

**BOOKING AND SCHEDULING SYSTEM FOR TRUCKING
SERVICES OF STA. CATALINA MULTI-PURPOSE
COOPERATIVE**

IRISH MAE V. BIANSON

BACHELOR OF SCIENCE IN INFORMATION SYSTEMS



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**BOOKING AND SCHEDULING SYSTEM FOR TRUCKING SERVICES OF
STA. CATALINA MULTI-PURPOSE COOPERATIVE**

IRISH MAE V. BIANSON

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APPROVAL OF THESIS OUTLINE

Name	IRISH MAE BIANSON
Major	N/A
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APPROVED BY THE GUIDANCE COMMITTEE

CATHERINE DAFFON

Adviser

Date

Statistician
(Optional)

Date

Co-Adviser
(Optional)

Date

CATHERINE C. DAFFON
Department Research Coordinator

Date

ARJAY S. AGBUNAG
Department Chairperson

Date

SHIERYL P. ORTIZA
College Research Coordinator

Date

MARICEL G. DAYADAY
Dean

Date

Study No: BSIS-2024-14
Index No: MC-CEIT-012823
Recorded by: ccd

RECORDED:

LYDIA C. PASCUAL
Director for Research and Development Office

Date

Recorded by: _____

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INTRODUCTION

A missionary priest named Fr. Fred Epiz, OMI, and some parish lay leaders initiated the founding of the Sta. Catalina Multi-Purpose Cooperative. The cooperative, as of today, has a population of more or less 3,000 members and nonmember customers operating in the agri-marketing and trading sectors. Among its various departments, the marketing department offering services such as buy-and-sell for agricultural products, rice mills, corn shellers, mechanical dryers, solar dryers, warehouses, and trucking services. The trucking service is used by the cooperative for transporting agricultural products from farm to cooperative as well as transporting finished products to the market.

A good communication channel is very important to the company, especially when clients need to communicate with the company to request the service they need (Perales-Aguirre, A.M. et al. 2024). Currently, communication relies on phone calls, which hinder individuals without direct contact information. Farmers often struggle to reserve trucking services; instead, they rely on people who have office contact details or physically visit the cooperative's office. This complicated process also affects customers, including wholesalers and retailers, who require trucking services to transport purchased goods to their stores.

Based on the following observations, the researcher would like to develop a system that would address the challenges and problems encountered by the Sta. Catalina Cooperative marketing department with reservations and the scheduling of their trucking services.

Statement of the Problem

Sta. Catalina Multi-Purpose Cooperative offer trucking services for the products that are delivered to them and for the finished products they sell to the market. Currently, the cooperative uses phone calls for communication, and individuals without contact information typically make personal requests to book and schedule trucking services with the cooperative.

In an interview with Mr. Wendell P. Amoronio, the manager of the marketing department, he said that they encounter communication challenges, especially when it comes to the marketing department and the clients who are the farmers or individuals who deliver raw agricultural products. This ineffective communication also impacts clients that consume their finished product, including wholesalers and retailers, who depend on trucking services to deliver purchased items to their stores. The staff faces difficulties during phone calls to gather information from the clients due to the unstable signal, making it difficult to determine whether the person who booked and scheduled the trucking service is a member or not. As well as making it difficult for farmers to access the services they need.

Significance of the Project

The goal of this project is to develop an online booking and reservation service for the trucking service of the Sta. Catalina Multi-Purpose Cooperative that significantly aims to improve the communication channel of the clients so that they have easier access to the cooperative's marketing department. It will simplify the trucking service booking and scheduling process.

This is beneficial to:

- **Marketing Department Staff:** it helps the staff manage the booking and schedule easily; it also helps them to have smooth communication and save time for the verification process.
- **Clients:** This will provide the customers with a platform to easily book and schedule trucking service for the delivery of their purchased goods. They will also have access to the information and status of their bookings.

Objectives of the Project

Generally, the objective of this project is to develop an online booking and scheduling system for the Sta. Catalina Multi-Purpose Cooperative Marketing Department.

Specifically, it aims to:

1. create a trucking service schedule;

2. check the availability of trucks;
3. generate a monthly report for delivery schedule report, booking activity report; and
4. evaluate the systems functionality.

Expected Output of the Project

The proposed project, scheduling, and booking system is designed for the Sta. Catalina Multi-Purpose Cooperative. The researcher aims to improve the communication channel between the marketing department and the clients.

The expected outputs of the system are the following:

1. The cooperative's clients could input reservation details such as name, type of trucking service, product type, quantity, and destination.
2. The staff could arrange a trucking reservation based on the availability and quantity of products.
3. Send a confirmation notification to the clients with confirmed reservation details, such as the truck's plate number and the scheduled departure time.
4. Develop a centralized database to store client contact information, communication history, and service requests.

Operational Definition of Terms

The terminologies were defined by the researcher for better and clearer understanding about the study;

Automation- The use of technology to perform booking and scheduling tasks with minimal human involvement.

Booking and Scheduling System- A digital platform designed to manage and organize truck reservation and service schedules for the cooperative.

Client- An individual or organization using the cooperative's trucking services and interacting with the booking and scheduling system. It may be farmer, store owners, and classified into two; member and non- member.

Communication Channel- The means by which information is transmitted between cooperative and its client.

Develop- The process of creating, coding, testing, and deploying the booking and scheduling system.

Generate- The system's ability to produce reports and notifications based and stored data.

Input- Data entered by users into the system for processing.

Web Application- An online interface accessible via web browsers where the client and staff interact with the booking and scheduling system.

Conceptual Framework

Figure 1 presents the conceptual framework. The inputs are the client's data, reservation details, product details, and truck details. The process will then involve the design and development of the project, enabling the client to book and schedule trucking services, the staff to manage booking and scheduling, the staff to send notifications to the client, and the generation of a booking report. The booking and scheduling system will serve as the output, allowing the cooperative's client to make online reservations for trucking services, while the staff will be responsible for managing these reservations. The project's goal is to simplify the reservation process for the clients, as well as establish a new communication channel between the cooperative client and the marketing department.

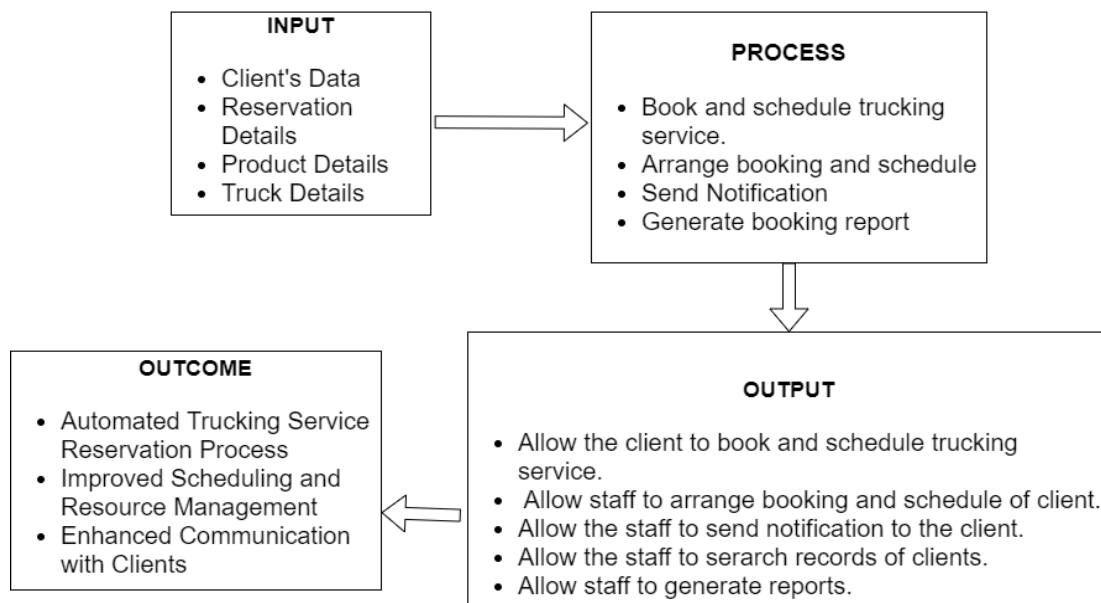


Figure 1 Conceptual Framework

Limitations of the Project

The project will focus on web applications and databases. It will be able to create, manage, and monitor the trucking system's reservations. The marketing department's staff will have access to the system's database, while cooperative members and customers can view, access, and request trucking service reservations.

Only the employees, clients, and members of the Sta. Catalina Multi-Purpose Cooperative Marketing Department are the target audience for the proposed project.

Data: The user will be able to create an account and view a dashboard. The staff will be able to manage booking and scheduling, create and send notifications, and generate reports. The clients will be able to book and schedule.

People: The project involves the Marketing Department Manager and staff. They will act as the system's administrator. The client will function as a system user.

Process: The employees of Sta. Catalina Multi-Purpose Cooperative will serve as administrator users since they can manage the booking and scheduling requests. The employee can create a user account, manage bookings, and schedule requests. The client can book trucking service; upon registering, they will be directed to the home page and then requested booking and scheduling, where they will input the details of the booking process.

REVIEW OF RELATED LITERATURE

Booking and scheduling systems in different sectors have changed extensively due to the emergence of digital technologies. Unlike traditional means of booking appointments, services which were often too slow and inconvenient, current procedures involving online platforms plus mobile apps have been made very flexible for better user satisfaction.

Booking and scheduling system

Online booking and scheduling systems have changed the face of transport industry; the days when someone had to go physically to a booking office are gone. These systems are important because it allows customers to keep track and book tickets easily hence enhancing customer satisfaction and efficiency (Ogbonna, 2019). Additionally, in the study of Abad (2018) shows that through online bookings, it allows tricycle bookings improved service delivery and commuter comfort.

The development of online road transportation ticketing systems has increased the ease of making a booking for a journey through the elimination of traditional ticketing bottlenecks. This makes it easier to deal between the consumer and the business owner in this industry of road transport, as interactions are much smoother and operations are more efficient. Some remarkable advantages of the web-based approach include, but are not

limited to, ubiquitous access to information at any time.(Adekola et al., n.d.). Traditional booking systems, such as those based on phone, email, and calls for booking equipment, are largely time-consuming for customers and the companies involved in renting out equipment. Online heavy equipment booking platforms have been developed to mitigate these challenges and provide quick access to construction and infrastructure projects' rental equipment. One study applied Monte Equipment mental simulation to estimate productivity on a construction site for a selected residential building project. It was revealed that in Turkish construction enterprises, detailed scheduling of heavy equipment and productivity considerations are usually not taken into account. Productivity data normally rely on simple extrapolations for planned construction activities, with daily reports from the machinery departments. This present study focuses on the characteristics of the construction sector in terms of equipment scheduling and how their productivity is evaluated in Turkey. It finds scope for high reduction in cost by improving current practices. It suggests the application of simulation methods like Monte Equipment as a supportive tool for better estimation of cost and productivity (IJRASET, 2023) .

