

Final Report

Camping Equipment Rental & Guide Hiring Platform



Group Project 1
CS Group 6

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1 Introduction

1.1 Domain Description

Sri Lanka is a beautiful country with many picturesque tourist attractions for local and international tourists equally. Camping and hiking are one of such activities. The most significant problem for travelers is finding traveling and camping equipment they need. If they are camping for a few days they would need transport services, tents, cooking equipment, sleeping bags, backpacks, cameras, and such equipment to fulfill their needs during the camping period. Currently, either travelers borrow them from someone or buy them as a necessity. Especially, the rural destinations especially don't have many shops. And buying these equipment, only to use them rarely is a waste of money and effort. Even when finding guides, it's hard to find someone reliable without having a prior association.

1.2 Analysis of Existing Systems

There is no proper platform for camping equipment renting in Sri Lanka at the moment. So our system can be considered an initiative in Sri Lanka. The existing sites for equipment renting such as <https://www.campingstorelk.com/> and <https://www.tentmaster.lk/>. But all of them focus only on tents and they don't support renting. The existing method that the campers and hikers use to find equipment is through social media platforms. This is very time-wasting since they have to browse through a lot and even if they find ideal equipment, after contacting them they get to know that the particular equipment is not available for the moment, which makes the whole process only a waste of time, effort and money in the end. As for finding guides, they search for one through prior associations or recommendations from friends or social media, which again uses an unnecessary amount of time and effort. Our system addresses these issues so the customer gets a user-friendly platform to satisfy all their needs. Our target is to provide a common platform for all the rental services and guides to get into a common platform so customers can get their needs resolved easily, and for the rental shops and guides to have an easier business process and make a good customer base.

1.3 Goals and Objectives

1.3.1 Project Goals

Our main goal is to introduce a fully functional web-based system for campers and hikers around the island to prepare for their journey through one platform. Though Wanderlust will be an initiative in Sri Lanka, we've had positive responses from the public through the survey we conducted, and they encouraged us to go forward with this project. This system can facilitate pre-booking and renting of camping equipment, hiring reliable guides, for traveling enthusiasts. The Tips and Knowhow section will undoubtedly help them to prepare well for their journey. Moreover, this platform will provide an excellent opportunity for the guides and rental ships to make a solid customer base and flourish their respective businesses.

1.3.2 Objectives

- Camping Equipment Rental Service: Providing an efficient system for rental services to list their camping equipment inventory.

- Guide: Providing a web-based system to make it easy to find customers and to make a good customer base.
- Campers/travelers: Providing an efficient web application to seek traveling and camping equipment as their necessities to rent out in one place. Furthermore, get insights and knowledge about camping and hiking through Tips and Know-hows.

1.4 Assumptions, Constraints, and Limitations

We assume that;

- The endorsement letters provided by guide are not forged.
- The business certifications provided by they rental services are not forged.
- The equipment uploaded by the shops is up to the quality they have mentioned.

To use the system;

- The users must have moderate competency in English and knowledge of how to operate a computer.
- The users need an internet connection.

2 Project Feasibility

2.1 Operational Feasibility

This section measures how well the proposed solution meets the user requirements of the system to solve the issues in the existing system. Therefore, it is necessary to meet desired requirements to be operationally feasible. At present, most of the activities that are related to camping/hiking planning are done offline, or through social media posts which is time-consuming and a waste of money. By conducting a public survey, we found out that,

- People are willing to use such a platform.
- Guides and campers are interested in using this platform.
- Rental shops are open to come on board.

From our platform, we have proposed to classify the relevant shops with respect to their destination. Also, rental services and guides both will be connected through one platform so it will be really easy for the users.

Our solution is a web application accessed through the Internet. So, to use and operate the system users must have,

- Internet connection.
- A mobile phone or a computer with a recent version of a web browser installed.
- Basic knowledge of IT and using the internet.
- Intermediate level of knowledge in online and card-based payments for payments.

Because there is no need to provide special training to use the system or any dedicated HR resources to maintain the system, the project is operationally feasible

2.2 Technical Feasibility

This section measures the flexibility of the practical implementation of building of our web-based platform by using the selected technical solutions. The main deliverable of this project is a web app built using HTML, CSS and JS in the frontend and PHP in the backend which utilizes MySQL as the datastore. The platform relies on; Google Maps API to show locations, a payment gateway to accept payments and also uses SMTP to send emails. While developing, we'll be using Figma for UI/UX prototyping, and Draw.io and Lucidchart for diagramming and modeling. In addition to that, GitHub is used as the code collaborative and version control tool. The team have to gain adequate technical knowledge before and while building the system. It is a tremendous task, but the timeline allows us to gain a considerable amount of technical knowledge before starting the actual development work and the rest while building the system itself.

2.3 Economical Feasibility

The system could be easily hosted in any cloud provider as we would not be using any proprietary or vendor-locked technologies. The technologies we're using are either open source or freely available, so we won't be needing any cost for that. But deployment, maintenance require some amount of cost, but it will not be a huge amount, hence we can say that this project is economically feasible.

2.4 Schedule Feasibility

We started our project in July and now we've come to the system deployment as previously planned.

2.5 Legal and Ethical Feasibility

This section measures the legal and ethical issues we would be facing when building and implementing our platform and our countermeasures for that.

- All user identity is verified when registering and each login.
- Personal information will be protected and user passwords will be hashed.
- The service records collected and stored related to users will not be exposed to a third party under any circumstances.
- Application is built following the license of the software technologies that are used.
- Building and deployment of the system is done according to the laws of Data protection and privacy act and Electronic transactions act.

3 Requirements

3.1 User Roles

In requirement identification, the users of the system have been identified as follows.

- System administrator
- Rental shops
- Guides
- Customer

3.2 Use Cases and Use Case Diagrams

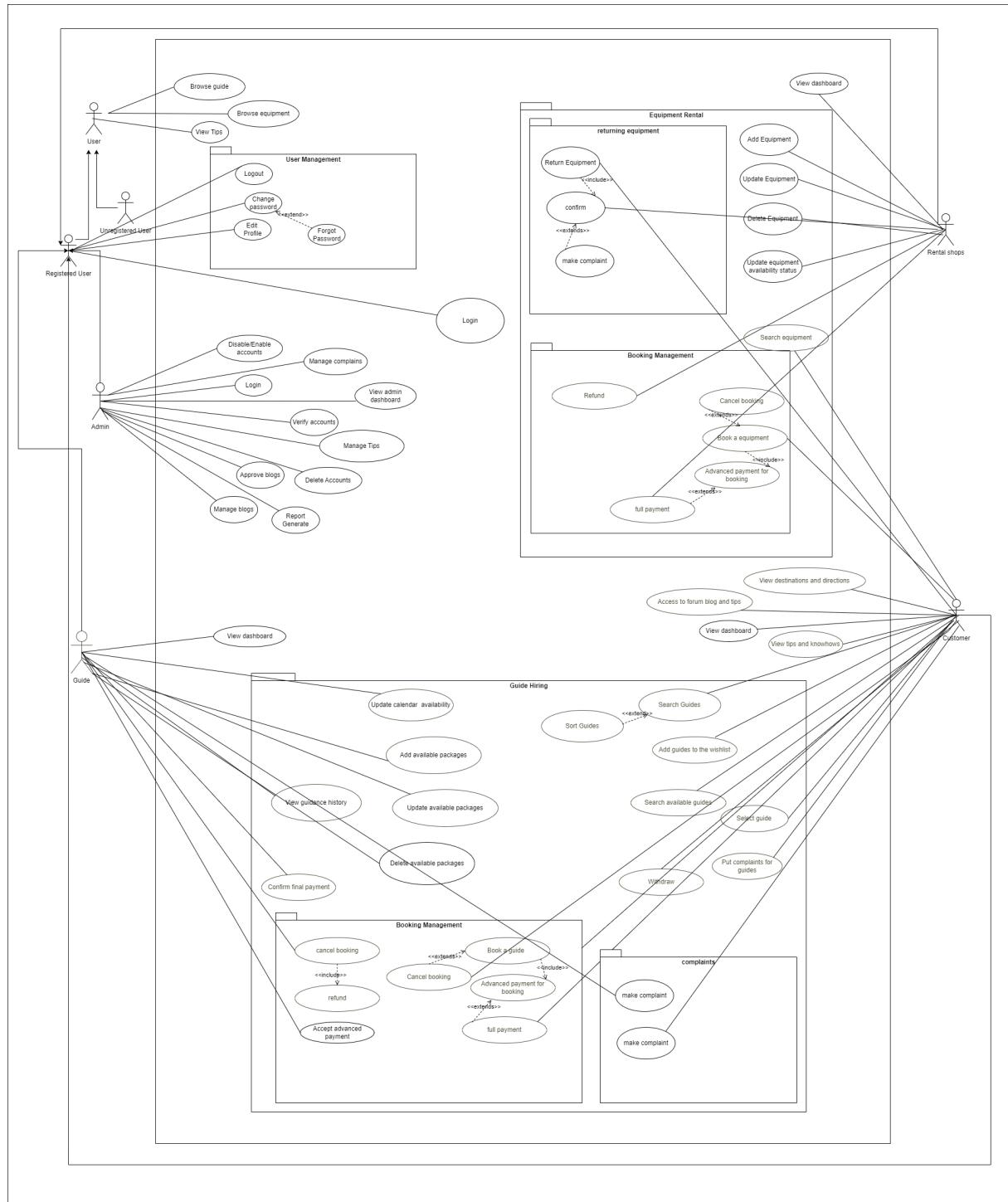


Figure 1: Use Case

3.3 Use Case Descriptions

Use Case ID	UC-001
Use Case Name	Register
Primary Actor(s)	Unregistered User
Description	Users have to register before logging into the system by adding details to the system.
Pre-Conditions	Users need to have necessary verifications.
Main Scenarios	<ol style="list-style-type: none"> 1. Enter the email address. 2. Check if the email already exists. 3. Set the password. 4. System displays the relevant registration form. 5. Enter all the required details. 6. Accept the terms and conditions given by the system. 7. Show a message saying a verification link will be sent through an email, to verify the account. 8. Verify the account using the link. 9. System saves data in the database. 10. Show message saying complete registration.
Exceptions	Already registered users, Invalid data entered
Post-conditions	<ul style="list-style-type: none"> – Admin is notified in the cases of rental services and guides registrations. – Admin verifies or rejects the registrations for rental services and guides (Use Case ID # UC-002). – Notification of approval/rejection is sent for rental services and guides.

Table 1: Use Case: Register

Use Case ID	UC-002
Use Case Name	Login
Primary Actor(s)	User, Rental Services, Guide, Admin
Description	Users can log in to the system by providing required credentials.
Pre-Conditions	User must be registered before.
Main Scenarios	<ol style="list-style-type: none"> 1. User enters email to log in. 2. If the entered email is valid, prompt for the password. 3. If the entered email is invalid, repeat step 1. 4. If the entered password is valid, direct to Home page.
Alternate Scenario	<ol style="list-style-type: none"> 1. User selects 'Forgot password'. 2. System sends a link to change the password via email. 3. System redirects to Use Case ID UC-003.
Exceptions	Unregistered users
Post-conditions	None

Table 2: Use Case: Login

Use Case ID	UC-003
Use Case Name	Change Password
Primary Actor(s)	Admin,User, Rental services, Guide
Description	User changes the existing password to a new one
Pre-Conditions	User must be logged in to profile
Main Scenarios	<ul style="list-style-type: none"> 1. User click change password 2. User enter current password 3. User enter new password 4. User Confirm and save password
Alternate Scenario	
Exceptions	User can change password if current password enter correctly
Post-conditions	None

Table 3: Use Case: Change Password

Use Case ID	UC-004
Use Case Name	Disable/Enable Account
Primary Actor(s)	Admin
Description	If the admin wants, they can disable and enable accounts of Rental services and Guides.
Pre-Conditions	None
Main Scenarios	<ul style="list-style-type: none"> 1. Admin can disable accounts of Rental services and Guides. 2. An email is sent to the disabled account-holder to contact the admin if needed. 3. Admin can enable the disabled accounts.
Exceptions	None
Post-conditions	The relevant accounts get notified of the status change.

Table 4: Use Case: Disable/Enable Account

Use Case ID	UC-005
Use Case Name	Edit Profile
Primary Actor(s)	Admin, Rental Service, Guide, User
Description	Allows users, including Admin, Rental Services, Guides, and Users, to edit their profiles.
Pre-Conditions	User has to be logged into the system.
Main Scenarios	<ul style="list-style-type: none"> 1. User clicks on "Edit Profile".
Exceptions	None
Post-conditions	None

Table 5: Use Case: Edit Profile

Use Case ID	UC-006
Use Case Name	Verify Account
Primary Actor(s)	Admin
Description	Verify the accounts of Rental services and Guides after their initial registration.
Pre-Conditions	Rental services and Guides should register.
Main Scenarios	<ul style="list-style-type: none"> 1. When Guides or Rental Services register, the admin is notified, and their account is kept disabled for the meantime. 2. If the admin approves, the account is verified, and it is enabled.
Exceptions	None
Post-conditions	The relevant account holder gets notified of the verification.

Table 6: Use Case: Verify Account

Use Case ID	UC-007
Use Case Name	View Main Dashboard
Primary Actor(s)	Admin
Description	Allows Admin to view the main dashboard.
Pre-Conditions	Admin must be logged into the system.
Main Scenarios	<ul style="list-style-type: none"> 1. Admin logs into the system. 2. Admin navigates to the main dashboard. 3. Admin selects and views desired statistics and information from the dashboard.
Exceptions	None
Post-conditions	None

Table 7: Use Case: View Main Dashboard

Use Case ID	UC-008
Use Case Name	View Dashboard
Primary Actor(s)	Admin, Guide, Rental Service
Description	Allows Admin, Guides, and Rental Services to view their respective dashboards.
Pre-Conditions	None
Main Scenarios	<ol style="list-style-type: none"> 1. Admin, Guide, or Rental Service logs into the system. 2. Guide or Rental Service navigates to their personal dashboard. 3. Guide or Rental Service checks statistics and relevant information. 4. Admin can access and view dashboards of all users.
Exceptions	None
Post-conditions	None

Table 8: Use Case: View Dashboard

Use Case ID	UC-009
Use Case Name	Add Packages
Primary Actor(s)	Guide
Description	Allows Guide to add packages to their profile.
Pre-Conditions	Guide is registered and verified.
Main Scenarios	<ol style="list-style-type: none"> 1. Guide logs into the system. 2. Guide navigates to their profile. 3. Guide selects the option to add packages. 4. Guide fills in the details of the new package. 5. Guide saves the new package to their profile.
Exceptions	None
Post-conditions	None

Table 9: Use Case: Add Packages

Use Case ID	UC-010
Use Case Name	Update Packages
Primary Actor(s)	Guide
Description	Allows Guide to update packages and calendar availability in their profile.
Pre-Conditions	Guide has already uploaded the packages.
Main Scenarios	<ol style="list-style-type: none"> 1. Guide logs into the system. 2. Guide navigates to their profile. 3. Guide selects the option to update packages. 4. Guide modifies the details of the existing packages. 5. Guide updates the calendar visibility settings if needed. 6. Guide saves the changes to their profile.
Exceptions	None
Post-conditions	None

Table 10: Use Case: Update Packages and Calendar availability

Use Case ID	UC-011
Use Case Name	Delete Packages
Primary Actor(s)	Guide, Admin
Description	Allows Guide and Admin to delete packages from profiles.
Pre-Conditions	<ul style="list-style-type: none"> • Guide has already uploaded the packages. • The particular package is not booked at the moment.
Main Scenarios	<ol style="list-style-type: none"> 1. Guide logs into the system. 2. Guide navigates to their profile. 3. Guide selects the option to delete packages. 4. Guide chooses the package to be deleted. 5. Guide confirms the deletion action. 6. The selected package is removed from the guide's profile. 7. Admin logs into the system. 8. Admin navigates to the guide's profile. 9. Admin selects the option to delete packages. 10. Admin chooses the package to be deleted. 11. Admin confirms the deletion action. 12. The selected package is removed from the guide's profile.
Exceptions	None
Post-conditions	None

Table 11: Use Case: Delete Packages

Use Case ID	UC-012
Use Case Name	View Packages
Primary Actor(s)	Customer, Guide, Admin, Guest User, Rental Service
Description	Allows various actors to view packages and calendar availability of guides.
Pre-Conditions	Guide has already uploaded the packages.
Main Scenarios	<ul style="list-style-type: none"> 1. Actors navigate to the guide's profile. 2. Actors can view the list of packages offered by the guide. 3. Actors can also view the guide's calendar availability.
Exceptions	None
Post-conditions	None

Table 12: Use Case: View Packages and Calendar Availability

Use Case ID	UC-013
Use Case Name	View Guidance History
Primary Actor(s)	Admin, Guide
Description	Allows Admin and Guides to view guidance history of guides.
Pre-Conditions	Guides have gone on journeys before through the system.
Main Scenarios	<ul style="list-style-type: none"> 1. Actor (Admin or Guide) navigates to the guide's profile. 2. Actor can view detailed statistics of the guide's guidance history, including past journeys and activities.
Exceptions	None
Post-conditions	None

Table 13: Use Case: View Guidance History

Use Case ID	UC-014
Use Case Name	Add Equipment
Primary Actor(s)	Rental Services
Description	Allows Rental Services to add equipment to their inventory.
Pre-Conditions	Rental Services must be registered and verified in the system.
Main Scenarios	<ol style="list-style-type: none"> 1. Rental Service logs into the system. 2. Rental Service navigates to their inventory management section. 3. Rental Service selects the option to add equipment. 4. Rental Service provides the details of the new equipment. 5. Rental Service adds the new equipment to their inventory.
Exceptions	None
Post-conditions	None

Table 14: Use Case: Add Equipment

Use Case ID	UC-015
Use Case Name	View/Search Equipment
Primary Actor(s)	Admin, Guide, Customer, Rental Service, Guest User
Description	Allows all users to search and view equipment of any rental service with the provided filters.
Pre-Conditions	The respective rental services have added equipment.
Main Scenarios	<ol style="list-style-type: none"> 1. User navigates to the equipment search section. 2. User selects the rental service they wish to search within. 3. User applies filters based on their preferences. 4. User views the list of equipment matching their filters. 5. Alternatively, User can filter equipment-wise and directly select the equipment.
Exceptions	None
Post-conditions	None

Table 15: Use Case: View/Search Equipment

Use Case ID	UC-016
Use Case Name	Update Equipment
Primary Actor(s)	Rental Service
Description	Allows rental services to update the equipment in their inventories.
Pre-Conditions	<ul style="list-style-type: none"> • Users have booked the equipment. • The rental shop decides to change the stock.
Main Scenarios	<ol style="list-style-type: none"> 1. When a user books an equipment, the system automatically updates the stock of the equipment. 2. Rental Service logs into the system. 3. Rental Service navigates to their inventory management section. 4. Rental Service selects the equipment to update. 5. Rental Service modifies the stock count of the equipment. 6. Rental Service saves the changes to the equipment's stock.
Exceptions	None
Post-conditions	None

Table 16: Use Case: Update Equipment

Use Case ID	UC-017
Use Case Name	Delete Equipment
Primary Actor(s)	Rental Service
Description	Allows rental services to delete equipment from their inventories.
Pre-Conditions	The respective rental services have added equipment.
Main Scenarios	<ol style="list-style-type: none"> 1. Rental Service logs into the system. 2. Rental Service navigates to their inventory management section. 3. Rental Service selects the equipment to be deleted. 4. Rental Service confirms the deletion action. 5. The selected equipment is removed from the rental service's inventory.
Exceptions	None
Post-conditions	None

Table 17: Use Case: Delete Equipment

Use Case ID	UC-018
Use Case Name	Book Equipment
Primary Actor(s)	Customer
Description	Allows Customers to book the equipment they want.
Pre-Conditions	The equipment must be available to book.
Main Scenarios	<ol style="list-style-type: none"> 1. Customer navigates to the equipment selection section. 2. Customer selects the equipment they want to book. 3. Customer provides necessary booking details. 4. Customer pays the advance amount through the system.
Exceptions	None
Post-conditions	The availability of the equipment is updated.

Table 18: Use Case: Book Equipment

Use Case ID	UC-019
Use Case Name	Book Guide
Primary Actor(s)	Customer
Description	Allows Customers to hire the guide they want.
Pre-Conditions	The guide must be available to book.
Main Scenarios	<ol style="list-style-type: none"> 1. Customer navigates to the guide selection section. 2. Customer selects the guide they want to book. 3. Customer provides necessary booking details. 4. Customer pays the advance amount through the system. 5. Customer receives contact details of the guide.
Exceptions	None
Post-conditions	The calendar of the guide is updated.

Table 19: Use Case: Book Guide

Use Case ID	UC-020
Use Case Name	Cancel Booking (Rental Service)
Primary Actor(s)	Customer, Rental Service
Description	Allows the Customer or Rental Service to cancel their relevant booking.
Pre-Conditions	The customer must have booked equipment prior.
Main Scenarios	<ol style="list-style-type: none"> 1. Customer navigates to their bookings section. 2. Customer selects the booking to be canceled. 3. Customer confirms the cancellation. 4. Rental Service receives a cancellation notification. 5. Rental Service confirms the cancellation.
Exceptions	None
Post-conditions	The booking is canceled, and relevant updates are made. Relevant refunding will be done if needed.

Table 20: Use Case: Cancel Booking (Rental Service)

Use Case ID	UC-021
Use Case Name	Cancel Booking (Guide)
Primary Actor(s)	Customer, Guide
Description	Allows the Customer or Guide to cancel their relevant booking.
Pre-Conditions	The customer must have booked the guide prior.
Main Scenarios	<ol style="list-style-type: none"> 1. Customer navigates to their bookings section. 2. Customer selects the booking with the guide to be canceled. 3. Customer confirms the cancellation. 4. Guide receives a cancellation notification. 5. Guide confirms the cancellation.
Exceptions	None
Post-conditions	The booking is canceled, and relevant updates are made. Relevant refunding will be done if needed.

Table 21: Use Case: Cancel Booking (Guide)

Use Case ID	UC-022
Use Case Name	Manage Tips and Know Hows
Primary Actor(s)	Admin
Description	Allows the Admin to handle tips and know hows.
Pre-Conditions	<ul style="list-style-type: none"> • For deleting and updating, the tips and know hows must've been uploaded beforehand.
Main Scenarios	<ol style="list-style-type: none"> 1. Admin navigates to the tips and know hows management section. 2. Admin adds new tips and know hows to the system. 3. Admin selects existing tips or know hows to delete or update. 4. Admin confirms the deletion or update action.
Exceptions	None
Post-conditions	Tips and know hows are added, deleted, or updated in the system.

Table 22: Use Case: Manage Tips and Know Hows

Use Case ID	UC-023
Use Case Name	View Tips and Know Hows
Primary Actor(s)	Customer, Guide, Admin, Guest User, Rental Service
Description	Allows all actors to view tips and knowhows.
Pre-Conditions	The Admin must've added tips and knowhows beforehand.
Main Scenarios	<ol style="list-style-type: none"> 1. Actor navigates to the tips and knowhows corner. 2. Actor selects the option to view tips and knowhows. 3. Actor can see the list of available tips and knowhows. 4. Actor can choose and view specific tips or knowhows.
Exceptions	None
Post-conditions	None

Table 23: Use Case: View Tips and Know Hows

Use Case ID	UC-024
Use Case Name	Generate Report
Primary Actor(s)	Admin, Rental Service, Guide
Description	Allows the Admin, Rental Service, and Guide to generate a report of the selected data.
Pre-Conditions	None
Main Scenarios	<ol style="list-style-type: none"> 1. Actor navigates to the report generation section. 2. Actor selects the desired data and parameters for the report. 3. Actor generates the report.
Exceptions	None
Post-conditions	The selected report is generated based on the chosen data and parameters.

Table 24: Use Case: Generate Report

Use Case ID	UC-025
Use Case Name	Confirm Pickup Equipment
Primary Actor(s)	Customer
Description	Customer makes a complaint after going to pick up the equipment from the shop.
Pre-Conditions	Customer must have booked and paid the advance of the said equipment.
Main Scenarios	<ol style="list-style-type: none"> 1. Customer goes to the rental shop for equipment pickup. 2. If the customer is satisfied with the equipment: <ul style="list-style-type: none"> a. Customer has to make the full payment + the extra debit for the equipment. b. Customer confirms the pickup and continues their journey. 3. If the customer has complaints about the equipment: <ul style="list-style-type: none"> a. Customer records the complaint and details. b. Customer provides evidence or proof for the complaint. c. Customer uploads the complaint and evidence to the system.
Exceptions	None
Post-conditions	The pickup is confirmed, and necessary actions are taken based on whether there are complaints or not. The extra debit paid here will be settled in the Usecase UC-036.

Table 25: Use Case: Confirm Pickup Equipment

Use Case ID	UC-026
Use Case Name	Confirm Return Equipment
Primary Actor(s)	Rental Service
Description	Rental service confirms the return of the equipment after the customer returns the equipment.
Pre-Conditions	Customer must have returned the equipment.
Main Scenarios	<ol style="list-style-type: none"> 1. Customer returns the equipment to the rental shop. 2. Rental service staff inspects the returned equipment. 3. If there are no complaints or issues: <ol style="list-style-type: none"> a. Rental service will return the extra debit paid at the pickup. 4. If there are complaints or issues: <ol style="list-style-type: none"> a. The amount according to the policy of the rental shop will be deducted from the debit and returned to the customer. b. Rental service uploads the complaint and evidence to the system.
Exceptions	None
Post-conditions	The return is confirmed, and necessary actions are taken based on whether there are complaints or not.

Table 26: Use Case: Confirm Return Equipment

Use Case ID	UC-027
Use Case Name	Refund Customer
Primary Actor(s)	Rental Service
Description	Rental service processes a refund for a customer who made a complaint when confirming pickup.
Pre-Conditions	Customer has made a complaint when confirming pickup.
Main Scenarios	<ol style="list-style-type: none"> 1. Customer makes a complaint when confirming pickup. 2. If the rental service acknowledges the complaint: <ol style="list-style-type: none"> a. Rental service processes the refund for the customer. 3. If the rental service does not acknowledge the complaint: <ol style="list-style-type: none"> a. Admin is informed of the complaint. b. Admin processes the complaint and takes necessary steps. c. If the complaint is valid, admin processes the refund.
Exceptions	None
Post-conditions	The customer is refunded based on the validity of the complaint.

Table 27: Use Case: Refund Customer

3.4 Functional Requirements

ADMIN

- Admin shall be able to login to the system
- Admin shall be able to change passwords of all user accounts
- Admin shall be able to Disable/Enable Account all user accounts
- Admin shall be able to Edit his Profile
- Admin shall be able to Verify Accounts of guides and rental shops
- Admin shall be able to Manage Complaints of users
- Admin shall be able to view his main dashboard
- Admin shall be able to view dashboards of rental shops and guides
- Admin shall be able to delete Guide packages
- Admin shall be able to view Guide packages
- Admin shall be able to view guide calendar availability
- Admin shall be able to view guidance history
- Admin shall be able to view equipment
- Admin shall be able to manage tips and know-hows

CUSTOMER

- Customer shall be able to login to the system
- Customer shall be able to change his password
- Customer shall be able to edit his profile
- Customer shall be able to view guide packages
- Customer shall be able to view guide calendar availability
- Customer shall be able to view equipment
- Customer shall be able to book equipment
- Customer shall be able to book a guide
- Customer shall be able to cancel equipment booking he made previously
- Customer shall be able to Cancel guide booking he made previously
- Customer shall be able to view tips and know-hows

RENTAL SERVICE

- Rental Service shall be able to login to the system
- Rental Service shall be able to change his password
- Rental Service shall be able to edit his profile
- Rental Service shall be able to view his dashboard
- Rental Service shall be able to view Guide packages
- Rental Service shall be able to view guide calendar availability
- Rental Service shall be able to add equipment
- Rental Service shall be able to view equipment
- Rental Service shall be able to update equipment he added previously
- Rental Service shall be able to delete equipment he added previously
- Rental Service shall be able to cancel equipment booking done by customers
- Rental Service shall be able to view tips and know-hows

GUIDE

- Guide shall be able to login to the system
- Guide shall be able to change his password
- Guide shall be able to edit his profile
- Guide shall be able to view his dashboard
- Guide shall be able to add packages
- Guide shall be able to update packages he uploaded
- Guide shall be able to delete packages he uploaded
- Guide shall be able to update his calendar availability
- Guide shall be able to view packages of all guides
- Guide shall be able to view calendar availability of all guides

- Guide shall be able to view his guidance history
- Guide shall be able to view equipment
- Guide shall be able to cancel a customer's booking
- Guide shall be able to view tips and know-hows

3.5 Quality Attributes

3.5.1 Performance

A computer system must be always performant, reliable and must provide consistent results.

- The database will be normalized to reduce data redundancy and will optimize query performances.
- We'll be optimizing images, graphics and assets used within our platform.
- Proper algorithms will be developed and used within our system.

3.5.2 Usability

The users of this system, currently either do not use a software platform or use one with simple, limited functionalities. Most of them use some form of social media to run their operations. Therefore, the system must be simple and user-friendly as the users are not highly technical people. A simple and uncluttered user interface where it is easy to find the required services should address this issue.

- The system requires basic knowledge of IT and English knowledge to operate.
- Systems will have user interfaces with minimal but clear designs.
- All functionalities will have proper validations and notifications.

3.5.3 Security

Signups and listings of guides and rental shops will be verified by obtaining relevant documents. (For guides: Endorsement letters by the Police or Grama Niladhari, Tourist Guide Certification issued by the government. For rental shops: Business registration certification by the government, Endorsement letters by the Grama Niladhari)Guides and Rental services can access the system only after admin approval. Countermeasures against SQL injections, Cross-site scripting, CORS attacks and various attacks will be implemented. All users are verified via SMS or email when changing passwords. All login credentials are hashed and Access Control is enforced. And we're following the Least Privilege principle throughout our platform.

3.5.4 Maintainability

System maintenance and future improvements should be straightforward to carry out. Therefore, The system

- Follows MVC architecture : Adding new features to the system can be done without changing the layout of the whole system.
- Follows best practices and standards
- Follows proper developer documentation and comments for future references.

4 System Architecture

4.1 Components and their responsibilities

Registration

Signup - Prompts the user to enter the required fields according to the user type. And validate them with the help of User verification component.

User verification - Verifies the user account by providing data to the Admin component.

User creation - Creates user accounts once the User verification component provides the necessary data, or provides an error message if the verification fails.

Login

Login - Gets login credentials from the user and gets those credentials verified from User Authentication component and redirects the user to the respective user interface or provides error messages if the credentials are wrong.

Forgot password - Let the user reset his forgotten password by entering his email address. The component checks the given username with the User Authentication component and then sends the password reset email if the email or username is verified. Otherwise, it displays the relevant error messages.

User authentication - Verifies user credentials in login and password reset processes. It uses the user table from the database to verify the credentials given by the user.

Admin

Admin dashboard - This UI component of the admin shows the functionalities that the admin can perform. Furthermore, it shows a few statistics of the overall system as well.

Manage guides - Let the admin manage, delete guide profiles, and see their guidance history.

Manage rental services - Let the admin manage, delete rental services, and see their performance history.

Resolve complaints - Let the admin resolve complaints made by customers, rental services, guides, and pass the data to the relevant components of the said users.

Manage tips and knowhows - Let the admin insert, delete, and update blogs.

User verification - Verifies the user accounts as requested by the Sign-up subsystem, and sends results.

Report generation - Generates reports of selected data and performance as desired.

Customer

Customer Dashboard - This UI component of the customer shows the functionalities that the customer can perform. Furthermore, it shows a few statistics of the customer such as past guide hiring, and equipment bookings as well.

Equipment booking - Let the customer browse for equipment and book desired equipment.

Guide hiring - Let the customer search for guides and hire desired guides.

Make complaint - Let customers make complaints about a rental service and/or a guide, and send the necessary data to the Resolve complaint component of admin.

Rental service

Rental service dashboard - This UI component of the rental service shows the functionalities that the rental service can perform. Furthermore, it shows a few statistics of

the rental service such as past equipment bookings, and currently hired equipment as well.

Equipment booking - Handles equipment bookings done by the customers and keeps track of their payments.

Equipment handling - Adds and removes equipment, also updates equipment with the data provided by the Equipment booking Component.

Make complaint - Make complaints about customers.

Guide

Guide dashboard - This UI component of the guide shows the functionalities that the guide can perform. Furthermore, it shows a few statistics of the guide such as past tours, and calendar availability as well.

Manage guide packages - Add, remove, and update guide packages.

Manage calendar availability - Updates the calendar availability according to the bookings done by customers.

Guide booking - Handles bookings done by the customers and keeps track of their payments.

Make complaints - Make complaints about customers.

Tips and Know-hows

Tips and know-hows - This UI component shows the tips and know-hows to all users.

Manage Tips and know-hows - Manages tips and know-hows, with admin component.

Payment - Handles the payments done by customer when booking equipment and hiring guides.

