence diagram



## Inventory Management

Inventory management in an electrical service management system involves tracking and organizing electrical components, tools, and equipment. Key functions include real-time inventory tracking to prevent stockouts and identifying surplus or obsolete items. The system also categorizes items for easier management, integrates with accounting and project management modules, and generates reports on inventory status and cost analysis. Overall, it streamlines operations, reduces costs, and enhances productivity in electrical service management.

### Use Case Scenario

*Table 5 - Inventory management use case scenario*

Name	Inventory Management	
Summary	The inventory manager ensures management of stock, ensuring optimal levels, preventing shortages, ensuring reliability.	
Priority		
Preconditions	Customers and Managers must register to the system.	
Postconditions	Customers can get their inventory report and Managers can check all inventory reports.	
Primary actor(s)	Customer ,Inventory Manager	
Secondary Actor(s)	Inventory Manager	
Main Scenario	Step	Action
	1	The Inventory Manager is logged into the inventory management system.
	2	Navigates to the "Add Product" functionality in the system.
	3	Inputs necessary details for the new product, including name, description, quantity, unit of measurement, and supplier information.
	4	Assigns a category or type to the new product for organizational purposes.
	5	Inventory manager has the option to set a minimum stock level for the new product to facilitate automated reorder notifications.

	6	Saves the entered information, and the new product is now part of the inventory.
	7	The system updates the inventory database to include the new product and its associated details.
	8	Inventory manager reviews inventory reports and identifies products that are below the minimum stock threshold.
	9	Selects the option to initiate a purchase order for the identified products.
	10	Specifies the quantity needed for each product and any additional information required.
	11	The system sends the purchase order to the designated supplier.
	12	Receives a confirmation from the supplier indicating the acceptance of the order.
	13	Supplier delivers the ordered stock to the organization's warehouse.
	14	Updates the inventory system to reflect the newly received stock.

Extension	Step	Action
	1a	If user email or password is incorrect display invalid user message
	1b	Allow the user to enter new password
	3a	If entered details do not match the fields display error message

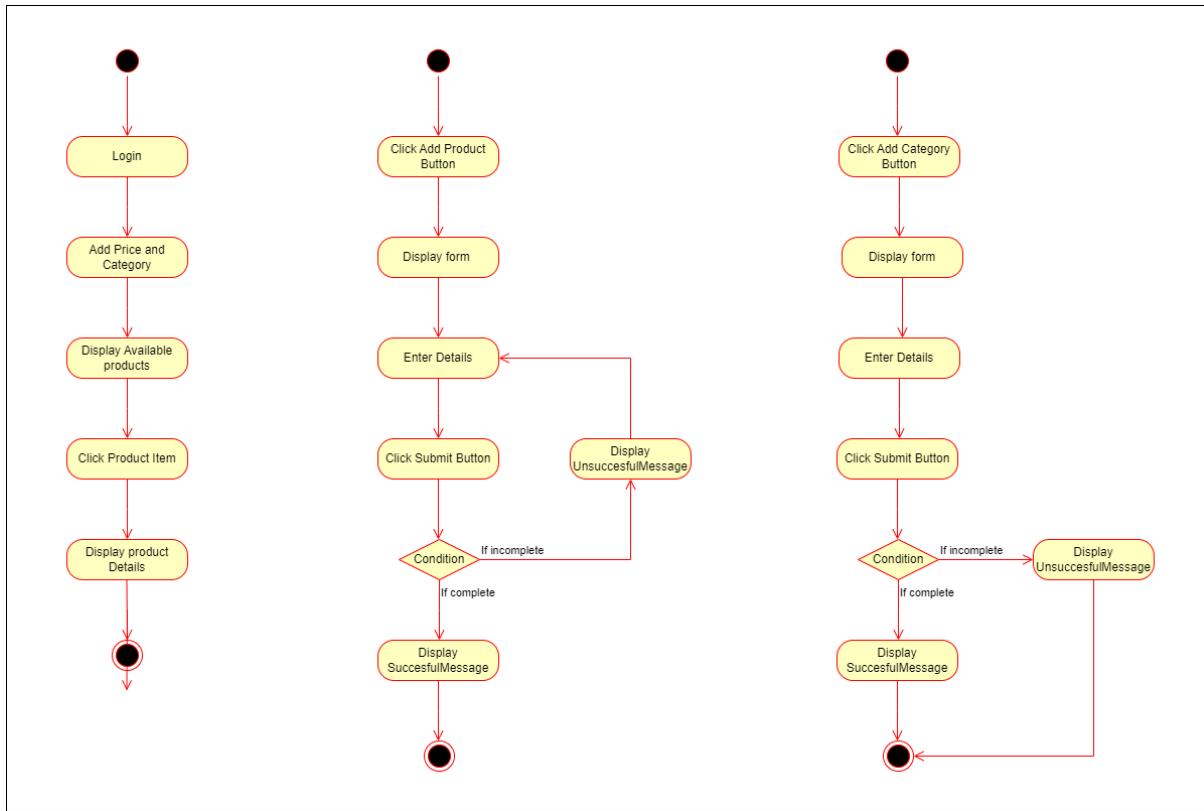
## Use Case Diagram

Figure 11 - Inventory management use case diagram



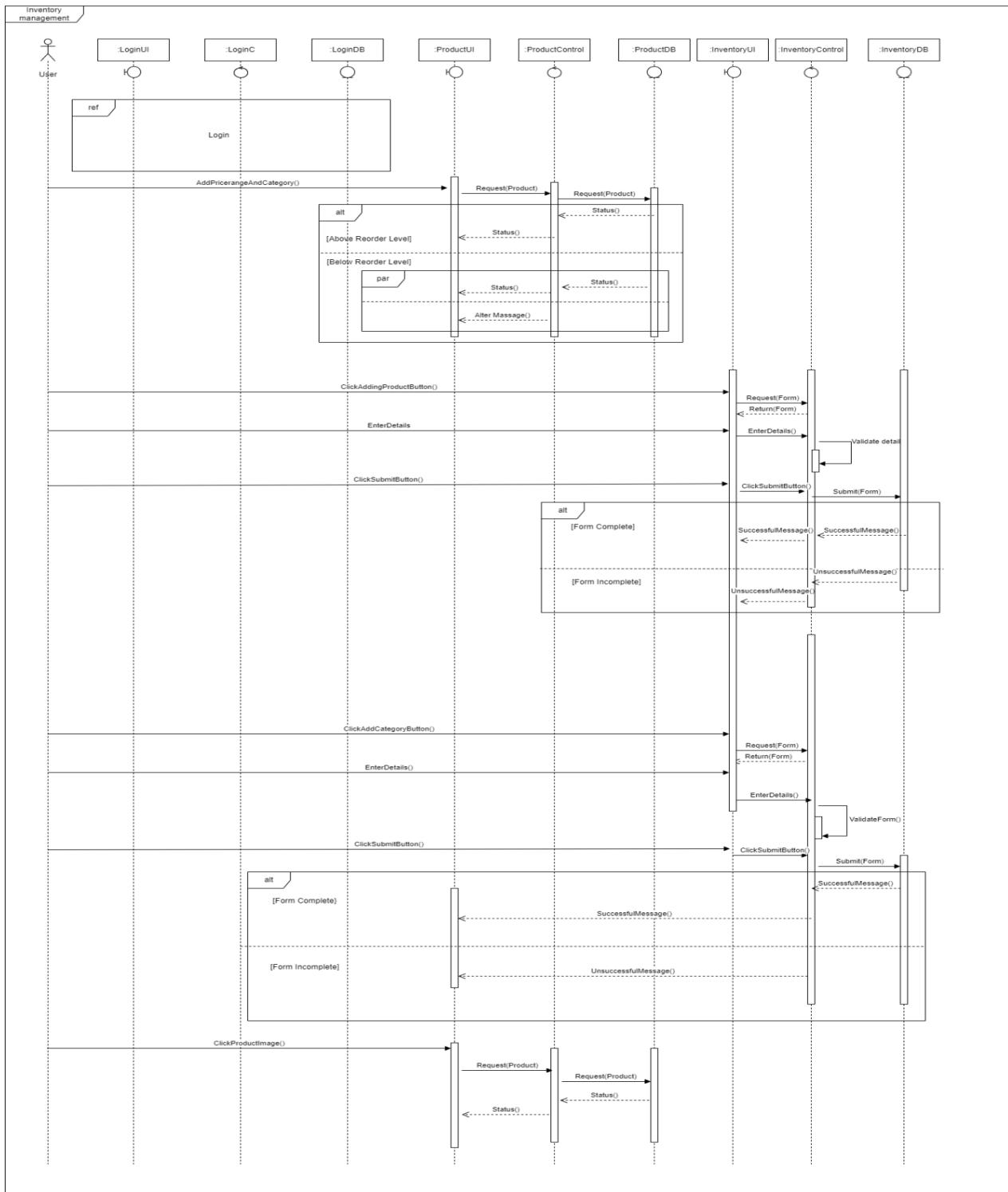
## Activity Diagram

Figure 12 - Inventory management activity diagram



## Sequence Diagram

Figure 13 - Inventory management Sequence diagram



## Schedule Management

Newton Electrical's Service Schedule Management System simplifies appointment booking with a user-friendly interface, offering a calendar display for selecting available time slots. Users can easily cancel or reschedule appointments and track their status via a dedicated interface. Schedule managers access an admin dashboard to view and manage bookings, with the ability to approve or cancel appointments and notify users of changes. A search function enables quick access to booking details, and managers can download comprehensive booking reports for analysis. This streamlined system ensures efficient scheduling for both users and managers.

### Use Case Scenario

*Table 6 - Service Schedule Management Use Case Scenario*

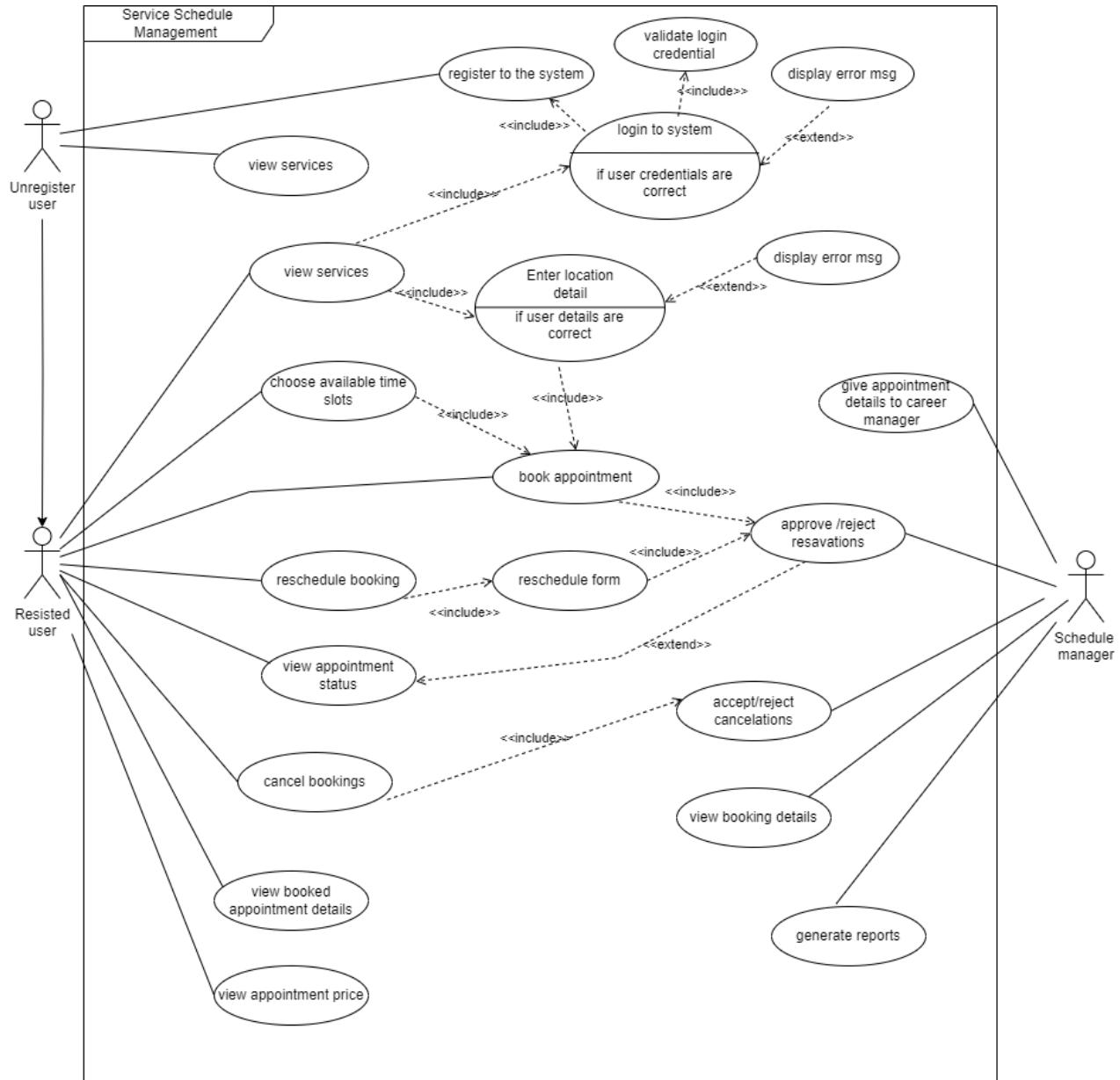
<b>Name</b>	Service Schedule Management	
<b>Summary</b>	Schedule a time slot for an electrician	
<b>Priority</b>	01	
<b>Pre-conditions</b>	The user must be registered to the system	
<b>Postconditions</b>	The customer has a confirmed appointment with the electrical service company. The service company receives the details of the appointment.	
<b>Primary Actors(s)</b>	Registered User	
<b>Trigger</b>	Manager accept the reservation	
<b>Main Scenario</b>	Step	Action
	1	Login to the system using the user credentials
	2	The customer opens the app and navigates to the "Book Appointment" section.
	3	The customer selects the type of electrical service they need from available options

	4	The customer selects the number of rooms the service is needed
	5	The customer types of problem they are facing in detail
	6	The system displays a form for the customer to fill out
	7	The customer fills in their details and the address of the location where the service is required and submits the form
	8	The system displays available dates and time slots for the customer to choose from
	9	The customer selects a preferred date and time for the appointment from the available slots.
	10	The system calculates the price of the service base on the service and the number of rooms user selected
	11	The system displays the appointment details in the interface
	12	The user reviews the booking details
	13	The user confirms the booking by clicking the confirm button
	14	The system display “booking conformed “massage
	15	The user can navigate to My Booking page to view the booking details
	16	If the customer needs to reschedule, they can click on the reschedule button next to the booking details
	17	The system displays a form for the user to fill
	18	The user fills in the form with new date and time they need and submit it
	19	If the customer needs to cancel, they can click on the cancel button next to the booking details
	20	The system displays a popup message to confirm the cancelation
	21	The user can view the status of the booking next to the booking details
<b>Extensions</b>	Step	Action

	1a	If the user credentials are incorrect the system displays an error message
	7a	If the customer enters an invalid zip code the system will display an error message
	7b	If the customer enters an invalid contact number, the system will display an error message
	9a	If the customer enters an invalid date the system will display an error message
	13a	If the customer thinks the booking details are wrong they can go back and re-enter details
	17a	If the customer enters an invalid date or time the system will display an error message
	20a	If the customer do not want to cancel click cancel button in the popup message
<b>Open Issues</b>	1	The manager should confirm the reservation