In the field of health care, according to the study of Mendoza et al. web-based platform for scheduling reduced wait times by far and improved patient's satisfaction through communication enhancement as well as greater accessibility. Ele et al (2020), on the other hand their study shows that online booking system with an SMS notification system enhance patient

management, avoid missed appointments and improve overall healthcare system efficiency. According to the study of Sonawane et al., (2024) by leveraging technology, online booking systems enhance emergency response times, fostering reliability and security in healthcare services. This innovation is important in bridging the gap between patients and emergency medical services, improving patient outcomes, and saving valuable time during critical situations.

It is noticed that technology has been integrated into sports and leisure management through the study of Rashmi and Kiran (2023) a badminton court management system shows that this digital platform takes care of scheduling, payments, and maintenance which then enhances user accessibility as well as operational efficiency for facility managers. Similarly, in the study of Cabañero (2023) a laundry booking system with SMS notifications shows how technology has optimized traditional business processes and improved customer-service provider interactions.

In academic environment, online appointment scheduling systems have transformed the student-teacher interaction. According to Jaival et al. (2015) web application for students to make appointments easily therefore improving time management and operation efficiency. Ahmad, Sidek and Omandin (2010) examined Constraint Logic Programming (CLP) in e-appointment systems showing its capability to automate scheduling processes and provide feedback mechanisms for better efficiency. The study of Ikbal &

Mauluddin, (2018) was towards making the secretariat of the information systems department more efficient in their classroom management, by integrating a classroom booking-information system with a lecture-scheduling-information system. They deployed a the-object-oriented approach which is using Unified Modeling Language (UML) by using a prototype model. They developed the system using Java SE and MySQL. The result of implementation is making it easy to track and manage classrooms, and reducing conflicts between original and replacement schedules.

Moreover, with the likes of Event-Venues Booking Management System and other cloud-based booking systems, event management has been made easier through ease booking activities and schedule coordination among others as well as help in communication between users and suppliers (JosephNg et al., 2023). According to Mohan, (2024), by using a seminar hall booking system, not only is time saved seeking authorized personnel, but unreserved spaces may be utilized more efficiently to reduce recurrence.

Communication Channel

For various sectors to perform its booking and scheduling system effectively, it depends on effective communication channels. Communication plays an essential role in both human existence and organizational success. It is a process of sharing ideas, information, and feelings to achieve a common understanding that is crucial for directing the functions of managers. It ensures

productivity, job satisfaction, and better relationships (Islam, n.d.). Communication is a basic management tool within any organization according to Bucata and Rizescu (2017), for which they stress its significance in achieving the company's objectives. With online platforms being a dominant feature of today's business environment, modern communication channels have revolutionized this sector with respect to cost efficiency and global reach (Globocnik Zunac et al., 2021)

Peng et al. (2018) examine how communication, innovation, and decision making are interrelated in cooperatives by highlighting the need for efficient vertical communication that would guarantee cooperative relationship and innovation. Constantinescu-Dibra and Cotju (2022) analyze consumer behavior and digital communication trends post-COVID-19 emphasizing the use of online platforms as well as the fact that businesses have to involve clients through such preferred media.

Platform like email, social media and websites are identified by Mama et al. (2022) as essential communication means influencing consumer behavior and business networking strategies during the pandemic. Nonetheless, complexities of contemporary communication channels are depicted through such challenges as adjusting to non-verbal cues in digital interface (Globocnik Zunac et al., 2021), and technological adaptation by young entrepreneurs (Jorgensen et al., 2022).

However in the study conducted by Vegiayan et al. (2013) reports on the relationship of communication technology as a channel for interaction among employees in an IT department of a multinational organization in Malaysia. It examines the most used and preferred communication channels among employees, revealing that while "instant messenger" is the most used, the "landline telephone" remains the most preferred. A significant positive relationship was identified between the perception of media richness and the preferred communication channel, indicating that traditional media still holds a strong preference despite the availability of newer communication channels.

In conclusion, booking and scheduling systems have greatly evolved by tapping into digital technologies with a view to enhancing efficiency and user satisfaction in transportation, healthcare, leisure, academic, event management and more. These streamlines process and reduces waiting time while improving accessibility thereby facilitating efficient service providers-consumer communication. Though problems like technology adoption and suitable with organizational goals hinder in its implementation but continued research and innovation is needed for optimization of these systems in diverse industries therefore increasing their implication going forward.

METHODOLOGY

Research Design

This study will employ a descriptive research design. To test the usability of booking, scheduling, storing, recording, and managing all of the client's data, the researcher will use a questionnaire to choose users at random. The researcher will design a system to tackle the current issues facing the organization. Additionally, the researcher will assess the system's functionality.

Research Participants and Materials

The respondents will be the employees of the Sta. Catalina Cooperative marketing department, as well as the clients who request the cooperative's trucking service. Each of them will be given a set of survey questionnaires.

Data Collection

In order to ensure the systematic and organized data collection, the researcher will follow a system procedure. The procedures to be followed; First is the researcher will send an informed letter to the manager of the Marketing Department in order to get approval for the intended project. Upon

approval, the researcher will ask permission then will give the questionnaires to the respondents to get the information/data necessary for the study.

Data Analysis

The researcher plans to analyze the data using a 5-point Likert scale (table 1). The extremes of Strongly Disagree and Strongly Agree represent the end points. Unlike the Likert-modified survey concept, interval data enables the measurement of answer variation, with the corresponding numbers representing quantifiable outcomes.

Table 1. 5-point Likert Scale.

Numerical Value	Description	Weighted Average
1	Strongly Agree	1.00-1.79
2	Agree	1.80-2.59
3	Neutral	2.60-3.39
4	Disagree	3.40-4.19
5	Strongly Disagree	4.20-5.00

Validity

Validity in quantitative research means “appropriateness” of the tools, processes, and data (Leung, 2015). The study will analyze the acceptability of multiple solutions based on the organization's real-time data and clearly describe the main aspects of the problem. The system method requires researcher to actively participate in the process to gather data for each field.

Additionally, we have carefully compiled the survey respondents, writers, cited sources, and researchers to prevent plagiarism. The researcher in this study ensures the use of all collected data as reliable and authentic sources for future system evaluation. The validity and reliability of research, along with its results, are crucial components that demonstrate the quality of research (Hayashi et al., 2019).

Ethical Consideration

By withholding the names or personal identities of persons who participate in the project, the researcher maintains the confidentiality of all personal data involved. The researcher guarantees privacy.

Additionally, the researcher meticulously tabulates and documents all the data. The collection process does not involve any manipulation of the data, results, methods, or procedures. We take these steps to guarantee the delivery of accurate research outcomes, free from any tampering. Additionally, the researcher obtains approval from the office of the Sta. Catalina Cooperative Marketing Department to use their employees, as well as the farmers and customers who request their trucking service, as participants in this study. To achieve this, the researcher obtains a letter of approval to proceed with the project.

Project Development

This section presents the design of the project, project development approach database schema, and system requirement specification.

Project Development Approach

Figure 2 depicts the modified waterfall model. The researcher will use this development approach because of its clear, sequential structure, which aligns well with the well-defined project requirements. This model provides a disciplined and structured approach, ensuring detailed documentation and systematic development through each phase; planning, analysis, design, implementation, testing, deployment, and maintenance. The model's emphasis on documentation supports future maintenance and scalability. The linear progression minimizes the risk of overlapping tasks, ensuring consistent and integrated development. Regular phase reviews allow for stakeholder feedback and approval, keeping the project on track.

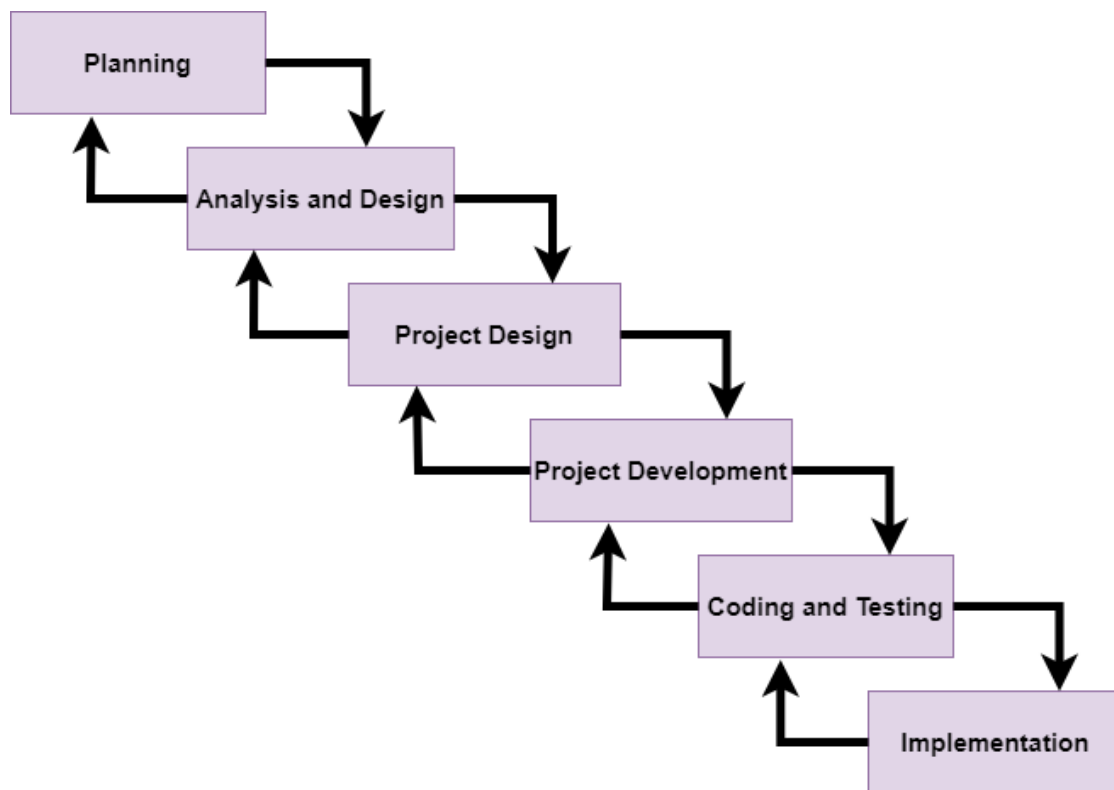


Figure 2. Modified Waterfall Model

Planning Phase- the project schedule, deliverables, and requirements are all established, and the project plans are all formally recorded.

