Capybara Group - Capbr.G

BookaStay
Vision Document (English ver.)

Version 1.0.0.0

Revision History

Date	Version	Description	Author
27/09/2024	0.1.0.0	Initial release	Project Manager (L.T. Nghia)
30/09/2024	0.1.1.0	Approved the tentative plan	All members
11/10/2024	0.2.0.0	Modify workflows	All members
01/11/2024	0.3.0.0	Add more information	Project Manager (L.T. Nghia)
20/11/2024	1.0.0.0	Public release version (final version)	Project Manager (L.T. Nghia)

Table of Contents

Vision (Small Project)

1.   Introduction

This document is compiled to describe and analyze the general requirements and functions of the entire project "E-commerce - Reservation service: BookaStay hotel reservation system for application software, BookaStay application", abbreviated as "BookaStay project" from the user's perspective (POV), simulated and compiled by Capybara Group (Capbr.G).

The BookaStay project provides optimal solutions for online booking, focusing on meeting the requirements of hotelier stakeholders and consumers. These solutions come from the needs of customers who require the most optimal system to meet the booking process, improve user experience and support systematic, effective virtual management services. .

1.1   Organization

The BookAStay project is implemented and developed by Capybara Development Team, Capbr.G.
The finished product is beta tested and publicly released online by Capybara Web, Capbr.G.

1.2   Significance

The project product is expected to bring attractive and interesting online experiences to users when using the hotel booking service we provide.

1.3   References

- VisionDocument: *Vision document for a requirements project*
- Booking.com: *Booking.com*
- Agoda.com: *https://www.agoda.com/?ds=DCcFXEqX8nGMcQiV*

2. Positioning

2.1 Problem Statement

The problem of	Difficulties in finding and booking hotels that meet consumers' needs and budgets make it easier to promote hotels to users as well as manage the booking process.
affects	Consumers, hoteliers and website managers
the impact of which is	Consumers spend a lot of time comparing options and suitable offers, and hoteliers have difficulty reaching customers.
a successful solution would be	Provides a user-friendly platform. Allows you to easily book and search for hotels. Simplify the search process with filters. Ensuring a safe and secure transaction process.

2.2 Product Position Statement

For	People wishing to book hotel rooms, hotel owners
Who	Reservations, room for rent
The *BookaStay*	A website
That	Convenient search and reservation ability, detailed filtration features for price and location, along with safe payment process and customer support service quickly.
Unlike	Booking service via the hotline or to take place to book a room
Our product	Focus entirely on the hotel segment, making it easy for consumers to find quality hotels without being confused with other services.

3.   Stakeholder and User Descriptions

3.1   Stakeholder Summary

Name	Description	Responsibilities
Developer	Capybara Development Team, Capbr.G	Responsible for planning, building and developing software systems; Write requirements documents, system description documents, usage documents,...
Publisher	Capybara Web, Capbr.G	Responsible for releasing project application software for test versions and community versions.
Theory instructors and practice instructors	Including Ms. Nguyen Thi Minh Tuyen and Mr. Ho Tuan Thanh, who act as supervisors and guides in implementing the software.	Monitor the process of software implementation, guide the software implementation processes of the group.
Hotelier	Owners of hotels wishing to rent or advertise hotels and rooms	Make requirements and criteria for building a booking website, hotel booking, homestay, ...
Hotel staff	Hotel staff such as receptionist, manager, accounting, ...	Make requirements for the function of managing booking, paying, exchanging with customers, ...
Reservation service users	People wishing to book residents such as tourists, business travelers, ...	People directly use booking services, make requirements on reservation, payment, and booking history; Know the details of the hotel, room, exchange with the hotel manager, ...

