



JOURNEY BEYOND

Final Report

GROUP IS24

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01. Introduction

1.1 Domain description

The domain of this project lies within **travel and tourism management**, specifically focusing on the development of an integrated, user-friendly **web-based travel planning system** tailored for Sri Lanka. The platform, named “**Journey Beyond**”, is designed to address common inefficiencies in current travel planning practices, where users often need to rely on multiple fragmented sources and service providers to plan their trips.

In this domain, the key stakeholders include local and international travelers, accommodation providers, transport service providers, tour guides, equipment suppliers, and administrative personnel. These users interact within a digital ecosystem that facilitates the **booking of travel services**, including accommodations, vehicles, guides, and travel-related equipment — all from a **single platform**.

The system also emphasizes compliance with **local tourism regulations**, ensuring that only **government-registered service providers** can participate. This not only enhances credibility and safety but also supports the formal tourism economy. The system incorporates features like **location-based recommendations**, **package booking**, **online payments**, and **user feedback**, streamlining the entire travel experience.

By unifying travel service interactions into a single digital space, "Journey Beyond" significantly enhances the **efficiency, convenience, and trustworthiness** of travel planning for both domestic and international tourists visiting Sri Lanka.

1.2 Current system and limitations

In the current travel planning landscape, users often face significant **fragmentation of services**. Travelers must visit multiple websites and platforms to arrange accommodations, transportation, tour guides, and equipment rentals. This **scattered ecosystem** results in **time-consuming** planning processes, **inefficient coordination**, and **confusion**, especially for first-time travelers or tourists unfamiliar with local services.

Furthermore, the lack of a **centralized system** leads to:

- **Difficulty in verifying service provider credibility**, increasing the risk of unreliable services.
- **Limited support for personalized travel experiences**, as users must manually coordinate between different vendors.
- **Inconsistent user interfaces** across platforms, which can be especially challenging for non-tech-savvy users.
- **No integrated payment gateway**, forcing users to make separate transactions for each service.
- **Lack of real-time service availability**, often causing delays or booking failures.

These limitations highlight the need for a **unified platform** like "Journey Beyond" — one that consolidates all travel planning elements into a single, user-friendly environment, allowing for efficient booking, verified services, and a seamless user experience.

02.Goal & objectives

2.1Project Goal

The primary goal of the "Journey Beyond" travel planning system is to develop a **comprehensive and user-friendly web platform** that transforms the travel planning experience for users traveling within Sri Lanka. The system aims to integrate various services — including accommodation, transport, guides, and equipment rentals — into a **single digital platform** that is accessible, efficient, and convenient for both local and international travelers.



2.2Project Objectives

To achieve this goal, the project focuses on the following specific objectives:

1. **Comprehensive Services**
Provide a complete travel planning solution that includes accommodation booking, transport services, guide hiring, and equipment rentals — all in one place.
2. **Booking Facilities**
Enable users to **easily book services** through an intuitive interface, minimizing the need to navigate multiple platforms.
3. **User-Friendly Interface**
Design a **simple and intuitive UI** so users of all backgrounds can plan their trips without technical difficulty.
4. **Service Packaging**
Allow service providers to offer **custom travel packages** combining accommodations, transportation, and guided tours, enhancing convenience and choice for users.
5. **Seamless Payment Processing**
Integrate a **secure and reliable payment gateway** (Pay Here) for users to pay for services effortlessly and safely within the system.

03. Process re-engineered

The “Journey Beyond” platform re-engineers the **traditional, fragmented travel planning process** by consolidating multiple disconnected services into a **centralized and automated system**. In the current model, travelers are required to:

- Visit multiple websites to book accommodations, hire vehicles, or find guides.
- Independently verify the credibility of service providers.
- Manually organize and schedule bookings.
- Use various payment methods for each service.

This process is **time-consuming, error-prone, and inefficient**, especially for users with limited travel experience or technological confidence.

Journey Beyond transforms this experience by introducing a streamlined, digital process that:

- **Centralizes all services** (accommodation, transport, guides, and equipment) under one platform.
- Allows **service provider registration and verification** through admin approval, ensuring trust and reliability.
- Enables **users to search, compare, and book** services based on location, availability, and preferences.
- Automates the **booking and payment process** using an integrated payment gateway (PayHere).
- Provides a **personalized dashboard** for each user role to manage bookings, availability, and transactions.

By re-engineering these manual processes into a **unified digital workflow**, “Journey Beyond” reduces complexity, increases efficiency, and enhances the overall user experience for both travelers and service providers.

04. Assumptions

The development and operation of the “Journey Beyond” travel planning system are based on the following key assumptions:

1. **Internet Access:**
Users are assumed to have reliable and consistent internet access to use the web-based platform effectively.
2. **Device Availability:**
It is assumed that users possess internet-enabled devices such as laptops, desktop computers, or smartphones capable of accessing the platform.

3. **Language Proficiency:**

The system will be developed in English only. It is assumed that users are comfortable with using English for all system interactions.

4. **Online Payment Knowledge:**

Users are assumed to have a basic understanding of online payment methods (e.g., debit/credit cards, payment gateways) for booking and purchasing services.

5. **Legitimate Service Providers:**

All service providers (hotels, guides, transport, equipment suppliers) are assumed to be legally registered and willing to provide valid documentation during registration.

These assumptions guide the system's design and implementation, ensuring that resources are focused on features that best support the intended user base and usage environment.

05. Feasibility Study

This feasibility study evaluates the viability of our proposed Travel Planning Management System. It examines technical, economic, legal and ethical, social and scheduling factors to identify potential challenges and optimize resources. The goal is to support informed decision-making, minimize risks, and ensure the project aligns with organizational objectives for successful implementation.

5.1. Technical Feasibility

We have planned to develop our system, "Journey Beyond" as a comprehensive web application utilizing the following technologies:

Front End:

- HTML: Utilized for creating the fundamental layout of the website.
- CSS: Employed to style the HTML pages, ensuring a visually appealing and responsive design.
- JavaScript: Used to incorporate dynamic behavior and interactivity into the webpage.

All of these front-end technologies are highly popular globally, with extensive resources and communities available to help us effectively integrate them into our project.

Back End:

- PHP: A highly flexible and widely used, platform-independent programming language. PHP will be crucial for handling server-side logic and business processes.
- MySQL: Utilized to create, manage, and modify the database for our system, ensuring efficient data storage and retrieval.

For handling monetary transactions, our system will integrate with the PayHere payment gateway. PayHere is trusted by over 5000 Sri Lankan businesses for secure and efficient online payments.

Additional Technologies and Tools:

- **APIs:** We plan to incorporate various APIs to enhance the functionality of Journey Beyond, such as for travel information, mapping, and weather data.
- **GitHub:** Employed as our version control tool, GitHub will facilitate collaboration, code management, and deployment.

We will ensure that our development process adheres to best practices in security, scalability, and user experience, leveraging the strengths of these technologies to deliver a robust and user-friendly travel planning platform.

5.2. Economic Feasibility

Our solution's cost considerations include:

- **Development Cost:** Since we're students, no added cost for development.
- **Tools:** We use free tools, no extra cost.
- **Hosting:** Localhost

After implementation, Our revenue will come from a commission fee charged to service providers for each booking made through our platform. This will help sustain the system and ensure its continued improvement. Considering these costs, our solution is affordable and economically feasible.

5.3. Legal and Ethical Feasibility

- **User Data Protection:** Ensuring the privacy of user information, limiting access to authorized personnel.
- **Secure Transactions:** Ensuring the safety of financial transactions especially through the payment gateway.
- **Registered Travel Guides:** Collaborating only with certified guides recognized by Sri Lanka's tourism authority.
- **Service Provider Verification:** Verifying service providers for authenticity and reliability before they join the platform
- **Confirmed Reservations after Payments:** Reservations will be finalized only upon successful payment, ensuring transparency.

The legal and ethical feasibility of JourneyBeyond is established by adhering to these principles, building user trust, and complying with industry standards.

5.4. Operational Feasibility

This part checks how well our idea works for users and solves their problems. We want to make sure our system runs smoothly and does what people need. Right now, many travel things are done on different websites, making things confusing and slow. Our platform makes it easier by sorting activities like places to stay, travel, and guides, types of equipment. Our web application requires the following for smooth operation.

- An internet connection for users to access the platform.
- A device like a smartphone or computer with a web browser for browsing.
- Basic IT skills and internet usage knowledge for users.
- Intermediate knowledge of online and card-based payments for transactions.

Since our system is easy to use and doesn't need special training, it's operationally feasible

5.5. Social Feasibility

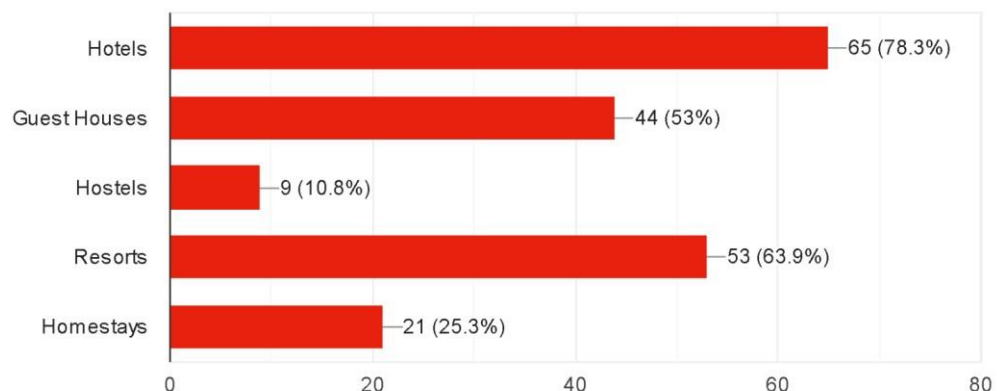
Social feasibility in simple words means checking if people like and support our idea.

We conducted a survey using Google Forms to understand this. In Sri Lanka, there's a strong Interest in traveling and exploring new places. People often use travel services to plan their trips And find accommodations.

We asked the public about their travel preferences, booking services, and using an all-in-one travel platform like Journey Beyond. The survey gathered more than 80 responses.

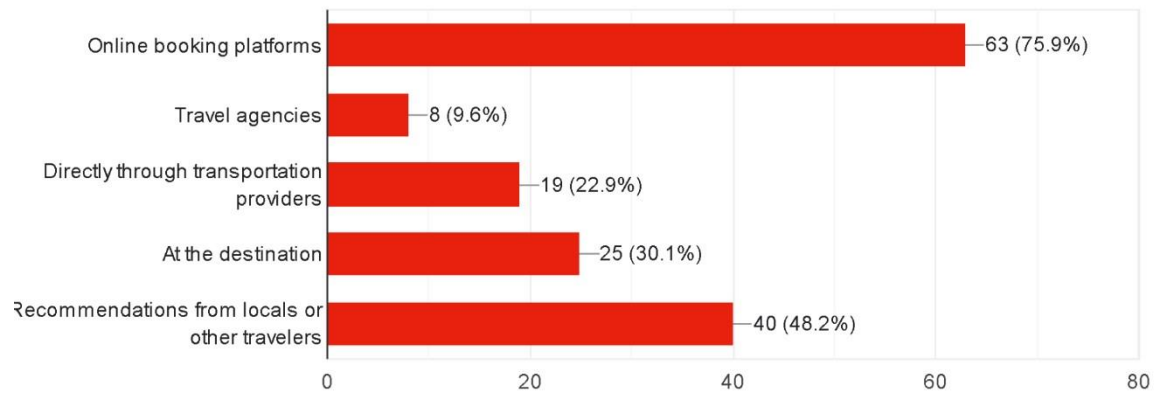
The following images show responses we received during the survey.

01. What type of accommodation do you prefer when traveling?(you can select more than one)
83 responses



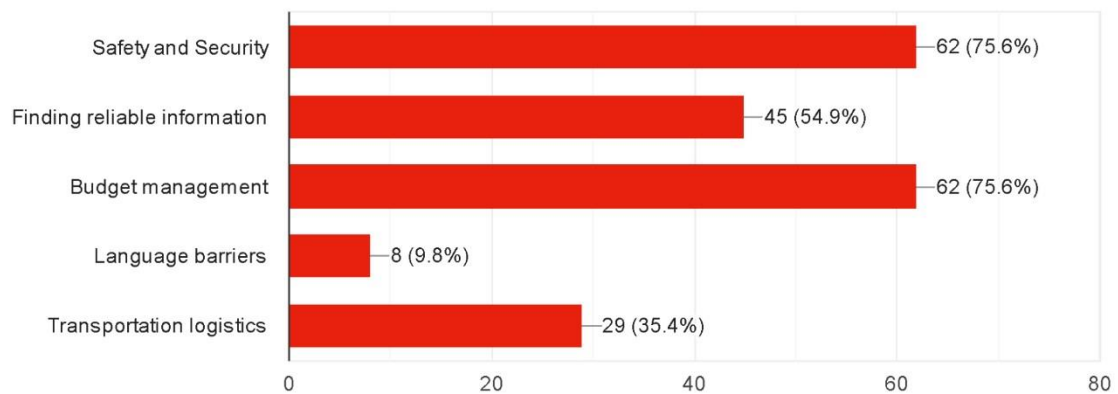
02. .How do you typically find and book transportation?(you can select more than one)

83 responses



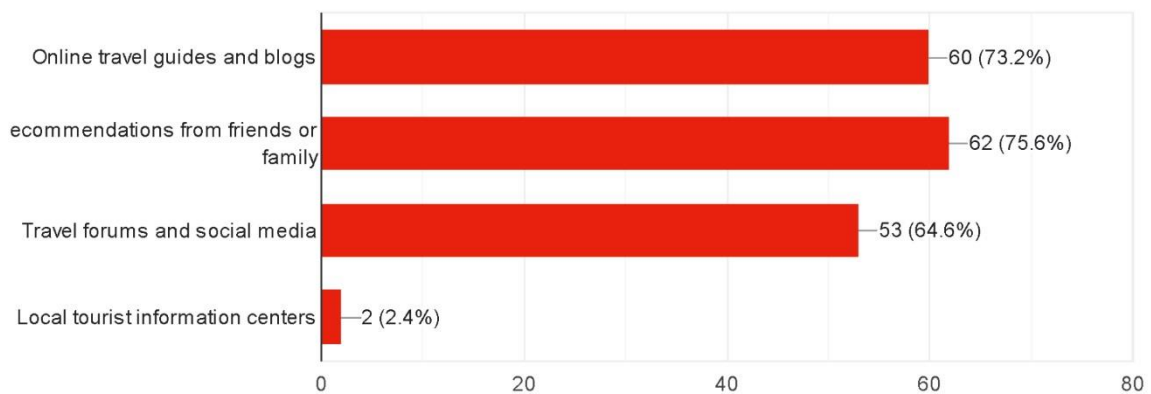
03. What are your biggest concerns or challenges when planning a trip?

