

## LA GRANDEE INTERNATIONAL COLLEGE

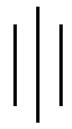
## Simalchaur, Pokhara, Nepal

A Project Report

On

# "Hamro Booking Sewa"

(Hotel Booking Application)



#### **Submitted to:**

LA Grandee International College

Bachelor of Computer Application (BCA) Program

In partial fulfilment of the requirements for the degree of BCA under

Pokhara University

## **Submitted by:**

| Name             | Program | Semester | P.U. Registration Number |
|------------------|---------|----------|--------------------------|
| Laxman Parajuli  | BCA     | 8th      | 2019-01-53-0119          |
| Sandhya Banstola | BCA     | 8th      | 2019-01-53-0132          |
| Ujjwal Adhikari  | BCA     | 8th      | 2019-01-53-0138          |

**Date: 2 July 2024** 

## ACKNOWLEDGEMENT

The satisfaction that accompanies after the successful completion of any task will be incomplete without mentioning the people whose ceaseless and relentless cooperation, constant guidance and encouragement made this project possible.

We are grateful to our project supervisor and faculty teacher **Mr. Sunil Sapkota**, BCA coordinator **Mr Ramesh Chalise**, and **Er. Kiran KC**, principal of **LA Grandee International College** for the guidance, inspiration and constructive suggestions that helped us in the preparation of this project.

We are also appreciative among each other and have understood that teamwork, the designation of the task per the skillset one portrays, constant synchronisation and monitoring of progress and instilling new knowledge and skill is imperative for the success of any given work.

Sincerely,

Laxman Parajuli

Sandhya Banstola

Ujjwal Adhikari

## STUDENT'S DECLARATION

We hereby declare that we are the only authors of this work and that no sources other than the listed here have been used in this work.

Name: Laxman Parajuli

Exam Roll No: 20530177

Semester: 8th Semester

Name: Sandhya Banstola

Exam Roll No: 20530190

Semester: 8th Semester

Name: Ujjwal Adhikari

Exam Roll No: 20530195

Semester: 8th Semester

Date: 2 July 2024

## SUPERVISOR'S DECLARATION

I, hereby recommend that the project "Hamro Booking Sewa" done under my supervision by Mr. Laxman Parajuli, Ms. Sandhya Banstola and Mr. Ujjwal Adhikari during their 8<sup>th</sup> Semester in the partial fulfillment of the requirement for the degree of Bachelor of Computer Application under the affiliation of Pokhara University is completed to my satisfaction and be processed for final evaluation.

.....

Mr. Sunil Sapkota

**Project Supervisor** 

Date: 2 July 2024



# Pokhara University Affliate LA GRANDEE International College ला ग्राण्डी इन्टरनेशनल कलेज



Shaping Minds, Nurturing Future

## **Letter of Approval**

We certify that we have examined this report entitled "Hamro Booking Sewa" and are satisfied with the project defense. It is satisfactory in the scope and qualify as project in partial fulfillment of the requirements for the degree of BCA under Pokhara University.

Mr. Sunil Sapkota Er. Sujan Tamrakar Mr. Ramesh Chalise Er. Kiran K.C Supervisor External Examiner Department Coordinator Principal

Date: 2024-07-02

## **ABSTRACT**

Hotel is a company that provides accommodation services and provides other facilities that meet the requirements of comfort and commercial purposes. The development of the times and technology, also affects the development of the hotel. The use of hotel reservation technology makes it easier for the hotel booking process. Service quality, trustworthiness, facilities and security affect hotel selection decisions.

Hotel booking applications have revolutionized the way people make travel arrangements. These mobile applications provide users with the convenience of booking a hotel room anytime, anywhere. With just a few taps on their smartphones, users can browse through a wide selection of hotels, compare prices, read reviews, and make a reservation within minutes. The application also offers users the option to choose their preferred room type and view room availability.

One of the key features of a hotel booking application is its user-friendly interface. The application is designed to be easy to navigate, with intuitive search filters that allow users to quickly find the perfect hotel that suits their preferences and budget. Additionally, many hotel booking applications offer loyalty programs or special deals for frequent users, encouraging them to continue using the application for their travel needs.

Hotel booking applications have become an indispensable tool for travelers looking to easily and efficiently book accommodation. These applications provide users with a seamless booking experience, allowing them to make reservations in just a few taps on their smartphones. With a wide selection of hotels, user-friendly interfaces, and special deals for frequent users, hotel booking applications have revolutionized the way people plan their travel accommodations.