3.2   User Summary

Name	Description	Responsibilities	Stakeholder
Manager	Hotel staff such as receptionist, manager, ...	Make requirements for the function of managing booking, paying, exchanging with customers, ...	Hotel staff
Reservation	People wishing to book residents such as tourists, business travelers, ...	People directly use booking services, make requirements on reservation, payment, and book history; Know the details of the hotel, room, exchange with the manager, ...	Reservation service users

3.3 User Environment

- The BookaStay application is created towards the user who is the tourists, the people traveling far away, ... the application not only serves domestic users but also towards foreign tourists with the country with The multilingual support
- The application is built on the web platform to meet the flexibility during use, can use the phone or computer to access
- There are 2 main types of users that the application wants to target:
  + Hotel owner: For this group of users, the system only supports domestic hotels wishing to rent rooms. These hotels must be evaluated and tested at a good and reputable level before being registered to use the system.
  + Room tenants: This group of users wants to aim for both domestic and foreign customers to fully meet the needs of accommodation for tourists when coming to a strange place.
- The system is not towards adulthood and also does not support reservation for children or adolescents (<18 years old), users when registering an account must be over 18 years old

3.4 Summary of Key Stakeholder or User Needs

| Need	Priority	Concerns	Current Solution	Proposed Solutions
Search room	High	Customers have difficulty searching for accommodation to suit the needs	Customers must go to the location and must go around to search for hotels, expensive time and effort	Customers can stay home to search online hotels, can filter search results according to many criteria
Booking	High	Complex booking	When in need of booking, customers have to meet the receptionist or call to book a reservation (cost), causing difficulties and slow	Users can visit the website and book online, operate simply just press the booking button and online payment
Payment	Normal	Customers cannot pay in advance	Customers must go to the hotel and pay directly with the receptionist	Customers can stay at home and pay online for the hotel
Hotel room management	High	The management room for rent is difficult when the manager must check the rooms manually	Hotel staff must manually manage the empty or leased rooms	System for management of rental rooms with simple interface. The manager can change the status of the room, check the room, how many renters, how many renters, ...
Hotel finance management	Normal	Financial management needs, revenue reports, profit statistics over time	The manager or hotel owner must synthesize and calculate manual revenue based on handwritten data recorded on paper, easy to lose and errors	The statistics will be automatically done based on the book history recorded in the system, users only need to press the button, they will receive results, without manual operation.