82 responses



04. How do you usually gather information about local attractions, restaurants, and events? (You can select more than one)

82 responses



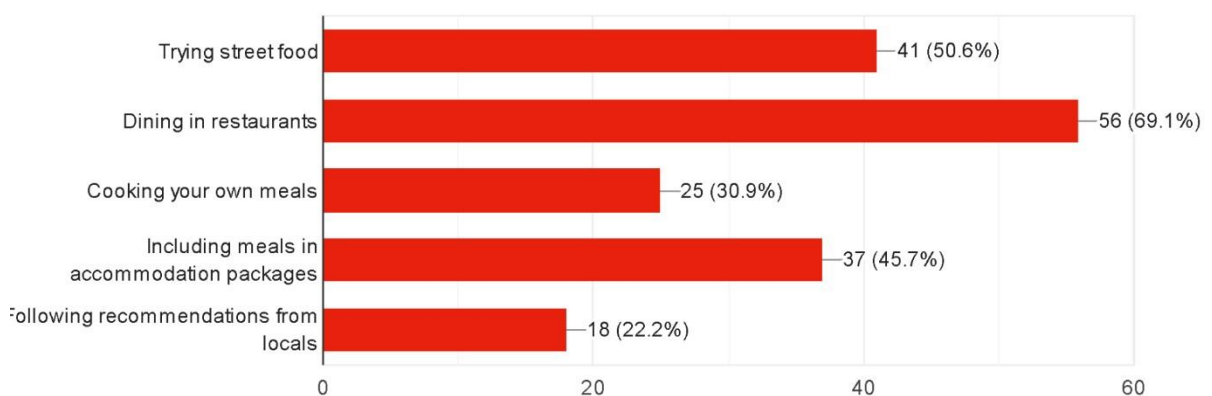
05. How important is it for you to have access to local guides or tour operators during your trip, and what services do you expect from them?

81 responses



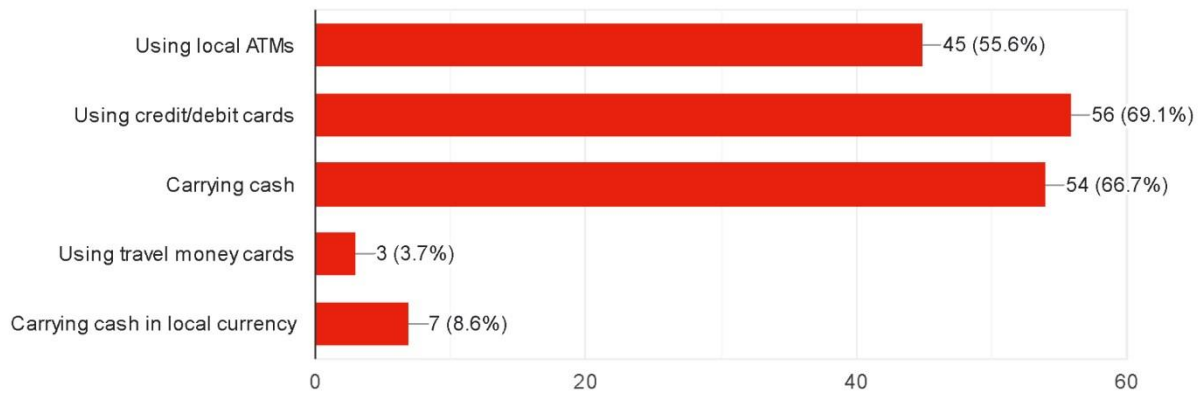
06. How do you prefer to handle your meals during your trip? (You can select more than one)

81 responses



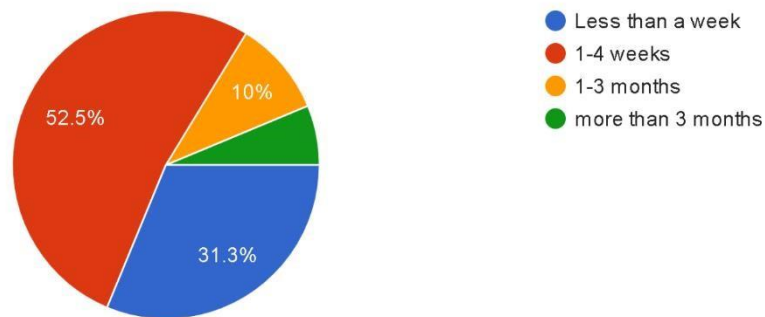
07.How do you usually handle payments while traveling? (select more than one)

81 responses

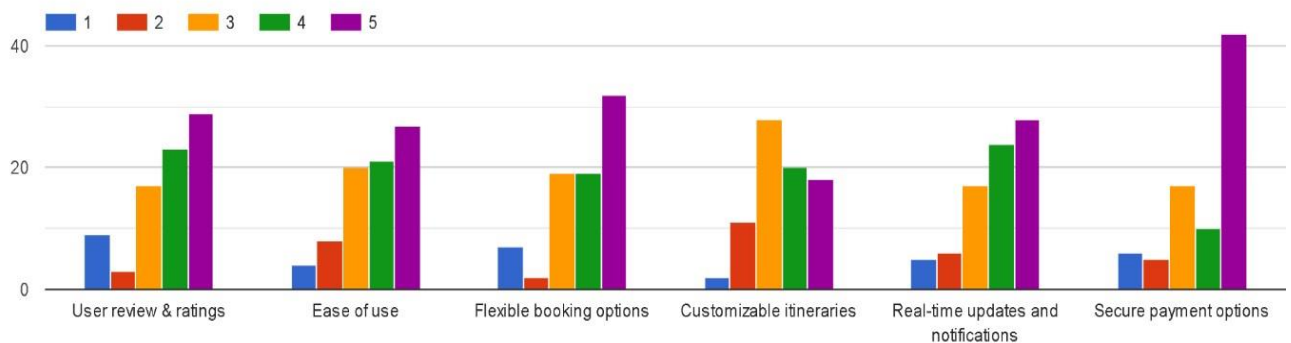


08.How far in advance do you typically plan your trips?

80 responses

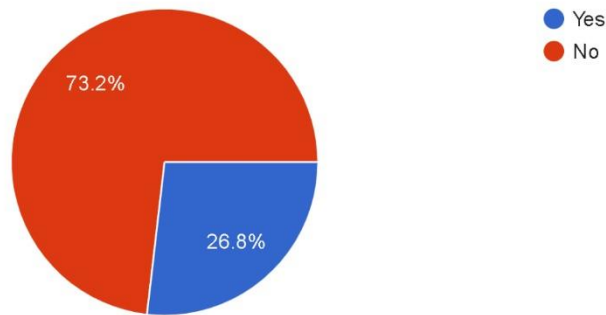


09.What features are most important to you in a travel planning system? (Rate on a scale of 1-5, where 1 is least important and 5 is most important?)



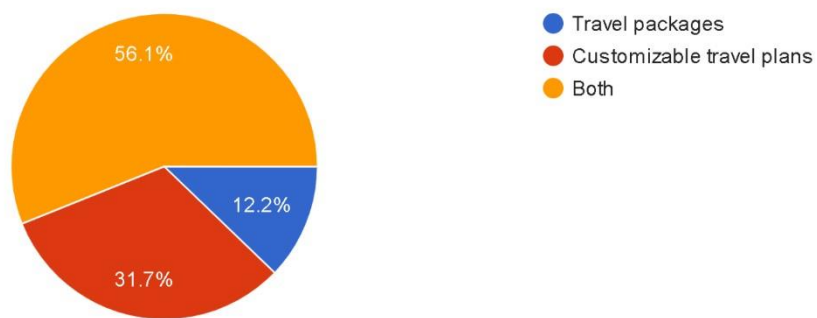
10. .Do you have any prior experience using a travel planning system?

82 responses



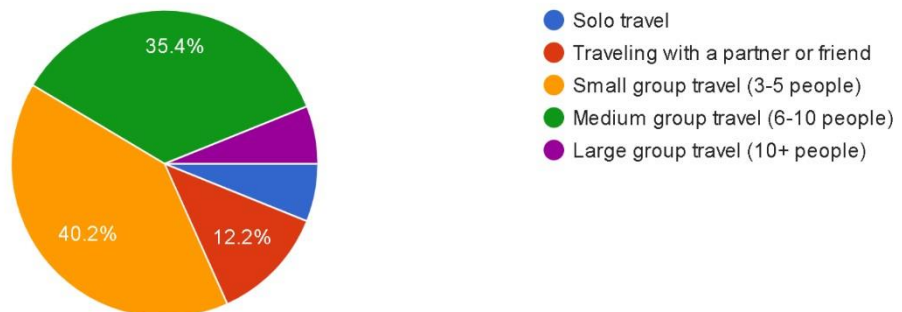
11. .Would you prefer a system that offers travel packages or allows you to customize your travel plans?

82 responses



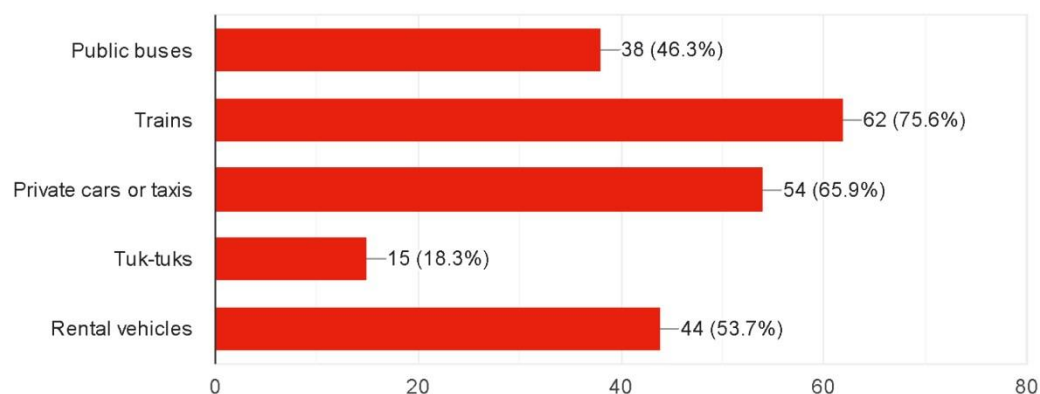
12. What is your preference for travel group size?

82 responses



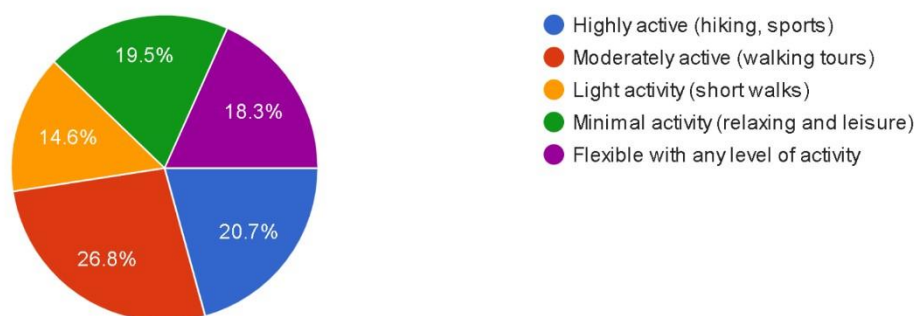
13. What is/are your preferred mode of transportation? (you can select more than one)

82 responses



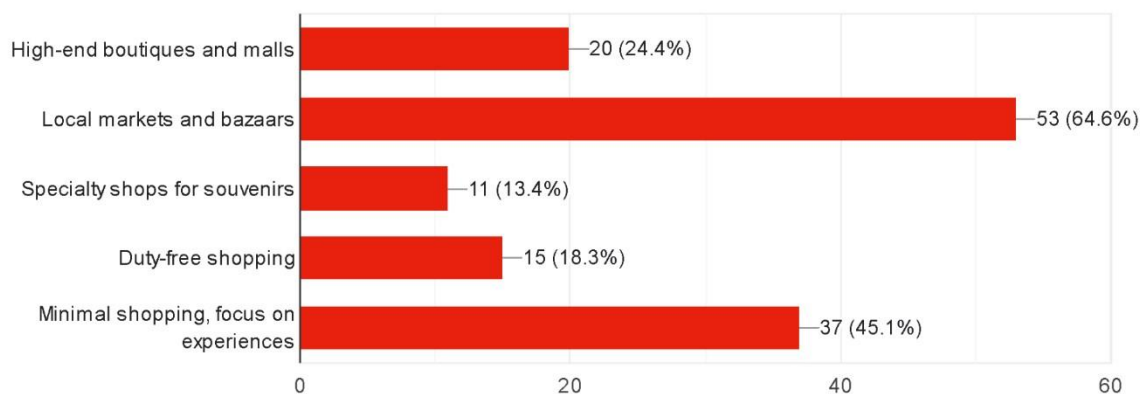
14. What level of physical activity are you comfortable with during your trip?

82 responses



15. What are your ways of finding needs for trip ?

82 responses



Link to the Google Form -

https://docs.google.com/forms/d/e/1FAIpQLSdHRkOawt8q2YdOPAOGi1nAa1LXk2KUHJ7BbYVPwrr4VN1YvQ/viewform?usp=sf_link

06. Requirements

6.1. Stakeholders / Actors

The following are the primary stakeholders (user roles) in the system:

- **Admin**
- **Normal Travel User (Traveler)**
- **Transport Supplier / Driver**
- **Accommodation Supplier**
- **Guider**
- **Equipment Supplier**

Each actor has different roles and permissions within the system, managed through custom interfaces and dashboards.

6.2. Functional and Non-Requirements

6.2.1.Functional Requirements

Functionalities of Admin

- **Shall be able to register to the system**
- **Shall be able to login to the system**
- **Shall be able to logout**
- **Shall be able to manage personal profile**
- **Shall be able to view traveler/customer and service providers**
- **Shall be able to delete traveler/customer and service providers**
- **Shall be able to Approve service providers**
- **Shall be able to Approve the tour packages**

Functionalities of Registered Travel User

- **Shall be able to register to the system**
- **Shall be able to login to the system**
- **Shall be able to log in from the system**
- **Shall be able to update their user profile**
- **Shall be able to pay for services**
- **Shall be able to book services such as hotels, transport, guides**
- **Shall be able to view trip details of the customer**
- **Shall be able to provide feedback Functionalities of Hotels, guides, and drivers.**

Functionalities of Accommodation Supplier

- Shall be able to register to the system
- Shall be able to login to the system
- Shall be able to logout
- Shall be able to manage personal profile
- Managing bookings
- Shall be able to update the availability
- Shall be able to view the payments.

Functionalities of Transport Supplier/Driver

- Shall be able to register to the system
- Shall be able to login to the system
- Shall be able to add vehicles to the system
- Shall be able to update availability in the system
- Shall be able to manage bookings
- Shall be able to view the payments
- Shall be able to manage rental and service rates

Functionalities of Guider

- Shall be able to register to the system
- Shall be able to login to the system
- Shall be able to logout
- Shall be able to manage personal profile
- Shall ne able to Managing bookings
- Shall be able to update the availability
- Shall be able to respond to bookings
- Shall be able to view the payments.
- Shall be able to manage their rates

Functionalities of Equipment Supplier

- Shall be able to register to the system
- Shall be able to login to the system
- Shall be able to set and update prices
- Shall be able to maintain an inventory
- Shall be able to contact customers
- Shall be able to view the payments

6.2.2.Non-Functional Requirements

In addition to the core functionalities outlined, the Travel Planning System places significant emphasis on non-functional requirements to ensure a robust, user-friendly, secure, and high performing platform. These non-functional requirements encompass critical aspects that contribute to the overall success of the system.

- **Reliability**

Journey Beyond will be highly reliable, ensuring consistent availability and minimal downtime to avoid disruptions in travel planning and bookings. And also it will have mechanisms to handle errors gracefully, providing informative error messages and enabling smooth recovery from unexpected situations

- **Usability**

The user interface of our supposed travel planning system will be highly intuitive as well as user-friendly, and easy to navigate for all user types, including travelers, guides, hotels, and admin. Moreover, Clear and concise instructions, tooltips, and guidance will be provided to ensure users can interact with the system effortlessly.

- **Security**

Strong data encryption and secure communication protocols will be implemented to safeguard sensitive user information, such as personal details, financial transactions, and travel plans. Access controls also will be established to ensure that each user type can only access the features and data relevant to their role.

- **Performance**

The system will deliver highly responsive and seamless performance, even during peak usage periods when there is a high volume of users and transactions. Load balancing and efficient resource management will be employed to ensure smooth performance under varying workloads.