4.2 Component interactions

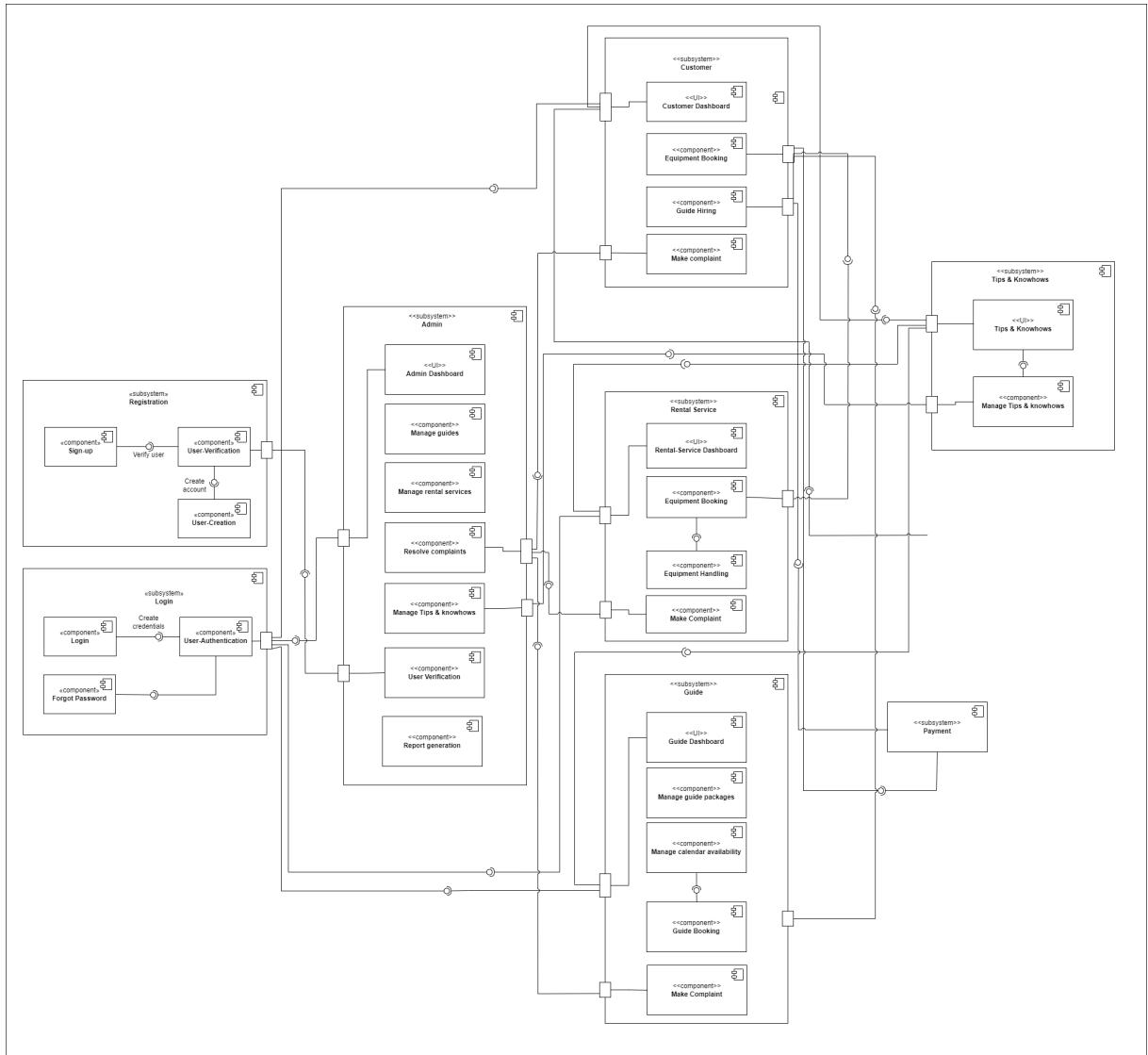


Figure 2: Component Diagram

5 System Design

5.1 Class diagram

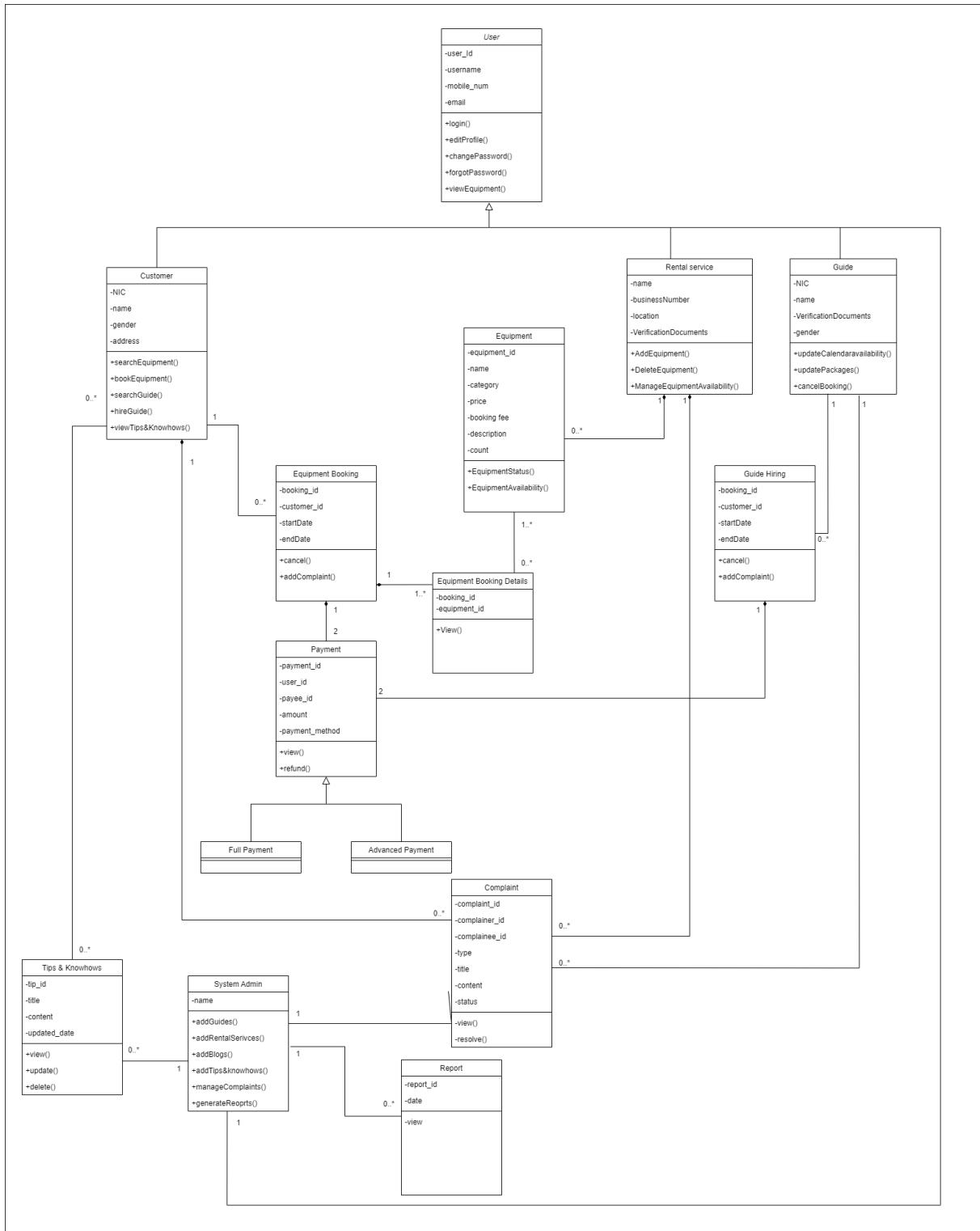


Figure 3: Class diagram

5.2 ER diagram

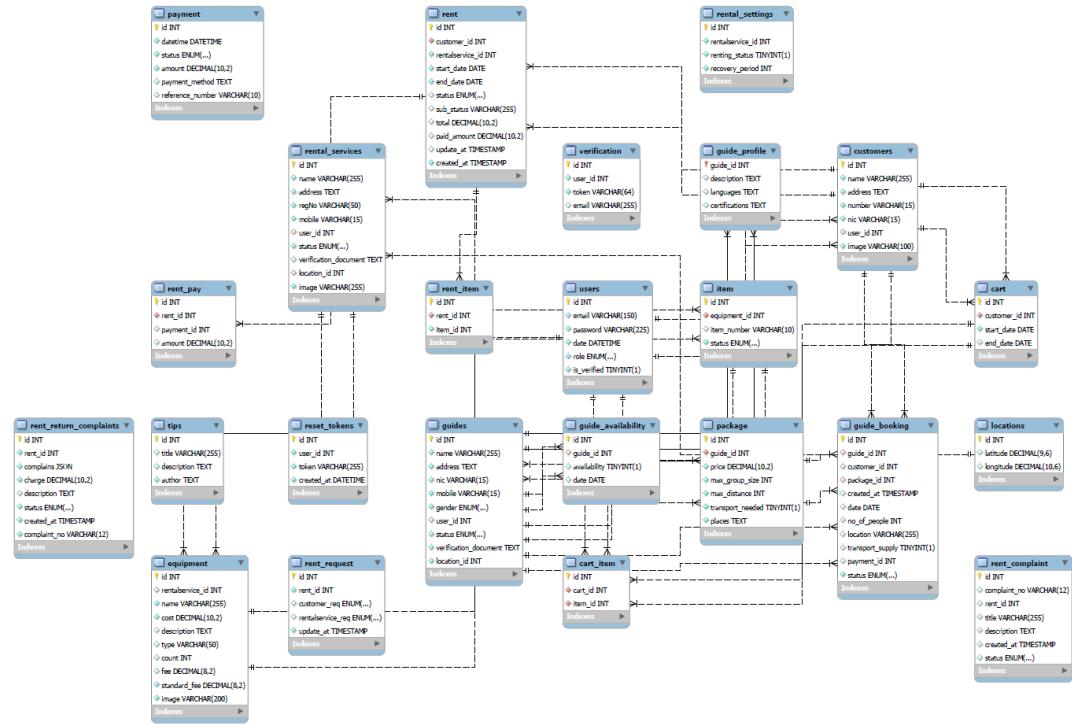


Figure 4: ER diagram

5.3 Sequence diagrams

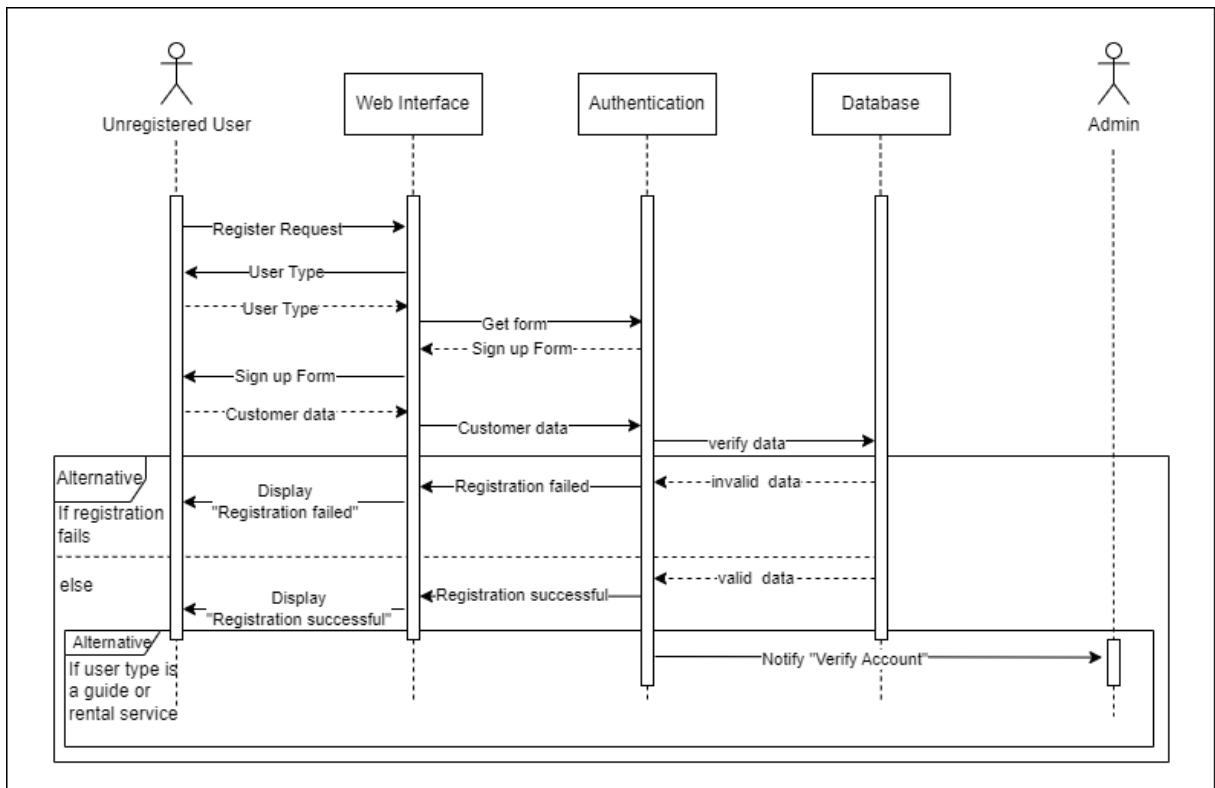


Figure 5: Register

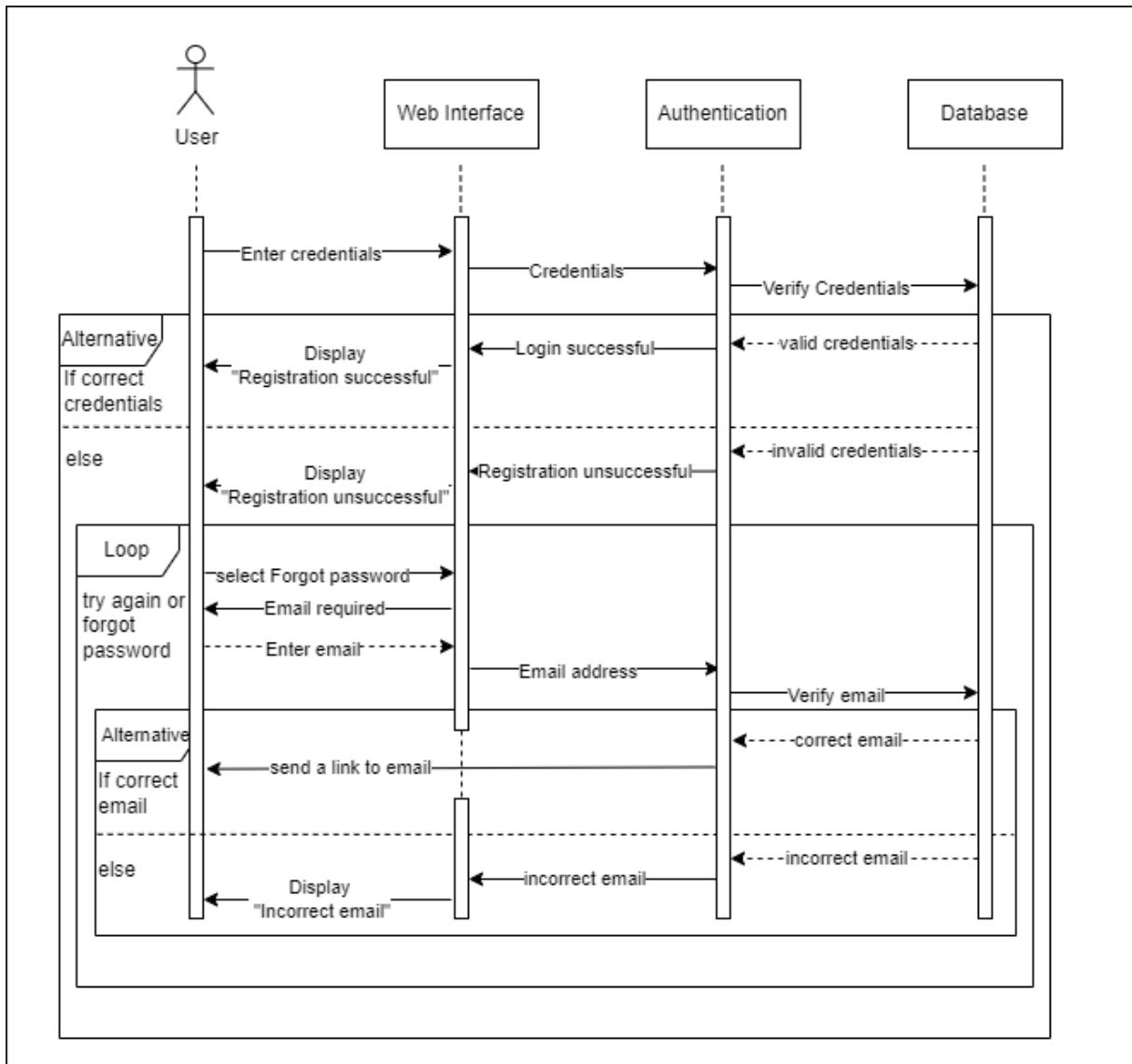


Figure 6: Login

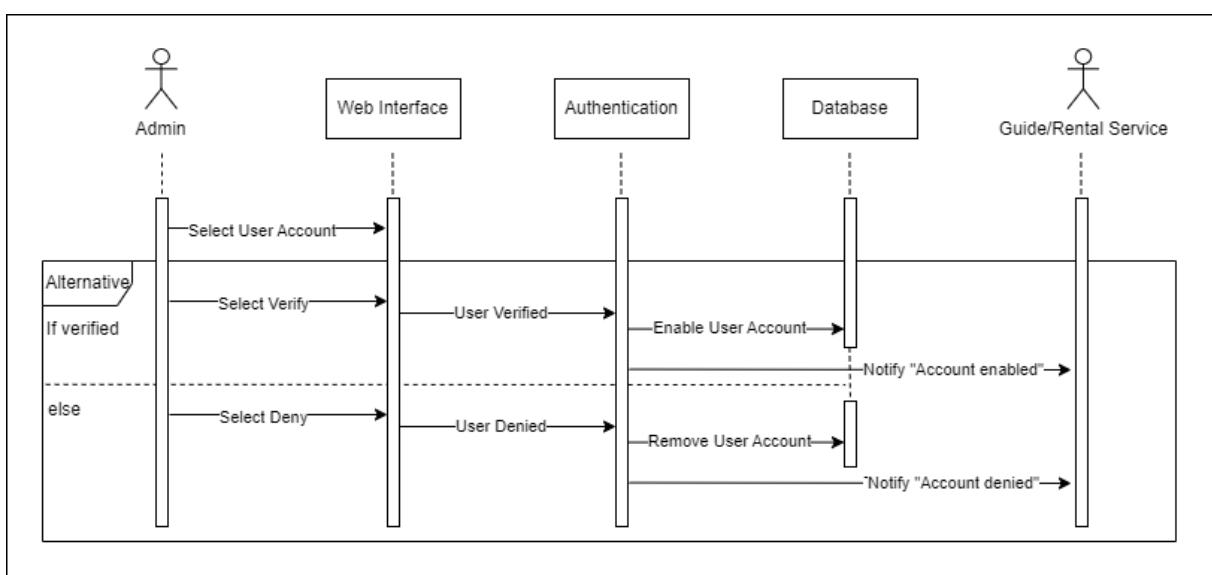


Figure 7: Verify Accounts

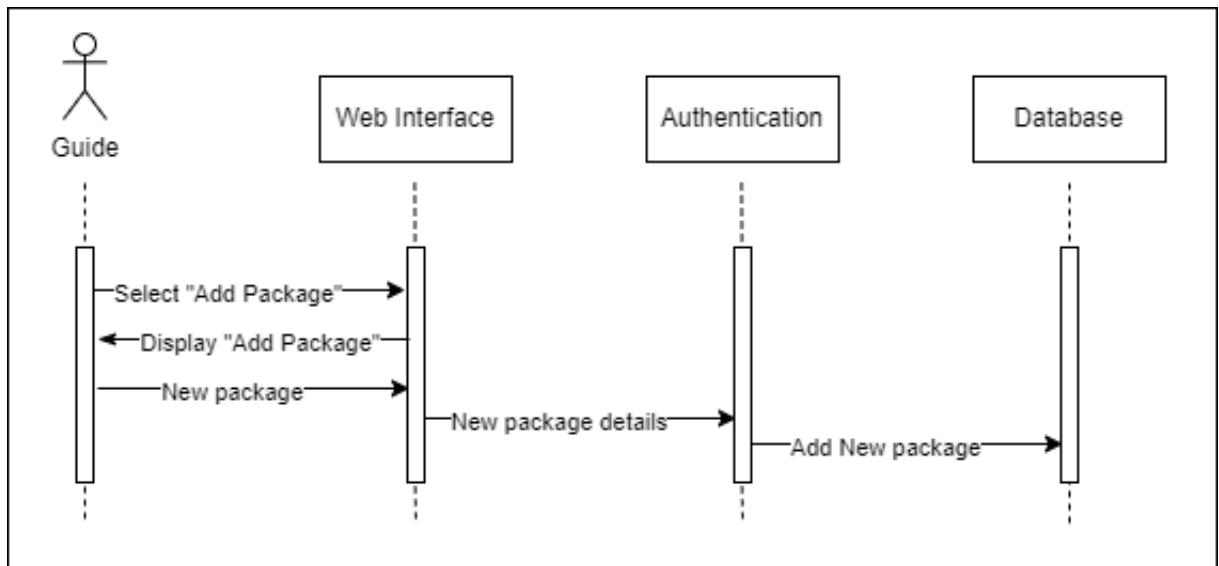


Figure 8: Add guide packages

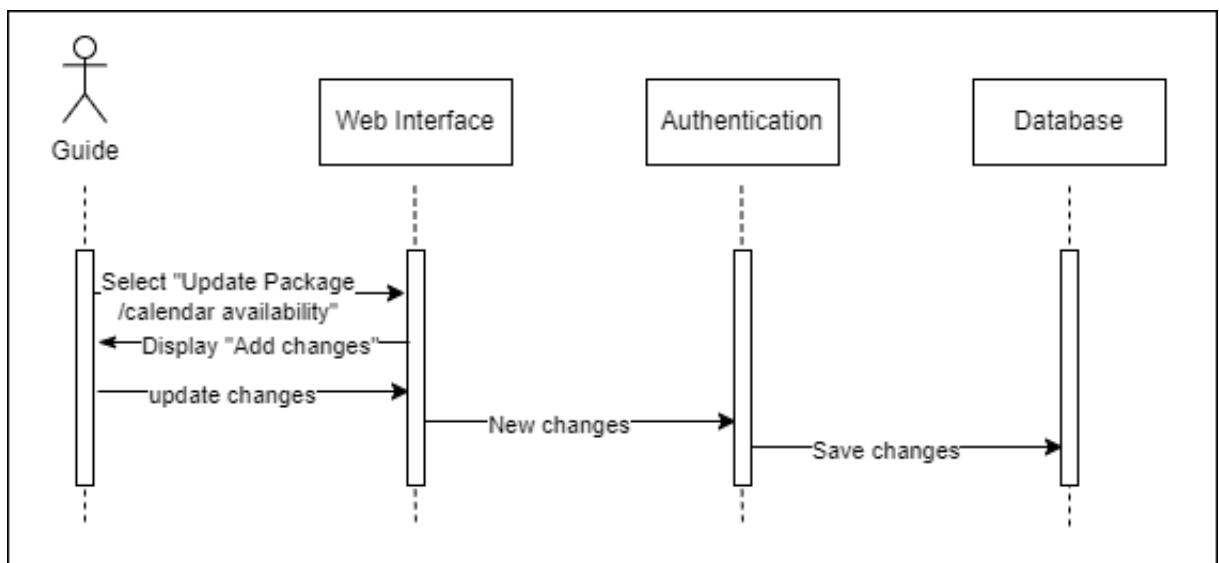


Figure 9: Update guide calendar availability and packages

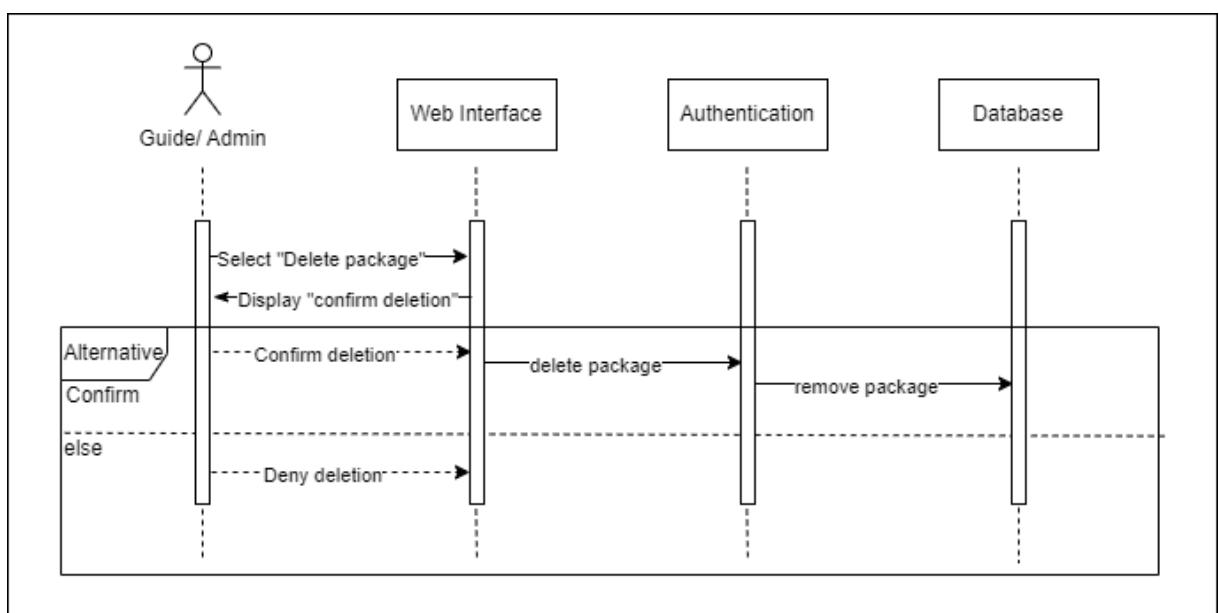


Figure 10: Delete guide packages

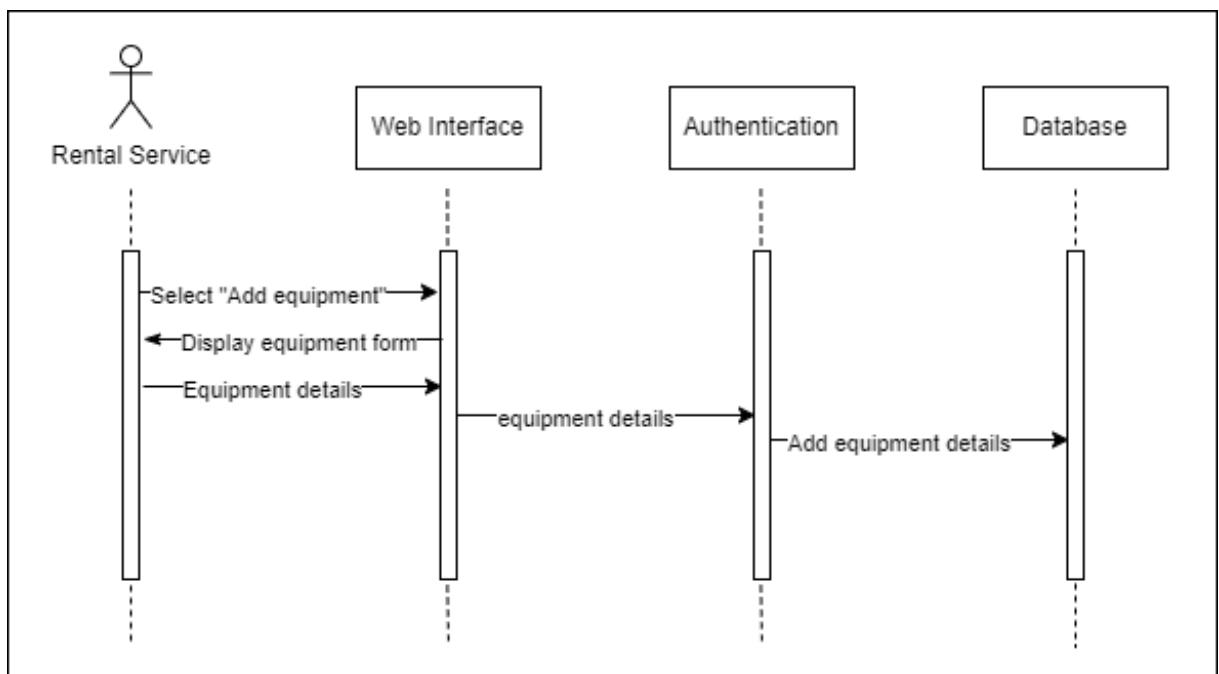


Figure 11: Add equipment

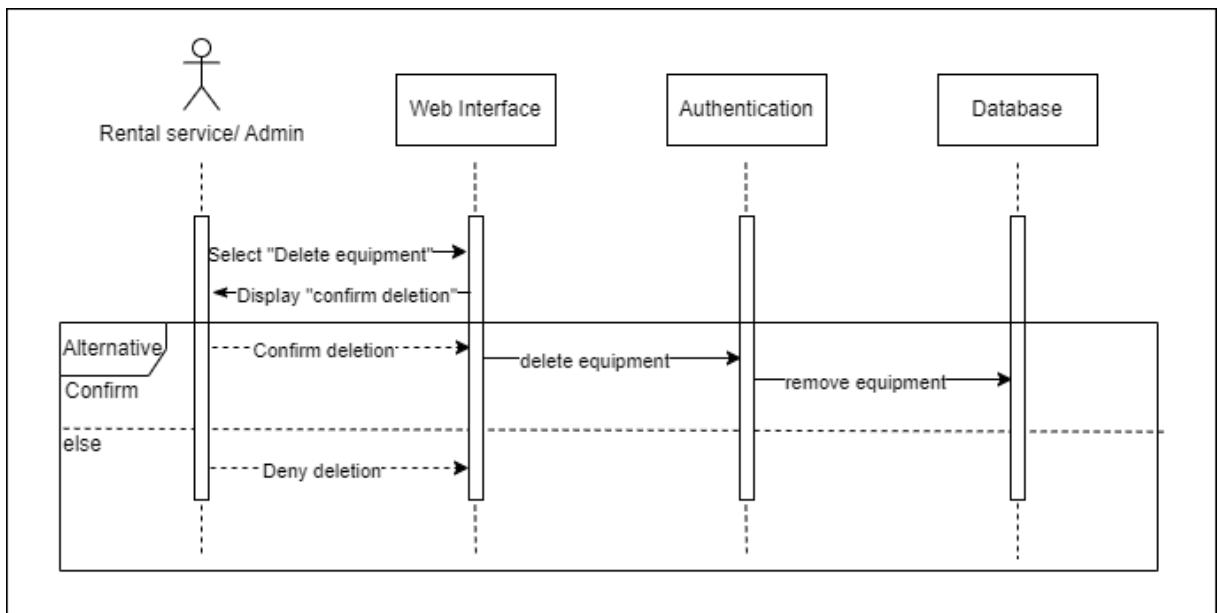


Figure 12: Delete equipment

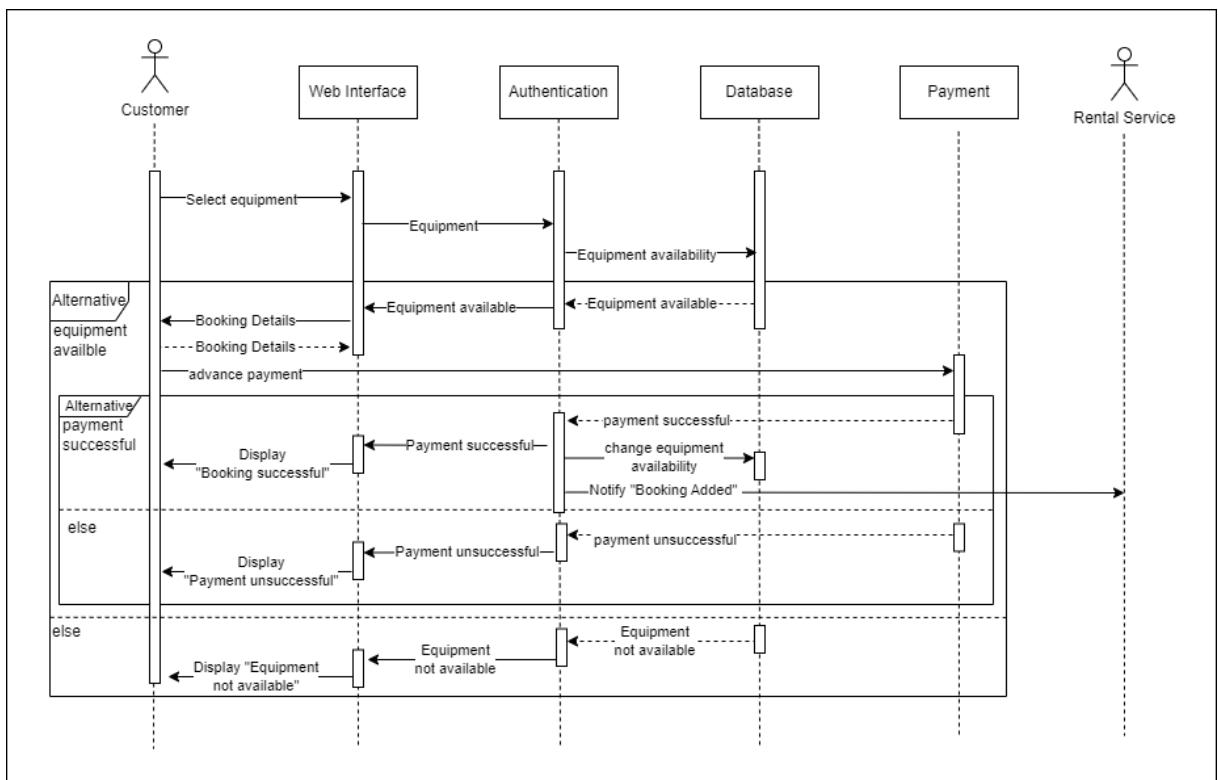


Figure 13: Book equipment

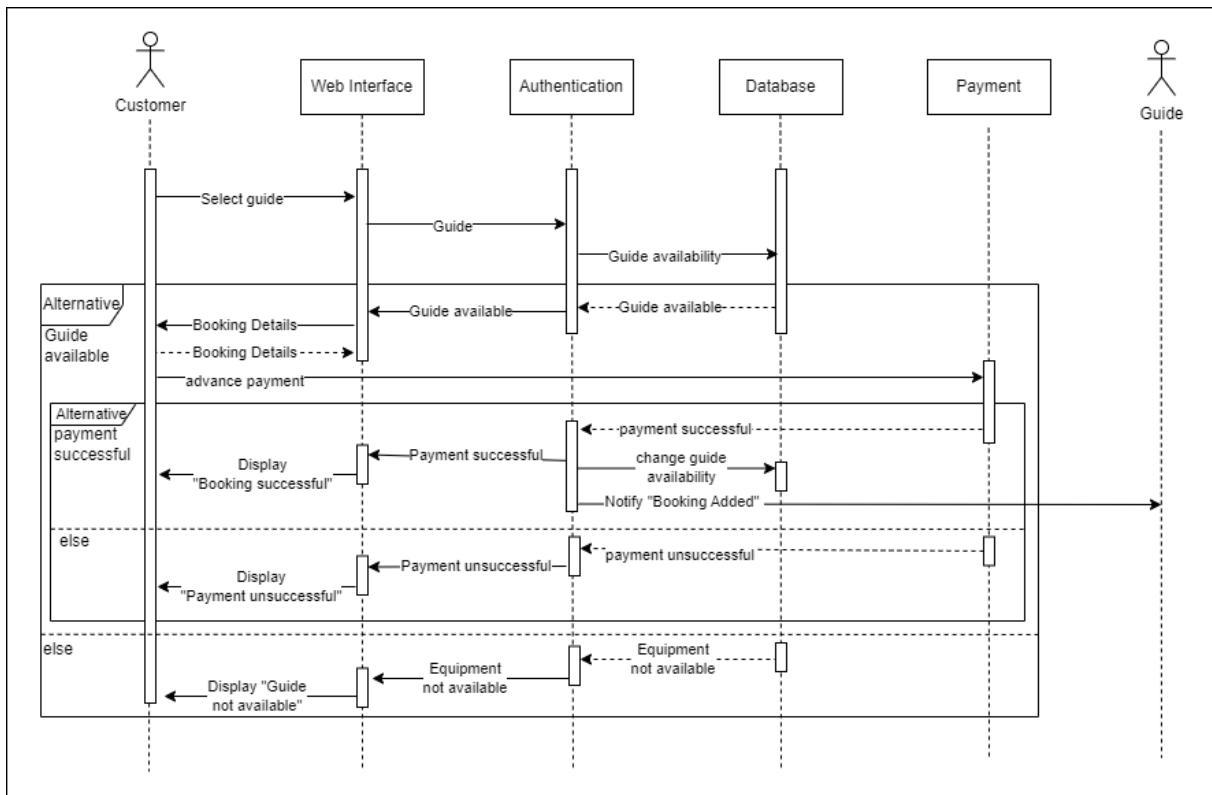


Figure 14: Book guide

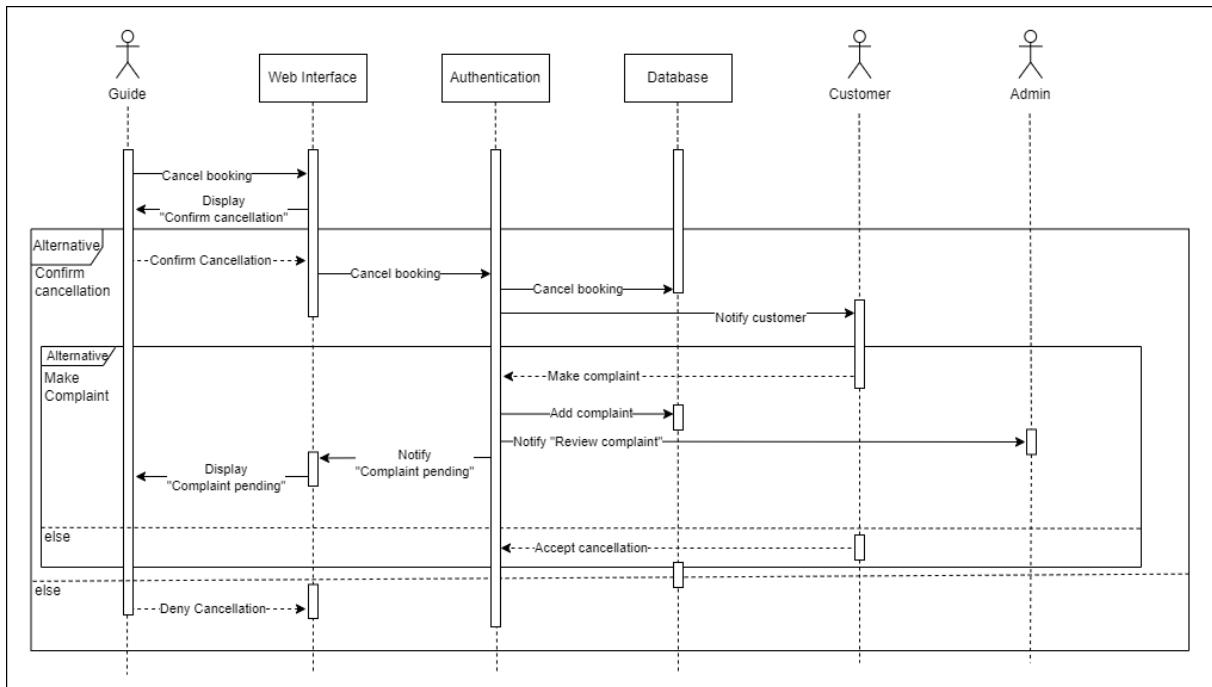


Figure 15: Cancel guide booking [by guide]

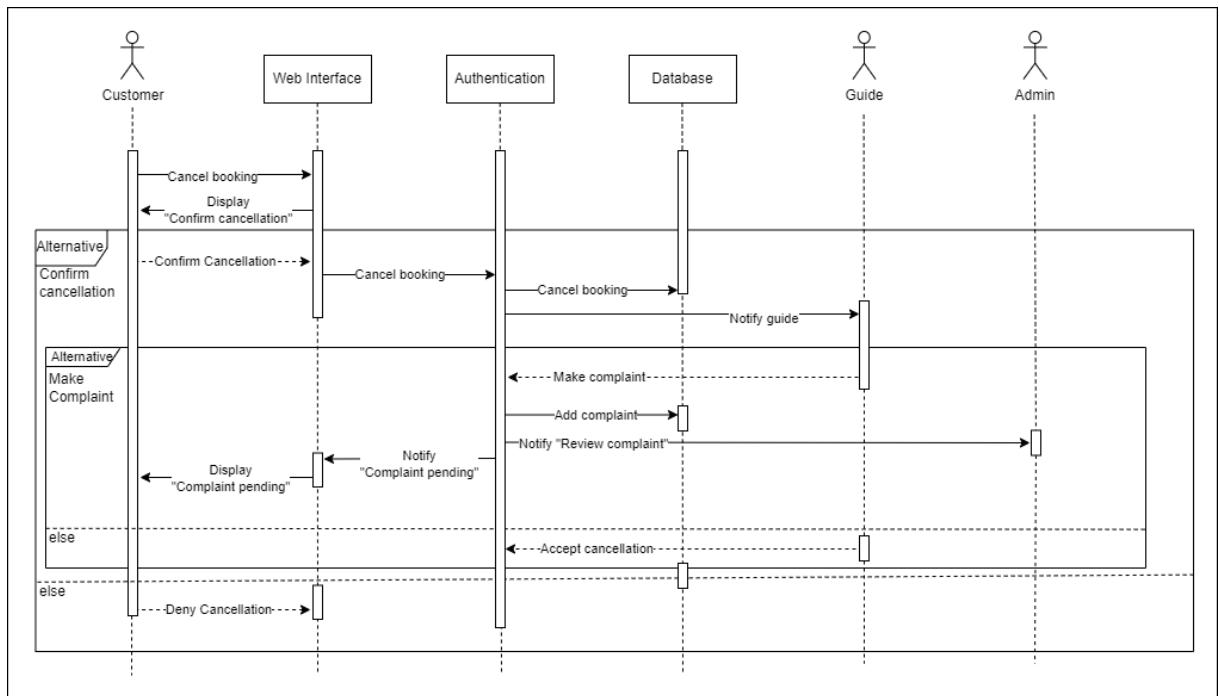


Figure 16: Cancel guide booking[by customer]

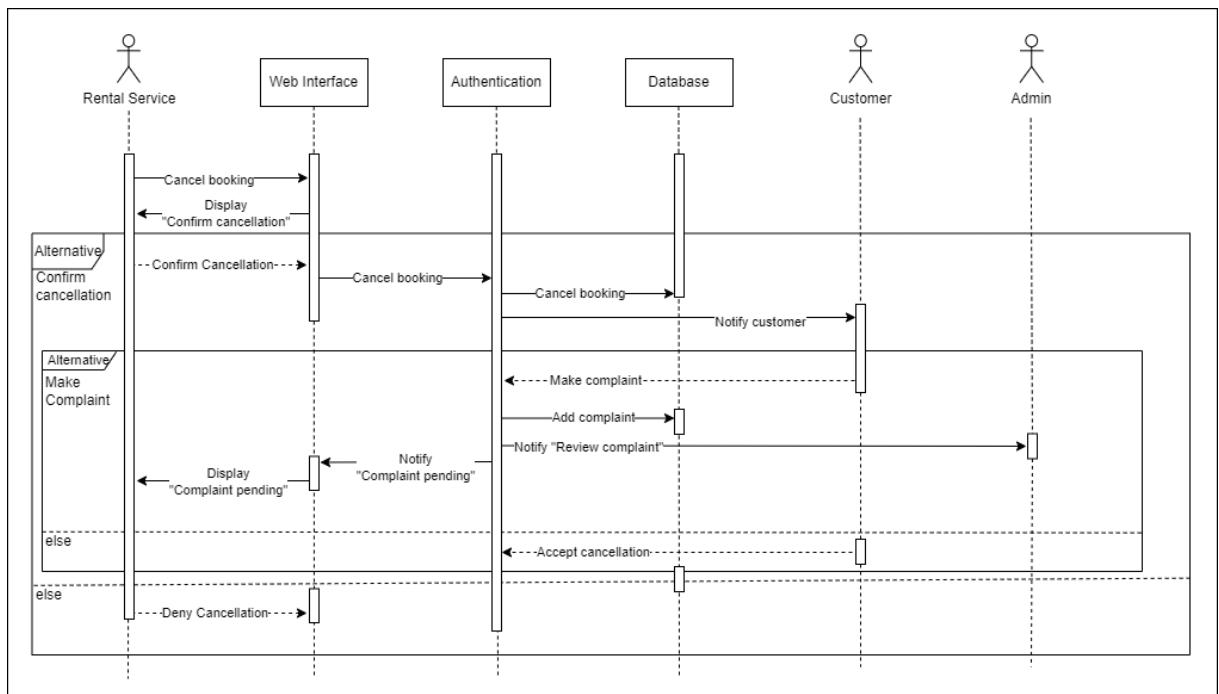


Figure 17: Cancel equipment booking[by rental service]

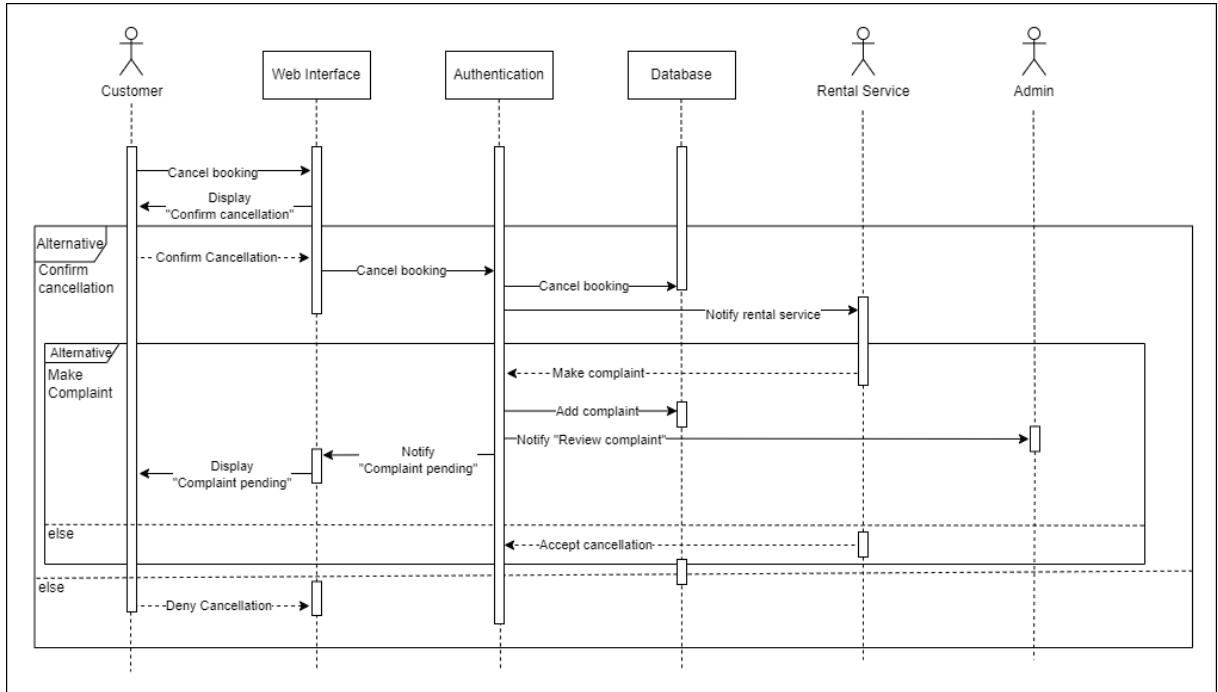


Figure 18: Cancel equipment booking[by customer].