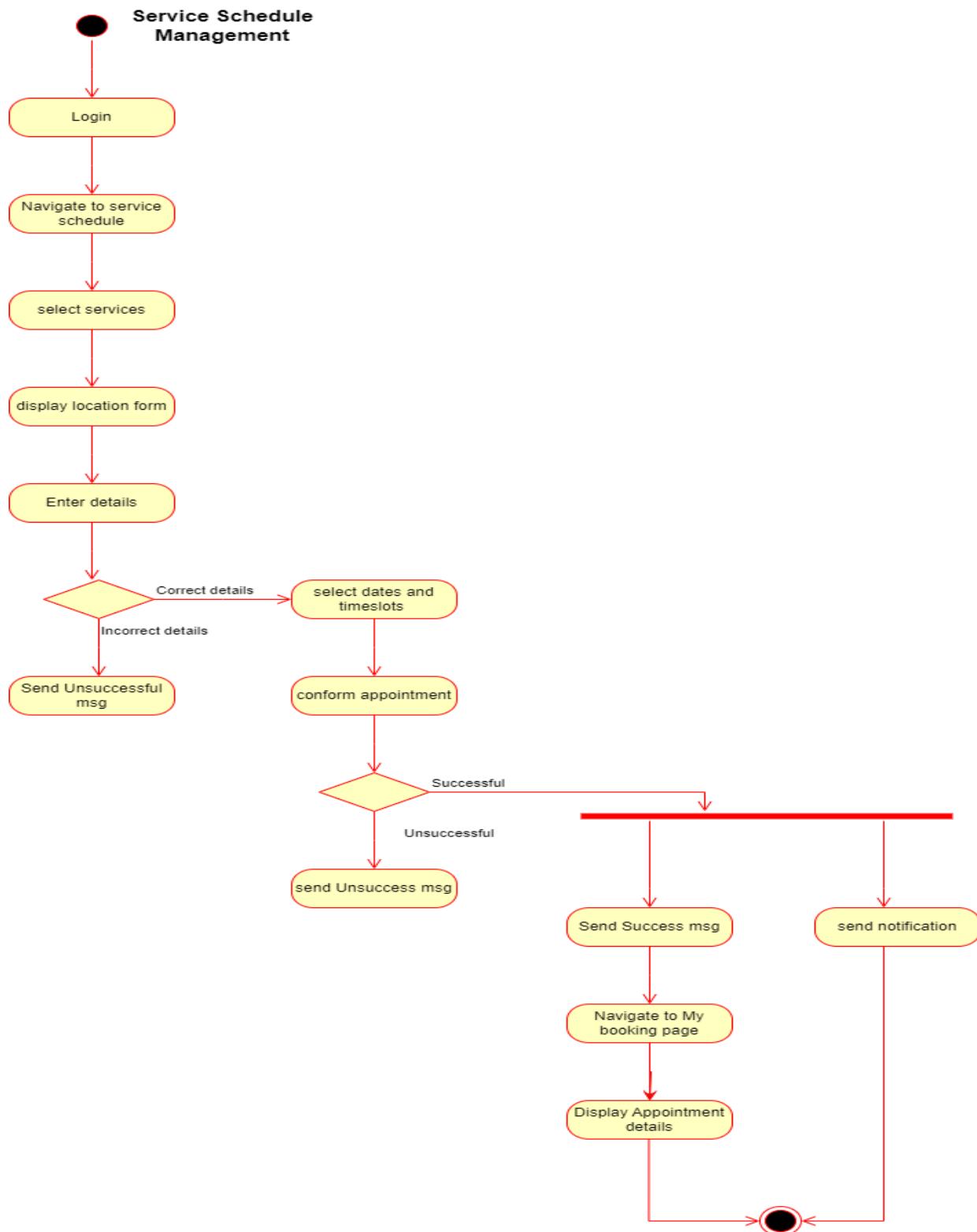
## Use Case Diagram

Figure 14 - Service Schedule Management Use Case diagram



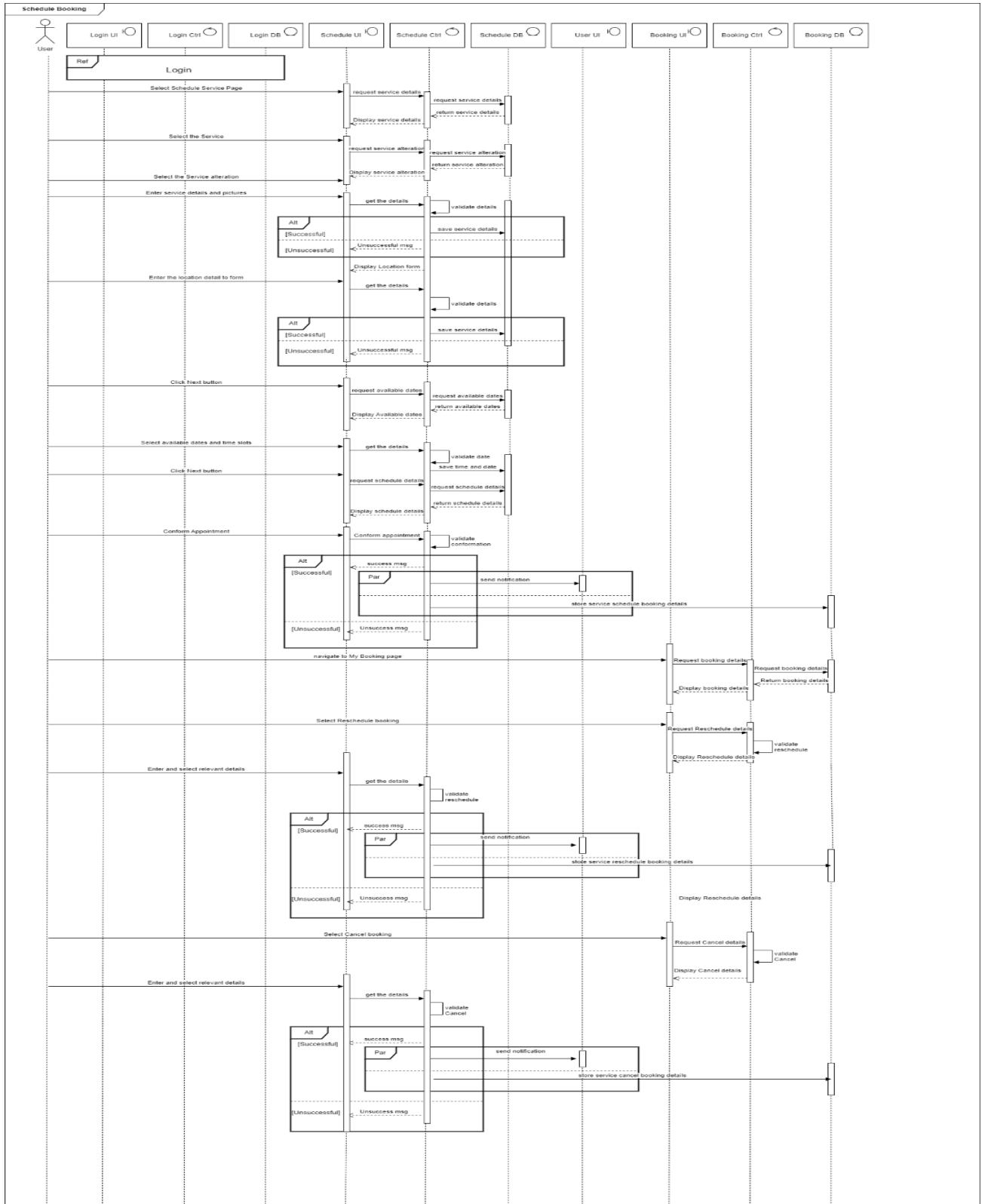
## Activity Diagram

Figure 15 - Service Schedule Management Activity Diagram



## Sequence Diagram

Figure 16 - Service schedule management Sequence diagram



## Package Management

Newton Electrical's package management system attracts the customers for the company. Package managers can easily add packages with specific details like package name, description, ID, services, and prices etc... He can also update package information as needed, such as for seasonal changes. And the package manager can delete the package from the system. The system allows package manager to generate reports about packages, providing useful insights for decision-making. This simplifies the process of managing packages and ensures customers get the services they need efficiently.

### Use Case Scenario

*Table 7 - Package management use case scenario*

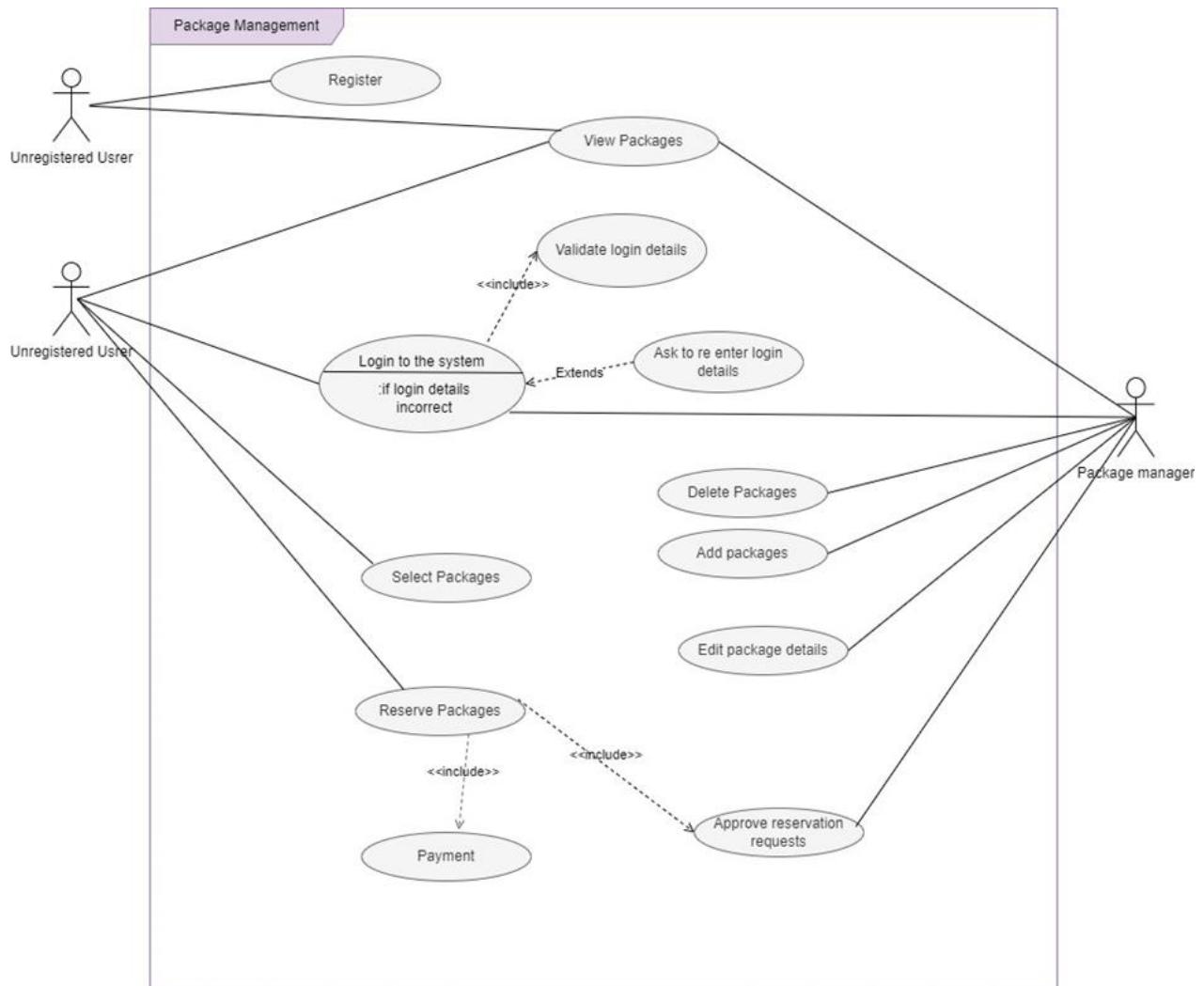
Pre-Conditions	The package manager should be logged into the system.	
Post Conditions	Package manager can add, delete packages and edit package details	
Main Success Scenario	Step	Action
	1	Package manager login to the system using username and password
	2	The system validates login credentials
	3	The system shows a successful message to the user
	4	The package manager clicks on the “Packages”
	5	The system navigates the package manager to the package page

<b>Extensions</b>	Step	Action
	6	Package manager clicks on the “add new package” button and the system displays a form to fill in new package details
	7	Package manager fill in the required information for the new package and select the “Submit” option
	8	The package manager adds a new package to the system and displays it
	9	The package manager views a package and selects the “delete” option to remove a package from the system
	10	The system displays a confirmation message and the package manager selects “yes” to confirm the deletion
	11	After the confirmation, the system permanently removes the selected package from the system
	12	Package manager view a package and select the “Edit” option to edit the details of the viewed package
	13	The system displays the from within the details of the package.
	14	After deleting, adding, edit information of the package admin select the “ save and submit option”
	15	The system displays a confirmation message, and the package manager selects “yes” to confirm the updated details

2a	If login credentials are incorrect, the system asks to re-enter login credentials
7a/14a	If the package manager didn't fill in some required information about the package, the system doesn't allow to submit the form.
7b	Package manager can cancel the adding package by clicking on the “cancel” option
10a/15a	If the package manager selects “No” the system navigates to the form again
14b	Package manager can cancel editing package by clicking on the“cancel” option

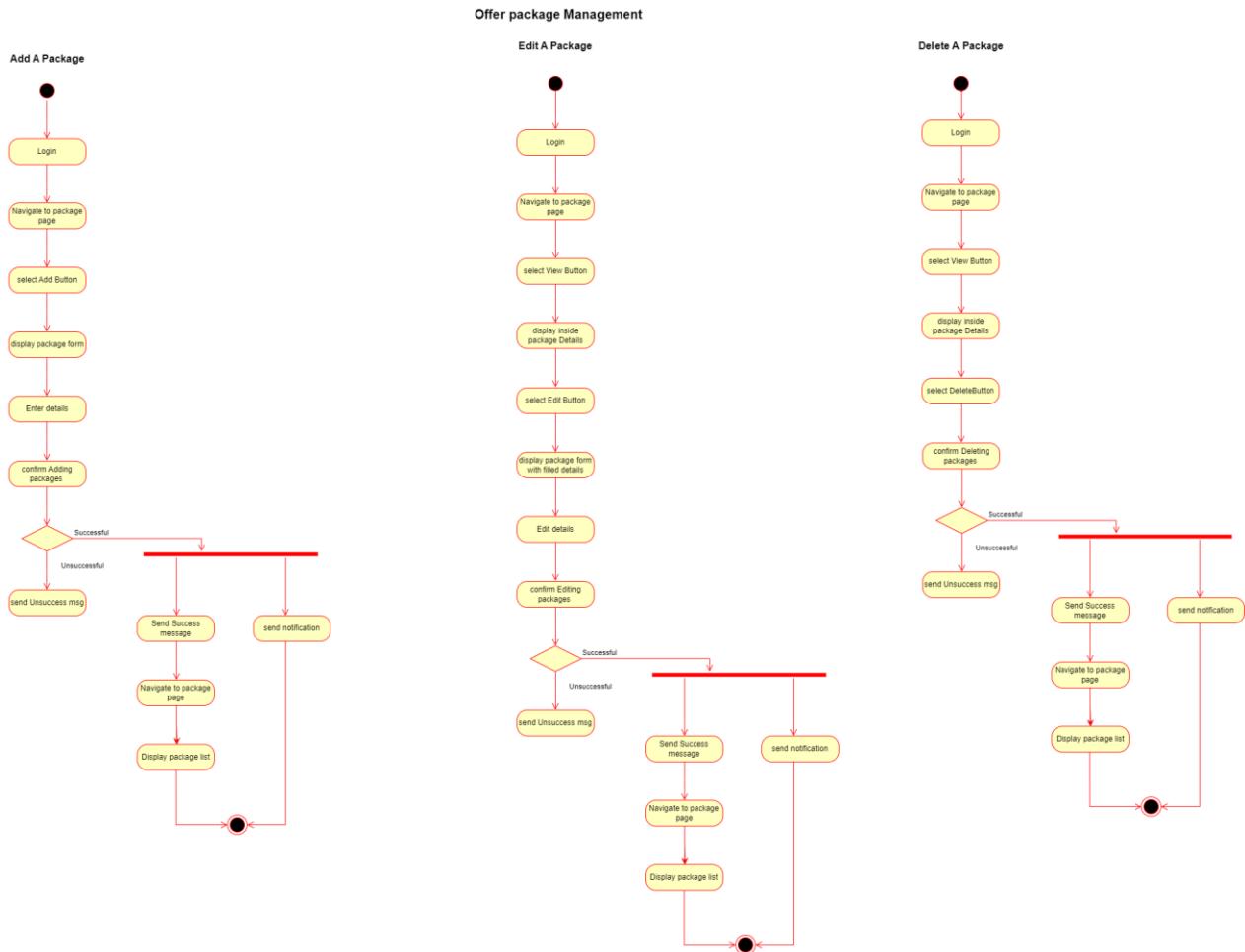
## Use Case Diagram

Figure 17 - Package management Use Case Diagram



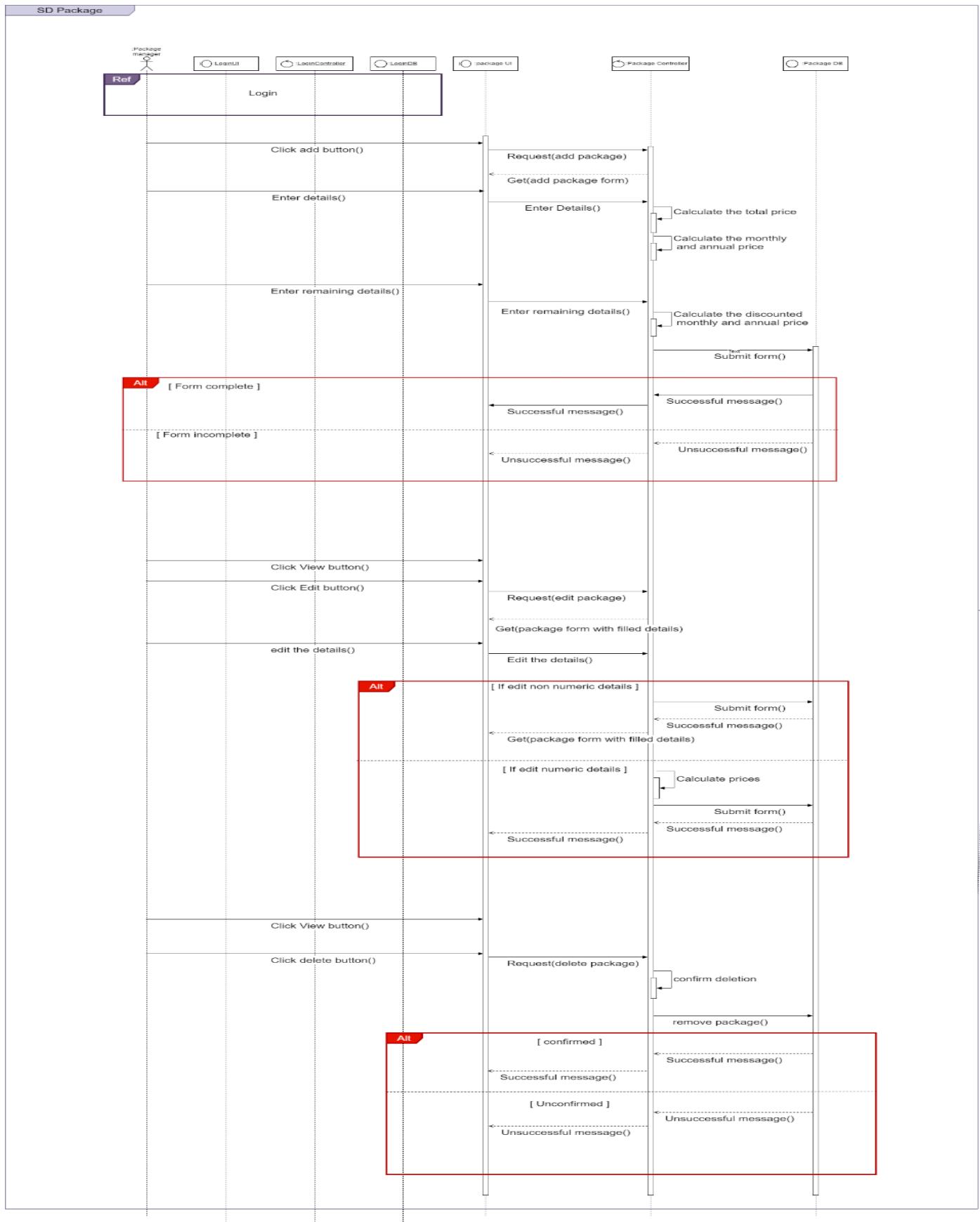
## Activity Diagram

Figure 18 - Package management Activity Diagram



## Sequence Diagram

Figure 19 - Package management Sequence Diagram



## **Project Management**

The Project Management function within an electrical service management system serves as a pivotal component, seamlessly merging past and ongoing projects. Primarily overseen by a designated project manager, this module encompasses a spectrum of tasks aimed at enhancing project visibility and efficiency. The project manager's role encompasses adding new projects, categorizing them into distinct phases such as completed, ongoing, and future endeavors, and updating their statuses accordingly. This systematic approach fosters a structured representation of project history, encapsulating detailed insights into outcomes, encountered challenges, and key performance metrics, thus facilitating informed decision-making processes.

One of the salient features of the Project Management function is its provision of real-time updates on ongoing projects. By delivering transparent progress reports, the system empowers stakeholders with the requisite information to make informed decisions. This transparency not only fosters accountability but also streamlines communication channels, thereby optimizing resource allocation and timelines. Moreover, the integration of past project details with ongoing initiatives ensures that historical data serves as a valuable asset, guiding current endeavors towards successful outcomes.

The holistic integration of past and ongoing project details significantly augments overall operational efficiency. By leveraging historical insights, the system can adaptively allocate resources, optimize timelines, and enhance client communication protocols. This approach underscores the system's commitment to delivering high-quality electrical services in a dynamic and informed manner, thereby bolstering stakeholder satisfaction and organizational reputation.

Furthermore, the project manager assumes a multifaceted role within the system, extending beyond project oversight to encompass user management functionalities. In addition to overseeing project lifecycles, the project manager has the authority to create, edit, and manage projects within the system's framework. Notably, they possess the prerogative to remove projects, thereby ensuring that outdated or irrelevant information is promptly expunged from the system.

Moreover, the project manager serves as the custodian of project-related data, tasked with generating comprehensive project reports. These reports offer stakeholders a bird's eye view of the company's project landscape, detailing metrics such as the number of completed projects, ongoing initiatives, and comprehensive breakdowns of project activities. By providing stakeholders with granular insights into project performance, these reports facilitate strategic decision-making and enable continuous improvement across organizational processes.