- **Availability**

The system will aim for high availability, with a target uptime percentage to ensure users can access the platform whenever they need to plan their travels. Redundancy and failover mechanisms should be implemented to mitigate the impact of hardware failures or other technical issues.

6.3. In-scope and out-scope

In-scope

- **A comprehensive travel planning solution**

This system will offer a suitable, comprehensive response to many of the travel planning requirements of travelers. It provides a range of services, including choosing a package based on their budget, selecting a driver or a vehicle, and also choosing a guide if they want. Everything from one place and time saving is another plus point for the users in this system. The system's main purpose is to make better travel planning services easier more efficient and more convenient.

- **Requesting Guider for traveling**

This system is not only for local users it is also for tourists. So If a tourist wants to travel here they can pick a guide from our system based on their preferences. The important thing is the guide should be government-registered. As a guide, they should update their training

certificate otherwise system admin will remove them from the system.

- **Requesting accommodation**

The system will provide a facility to book their accommodation based on their preferences. That means according to their traveling locations and their number of members. In this also only government-registered hotels and villas are allowed to register on the system. In the Registration, they should provide their license as a soft copy.

- **Requesting vehicle**

The system facilitates for travelers to search for available vehicles with drivers. when drivers are willing to register in the system they should upload their relevant documents to register as a legal driver in the traveling industry.

- **Requesting equipment**

The system facilitates the users to search and buy all the necessary items on the same platform. After confirming and buying those items they will receive their items by courier service or another option.

- **Search by locations**

Users can search the areas that they are willing to plan for travel. When they are trying to search by locations systems will recommend nearby locations according to their search results.

- **Make payments**

The system provides a facility for users to pay their payments by using a payment gateway.

- **Admin Operations**

The system admin can Update, Delete, Approve, and check what the scheduled and completed plans within the system are.

Out-scope

- **No Mobile Application**

This system will not have a mobile application. However, this is completely responsive for both web and mobile devices.

- **Customer Support Chatbot**

Due to our current team size and time constraints, we are unable to add another user to the system for development at this time. Expanding the scope would risk compromising the quality and timely delivery of our project. Therefore, we must focus on our initial objectives to ensure successful completion.

- **Not adding a Restaurant as a Service provider**

We cannot include restaurants as service providers in our system due to our inability to guarantee food quality, as we lack sufficient evidence and verification. Additionally, most travelers prefer to utilize food services provided by their accommodations. Therefore, adding restaurants is beyond the scope of our current project.

- **Multi-Language Support (limited to English)**

We are limiting multi-language support to English due to our current resource constraints. Most tourists are familiar with English, and it is an international language. Therefore, focusing on English allows us to ensure a high quality product within our capabilities.

- **Expanding the application's geographical coverage (limited to Sri Lanka).**

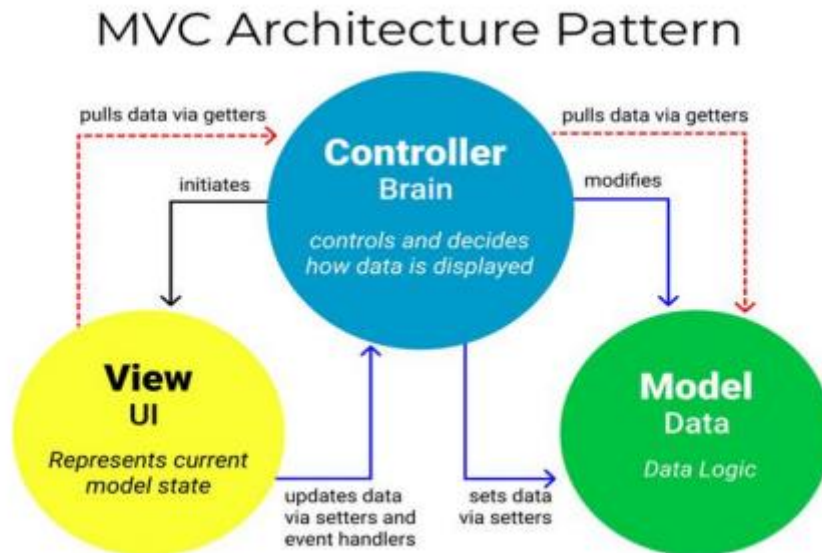
Expanding beyond Sri Lanka would require significant additional development and testing. Therefore, we are focusing on providing a high-quality service within Sri Lanka.

6.4. Project Constraints

- **Service Provider Verification Process:**
The verification and approval process for service providers' submissions may take up to 4 hours. Only approved service providers will be visible to registered travelers.
- **Payment Processing:**
The system relies on third-party payment gateways for processing transactions. Delays or issues in payment processing by these gateways may impact the booking confirmation process.
- **Limited Geographical Coverage:**
The application's coverage is limited to travel destinations within Sri Lanka. Booking services outside of this scope are not supported.
- **User Accountability:**
Registered users are responsible for the accuracy of the information they provide during registration, booking, and feedback submission. Any misuse or fraudulent activity may result in suspension or legal action.
- **Data Privacy:**
While efforts will be made to ensure data privacy and security, the system cannot guarantee complete immunity from potential data breaches or unauthorized access.
- **Service Availability:**
The availability of service providers (hotels, restaurants, transport providers, tour guides) is subject to their individual schedules and operational constraints. The system cannot guarantee immediate availability.
- **Equipment Delivery:**
Customers who wish to purchase travel items should do so 3-5 days in advance, as the delivery system takes 3-5 working days to deliver the items.

07. System's Architecture

The architecture of the "**Journey Beyond**" travel planning platform is designed using the **Model-View-Controller (MVC)** framework. This architectural pattern ensures a clean separation between data, user interface, and control logic, allowing the system to be scalable, maintainable, and efficient.



7.1. Components and their functionalities

The proposed system architecture is based on a Model-View-Controller (MVC) framework, which separates the system into three main components: Model, View, and Controller. Each component performs distinct roles to ensure efficient management of user interactions, data processing, and presentation.

1. Model (Data Layer)

- **User Management:** Manages data related to users and admin, including their personal information and roles.
- **Booking Management:** Handles the storage, retrieval, and updates related to bookings, including reservations and payment transactions.
- **Service Provider's Data:** Manages and stores information related to travel suppliers, such as accommodation providers, transport, equipment suppliers and guider.
- **Reviews & Ratings:** Stores and retrieves feedback submitted by users about various services (e.g., travel, accommodation)

2. View (Presentation Layer)

- **Admin Dashboard:** Displays a comprehensive dashboard for administrators to manage users, suppliers, and view system reports.

- **User Dashboard:** Provides an interface for users to manage their profiles, view bookings, and provide feedback.
- **Service Provider's Dashboard:** Enables suppliers to manage availability, update prices, and track bookings.
- **Search and Booking Interface:** Allows users to search for available services (e.g., transport, accommodation) and make bookings.
- **Reviews and Ratings:** Displays the reviews submitted by users for different services.

3. Controller (Business Logic Layer)

- **Admin Controller:** Processes actions related to user and supplier management, such as adding new users, approving suppliers, and generating reports.
- **Booking Controller:** Manages the booking process, including confirming reservations, handling payments, and updating availability.
- **Service Provider's Controller:** Handles actions related to managing supplier services, including adding, updating, and removing services from the system.
- **Review Controller:** Manages the functionality for submitting, editing, and displaying reviews for services.

7.2. Component interactions

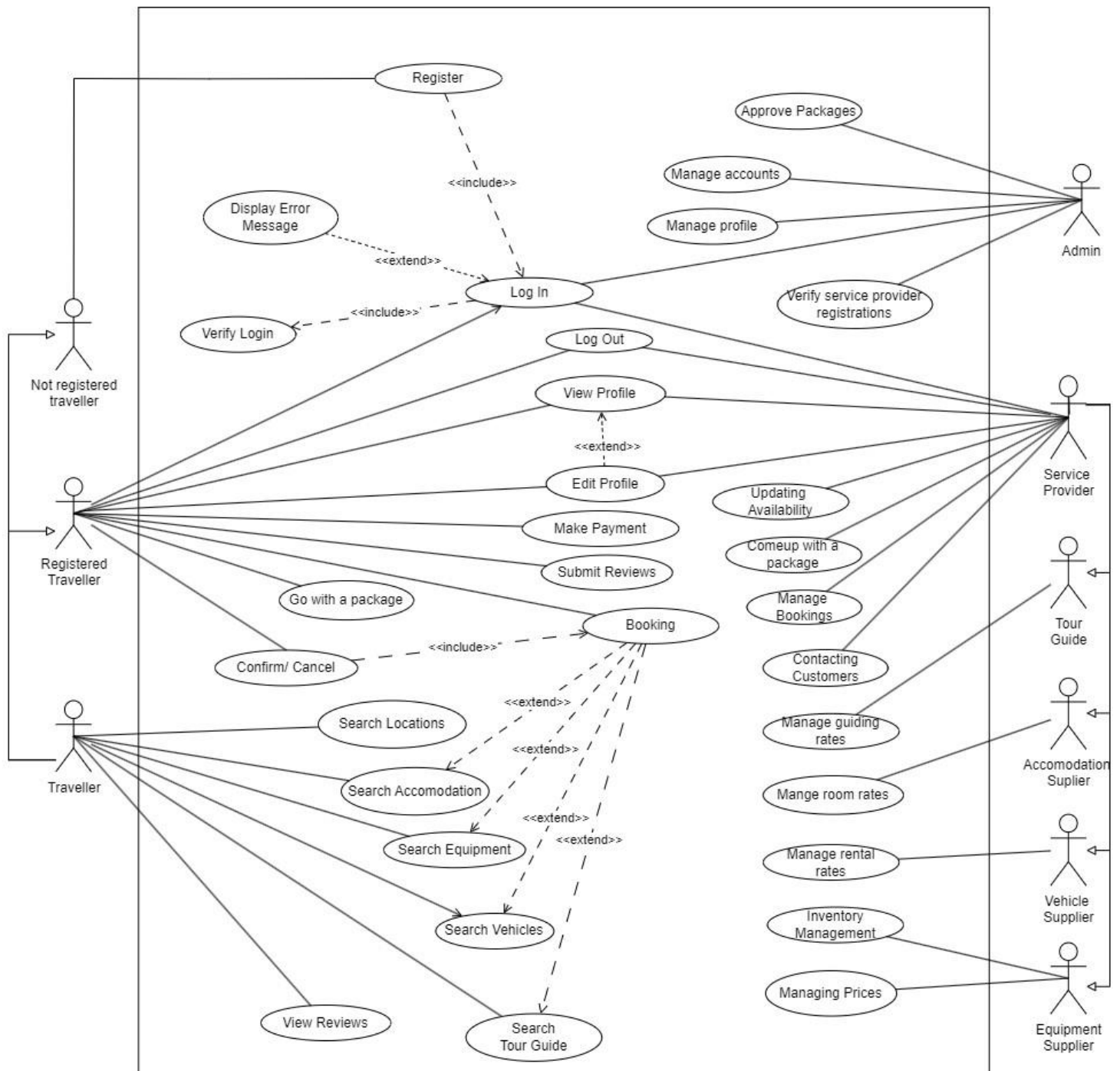
The interaction between components in the system follows a clear flow to ensure efficient handling of data and user interactions.

- 1. User Makes a Request (View):** A user interacts with the system through the UI (View), such as searching for services, making a booking, or submitting a review.
- 2. Controller Processing (Controller):** The Controller receives the user's request from the View. It processes the logic related to the request, such as validating the booking details or managing user feedback. The Controller communicates with the Model to retrieve or update the necessary data.
- 3. Data Handling (Model):** The Model communicates with the database to retrieve or update the required data. For example, it retrieves the list of available services or stores a new booking.
- 4. Displaying Results (View):** Once the Controller has processed the data, the View updates the user interface to reflect the results (e.g., confirming a booking, displaying available services, or showing user feedback).
- 5. Notification and Feedback (Model and View):** The Model sends a notification to the user or supplier, if necessary (e.g., confirming a booking), and the View updates the UI to display any relevant messages or notifications.

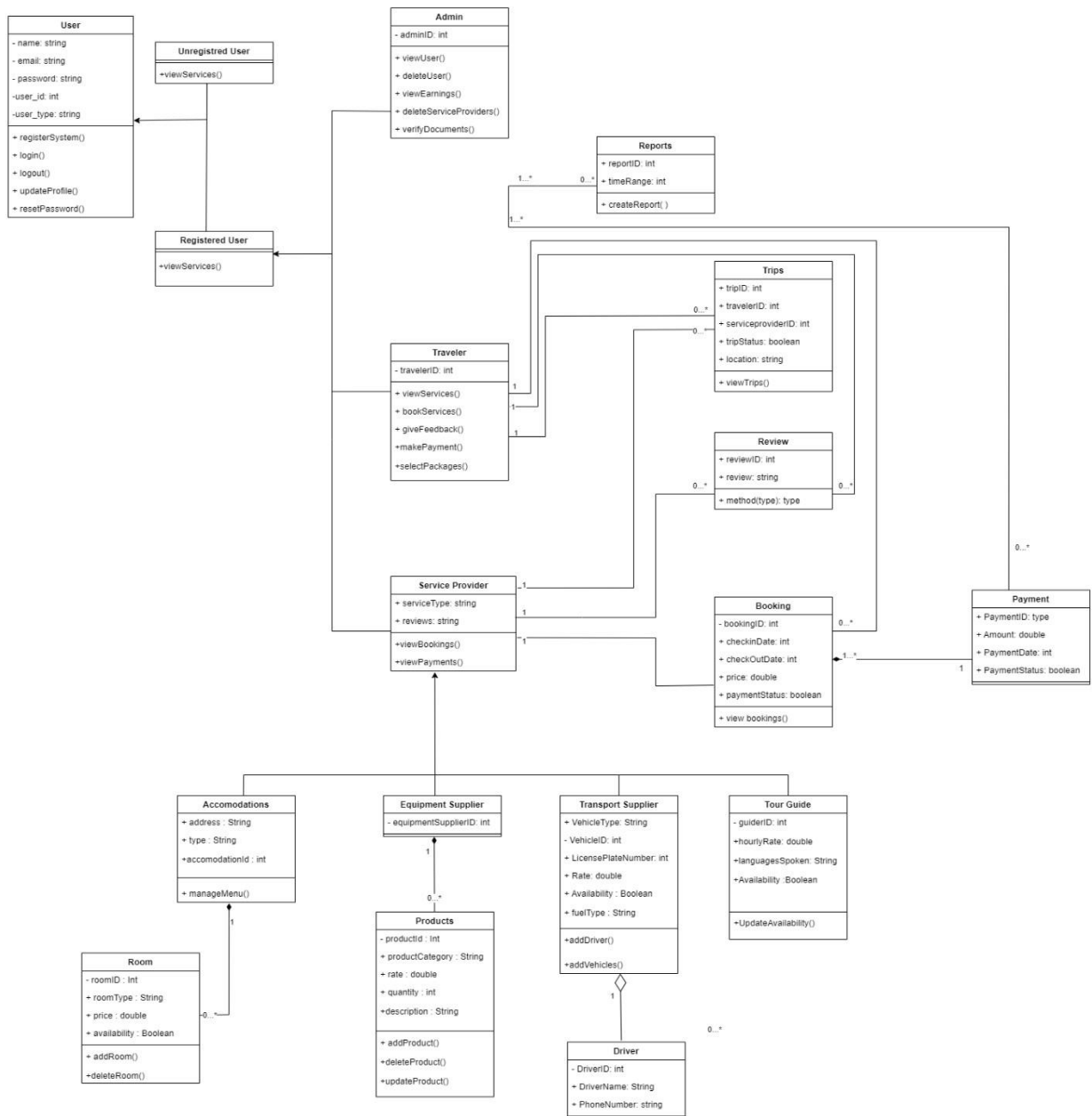
This separation of concerns ensures that the application is both scalable and maintainable, as each component can evolve independently. For example, changes in the user interface (View) won't affect the underlying business logic (Controller) or data (Model), allowing for easier updates and maintenance of the system.