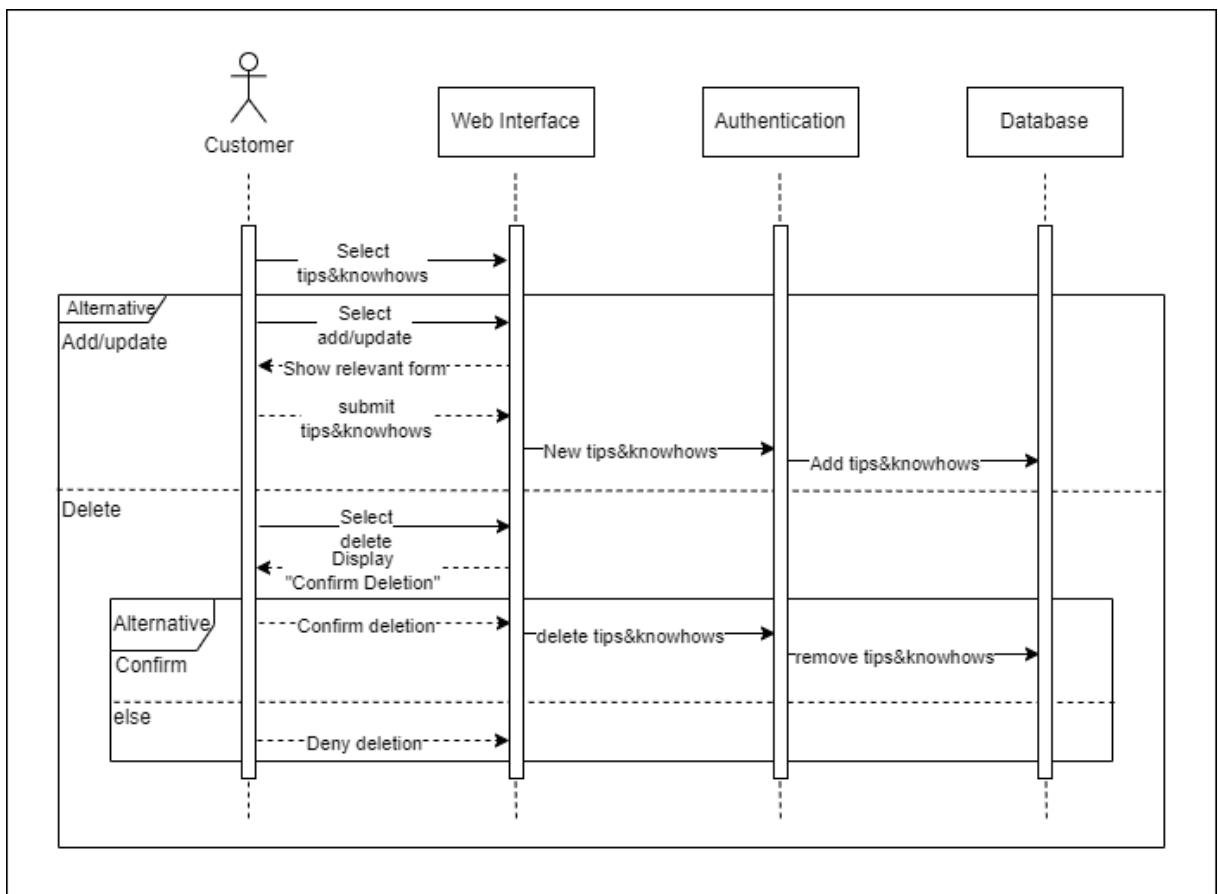


Figure 19: Manage tips and know-hows

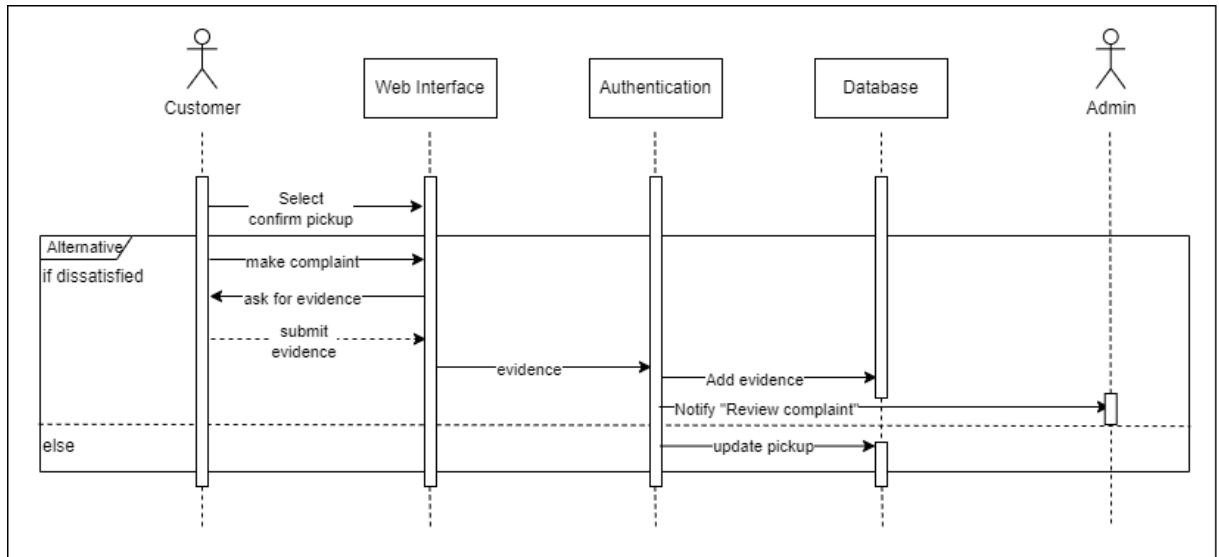


Figure 20: Confirm pickup equipment

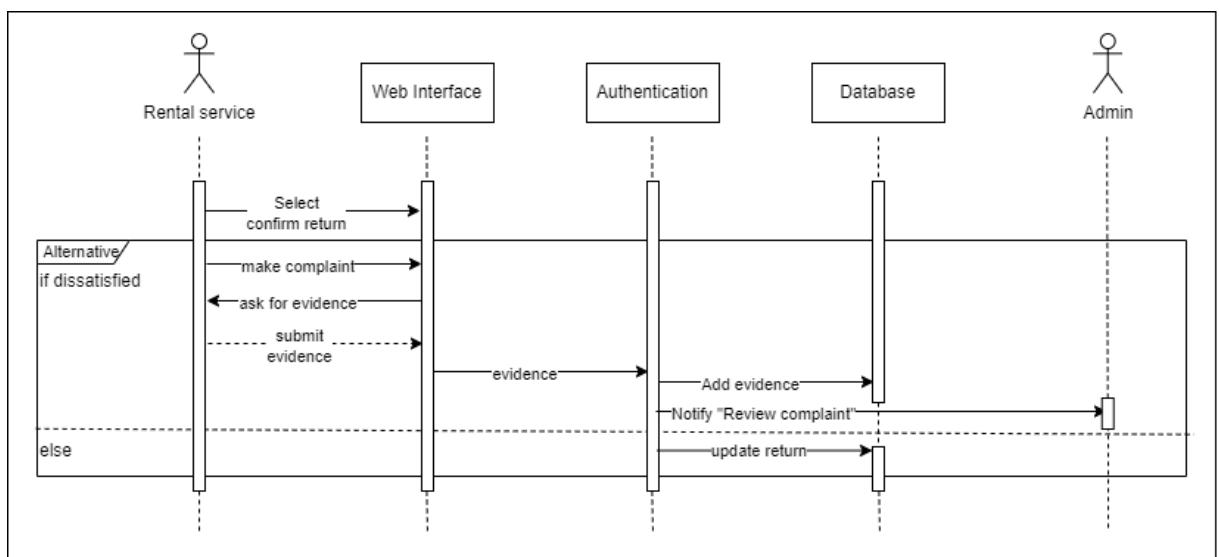


Figure 21: Confirm return equipment

5.4 Activity diagrams

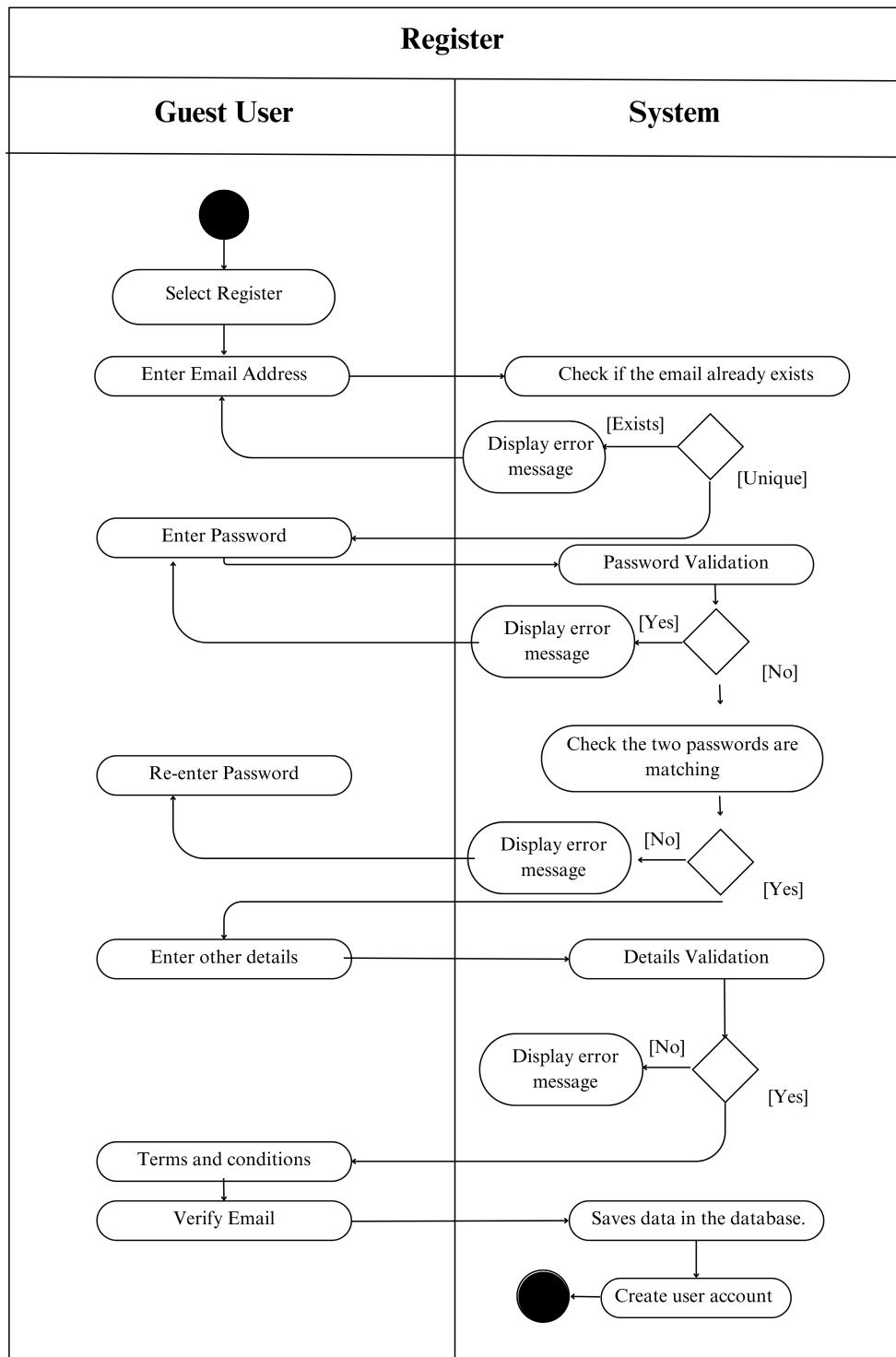


Figure 22: Register

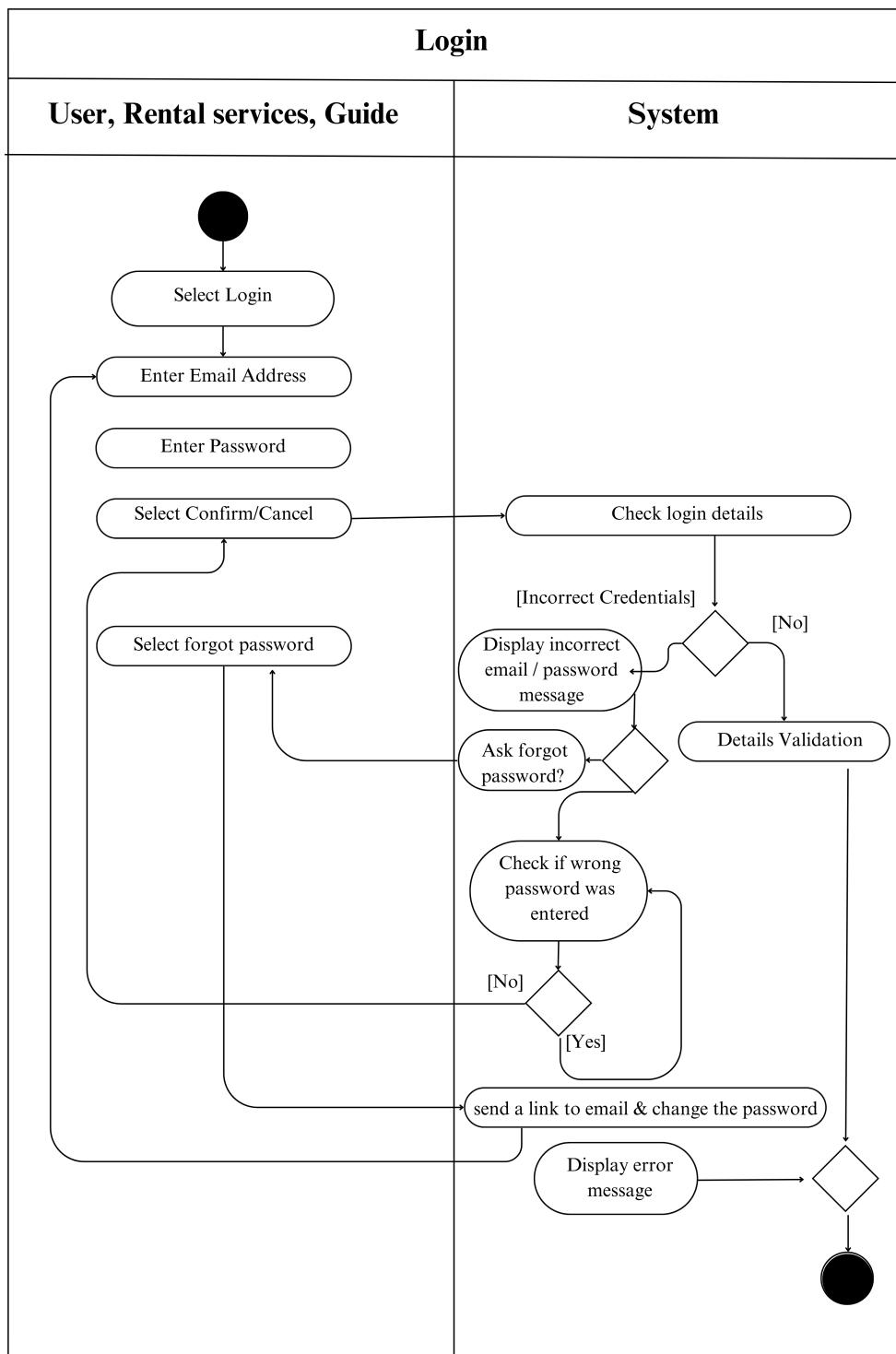


Figure 23: Login

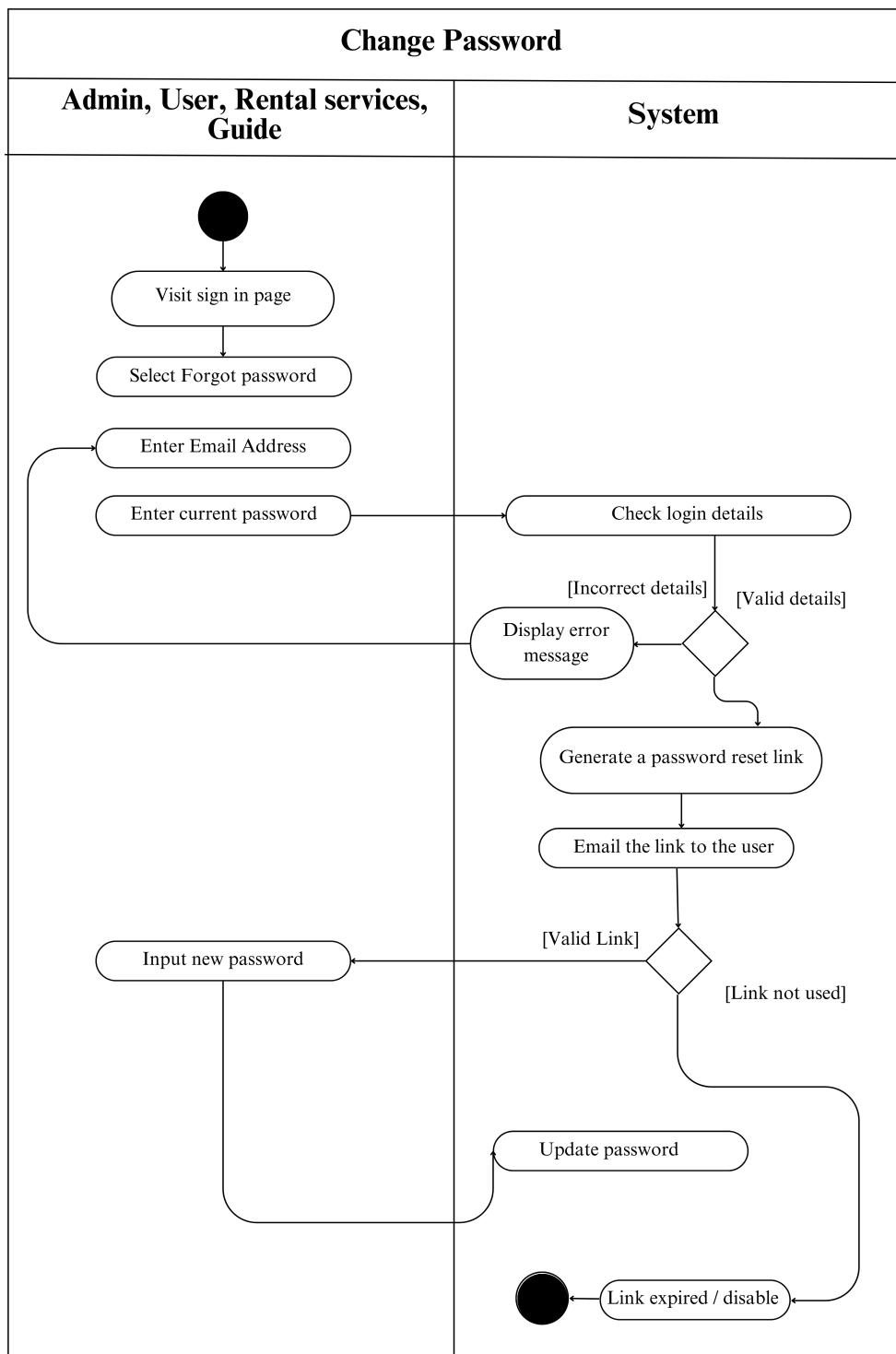


Figure 24: Change Password

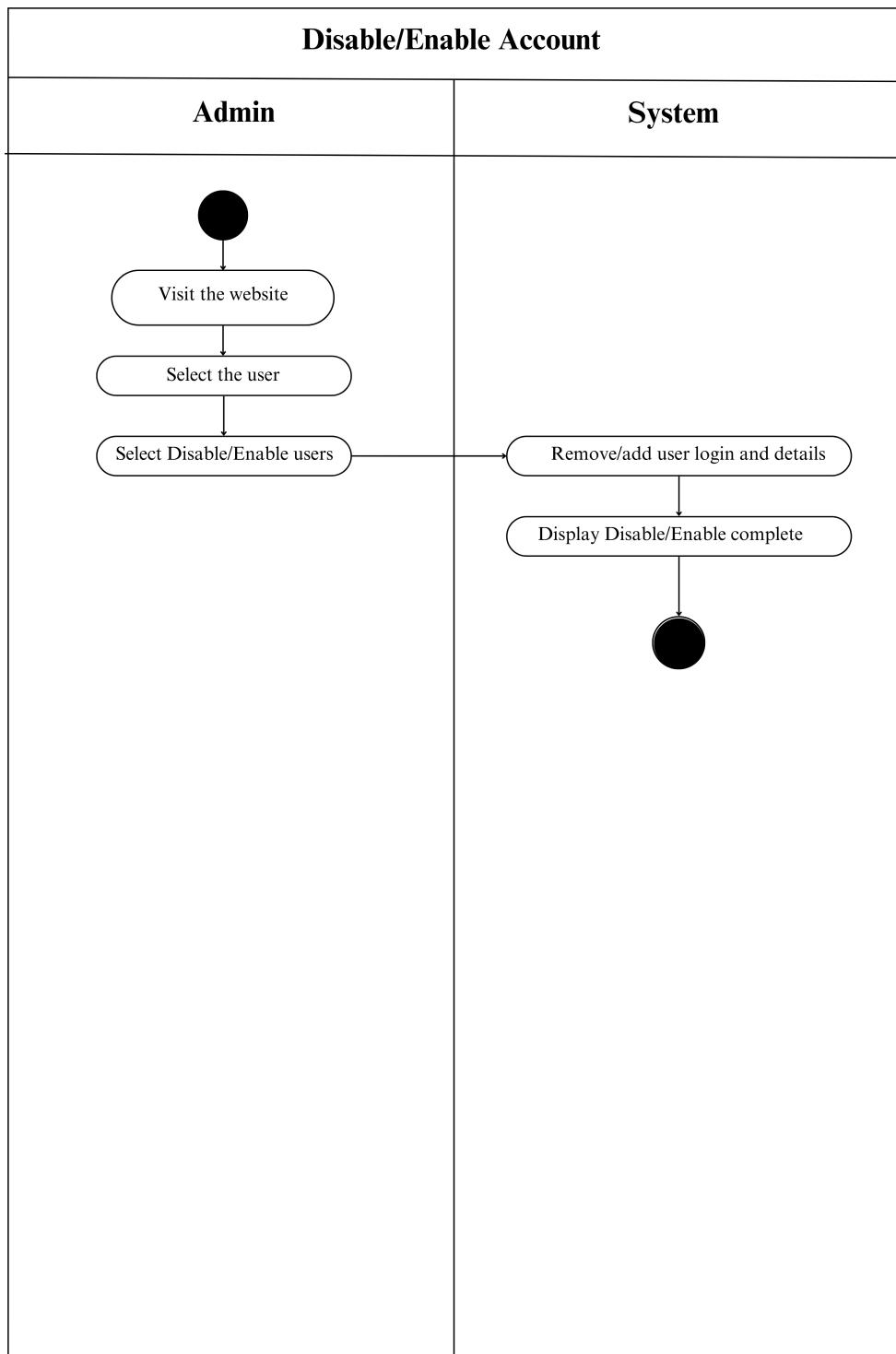


Figure 25: Disable/Enable Account

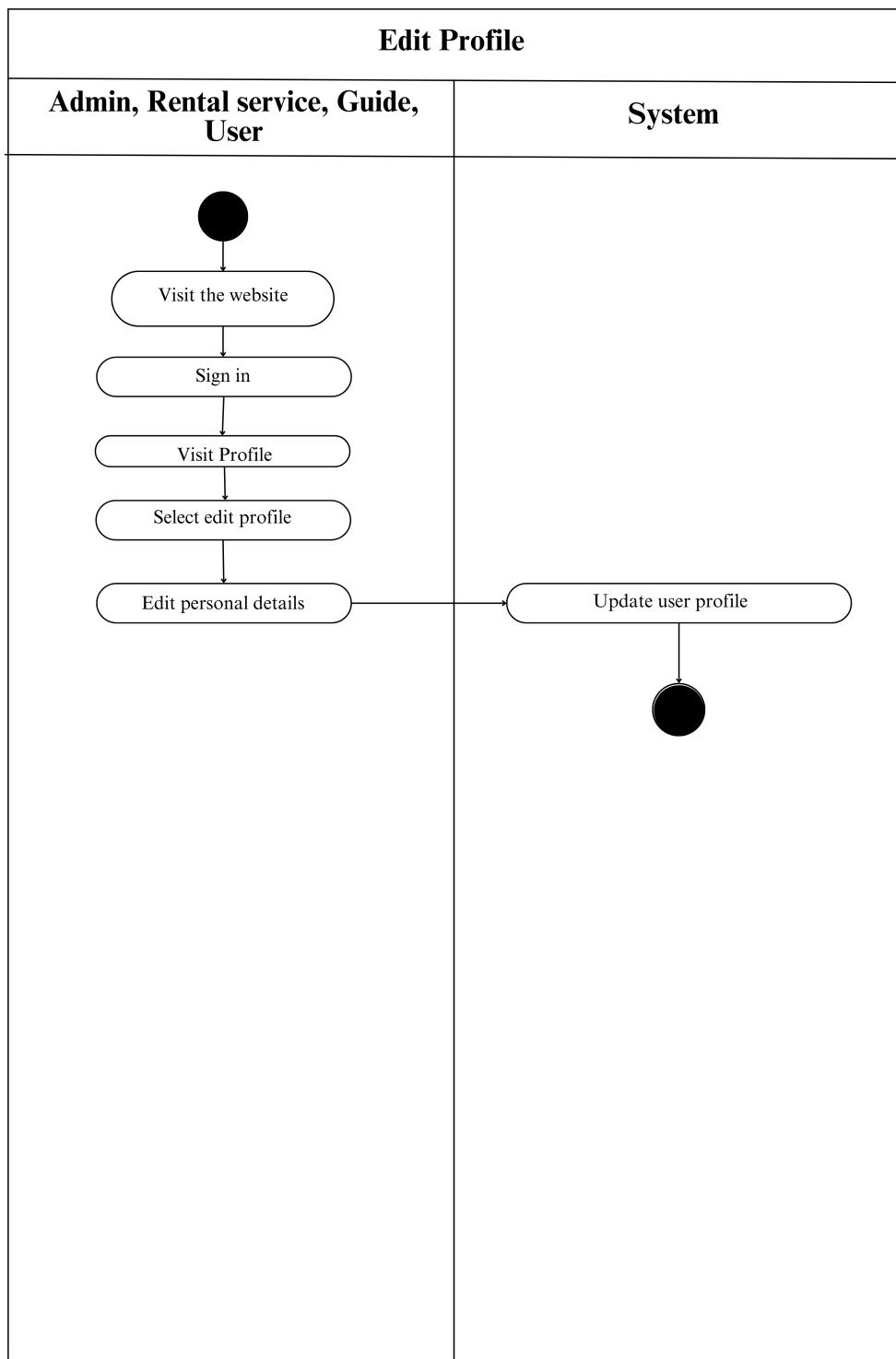