### **Use Case Scenario**

*Table 8 - Project management use case scenario*

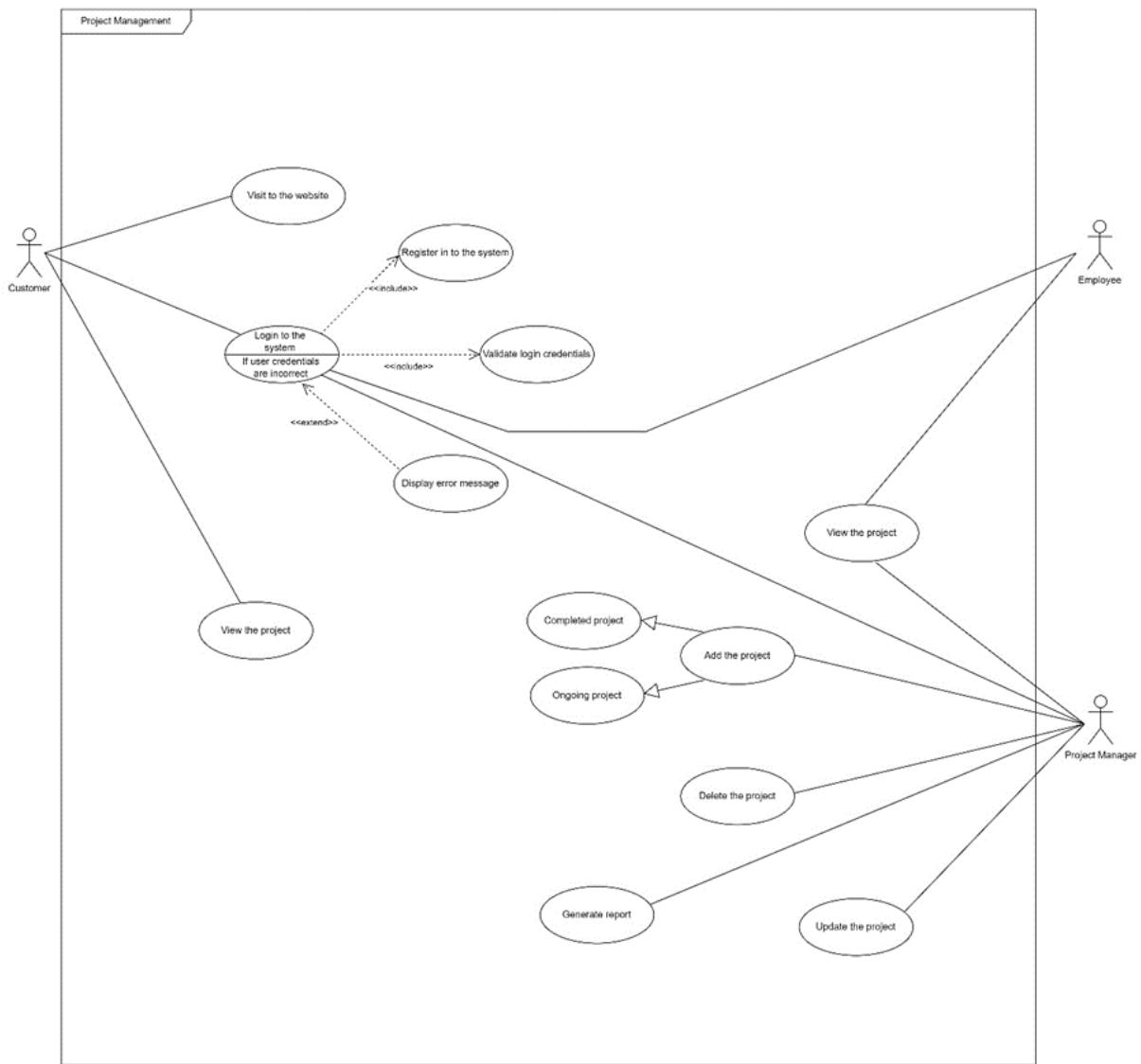
<b>Use Case Name</b>	Project Management	
<b>Use Case Summary</b>	Project Manager will add, view, update and delete projects details	
<b>Priority</b>	03	
<b>Primary Actor</b>	Project Manager	
<b>Pre Conditions</b>	The Project Manager should be logged into the system	
<b>Post Conditions</b>	Project Manager can add, view, update and delete projects details	
<b>Main Success Scenario</b>	Step	Action
	1	Project Manager login to the system using username and password
	2	The system validates login credentials
	3	The system shows a successful message to the Project Manager
	4	The Project Manager clicks on the “Projects”
	5	The system navigates the Project Manager to the project page
	6	Project Manager clicks on the “Add New Project” button and the system displays a form to fill in new project details
	7	Project Manager fill in the required information for the new project and select the “Add” option

	8	The Project Manager adds a new project to the system and displays it
	9	Project Manager clicks on the “Update” button to update a project details and select the “Delete” option for remove a project from the system being able necessary
	10	The system displays a confirmation message and the Project Manager selects “Agree” to confirm the deletion
	11	After the confirmation, the system permanently removes the selected project from the system
	12	Project Manager searches for project details through the “Search Bar” to "View" details of projects
	13	The system displays the table within the details of the project
	14	After adding, viewing, deleting and update information of the project, Project Manager can view the count of projects separately as "Ongoing" and "Previous" by pie chart
	15	Finally, Project Manager can generate a report by clicking on the “Generate Report” button
<b>Extensions</b>	<b>Step</b>	<b>Action</b>
	2a	If login credentials are incorrect, the system asks to re-enter login credentials

	7a	If the Project Manager didn't fill in some required information about the project, the system doesn't allow to submit the form.
	9a	Project Manager can cancel editing package by clicking on the “Cancel” option
	10b	If the Project Manager selects “Disagree” the system navigates to the form again

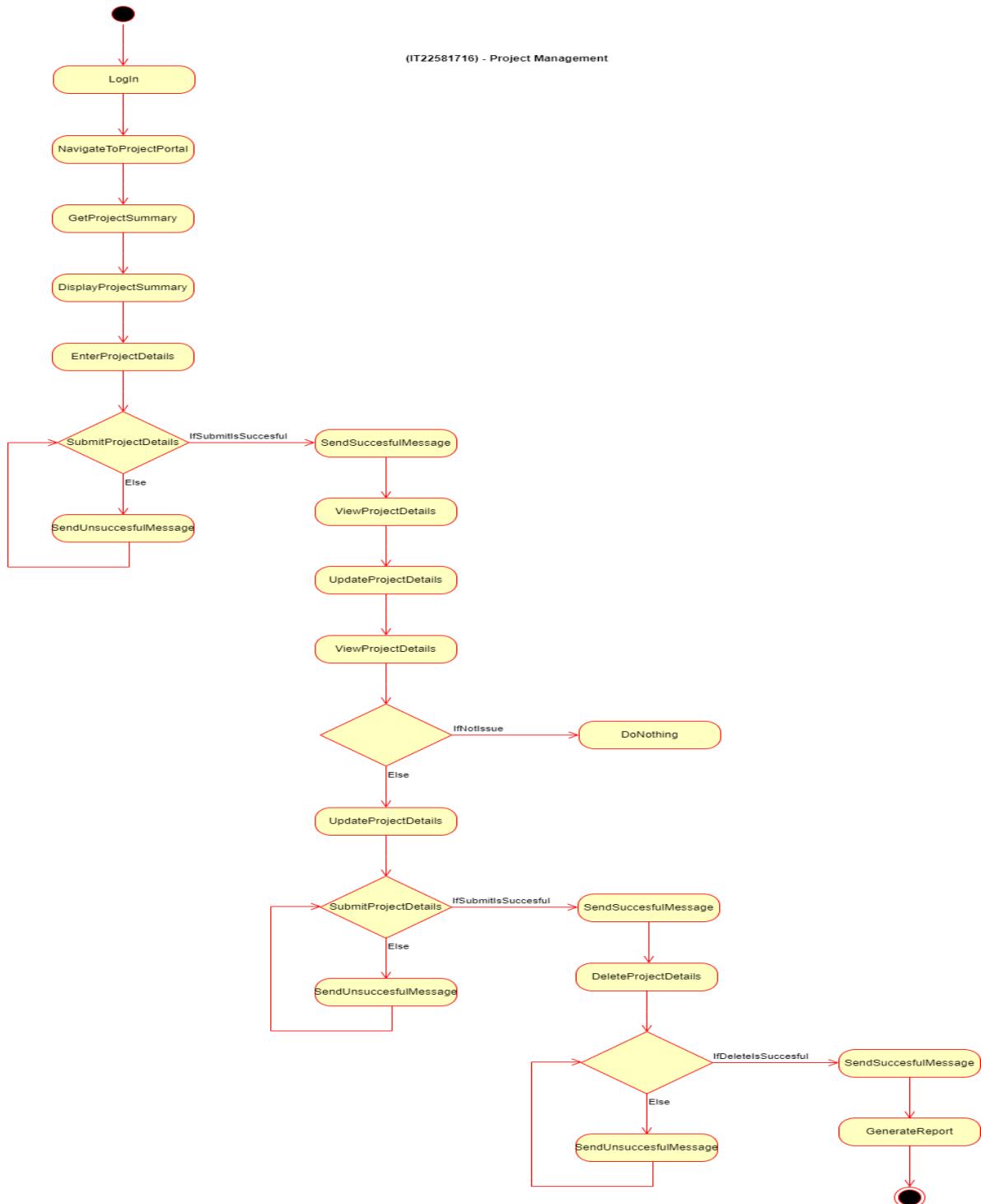
## Use Case Diagram

Figure 20 - Project management use case diagram



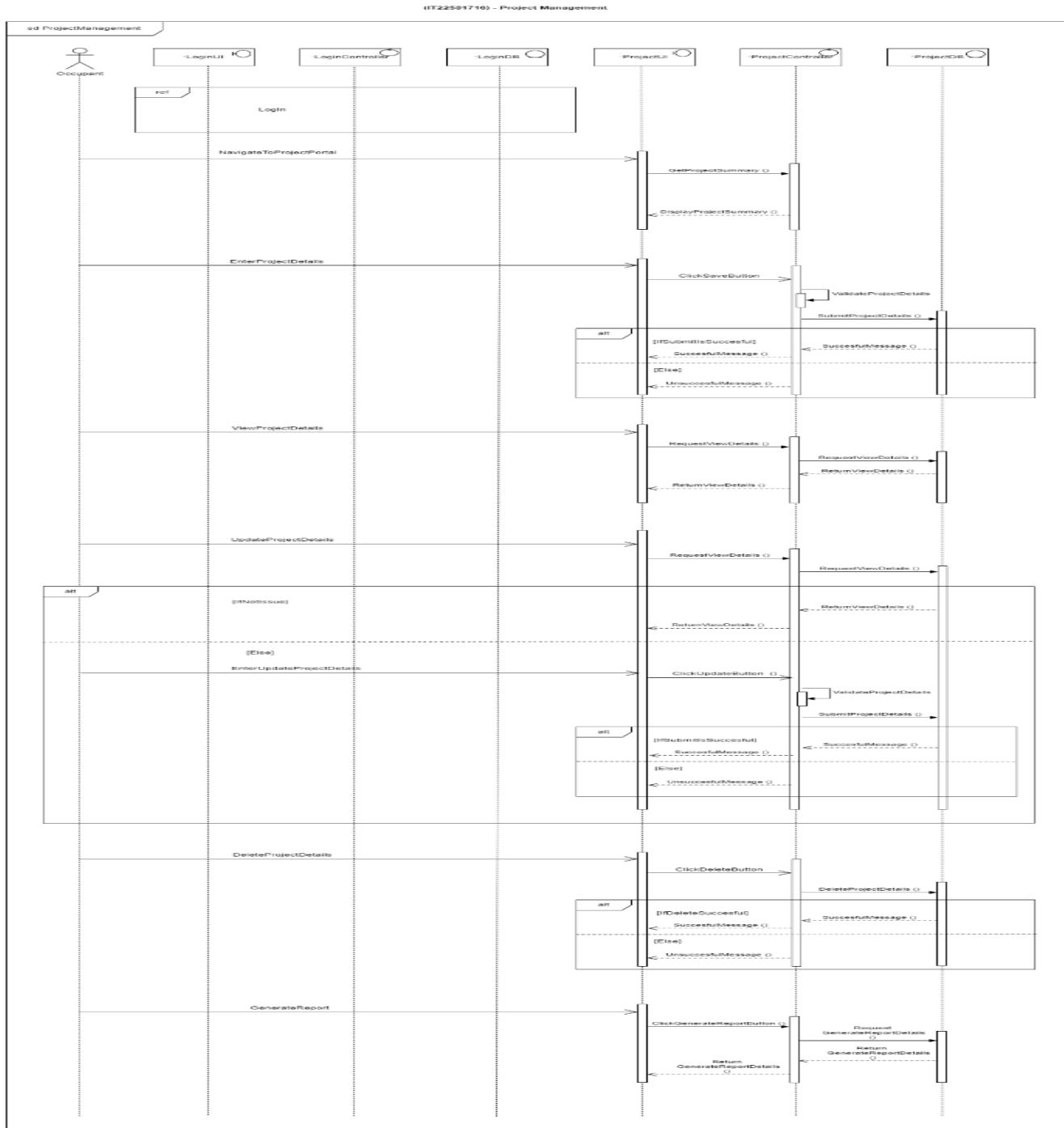
## Activity Diagram

Figure 21 - Project management Activity Diagram



## Sequence Diagram

Figure 22 - User management Sequence diagram



## **Order Management**

Order management system integrates with various platforms and handles all functionalities related to ecommerce such as order placement, shopping cart, delivery management and payment processing etc. Customers can directly place orders or add items to the shopping cart and then do a checkout. Throughout the ordering process, customers are required to enter all necessary information and all user inputs are thoroughly validated by the system. System provides the flexibility customers need and allows them to choose between different delivery and payment configurations. The system is administered by order managers who can review all orders and transactions timely, add/update order related discount rules, take necessary actions on system abuse and generate related reports on various topics.

### **Use Case Scenario**

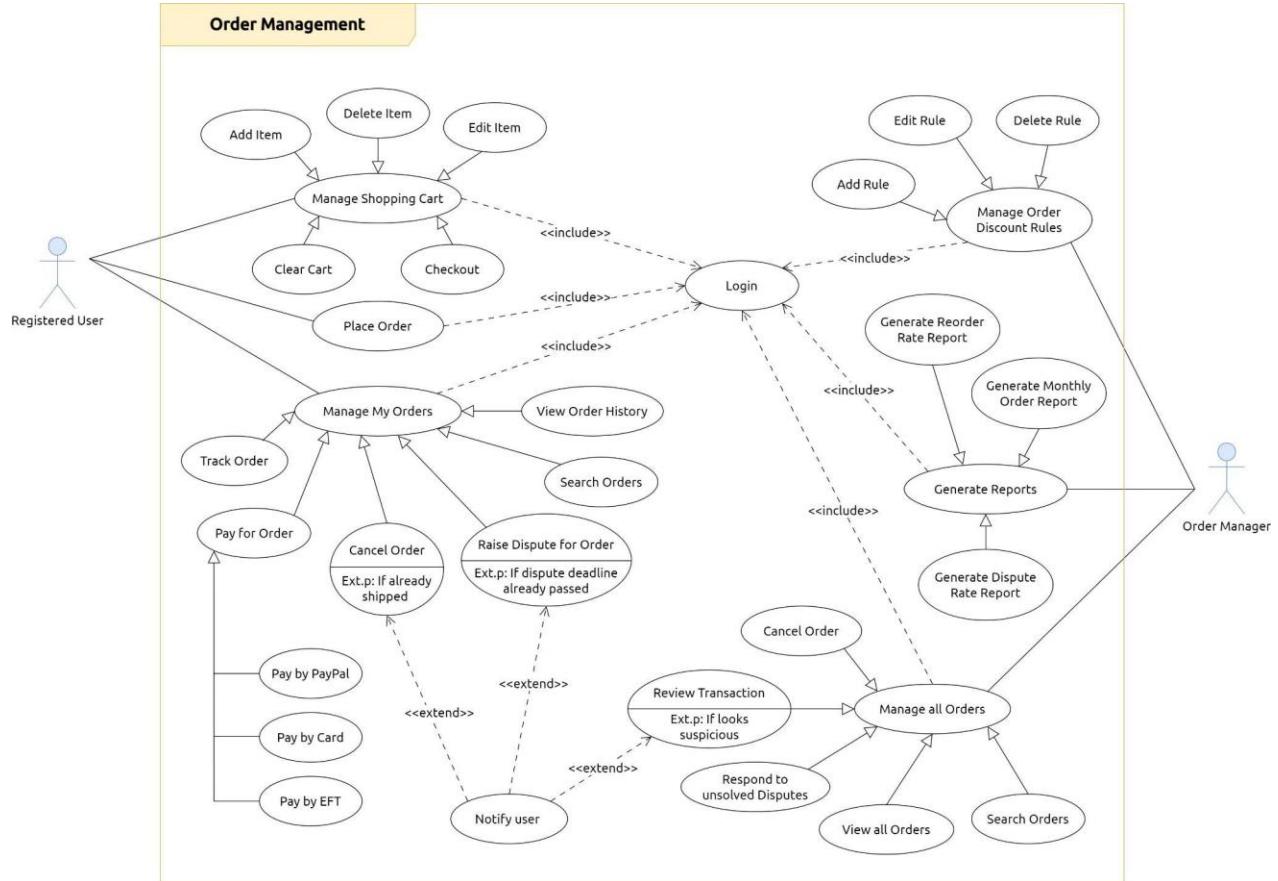
*Table 9 - Order management use case scenario*

Name	User purchases a product by directly placing an order	
Summary	User chooses ‘Buy Now’ from the product description page, directly placing an order, and then successfully completes the payment.	
Priority	05	
Pre-conditions	User is registered and already logged in, has internet access and decided on the product he/she want to purchase.	
Post-conditions	User successfully placed an order and now he/she can wait until it's fulfilled and have access to some after sales services.	
Primary Actors(s)	Registered User (Customer)	
Main Scenario	Step	Action
	1	User visits the Newton Electrical’s website, and navigates to the product description page
	2	User clicks on the ‘Buy Now’ button
	3	System redirects the user to order confirmation page and prompts to enter required information
	4	User fill in all the necessary details and click on ‘Place Order’.

	5	System validates the inputs and prompts whether user want to pay now or save the order to pay later
	6	User chooses to continue with the payment.
	7	System navigates to payment page and prompts to enter required information
	8	User fill in all the necessary details and click on 'Pay Now'.
	9	System validates the inputs and processes the payment.
	10	System notifies the user that the payment is successful and navigates to 'My Orders' portal.
Extensions	Step	Action
	5a, 9a	System validates the inputs and notifies the user that some inputs contain invalid data.
	10a	System notifies the user that the payment has failed and displays an informative error message.