08. System Design Diagrams

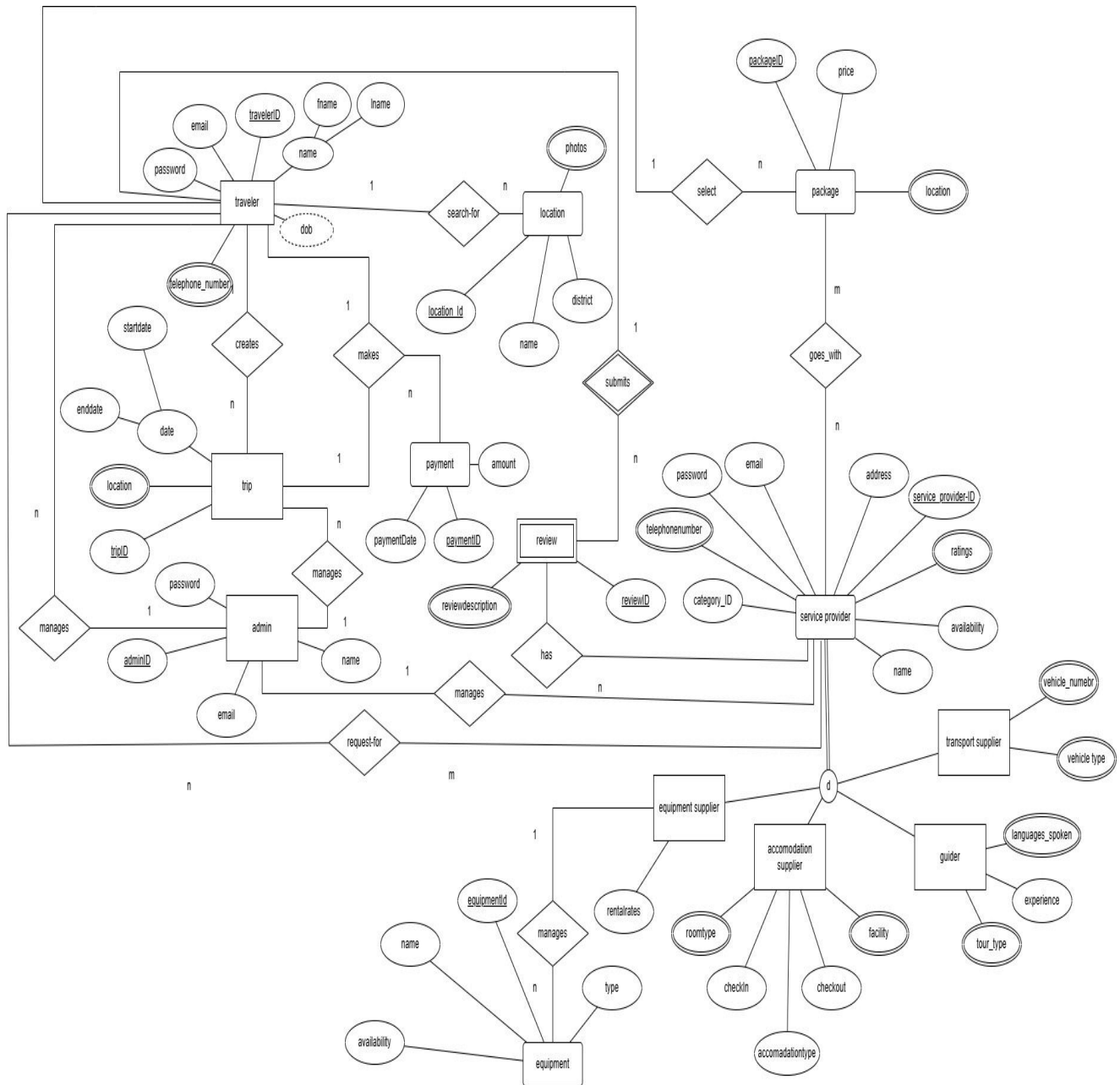
8.1. Use Case Diagram



8.2. Class Diagram

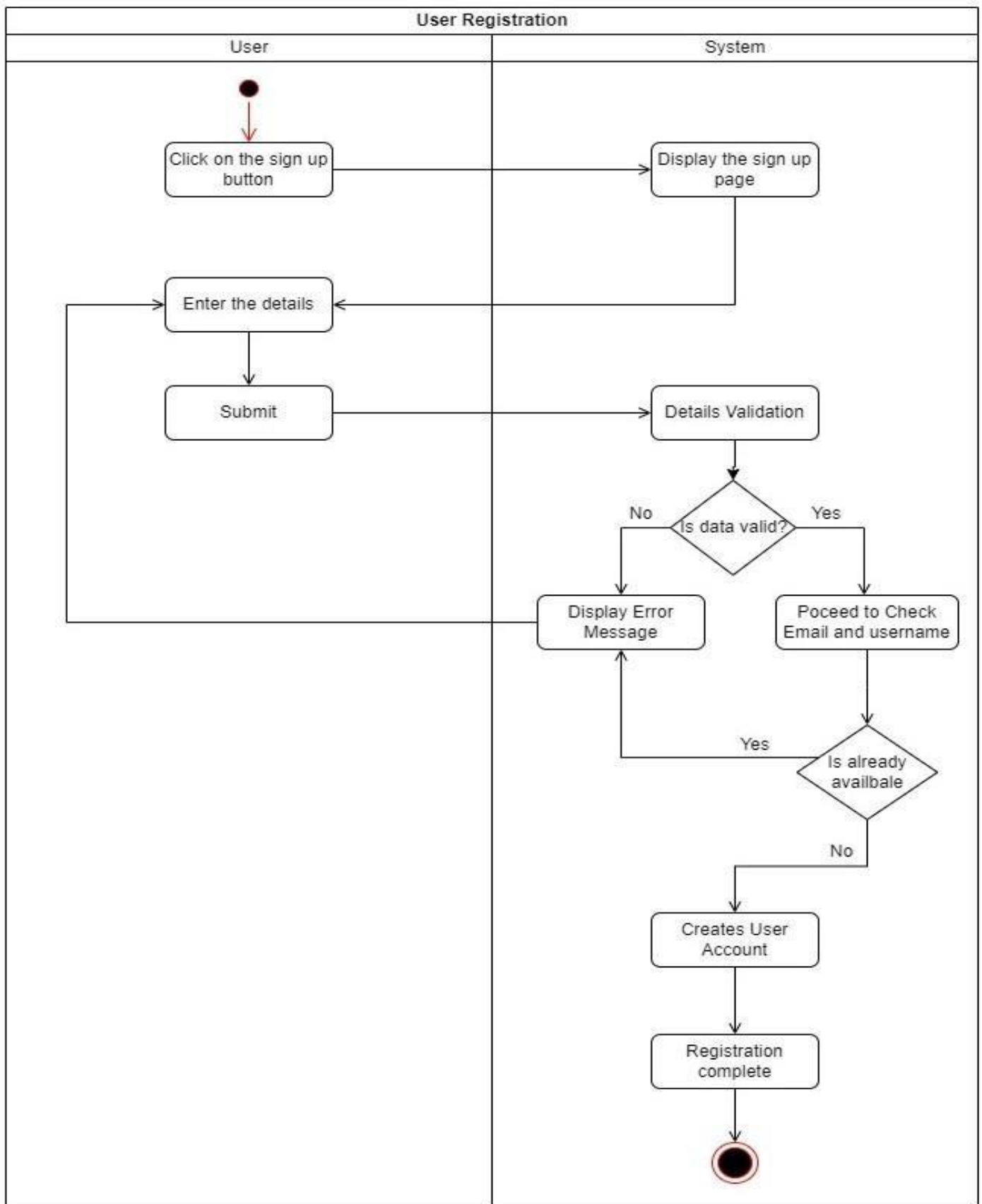


8.3. ER Diagram

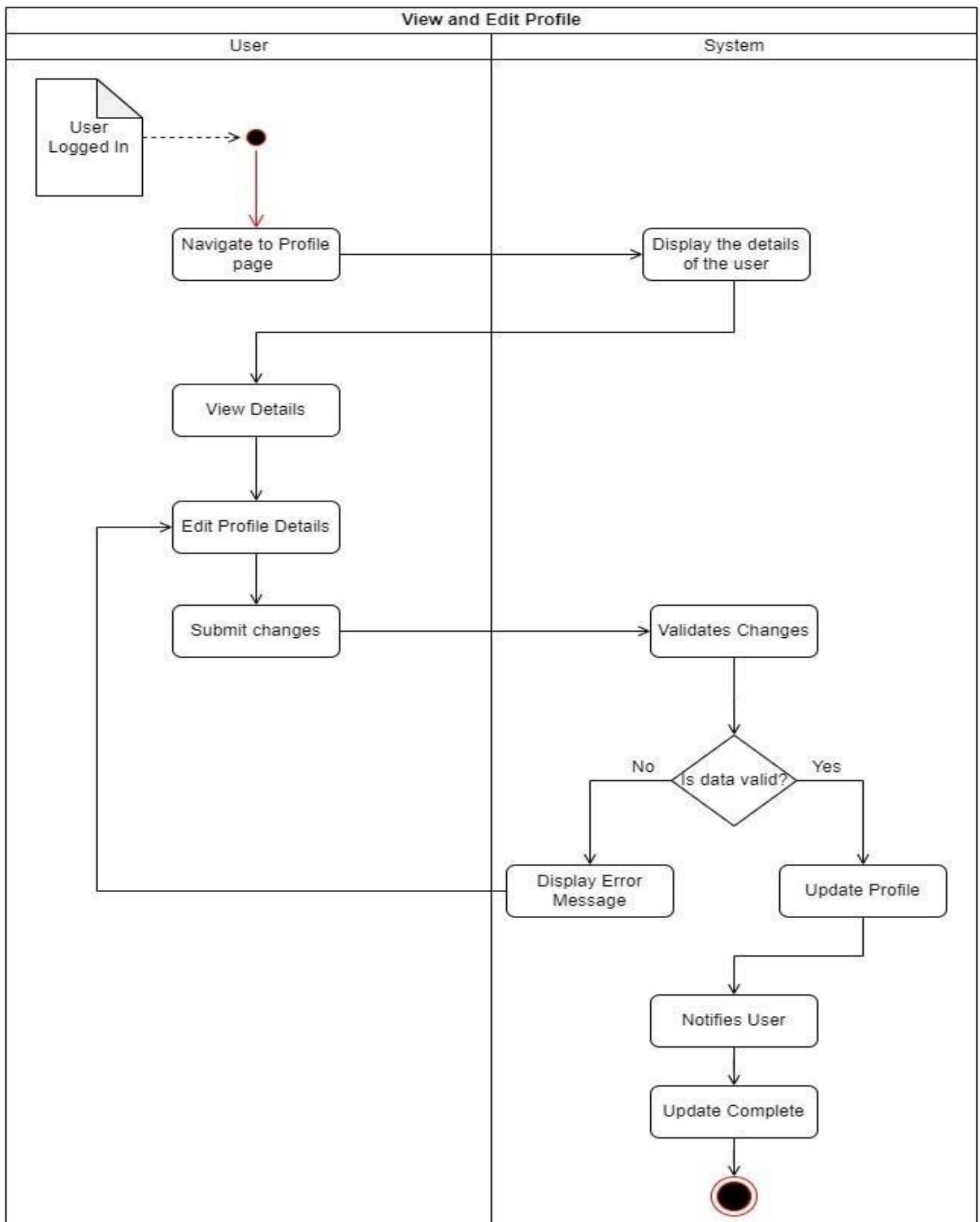


8.4. Activity Diagram