# TABLE OF CONTENTS

| ACKNOWLEDGEMENT          | i    |
|--------------------------|------|
| STUDENT'S DECLARATION    | ii   |
| SUPERVISOR'S DECLARATION | iii  |
| ABSTRACT                 | v    |
| TABLE OF CONTENTS        | vi   |
| LIST OF FIGURES          | vii  |
| LIST OF TABLES           | viii |
| ABBREVIATIONS            | ix   |
| 1. INTRODUCTION          | 1    |
| 2. PROBLEM STATEMENT     | 2    |
| 3. OBJECTIVES            | 3    |
| 4. BACKGROUND STUDY      | 4    |
| 5. REQUIREMENT DOCUMENT  | 8    |
| 6. SYSTEM DESIGN         | 11   |
| 7. DEVELOPMENT           | 29   |
| 8. TESTING               | 34   |
| 9. PROJECT RESULT        | 39   |
| 10. FUTURE ENHANCEMENT   | 41   |
| 11. CONCLUSION           | 42   |
| 12. REFERENCES           | 44   |
| 12 ANNEY                 | 47   |

# LIST OF FIGURES

| Figure 6.1.1 : Flowchart-Admin            | 11 |
|---|----|
| Figure 6.1.2 : Flowchart-User             | 13 |
| Figure 6.2.1 :ER Diagram.                 | 16 |
| Figure 6.3.1 :DFD Level 0                 | 21 |
| Figure 6.3.2 :DFD Level 1                 | 23 |
| Figure 6.3.3 : DFD Level 2                | 26 |
| Figure 7.1.1 :Gantt Chart                 | 29 |
| Figure 7.2.1 :Agile Model                 | 32 |
| Figure 8.1.1 :Software Testing Life Cycle | 34 |

# LIST OF TABLES

| Table 5.1.1: Hotel Booking Component Matrix | 8  |
|---|----|
| • •   |    |
| Table 8.1.1: User Acceptance Testing        | 38 |
| Table 8.1.1. User Acceptance Testing        |    |

# **ABBREVIATIONS**

| Abbreviation | Full Form                                      |  |
|--------------|--|--|
| AI           | Artificial Intelligence                        |  |
| API          | Application Programming Interface              |  |
| AR           | Augmented Reality                              |  |
| BCA          | Bachelor of Computer Application               |  |
| DFD          | Data Flow Diagram                              |  |
| DSS          | Decision Support System                        |  |
| ER           | Entity Relationship                            |  |
| GDPR         | General Data Protection Regulation             |  |
| ISO          | International Organization for Standardization |  |
| PHP          | Hypertext Preprocessor                         |  |
| QA           | Quality Assurance                              |  |
| SEO          | Search Engine Optimization                     |  |
| STLC         | Software Testing Life Cycle                    |  |
| UAT          | User Acceptance Testing                        |  |
| UML          | Unified Modeling Language                      |  |
| UI           | User Interface                                 |  |
| UX           | User Experience                                |  |
| VR           | Virtual Reality                                |  |
| Wi-Fi        | Wireless Fidelity                              |  |

## 1. INTRODUCTION

Hamro Booking Sewa is a laravel and react native based android application project on online hotel booking where users can view, select and book hotel rroms. The system is fully computerized; the users can book the hotels room very easily. The project is completely user-friendly to attract more users into the platform.

While this project is being built across different development areas, the primary features included are uploading hotel details by hotel owners and online hotel booking by users. The rooms can also be viewed, selected and reviewed. The project has different modules in the development work, which are divided among super admin, hotel owners, users and registrations option.

For today's audiences it's all about immediacy and mobility, the content they are looking for must be just a click away to fit their needs. Now everything is possible. Maybe you want to book a room at your favorite hotel when you are traveling, or maybe each member of your family wants to stay in separate rooms of the hotel. All of these demands are being fulfilled with the help of hotel booking application. Now if you want to view rooms, book hotel rooms and view hotel features you can easily do it wherever you may be.

This hotel booking project in laravel and react native is very unique and different in its approach when compared to the existing projects in the booking segment. The project is built with React Native, a framework of JavaScript and React for front end and PHP framework Laravel for backend. It involves the teamwork of the entire development team.

We have seen a lot of success in the recent times in the online hotel booking with the advent of Internet and our project is targeted to ride on the current trend to reap benefits while meeting the customer's needs.

We have frequently communicated with system features, expectation and resolution of conflicts in requirements as demanded by various users. We have accessed the probable effect of a change with the plan of reducing sudden side effects. Presenting this project in digital platform leads to global connectivity and helps us to improve our application development skills.

## 2. PROBLEM STATEMENT

- Online hotel booking apps lacks of transparency in pricing: many apps advertise low rates, only for users to discover hidden fees and additional charges upon booking.
- Online hotel booking apps may lack customer support and assistance; when
  problems or issues arise during the booking process or stay at the hotel, users often
  struggle to get in touch with a representative for assistance.

## 3. OBJECTIVES

- To improve the user experience and satisfaction by providing a platform where users can browse, compare different hotel options, and find the best deal that suits their budget and preferences.
- To streamline the reservation process by allowing users to reserve rooms at their own convenience, without the need to make phone calls or visit multiple hotels in person.