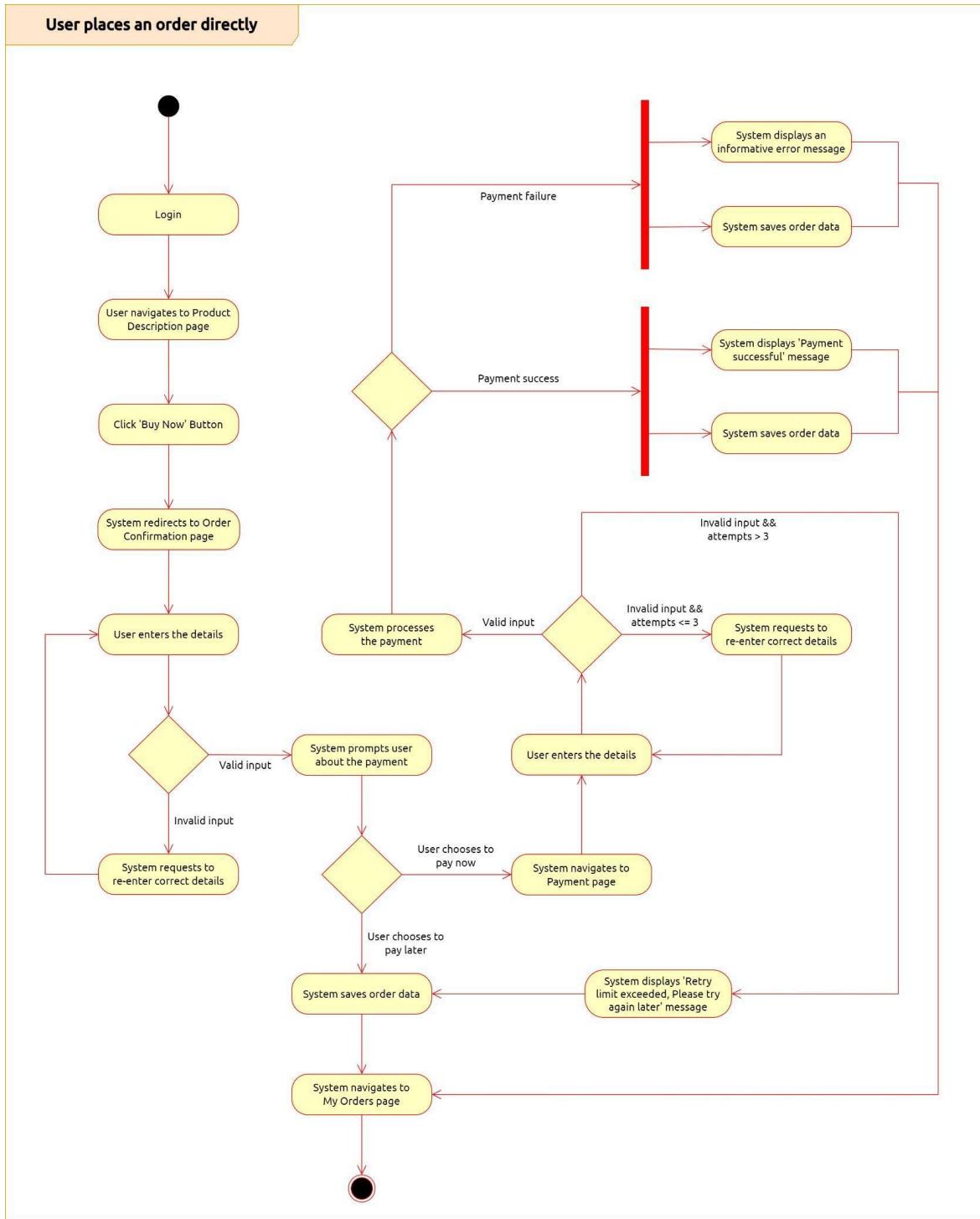
## Use Case Diagram

Figure 23 - Order management Use Case Diagram



## Activity Diagram

Figure 24 - Activity Diagram for ‘User places an order directly’



## **Non Functional Requirements**

The system must meet the functional requirements of the users, which may include specific features or capabilities that the system must have in order to meet the needs of the user.

Performance:

The system must be able to perform its intended functions in a timely and efficient manner, with fast response times and minimal downtime.

Scalability:

The system must be able to scale to handle increasing amounts of data, users, or transactions without sacrificing performance or stability.

Reliability:

The system must be reliable and able to operate continuously without failure or unexpected Downtime.

Security:

The system must be secure and protect user data and sensitive information from unauthorized access or attack.

Cost:

The system must be cost-effective, with a reasonable cost that is commensurate with the value that it provides to the user.

Compatibility:

The system must be compatible with other systems or software that the user may use, with the ability to exchange data or integrate with other systems, as necessary.

Usability:

The system must be easy to use and navigate, with an intuitive interface that is accessible to users with varying levels of technical expertise.

Accessibility:

The system must be accessible to users with disabilities or other special needs, with features that make it possible for all users to access and use the system.

Maintainability:

The system must be maintainable, with the ability to update or modify the system as necessary to fix bugs, add features, or improve performance.

## **Technical Requirements**

### Web-based System

Users can access the system using a web browser, making it convenient for them to use on any device with an internet connection.

### Back-end

This is like the system's brain, handling tasks like storing and managing data, and ensuring everything runs smoothly behind the scenes.

### User interface (Front-end)

It's what users see and interact with directly - like buttons, forms, and menus - making the system easy to use and navigate.

### Database:

The system should have a database to store and manage data efficiently and effectively.

### Security

This keeps everything safe and secure, making sure only authorized users can access sensitive information and protecting against cyber threats.

### Data Management

Effective data management capabilities, including data storage, retrieval, processing, and analysis, are crucial for handling and leveraging large volumes of data efficiently.

### Performance

To satisfy the needs of the users, the system should be built to function successfully and efficiently.

### Maintainability

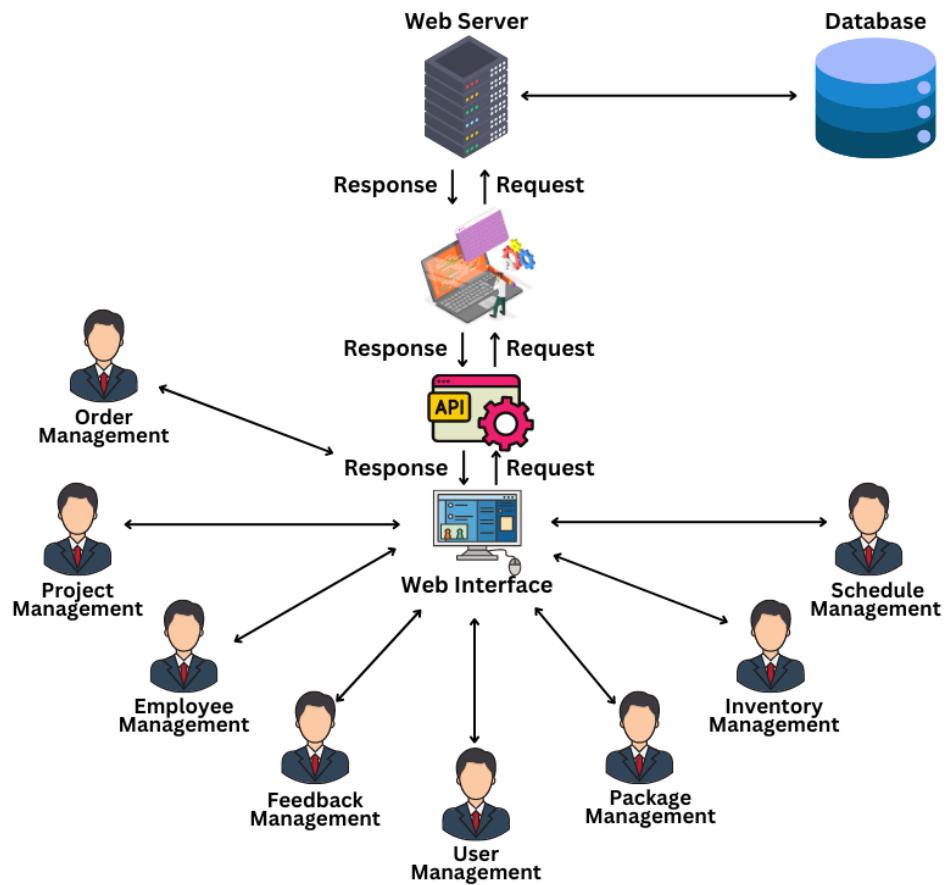
The system should be easy to maintain and update, with clear documentation, and efficient debugging tools to facilitate troubleshooting and updates.

### User Interface:

The system should have an easy-to-use interface that allows users to interact with the system and perform necessary tasks and easy navigation without complexity.

## High Level Architecture Diagram

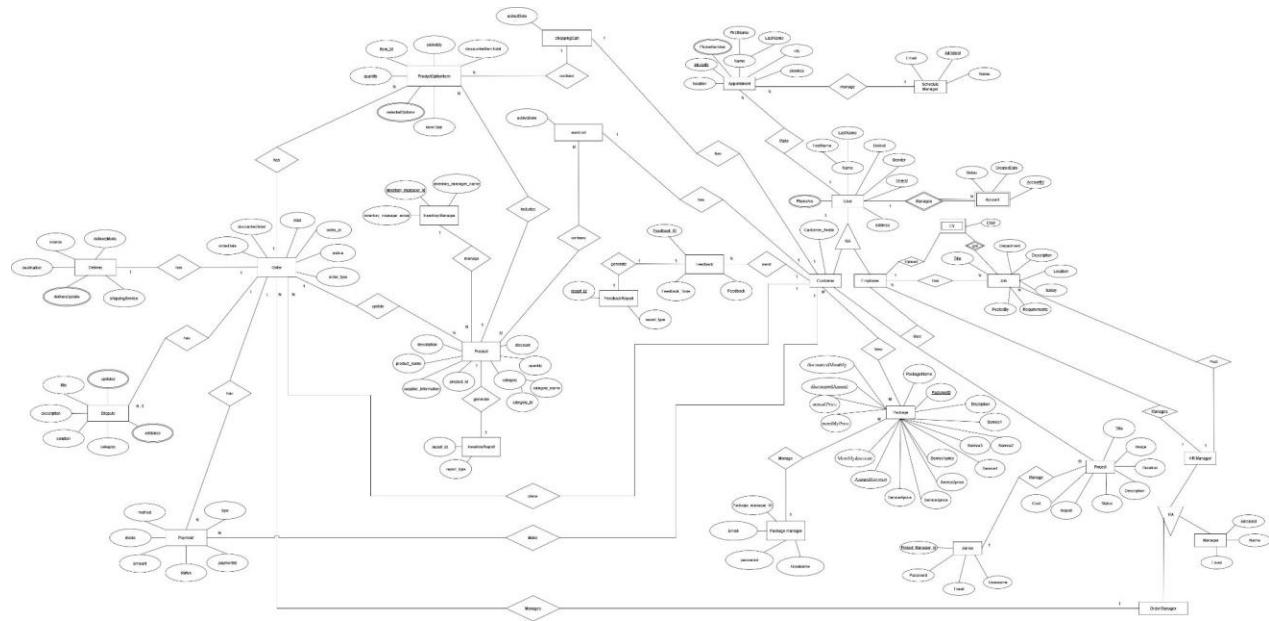
Figure 25 - High level architecture diagram



## ER Diagram

Drive link for diagrams: <https://drive.google.com/file/d/1RVkyU8Mq0GHLyh8f9Th-nPee6fuZ4xsN/view?usp=sharing>

Figure 26 - Er diagram

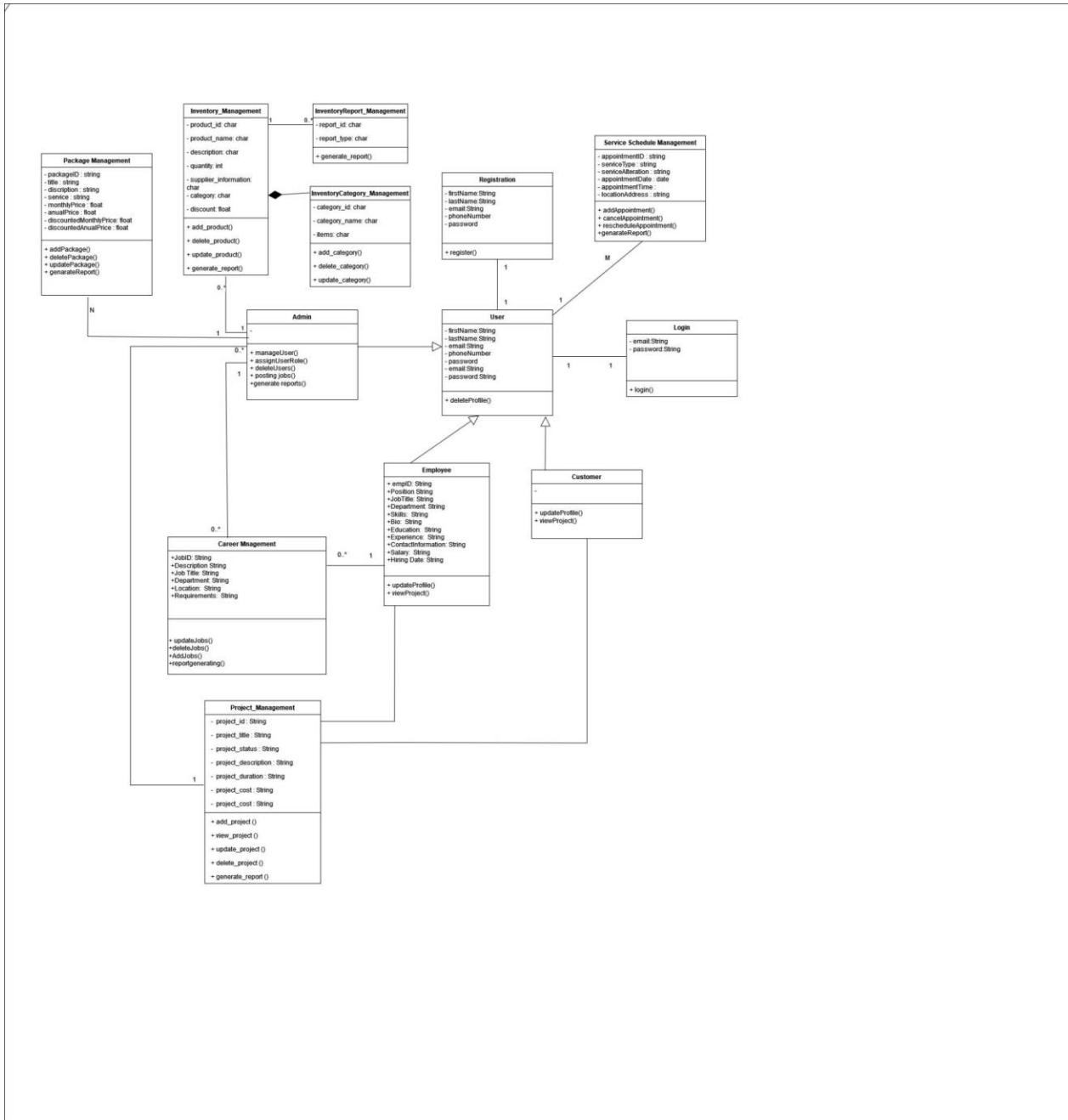


# Class Diagram

Drive link for diagrams:

<https://drive.google.com/file/d/1ZnYe3-LdGwAK-jb9rvZBE-FZ6iSaxGYO/view?usp=sharing>

Figure 27 - Class diagram



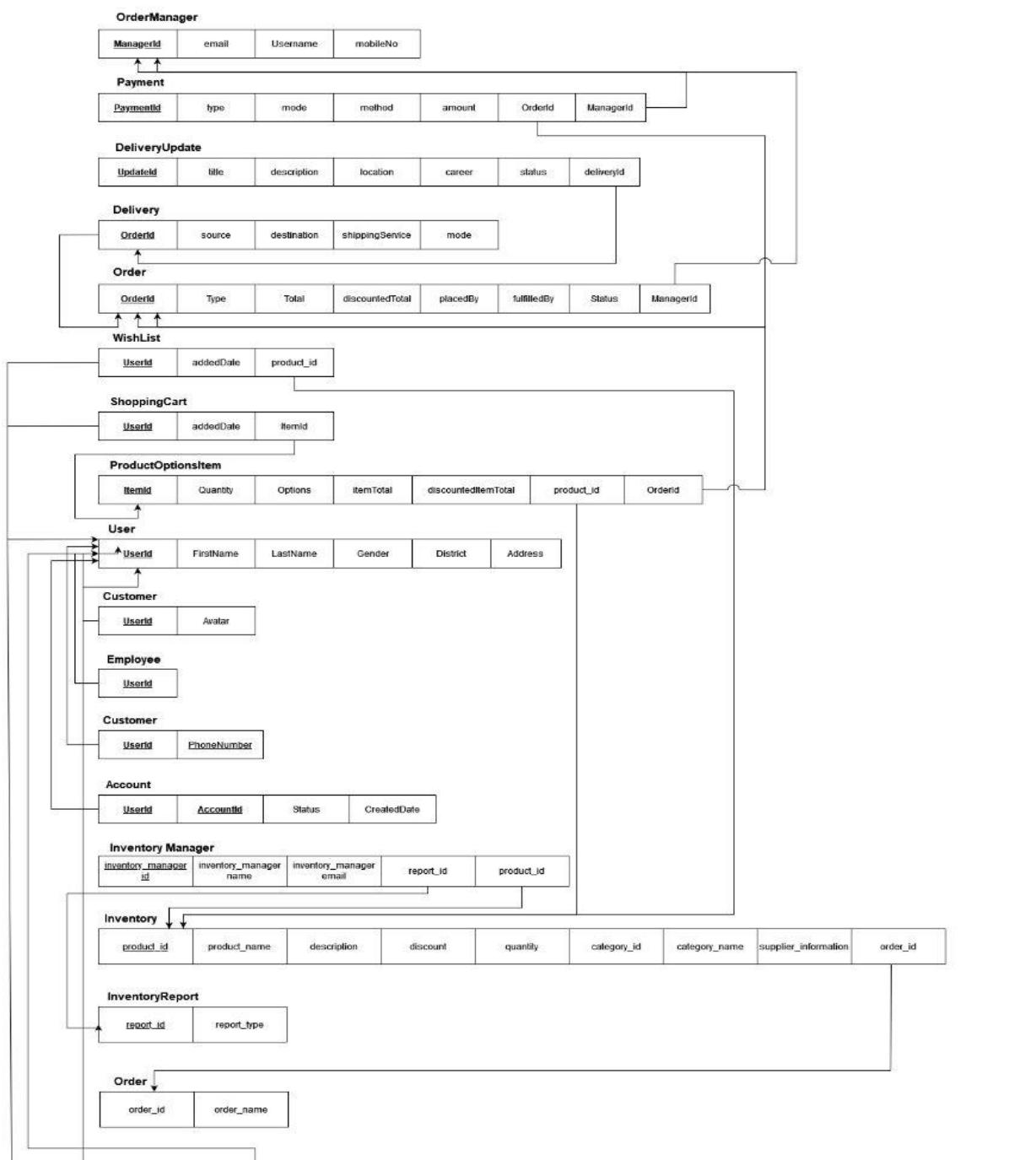
# Databases

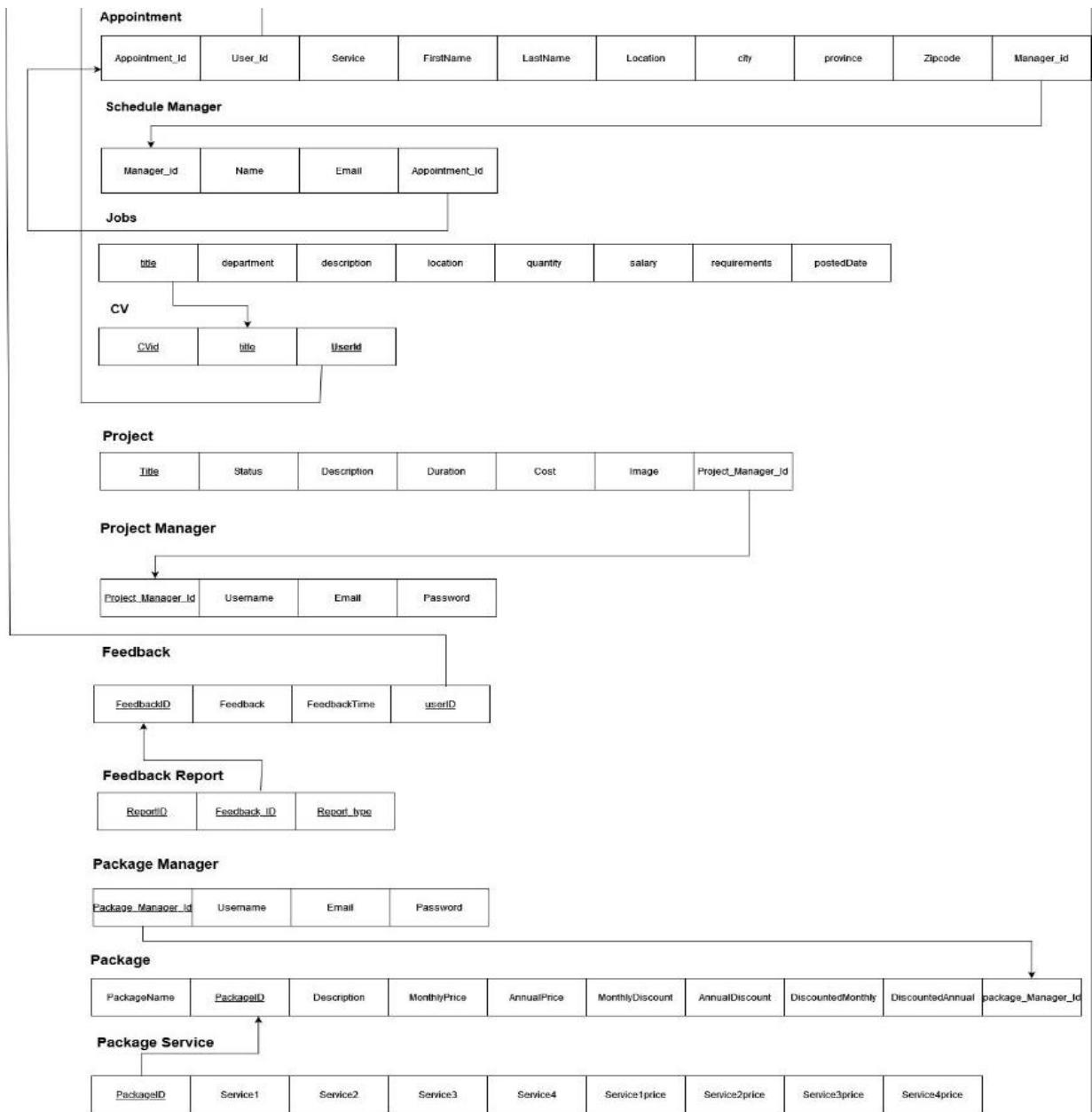
## Database Schema

Drive link for diagrams:

[https://drive.google.com/file/d/1HpePc3gNZq4bWOGeuQOee\\_Glkp7wnJjV/view?usp=sharing](https://drive.google.com/file/d/1HpePc3gNZq4bWOGeuQOee_Glkp7wnJjV/view?usp=sharing)

Figure 28 - Database schema





## **Processes**

User Registration - Allows individuals to register with the system by providing their personal details such as name, email, mobile number and gender etc and validate the user details and store the details in the database

User Management - allows user manager to manage the users who are registered with the system which user manager can change the user role and delete the users from the system permanently.

Inventory Management - In the inventory management system, the process of adding inventory items begins with the inventory manager navigating to the inventory management section and selecting the 'Add Item' option. The user manager then inputs essential details such as item name, description, category, quantity, and price, and saves the item to add it to the inventory.

Manage Inventory - Inventory manager can manage registered users by viewing the user list, selecting a user, and either changing their role or permanently deleting the user from the system.

**Appointment Booking for Users** - Newton Electrical's system offers a straightforward booking process with a user-friendly interface. Users navigate through available time slots displayed on a calendar, making it easy to select suitable appointment times according to their preferences.

**Appointment Management for Users** - After booking appointments, users have convenient management options. Through a dedicated interface, they can effortlessly cancel or reschedule appointments as needed. Additionally, users can track the status of their appointments in real-time, providing them with up-to-date information.

**Schedule Management for Manager** - Schedule manager uses the system's admin dashboard to manage appointments efficiently. They can review, approve, or cancel bookings and access advanced search features for specific details. The system also enables them to generate comprehensive reports for analysis and optimization of scheduling practices.

### **Adding New Packages:**

The package manager adds new packages to the system, specifying services and pricing. This expands offerings to meet customer needs.

### **Editing Existing Packages:**

The package manager updates existing package information to keep it accurate. This ensures competitiveness in the market.

**Deleting Unnecessary Packages:**

Unused or outdated packages are removed to streamline the list. This focuses on promoting relevant offerings.

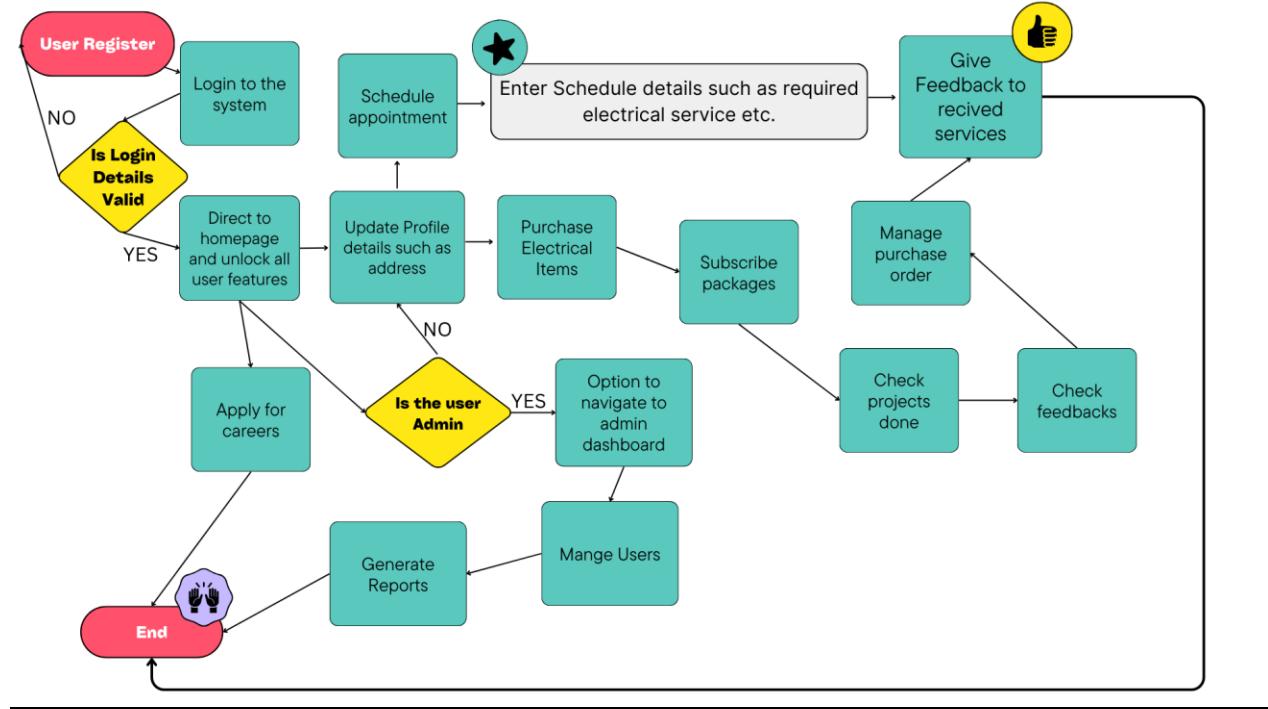
**Customer Selection and Payment:**

Customers browse and select packages, adding them to their cart. They choose monthly or annual payments, facilitating a seamless purchase process.

**Manage Projects** - In the Newton Electricals Service Management system, the process of adding new projects begins with the Project Manager navigating to the Project Management module and selecting the "Add New Project" button. The Project Manager then inputs essential details such as Title, Description, Duration, Cost, Status (Completed, Ongoing), Image. The Project Manager can manage projects by Viewing the project list, Searching a project, and either Editing the project details or permanently Deleting the project from the system.

**Project Management** - This management functionality ensures that the project information remains up-to-date and relevant, allowing for efficient oversight and control of all Ongoing, Completed projects within the system. The system also allows Project Managers to produce extensive reports for analyzing and optimizing project details.

## Workflows



The workflow begins with user registration in the system, where necessary user details such as username, email, and mobile number, which should be unique, are provided. After the user provides the necessary details and clicks on the sign-in button, the system validates that the entered user details meet the validation criteria.

Once the user signs in, they will be redirected to the login page, where they should enter their email and password. If the user details are valid, they will be redirected to the homepage and unlock all the functionalities available to registered users.

Before the user can schedule or purchase items, they need to update the address in the user profile section. Additionally, users can update the current user details previously entered during registration.

After completing the above steps, the user can schedule a service appointment. When scheduling, the user should fill out the schedule form by selecting a date and time, the services required, and can upload a photo of the service area. After clicking finish, the details will be stored in the system.

Customers can also subscribe to packages once they navigate to the subscription section, which includes annual and monthly service packages. Users can subscribe and receive service repairs based on the subscription.

Additionally, when users click the projects tab in the navigation menu, they will be redirected to the projects section. Here, users can review and research the projects the company has done, and this section is frequently updated by the project manager.

Furthermore, users can purchase any electrical items from the system. Once a user selects an item, all the necessary item details will be displayed. After reviewing, the user can select the "buy now" button, and it will be added to the cart for payment.

All packages and service schedules will also be redirected to the payment section of the page.

Moreover, if the user is interested in applying for a career available under the career section of the page, they can upload a CV to the job they are interested in, which will be stored in the system for subsequent steps performed by the admin.

Users can submit feedback about the service they have received. They need to enter details such as username, email, and the service received. Additionally, users can rate the service using the star rating system.

## Chapter 4 - Testing

### Test Cases and Results

#### User Management - IT22028464

Table 10 - Test case of user management

<b>Project ID:</b> ITP24_B10_01/T141	
<b>Project Name:</b> Newton Electricals	
<b>Testing function:</b> User Management – User Registration	
<b>Test ID:</b> Test-01	<b>Test case designed and executed by-</b> <b>IT22028464</b> <b>Name- Jayasinghe J.A.D.T.S</b>
<b>Test Priority (High/Medium/Low):</b>	High
<b>Test description:</b>  A new user visit the newton electricals website and navigates to the user registration Page. The unregistered user fills out the registration form to register with the system so user will gain access to the system.	
<b>Preconditions:</b> <ul style="list-style-type: none"><li>● The Newton electrical system is accessible.</li><li>● User must select the registration option</li><li>● The user should be a new user.</li></ul>	
<b>Test Steps:</b>  <b>Step 1:</b> Unregistered user visit the newton electricals website <b>Step 2:</b> In the homepage locate the registration button on the navigation bar <b>Step 3:</b> Click on the registration button to access the registration form <b>Step 4:</b> Fill in the registration form by providing valid information of the user, ensuring to provide unique email and mobile number <b>Step 5:</b> Click the check box to agree with the terms and conditions <b>Step 6:</b> Click on the register button which will validate the details entered are valid <b>Step 7:</b> Once all are valid user will be redirected to homepage where user has access to different functions	
<b>Pass-conditions:</b> <ul style="list-style-type: none"><li>● The user is successfully registered in the newton electrical and service management system.</li><li>● The user receives a unique user id.</li><li>● The user has access to different system functionalities</li><li>● The admin approves the new user's registration in the system.</li></ul>	

*Table 11 - Test case results of registering a new user*

Test ID	Test Input	Expected Output	Actual Output	Result Pass/Fail
Test-01a	First Name: Thisara Last Name: Jayasinghe Email: sasmitha@gmail.com Phone Number: 0761203833 Password: 123Thisara Confirm Password: 123Thisara	User Registration Successful	User Successfully Registered	Pass
Test-01b	First Name: Kamla Last Name: Silva Email: Sasmithagmail.com Phone Number: 0761203833 Password: 123Kamal Confirm Password: 123Kamal	User Registration Successful	User Registration Failed (Invalid Email)	Fail
Test-01c	First Name: Nimal Last Name: Dias Email: nimal@gmail.com Phone Number: 0761203333 Password: 123Nimal Confirm Password: 123Nimal	User Registration Successful	User Successfully Registered	Pass

## Career Management- IT22059604

Table 12 - Test case of career management

<b>Project ID:</b> ITP24_B10_01/T141	
<b>Project Name:</b> Newton Electricals	
<b>Testing function:</b> Career Management	
<b>Test ID:</b> Test-02	<b>Test case designed and executed by-</b>  <b>IT22059604</b> <b>Name- Wimalarathna B.P.K.</b>
<b>Test Priority (High/Medium/Low):</b>	High
<b>Test description:</b>  As part of the career management system on the Newton Electricals website, the candidate is responsible for confirming that the job listing and search perform properly. They have to make sure that HR managers, or admins, can submit thorough job descriptions and that users can browse and search for job possibilities in an efficient manner. The candidate's ability to evaluate the job listing and search capability to make sure it satisfies the requirements and offers a seamless user experience is the focus of this point.	
<b>Preconditions:</b> <ul style="list-style-type: none"><li>● Career management system is operational.</li><li>● HR managers have access to post job listings.</li></ul>	
<b>Test Steps:</b>  <b>Step 1:</b> Verify that users can access the job listing page from the career management system homepage. <b>Step 2:</b> Check that the job listing page displays a well-curated list of current job opportunities at Newton Electricals. <b>Step 3:</b> Test the search functionality to ensure users can narrow down job listings by department, area, or job title. <b>Step 4:</b> Ensure HR managers can log in and post job listings with comprehensive job descriptions. <b>Step 5:</b> Confirm that job listings posted by HR managers are displayed correctly on the job listing page. <b>Step 6:</b> Test the visibility of job listings to users based on their search criteria. <b>Step 7:</b> Verify that users can click on a job listing to view the full job description. <b>Step 8:</b> Confirm that users can apply for a job directly from the job description page.	

**Pass-conditions:**

- Users can easily access the job listing page from the career management system homepage.
- The job listing page displays a well-curated list of current job opportunities at Newton Electricals.
- Search functionality allows users to narrow down job listings by department, area, or job title.
- HR managers can log in and post job listings with comprehensive job descriptions.
- Job listings posted by HR managers are displayed correctly on the job listing page.
- Job listings are visible to users based on their search criteria.
- Users can view full job descriptions and apply for jobs directly from the system.

*Table 13 - Test case results of cv upload*

Test ID	Test Input	Expected Output	Actual Output	Result Pass/Fail
JL01	Title:Job1 Department: Finance Description: Financial Job Location: Colombo Salary: LKR50000 Requirements: Degrees Posted By: Nimali Posted Date: 2024-11-22 14:41:12	Job listing successfully added	Job listing successfully added	Pass
JL02	Title:Job2 Department: Finance Description: Financial Job Location: Colombo Requirements: Degrees Posted By: Nimali Posted Date: 2024-11-22 14:41:12	Job listing successfully added	Failed to add job listing	Fail
JL03	Title: Job4 Department: Sales Description: Sales Job Location: Kandy Salary: LKR52000 Requirements: Sales Degree Posted By: Sunil Posted Date: 2024-12-15 11:45:00	Job listing successfully added	Job listing successfully added	Pass

## **Feedback Management - IT22898098**

*Table 14 - Test case of Feedback management.*

<b>Project ID:</b> ITP24_B10_01/T141	
<b>Project Name:</b> Newton Electricals	
<b>Testing function:</b> Feedback Management	
<b>Test ID:</b> Test-03	<b>Test case designed and executed by-</b>  <b>IT22898098</b> <b>Name- Gimsara W.T.G</b>
<b>Test Priority (High/Medium/Low):</b>	High
<b>Test description:</b>  The candidate is tasked with actively collecting feedback from new users visiting the user registration page on the Newton Electricals website. They must identify any issues or confusion experienced by users during the registration process and gather feedback through various channels such as online surveys, feedback forms, or direct communication. This point focuses on the candidate's ability to proactively gather feedback from users to understand their registration experience and potential areas for improvement.	
<b>Preconditions:</b> <ul style="list-style-type: none"><li>● Customer provide feedback</li></ul>	
<b>Test Steps:</b>  <b>Step 1:</b> Ensure users can provide feedback at each step of the registration process. <b>Step 2:</b> Monitor feedback mechanisms to encourage user input on their registration <b>experience</b> . <b>Step 3:</b> Analyze collected feedback to identify common issues or suggestions for improvement. <b>Step 4:</b> Prioritize identified issues based on their impact on the registration experience. <b>Step 5:</b> Implement solutions to address prioritized issues, collaborating with relevant teams if necessary. <b>Step 6:</b> Inform users of actions taken to improve the registration process based on their feedback. <b>Step 7:</b> Monitor ongoing feedback to iterate on improvements and enhance user experience.	
<b>Pass-conditions:</b> <ul style="list-style-type: none"><li>● The system effectively gathers feedback from users during the registration process.</li><li>● Feedback provided by users is analyzed to identify areas for improvement.</li><li>● Any issues or concerns raised by users are addressed promptly and effectively.</li><li>● Users express satisfaction with the registration process and any improvements made based on their feedback.</li><li>● The feedback management system facilitates ongoing refinement of the registration process to enhance user experience.</li></ul>	

Table 15 - Test case results of Feedback submission.