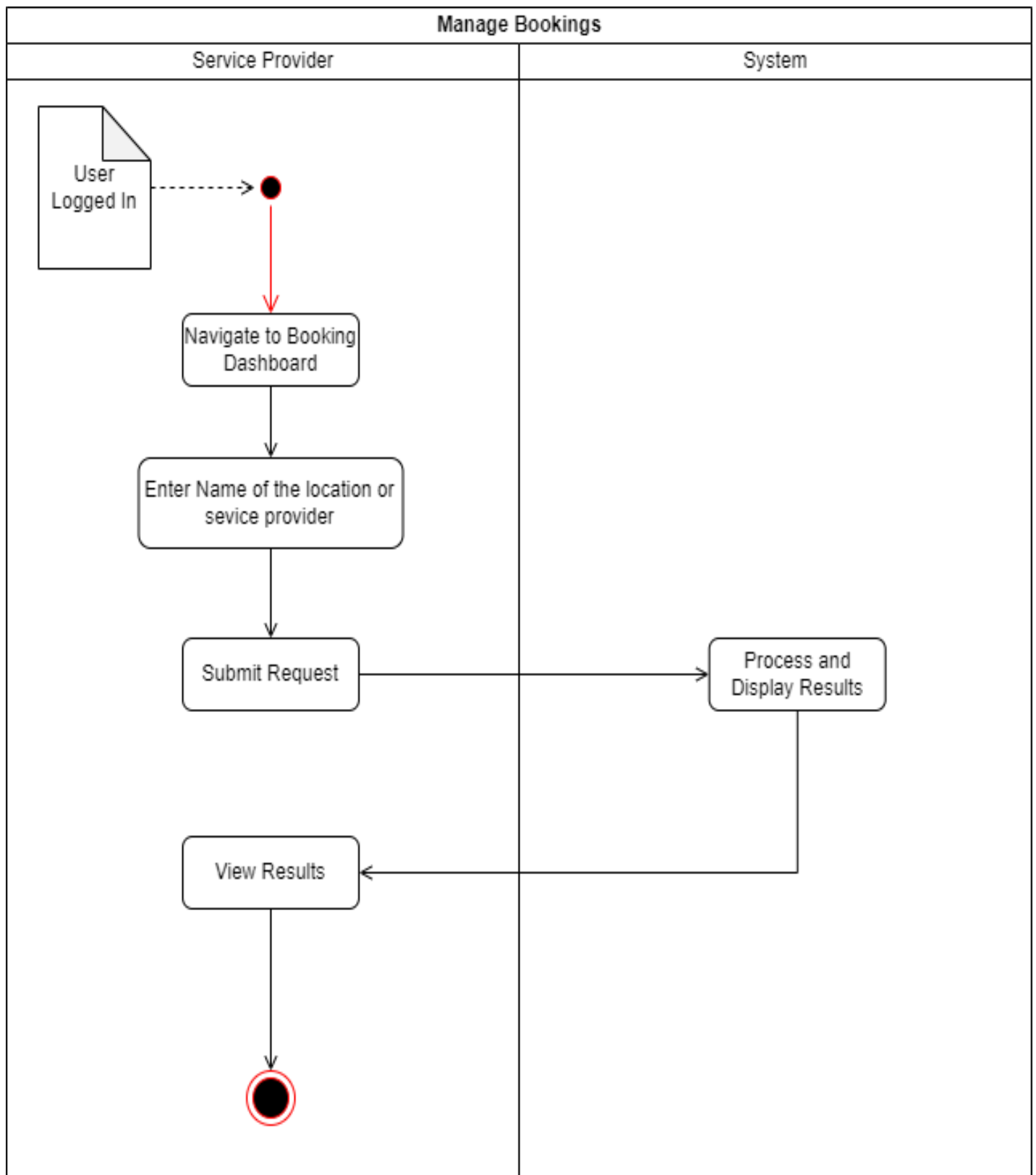
8.4.1. User Registration



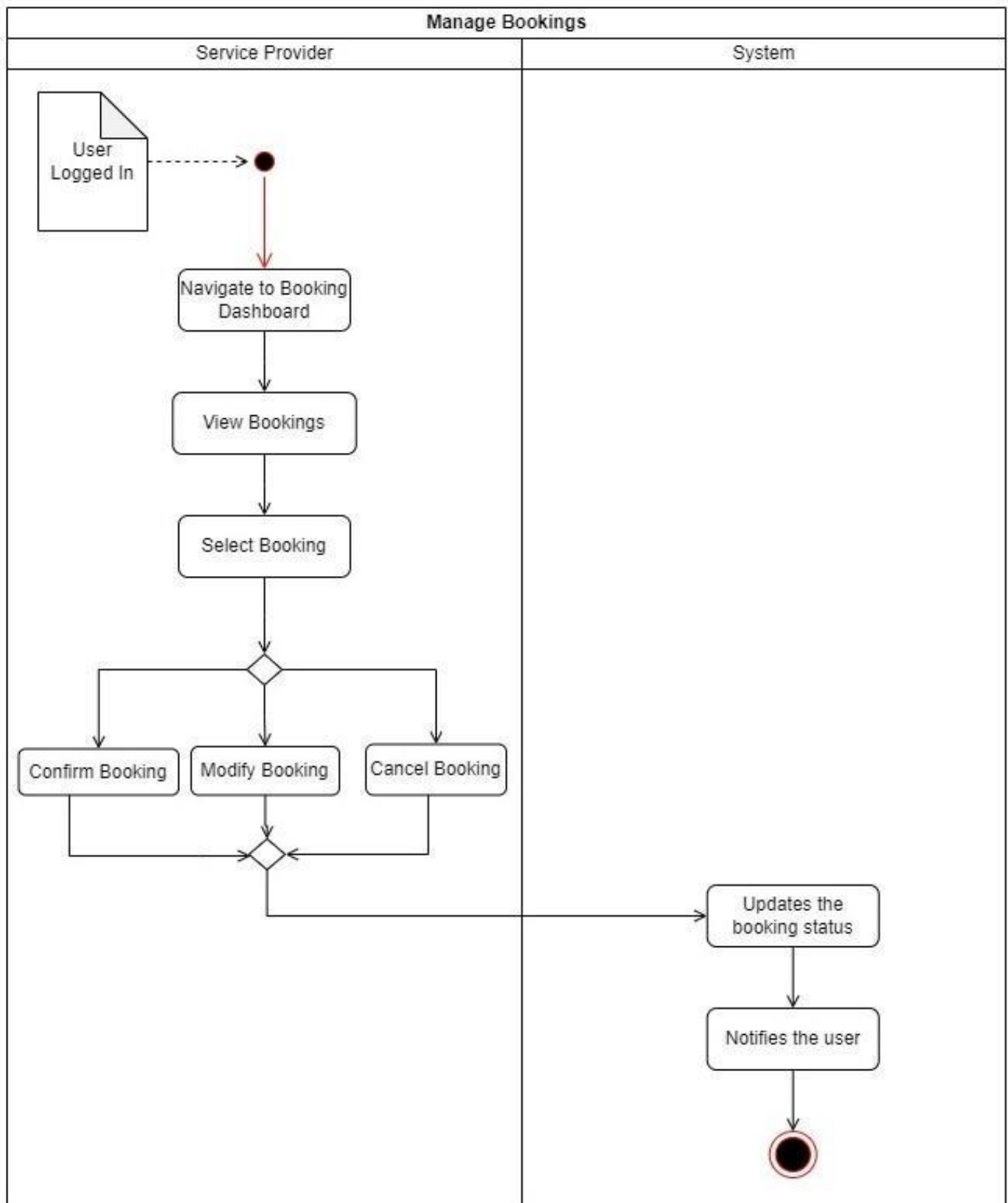
8.4.2. View and Edit Details



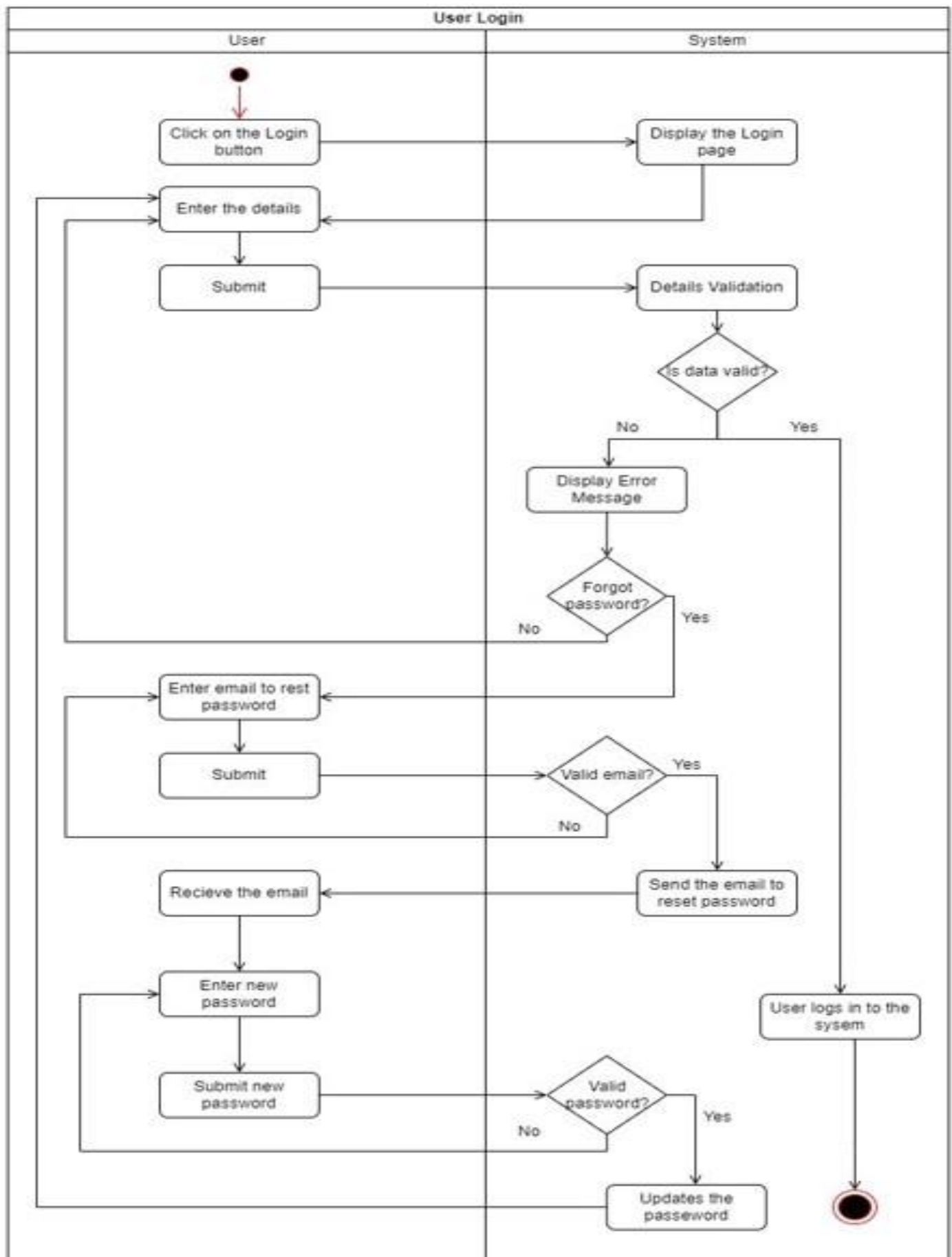
8.4.3. Search Locations or Service Providers