Analysis and Design Phase- this is an analysis of the situation and processes of the booking and scheduling of trucking service. Additionally, this phase studies the prepared design of the system and how it connects to the particular needs of the planning stage.

Project Development Phase- At this stage, the system is developed by the researcher using a modified waterfall diagram.

Project Design- This is the stage of the project where the main characteristics structure, success criteria, and significant outputs are planned.

Coding and Testing phase- on this stage the software design must be implemented by the developers or programmers in order for the software to be created, used, and tested by the user.

Implementation Phase- This stage is when a project is developed or put into action. To ensure the projects works successfully, it also includes testing, inspecting, adjusting, correcting and certifying facilities and systems.

System Requirement Specification

Functional Requirements

1. The user can create an account to the System.
 - Input- Required personal information
 - Process- The system will be able to allow the user to create account to the system.
 - Output- Account will be created to the system.
2. The user can log into the system
 - Input- username and password.
 - Process– the system will be able to allow the user access the system
 - Output– user successfully access the system.

3. The client can book and reserve trucking service.

- Input- Type of trucking service, type of product, product quantity and location.
- Process- the system will save the booking and reservation request.
- Output- confirmation message displaying reservation input.

4. The staff will arrange the booking and reservation of trucking service.

- Input- reservation details from the system and truck availability.
- Process- the staff view and select available trucking option. The system checks the truck availability and matches it to the reservation details and the staff confirm the booking and reservation.
- Output- updated reservation status.

5. The system will send confirmation notification

- Confirmed reservation details and customer contact information
- Process- the system will generate a confirmation message with a reservation detail and send the notification via in-system notification and SMS.
- Output- client receive confirmation notification with reservation details.

6. The Manager and staff can search the record of the clients.

- Input- client details.

- Process- the system allows the manger and staff to search records.
 - Output- client records display.
7. The Manager of the cooperative can generate booking activity report, and communication response time report.
- Input- Booking and reservation data
 - Process- the system will collect the booking and reservation data.
 - Output- generation of report.
8. The Driver can view booking schedule
- Input-Booking and reservation data
 - The system allows the driver to access the list of schedules.
 - The system will display the list of schedules
8. The client can logout to the system
- Input- Click log out.
 - Process- the system will log out the user account.
 - Output- User log out from the system.

Software Requirements Specification

Table 2 shows the software requirements specifications for the study's development. The table further shows the software needed by the developer to develop the proposed system

Table 2. Software Requirements Specifications

SPECIFICATION	MINIMUM	RECOMMENDED
Application Server	Windows Server	Windows server, Linux server
System Type	64-bit OS	64-bit OS
Database	My SQL	My SQL
Programming Language	HTML, Java Script, PHP	HTML, Java Script, PHP

Hardware specification

Table 3 shows the hardware requirements. The hardware requirements include the processor, system memory, and hard drive. These are required to develop the system.

Table 3. Hardware Specifications

SPECIFICATION	MINIMUM	RECOMMENDED
Processor	Quadcore	Octa Core
Hard Disk	250GB	1TB
Internet	10mbps	30mbps

Entity Relationship Diagram

Figure 3 shows the Entity Relationship Diagram of the proposed system. The diagram illustrates the relationship between tables. The client entity, which stores details about cooperative's client, both members and non-members. This entity has a one-to-many relationship with the reservation entity, which means that each client can make multiple reservation. The reservation entity is also connected to the truck and staff entities through many to one relationship. Each reservation involves a single truck and is managed by one staff member, but a truck and a staff member can be associated with multiple reservation. Each Notification that gives updates to the clients about their reservation is connected to specific reservation, client and staff member. The relationship shows one to one and many to one relationship. The Report entity has many to one relationship with staff entity, its shows that each staff member can generate multiple reports.

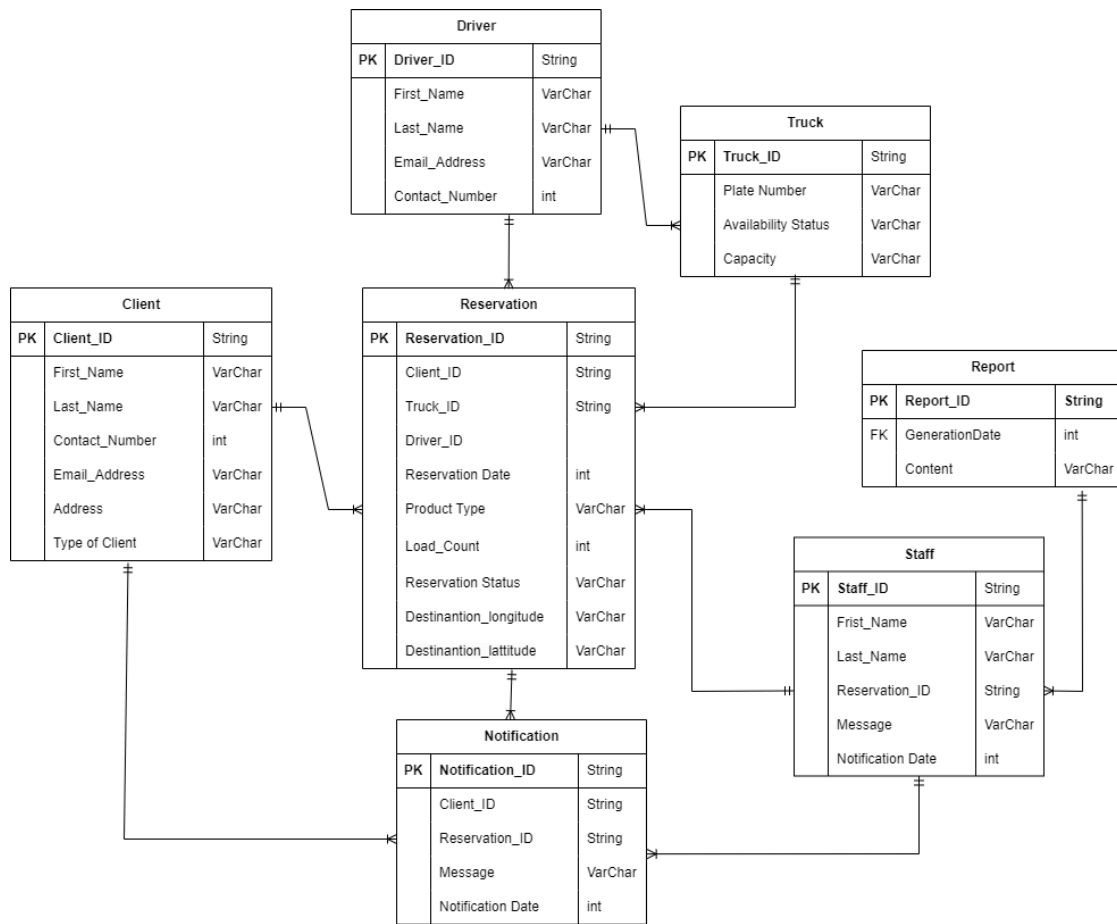


Figure 3. Entity Relationship Diagram

Use Case Diagram

Figure 4 shows the role of the user in the process of using the system. The users of the system will be able to create account, log in and log out of the system. The staff can arrange booking and reservation, send confirmation notification, the manager can view and generate report. The client can request booking and reservation. The client can request booking and reservation.

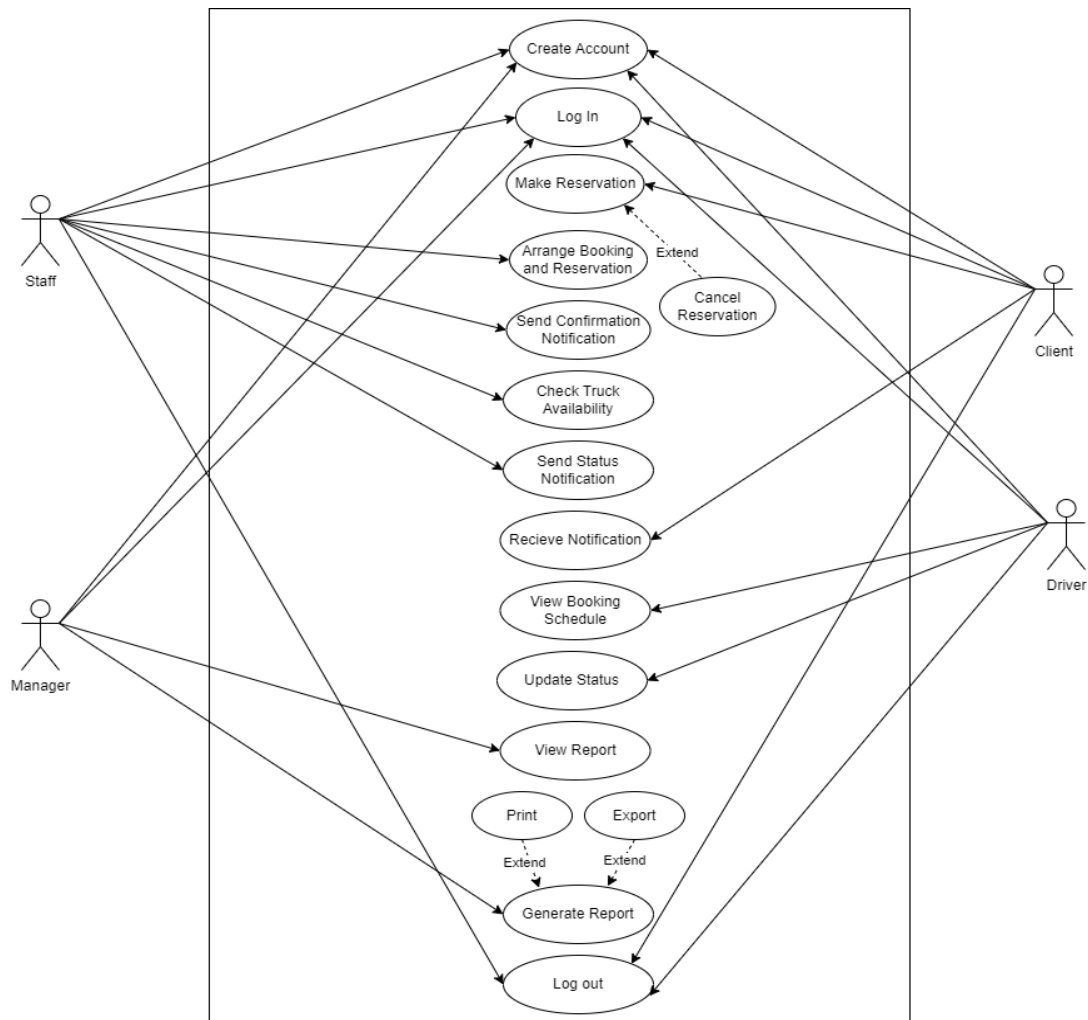


Figure 4. Use Case Diagram

Gantt Chart

Figure 5 illustrates the Gantt Chart for the proposed system development. Each phase represents a unique task or set of tasks that must be completed before moving to the next phase. These are divided into six stages; each stage has specific activity durations. The planning phase takes 17 days, next is the analysis phase with 46 days and 11 days in design phase. The development, testing and deployment phase will continue as the development of system continues.