3.5 Alternatives and Competition

- Booking.com: Hotel booking website
  + Support multinational reservation, many locations in many countries, multi -language support, currency conversion when paying, ...
  + There is a history of searching and reserving of customers in the session.
  + There are features to support placing cars, aircraft, ...
  + System suggest places to visit in the area
- Agoda.com: The hotel booking website is like Booking
  + Support multinational reservation, many locations in many countries, multi -language support, currency conversion when paying, ...
  + There is a history of searching and reserving of customers in session.
  + There are features to support placing vehicles, aircraft, ...
  + System suggest places to visit in the area.
  + Support eSim registration in countries.
  + Searching for searching, booking many services of car, bus, train, flight, ...
- Besides, those who want to book rooms can also go to online groups on social networking sites to book in advance but will not guarantee safety and security
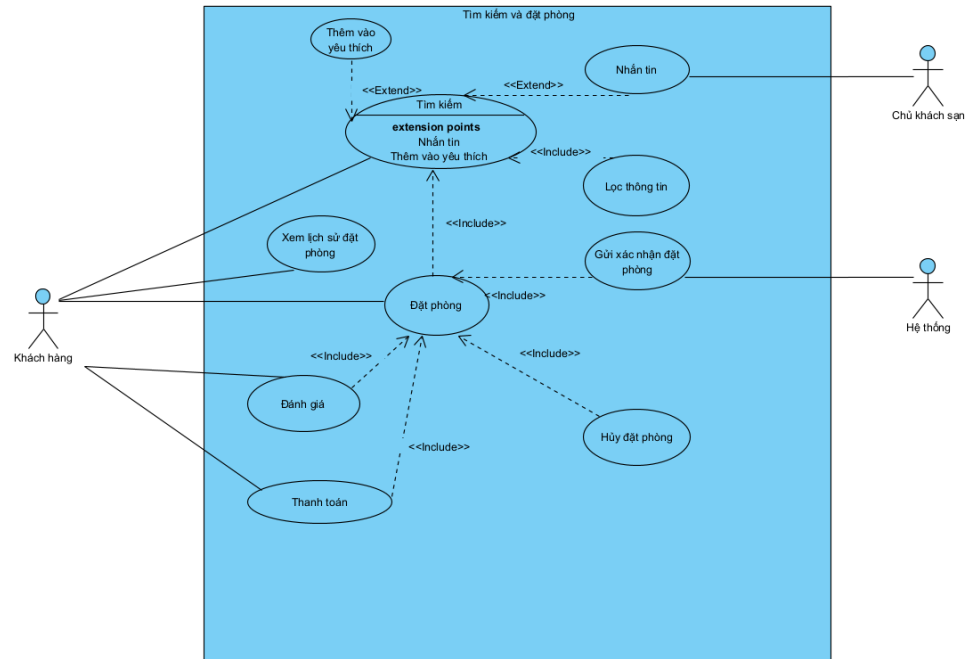
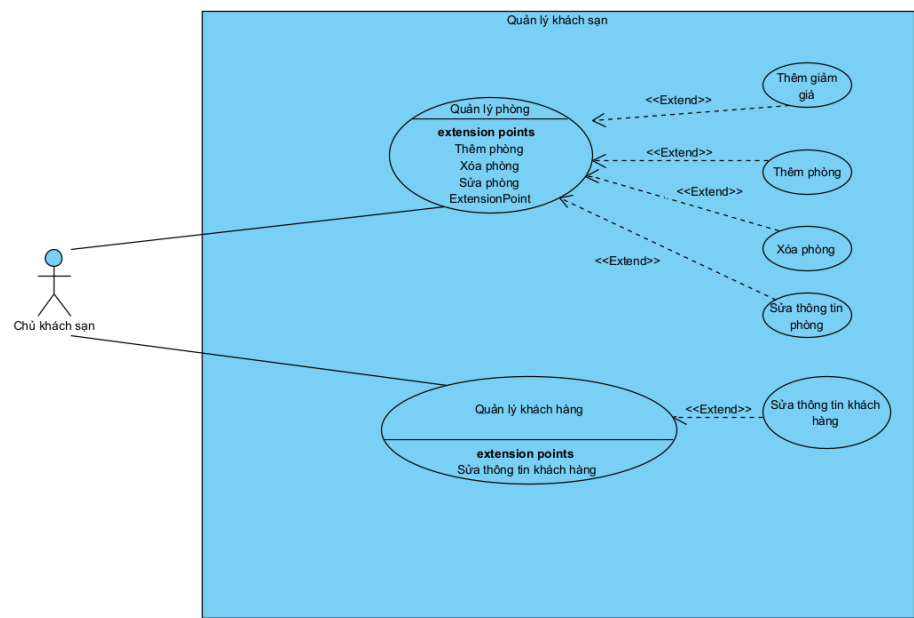## 4 Use-case Diagrams