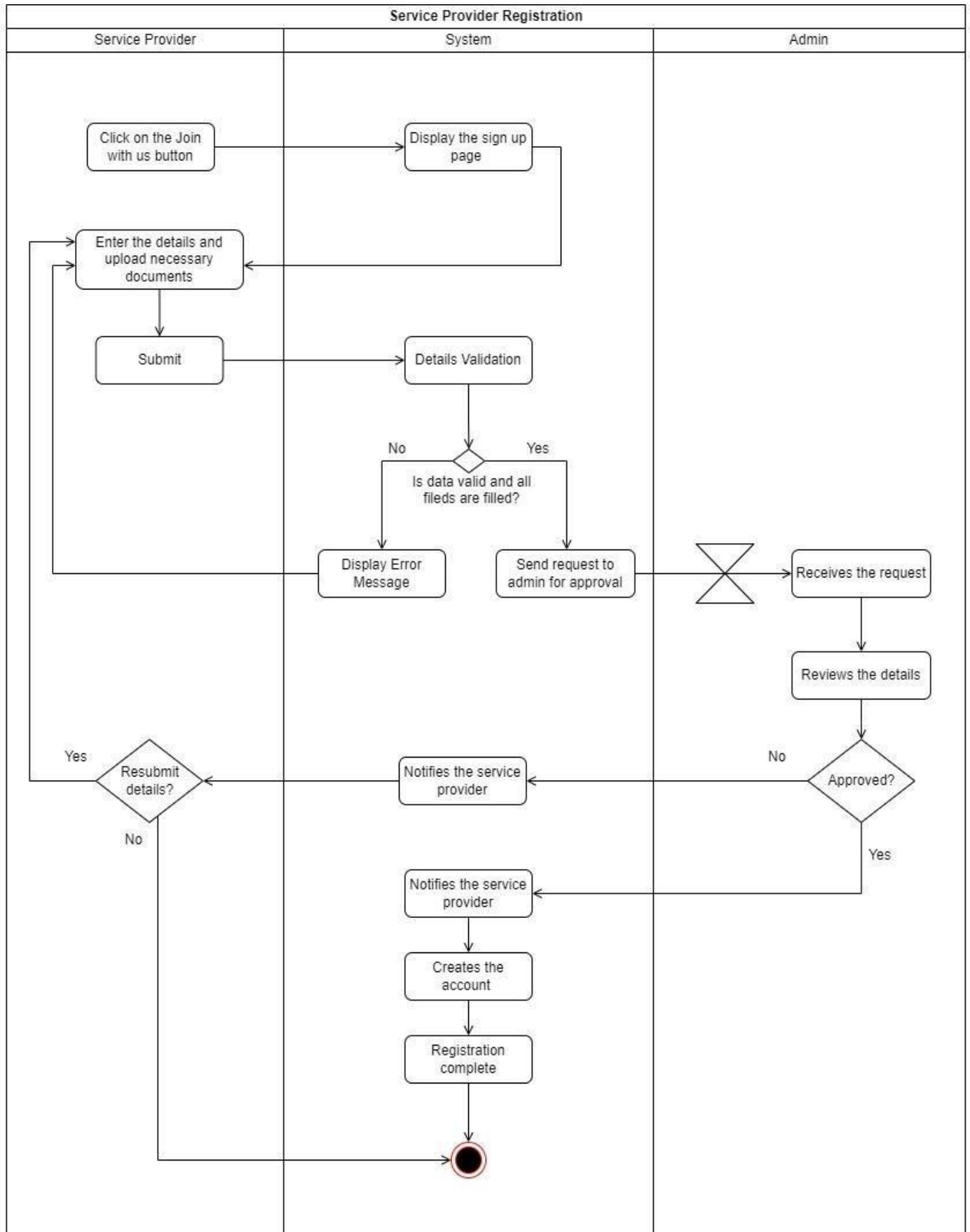
8.4.4. Manage Bookings



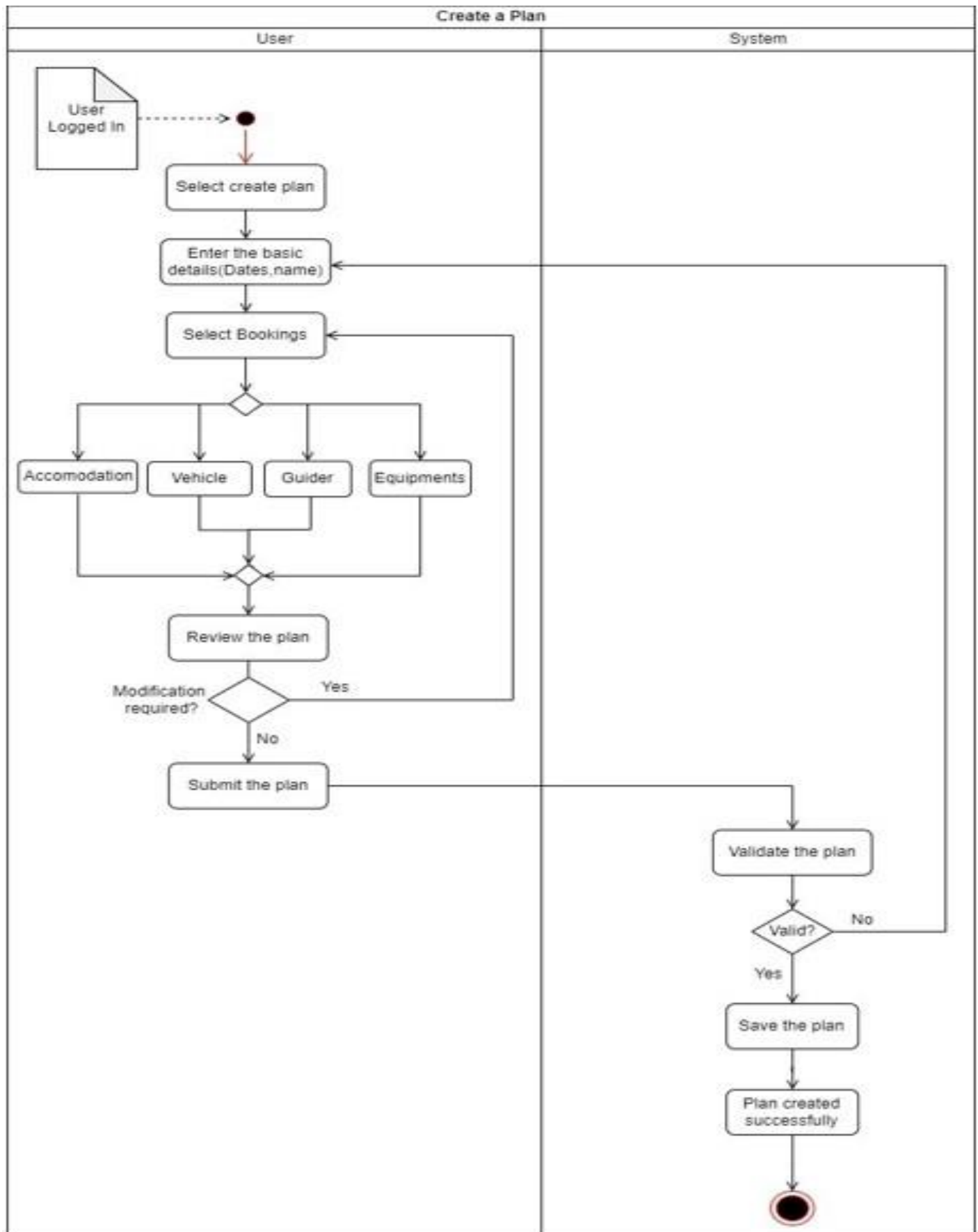
8.4.5 User Login



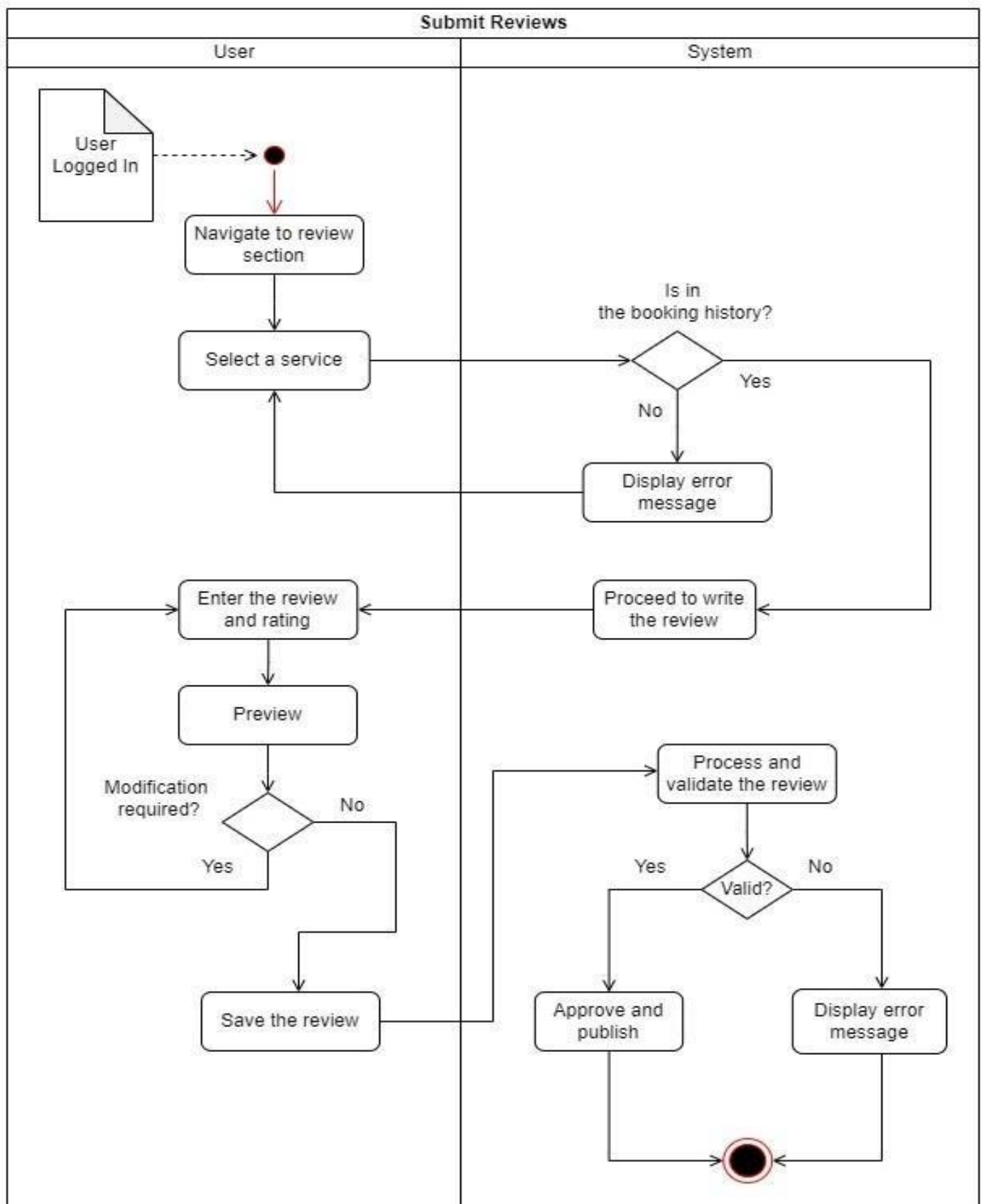
8.4.6 Service Provider Registration



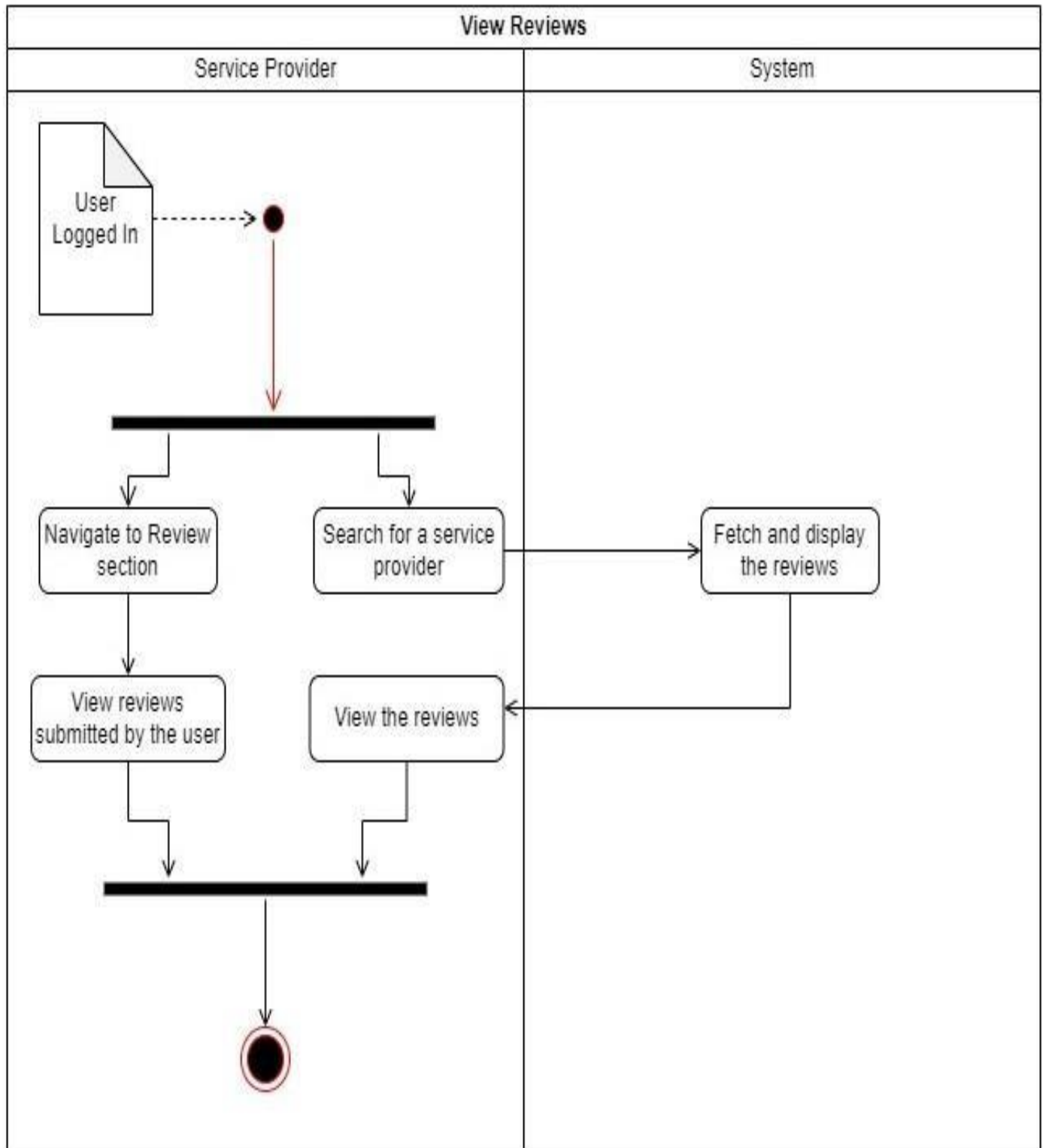
8.4.7 Create a plan



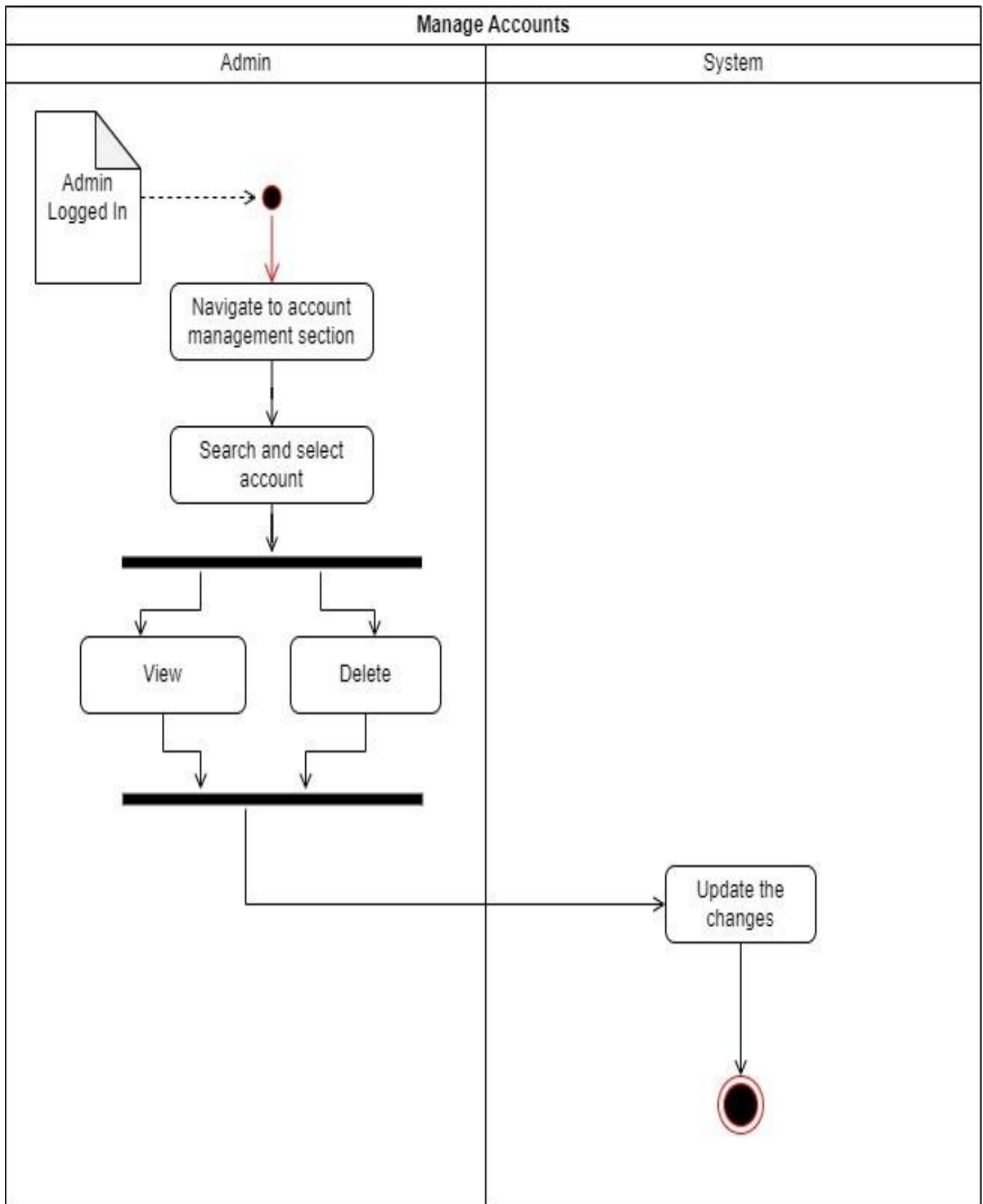
8.4.8 Submit Reviews



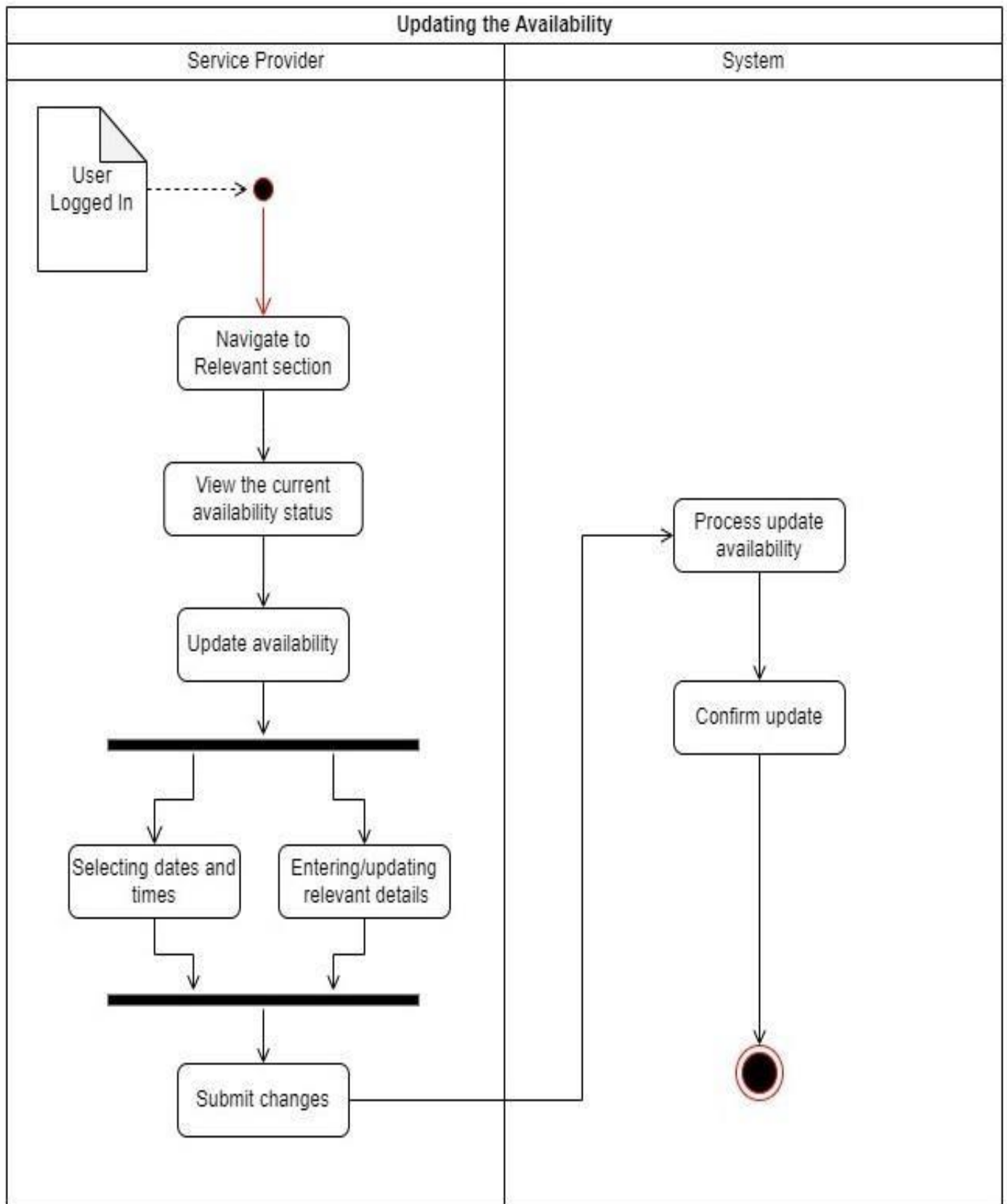
8.4.9. View the reviews



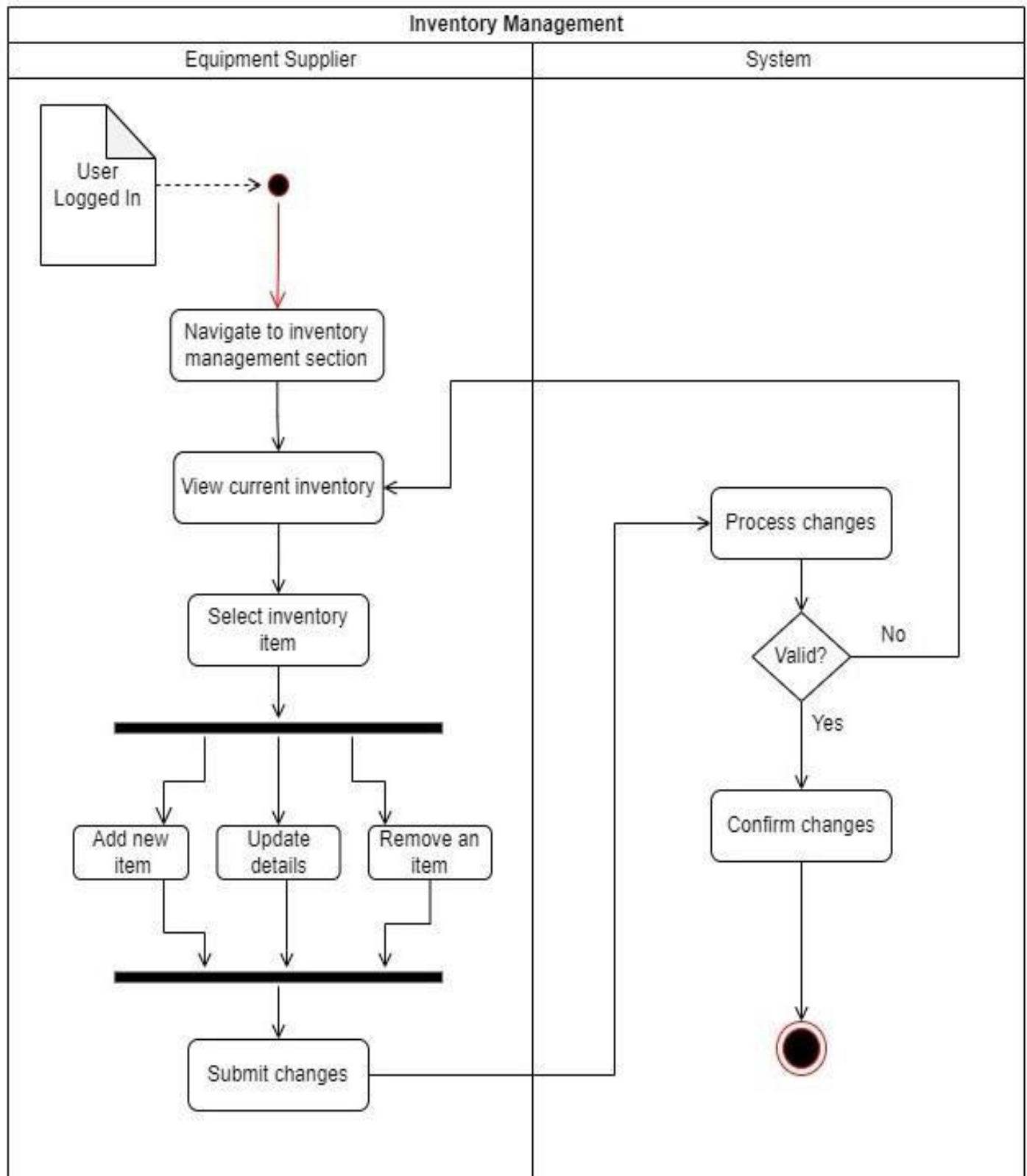
8.4.10 Manage Accounts



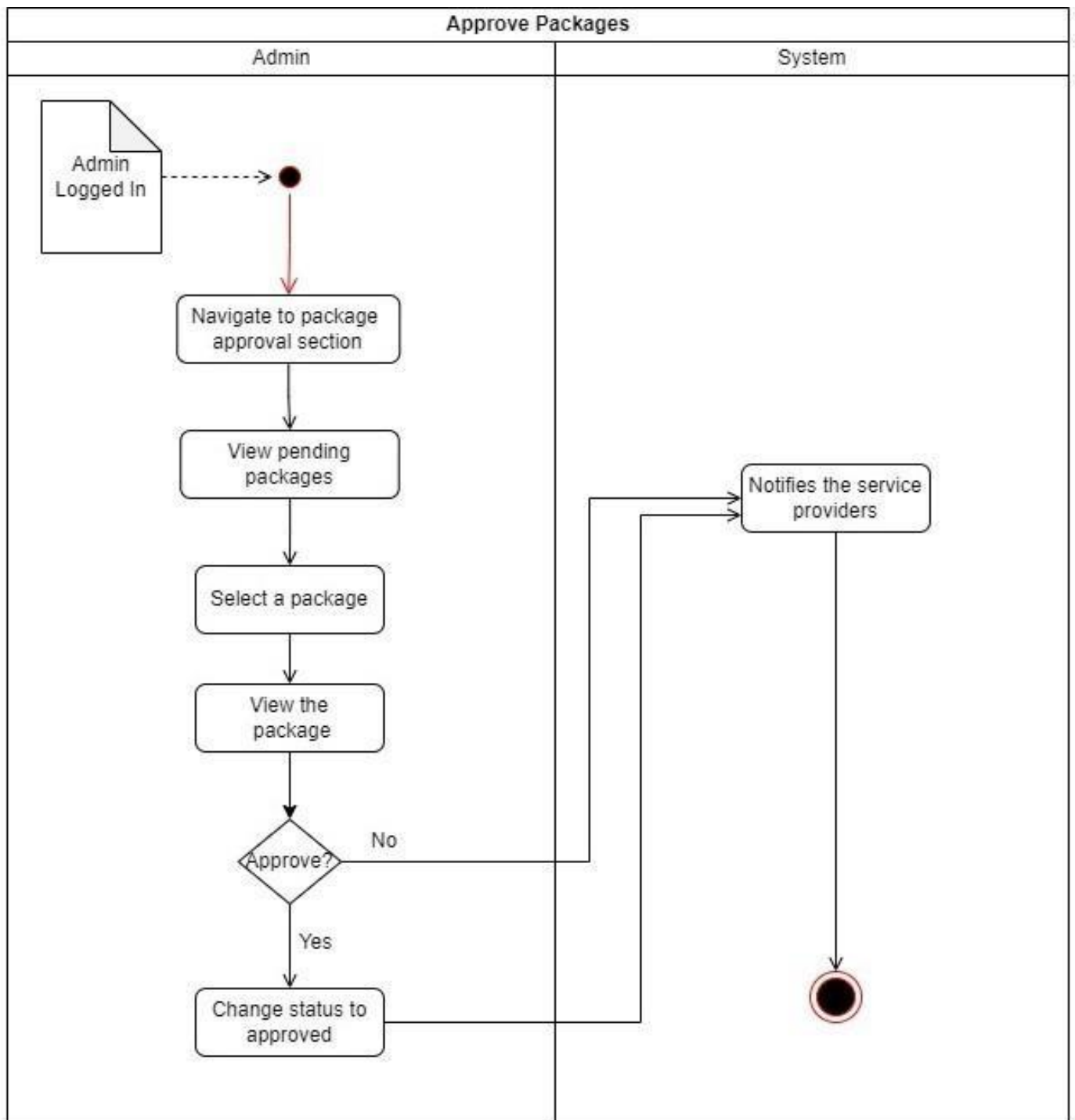
8.4.11 Updating the availability



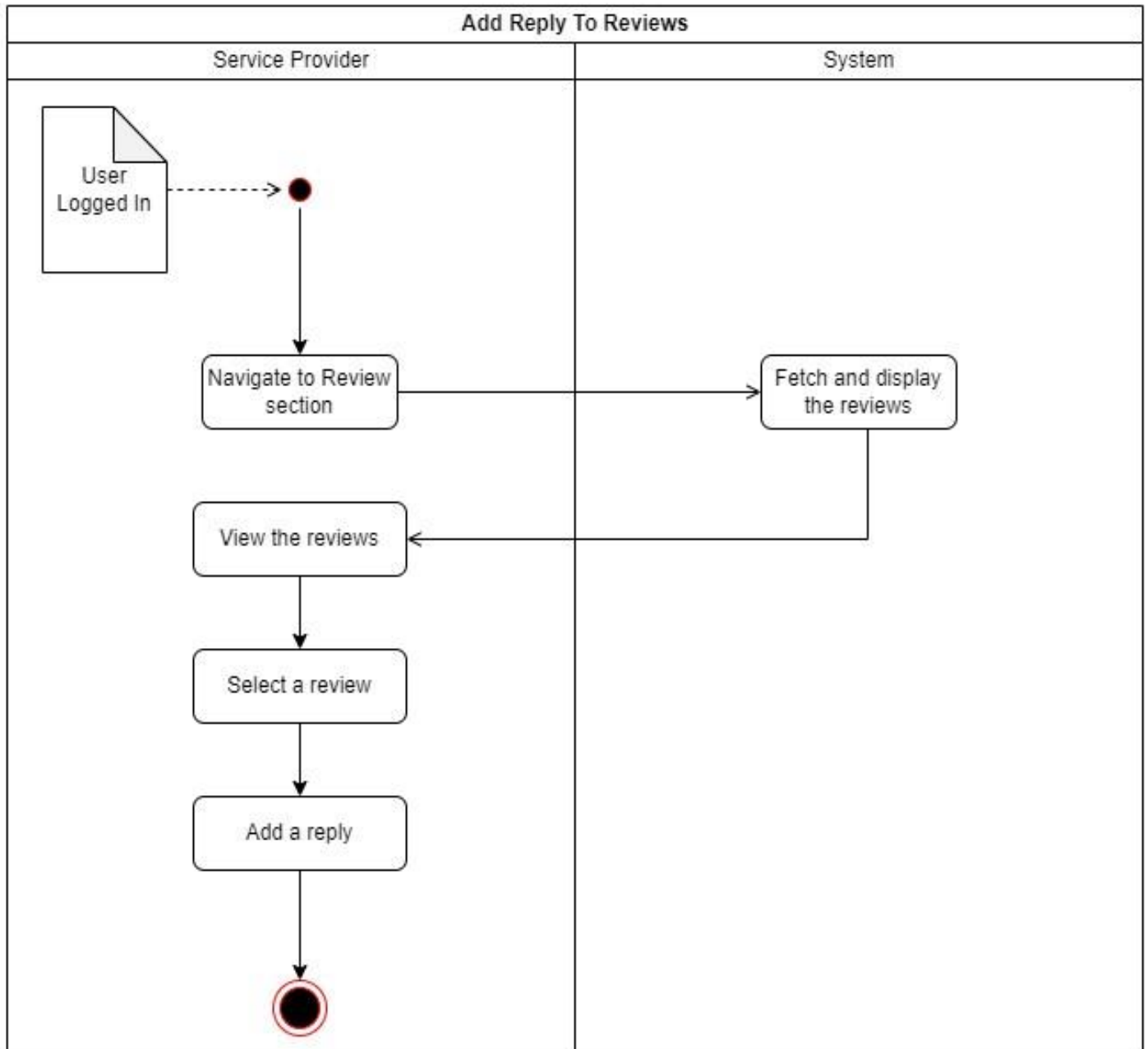
8.4.12 Inventory Management



8.4.13. Approve Packages



8.4.14. Add replies



9. Completeness of the Project

9.1. Functionalities completed

Admin Functionalities

- Register to the system
- Login and logout
- Manage personal profile
- View traveler/customer and service providers
- Approve service providers
- Delete traveler/customer and service providers

Travel User Functionalities

- Register to the system
- Login and logout
- Update user profile
- Pay for services
- Book services (hotels, transport, guides)
- View trip details
- Provide feedback

Accommodation Supplier Functionalities

- Register to the system
- Login and logout
- Manage personal profile
- Manage bookings
- Update availability
- View payments

Transport Supplier/Driver Functionalities

- Register to the system
- Login and logout
- Add vehicles
- Update availability
- Manage bookings
- Manage rental and service rates
- View payments

Guider Functionalities

- Register to the system
- Login and logout
- Manage personal profile
- Manage bookings
- Update availability
- Respond to bookings
- Manage their service rates
- View payments

Equipment Supplier Functionalities

- Register to the system
- Login and logout
- Maintain inventory
- Set and update prices
- Contact customers
- View payments

Other System Functionalities

- Payment gateway integration (Pay Here sandbox) for service payments
- Basic mobile responsiveness for web platform
- Search functionality by locations (early version integrated)