Figure 26: Edit Profile

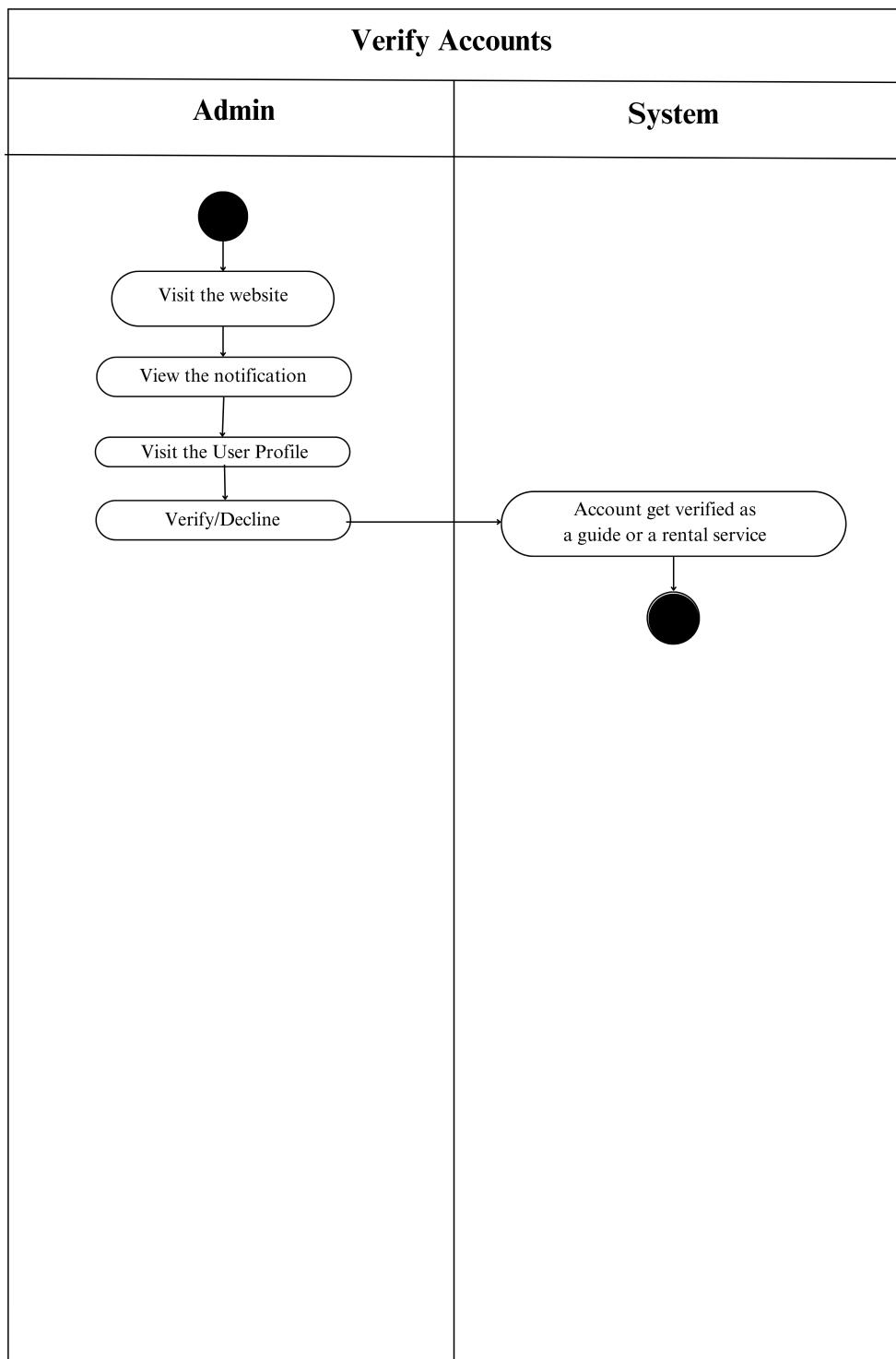


Figure 27: Verify Accounts

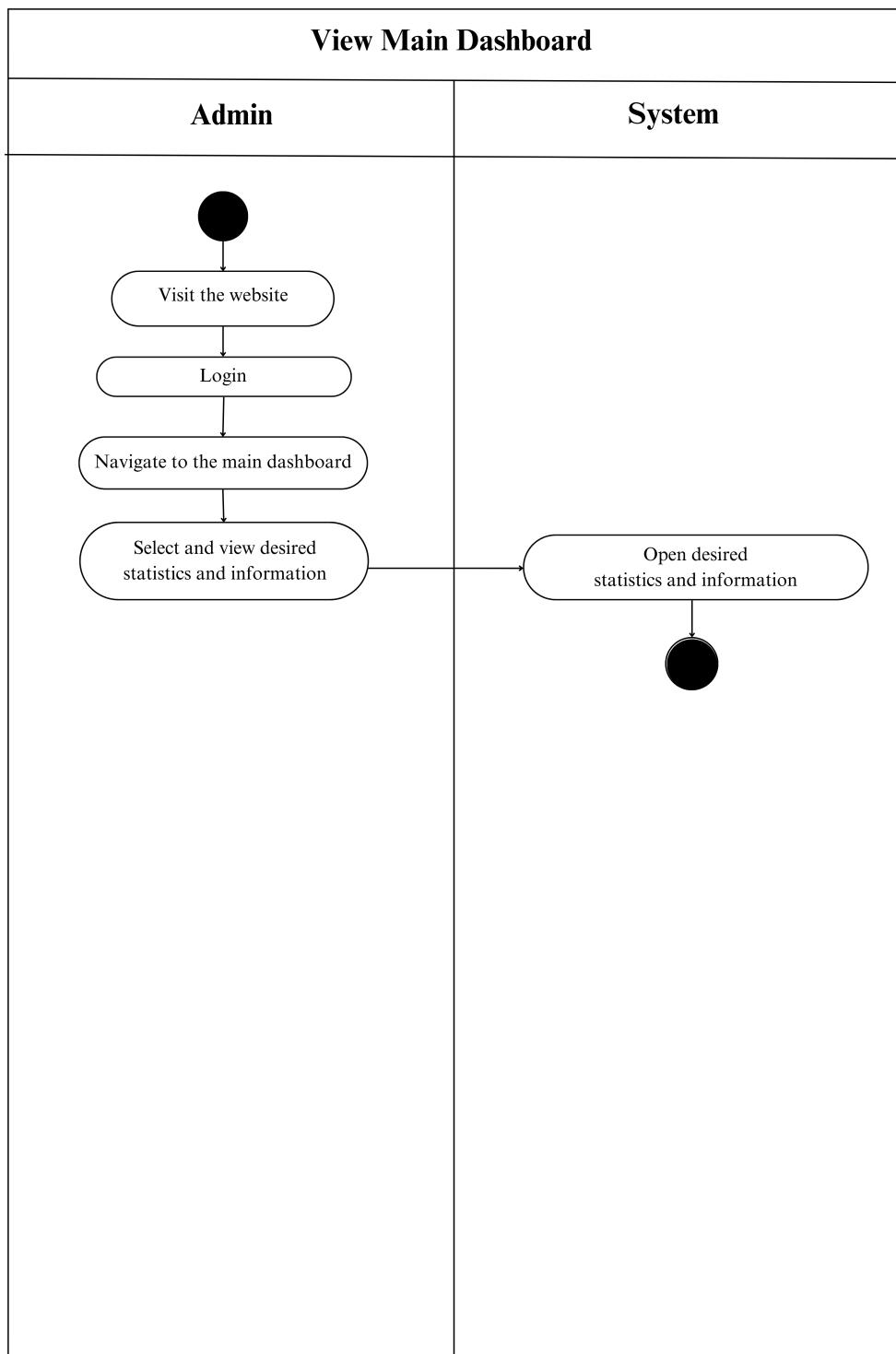


Figure 28: View Main Dashboard

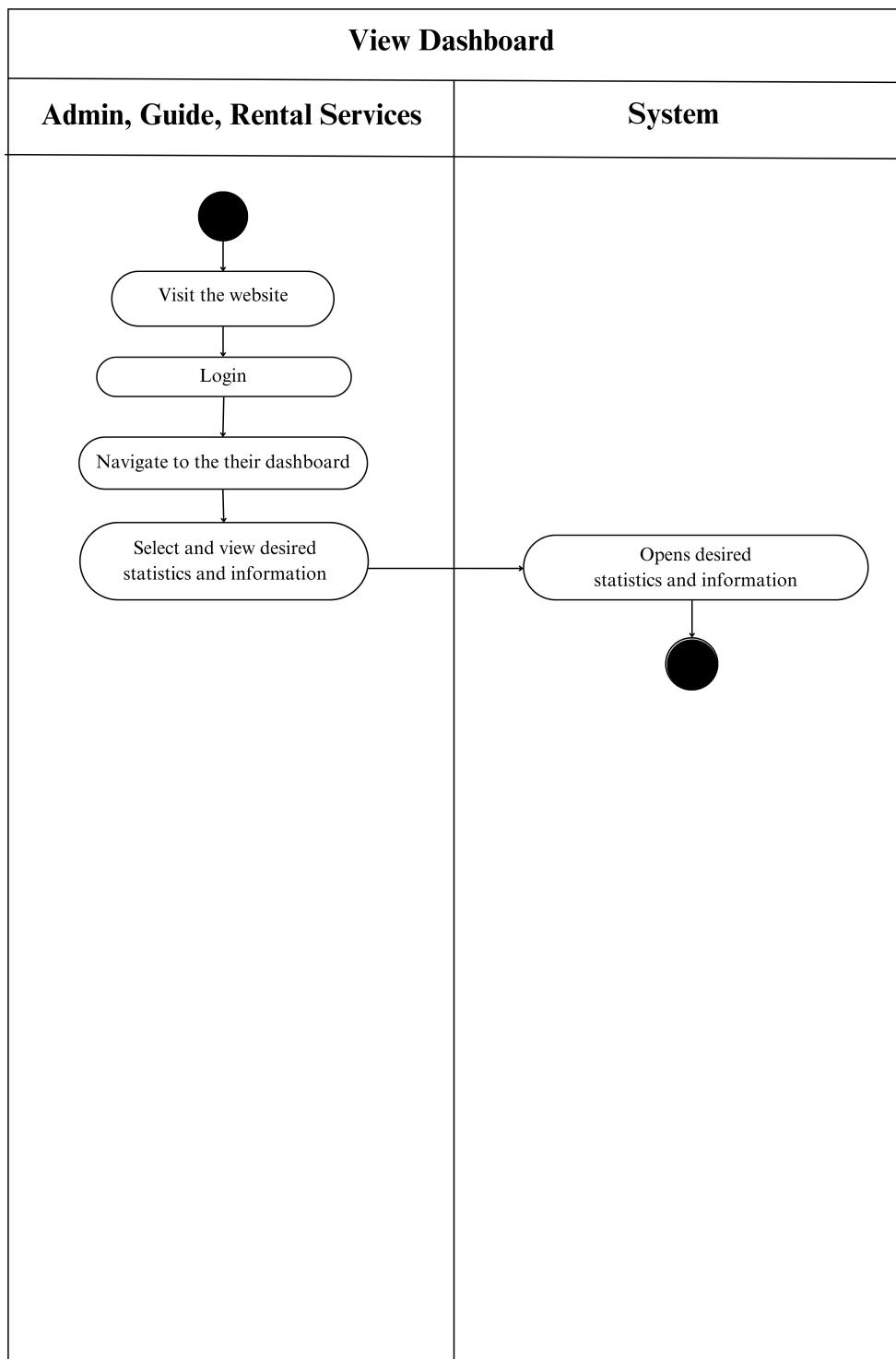


Figure 29: View Main Dashboard

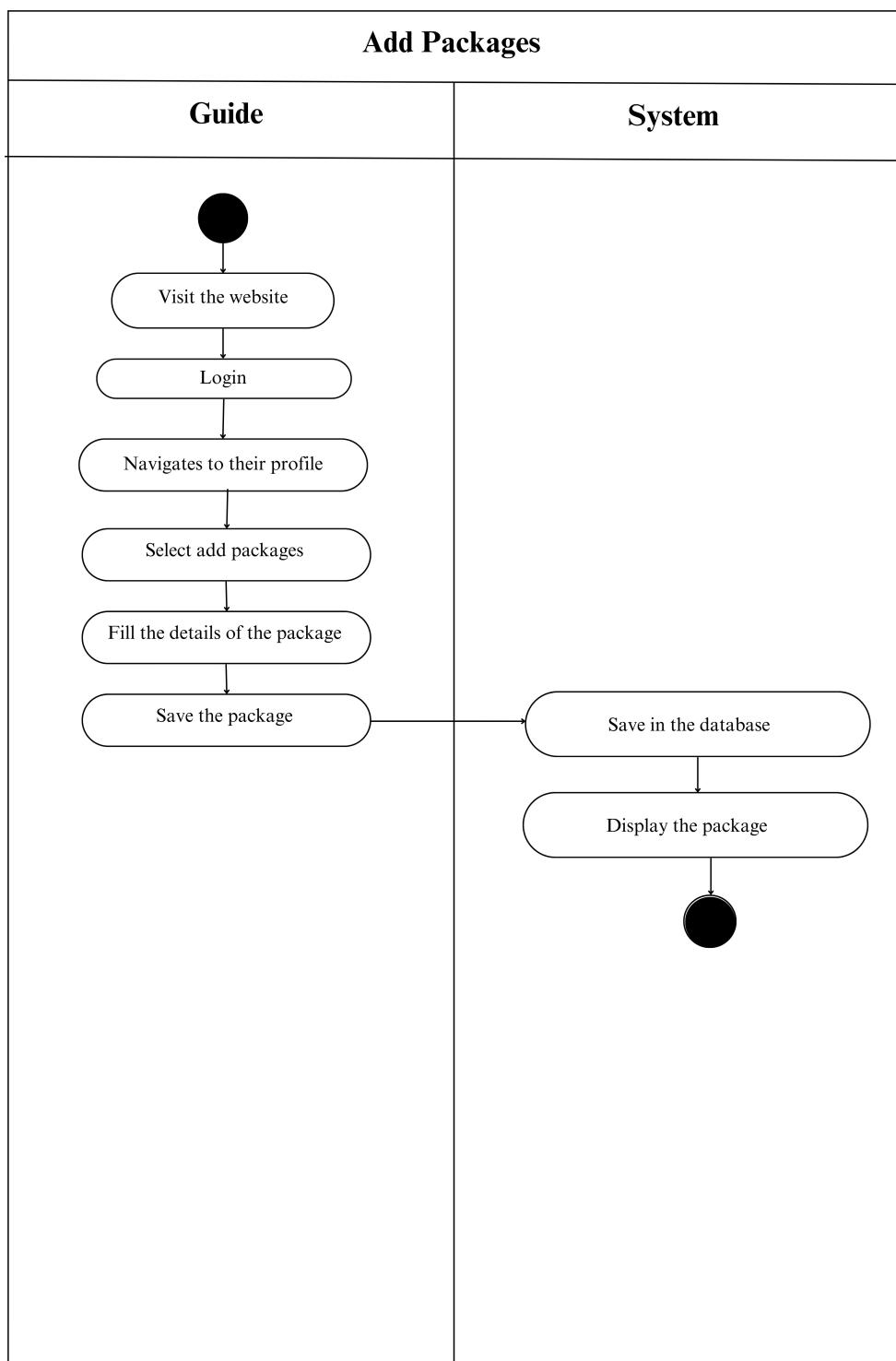


Figure 30: Add Packages

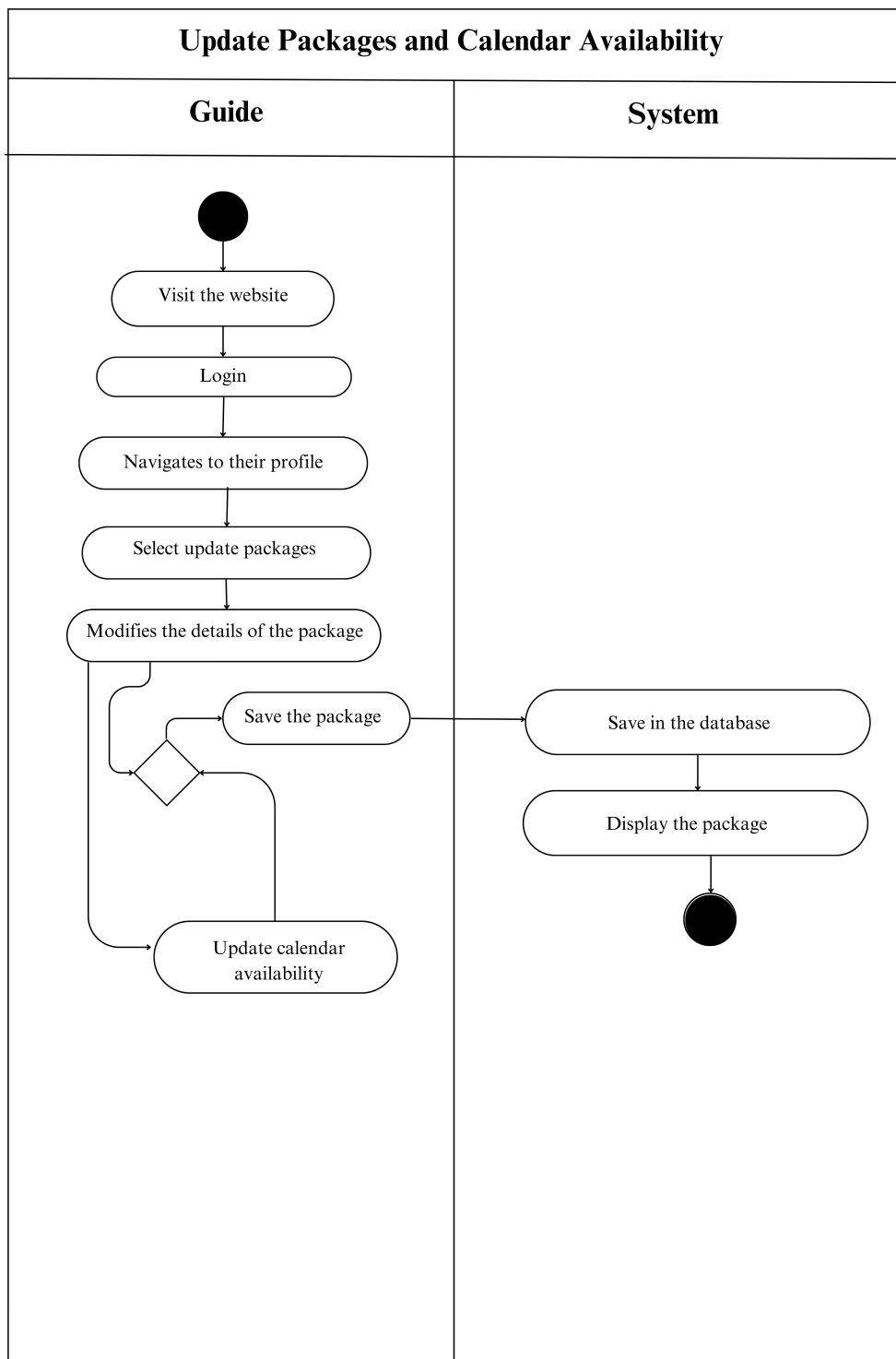


Figure 31: Update Packages and Calendar Availability

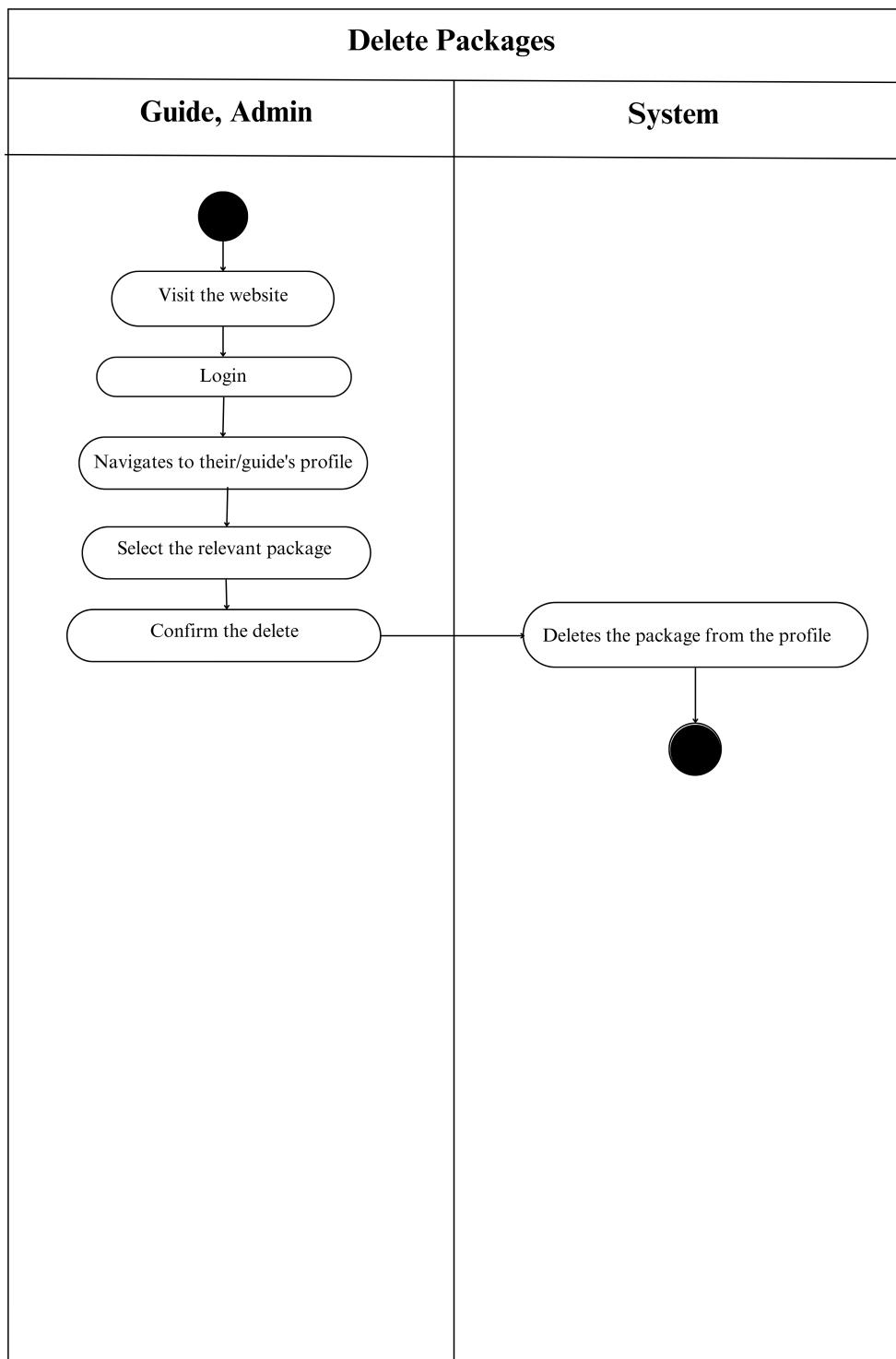


Figure 32: Delete Packages

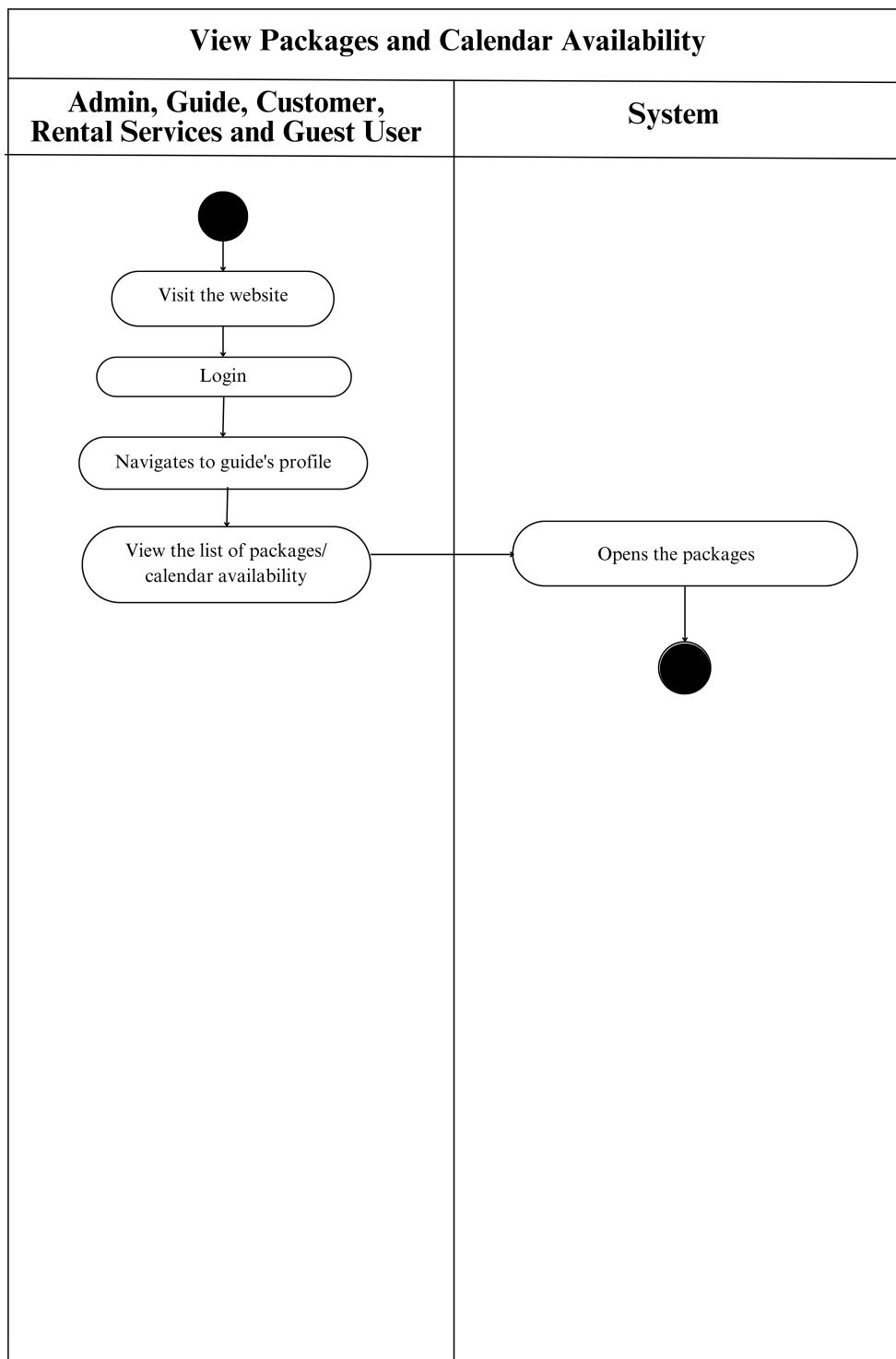


Figure 33: View Packages and Calendar Availability