Test ID	Test Input	Expected Output	Actual Output	Result Pass/Fail
FB01	<b>First Name:</b> Saman <b>Last Name:</b> Perera <b>Email:</b> samanpr@gmail.com <b>Phone Number:</b> 0774125632 <b>Feedback Message:</b> The user interface is intuitive and easy to navigate. <b>Rating:</b> 5	Feedback Submission Successful.	Feedback Successfully Submitted.	Pass
FB02	<b>First Name:</b> Kamal <b>Last Name:</b> Priyankar <b>Email:</b> kamalpriy.com <b>Phone Number:</b> 0742513265 <b>Feedback Message:</b> I encountered a bug when trying to submit a form. <b>Rating:</b> 2	Feedback Submission Failed.	Invalid Email Format.	Fail
FB03	<b>First Name:</b> Vinuri <b>Last Name:</b> Yapa <b>Email:</b> vinury@gmail.com <b>Phone Number:</b> 0710256231 <b>Feedback Message:</b> The loading time of the application is too slow. <b>Rating:</b> 3	Feedback Submission Successful.	Feedback Successfully Submitted.	Pass
FB04	<b>First Name:</b> Pavan <b>Last Name:</b> visal	Feedback Submission	Feedback Successfully	Pass

	<b>Email:</b> pavanvis@gmail.com <b>Phone Number:</b> 0777452145 <b>Feedback Message:</b> I suggest adding more features to improve the overall user experience. <b>Rating:</b> 4	Successful.	Submitted.	
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## Inventory Management

*Table 16 - Test case of Inventory Management*

Test ID	Test Input	Expected Output	Actual Output	Result Pass/Fail
PA01	Product Title :Rechargeable Desk Lamp Product Description :Unic Rechargeable Desk Lamp Product Price-Rs.2,639 Product Image Product Quantity-13 Product Availability-In Stock	After filling out the add product form and clicking the submit button, the window will close and redirect to the product page. The system will add new products and update the store item.	Display the added details of the product in the specific table, and update the store.	pass
PA02	Product Title: Air Conditioner Product Description	After filling out the add product form and	Display error message "value must be less than	fail

	:Singer Air Conditioner - Inverter 24000 BTU (SAS-24V-INV) Product Price- Rs.339,999 Product Image Product Quantity-130 Product Availability-In Stock	clicking the submit button, the window will close and redirect to the product page. The system will add new products and update the store item.	or equal 100" and redirect adding product form.	
PA03	Product Title: Air Conditioner Product Description :Singer Air Conditioner - Inverter 24000 BTU (SAS-24V-INV) Product Price- Rs.339,999 Product Image Product Quantity-99 Product Availability-In Stock	After filling out the add product form and clicking the submit button, the window will close and redirect to the product page. The system will add new products and update the store item.	Display the added details of the product in the specific table, and update the store.	pass
PA04	Product Title: Rechargeable Desk Lamp Product Description :Unic Rechargeable Desk Lamp	After filling out the add product form and clicking the submit button, the window	Display error message "value must be less than or equal 100" and redirect adding product	fail

	Product Price-Rs.2,639 Product Image Product Quantity-200 Product Availability-In Stock	will close and redirect to the product page. The system will add new products and update the store item.	form.	
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*Table 17 - Test case results of adding an product*

## Service Schedule Management

Table 18 - Test case of Service Schedule Management (appointment add)

<b>Project ID:</b> ITP24_B10_01/T141	
<b>Project Name:</b> Newton Electricals	
<b>Testing function:</b> Service Schedule Management	
<b>Test ID:</b> Test-03	<b>Test case designed and executed by-</b> <b>IT22575944</b> Name- P.R.Reid
<b>Test Priority (High/Medium/Low):</b>	High
<b>Test description:</b>  The service schedule management test for Newton Electrical will focus on verifying the accuracy of booking details such as zip codes, contract numbers, and appointment dates. It aims to validate the system's ability to detect and appropriately respond to erroneous inputs by displaying relevant error messages. Through a series of test cases encompassing both valid and invalid inputs, the test will ensure the system's proficiency in processing and storing information accurately. Furthermore, it will assess the system's capability to handle diverse error scenarios, prevent booking appointments with incorrect details, and manage concurrent booking requests without conflicts. All testing activities will be controlled to mitigate any potential impact on real appointments and data in the production system.	
<b>Preconditions:</b> <ul style="list-style-type: none"><li>Customer book Appointment</li></ul>	
<b>Test Steps:</b>  <b>Step 1:</b> Check booking details with valid information—zip codes, contract numbers, and appointment dates—to ensure accurate processing without errors. <b>Step 2:</b> Test the system's response to invalid inputs—like wrong zip codes or dates—to verify it displays correct error messages for correction. <b>Step 3:</b> Assess how the system handles errors, like missing details, ensuring it prompts users for necessary information and prevents incomplete bookings. <b>Step 4:</b> Attempting to book appointments with incorrect details to confirm the system prompts users to fix errors before proceeding. <b>Step 5:</b> Simulate multiple booking requests for future time slots to ensure the system schedules appointments accurately without overlaps.	
<b>Pass-conditions:</b> <ul style="list-style-type: none"><li>Valid Input Verification: Process booking details accurately without errors.</li><li>Invalid Input Detection: Display error messages for invalid details, prompt correction.</li><li>Error Scenario Handling: Prompt for missing details, prevent incomplete bookings.</li><li>Prevention of Incorrect Bookings: Prompt users to correct errors before booking.</li><li>Concurrent Booking Management: Schedule multiple bookings accurately without conflicts.</li></ul>	

*Table 19 - Test case results of booking an appointment*

**[Service Schedule Management] IT22575944 - P.R.Reid**

Test ID	Test Input	Expected Output	Actual Output	Result Pass/Fail
AB01	First Name: John Last Name: Doe Address: 123 Main Street City: Panadura Province: Kaluthara Zip Code: 12345 Date: 2024-05-01 Contact Number: 1234567890	"Appointment successfully booked!"	"Appointment successfully booked!"	Pass
AB02	First Name: Alice Last Name: Smith Address: 456 Elm Avenue City: Kalagedihena Province: Gampaha Zip Code: 67890 Date: 2024-04-30 Contact Number: 071345678	"Appointment successfully booked!"	"Failed to book the appointment. Please check your details and try again."	Fail
AB03	First Name: Emily Last Name: Johnson Address: 789 Oak Lane City: Makadura Province: Mathara Zip Code: 1234 Date: 2024-05-02 Contact Number: 0772463597	"Appointment successfully booked!"	"Failed to book the appointment. Please check your details and try again."	Fail
AB04	First Name: Sarah Last Name: Adams Address: 567 Malpara Street City: Irakkamam Province: Ampara Zip Code: 45678 Date: 2024-05-05	"Appointment successfully booked!"	"Appointment successfully booked!"	Pass

	Contact Number: 0711526423			
AB05	First Name: David Last Name: Wilson Address: 890 Malabe Road City: Malabe Province: Colombo Zip Code: 89012 Date: 2024-06-01 Contact Number: 0772516843	"Appointment successfully booked!"	"Appointment successfully booked!"	Pass

## Package Management

Table 20 - Test case of Package management(add package)

<b>Project ID:</b> ITP24_B10_01/T141	
<b>Project Name:</b> Newton Electricals	
<b>Testing function: Add new package</b>	
<b>Test ID:</b> Test-01	<b>Test case designed and executed by-</b> Reg no: IT22578396 Name: R.D.T.N.Dayarathne
<b>Test Priority (High/Medium/Low):</b>	High
<b>Test description:</b>  When package manager wants to add a new package package manager can add a new package to system using Admin package page	
<b>Preconditions:</b>  The package manager should be logged into the system.	
<b>Test Steps:</b> <ul style="list-style-type: none"> <li>● Step 1: Log in to the system and navigate to the admin dashboard.</li> <li>● Step 2: Navigate to the admin package page and click on the “Add Package” button. Step 3: Fill in all required details on the add package form and complete all validations.</li> <li>● Step 4: Click on the “Save” button</li> <li>● Step 5: System prompts “Add package successfully”</li> </ul>	
<b>Pass-conditions:</b> <ul style="list-style-type: none"> <li>● Besides service 1, service 2, and their prices all the fields in the form are required to edit a package.</li> </ul>	

*Table 21 - Test case results of adding a new package*

Test ID	Test inputs	Expected outputs	Actual Output	Result (Pass/Fail)
PK_001	packageName: Package one packageId: P001 Description: This grant customers list of services service1: First service service2: Second service service1price :1000 service2price :1500 Monthly price:10000 Annual price :30000	Package added successfully	Successfully package added	Pass
PK_001	packageName: PackageTwo packageId: P002 Description: This grant customers list of services service1: First service service2: service1price :1000 service2price : Monthly price:4000 Annual price :8000	Package added successfully	Failed to add a package ( Didn't fill all fields)	Fail

*Table 22 - Test case of Package management(Edit package)*

<b>Project ID:</b> ITP24_B10_01/T141	
<b>Project Name:</b> Newton Electricals	
<b>Testing Function:</b> Edit package details	
<b>Test case ID:</b>	<b>Test case design and executed by:</b> Reg no: IT22578396 Name: R.D.T.N.Dayarathne
<b>Test priority:</b>	
<b>Test Description:</b> Edit package details	
<b>Pre-conditions:</b> The package manager should be logged into the system.	
<b>Test steps:</b> Step 1: Log in to the system and navigate to the admin dashboard. Step 2: Navigate to the admin package page and click on the “Update” button on a Package. Step 3: Fill in all required details on the edit package form and complete all validations. Step 4: Click on the “Save” button Step 5: System prompts “Edit successfully”	
<b>Pass conditions:</b> Besides service 1, service 2, and their prices all the fields in the form are required to add a new package.	

*Table 23 - Test case results of package edit*

Test ID	Test inputs	Expected outputs	Actual Output	Result (Pass/Fail)
PK_003	packageName: Package one packageId: P001 Description: This grant Customers list of services service1: First service service2: Second service service1price :1000 service2price :1000 Monthly price:8000 Annual price :24000	Package Updated successfully	Successfully package Update	Pass

## **Project Management - IT22581716**

*Table 24 - Test case of project management*

<b>Project ID:</b> ITP24_B10_01/T141	
<b>Project Name:</b> Newton Electricals	
<b>Testing function: Project Management - Adding Project Details</b>	
<b>Test ID:</b> Test-01	<b>Test case designed and executed by-</b>  <b>IT22581716</b> <b>Name - Perera M.M.D.</b>
<b>Test Priority (High/Medium/Low):</b>	High
<b>Test description:</b>  A Project Manager visits the Newton Electricals Service Management website and navigates to the Project Management Page. The Project Management test for Newton Electrical Service Management will focus on verifying the accuracy of project details such as "Description" and "Costs". It aims to validate the system's ability to detect and appropriately respond to erroneous inputs by displaying relevant error messages. Through a series of test cases encompassing both valid and invalid inputs, the test will ensure the system's proficiency in processing and storing information accurately. Furthermore, it will assess the system's capability to handle diverse error scenarios, prevent the addition of projects with incorrect details, and manage concurrent project entries without conflicts. All testing activities will be controlled to mitigate any potential impact on real project data in the production system.	

**Preconditions:**

- The Newton Electrical system is accessible.
- The Project Manager is logged into the Newton Electricals Service Management system.

**Test Steps:**

**Step 1:** Project Manager visit the Newton Electricals Service Management website

**Step 2:** Navigate to the Project Management module

**Step 3:** Click on the "Add New Project" button

**Step 4:** Fill in the add project details form by providing valid information of the Project Manager, ensuring to provide without any symbol for "Cost" and less than five hundred characters for "Description"

**Step 5:** Click the "Add" button which will validate the details entered are valid

**Step 6:** Once all are valid Project Manager will be redirected to project list

**Pass-conditions:**

- The Project Manager is successfully logging in the Newton Electricals and Service Management system.
- The project details are saved without any loss or corruption.
- Existing data integrity is maintained and no other project details are affected.

*Table 25 - Test case results of adding project details*

Test ID	Test Input	Expected Output	Actual Output	Result Pass/Fail
PM01	Title : CEB Substation - Kalavana Status : Ongoing Description : New Kalavana Sub Station LV wiring at Kukule. MR Construction (PVT) LTD Duration : 8 Months Cost : 85000000	Project Added Successfully	Project Details Successfully Added.	Pass

	Image : 1713316857276substati on.jpg			
PM02	Title : Heritance Hotel - Ahungalla Status : Previous Description : Electrical Wiring Sub Contract under Wikramage Engineering (PVT) LTD Duration : 2 Years Cost : 85000000 Image : 1713316484226heritan ce-ahungalla.jpg	Project Added Successfully	Project Details Successfully Added.	Pass
PM03	Title : Xavier's Church - Nuwara Eliya Status : Previous Description : 10+ Million worth rewiring of the Main	Project Added Successfully	Project Details Successfully Added.	Pass

	<p>Building of Xavier's Church. Panel boards newly installed.</p> <p>Duration :</p> <p>1 Year</p> <p>Cost :</p> <p>15000000</p> <p>Image :</p> <p>1713316244519LED-CHurch-Lighting-Design.jpg</p>			
PM04	<p>Title : Ceylon Villa - Badulla</p> <p>Status : Previous</p> <p>Description : Electrical Wiring Sub Contract under Rajawardhana Engineering (PVT) LTD</p> <p>Duration : 8 Months</p> <p>Cost : \$55000000</p> <p>Image : 1713316042034Amazing-cabins-3.jpg</p>	<p>Project Added Successfully</p>	<p>Failed to Add Project Details</p>	<p>Fail</p>

## **Chapter 5 - Evaluation and Conclusion**

### **Evaluation**

The Newton Electrical and Service Management System underwent thorough evaluation to gauge its effectiveness in tackling the challenges encountered by customers and service providers in the electrical industry. Notably, the system's comprehensive service scheduling feature emerged as a standout, allowing customers to easily book appointments on a unified platform. By streamlining scheduling and eliminating the need for multiple website navigation, the system significantly boosts efficiency and saves customers' time.

Additionally, the system's advanced search and filtering capabilities were deemed highly beneficial. Customers can seamlessly search for electrical products and access user feedback, thus facilitating informed decision-making and enhancing the overall shopping experience. Furthermore, leveraging user data for personalized recommendations was positively evaluated, as it contributes to heightened customer satisfaction by tailoring product and service suggestions to individual needs.

Moreover, the integration of real-time availability and pricing information was identified as a valuable feature. By providing up-to-date details, the system empowers customers to make informed decisions and secure the best deals for their scheduled service arrangements, thereby reducing the likelihood of encountering unexpected issues during the booking process. Overall, the evaluation suggests that the Newton Electrical and Service Management System effectively addresses key industry challenges, enhancing efficiency, customer satisfaction, and decision-making processes for all stakeholders.

## Conclusion

The development of the Newton Electricals web application project involves assessing its adherence to initial objectives, the effectiveness of the chosen methodology, the utilization of appropriate tools and technologies, and the alignment with user requirements to deliver an efficient final product. The system incorporates features essential to the electrical and service management system, effectively managing user registration, package subscriptions, and service scheduling, thus simplifying and automating current processes.

The adoption of Agile methodology proved beneficial, allowing for iterative development, continuous improvement, and collaboration with stakeholders. This approach facilitated flexibility and adaptability, crucial in a dynamic business environment. The selection of the MERN stack provided a solid foundation, harnessing MongoDB, Express JS, React JS, and Node JS to create a scalable and efficient web application.

In summary, the Newton Electricals web application project demonstrates a commitment to addressing operational challenges through innovative technological solutions. By integrating user feedback, industry research, and best practices, the project has delivered a customized platform that meets the diverse needs of the organization and its customers. Its successful completion sets the stage for future enhancements and optimizations in the electrical industry. The successful completion of the web application lays the groundwork for future enhancements and optimizations in the electrical industry. And to increase the efficiency of the current system, the web application will serve as a cornerstone for enhancing productivity, improving customer satisfaction, and driving business success in the competitive electrical and service industry.

## **Appendices**

### **Apdex A Work Done By Members**

*Table 23 - Work done by each member*

Student ID and Name	Work Done
IT22028464 Jayasinghe J.A.D.T.S	User Management
IT22059604 Wimalarathna B.P.K.	Career Management
IT22898098 Gimsara W.T.G	Feedback Management
IT22345578 Galappaththi A.G.R.S	Inventory Management
IT22575944 P.R.Reid	Service Schedule Management
IT22578396 Dayarathne R.D.T.N	Package Management
IT22581716 Perera M.M.D.	Project Management
IT22322876 Madhubhashana M D H P	Order Management

## Appendix B

### Contributions

*Table 23 – contributions of each member*

Student ID and Name	Work Done
IT22028464 Jayasinghe J.A.D.T.S	User Management Company background, problem and motivation, stakeholder analysis, evaluation and conclusion Contribute to er diagram, class diagram and database schema development
IT22059604 Wimalarathna B.P.K.	Career Management Literature review, methodology Contribute to er diagram, class diagram and database schema development
IT22898098 Gimsara W.T.G	Feedback Management Non functional requirement Contribute to er diagram, class diagram and database schema development,stakeholder analysis
IT22345578 Galappaththi A.G.R.S	Inventory Management Contribute to er diagram, class diagram and database schema development
IT22575944 P.R.Reid	Service Schedule Management Aims and Objectives  Contribute to er diagram, class diagram and database schema development
IT22578396 Dayarathne R.D.T.N	Package Management Technical requirements Contribute to er diagram, class diagram and database schema development

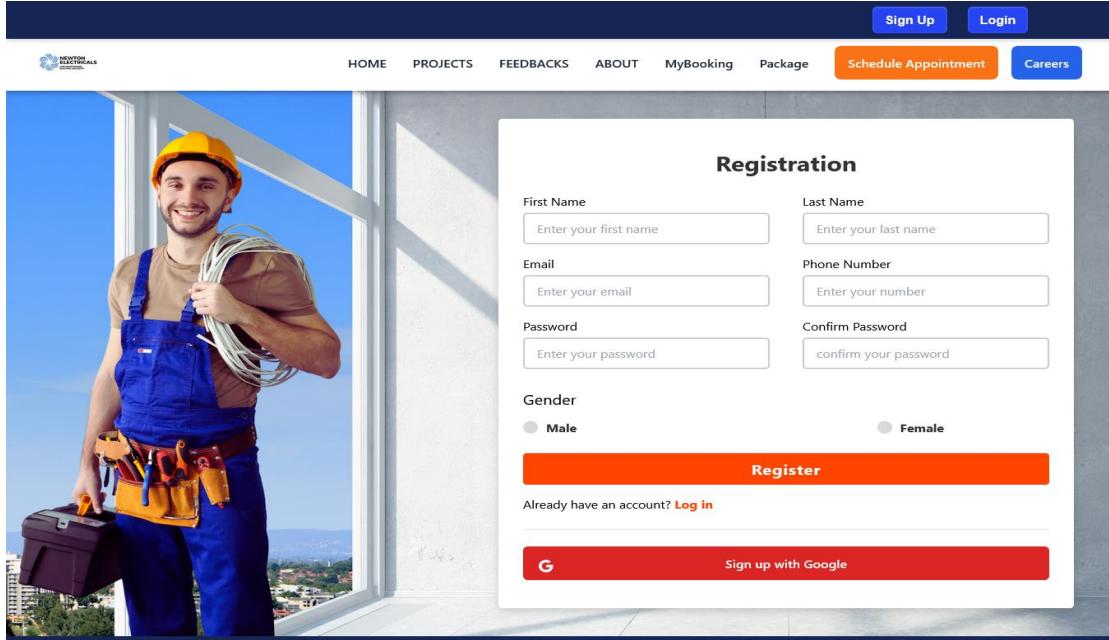
IT22581716 Perera M.M.D.	Project Management Contribute to ER diagram, class diagram and database schema development Tools and Technologies
IT22322876 Madhubhashana M D H P	Order Management Contribute to er diagram, class diagram and database schema development