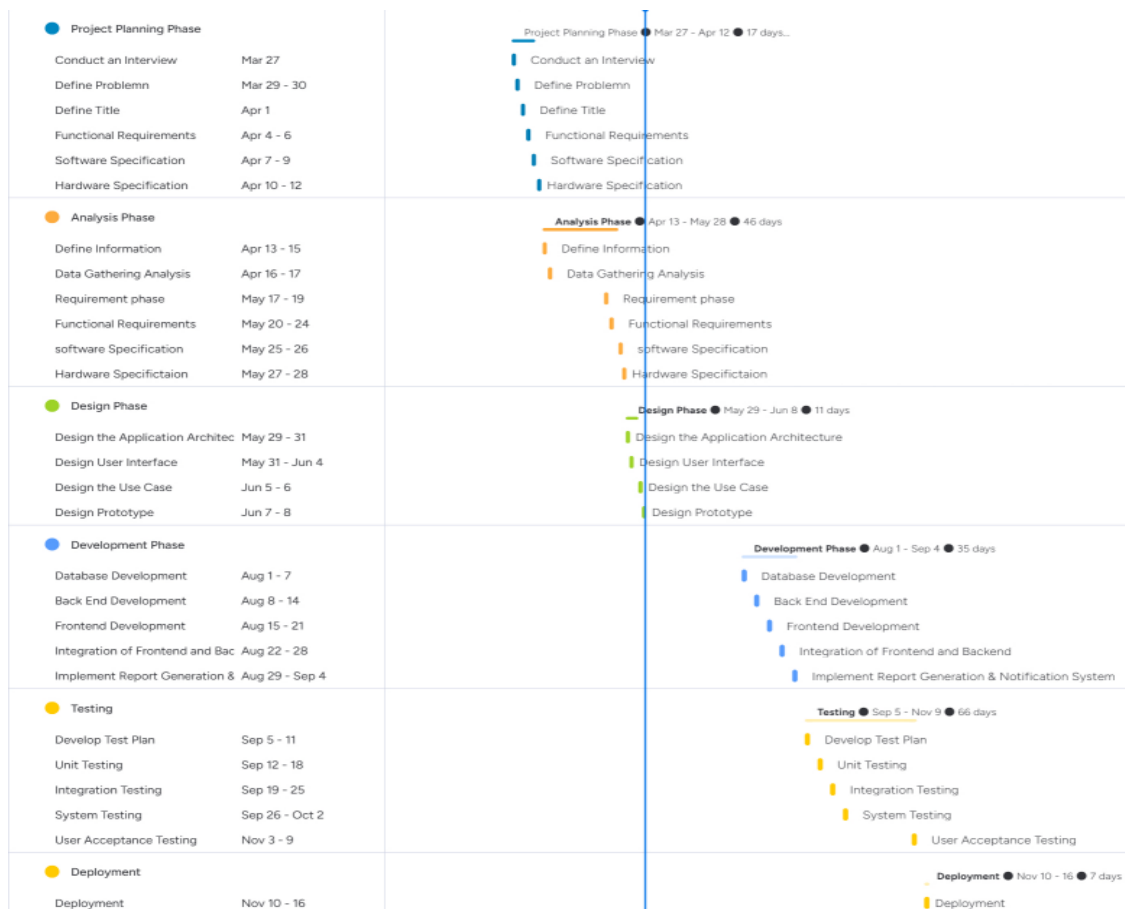


Figure 5. Gantt Chart

Activity Diagram

Figure 6 depicts the Activity diagram of the system. The diagram illustrates the registration process of the process of the user to the system. The client and admin will input the details needed for registration. The system will validate the data if the details are complete otherwise, it will return to the user registration page.

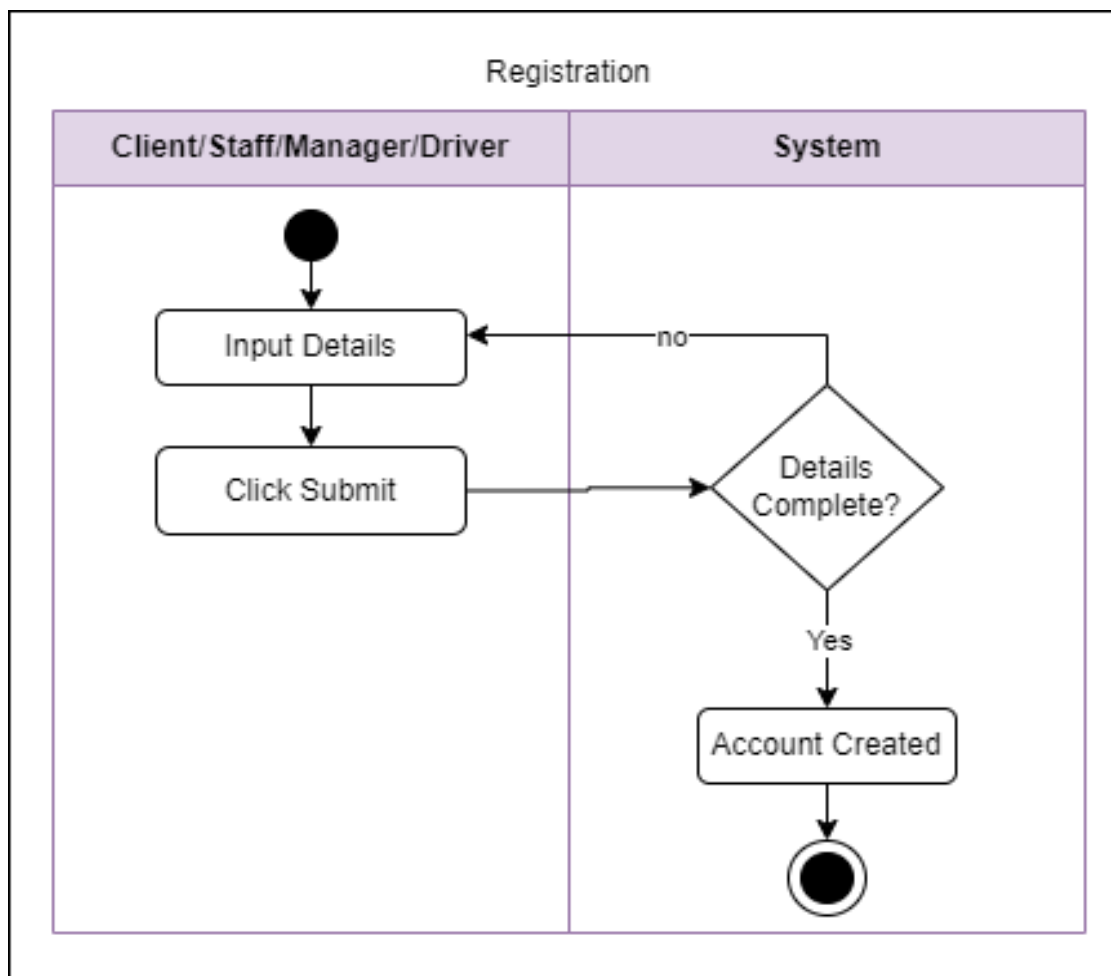


Figure 6. Activity diagram for creating account process of Booking and Scheduling System.

Figure 7. shows the Admin and Client log-in process activity diagram of the Booking and Scheduling System. If the username and password are correct and match to the database the user will log in to the system otherwise, it will return to the log in page.

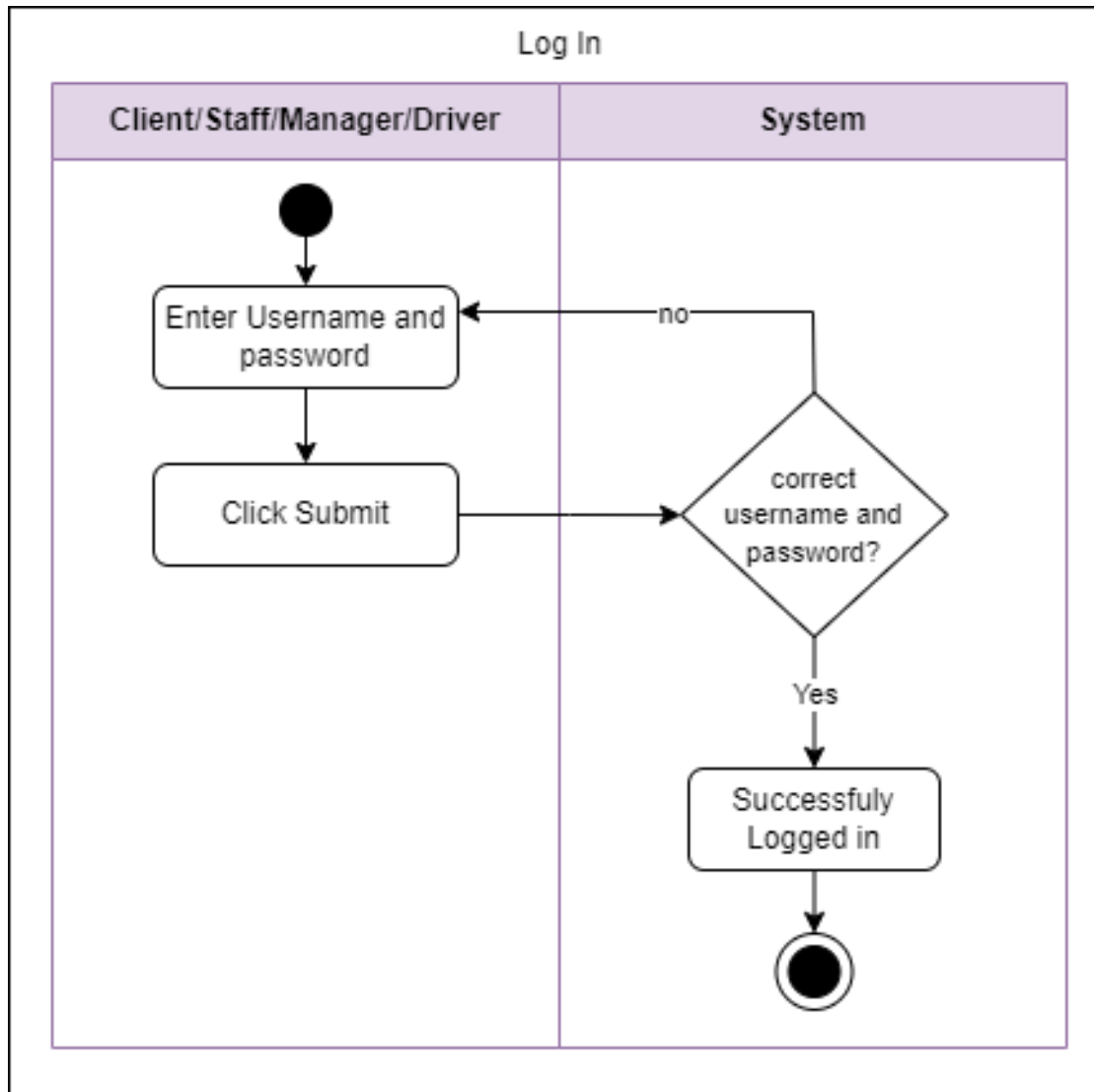


Figure 7. Activity diagram for log-in process.