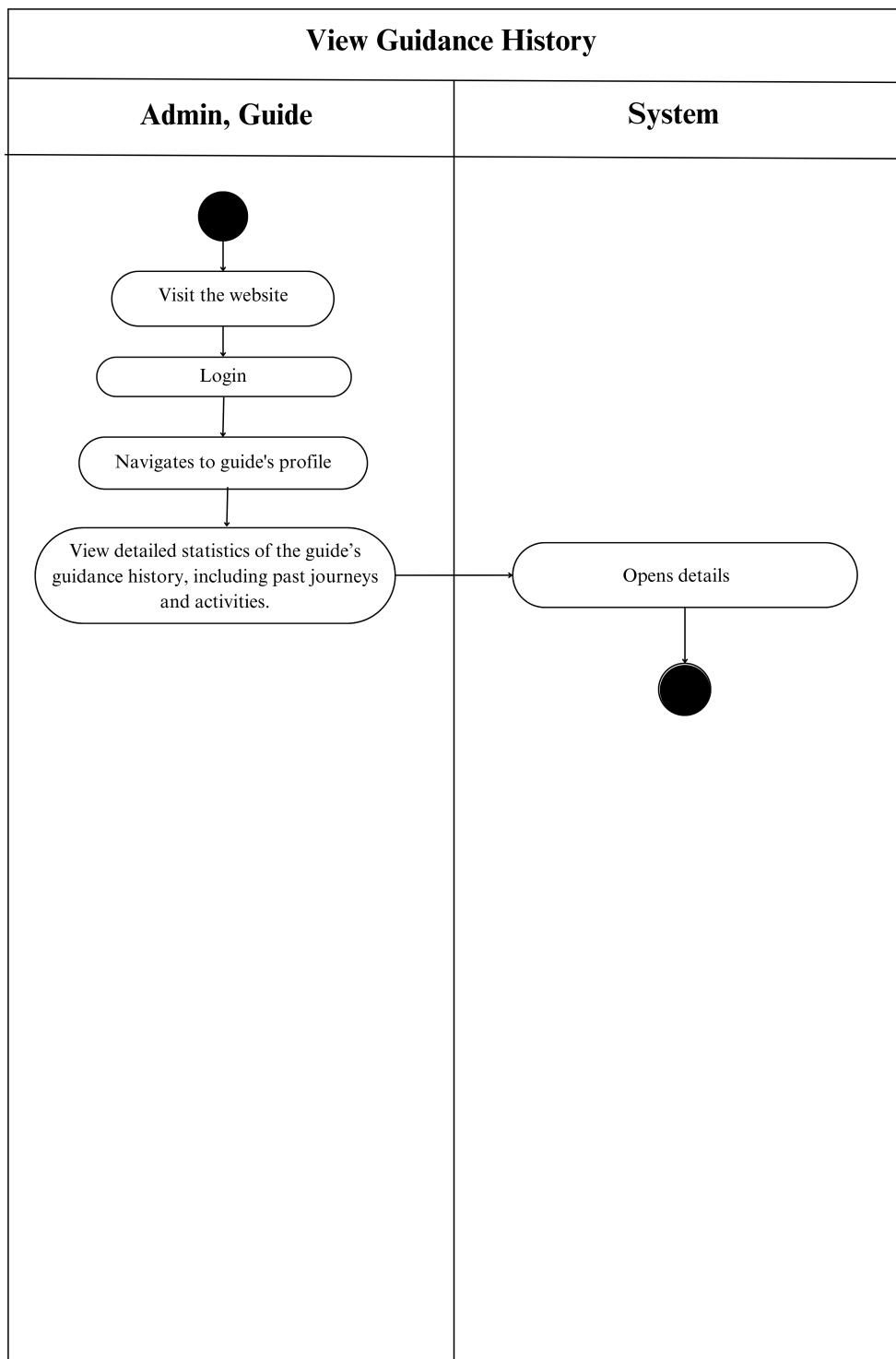


Figure 34: View Guidance History

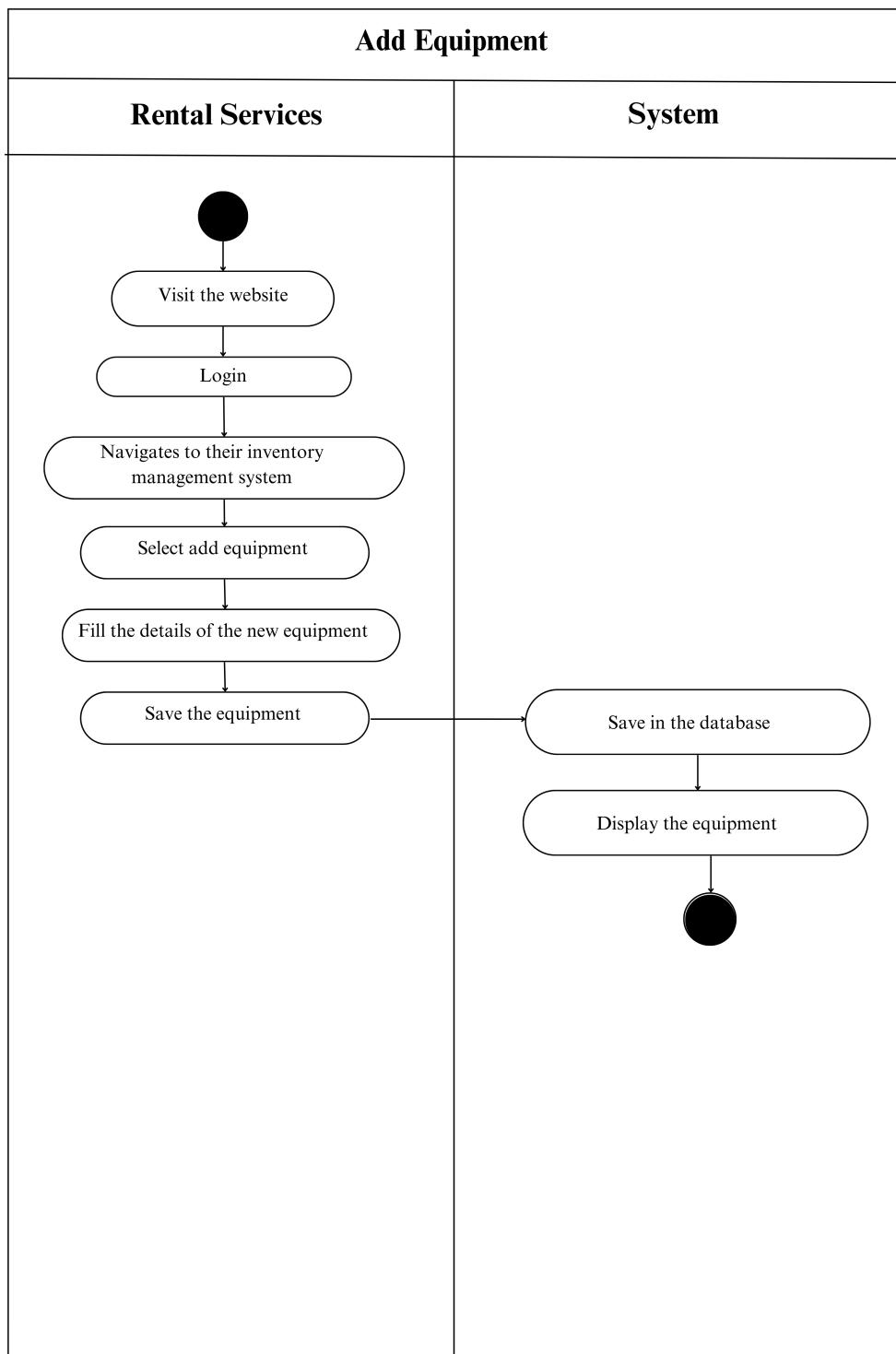


Figure 35: Add Equipment

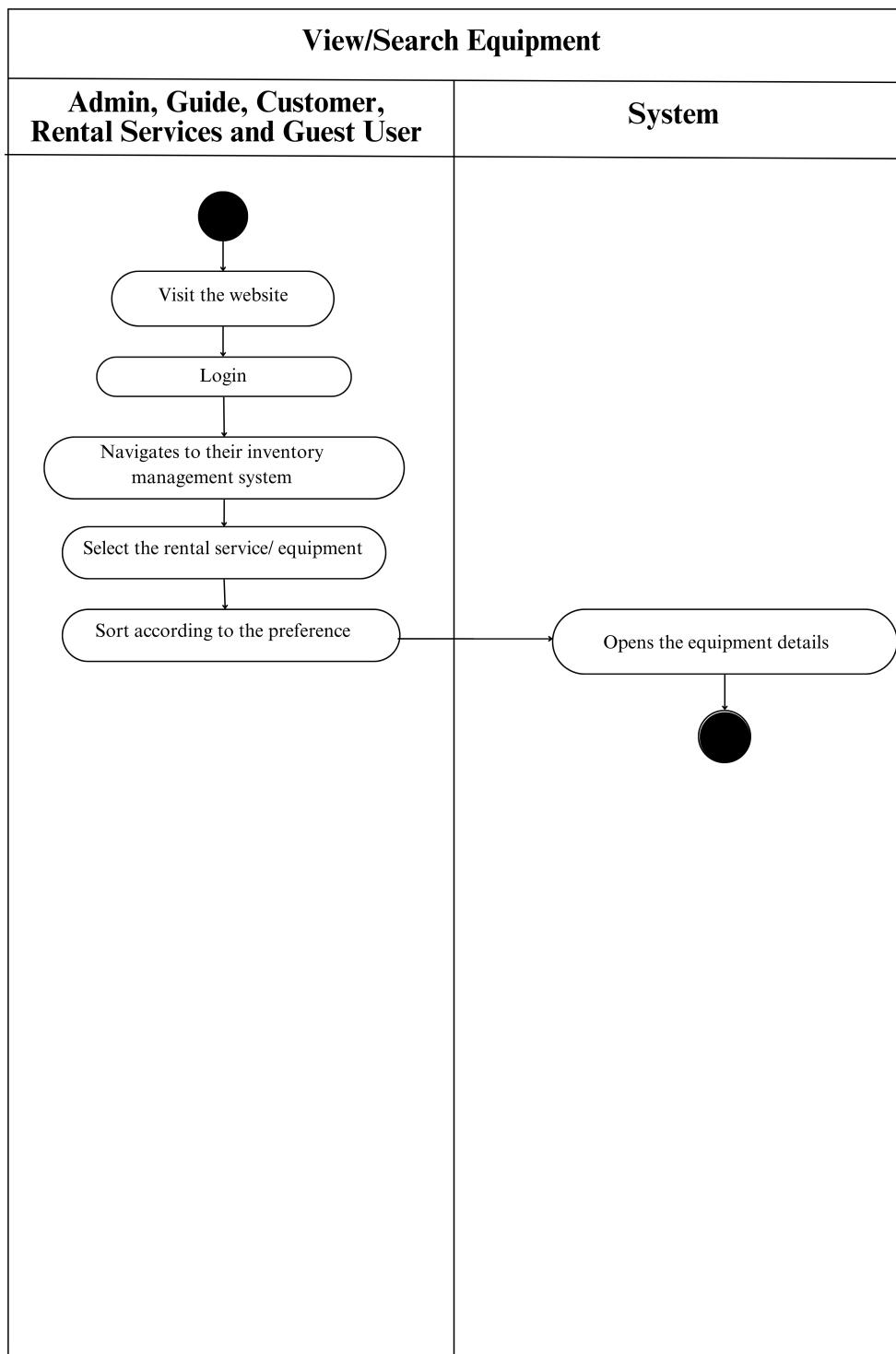


Figure 36: View Equipment

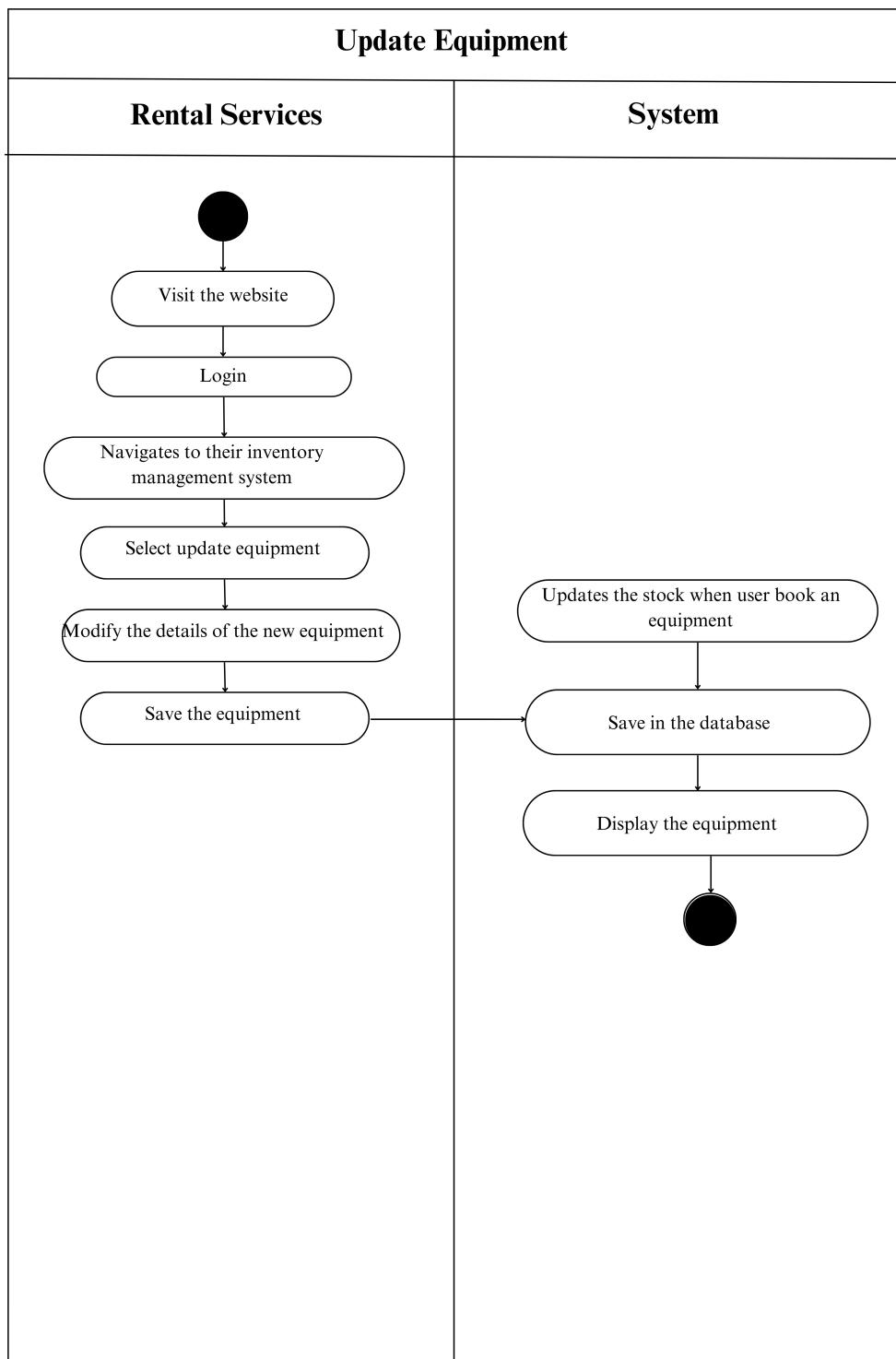


Figure 37: Update Equipment

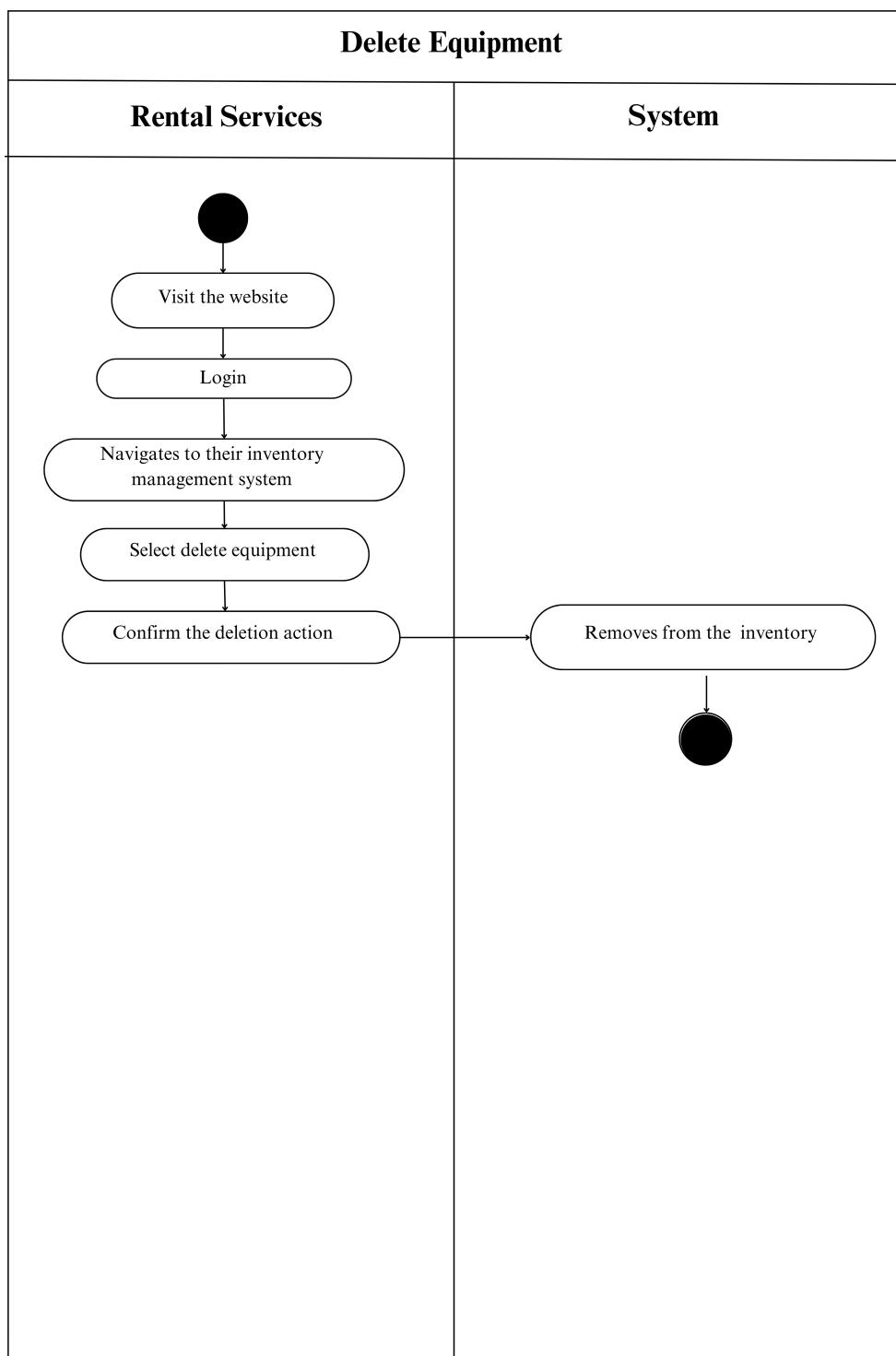


Figure 38: Delete Equipment

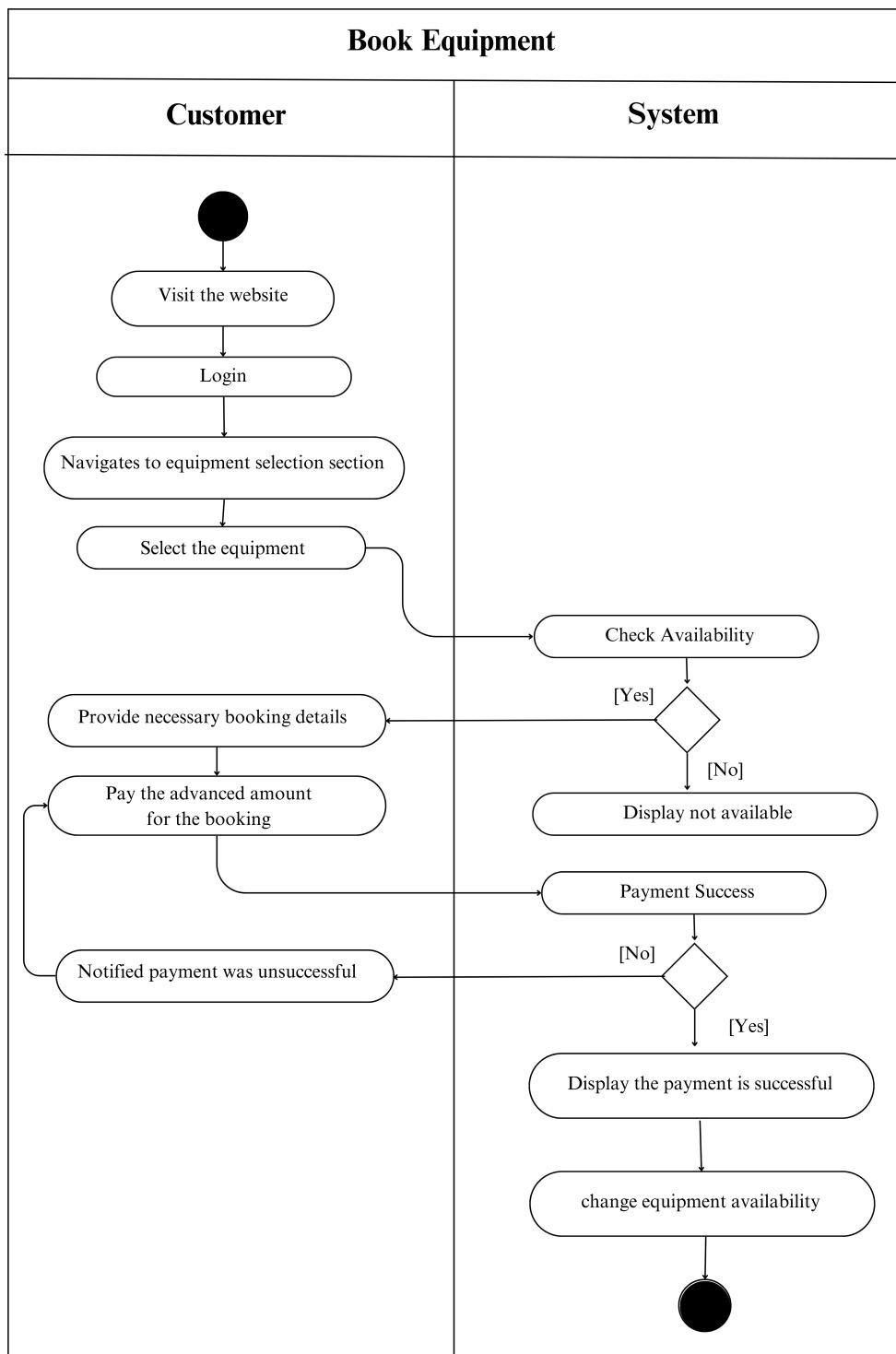


Figure 39: Book Equipment

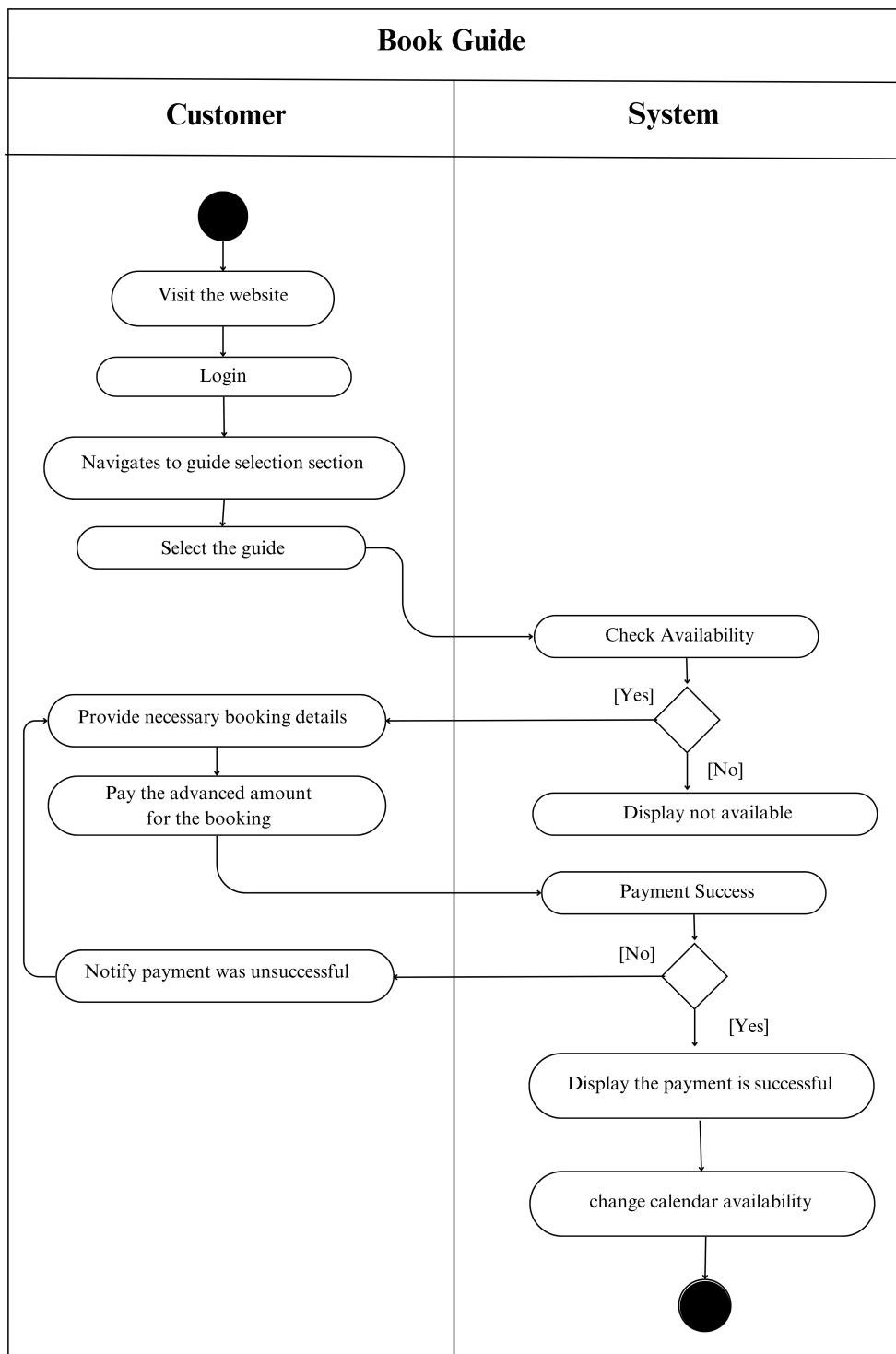


Figure 40: Book Guide

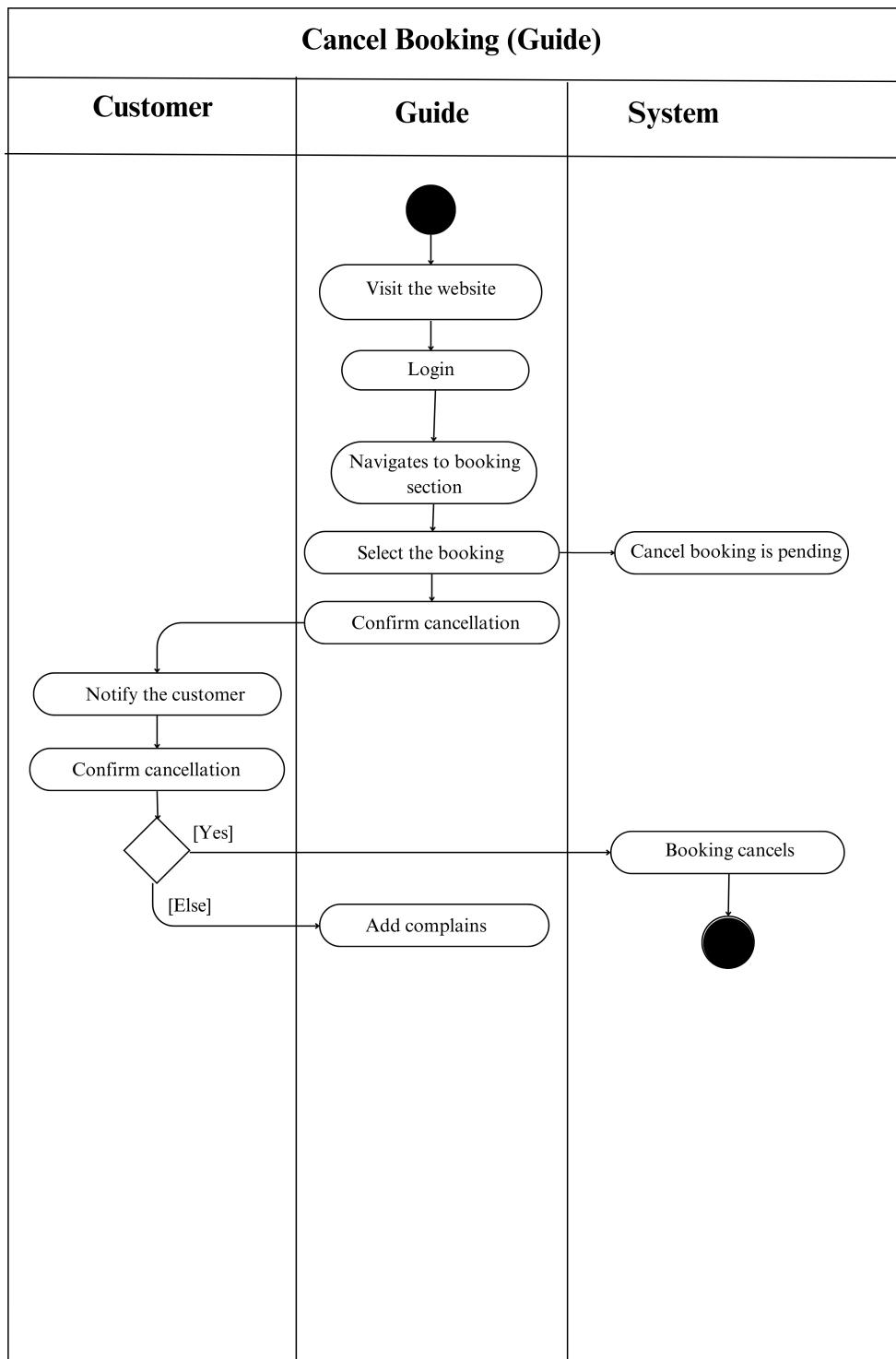


Figure 41: Cancel Booking (Guide)