4.1 Login/Register System
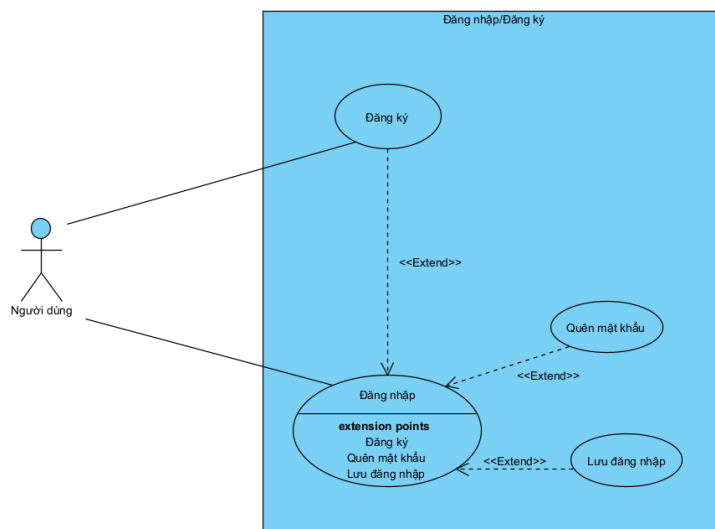
4.2 Search and Reservation System

4.3 Hotel Management System

4.4 Admin management system
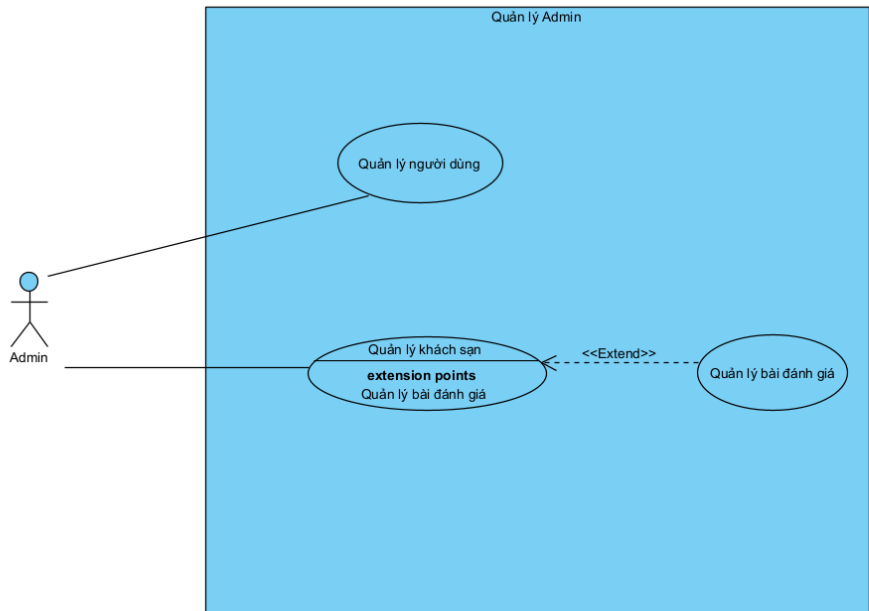
5. Product Overview

Our overview of our hotel reservation products includes the view of the system's operation and the assumptions with specific constraints.

5.1 Product Perspective

In the practical context, the service that our system brings offers a quick, convenient, personalization experience to propose suggestions about the hotel suitable for consumers, support the connection of translations. Online payment case, regular incentive programs.

Below is the context model on how our system operates:

- Application Server is an application server that acts as a website management and processing consumers' requirements while in the process of web browser to experience the best user interface, suggesting guests suggestions. The hotel is suitable for users, finding hotels, suitable hotel search filters, reservations and payments, ...
- Payment System is an online payment system with another third -party payment service provider (such as Visa, Napas, JCB, MasterCard, Payoo, ...)
- Marketing Service System is a system of management of marketing services, advertising with third parties or incentives and promotions of the hotel owner to attract consumers and increase sales.
- Hotel Management System is a hotel management monitoring system, including: Receiving user requirements for functions from Application Server, sending feedback or processing user requirements back to Application Server; Connect to the Database Server system in getting information data or updating new

data when you need to innovate; Connecting to the Payment System online payment system with a third party (such as Payoo, Visa, JCB, ...) when users send transaction requirements to the management monitoring system; In addition, it is also connected to the Service System Marketing System (still developing) in providing marketing cooperation cooperation and brand advertising other companies that profit additional income for this accompanying service.