Figure 8 shows the process of booking and scheduling trucking service. The client will select the booking and schedule menu bar then the system will display field where the client enters the booking detail, when the details are complete the trucking service booking will be saved; if not, then the user will fill up the missing booking details.

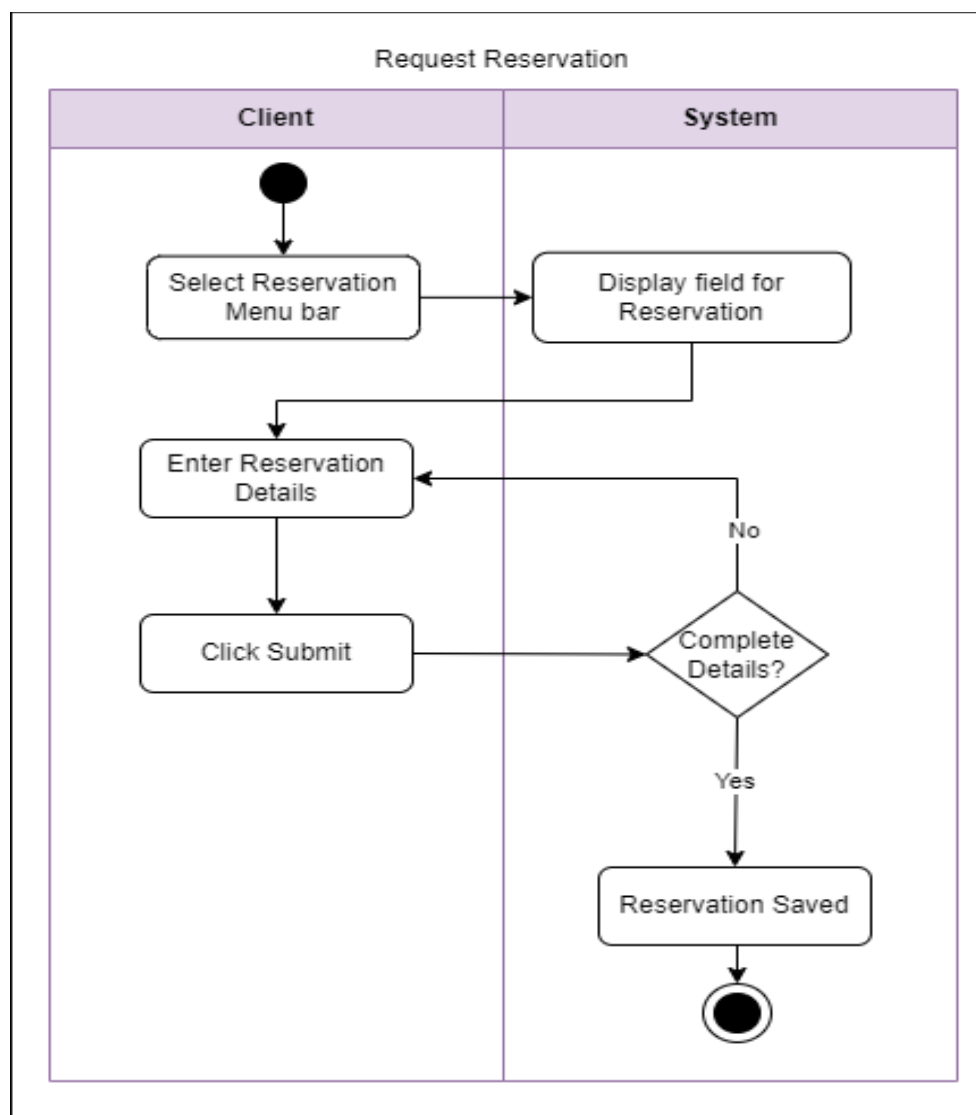


Figure 8. Activity diagram for booking and scheduling process.

Figure 9 shows the process of managing reservation by the Sta. Catalina Multipurpose Marketing Department. The staff will select the Manage Reservation in the menu bar, then the system will display the list of Booking request sent by the client. The staff will check first the availability of the truck then the system will display the list of available truck, if the truck that is compatible to the booking details is available the staff will approve and confirm the booking; if not the staff will check the time when the truck is available and change it to a new schedule.

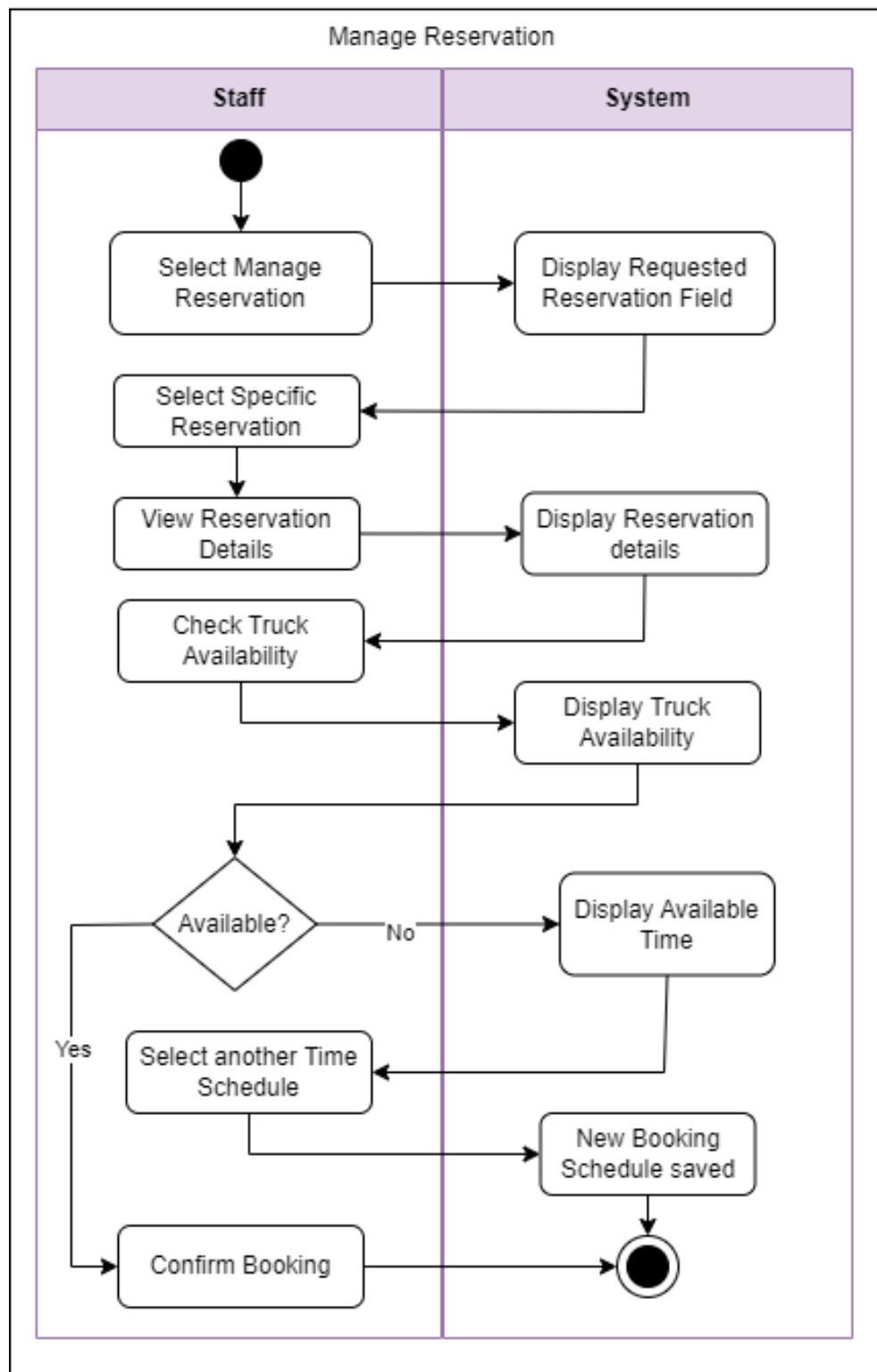


Figure 9. Activity diagram for managing booking and schedule.

Figure 10 shows the process of sending notification to the client about the status of their booking. The staff will select specific booking activity where to send the notification the system will display the field for composing notification. The staff will generate the notification content, click the Send Notification and the notification will be sent to the client.