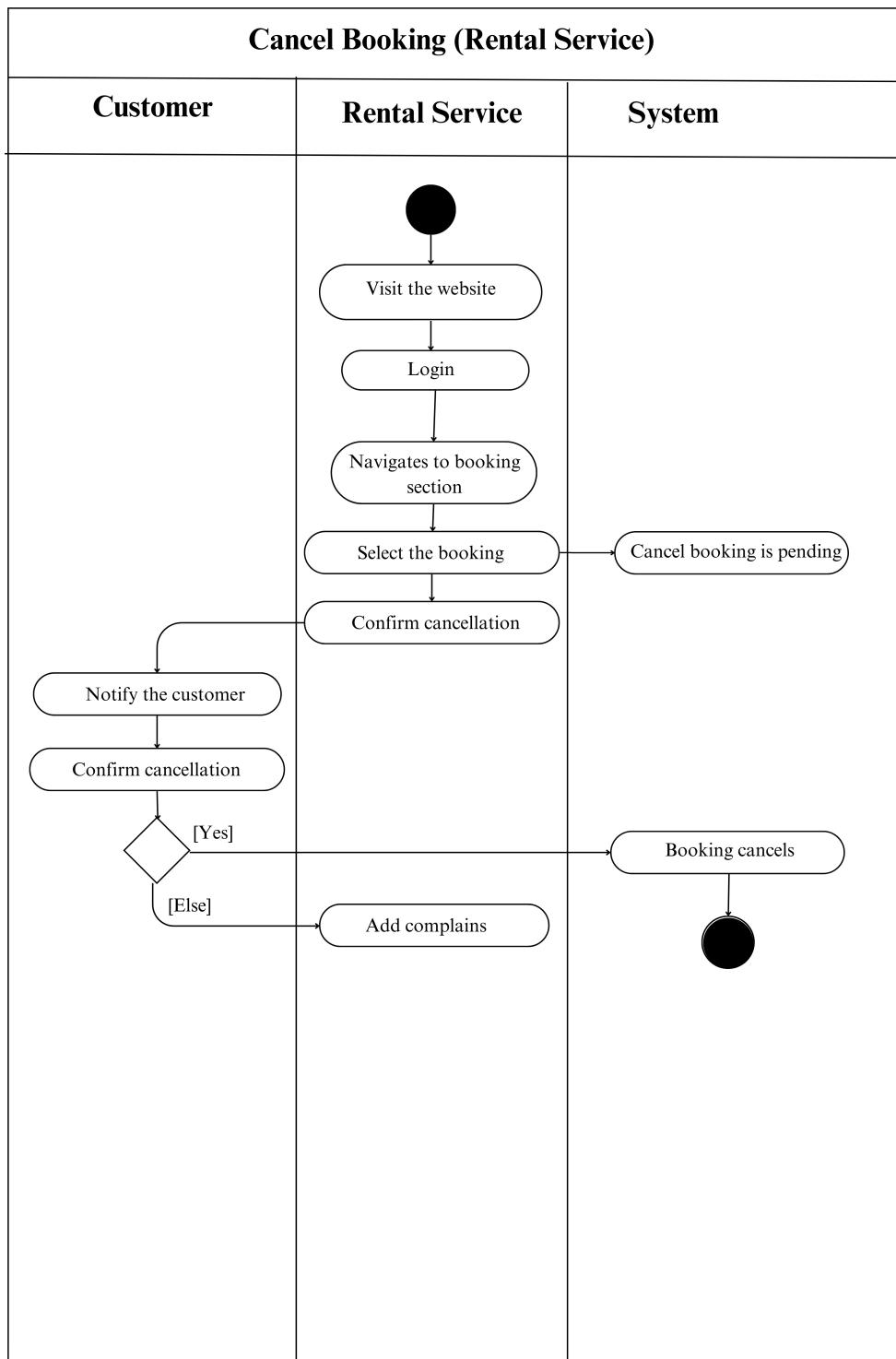


Figure 42: Cancel Booking (Rental Service)

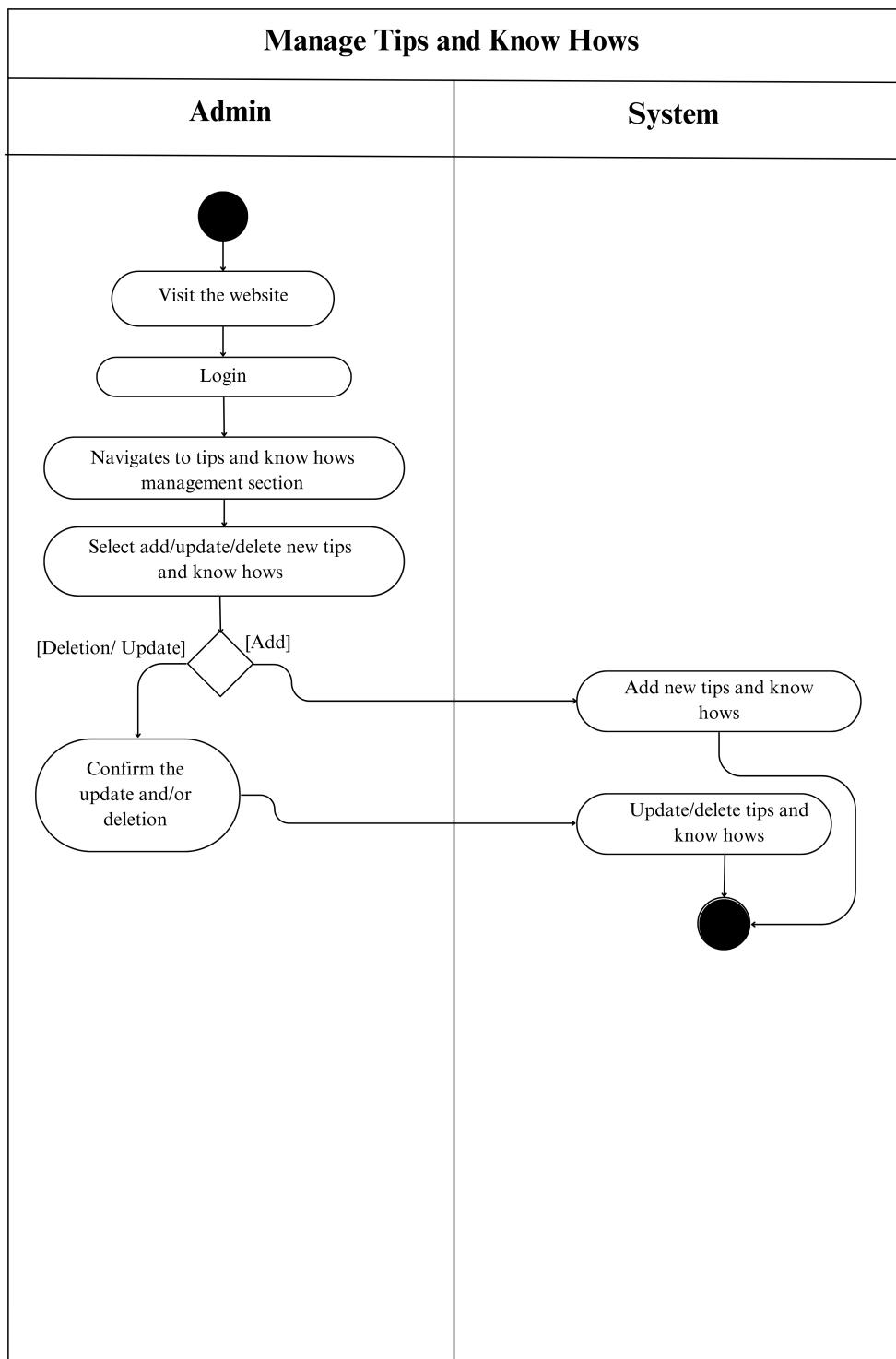


Figure 43: Manage Tips and Know-hows

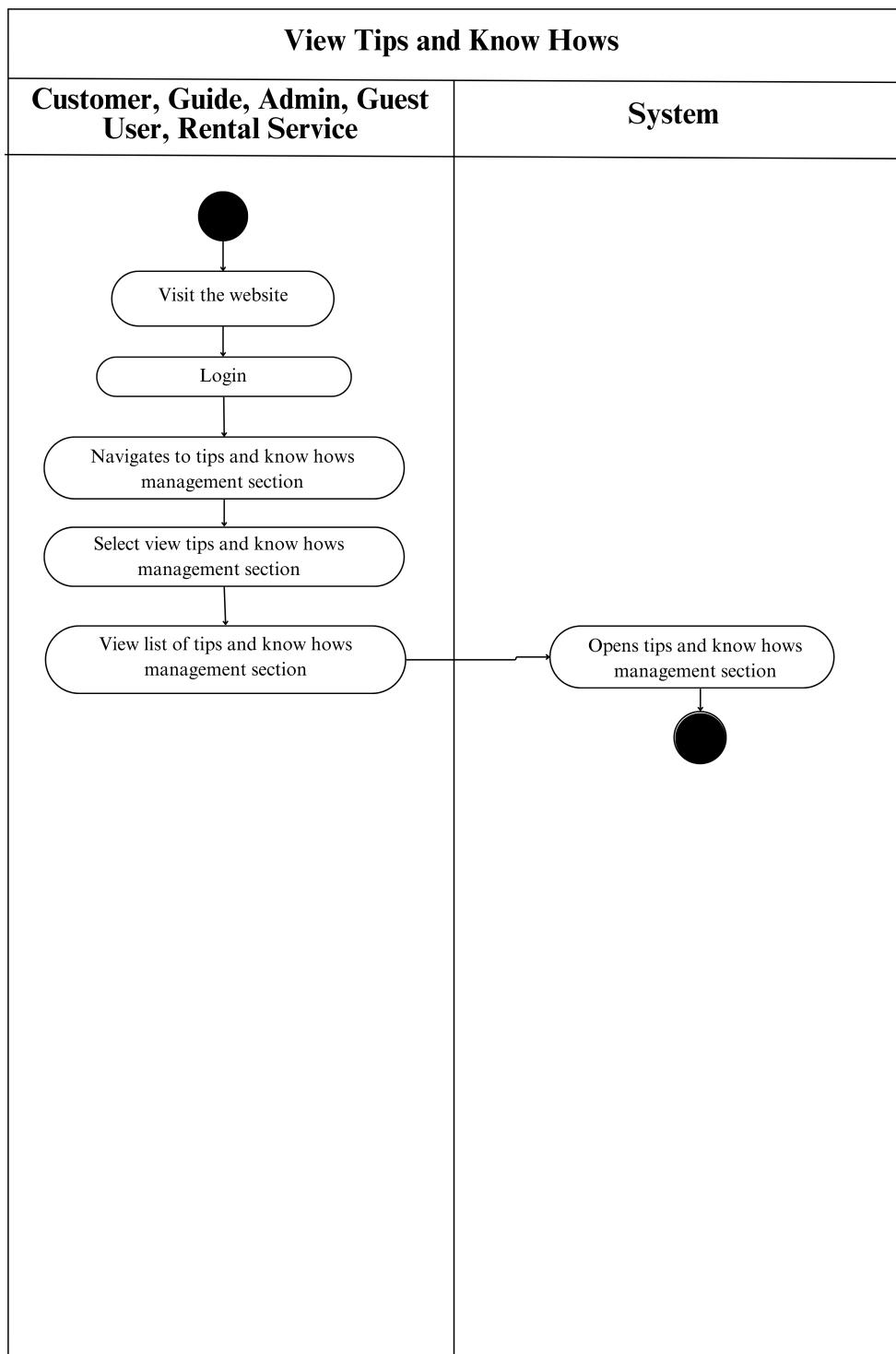


Figure 44: View Tips and Know-hows

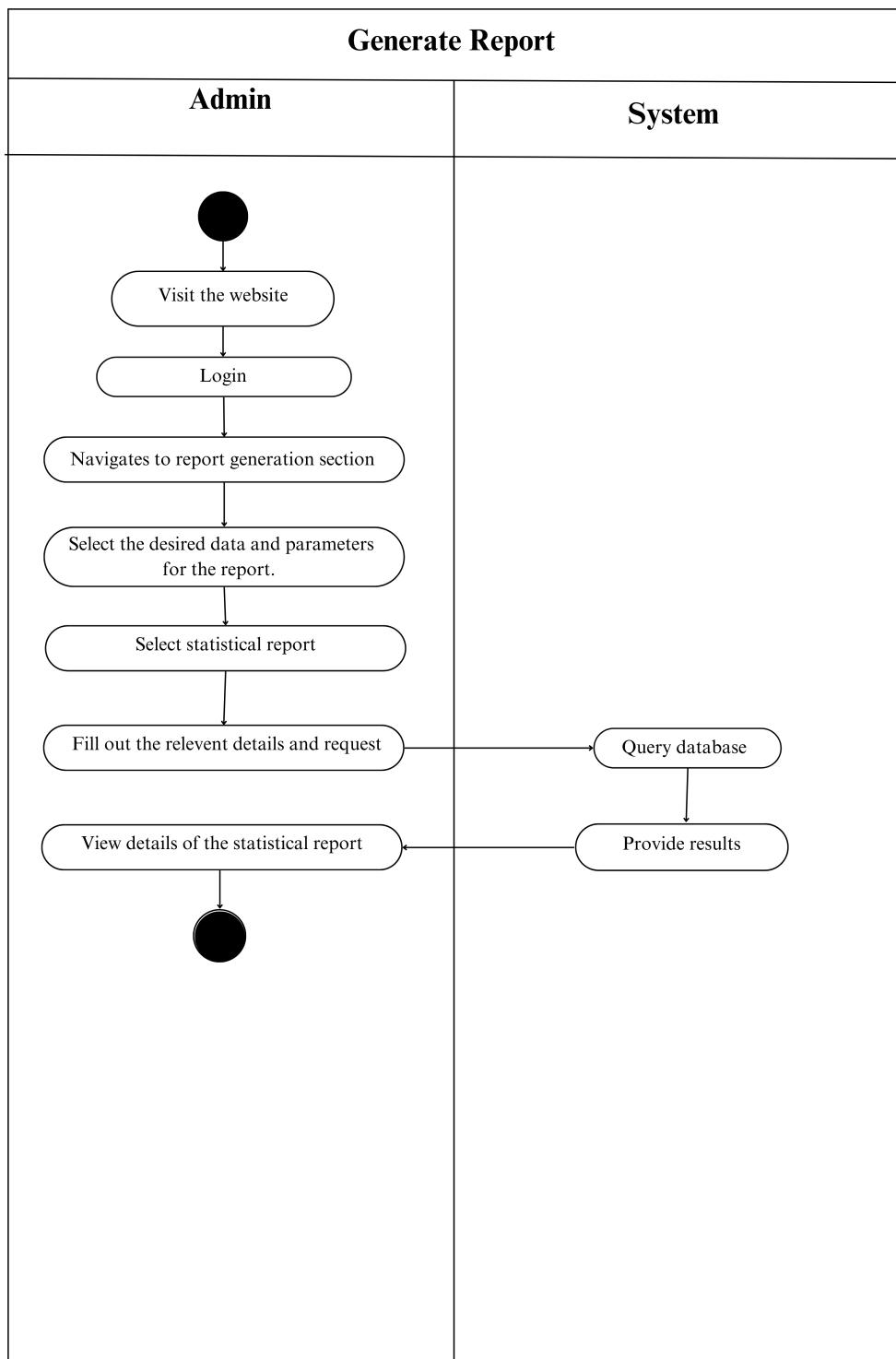


Figure 45: Generate Report

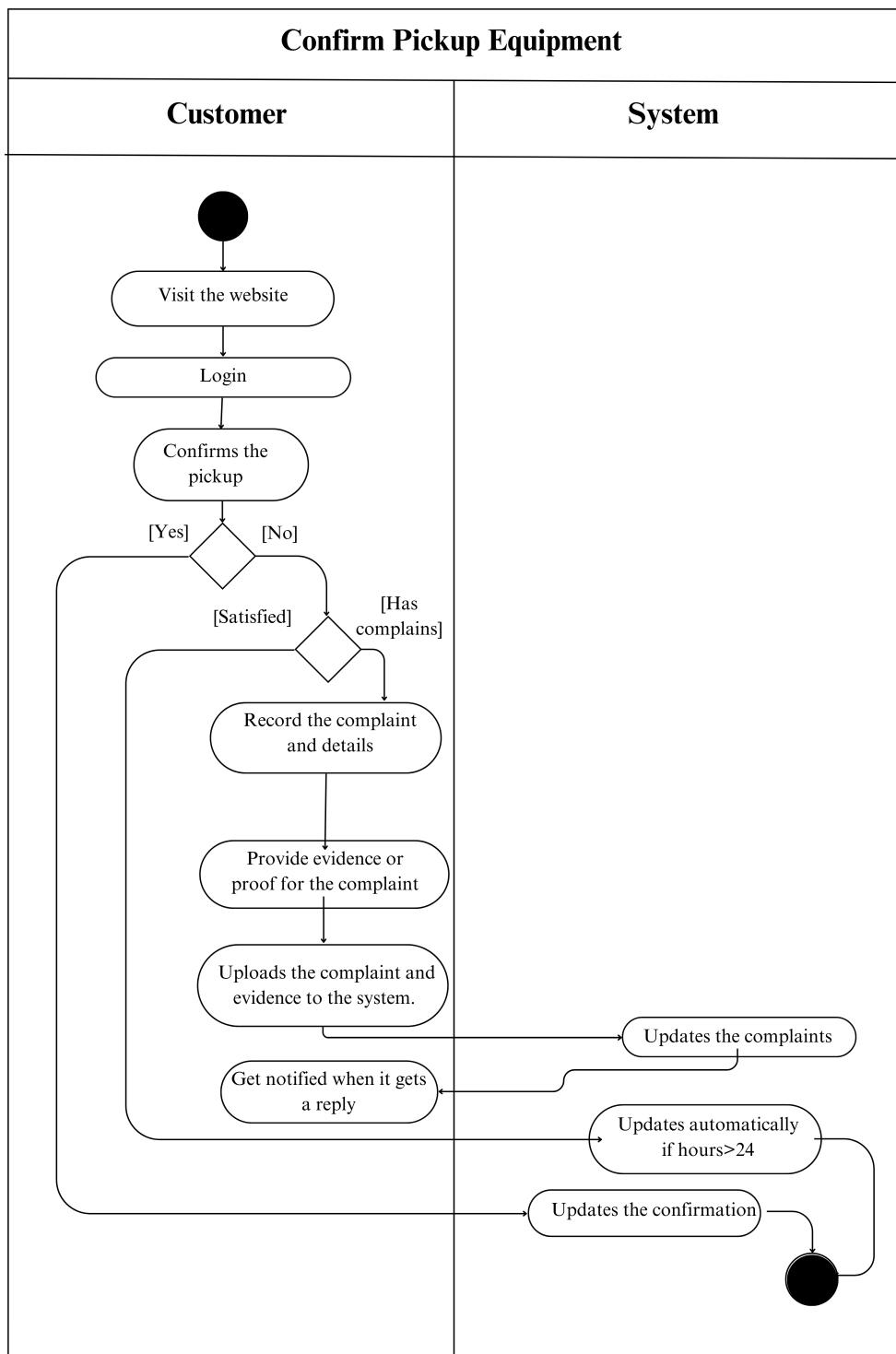


Figure 46: Confirm Pickup Equipment

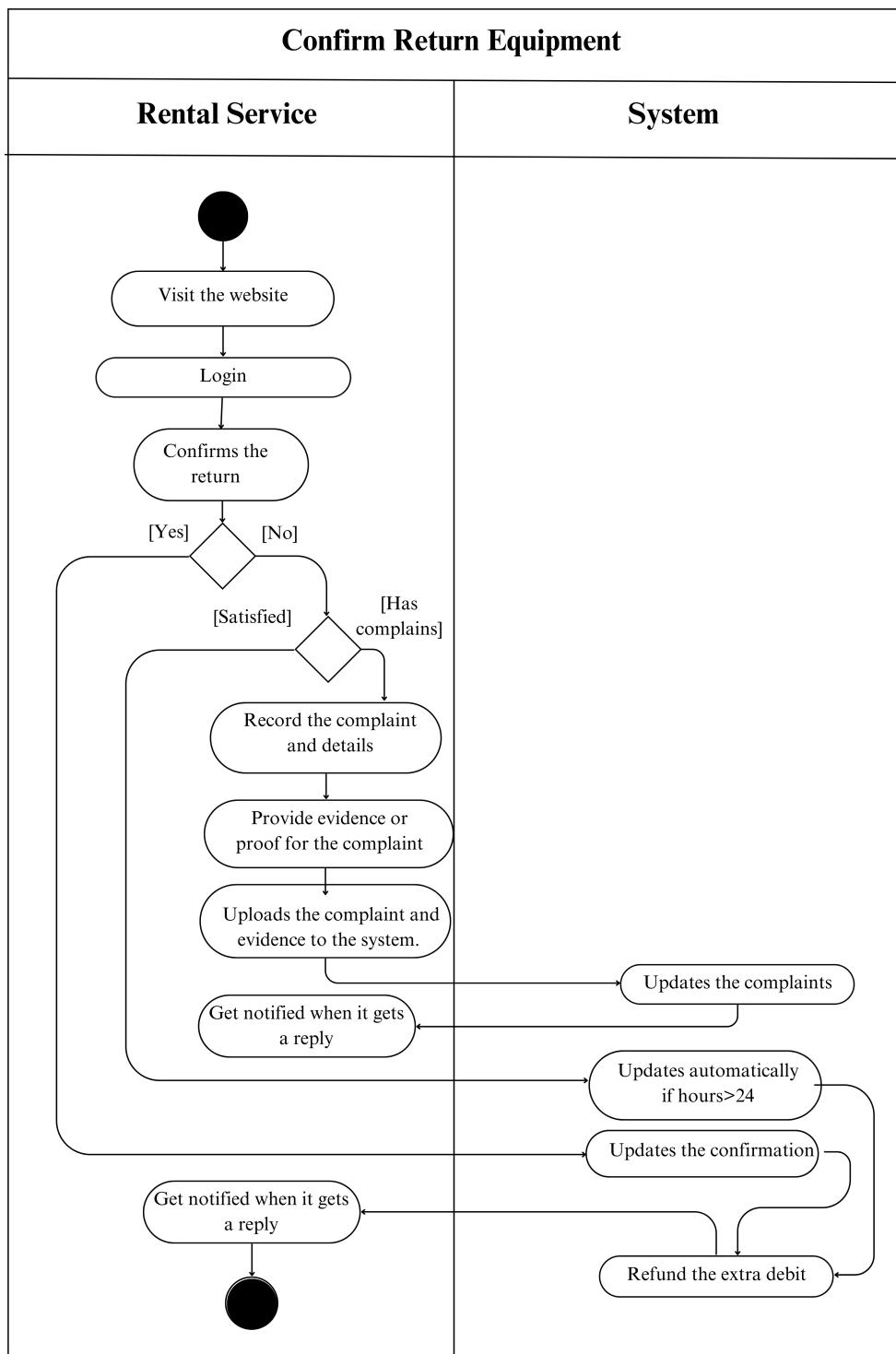


Figure 47: Confirm Return Equipment

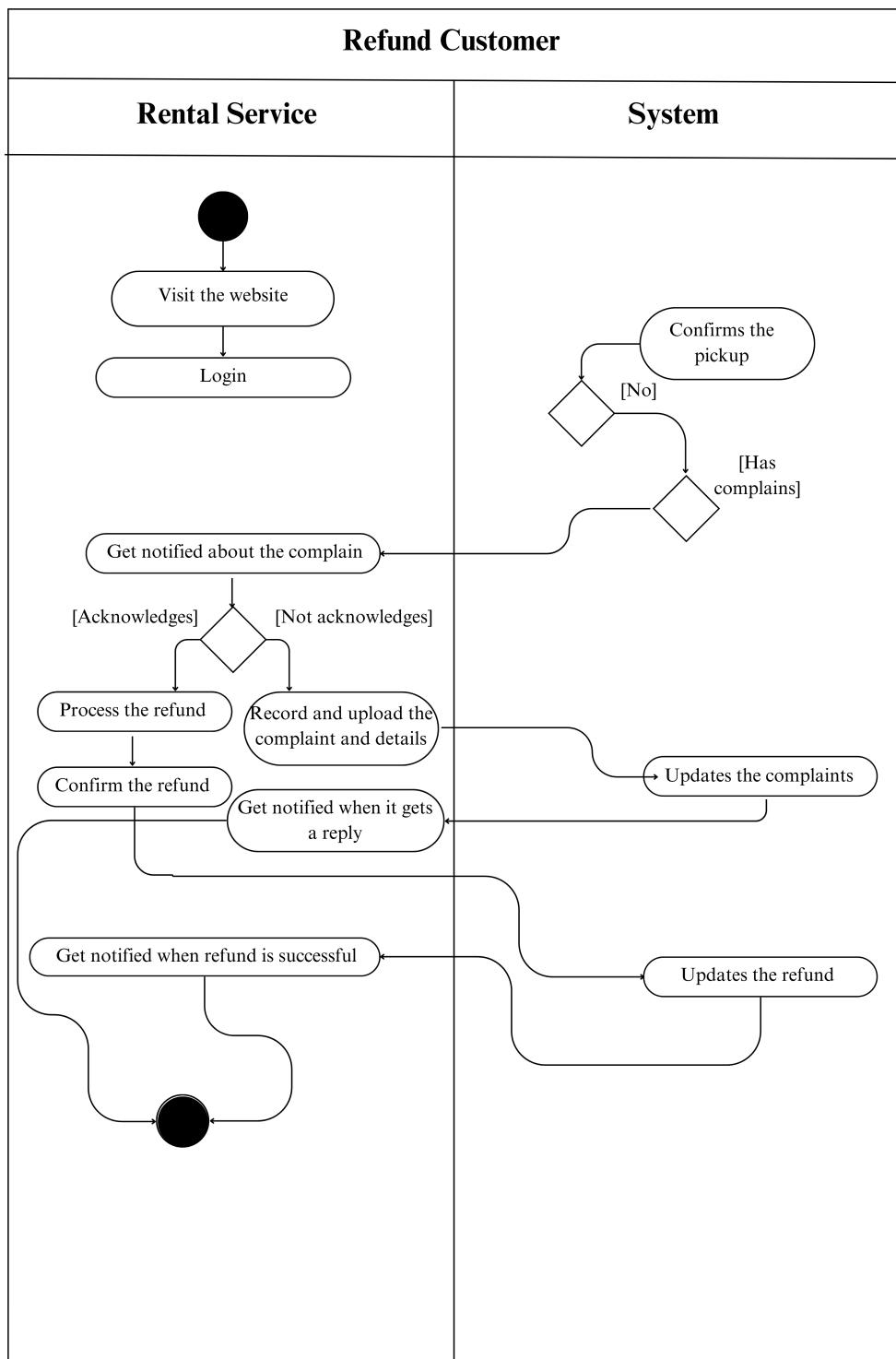


Figure 48: Refund Customer

5.5 State Transition diagrams

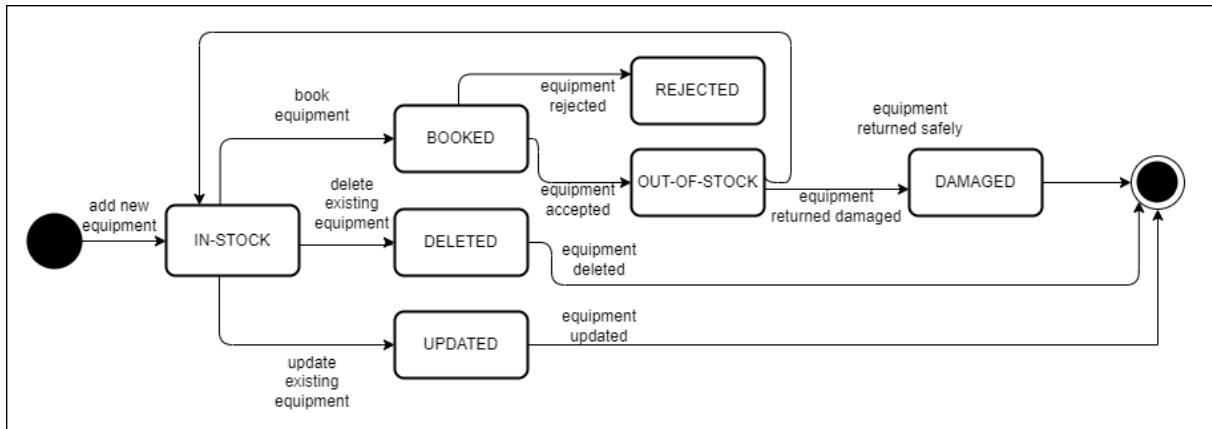


Figure 49: Equipment

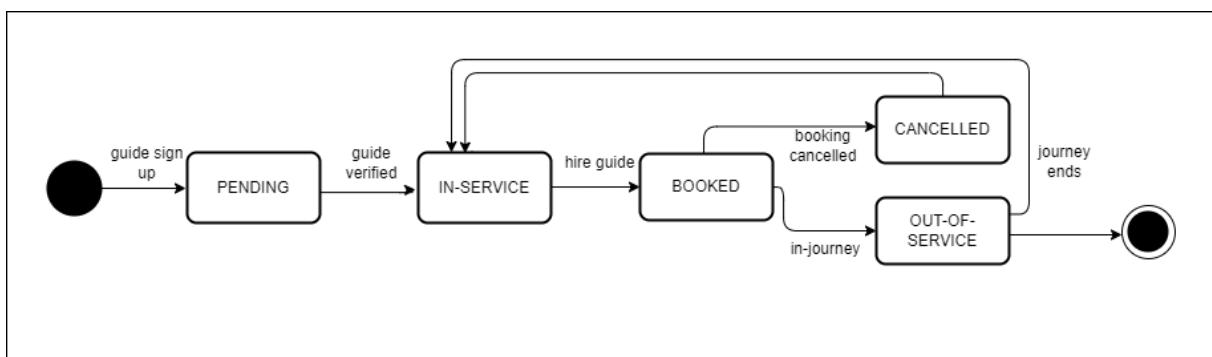


Figure 50: Guide Availability

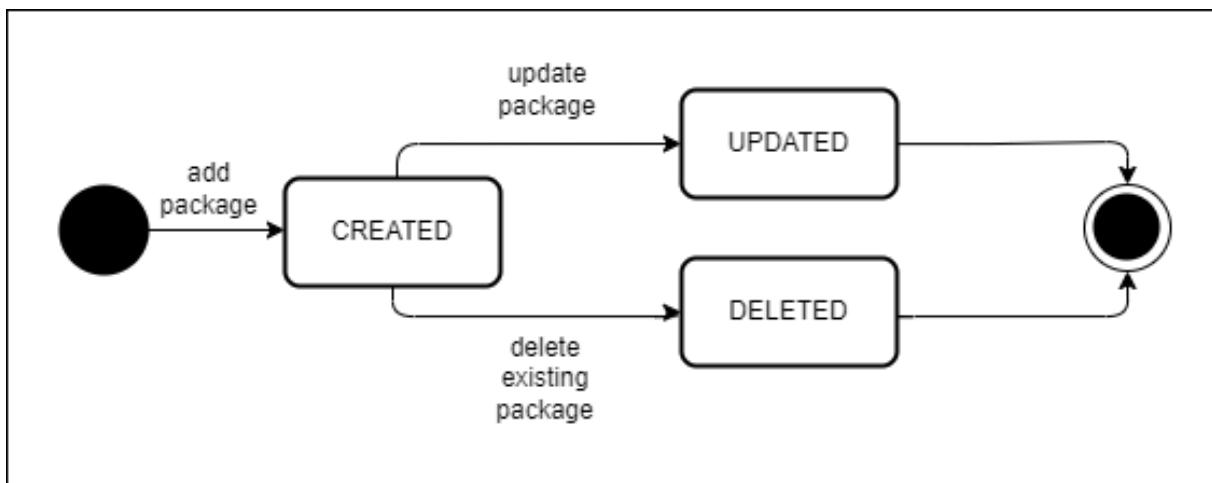


Figure 51: Manage Guide Package

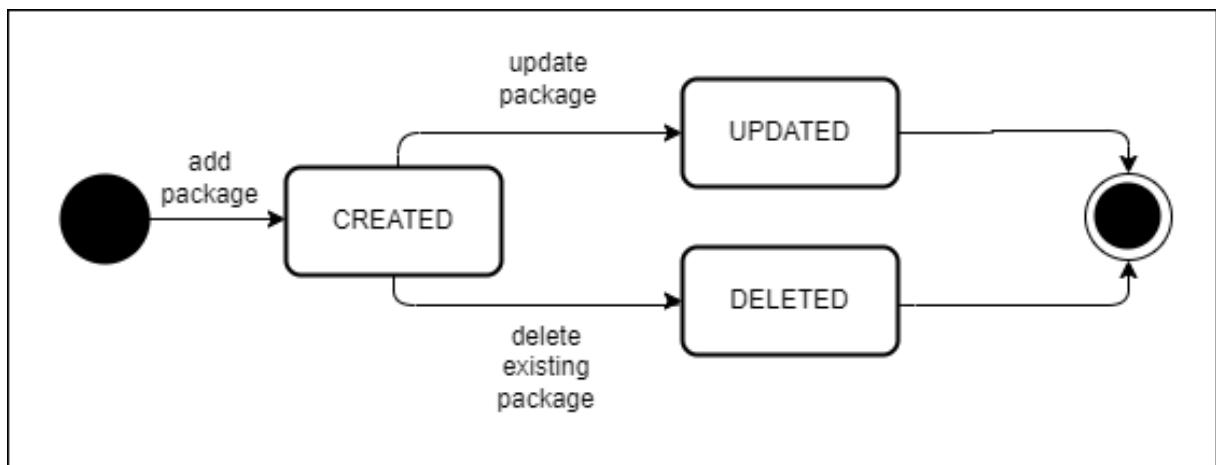


Figure 52: Equipment Booking

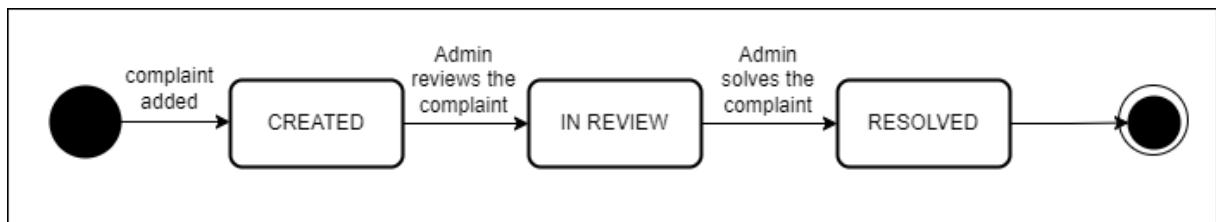


Figure 53: Complaint

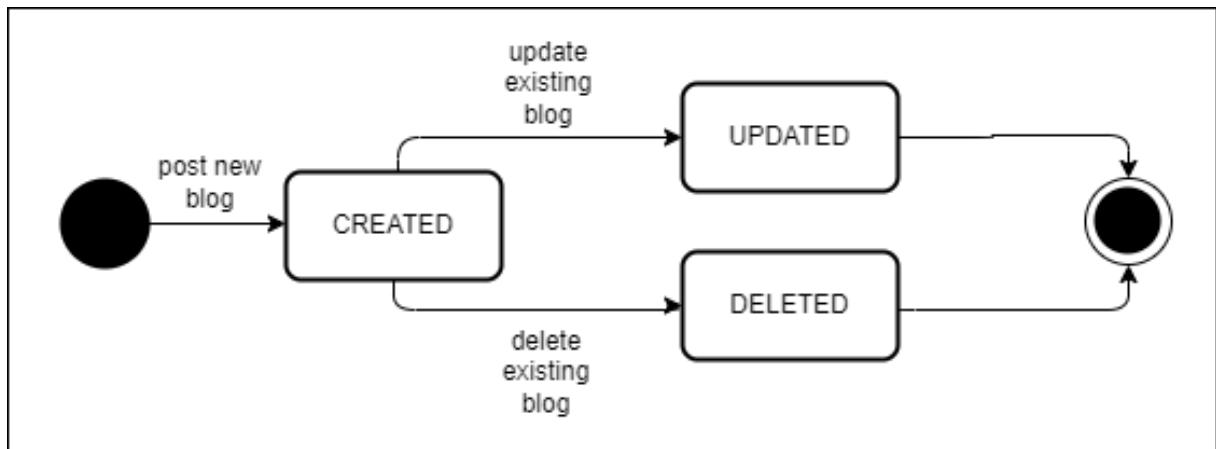


Figure 54: Tips and know-hows

6 Test Cases

Sign up & login

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
1	Unregistered User	Create User Account	1.Fill in the necessary details with valid data 2.Click signup	Creation of a new user account	Pass