9.2. Functionalities yet to complete

- Mobile Application
- chat bot
- Expanding the application's geographical coverage (limited to Sri Lanka)
- Restaurants as a service provider
- Multi-language Support

9.3. Individual contribution of the team members

Member 1 – 22020411 Jayasinghe N.N.P.D.T.

Student Index Number: 22020411

Student Name: Jayasinghe N.N.P.D.T.

Group Number: IS24

Group Name: Journey Beyond

- **Components Implemented:**

1. Admin Login and Authentication System
2. Admin User Management Dashboard
3. Service Provider Approval System
4. Normal Travel User Profile Management
5. Accommodation Supplier Booking Management
6. MVC Framework Base Setup
7. CRUD Operations for Admin and Accommodation Supplier
8. Testing of Admin and Travel User Functionalities

- **Description of the Component(s):**

1. **Admin Login and Authentication System** - Developed secure login/logout functionality for the admin user, including session management and error handling.
2. **Admin User Management Dashboard** - Created dashboard where Admins can view, delete, and monitor both travelers and service providers.
3. **Service Provider Approval System** - Built a review and approval workflow for new service providers and travel packages submitted to the system.
4. **Normal Travel User Profile Management** - Developed functionality allowing users to update their profiles, personal data, and preferences.
5. **Accommodation Supplier Booking Management** - Created an interface for accommodation suppliers to manage booking requests and availability.
6. **MVC Framework Base Setup** - Helped structure the project into Model-View-Controller layers to separate data handling, user interfaces, and logic.
7. **CRUD Operations for Admin and Accommodation Supplier** - Implemented Create, Read, Update, Delete operations for Admin and Accommodation Supplier modules.
8. **Testing of Admin and Travel User Functionalities** - Conducted system testing to verify login, registration, approval processes, and profile management features.