- Database Server is a storage database system containing information about hotels, rooms, prices, evaluation as well as user account information, hotel owners such as basic information, book history, sections, sections favourite,...
- Security System is a security system that provides security tools and features when communicating between systems to secure important information of consumers, hotel owners or related third parties (solid Especially personal information, information online transactions, ..).
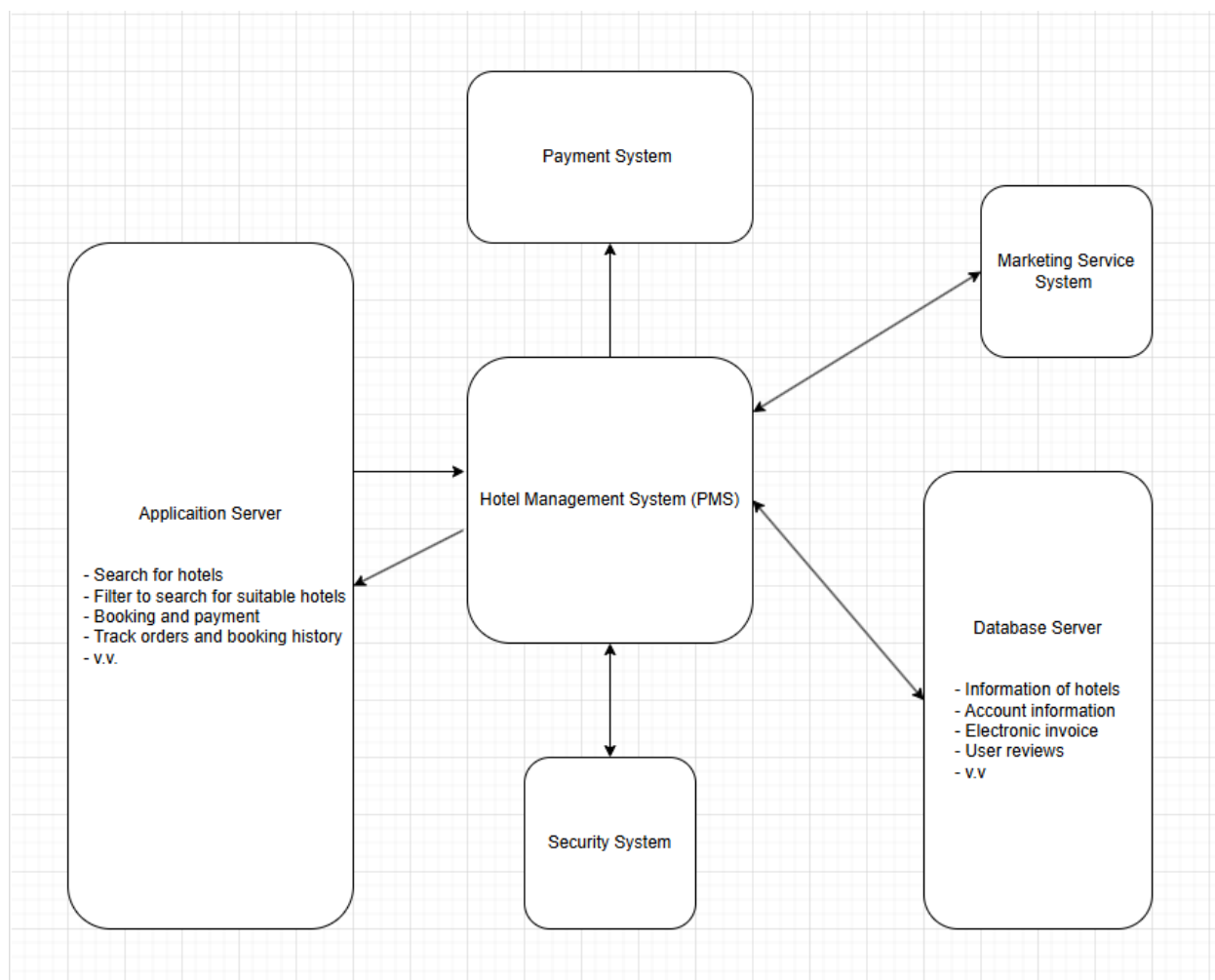
Customer Benefit	Supporting Features
Hotel reservation	Application Server provides experience services to users, sending reservation request to the hotel management system (Hotel Management System) to implement the reservation process.
Payment for booking	Users request payment after booking will be applied by the Application Server to the Hotel Management System for processing, if paying online with external services, the management system will be shifted to the Payment System system. reason.
Update hotel information	The hotel management system (PMS) will take the hotel information update requirements from the hotel owner to handle the request to work with the database server update new changes or work intermediaries through the marketing system Service System when it is necessary to update the necessary preferential policies.
Update user account information	The hotel management system (PMS) will require updating user account information from consumers to handle those requirements and work with the database server updated new changes.
Review consumer experience after using the service	Users make a request to the Application Server server to send user experience evaluation request to the PMS system to process new data updates to the server database server
Financial management for hotel owners	The hotel management system (PMS) provides the necessary functions for hotel owners to manage their indicators and parameters.
Monitor the management of the system's operation for the admin	The hotel management system (PMS) provides overall management functions for administrators to easily manage and coordinate the system.