Table 28: Create User Account

Actual Result

The screenshot shows a Windows desktop environment with a taskbar at the bottom containing various application icons. An open browser window displays a 'Customer Sign Up' form for the 'wanderlust' website. The form fields are filled with sample data: Name (Jay), Mobile Number (0112455677), Address (Nugegoda, Sri Lanka), NIC (2001991006544), Email (customer7@wl.com), and Password (admin@1234). The 'Sign Up' button is visible at the bottom of the form.

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
2	Unregistered User	Create user account with invalid data	1.Fill in the necessary details with invalid data 2.Click signup	Not allowing to create a new user account	Pass

Table 29: Create User Account - Invalid Data

Actual Result

The screenshot shows a 'Customer Sign Up' form on a 'Wanderlust' website. The form fields are filled as follows:

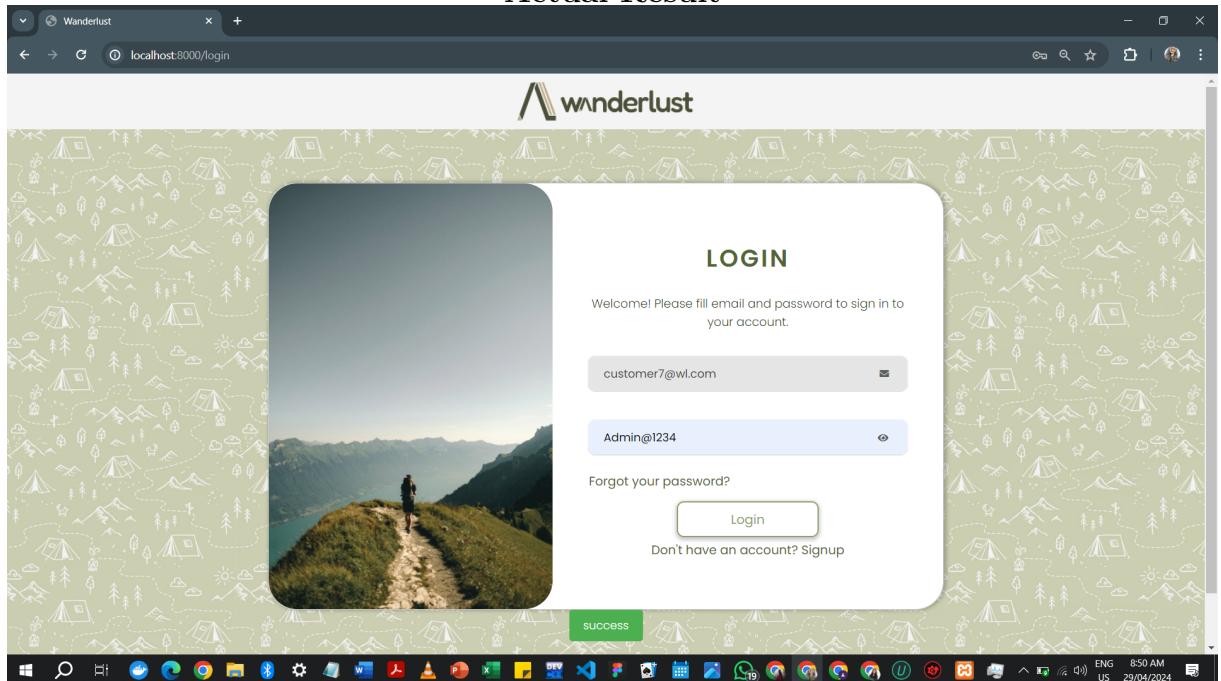
- Name: Jay
- Mobile Number: 0112455677
- Address: Nugegoda, Sri Lanka
- NIC: 2001991006544 (highlighted in red)
- Email: customer7@wl.com
- Password: admin@1234

A red error message at the bottom of the form states: "Invalid NIC number. Please enter a valid NIC number ending with 'V' or 'X'." The browser's status bar shows the URL as "localhost:8000/signup".

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
3	Customer	Login scenario with valid user	1.Fill in the correct email address and the password 2.Click login	Login to the account	Pass

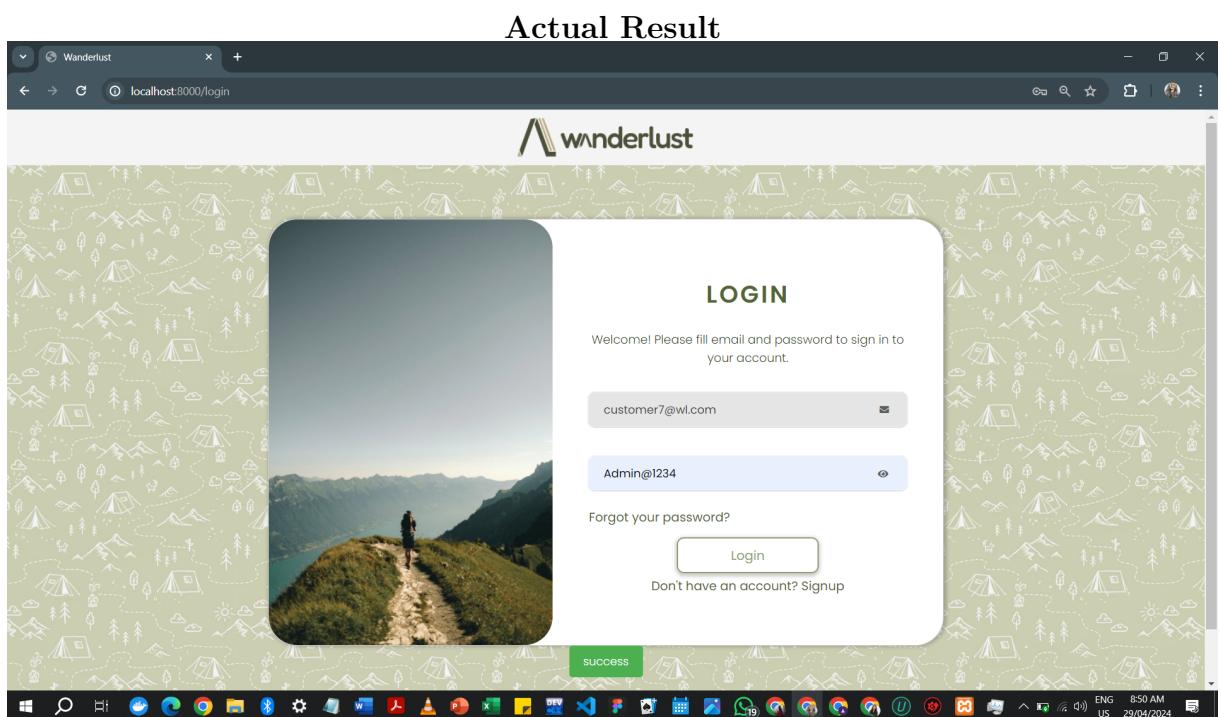
Table 30: Login

Actual Result



TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
4	Customer	Login scenario with valid user	1.Fill in the correct email address and the password 2.Click login	Login to the account	Pass

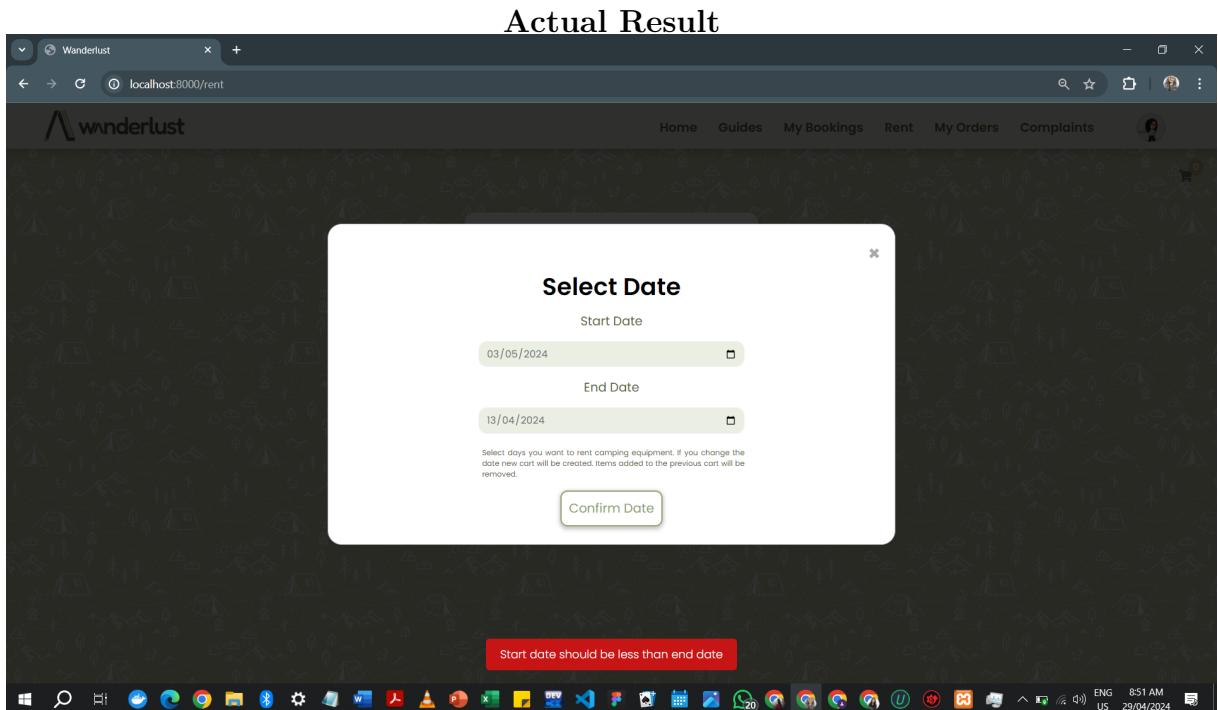
Table 31: Login with invalid Credentials



Searching for Equipment

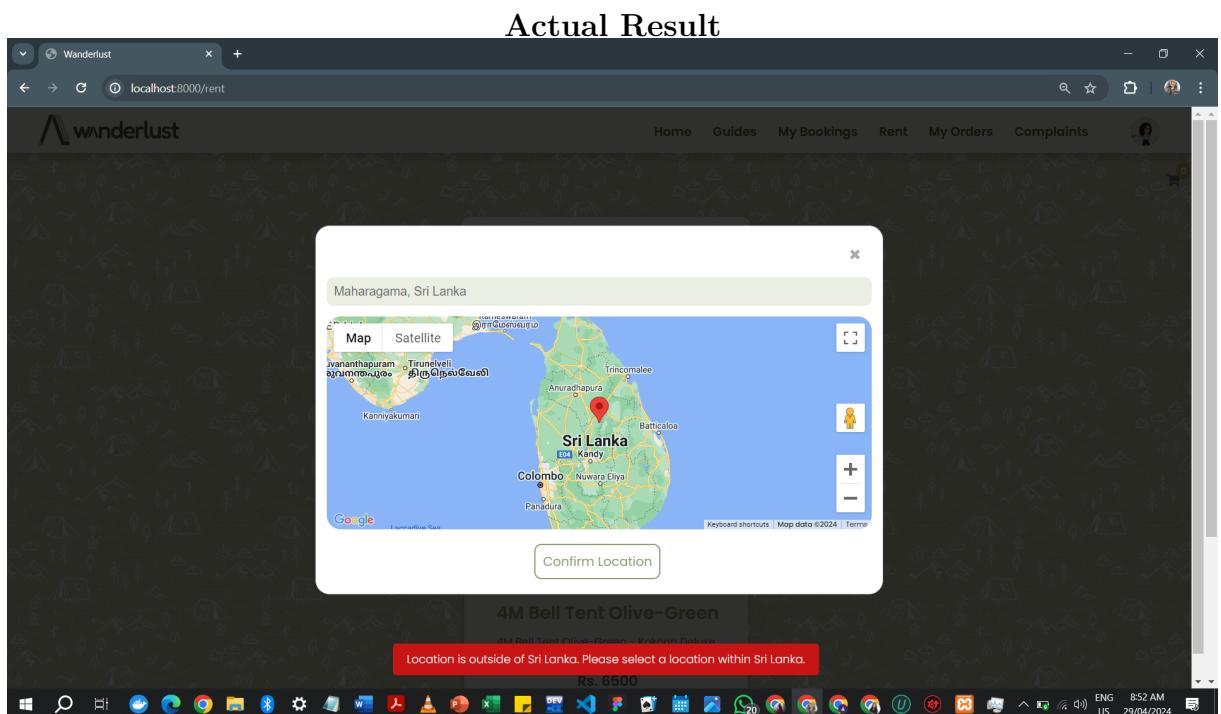
TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
5	Customer	Selecting invalid time range for renting period	Selecting a time period of end date coming before the start date	Error message	Pass

Table 32: Equipment search with invalid time



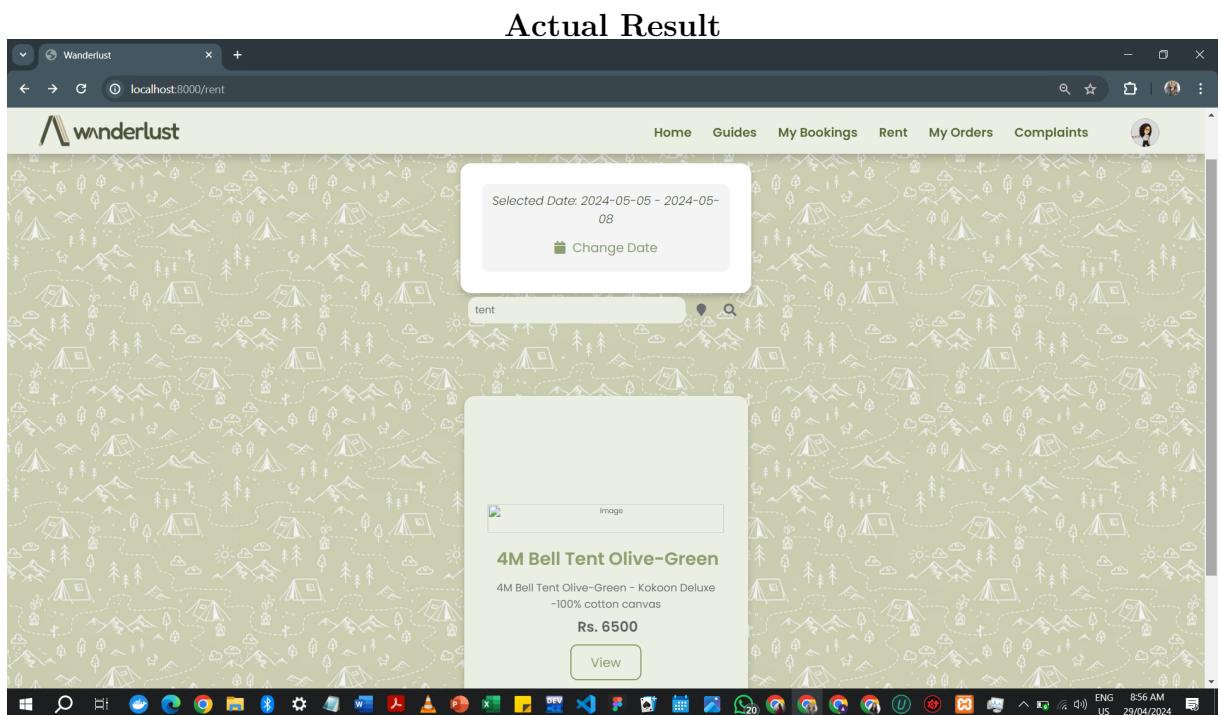
TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
6	Customer	Invalid place for location	Selecting a place out of Sri Lankan borders	Error message	Pass

Table 33: Equipment search with invalid place



TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
7	Customer	Equipment Search with valid inputs	1.Fill in valid date, location and item name 2.Click search	Available equipment	Pass

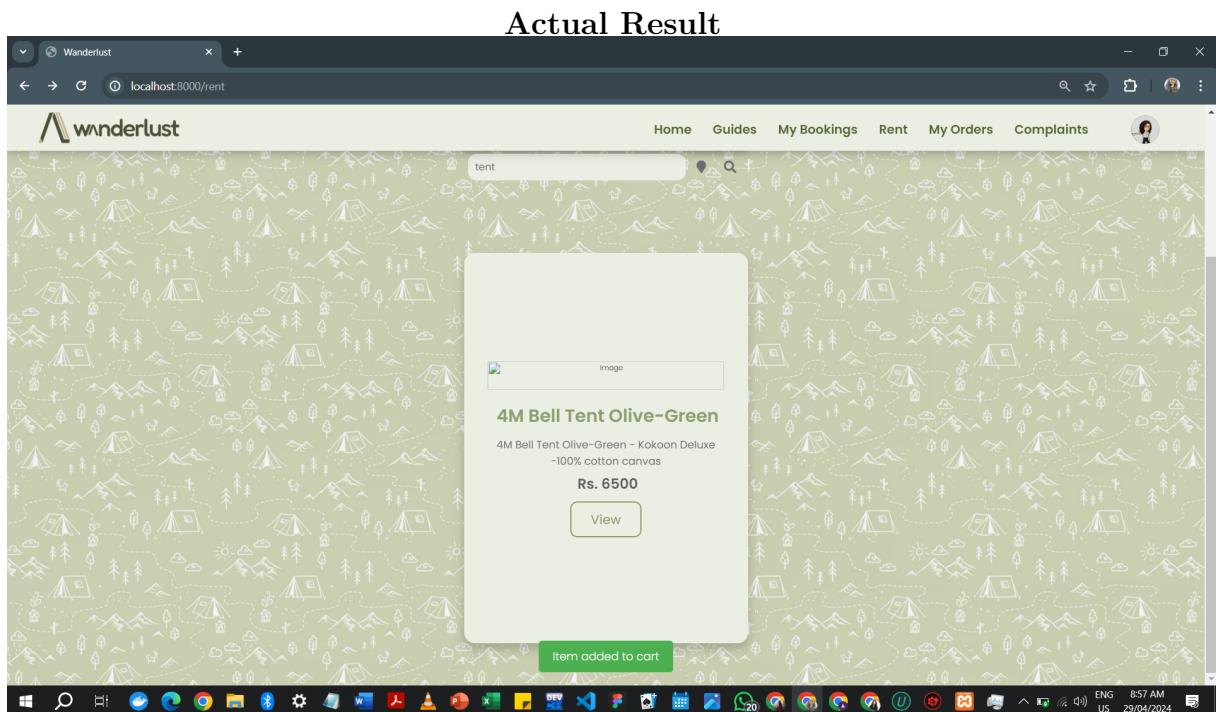
Table 34: Equipment search with valid details



Booking and Buying Equipment

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
8	Customer	Adding the item to cart	1.Select the item 2.Click add to cart	Item gets added to the cart	Pass

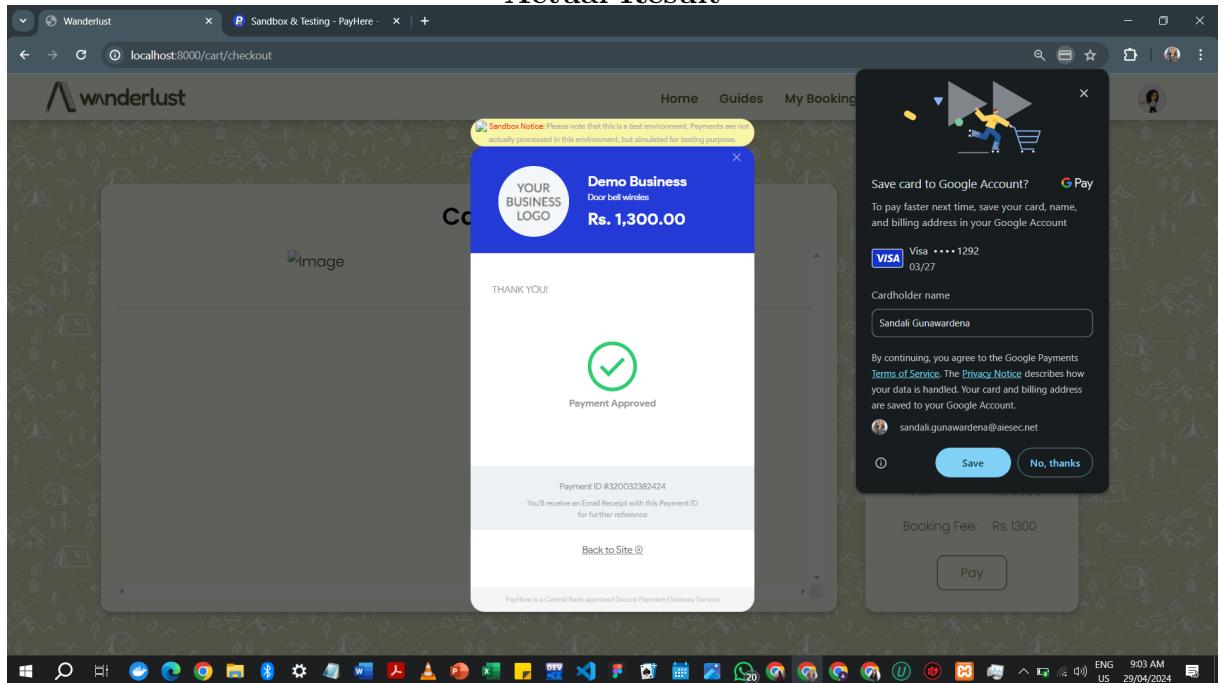
Table 35: Adding the item to cart



TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
9	Customer	Buying equipment	1.Select cart 2.Click payment method 3.Give necessary details 4.Click pay‘	Payment is approved and order is pending	Pass

Table 36: Buying Equipment

Actual Result

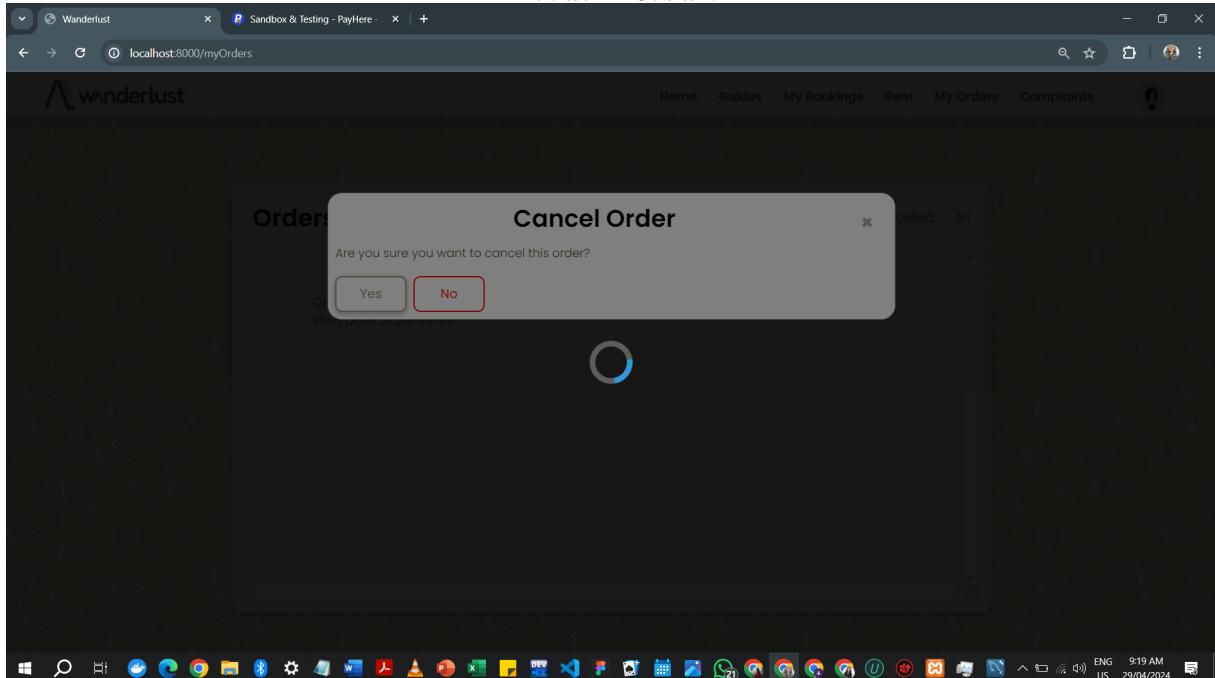


Cancel orders

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
10	Customer	Cancelling order	1.Select the order 2.Select cancel order 3.Confirm cancellation	Order gets cancelled	Pass

Table 37: Cancel orders

Actual Result



Search for guides

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
11	Customer	Searching for guides order	1.Input date, location, and number of people 2.Click search	Available guides are displayed	Pass

Table 38: Search for guides

Actual Result

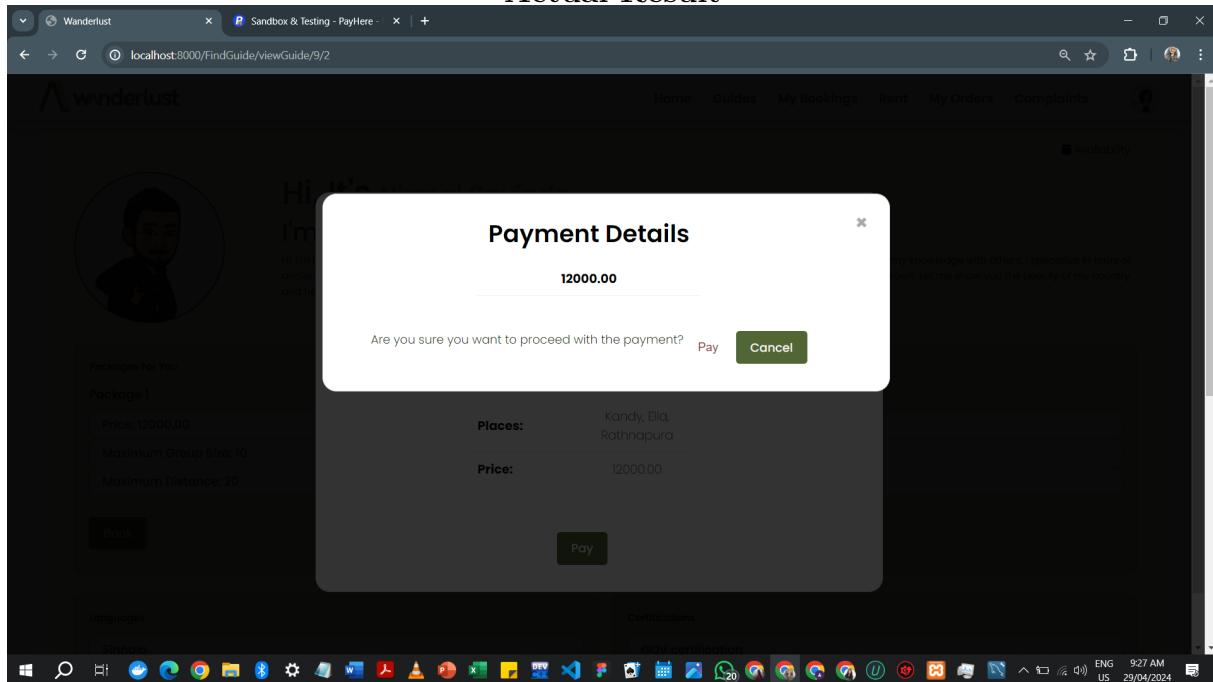
The screenshot shows a web browser window with the title "Wanderlust" and the URL "localhost:8000/findGuide". The page has a dark header with navigation links: Home, Guides, My Bookings, Rent, My Orders, Complaints, and a user icon. Below the header is a search form with fields for Location (Kandy), No of People (5), Transport Supply (checked), and a search button. A green button labeled "View Guide" is visible. The main content area displays a circular profile picture of a man with the name "9" below it. Below the profile, the text reads: "Nirmal Savinda, Sinhala, English, Tamil, Ella, Kandy, Kandy, Ella, Rathnapura, View Guide". The taskbar at the bottom shows various application icons.