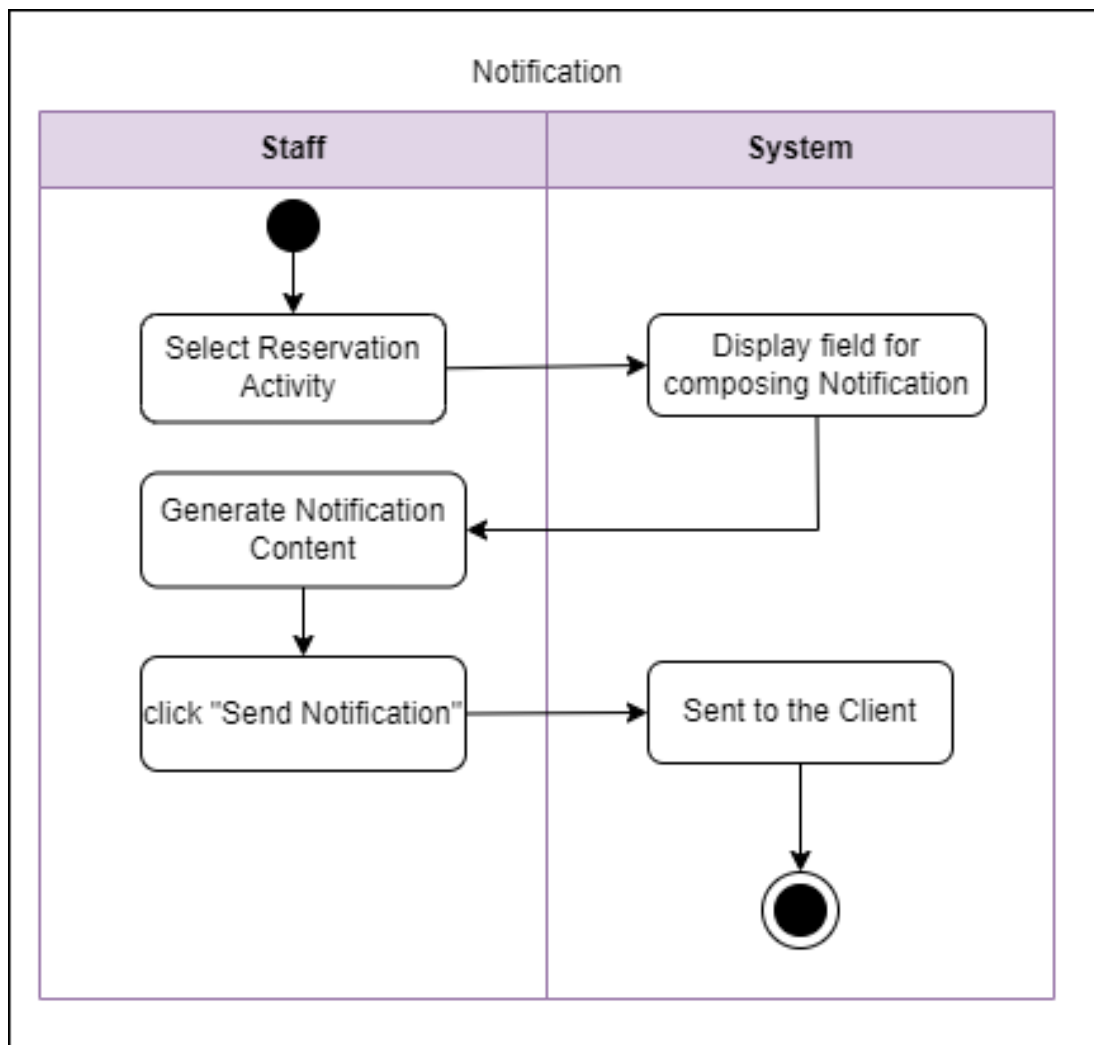


Figure 10. Activity Diagram for sending notification.

Figure 11 shows the process of searching client record in the system. The staff will click the search record then the system will display the search criteria input form. The staff will now input the criteria and the system will validate the criteria, if the criteria is valid then the system will display the result; if not the user will give the correct search criteria.

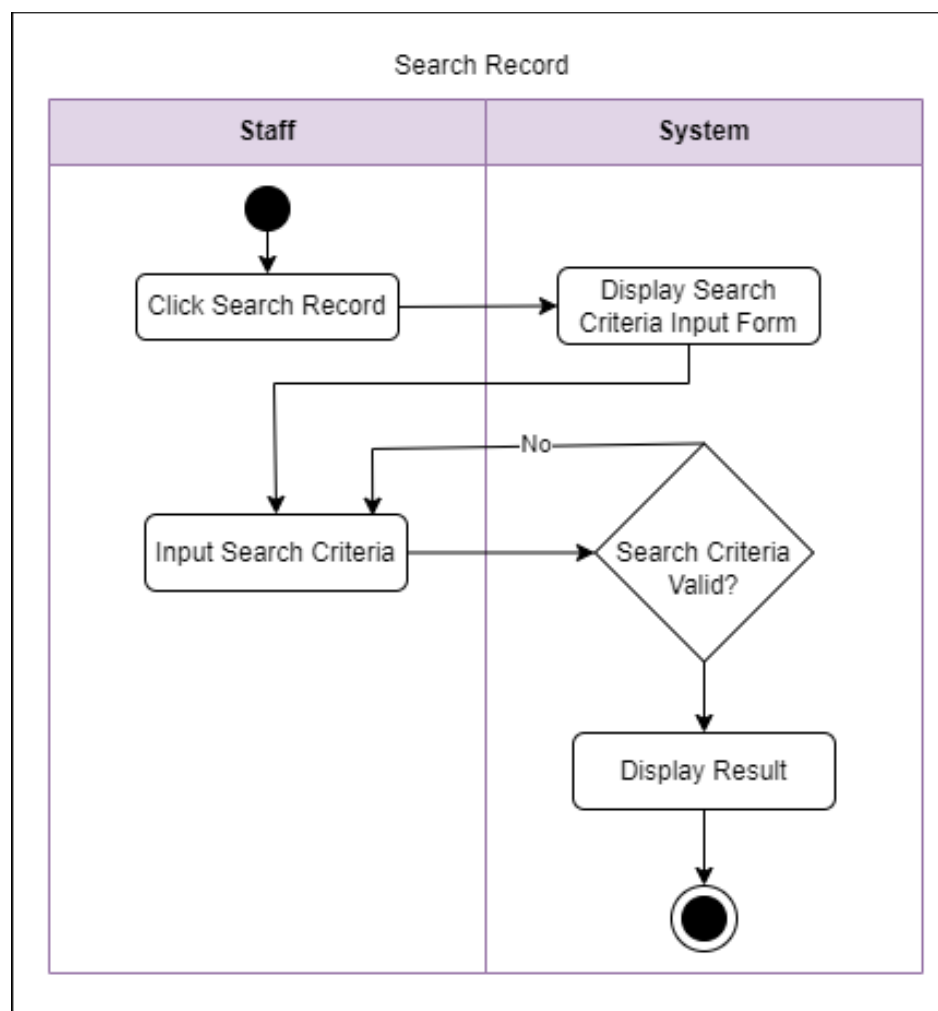


Figure 11. Activity Diagram for searching record of client.

Figure 12 shows the process of generating report such as activity report, and response time report. The staff will select the type of report they need then the system will retrieve the data needed and display the report. The staff will review the report then they will print or export the report.

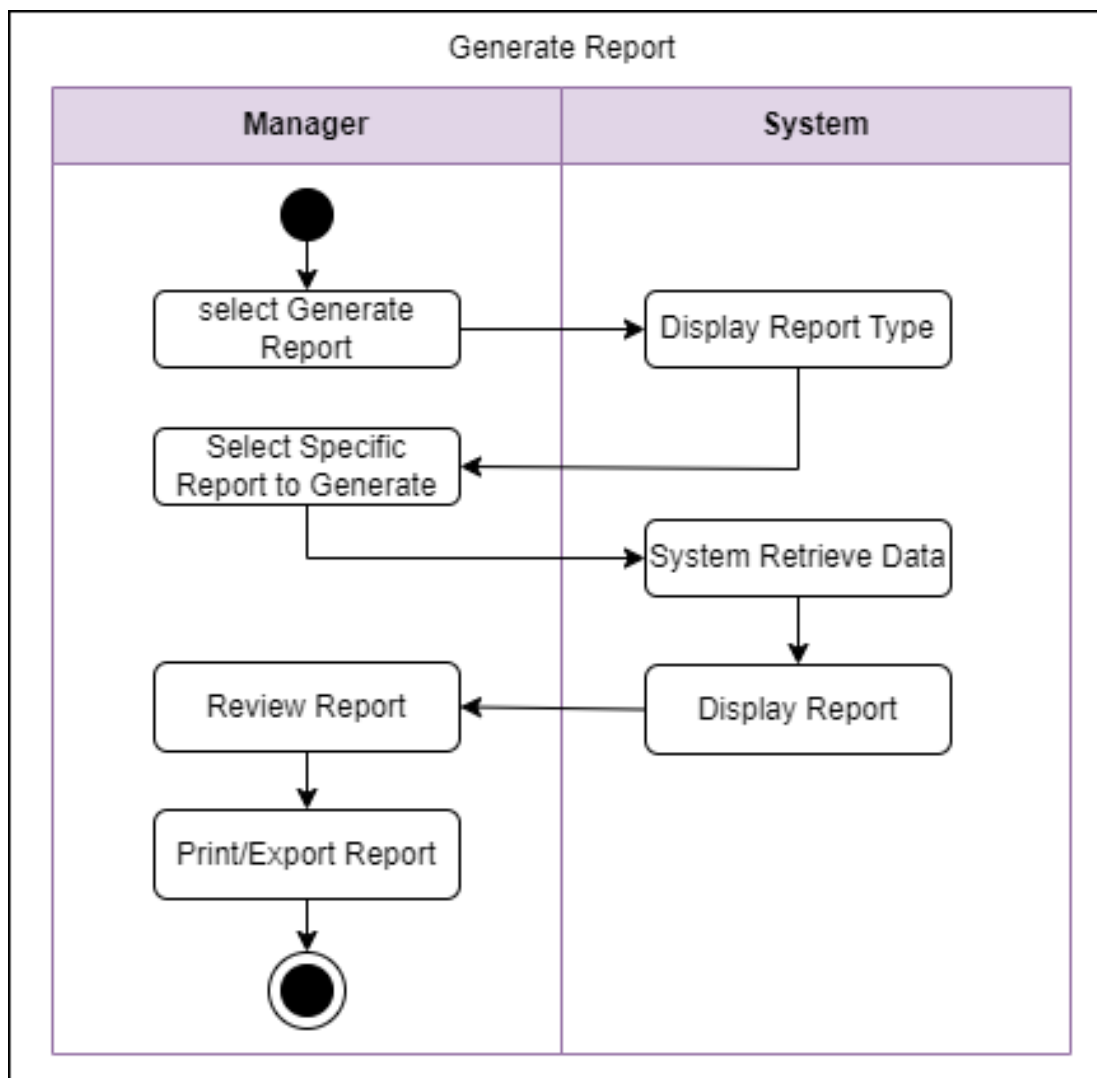


Figure 12. Activity diagram of generating report.

Figure 13 shows the process of log out to the system. The user will click log out then the system will display “Are you sure to log out if yes, the user will be logged out successfully; if not it will be terminated.