Test Case Table for Admin and Travel System Components

Admin Login and Authentication System

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-------------|---|--|---|-----------------------------|--------|
| TC-1 | Admin Login | Unit Testing: Verify findUserByEmail() exists | Email: "admin@example.com" | Returns true | Returns true | Pass |
| TC-2 | Admin Login | Unit Testing: Verify findUserByEmail() non-existent | Email: "unknown@example.com" | Returns false | Returns false | Pass |
| TC-3 | Admin Login | Integration Testing: Verify login with DB | Username: "admin1", Password: "admin123" | Session set, redirect to /admin/dashboard | Redirected to dashboard | Pass |
| TC-4 | Admin Login | Functional Testing: Verify successful login | Username: "admin1", Password: "admin123" | Redirect to /admin/dashboard | Redirected to dashboard | Pass |
| TC-5 | Admin Login | Functional Testing: Verify invalid credentials | Username: "admin1", Password: "wrong" | Error: "Invalid Username or Password" | Error displayed | Pass |
| TC-6 | Admin Login | Functional Testing: Verify empty fields | Username: "", Password: "" | Error: "Please fill out all fields" | Error displayed | Pass |
| TC-7 | Admin Login | Functional Testing: Verify logout | Click "Logout" | Redirect to /admin/login, session cleared | Redirected, session cleared | Pass |

Admin User Management Dashboard

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-----------------|--|-------------------------|-----------------------------------|------------------|--------|
| TC-8 | Admin Dashboard | Integration Testing: Verify dashboard data | Access /admin/dashboard | Displays traveler/provider counts | Counts displayed | Pass |
| TC-9 | Admin Dashboard | Functional Testing: Verify traveler list display | Access /admin/travelers | Table shows travelers | Table displayed | Pass |
| TC-10 | Admin Dashboard | Usability Testing: Verify dashboard readability | Access /admin/dashboard | Stats/tables clear and organized | Stats clear | Pass |

Service Provider Approval System

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|------------------|---|------------------------------------|----------------------------------|--------------------------------|--------|
| TC-11 | Service Provider | Functional Testing: Verify approve provider | Click "Approve" on provider ID 456 | Success message, provider active | Message shown, provider active | Pass |

Normal Travel User Profile Management

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-------------|--|--------------------------------------|-----------------|---------------|--------|
| TC-12 | Travel User | Unit Testing: Verify updateUserProfile() | Email: "user@new.com", Name: "Saman" | Returns true | Returns true | Pass |

| | | | | | | |
|-------|-------------|--|------------------------------|-------------------------------|---------------------------|------|
| TC-13 | Travel User | Integration Testing: Verify profile update | Update email: "user@new.com" | DB updated, success message | DB updated, message shown | Pass |
| TC-14 | Travel User | Functional Testing: Verify invalid email | Email: "invalid@.com" | Error: "Invalid email format" | Error displayed | Pass |

Accommodation Supplier Booking Management

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|--------------------|--|--------------------------------|------------------------------------|-------------------|--------|
| TC-15 | Booking Management | Functional Testing: Verify confirm booking | Click "Confirm" on booking | Booking confirmed | Booking confirmed | Pass |
| TC-16 | Booking Management | Usability Testing: Verify booking UI clarity | Access booking management page | Clear booking list, action buttons | UI clear | Pass |

MVC Framework Base Setup

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|---------------|--|-------------------------|------------------------------|---------------|--------|
| TC-17 | MVC Framework | Integration Testing: Verify controller-view flow | Access /admin/dashboard | View renders with model data | View rendered | Pass |
| TC-18 | MVC Framework | Functional Testing: Verify routing | Access /admin/login | Login page loads | page loads | Pass |

CRUD Operations for Admin and Accommodation Supplier

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|---------------|---|---|------------------|------------------|--------|
| TC-19 | CRUD Supplier | Unit Testing: Verify createSupplier() | Name: "Hotel XYZ", Email: "hotel@xyz.com" | Returns true | Returns true | Pass |
| TC-20 | CRUD Supplier | Integration Testing: Verify supplier creation | Submit supplier form | DB updated | DB updated | Pass |
| TC-21 | CRUD Supplier | Functional Testing: Verify update supplier | Update supplier email | Supplier updated | Supplier updated | Pass |

Member 2 – 22020901 Savindu A.U

Student Index Number: 22020901

Student Name: Savindu A.U

Group Number: IS24

Group Name: Journey Beyond

● Components Implemented:

1. Equipment Supplier Module CRUD
2. Equipment Supplier Inventory Management
3. User Profile Management for Normal Travel Users
4. Payment Gateway Integration (Pay Here Sandbox)
5. Payment Success/Failure Handling
6. User Interface Design for Equipment Supplier
7. Backend Validation for Equipment Orders
8. Testing of Payment and Inventory Systems

● Description of the Component(s):

1. **Equipment Supplier Module CRUD** - Developed a system for equipment suppliers to create, read, update, and delete product listings.
2. **Equipment Supplier Inventory Management** - Built inventory dashboards and forms allowing suppliers to manage stock levels and prices.

3. **User Profile Management for Travel Users** - Enabled users to edit their basic profile details, ensuring a user-friendly interface and validations.
4. **Payment Gateway Integration (PayHere)** - Integrated the PayHere sandbox system into the booking process to simulate real payment flows.
5. **Payment Success/Failure Handling** - Developed mechanisms to handle successful and failed payment notifications securely.
6. **User Interface Design for Equipment Supplier** - Designed UIs using HTML/CSS/JS for equipment suppliers to easily manage their inventory.
7. **Backend Validation for Equipment Orders** - Implemented backend checks to ensure all item orders have proper inventory confirmation before finalizing.
8. **Testing of Payment and Inventory Systems** - Tested payment processing, inventory updates, and profile update flows for system stability.

Test Case Table for Equipment Supplier, Payment, and User Components

Equipment Supplier Module CRUD

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|----------------|---|-------------------------------|---------------------------------|-------------------|--------|
| TC-22 | Equipment CRUD | Unit Testing: Verify createEquipment() | Name: "Uvin", Price: 50.00 | Returns true | Returns true | Pass |
| TC-23 | Equipment CRUD | Unit Testing: Verify updateEquipment() | Update price to 60.00 from 50 | Returns true | Returns true | Pass |
| TC-24 | Equipment CRUD | Functional Testing: Verify read equipment | Access equipment list | Displays list equipment details | Details displayed | Pass |
| TC-25 | Equipment CRUD | Functional Testing: Verify update equipment | Update name to "Large Tent" | Equipment updated | Equipment updated | Pass |

Equipment Supplier Inventory Management

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|----------------------|---|----------------------------|---------------------------|-----------------|--------|
| TC-26 | Inventory Management | Usability Testing: Verify dashboard clarity | Access inventory dashboard | Clear stock/price display | Dashboard clear | Pass |
| TC-27 | Equipment CRUD | Unit Testing: Verify updateStockLevel() | Equipment No1, Stock: 10 | Returns true | Returns true | Pass |

Payment Gateway Integration (PayHere Sandbox)

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-----------------|---|---------------------------------------|----------------------------------|-------------------------|--------|
| TC-28 | Payment Gateway | Unit Testing: Verify initiatePayment() | Amount: 500.00, Order ID: 3 | Returns PayHere transaction ID | Transaction ID returned | Pass |
| TC-29 | Equipment CRUD | Functional Testing: Verify successful payment | Complete payment with valid test card | Success message, order confirmed | Success message shown | Pass |

Member 3 – 22020799 Ranathunga R.J.K.S.S.

Student Index Number: 22020799

Student Name: Ranathunga R.J.K.S.S.

Group Number: IS24

Group Name: Journey Beyond

● **Components Implemented:**

1. Guider Registration and Login
2. Guider Profile Management
3. Guider Availability Calendar System
4. Guider Booking Management
5. Rate Management for Guiders
6. View Payments Module for Guiders
7. Booking Response System
8. Testing of Guider Management Features

● **Description of the Component(s):**

1. **Guider Registration and Login** - Built the registration and secure login systems for the Guider user role with basic validation.
2. **Guider Profile Management** - Developed editable profile pages allowing Guiders to manage their personal and professional details.
3. **Guider Availability Calendar System** - Created a calendar-based system where Guiders can set available dates for booking.
4. **Guider Booking Management** - Designed modules where Guiders can accept or reject traveler booking requests.
5. **Rate Management for Guiders** - Enabled Guiders to set or update service rates depending on their expertise and service areas.
6. **View Payments Module for Guiders** - Built secure access for Guiders to view and track payments earned through the system.
7. **Booking Response System** - Implemented real-time notifications and response actions for incoming booking requests.
8. **Testing of Guider Management Features** - Conducted functional and integration testing of registration, booking handling, and payment display features.

Test Case Table for Guider Management Components

Guider Registration and Login

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|--------|-------------|-------|-----------------|---------------|--------|
|--------------|--------|-------------|-------|-----------------|---------------|--------|

| | | | | | | |
|-------|--------------|--|--|--|-----------------------------|------|
| TC-30 | Guider Login | Unit Testing: Verify findGuiderByEmail() | Email: "guider@example.com" | Returns true | Returns true | Pass |
| TC-31 | Guider Login | Unit Testing: Verify registerGuider() | Email: "new@guider.com", Password: "pass123" | Returns true | Returns true | Pass |
| TC-32 | Guider Login | Functional Testing: Verify logout | Click "logout" | Redirect to /guider/login, session cleared | Redirected, session cleared | Pass |
| TC-33 | Guider Login | Functional Testing: Verify invalid credentials | Email: "guider@example.com", Password: "wrong" | Error: "Invalid Email or Password" | Error displayed | Pass |

Guider Profile Management

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|----------------|--|--|--|---------------|--------|
| TC-34 | Guider Profile | Unit Testing: Verify updateGuiderProfile() | Email: "guider@new.com", Name: "Jane" | Returns true | Returns true | Pass |
| TC-35 | Guider Profile | Unit Testing: Verify registerGuider() | Email: "new@guider.com", Password: "pass123" | Returns true | Returns true | Pass |
| TC-36 | Guider Profile | Usability Testing: Verify profile form UI | Access profile page | Access Clear fields, profile intuitive page submit | Form usable | Pass |

Guider Availability Calendar System

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-----------------------|---|---------------------------------------|-----------------|------------------|--------|
| TC-37 | Availability Calendar | Unit Testing: Verify setAvailability() | Date: "2025-05-01", Status: Available | Returns true | Returns true | Pass |
| TC-38 | Availability Calendar | Functional Testing: Verify set availability | Manura "2025-05-01" as available | Success message | Calendar updated | Pass |

Guider Booking Management

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|--------------------|--|--------------------------------|------------------------------------|---------------|--------|
| TC-39 | Booking Management | Usability Testing: Verify booking UI clarity | Access booking management page | Clear booking list, action buttons | UI clear | Pass |

View Payments Module for Guiders

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-----------------|---|------------------------|---------------------------|----------------|--------|
| TC-40 | Payments Module | Unit Testing: Verify getPayments() | Guider ID: 1 | Returns array of payments | Array returned | Pass |
| TC-41 | Payments Module | Functional Testing: Verify payment view | Access payment history | Shows payments | payments shown | Pass |

| | | | | | | |
|-------|-----------------|--|---------------------|------------------------------|----------|------|
| TC-42 | Payments Module | Usability Testing: Verify payment UI clarity | Access payment page | Clear payment list, readable | UI clear | Pass |
|-------|-----------------|--|---------------------|------------------------------|----------|------|

Member 4 – 22020861 Samaranayake P.D.R.O

Student Index Number: 22020861

Student Name: Samaranayake P.D.R.O

Group Number: IS24

Group Name: Journey Beyond

● Components Implemented:

1. Transport Supplier Vehicle Listing Module
2. Vehicle Availability Management
3. Transport Supplier Profile Management
4. Vehicle Booking Management System
5. Rate Management for Vehicle Rentals
6. View Transport Supplier Payments
7. Vehicle CRUD Operations (Add/Update/Delete)
8. Testing of Transport Supplier Functionalities

● Description of the Component(s):

1. **Transport Supplier Vehicle Listing Module** - Developed features allowing transport suppliers to list available vehicles into the platform.
2. **Vehicle Availability Management** - Created system for updating vehicle availability based on dates and booking status.
3. **Transport Supplier Profile Management** - Developed profile management pages for transport suppliers to edit company and service details.
4. **Vehicle Booking Management System** - Implemented modules for managing vehicle booking requests by travelers.
5. **Rate Management for Vehicle Rentals** - Provided forms for transport suppliers to manage rental and service rates for their vehicles.
6. **View Transport Supplier Payments** - Built modules where transport suppliers can view their completed and pending payments.
7. **Vehicle CRUD Operations (Add/Update/Delete)** - Developed basic create, update, and delete functionalities for vehicle entries.
8. **Testing of Transport Supplier Functionalities** - Conducted extensive testing on vehicle addition, booking acceptance, and payment visibility.

Test Case Table for Transport Supplier Components

Transport Supplier Vehicle Listing Module

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|---------------------|-----------------|--|-----------------------------|--------------------------------|----------------------|---------------|
| TC-43 | Vehicle Listing | Functional Testing: Verify vehicle display | Access /supplier/vehicles | Displays vehicle list | List displayed | Pass |
| TC-44 | Vehicle Listing | Usability Testing: Verify listing form UI | Access vehicle listing form | Clear fields, intuitive submit | Form usable | Pass |

Vehicle Availability Management

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|---------------------|----------------------|---|--|------------------------------|----------------------|---------------|
| TC-45 | Vehicle Availability | Unit Testing: Verify setVehicleAvailability() | Vehicle ID: 1, Date: "2025-05-01", Status: Available | Returns true | Returns true | Pass |
| TC-46 | Vehicle Availability | Usability Testing: Verify calendar UI | Access availability page | Clear date picker, intuitive | UI clear | Pass |

Transport Supplier Profile Management

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|---------------------|------------------|--|---------------------------|------------------------|----------------------|---------------|
| TC-47 | Supplier Profile | Unit Testing: Verify updateSupplierProfile() | Email: "supplier@new.com" | Returns true | Returns true | Pass |

| | | | | | | |
|-------|------------------|--|---|-----------------------------------|-----------------|------|
| | | | , Company: "JourneyBeyond Status: Available | | | |
| TC-48 | Supplier Profile | Functional Testing: Verify invalid email | Email: "invalid@.com" | Error: "Invalid email format" | Error displayed | Pass |
| TC-49 | Supplier Profile | Usability Testing: Verify profile form UI | Access profile page | Clear fields, intuitive submit | Form usable | Pass |

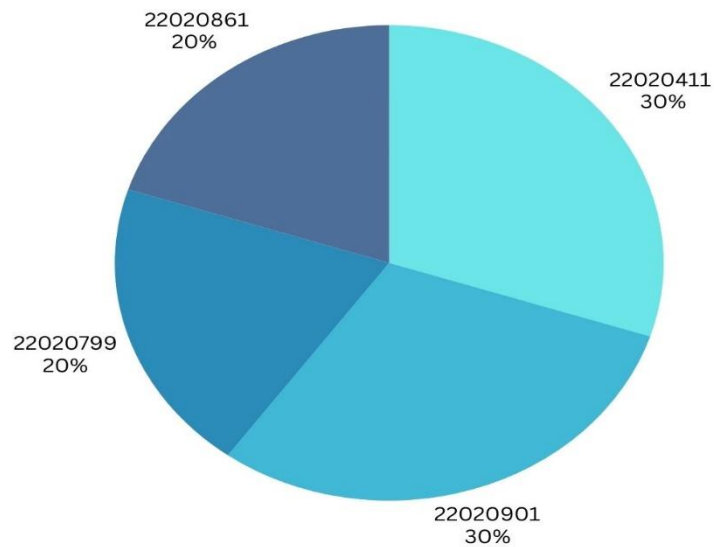
Vehicle Booking Management System

| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-----------------|---|------------------------------------|-----------------|---------------|--------|
| TC-50 | Vehicle Booking | Unit Testing: Verify acceptVehicleBooking() | Unit Testing: Verify Booking ID: 2 | Returns true | Returns true | Pass |

Rate Management for Vehicle Rentals

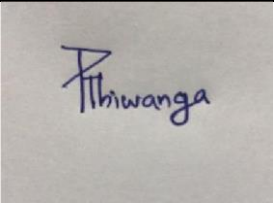

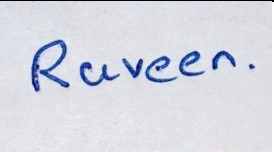
| Test Case ID | Module | Description | Input | Expected Output | Actual Output | Status |
|--------------|-----------------|--|--|-----------------------------|-----------------------------|--------|
| TC-51 | Rate Management | Unit Testing: Verify updateVehicleRate() | Rate: 100.00/day, Vehicle ID: 1 | Returns true | Returns true | Pass |
| TC-52 | Rate Management | Integration Testing: Verify rate update | Update rate to 100.00 for Vehicle ID 1 | DB updated, success message | DB updated, success message | Pass |

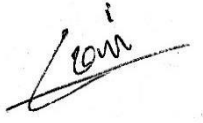
member's individual contribution as a percentage



15. Declaration

We as members of the project titled “Journey Beyond”, 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'll 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 place.

| Index Number | Name | Signature |
|--------------|------------------------|---|
| 22020411 | Jayasinghe .N.N.P.D.T. |  |
| 22020799 | Ranathunga R.J.K.S.S. |  |
| 22020861 | Samaranayake P.D.R.O |  |

| | | |
|----------|-------------|---|
| 22020901 | Savindu A.U |  |
|----------|-------------|---|