## Apendix C

### User Interfaces

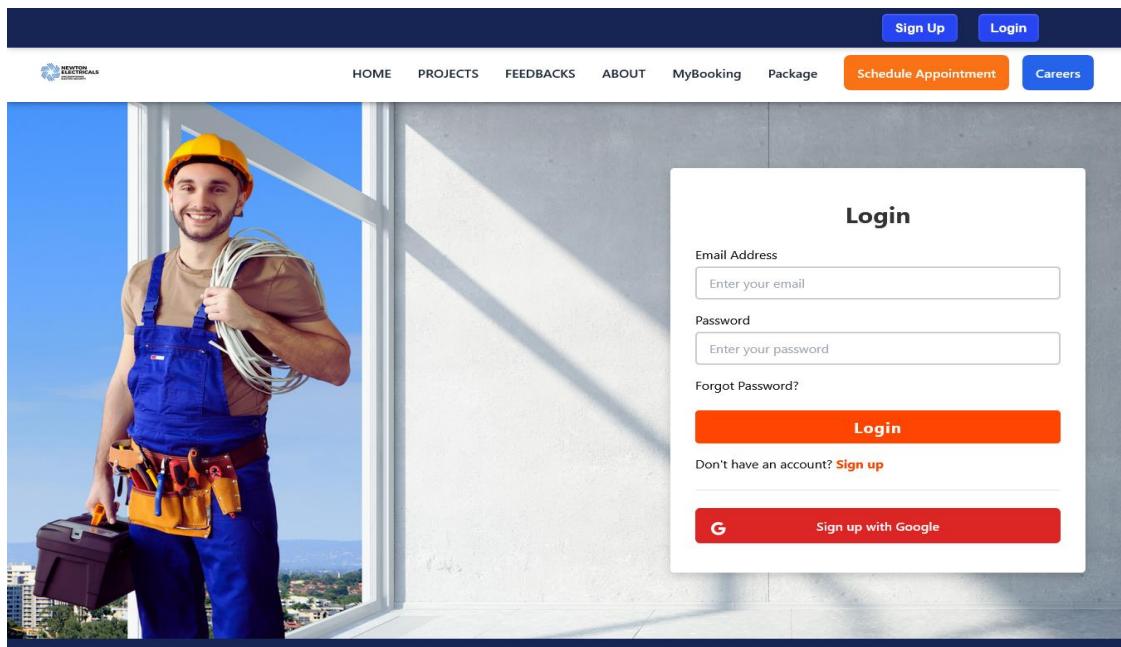
#### User Management

*User management - Sign up*



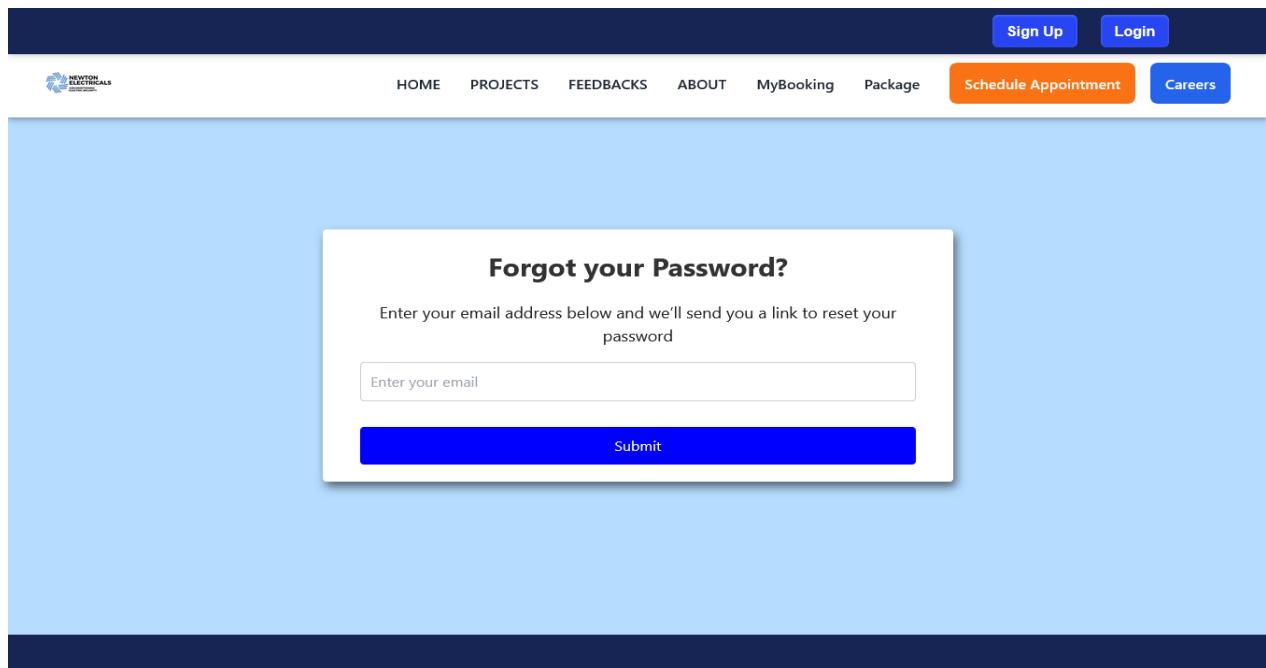
The screenshot shows a registration page for a user management system. At the top, there is a navigation bar with links for HOME, PROJECTS, FEEDBACKS, ABOUT, MyBooking, Package, Schedule Appointment, and Careers. On the far left, there is a logo for 'NEWTON CONSULTING' and a large image of a construction worker wearing a yellow hard hat, blue overalls, and holding a toolbox and a roll of white cables. The main area contains a registration form titled 'Registration'. The form includes fields for First Name, Last Name, Email, Phone Number, Password, and Confirm Password. There are also gender selection buttons for Male and Female, and a 'Register' button at the bottom. Below the registration form, there is a link for 'Already have an account? Log in' and a 'Sign up with Google' button.

## User management - Login



The screenshot shows a login page for a company named "NEWTON ELECTRICALS". At the top right are "Sign Up" and "Login" buttons. Below them is a horizontal menu with links: HOME, PROJECTS, FEEDBACKS, ABOUT, MyBooking, Package, Schedule Appointment (highlighted in orange), and Careers. The main content area features a large image of a smiling electrician at a construction site. To the right of the image is a "Login" form. It includes fields for "Email Address" and "Password", both with placeholder text "Enter your email" and "Enter your password". Below these are "Forgot Password?" and "Login" buttons. At the bottom of the form is a link "Don't have an account? [Sign up](#)" and a "Sign up with Google" button.

## User management - Password reset



The screenshot shows a password reset page. At the top and bottom are dark blue navigation bars with "Sign Up" and "Login" buttons. The middle section has a light blue background with a central white form. The form title is "Forgot your Password?". It contains a text input field labeled "Enter your email" and a blue "Submit" button. Below the form is a dark blue footer bar.

## User management - User profile

The screenshot shows the 'User management - User profile' section of a web application. At the top, there is a dark header bar with a user icon, 'Logout' button, and navigation links for 'HOME', 'PROJECTS', 'FEEDBACKS', 'ABOUT', 'MyBooking', 'Package', 'Schedule Appointment' (highlighted in orange), and 'Careers'. Below the header is a sidebar on the left with a user profile picture of 'Thisara' and a purple circular icon containing a white 'T'. The sidebar menu includes 'My Account', 'Rewards', 'Appointments', 'Contact Support', 'Logout', and 'Delete Account'. The main content area has a light blue background and features two forms: 'My Profile' and 'Change Password'.  
  
**My Profile**  
Form fields include:

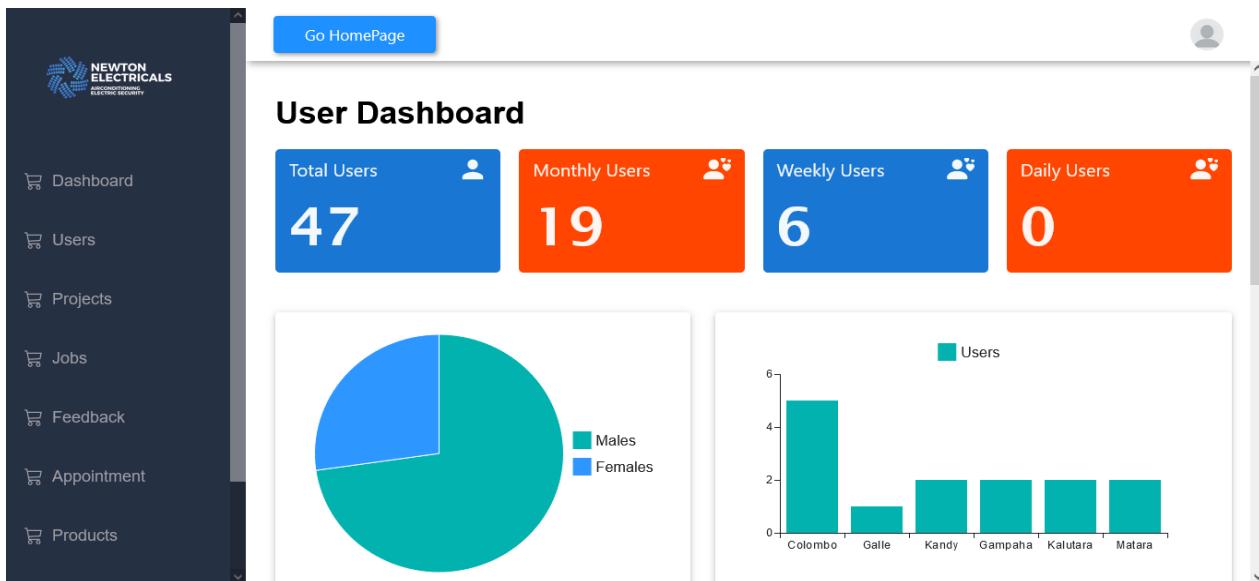
- First Name: Thisara
- Last Name: sas
- Email: thisarajack1@gmail.com
- Phone Number: Enter your number
- Address: Enter your Address
- District/Province: Select District
- Gender: Male (radio button selected)
- Female (radio button available)

  
**Change Password**  
Form fields include:

- Current Password: Enter your current Password
- New Password: Enter your new Password
- Confirm Password: Re-enter new Password

  
A central footer bar at the bottom contains the 'Newton Electricals' logo, links for 'Services', 'Company', 'Helpful Links', and 'Legal', and a page number '105'.

### User management - Admin Dashboard (user charts)



### User management - Admin Dashboard

The dashboard features a sidebar with 'NEWTON ELECTRICALS' logo and links for Dashboard, Users, Projects, Jobs, Feedback, Appointment, and Products. A top navigation bar includes a 'Go HomePage' button and a user profile icon. The main area displays a 'Generate Report' button and a search bar. Below is a table listing user details with edit and delete buttons.

User Id	First Name	Last Name	Email Address	Gender	User Role	Edit Role	Delete
2006	Kamal	Perera	isabella@gmail....	male	Admin	<button>Change Role</button>	<button>Delete</button>
2007	Harry	Silva	william@gmail.c...	male	Admin	<button>Change Role</button>	<button>Delete</button>
2009	Kumari	Fernando	harry@gmail.com	male	Customer	<button>Change Role</button>	<button>Delete</button>
2011	Thomas	Mendis	thomas@gmail....	male	Customer	<button>Change Role</button>	<button>Delete</button>
2012	Thisara	De Silva	lindaas@gmail.c...	female	Customer	<button>Change Role</button>	<button>Delete</button>
2013	Emma	Samantha	samantha@gma...	female	Customer	<button>Change Role</button>	<button>Delete</button>
2014	Taylor	Morton	mortaons@gma...	male	Admin	<button>Change Role</button>	<button>Delete</button>
2016	Anderson	jays	andersonsj@gm...	male	Customer	<button>Change Role</button>	<button>Delete</button>
2017	Ellina	Perera	isabellda@gmai...	male	Customer	<button>Change Role</button>	<button>Delete</button>

## Career Management

Logout Admin Dashboard

HOME PROJECTS FEEDBACKS ABOUT MyBooking Package Schedule Appointment Careers



Join Our Circuit of

Logout Admin Dashboard

HOME PROJECTS FEEDBACKS ABOUT MyBooking Package Schedule Appointment Careers

<b>Job1</b> Department: Finance Description: Financial Job Location: Colombo Salary: LKR50000 Requirements: Degrees  Posted By: Nimali Posted Date: 2024-03-19T16:01:12.517Z <a href="#">Upload CV</a> <a href="#">Send</a>	<b>Job2</b> Department: Finance Description: Marketing Job Location: Matara Salary: LKR55000 Requirements: Degree  Posted By: Nimal Posted Date: 2024-04-14T16:48:17.562Z <a href="#">Upload CV</a> <a href="#">Send</a>	<b>Job3</b> Department: Marketing Description: Marketing Job Location: Matara Salary: LKR30000 Requirements: Degree  Posted By: Nimal Posted Date: 2024-04-15T12:45:36.798Z <a href="#">Upload CV</a> <a href="#">Send</a>
<b>Job4</b> Department: IT Description: IT Job Location: Galle	<b>Job5</b> Department: Finance Description: Financial Job Location: Matara	<b>Job6</b> Department: Finance Description: Financial Job Location: Colombo

Go HomePage

Newton Electricals

Dashboard

Users

Projects

Jobs

Feedback

Appointment

Products

Packages

Posted Jobs  
TOTAL 8

Assigned Jobs  
TOTAL 4

Rejected Jobs  
TOTAL 1

Completed Jobs  
TOTAL 0

Download PDF

View CVs

Add a Job

Search..

### Jobs

Title	Department	Description	Location	Salary	Requirements	Posted By	Posted Date	Edit Job	Delete
Job1	Finance	Financial Job	Colombo	LKR50000	Degrees	Nimali	2024-03-19...	<button>Edit</button>	<button>Delete Job1</button>
Job2	Finance	Marketing J...	Matara	LKR55000	Degree	Nimal	2024-04-14...	<button>Edit</button>	<button>Delete Job2</button>
Job3	Marketing	Marketing J...	Matara	LKR30000	Degree	Nimal	2024-04-15...	<button>Edit</button>	<button>Delete Job3</button>
Job4	IT	IT Job	Galle	LKR35000	Intern	kasun	2024-04-15...	<button>Edit</button>	<button>Delete Job4</button>

Go HomePage

Newton Electricals

Dashboard

Users

Projects

Jobs

Feedback

Appointment

Products

Packages

CVs

User ID	Job Title	Uploaded At	Status	Actions
2045	Job2		Accepted	<button>View CV</button>
2045	Job3		Pending	<button>View CV</button>
2045	Job1		Accepted	<button>View CV</button>
2045	Job5		Accepted	<button>View CV</button>
2045	Job7		Pending	<button>View CV</button>
2045	Job4		Rejected	<button>View CV</button>

## Feedback Management

The screenshot shows a web browser window with the URL `localhost:5173/feedback`. The page has a dark blue header bar with a user icon, 'Logout', and 'Admin Dashboard'. Below the header is a navigation bar with links: HOME, PROJECTS, FEEDBACKS, ABOUT, MyBooking, Package, 'Schedule Appointment' (highlighted in orange), and 'Careers'. The main content area contains a form for submitting feedback. It includes fields for First Name, Last Name, Email, Contact Number, and a large text area for the Message. Below the message area is a five-star rating placeholder. At the bottom right are 'Cancel' and 'Submit' buttons.

First Name  
Enter your first name

Last Name  
Enter your last name

Email  
Enter your Email

Contact Number  
Enter your Contact Number

Message  
Type your message here

☆☆☆☆☆

Cancel Submit

The screenshot shows a list of feedback entries on the `localhost:5173/feedback` page. The header and navigation bar are identical to the previous screenshot. The main content displays four feedback records in a table format:

Zaminura Halivene	★★★★★	Very Good	Edit	Delete
erherhreh ehrehhh	★★★★☆	Wow	Edit	Delete
Winseth Wanige	★★★★★	Creativity	Edit	Delete
Senura Sampath	★☆☆☆☆			

localhost:5173/admin/feedback

The screenshot shows the admin interface for feedback management. On the left is a sidebar with navigation links: Dashboard, Users, Projects, Jobs, Feedback, Appointment, Products, Packages, and Setting. At the top right are standard browser controls. A blue button labeled "Go HomePage" is at the top center.

A bar chart titled "Rating" is displayed, showing the distribution of user ratings from Star1 to Star5. The Y-axis ranges from 0 to 6, and the X-axis lists the rating categories.

A "Download PDF" button is located below the chart. To the right is a search bar with placeholder text "Search...".

A table lists feedback records with columns: FeedbackId, UserId, Name, Email, Contact Number, Rating, Feedback Message, and Delete. Each record includes a red "Delete" button.

FeedbackId	UserId	Name	Email	Contact Number	Rating	Feedback Message	Delete
43	2047	Zaminura	zaminul@gmail.com	0774521236	5	Very Good	<button>Delete</button>
44	2047	erherhreh	Erherh@gmail.com	0774521245	4	Wow	<button>Delete</button>
45	2047	Winseth	winsethwan@gmail.com	0774521852	5	Creativity	<button>Delete</button>
46	2047	Senura	senurasam@gmail.com	0774522516	1	Very bad	<button>Delete</button>
47	2047	Omenul	omenulya@gmail.com	0774521125	3	Good	<button>Delete</button>
48	2047	Suman	sumanse@gmail.com	0774527458	2	Bad	<button>Delete</button>

## Inventory Management

Logout Admin Dashboard

HOME PROJECTS FEEDBACKS ABOUT MyBooking Package Schedule Appointment Careers

Newton Electricals

**Filter by Category**

- Electrical Tools
- Lightings
- Security Systems
- Wiring Items
- Solar Panel

Ceiling Fans

**Rs.23,999**

[Add to Cart](#) [Buy Now](#)

Air Conditioner

**Rs.339,999**

[Add to Cart](#) [Buy Now](#)

Air Conditioner

**Rs. 391,399**

[Add to Cart](#) [Buy Now](#)

[Go HomePage](#)



**Product Title:**

**Product Description:**

**Product Price:**

**Product Image:**  [Browse...](#) No file selected.

**Product Quantity:**

**Product Availability:**

[Go HomePage](#)



**Search Product...**

Product Title	Product Description	Product Price	Product Quantity	Product Image	Edit	Delete
Ceiling Fan s	Panasonic Ceiling Fa...	Rs.23,999	11	<a href="#">https://firebasest... </a>	<a href="#">Update</a>	<a href="#">Delete</a>
Air Conditioner	Singer Air Conditione...	Rs.339,999	15	<a href="#">https://firebasest... </a>	<a href="#">Update</a>	<a href="#">Delete</a>
Air Conditioner	Mitsubishi Inverter Ai...	Rs. 391,399	12	<a href="#">https://firebasest... </a>	<a href="#">Update</a>	<a href="#">Delete</a>
Air Conditioner d	Singer Air Conditione...	Rs.289,999	7	<a href="#">https://firebasest... </a>	<a href="#">Update</a>	<a href="#">Delete</a>
Ceiling Fan	KDK Ceiling Fan N56...	Rs.37,599	10	<a href="#">https://firebasest... </a>	<a href="#">Update</a>	<a href="#">Delete</a>
Security Camera	IMOU Security Came...	Rs. 24,699	20	<a href="#">https://firebasest... </a>	<a href="#">Update</a>	<a href="#">Delete</a>
Security Camera	IMOU Indoor Securit...	Rs. 11,899	25	<a href="#">https://firebasest... </a>	<a href="#">Update</a>	<a href="#">Delete</a>

## Schedule Management

*Service Schedule Management - Customer Schedule Appointment page*

WHAT CAN WE DO FOR YOU

**Electrical:**  
none

**Rooms:**  
none

**Description:**

**Next**

WHAT CAN WE DO FOR YOU

**First Name:**

**Last Name:**

**Address:**

**City:**

**Province:**

**Previous**   **Next**

 Logout Admin Dashboard

HOME PROJECTS FEEDBACKS ABOUT MyBooking Package **Schedule Appointment** Careers

## WHAT CAN WE DO FOR YOU

Select a Date and Time Slot

Date:

May 2024						
MON	TUE	WED	THU	FRI	SAT	SUN
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14		16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

Time Slot:

5/15/2024, 3:19:57 PM

 Logout Admin Dashboard

HOME PROJECTS FEEDBACKS ABOUT MyBooking Package **Schedule Appointment** Careers

## WHAT CAN WE DO FOR YOU



**CONFIRM YOUR APPOINTMENT**  
powerIssue

**NAME-** Radhya helakshya  
**DATE-** 5/25/2024, 2:30:00 PM  
**PHONE-** 0762541985  
**CITY-** Colombo 7  
**PRICE-** Rs 2500.00