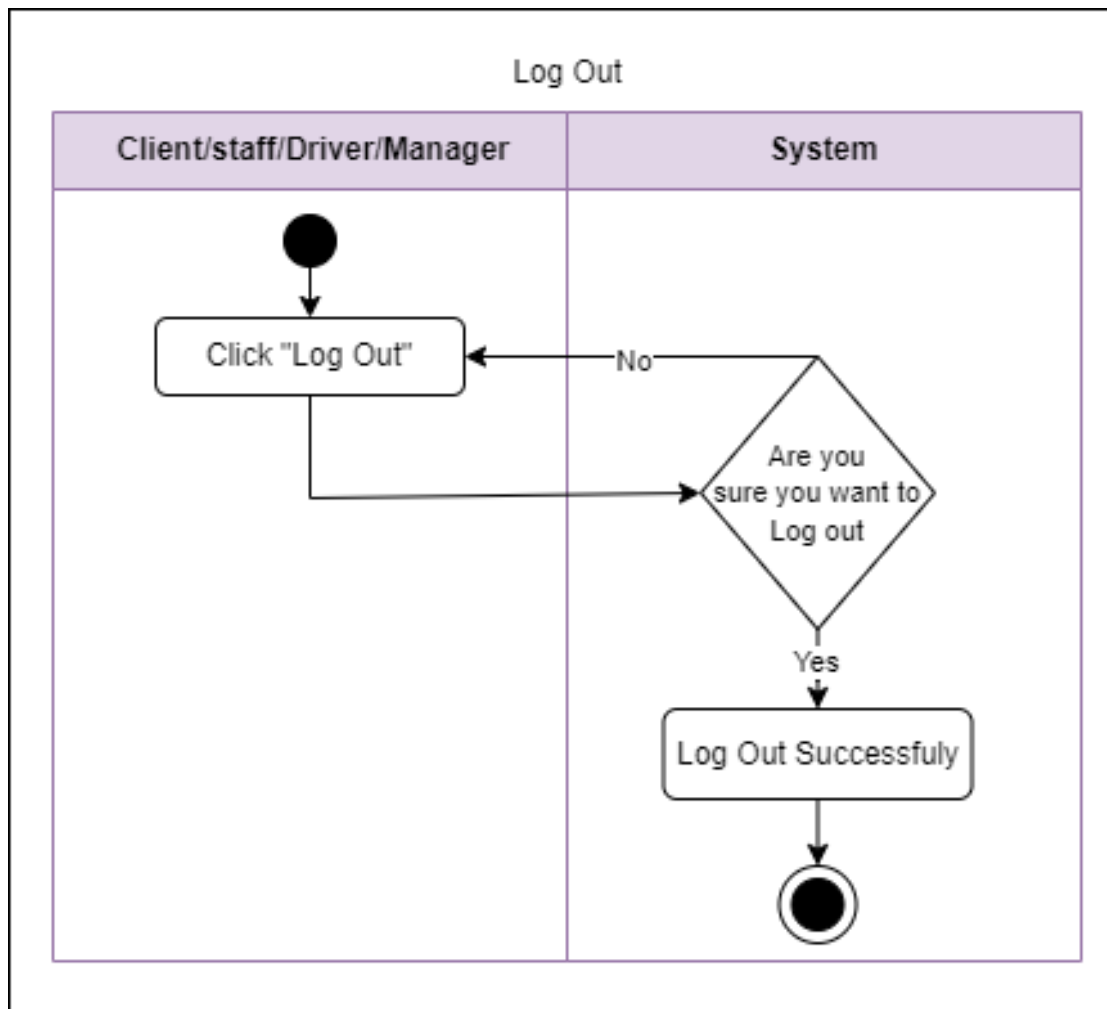


Figure 13 Activity Diagram for log out process.

Figure 14 shows the process of viewing the booking schedule. The driver will access the list of booking schedule and select specific booking to view the details. After viewing the details, the driver will accept the schedule.

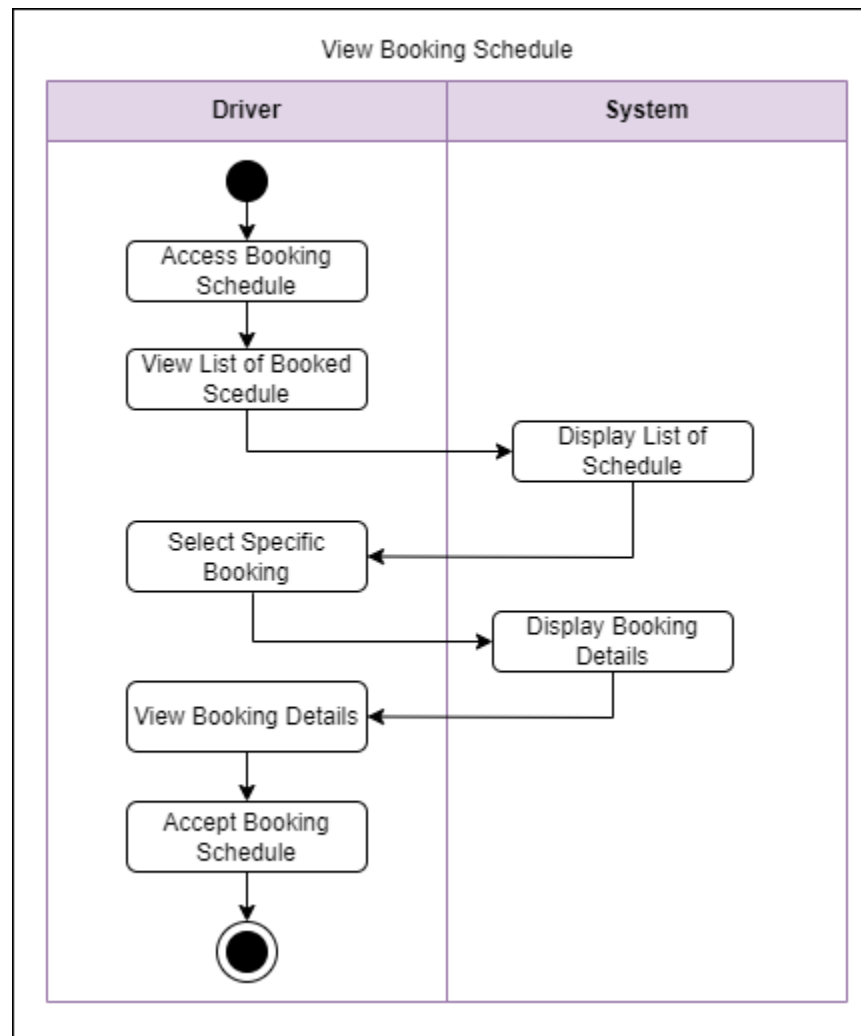


Figure 14 Activity Diagram to view booking schedule.

Figure 15 shows the process of updating status. The driver will access the list of booking schedule the system will display the list of schedules then the driver will select specific booking, update the status of the booking and the system will save the status update.

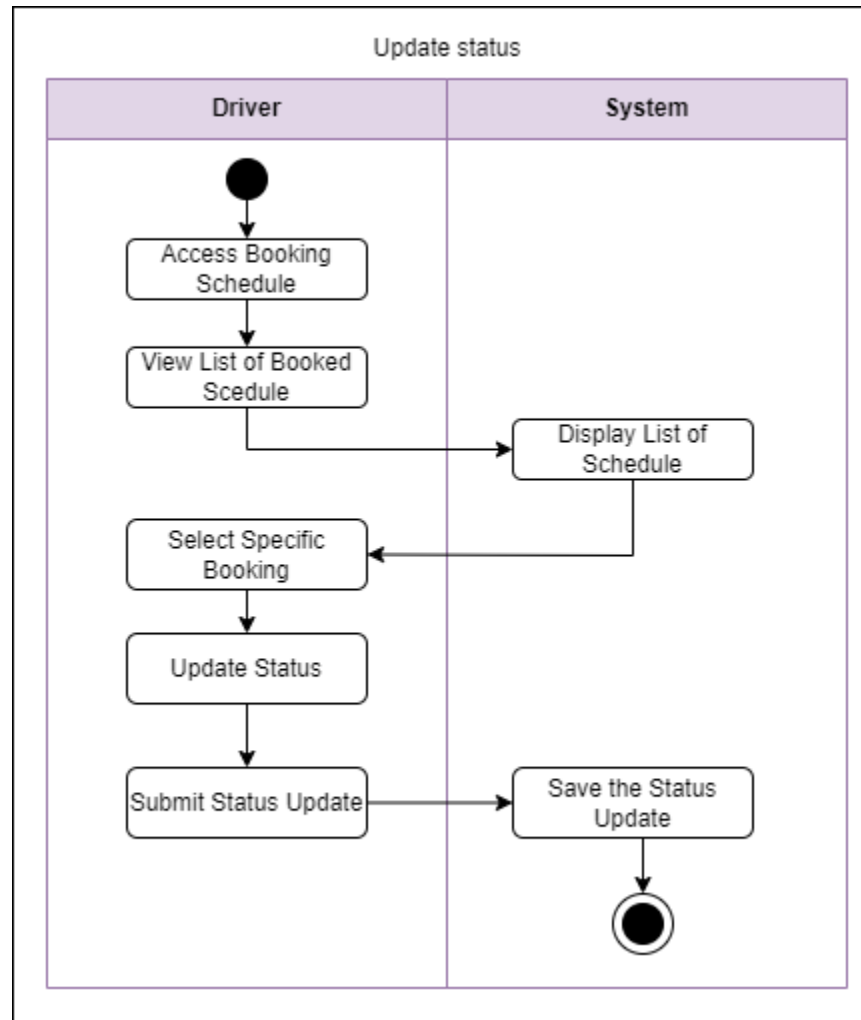


Figure 15. Activity Diagram to update status.

Figure 16 show the user interface design for creating account of new user of the system. The user will enter its Personal details.



The image shows a web form titled "STA. CATALINA MULTI-PURPOSE COOPERATIVE Marketing Department Online Booking System". The main heading is "CREATE NEW ACCOUNT". The form contains five input fields: "USERNAME", "PASSWORD", "FULL NAME", "ADDRESS", and "CONTACT NUMBER". To the right of these fields are two radio button options: "MEMBER" and "NON-MEMBER". A green "REGISTER" button is positioned to the right of the input fields.

Figure 16 User interface design for creating account.

Figure 17 show the user interface design for log in. The user needs to input its username and password.



The image shows a web form titled "STA. CATALINA MULTI-PURPOSE COOPERATIVE Marketing Department Online Booking System". The form contains two input fields: "USERNAME" and "PASSWORD". Below these fields are three buttons: "LOG IN", "FORGOT PASSWORD", and "REGISTER".

Figure 17 User interface design for Log In.

Figure 18 shows the user interface design where the client arranges booking and reservation of trucking service.

STA. CATALINA MULTI-PURPOSE COOPERATIVE
Marketing Department Online Booking System

BOOKING AND RESERVATION

TYPE OF TRUCKING SERVICE: DATE:

ADDITIONAL NOTE: LOCATION:

PARTICULAR	NUMBER OF LOADS
1.	1.
2.	2.
3.	3.
4.	4.
Total:	Total:

SUBMIT

Figure 18 User interface design for Booking and Reservation.