5.2   Assumptions and Dependencies

The following assumptions and dependencies are related to the capabilities of the whole project system we mentioned in this vision document.
- The system must comply with user information security regulations according to international standards such as GDPR.
- The system needs to be expanded to handle large traffic when the number of users increases, especially on peak occasions such as holidays, holidays, preferential days.
- Regularly check and maintain system plans to ensure the stability of the system.
- The system needs after a long time to renovate, update new features to meet the needs of users to improve the experience for users better.

6. Product Features

This section defines and describes the necessary features according to customer needs in terms of hotel reservation service system.

6.1 Consumer

6.1.1 Login Feature

This feature allows consumers to log in with an existing account on the system. This login includes account name and password.
The feature allows saving passwords for future login sessions and re-login when the consumer forgets the password.

6.1.2 Register Feature

This feature allows consumers to create new accounts on the system. Require necessary information fields such as full name, date of birth, personal document number (CCCD, Passport, etc.), email, phone number, password and password confirmation, policy terms the system we provide.

6.1.3 Search Feature

This feature provides consumers with on-demand search services to find suitable hotels based on location, check-in and check-out time, and number of people needing to book.

6.1.4 Filter Feature

This feature provides consumers with a list of hotels, finding hotels that satisfy their needs based on hotel ratings, experience rating, and hotel prices.

6.1.5 Booking Feature

This feature provides consumers with the necessary to make hotel reservations for commercial purposes. It includes summary information about the hotel you need to book, personal and contact information of the consumer making the reservation, as well as payment information about the order placed.

6.1.6 Evaluation Feature

This feature allows consumers to rate their experience of the hotel they booked for later consumers to review or hoteliers to view reviews from their customers to improve service, Hotel amenities are better. The review includes an assessment of the level of experience and comments left (if any).

6.1.7 Payment Feature

This feature is used when consumers want to make online payment transactions with third parties outside the supply system, mainly integrated on the Payment System to make payments when necessary.

6.1.8 Chat Feature

This feature allows consumers to chat with hotel owners when they require additional requests or ask questions about issues that satisfy consumer needs for hotel owners to know.

6.1.9 Invoice Feature

This feature is provided by the system when consumers need transparent, objective papers, or review the detailed booking information in their booking history.

6.1.10 Order History Feature

This feature is provided by the management system for consumers to review the pre -censored reservations.

6.1.11 Favorite Categories Feature

This feature helps consumers save the hotels that consumers feel like, suitable for themselves, notes when they need to consider the list of favorite hotels to book.

6.2 Hotelier

6.2.1 Login Feature

This feature allows the hotel owner to log in with the existing account on the system. This login section includes account name and password.
The feature allows logging back in if the hotel owner forgot the password.

6.2.2 Register Feature

This feature provides the hotel owner to create a new account including the necessary information about email, full name, phone number, password and confirmation of the imported password.

6.2.3   Posting Feature

This feature allows the hotel owner to post a hotel on the system to bring the hotel information to the necessary consumers including the basic information of the hotel, utilities, rooms, photos, images, Payment method, price, ...