**Previous** **Confirm Appointment**

## Service Schedule Management - My Booking page

Selected Options	Time Slot	Address	(LKR)	Description	Status	Action
powerIssue	2024-05-23T19:30:00.000Z	3400 St Johns Pkwy Sanford, FL	1250.00	Tripped Circuit Breaker	approved	<a href="#">Reschedule</a> <a href="#">Delete</a>
switch/outlet	2024-05-16T18:30:00.000Z	5 2nd Rohini Ln Front Street, 11	7500.00	Faulty light switch in bedroom;...	approved	<a href="#">Reschedule</a> <a href="#">Delete</a>
rewiring	2024-05-07T16:09:44.838Z	159 Maliban Street, 11	45000.00	i want to rewire 3 rooms in my...	approved	<a href="#">Reschedule</a> <a href="#">Delete</a>
powerIssue	2024-05-23T18:30:00.000Z	348, DEHIWALA ROAD	10000.00	Power outage in bedroom; lig...	canceled	<a href="#">Reschedule</a> <a href="#">Delete</a>
rewiring	2024-05-30T18:30:00.000Z	531/2, NEGOMBO ROAD	65000.00	whole house 3 story	approved	<a href="#">Reschedule</a> <a href="#">Delete</a>
switch/outlet	2024-05-17T18:30:00.000Z	406, Dutugemunu Road, Thala...	5000.00	Outlet in kitchen dead; no pow...	canceled	<a href="#">Reschedule</a> <a href="#">Delete</a>
rewiring	2024-05-23T18:30:00.000Z	NO 668, NUGAPE	25000.00	an apartment building main hall	approved	<a href="#">Reschedule</a> <a href="#">Delete</a>
powerIssue	2024-05-31T18:30:00.000Z	3401 St Johns Pkwy Sanford, FL	5000.00	Outlet in kitchen dead; no pow...	approved	<a href="#">Reschedule</a> <a href="#">Delete</a>

## Service Schedule Management - My booking page reschedule page

rewiring
2024-05-23T18:3... NO 668, NUGAPE 25000.00 an apartment bui... approved

Reschedule Appointment

Selected Options:

Time Slot:

Address:

Description:

Save
Cancel

## Service Schedule Management - Admin page

[Go HomePage](#)



### All Bookings

Selected Options	Time Slot	Address	Price(LKR)	Description	Status	Action
powerIssue	2024-05-23T19:30:00.000Z	3400 St Johns Pkwy Sanford, FL	1250.00	Tripped Circuit Breaker	approved	<a href="#">Approve</a> <a href="#">Cancel</a>
switch/outlet	2024-05-16T18:30:00.000Z	5 2nd Rohini Ln Front Street, 11	7500.00	Faulty light switch in bedroom...	approved	<a href="#">Approve</a> <a href="#">Cancel</a>
rewiring	2024-05-07T16:09:44.838Z	159 Maliban Street, 11	45000.00	i want to rewire 3 rooms in m...	approved	<a href="#">Approve</a> <a href="#">Cancel</a>
powerIssue	2024-05-23T18:30:00.000Z	348, DEHIWALA ROAD	10000.00	Power outage in bedroom; lig...	canceled	<a href="#">Approve</a> <a href="#">Cancel</a>
rewiring	2024-05-30T18:30:00.000Z	531/2, NEGOMBO ROAD	65000.00	whole house 3 story	approved	<a href="#">Approve</a> <a href="#">Cancel</a>
switch/outlet	2024-05-17T18:30:00.000Z	406, Dutugemunu Road, Thala...	5000.00	Outlet in kitchen dead; no po...	canceled	<a href="#">Approve</a> <a href="#">Cancel</a>
rewiring	2024-05-23T18:30:00.000Z	NO 668, NUGAPE	25000.00	an apartment building main h...	approved	<a href="#">Approve</a> <a href="#">Cancel</a>
powerIssue	2024-05-31T18:30:00.000Z	3401 St Johns Pkwy Sanford, FL	5000.00	Outlet in kitchen dead; no po...	approved	<a href="#">Approve</a> <a href="#">Cancel</a>
powerIssue	2024-05-26T18:30:00.000Z		1250.00	sdsfe	approved	<a href="#">Approve</a> <a href="#">Cancel</a>
powerIssue	2024-05-10T09:20:51.251Z		1250.00		pending	<a href="#">Approve</a> <a href="#">Cancel</a>

[Download PDF](#)

## Package Management

### Package management - Customer package page

[Logout](#)
[Admin Dashboard](#)

Monthly

Annually

**package 3**

Rs. 2000 - Monthly

\* First

\* second

\*

\*

[Add to Cart](#)

[Pay Now](#)

**Maintenance**

Rs. 7000 - Monthly

\* equipment cleaning

\* equipment lubricating

\* service3

\* service4

[Add to Cart](#)

[Pay Now](#)

### Package management - Admin package page

The screenshot shows a web-based application interface for managing packages. On the left, a dark sidebar menu lists various administrative functions: Dashboard, Users, Projects, Jobs, Feedback, Appointment, Products, Packages, and Setting. The main content area is titled "Package Dashboard". It features a "Download All Packages" button and a table listing packages. The table columns include Package ID, Package Name, Monthly Price, Annual Price, Service 1, Service 2, Service 3, Service 4, and Actions. Two rows are visible: one for "package 3" with values 2000, 24000, First, second, and another for "Maintenance" with values 7000, 22000, equipment cleani..., equipment lubric..., service3, service4. Each row has "DELETE" and "Update" buttons. Below the table is an "Add Package" button.

### Package management - Admin package page

This screenshot shows the "Add Package" dialog box overlaid on the Package Dashboard. The dialog has a title "Add Package" and several input fields: "Package Name" (with placeholder "Enter package name"), "Package ID" (with placeholder "Enter package ID"), "Description" (with placeholder "Enter package description"), "Service 1" (with placeholder "Enter service name"), "Service 2" (with placeholder "Enter service name"), "Service 3" (with placeholder "Enter service name"), and "Service 4" (with placeholder "Enter service name"). In the background, the Package Dashboard table is partially visible, showing the same two package entries as the first screenshot.

### Package management - Updating package form

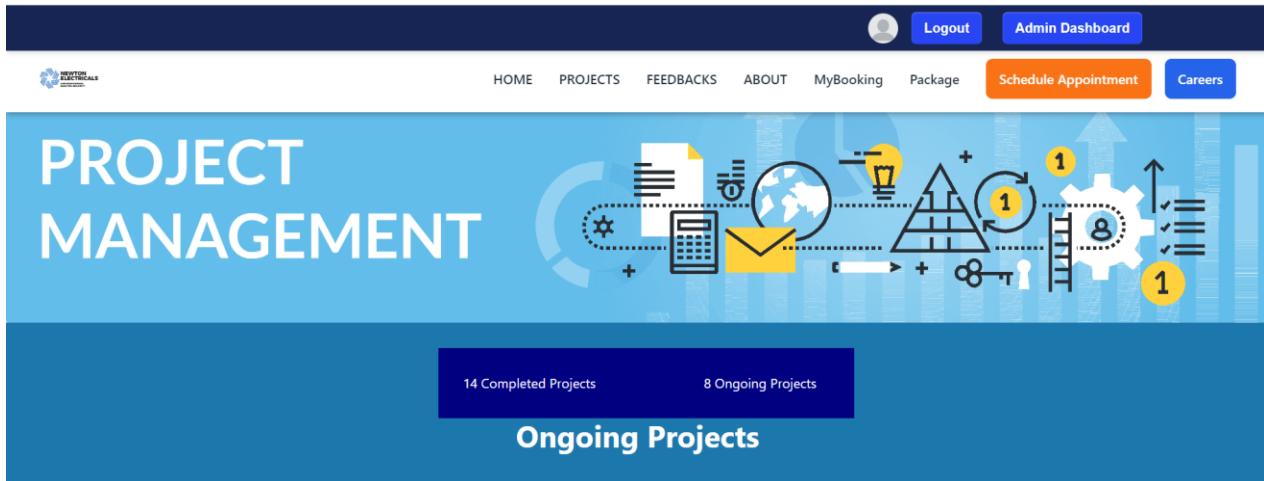
The screenshot shows a modal window titled "Update Package" over a "Package Dashboard". The modal contains fields for Package Name (Maintenance), Package ID (004), Description (In this package, customers benefit from proactive preventive...), and four Service fields (Service 1: equipment cleaning, Service 2: equipment lubricating, Service 3: service3, Service 4: service4). The background dashboard lists packages with columns: Package ID, Package Name, Monthly Price, Annual Price, Service 1, Service 2, Service 3, Service 4, and Actions (Delete, Update).

### Package management - Delete package confirmation

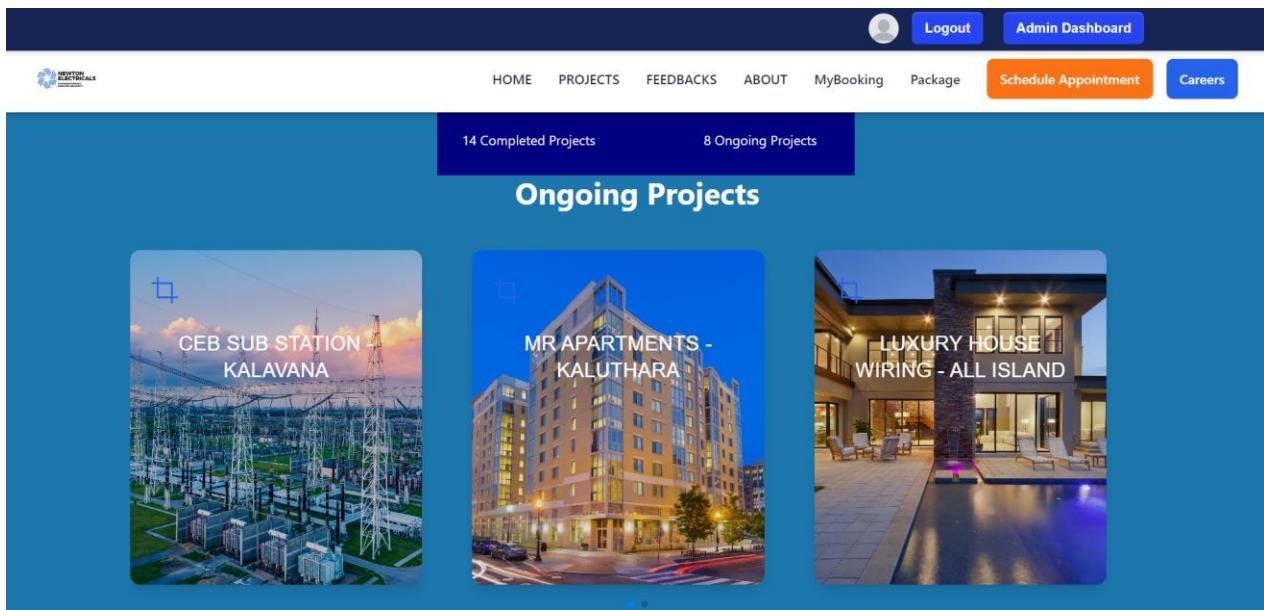
The screenshot shows a modal window titled "Confirm Delete" asking "Are you sure you want to delete this package?". The background dashboard lists packages with columns: Package ID, Package Name, Monthly Price, Annual Price, Service 1, Service 2, Service 3, Service 4, and Actions (Delete, Update).

## ProjectManagement

*Project management (Page for users like customers and employees)*



The screenshot shows the homepage of a project management application. At the top, there's a dark header bar with a user icon, "Logout", and "Admin Dashboard". Below the header is a navigation menu with links: "HOME", "PROJECTS", "FEEDBACKS", "ABOUT", "MyBooking", "Package", "Schedule Appointment" (highlighted in orange), and "Careers". The main content area has a blue header with the text "PROJECT MANAGEMENT" and a decorative graphic of gears, documents, and icons. Below this, a dark blue section displays project statistics: "14 Completed Projects" and "8 Ongoing Projects". A central button labeled "Ongoing Projects" is visible. The bottom part of the page features three project cards with images and titles: "CEB SUB STATION - KALAVANA", "MR APARTMENTS - KALUTHARA", and "LUXURY HOUSE WIRING - ALL ISLAND".



This screenshot shows the "Ongoing Projects" page from the project management application. The layout is identical to the home page, with a dark header, navigation menu, and project statistics at the top. The central "Ongoing Projects" button is highlighted in orange. Below it, the three project cards are displayed: "CEB SUB STATION - KALAVANA", "MR APARTMENTS - KALUTHARA", and "LUXURY HOUSE WIRING - ALL ISLAND".

Logout Admin Dashboard

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## Previous Projects

**COFFEE LAB - HATTON**

**ST CLARET COLLEGE - RAGAMA**

**XAVIER'S CHURCH - NUWARA ELIYA**

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**CEB Sub Station - Kalavana**  
New Kalavana Sub Station LV wiring at Kukule. MR Construction (PVT) LTD is the main contractor.

**MR Apartments - Kaluthara**  
80+ Million electrical project conducted by our company. Electrical Wiring, Panel Boards & Lightning protection done by Newton Electricals.

**Luxury House Wiring - All Island**  
Luxury House wiring of apartments and Condominium Buildings including light fittings and panel boards.

**Laksala Shopping Mall - Kandy**  
Overseeing an electrical project, our firm managed the intricate installation of Wiring, Panel Boards, and Lightning protection systems.

*Project management (Admin page with crud operation, calculation, search and generate report)*

The screenshot shows the Project Dashboard for Newton Electricals. At the top right is a user profile icon. Below it is a blue button labeled "Go HomePage". The main title "Project Dashboard" is centered above a pie chart. The pie chart has two segments: "Completed" (red) and "Ongoing" (orange). Below the chart is a search bar with placeholder text "Search.." and a blue "Add Project" button. To the right is a "Download PDF" button. A table lists three projects: Coffee Lab - Hatton (Previous), ST Claret College - Ragama (Previous), and Xavier's Church - Nuwara Eliya (Previous). Each row includes the project title, status, and a truncated description.

Title	Status	Description
Coffee Lab - Hatton	Previous	10 Million worth rewiring of the Main Building of Coffee Lab. Pa...
ST Claret College - Ragama	Previous	20+ Million electrical project done for ST Claret College. Total L...
Xavier's Church - Nuwara Eliya	Previous	10+ Million worth rewiring of the Main Building of Xavier's Chu...

This screenshot shows the Project Dashboard with a different set of data. The table lists ten projects, each with a title, status, and a truncated description. Projects include Coffee Lab - Hatton (Previous), ST Claret College - Ragama (Previous), Xavier's Church - Nuwara Eliya (Previous), Taxila Central College - Horana (Previous), CEB Sub Station - Kalavана (Ongoing), MR Apartments - Kaluthara (Ongoing), Luxury House Wiring - All Island (Ongoing), Ceylon Villa - Badulla (Previous), Heritance Hotel - Ahungalla (Previous), and The Johns Hopkins Hospital - Colombo (Previous). A "Download PDF" button is visible on the right. At the bottom, there are pagination controls and a message indicating 1-10 of 11 rows.

Title	Status	Description
Coffee Lab - Hatton	Previous	10 Million worth rewiring of the Main Building of Coffee Lab. Pa...
ST Claret College - Ragama	Previous	20+ Million electrical project done for ST Claret College. Total L...
Xavier's Church - Nuwara Eliya	Previous	10+ Million worth rewiring of the Main Building of Xavier's Chu...
Taxila Central College - Horana	Previous	30+ Million electrical project done for Taxila Central College. To...
CEB Sub Station - Kalavана	Ongoing	New Kalavана Sub Station LV wiring at Kukule. MR Construction...
MR Apartments - Kaluthara	Ongoing	80+ Million electrical project conducted by our company. Electr...
Luxury House Wiring - All Island	Ongoing	Luxury House wiring of apartments and Condominium Building...
Ceylon Villa - Badulla	Previous	Electrical Wiring Sub Contract under Rajawardhana Engineering...
Heritance Hotel - Ahungalla	Previous	Electrical Wiring Sub Contract under Wikramage Engineering (...)
The Johns Hopkins Hospital - Colombo	Previous	Overseeing a 30 million electrical endeavor, our company playe...

Rows per page: 10 | < | 1-10 of 11 | > | >> |

The screenshot shows a project management interface for 'Newton Electricals'. On the left is a dark sidebar with navigation links: Dashboard, Users, Projects, Jobs, Feedback, Appointment, Products, and Packages. The main area has a header with 'Go HomePage' and a search bar. A 'Download PDF' button is in the top right. Below is a table listing projects:

Description	Cost (Rs.)	Edit project	Delete
10 Million worth rewiring of the Main Building of Coffee Lab. Pa...	5000000	<button>Update</button>	<button>Delete</button>
20+ Million electrical project done for ST Claret College. Total L...	25000000	<button>Update</button>	<button>Delete</button>
10+ Million worth rewiring of the Main Building of Xavier's Chu...	15000000	<button>Update</button>	<button>Delete</button>
30+ Million electrical project done for Taxila Central College. To...	35000000	<button>Update</button>	<button>Delete</button>
New Kalavana Sub Station LV wiring at Kukule, MR Construction...	60000000	<button>Update</button>	<button>Delete</button>
80+ Million electrical project conducted by our company. Electr...	50000000	<button>Update</button>	<button>Delete</button>
Luxury House wiring of apartments and Condominium Building...	55000000	<button>Update</button>	<button>Delete</button>
Electrical Wiring Sub Contract under Rajawardhana Engineering...	60000000	<button>Update</button>	<button>Delete</button>
Electrical Wiring Sub Contract under Wikramage Engineering (...)	80000000	<button>Update</button>	<button>Delete</button>
Overseeing a 30 million electrical endeavor, our company playe...	100000000	<button>Update</button>	<button>Delete</button>

Rows per page: 10 | 1-10 of 11 | < > |

Project management (Admin page with add details in crud operation)

The screenshot shows the same project management interface with an 'Add Project' modal dialog open. The modal contains fields for Title, Status (radio buttons for Ongoing or Previous), Description, Duration, Cost, and a file upload field labeled 'Choose file'. Buttons for 'ADD' and 'CANCEL' are at the bottom. In the background, the project list is partially visible.

Project management (Admin page with update details in crud operation)

The screenshot shows a project management application for 'Newton Electricals'. On the left is a dark sidebar with navigation links: Dashboard, Users, Projects, Jobs, Feedback, Appointment, Products, and Packages. The main area has a header with 'Go HomePage' and 'Add Project' buttons, a search bar, and a 'Download PDF' button. A modal window titled 'Update Project' is open, containing fields for Title (Coffee Lab - Hatton), Status (radio buttons for Ongoing and Previous, with Previous selected), Description (10 Million worth rewiring of the Main Building of Coffee Lab.), Duration (6 Months), and Cost (50000000). At the bottom of the modal are 'UPDATE' and 'CANCEL' buttons. Below the modal, a table lists several projects with columns for Description, Cost (Rs.), and actions (Edit project, Update, Delete). One row is highlighted with a blue border.

Project management (Admin page with delete details in crud operation)

This screenshot shows the same project management application. The sidebar and header are identical to the previous screenshot. A modal window titled 'User Deletion Confirmation' is displayed, stating: 'Project ID 661f20712972809b299348a1 Deleting this project will permanently remove all associated data and access rights from the system.' It asks, 'Are you absolutely certain you want to proceed with this action?' with 'DISAGREE' and 'AGREE' buttons. The main table below the modal lists projects with their descriptions and costs. The last row of the table is highlighted with a blue border.