Figure 19 shows the user interface design where the staff schedule and confirm booking and reservation of trucking service.

STA. CATALINA MULTI-PURPOSE COOPERATIVE
Marketing Department Online Booking System

RESERVATION MANAGEMENT

RESERVATION ID: 123456 DATE: 01/20/2024

TYPE OF TRUCKING SERVICE: Hauling LOCATION: Purok 3, Noa, Magpet, Cotabato

CLIENT NAME: Crezal Eugene Bianson

PARTICULAR	NUMBER OF LOADS
Palay	80 sacks
Total: 1	Total: 80 sacks

ASSIGN TRUCK: Truck 4

SCHEDULE TIME: 3:00 p.m.

CONFIRM BOOKING

Figure 19 User interface design for Reservation Management.

Figure 20 shows the user interface design where the staff create notification that will be sent to the client.

STA. CATALINA MULTI-PURPOSE COOPERATIVE
Marketing Department Online Booking System

CREATE NOTIFICATION

Recipient Details:
 Client Name: Dropdown/List of Clients
 Email Address: [Auto-filled]
 Phone Number: [Auto-filled]

Notification Details:
 Subject: [Your Booking Confirmation]

Dear {ClientName},
 We are pleased to inform you that your trucking service reservation has been successfully confirmed. Below are the details of your booking:

Service Type: _____ Product Type: _____
 Quantity: _____ Pickup Location: _____
 Scheduled Departure Time: _____ Assigned Truck: _____
 Driver: _____

SEND NOTIFICATION

Figure 20 User interface design to create notification.

Figure 21 shows the user interface design where the client views the sent notification.

STA. CATALINA MULTI-PURPOSE COOPERATIVE
Marketing Department Online Booking System

NOTIFICATION

Booking Confirmation - Trucking Service Scheduled

Dear Mr. Crezal Eugene Bianson,

We are pleased to inform you that your trucking service reservation has been successfully confirmed.

Below are the details of your booking:

Service Type: Hauling
Product Type: Palay
Quantity: 80 sacks
Pickup Location: Purok 3, Noa, Magpet, Cotabato
Scheduled Departure Time: 3:00 PM
Assigned Truck: kwb-1678920
Driver: Nathaniel Dela Cruz

BACK TO HOME

Figure 21 User interface design where client view sent notification.

Figure 22 shows the user interface design where the staff can manage reservation. The staff will edit the reservation to arrange the client reservation and view details of the reservation.

The user interface design for the STA. CATALINA MULTI-PURPOSE COOPERATIVE Marketing Department Online Booking System features a header with the cooperative's logo and name. Below the header, the title 'RESERVATION MANAGEMENT' is displayed. The main content area contains a table with four rows of reservation data. Each row includes a reservation ID, client name, and status, followed by 'VIEW' and 'EDIT' buttons. A 'BACK TO HOME' button is located at the bottom right of the interface.

RESERVATION ID	CLIENT NAME	STATUS	
12345	BIANSON, CREZAL EUGENE	CONFIRMED	VIEW EDIT
12346	VICTORIANO, ARNEL	PENDING	VIEW EDIT
12347	BANDIOLA, ANDREW KENT	PENDING	VIEW EDIT
12348	LARA, CARL JOHN	CONFIRMED	VIEW EDIT

[BACK TO HOME](#)

Figure 22 User interface design where staff manage reservation.

Project Cost Estimate

The following details on Table 4 shows the estimated cost of completing the project. It shows the equipment needed by the developer to complete the project.

Table 4. Project Cost Estimate Table

ITEMS/DESCRIPTION	ESTIMATED COST
1. Requirement Planning Phase	
I. On- Site Meetings	Php 250
II. Document Current System	Php 300
III. Internet Connection	Php 500
IV. Transportation Expenses	Php 300
V. Food	Php 300
VI. Printing	Php 500
2. User Design Phase	
I. Database Design	Php 1,500
II. Software Design	Php 400
II. Interface Design	Php 500
3. Construction Phase	
I. Develop System Modules	Php 500
II. Integrate System Module	Php 200
III. Perform Initial Testing	Php 250
IV. Development Complete	Php 300
4. Cutover Phase	
I. Perform System Testing	Php 350
II. Document Issues Found	Php 400
III. Correct Issues Found	Php 350
IV. Testing Complete	Php 700
Grand Total	Php 7,600

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APPENDICES

Appendix A. Application for Research Adviser

	UNIVERSITY OF SOUTHERN MINDANAO Kabacan, Cotabato Philippines	
APPLICATION FOR RESEARCH ADVISER		

April 10, 2024

CATHERINE C. DAFFON

Department of Computing and Library Information Science
 College of Engineering and Information Technology
 USM, Kabacan, Cotabato

Ma'am:

I would like to request that you will be my Research adviser effective 2nd semester, SY 2023-2024. I intend to work on "**Booking and Scheduling System for Trucking Services of Sta. Catalina Multi-Purpose Cooperative**"

I am hoping for your most favorable approval on this request. Thank you very much.

Very truly yours,

IRISH MAE V. BIANSON

APPROVED
<u>CATHERINE C. DAFFON</u> Adviser _____ Date

Appendix B. Application for Research Title

	UNIVERSITY OF SOUTHERN MINDANAO Kabacan, Cotabato Philippines	
APPLICATION FOR RESEARCH TITLE		

April 25, 2024

DANILYN A. FLORES

Chairperson, Department of Computing and Library Information Science

MADAM:

I would like to request your office to allow me to research on the study entitled” **Booking and Scheduling System for Trucking Services of Sta. Catalina Multi-Purpose Cooperative**”.

The study has the following objectives:



7. create a trucking service schedule;
8. check the availability of trucks;
9. generate a monthly report for delivery schedule report, booking activity report; and
10. evaluate the systems functionality.

Very truly yours,

IRISH MAE V. BIANSON

NOTED	
<u>CATHERINE C. DAFFON</u> Adviser	_____ Date
<u>CATHERINE C. DAFFON</u> Department Research Coordinator	_____ Date
<u>NOR-AINE M. CORPUZ</u> College Research Coordinator	_____ Date
APPROVED	
<u>DANILYN A. FLORES</u> Department Chairperson	_____ Date

Appendix C. Estimated Budget of the Research

	UNIVERSITY OF SOUTHERN MINDANAO Kabacan, Cotabato Philippines	
ESTIMATED BUDGET OF THE RESEARCH		

Booking and Scheduling System for Trucking Services of Sta. Catalina Multi-Purpose Cooperative.

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ITEMS/DESCRIPTION	ESTIMATED COST
I. PERSONAL EXPENSES	
1. Meals	500.00
2. Snacks	400.00
3. Transportation	550.00
Sub Total	1,450.00
II. MAINTENANCE AND OPERATING EXPENSES (MOE)	
1. Internet (Load)	1,000.00
2. Outline Defense Fee	1,500.00
3. Print	500.00
4. Bond Paper	300
Sub Total	3,300.00
Grand Total	4,750.00

Prepared and submitted by:

IRISH MAE V. BIANSON

NOTED	
<u>CATHERINE C. DAFFON</u> Adviser	_____ Date
<u>CATHERINE C. DAFFON</u> Department Research Coordinator	_____ Date
<u>ARJAY S. AGBUNAG</u> Department Chairperson	_____ Date

Appendix D. Application for Thesis Outline Defense

	UNIVERSITY OF SOUTHERN MINDANAO Kabacan, Cotabato Philippines	
APPLICATION FOR THESIS OUTLINE DEFENSE		

Name	IRISH MAE V. BIANSON
Degree/Major	BACHELOR OF SCIENCE IN INFORMATION SYSTEMS
Thesis Title	BOOKING AND SCHEDULING SYSTEM FOR TRUCKING SERVICES OF STA. CATALINA MULTI-PURPOSE COOPERATIVE
Date of Examination	JUNE 24, 2024
Time	11:00 AM
Place	DEPARTMENT OF COMPUTING AND LIBRARY INFORMATION SCIENCE

MEMBERS OF THE EXAMINING COMMITTEE

Name	Signature	Date
<u>ELIZABETH R. GENOTIVA</u>	_____	_____
<u>JOSEPH C. LORILLA</u>	_____	_____
<u>RYAN Z. GONZAGA</u>	_____	_____

RECOMMENDING APPROVAL:

CATHERINE C. DAFFON

Adviser

_____ Co-Adviser (Optional)

APPROVED:

 College Statistician
 (Optional)

CATHERINE C. DAFFON
 Department Research Coordinator

DANILYN A. FLORES
 Department Chairperson



REPORT ON THE RESULT OF EXAMINATION

Name	Signature	Remarks
<u>ELIZABETH R. GENOTIVA</u>	_____	_____
<u>JOSEPH C. LORILLA</u>	_____	_____
<u>RYAN Z. GONZAGA</u>	_____	_____

APPROVED:

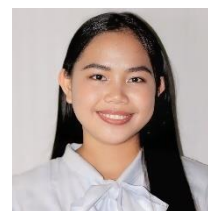
CATHERINE C. DAFFON
 Department Research Coordinator

 Date

	UNIVERSITY OF SOUTHERN MINDANAO Kabacan, Cotabato Philippines	
CURRICULUM VITAE		

IRISH MAE V. BIANSON

Noa, Magpet, Cotabato
09606027964
imvbaison@usm.edu.ph



PERSONAL INFORMATION	
Last Name	BIANSON
First Name	IRISH MAE
Middle Name	VICTORIANO
Nickname	RISH
Age	21
Nationality	FILIPINO
Religion	ROMAN CATHOLIC
Civil Status	SINGLE
Father's Name	SALVADOR S. BIANSON
Mother's Name	GRACE V. BIANSON
Educational Background	
Elementary	NOA ELEMENTARY SCHOOL
Junior High School	GREENFIELD NATIONAL HIGH SCHOOL
Senior High School	MAGPET NATIONAL HIGH SCHOOL
Tertiary	UNIVERSITY OF SOUTHERN MINDANAO

Appendix E. Certificate of English Critic

Republic of the Philippines
UNIVERSITY OF SOUTERN MINDANAO
Kabacan, Cotabato

COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY

CERTIFICATION OF ENGLISH CRITIC

This is to certify that the thesis study outline entitled **Booking and Scheduling System for Trucking Services of Sta. Catalina Multi-Purpose Cooperative** conducted by **Irish Mae Bianson** was edited by the undersigned.

CATHERINE C. DAFFON
Signature over Printed Name

Date

I confirm that this study has been checked by the English Critic.

CATHERINE C. DAFFON
Adviser

Date