6.2.4   Search Feature

This feature provides the hotel owner to find the hotel list that the hotel owner has previously posted the hotel information on the system after being censored.

6.2.5   Price Feature

This feature allows hotel owners to customize prices or modifications on discount policies depending on the day of the week or in the month.

6.2.6   Payment Feature

This feature allows the hotel owner to make transactions with consumers through online payment transactions with third parties in addition to the supply system, mainly integrated on the Payment System system for payment when necessary. .

6.2.7   Chat Feature

This feature allows the hotel owner to respond to additional requirements or questions and answers to consumer needs.

6.2.8   Invoice Feature

This feature is provided by the service system when the hotel owner needs transparent, objective, or reviewing documents for detailed reservation information in the history of the reservation stored on the system for the purpose. Legal.

6.2.9   Financial Statements Feature

This feature is provided by the management system for the hotel owner to manage finance, statistics and review the history; as well as providing administrators to manage system parameters (account number, hotel number, traffic volume).

6.3   Administrator

6.3.1   Login Feature

This feature allows administrators to log in to the server's official management system. This login section includes account name and password.

6.3.2   Overview Feature

This feature allows administrators to monitor data and objectively evaluate the whole system situation. Related figures on the number of accounts, hotels, traffic, ...

6.3.3   Report Approval Feature

This feature allows administrators to consider and handle reports on reporting from the requirements of the financial statements of the hotel owners. Allow administrators to be approved, deleted, stored, ...

6.4   System Defaults

6.4.1   Language Feature

This feature offers the service that the system provides a convenient multilingual feature for communication and manipulation to users.

6.4.2   Tutorial Feature

This feature helps users easily manipulate and use the services provided by the system.

6.4.3   Map Feature

This feature supports providing accurate geographical location of the hotel location, and supports the provision of hotel suggestions suitable for consumer needs in particular.

6.4.4   Installation Feature

This feature helps some users can adjust and update important important information such as email, or password, ... converting support functions for users such as language support, money bad,...

7 Non-Functional Requirements

7.1 Usability Requirements

- The user user ability must be friendly, users are easy to manipulate, use to book without reading instructions.
- Ensure the problem of multilingual support and can be adjusted depending on the country.

7.2 Performance Requirements

- The requirements of the site's performance must meet the criteria of fast response time, the response time does not exceed the threshold of 3 seconds on each operation..
- The system requires support for multiple users to access at the same time, especially at peak time such as holidays, weekends.

7.3 Space Requirements

- The system can be expanded to serve thousands of users simultaneously without affecting performance.
- Database and services must be easily expanded when needed.

7.4 Dependability Requirements

- The system needs to operate continuously 24/7 with the minimum dying (downtime).
- It is necessary to have a backup system to fix the problem quickly when the system congestion occurs.

7.5 Environmental Requirements

- The system needs to run on the appropriate environment, avoiding cases where the system is not compatible with the enforcement environment.
- The program structure of the system must be transparent and intuitive, with notes to comment (comment) when necessary, and follow the rules and standards when programming.

7.6 Development Requirements

- Need a periodic data backup system to recover quickly if there is a problem.
- Can deploy applications on multiple platforms (web, iOS, Android) for users to easily access.
- The system must ensure that there is an expansion space when developing the application.

7.7 Regulatory Requirements

- Comply with the law on standard principles when participating in internet activities
- Compliance with the rules and policies and regulations of the site have been clearly stated when using the service of this website system.
- There is a clear data recovery process to protect customer data and ensure that the user experience is not interrupted.

7.8 Security Requirements

- Customer data, especially payment information and personal information, must be encrypted and protected.
- Ensure compliance with security standards such as PCI-DSS for payment.
- Take measures against popular attacks such as SQL Injection, Cross-Site Scripting (XSS), and Cross-Site Request Forgery (CSRF).
- Customer data or related to customers should be given priority to implement security measures.