Book guides

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
12	Customer	Booking guides	1.Select the guide and the required package 2.Click book 3.Confirm payment 4.Fill the necessary payment details 5.Make payment	Guide is booked	Pass

Table 39: Book guides

Actual Result

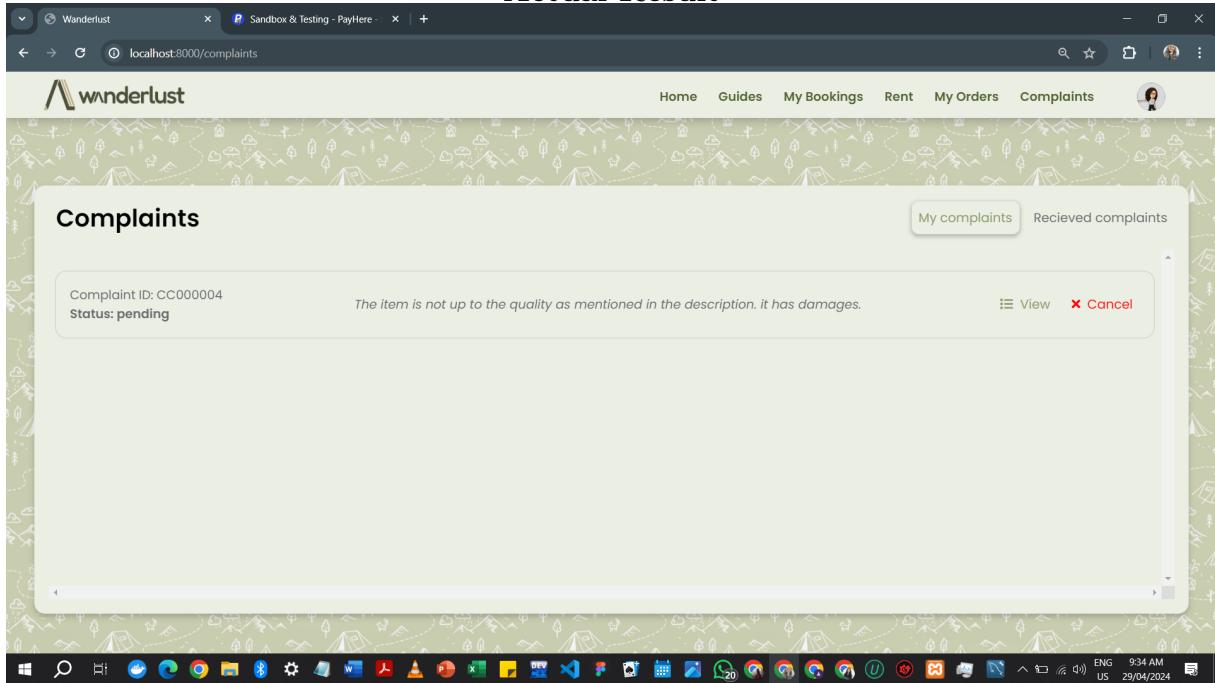


Make complaints

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
13	Customer	Making complaints of rented items	1.Select My Orders 2.Go to upcoming tab 3.Click complain if the required item 4.Make the complaint	Complaint is in "Complains" page	Pass

Table 40: Make complaints

Actual Result

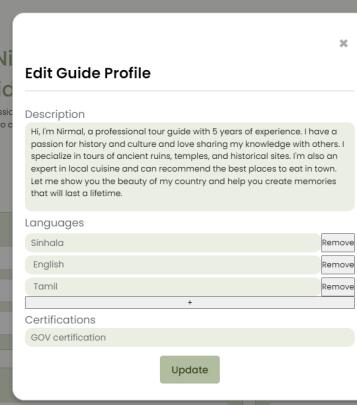


Guide Profile Editing

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
14	Guide	Profile editing	1.Select 'Edit Profile' 2.Enter the new details 3.Click Update	Profile is updated	Pass

Table 41: Edit profile

Actual Result



The screenshot shows a browser window titled 'Wanderlust' with the URL 'localhost:8000/guideprofile'. On the left, there's a sidebar with navigation links: Dashboard, My Guide Profile, My Packages, Availability, Bookings, Complaints, Statistics, and Settings. The main content area displays a 'My Guide Profile' page for a guide named 'Nirmal Savinda'. It features a profile picture, a bio message 'Hi, I'm Nirmal, a professional tour guide with 5 years of experience. I have a passion for history and culture and love sharing my knowledge with others. I specialize in tours of ancient ruins, temples, and historical sites. I'm also an expert in local cuisine and can recommend the best places to eat in town. Let me show you the beauty of my country and help you create memories that will last a lifetime.', and sections for 'Languages' (Sinhala, English, Tamil) and 'Certifications' (GOV certification). A modal window titled 'Edit Guide Profile' is open over the main content, showing the same bio text and language/certification sections.

Updating Calendar Availability

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
15	Guide	Invalid calendar availability update	1.Select an old date to update the calendar availability	Calendar is not responding	Pass

Table 42: Invalid calendar availability update

Actual Result

The screenshot shows a web application titled "Availability" under "Wanderlust". The URL is "localhost:8000/guideAvailability". On the left, there is a sidebar with a user profile for "Nirmal Savinda" and links for Dashboard, My Guide Profile, My Packages, Availability, Bookings, Complaints, Statistics, and Settings. The main content area displays a calendar for April 2024. Several dates are highlighted in green, including 15, 16, 20, 21, 22, 23, 24, 25, 26, 27, 28, and 29. Below the calendar, there is a message: "Update your Availability". The taskbar at the bottom shows various application icons.

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
16	Guide	Valid calendar availability update	1.Select a valid date to update 2.Click Update	Calendar availability is updated	Pass

Table 43: Valid calendar availability update

Actual Result

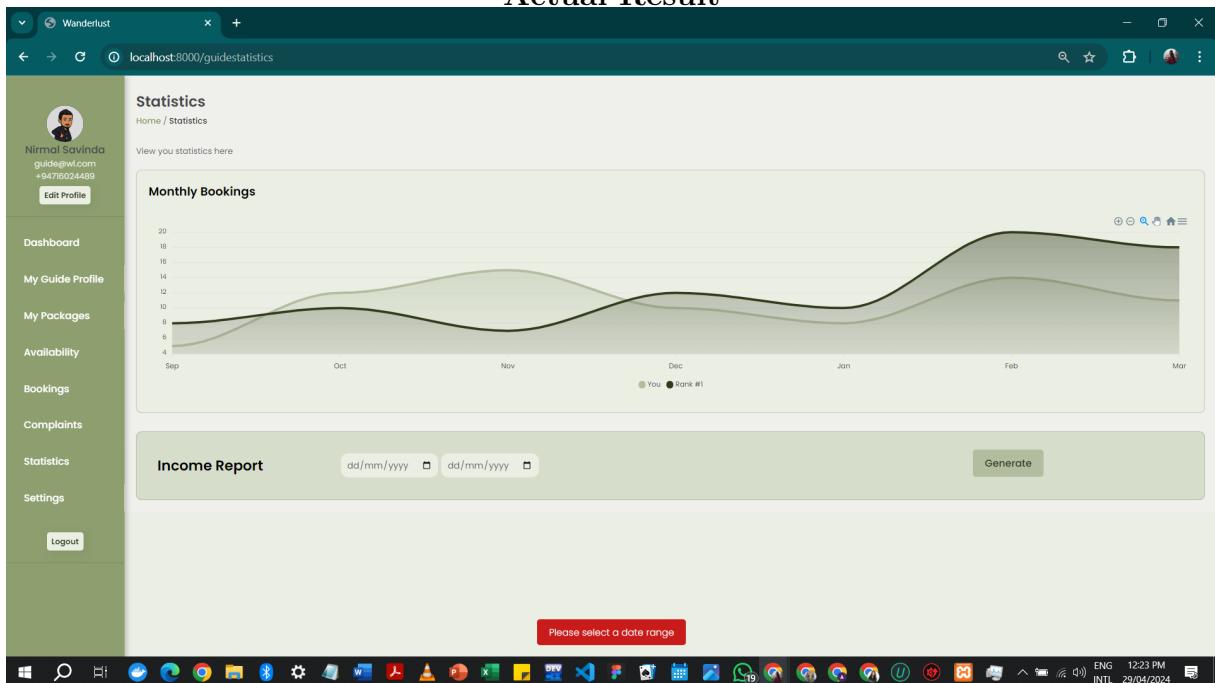
The screenshot shows a browser window for the 'Wanderlust' application at 'localhost:8000/guideAvailability'. The user profile 'Nirmal Savinda' is visible on the left. A modal window titled 'Availability' is open, showing a date picker for May 2024. The date 'May 3, 2024' is selected. The 'Availability' field has a checked checkbox. A green success message at the bottom of the modal says 'Availability updated successfully'. The status bar at the bottom right shows the date as 29/04/2024.

Report Generation

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
18	Guide	Invalid Report generation	1. Selecting an invalid time range for the input 2. Click Generate Report	Error message pops up	Pass

Table 44: Invalid data given for the report

Actual Result



TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
19	Guide	Valid Report generation	1. Selecting a valid time range for the input 2. Click Generate Report	Report is generated	Pass

Table 45: Valid data given for the report

Actual Result

Wanderlust

Monthly Income Report for Nirmal Savinda
2024-04-29

Name: Nirmal Savinda
Address: Colombo

Month	Income (Rs.)
Total	Rs.0.00
Service Fee	Rs.0.00
Net Income	Rs.0.00

This report was generated by the system on 2024-04-29
Verify at: https://localhost:8000/reports/income_report_662f4fc5c3a7b.pdf

Equipment Handling

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
20	Rental Services	Valid Equipment adding	1.Click 'Add new' 2.Input valid data for the fields 3.Click 'Add equipment'	Equipment is added successfully	Pass

Table 46: Valid equipment added

Actual Result

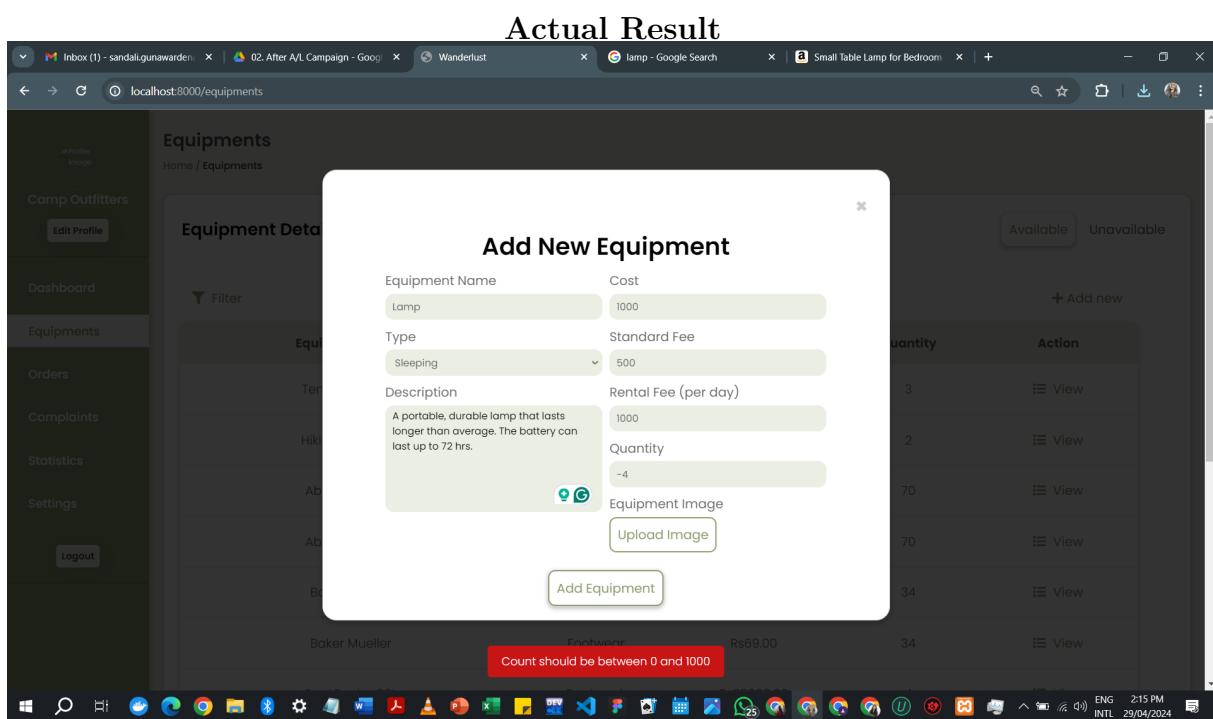
The screenshot shows a web application interface for managing equipment. On the left, there is a sidebar with navigation links: Profile, Camp Outfitters, Dashboard, Equipments (which is currently selected), Orders, Complaints, Statistics, Settings, and Logout. The main content area has a header 'Equipments' and a sub-header 'Equipment Details'. It features a 'Filter' button and two buttons for 'Available' and 'Unavailable' equipment status. Below is a table with columns: Equipment Name, Type, Cost, Quantity, and Action (with a 'View' button). The table contains six rows of equipment data. At the bottom right of the table, there is a green success message box that says 'Equipment added successfully'.

Equipment Name	Type	Cost	Quantity	Action
Tent - 2 Persons	Tent	Rs3040.00	3	
Hiking Backpack	Backpack	Rs14000.00	2	
Abbot Jimenez	Cooking	Rs85.00	70	
Abbot Jimenez	Cooking	Rs85.00	70	
Baker Mueller	Footwear	Rs69.00	34	
Baker Mueller	Footwear	Rs69.00	34	

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
21	Rental Services	Invalid Equipment adding	1.Click 'Add new' 2.Input invalid data (invalid name or negative count) 3.Click 'Add equipment'	Error message pops	Pass

Table 47: Invalid equipment added

Actual Result

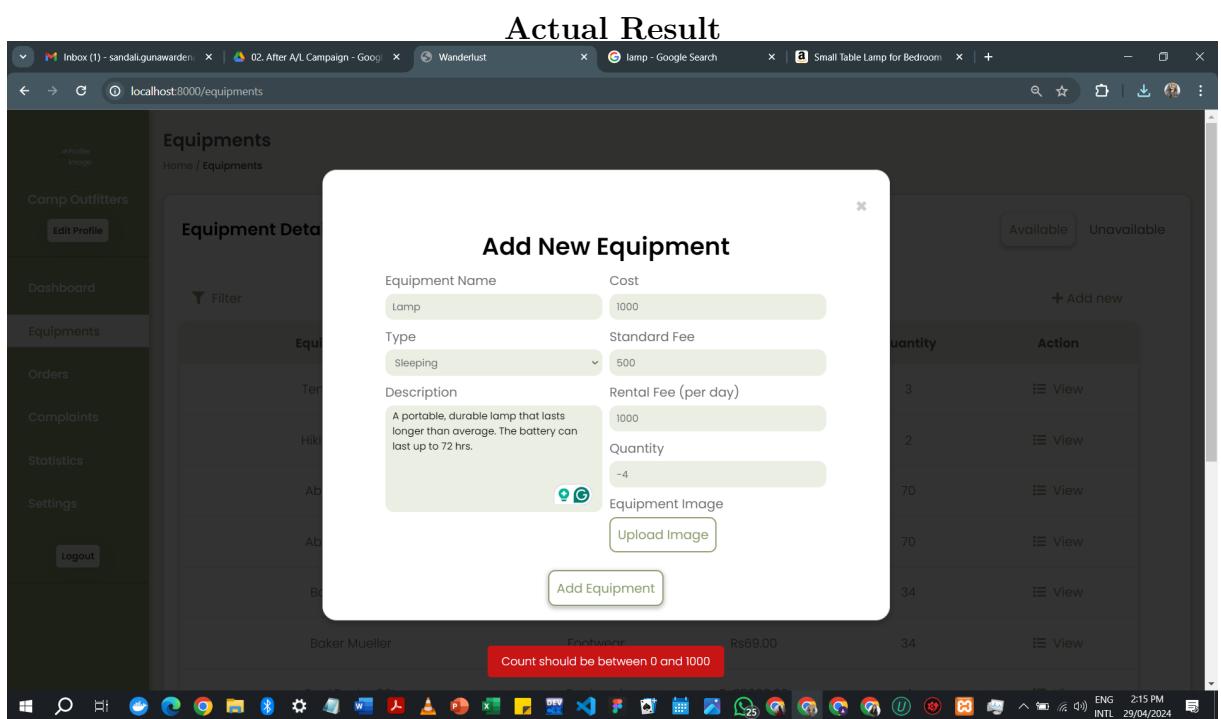


The screenshot shows a 'Camp Outfitters' application interface. A modal window titled 'Add New Equipment' is open. Inside the modal, there are several input fields and a description area. The 'Quantity' field contains '-4', which is highlighted in red, indicating an error. A red validation message at the bottom of the modal states: 'Count should be between 0 and 1000'. The background shows a list of existing equipment items with columns for Name, Cost, Type, Rental Fee, Quantity, and Action.

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
21	Rental Services	Invalid Equipment adding	1.Click 'Add new' 2.Input invalid data (invalid name or negative count) 3.Click 'Add equipment'	Error message pops	Pass

Table 48: Invalid equipment added

Actual Result



The screenshot shows a 'Camp Outfitters' application interface. On the left is a sidebar with 'Camp Outfitters' branding and links for 'Edit Profile', 'Dashboard', 'Equipments' (which is selected), 'Orders', 'Complaints', 'Statistics', 'Settings', and 'Logout'. The main area has a dark header 'Equipments' and a sub-header 'Equipment Details'. A modal window titled 'Add New Equipment' is open. Inside the modal, there are several input fields and dropdowns with their current values: 'Equipment Name' (Lamp), 'Cost' (1000), 'Type' (Sleeping), 'Standard Fee' (500), 'Rental Fee (per day)' (1000), and 'Quantity' (-4). Below these fields is a 'Description' box containing the text: 'A portable, durable lamp that lasts longer than average. The battery can last up to 72 hrs.' There is also a 'Equipment Image' section with a placeholder 'Upload Image' button. At the bottom of the modal is a green 'Add Equipment' button. A red error message at the bottom of the modal states: 'Count should be between 0 and 1000'. In the background, a table lists equipment items with columns for Name, Cost, Type, Standard Fee, Rental Fee, Quantity, Action, and View. The table shows items like 'Baker Mueller' (Cost: Rs69.00, Type: Tent, Standard Fee: 34) and 'Small Table Lamp for Bedroom' (Cost: 70, Type: Lamp, Standard Fee: 70). The status bar at the bottom right shows 'ENG 2:15 PM INTL 29/04/2024'.

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
22	Rental Services	Equipment deleting	1. Click 'View' 2. Select 'Delete' 3. Confirm deletion	Equipment is deleted	Pass

Table 49: Equipment deleting

Actual Result

The screenshot shows a web browser window with a sidebar menu on the left. The sidebar includes options like 'Camp Outfitters' (with 'Edit Profile'), 'Dashboard', 'Equipments' (which is selected and highlighted in green), 'Orders', 'Complaints', 'Statistics', 'Settings', and 'Logout'. The main content area displays a table of equipment items with columns for Name, Category, Price, Quantity, and a 'View' button. One row for a 'Lamp' has been deleted, and a green success message at the bottom states 'Equipment deleted successfully'.

Name	Category	Price	Quantity	Action
Hiking Backpack (80L)	Backpack	Rs17000.00	5	View
Zempire Mono Hiking Tent	Tent	Rs25000.00	7	View
Camping Cookware Set	Cooking	Rs11500.00	3	View
Lamp	Sleeping	Rs1000.00	5	View
Lamp	Sleeping	Rs1000.00	5	View
Lamp	Sleeping	Rs1000.00	2	View
Lamp	Sleeping	Rs1000.00	2	View
Lamp	Sleeping	Rs1000.00	2	View
Lamp	Other	Rs1000.00	5	View
Lamp	Other	Rs1000.00	5	View

Equipment deleted successfully

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
23	Rental Services	Increase equipment count	1. Click 'View' 2. Select 'Increase Quantity' 3. Confirm quantity	Equipment count is increases	Pass

Table 50: Increase equipment count

Actual Result

Name	Type	Price	Count	Action
Hiking Backpack (80L)	Backpack	Rs17000.00	5	View
Zempire Mono Hiking Tent	Tent	Rs25000.00	7	View
Camping Cookware Set	Cooking	Rs11500.00	3	View
Lamp	Sleeping	Rs1000.00	5	View
Lamp	Sleeping	Rs1000.00	5	View
Lamp	Sleeping	Rs1000.00	2	View
Lamp	Sleeping	Rs1000.00	2	View
Lamp	Sleeping	Rs1000.00	2	View
Lamp	Other	Rs1000.00	5	View
Lamp	Other	Rs1000.00	5	View

Count increased successfully

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
24	Rental Services	Making equipment unavailable	1.Click 'View' 2.Select 'Manage items' 3.Select 'Manage' icon of the relevant item 4.Select desired option	Equipment is made unavailable permanently/temporarily	Pass

Table 51: Making equipment unavailable

Actual Result

The screenshot shows a 'Manage Items' modal window open over a dark-themed application interface. The modal contains a table with columns: Number, Status, Upcoming booking count, and Actions. There are four rows of data:

Number	Status	Upcoming booking count	Actions
I000903544	Available	0	Manage
I000909785	Available	0	Manage
I000903189	Available	0	Manage
I000901710	Available	0	Manage

Below the table, there is a description: "Rechargeable, durable, battery lasts for 72 hrs". To the right of the description is a thumbnail image of a red lantern. Underneath the description, there is a "Quantity" field set to "5". At the bottom of the modal, there are buttons for "Edit", "+ Increase Quantity", and "Manage Items". A green success message "Item made unavailable permanently" is displayed at the bottom right.

Order Handling

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
25	Rental Services	Accepting/rejecting customer orders	1.Click 'Orders' 2.Select 'Pending' 3.Select either 'Accept' or 'Reject'	Order status is updated in the customer's account	Pass

Table 52: Accepting/rejecting customer orders

Actual Result

The screenshot shows a web application interface for managing orders. On the left, there is a sidebar with a green background containing navigation links: Profile, Dashboard, Equipments, Orders (which is selected and highlighted in white), Complaints, Statistics, and Settings. Below these is a Logout button. The main content area has a white background and is titled 'Orders'. It shows a sub-navigation bar with links for Pending, Upcoming, Today, Rented, Completed, Cancelled, and All. Below this is a search/filter section with 'Start Date' and 'End Date' fields and a 'Filter' button. A single order is listed in a card: Order ID: 99, Status: pending, Dates: 2024-05-29 - 2024-05-30, Paid Amount: 200.00, Payment Status: completed. To the right of the order card are three buttons: 'View' (grey), 'Accept' (orange with a checkmark), and 'Cancel' (red). The browser's address bar shows 'localhost:8000/orders'. The taskbar at the bottom of the screen displays various application icons.

Complaint Handling

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
26	Rental Services	Complaint Handling	1.Click 'Complaints' 2.Select 'Pending' 3.Select either 'Accept' or 'Reject'	Order status is updated accordingly in the customer's account and rental service's account	Pass

Table 53: Complaint Handling

Actual Result

The screenshot shows a web application interface for 'Wanderlust'. The URL is `localhost:8000/complaints`. The left sidebar has a green background and contains the following menu items:

- Profile (Image)
- Camp Outfitters
- Dashboard
- Equipments
- Orders
- Complaints (selected)
- Statistics
- Settings
- Logout

The main content area has a white background and displays the following information:

Complaints

Home / Complaints

Complaints

Pending Accepted Rejected Resolved Cancelled

Complaint ID: 4
Status: resolved

View

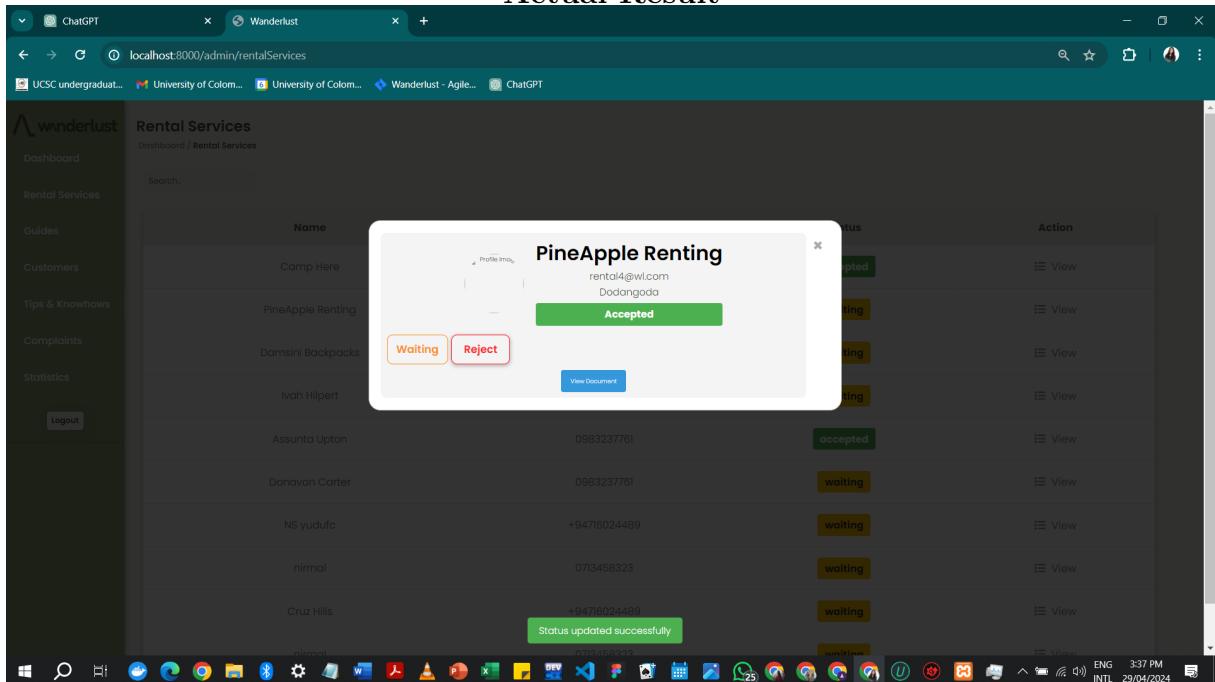
The status 'Resolved' is highlighted in a blue box. The bottom of the screen shows a Windows taskbar with various icons and system status.

User Handling

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
27	Admin	User Handling - Rental Shops	1.Select 'Rental Shops' 2.Click 'View' of the specific Rental shop 3.Select 'Accept' or 'Reject'	User status is updated accordingly	Pass

Table 54: User Handling - Rental Shops

Actual Result



TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
28	Admin	User Handling - Guide	1.Select 'Guides' 2.Click 'View' of the specific Guide 3.Select 'Accept' or 'Reject'	User status is updated accordingly	Pass

Table 55: User Handling - Guides

Actual Result

The screenshot shows the 'Guides' section of the Wanderlust application. A modal window is open for a guide named Webster King. The modal displays the guide's name, email (youokeditata067@gmail.com), address (53994 Dayna Estate), and current status (Waiting). There are two buttons: 'Rejected' (orange) and 'Accept' (blue). Below the buttons is a 'View Document' link. At the bottom of the modal, a green success message says 'Status updated successfully'. In the background, there is a list of other guides with their names, phone numbers, and statuses. The statuses include 'Accepted' and 'Waiting'. Each guide entry has a 'View' button next to it.

TID	User Role	Scenario Description	Steps to Execute	Expected Result	Status
29	Admin	Resolving Complaints	1.Select 'Complaints' 2.Click the relevant user 3.Select 'Resolve' or 'Reject'	Complaint status is updated accordingly	Pass

Table 56: Resolving Complaints

Actual Result

The screenshot shows the 'Complaints' section of the Wanderlust application's admin interface. The URL in the browser is `localhost:8000/admin/complains`. The main content area displays a table with a single row of data. The table has columns for 'Pending', 'Accepted', 'Rejected', and 'Resolved'. The 'Resolved' button is highlighted. Below the table, there is a message: 'Complaint ID: 4' and 'Status: resolved'. The left sidebar contains a navigation menu with links for Dashboard, Rental Services, Guides, Customers, Tips & Knowhows, Complaints, and Statistics. The 'Logout' button is also visible in the sidebar.

7 Individual Contribution

7.1 Member #1

Student Index Number: 21001792

Student Name: SAVINDA H.W.N.

Components implemented:

- Equipment management
- Orders management
- Rental Services search component
- Payment Gateway

Description of the component(s):

- Equipment management – Rental Shops can add, update, view, remove, increase count, temporarily disable equipment from the inventory.
- Orders management – Customers can place orders, cancel orders and the rental shops can accept or reject the orders. The equipment will be marked as rented and returned later on.
- Rental Services search component – by inputting the location, item name and the date, customers can view the most relevant and available items to the search.
- Payment Gateway – Customer paying for orders

7.2 Member #2

Student Index Number: 21000735

Student Name: GUNAWARDENA R.S.U.

Components implemented:

- Dashboard of the admin
- Complaint management by admin
- Managing Tips and Knowhows

Description of the component(s):

- Dashboard of the admin – Statistical charts of users and bookings, Report generation of the income, view modification
- Complaint management by admin – Resolving complaints
- Managing Tips and Knowhows – Add, delete, update Tips and Knowhows

7.3 Member #3

Student Index Number:

Student Name: RAJAPAKSHA S.P.A.G.T.

Components implemented:

- Dashboards of Guide
- Guide profile and package management by Guide
- Guide Availability
- Guide Booking and Filter Guide by Customer

Description of the component(s):

- Guide dashboard - The guide can view a brief summary of his bookings, including income, No of Tours, recent booking, upcoming booking, and the comparison between completed bookings and all bookings.
- Guide Profile and packages management - The guide can edit the profile of the Guide profile that the customer views and add, edit, and delete packages
- Guide Availability - Update Availability of the guide
- Guide Booking - The guide can view the booked days, and the customer can Filter and choose the relevant guide for the customer, select the package, and book the guide.

7.4 Member #4

Student Index Number:

Student Name: SARANI H.A.S.

Components implemented:

- Customer complaint management
- Rental complaint management
- Login page and Signup page
- Customer frontend

Description of the component(s):

- Customer Complaint Management : Customers can complain about rental services, Customers can view the all complaints they have made, Customers can view rejected complaints by admin
- Rental service Complaint Management : Rental services can view received complaints by customers and, resolve and reject complaints by admin, Rental services can complain to customers, Admin can resolve or reject complaints received by both customers and rental services
- Login and signup page, Customer frontend : frontend designs of all pages of the mentioned pages

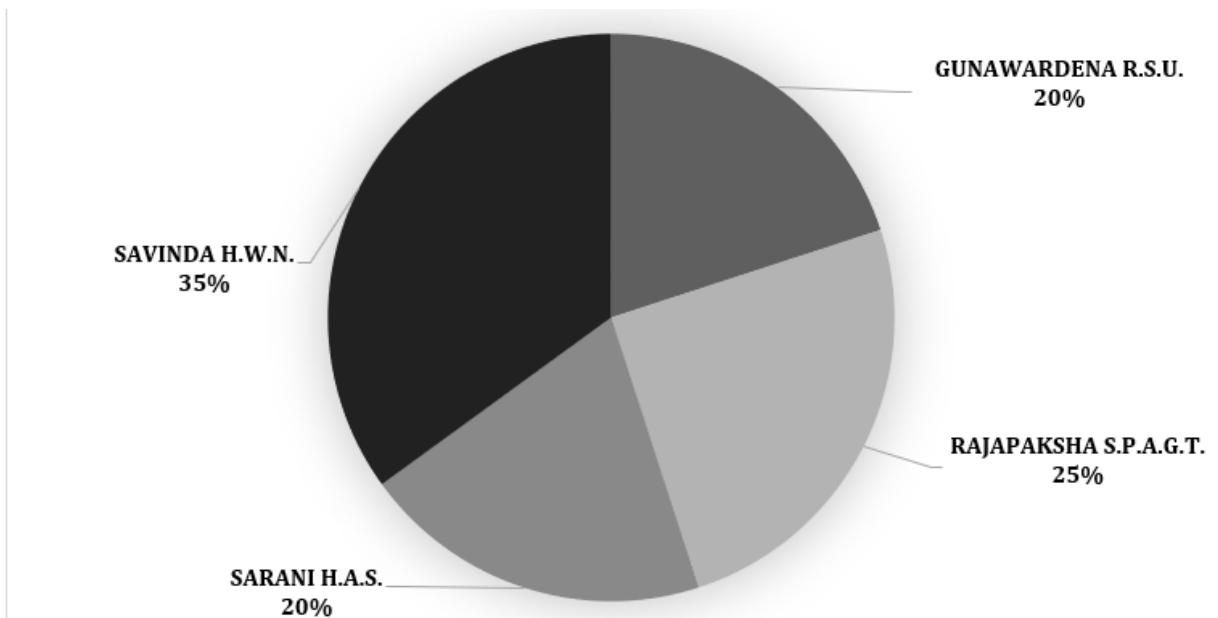
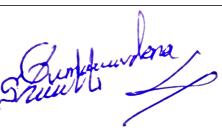


Figure 55: ER diagram

8 Declaration

We as members of the project titled Wanderlust, Certify that we will carry out this project according to the guidelines provided by the coordinators and supervisors of the course, as well as we will not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any university. To the best of our knowledge and brief, the project work will not contain any material previously published or written by another person or ourselves, except where due reference is made in the text of appropriate places.

Name	Index Number	Signature
SAVINDA H. W. N.	21001792	
GUNAWARDENA R.S.U.	21000735	
RAJAPAKSHA S.P.A.G.T.	21001537	
SARANI H.A.S.	21001741	