## 4. BACKGROUND STUDY

The Internet usage has entirely revolutionized the behavior of people in the way of purchasing goods and services. Nowadays, people begin to shop online as their life become very busy to be able to shop in-store. Hence, the development of mobile phone has rapidly grown to satisfy the need of human being as they start using mobile phone habitually in their daily life. Mobile phone emerges as one of the devices that people always use in their daily life. Hotel booking on the mobile phone has become trends among people who attach very much on the easiness of purchasing that produce a paperless ticket. According to Nielsen global e-commerce report in 2017, more than a half of global online purchasing on fashion products accounted for 58%, travel products or services represented an average 55%, Book, music & stationary represented 50%, IT and mobile accounted for 43% and event tickets is 41% of the total global respondents [1].

The growth of current technology on the mobile phone gives a big opportunity for airlines, travel and tourism companies to attract customers by offering the easiness of purchasing on the mobile application [2]. According to Nielsen Mobile Wallet Syndicated Report in 2016, the vast majority (76%) of Canada smartphone owners have used their mobile phone in purchasing-related activity [3]. A Bronto report in 2016 also highlights that 64% of Americans are shopping more often on their mobile phones [4]. From the combination surveys above shows that purchasing travel products or service is the second most likely purchased product/service in online shopping that attract smartphone users. The tremendous accomplishment of these companies can be interpreted by developing their mobile application that is user-friendly. A lot of similar application has been introduced in the market in order to book flight ticket or hotel. However, that application that has poor usability will not attract the users or customers to use those applications in the future.

Hotel is a company that provides services in the form of accommodation and provides meals and other facilities in hotels for the public that meet the requirements for convenience and commercial purposes in these services. Its role is very important in the scope of tourism, business, and other travel needs. The development of times and technology has also influenced the development of hotels today, where one of them can

easily order and find hotels in an area, only from a smartphone that we have, simply by installing a hotel booking application. We can rest in peace during our journey [5].

The use of hotel reservation technology facilitates the booking, but to be able to determine a hotel has many factors. Service quality, trust, facilities and of course security partially and simultaneously influence hotel selection decisions [6]. Service quality can be said to be satisfactory and the level of security affects financial performance and service quality also affects financial performance, this means that the better the level of security and quality of service, the hotel's financial performance will further improve [7].

The evolution of the hotel industry has been significantly influenced by technological advancements, particularly through the proliferation of hotel booking applications. These applications have revolutionized how travelers search for and book accommodations, offering convenience and accessibility like never before. These study explores the critical elements involved in the development of a successful hotel booking application, drawing insights from industry trends, technological innovations, user experience design, and effective marketing strategies.

To develop a compelling hotel booking application, it is essential to analyze current industry trends and understand the preferences of modern travelers. According to a study by Deloitte [8], travelers today prioritize personalized experiences and seamless booking processes. They seek accommodations that offer unique amenities and cater to specific preferences such as location, price range, and the availability of facilities like Wi-Fi or complimentary breakfasts.

A thorough competitive analysis is crucial to identify gaps in the market and distinguish the application from existing competitors. [9] For instance, while major players like Booking.com and Airbnb dominate the market with their extensive listings and user-friendly interfaces, there remains room for niche applications targeting specific traveler segments or offering unique features such as real-time room availability updates or integration with local experiences and attractions.

The success of a hotel booking application hinges on robust technological foundations. Integration of advanced features such as AI-driven recommendation engines for personalized suggestions, secure payment gateways, and seamless user interfaces are imperative. [10] Research indicates that applications leveraging AI to analyze user

preferences and offer tailored recommendations can significantly enhance user engagement and satisfaction.

User experience design plays a pivotal role in the adoption and retention of users. [11] A user-centric approach involves designing intuitive interfaces, optimizing for mobile platforms, and ensuring accessibility features for diverse user demographics. Studies suggest that applications with streamlined booking processes and visually appealing interfaces tend to attract and retain a larger user base.

Navigating legal and regulatory landscapes is crucial to ensure compliance and build trust among users. Data protection regulations such as GDPR in Europe impose requirements on the handling of user data, emphasizing the need for robust security measures and transparent data policies within the application. [12]

Effective marketing strategies are essential to enhance visibility and attract a broad user base. Techniques such as search engine optimization (SEO), social media marketing, and partnerships with influencers or travel bloggers can significantly boost app downloads and user engagement. [13] Studies highlight the effectiveness of targeted digital marketing campaigns in driving app awareness and adoption.

Choosing the right revenue model is critical for the sustainability of the application. Revenue streams such as commission fees on bookings, subscription-based premium features, or partnerships with hotels for promotional placements can generate steady income. [14] Research indicates that a diversified revenue model aligned with user expectations and market dynamics is key to long-term.

Planning for scalability is essential to accommodate growing user demands and future expansions. This involves anticipating technological advancements, exploring potential partnerships, and adapting to changing market trends. [15] Studies suggest that agile development methodologies and continuous innovation are pivotal in sustaining growth and competitiveness in the dynamic landscape of hotel booking applications.

Incorporating emerging technologies can provide a competitive edge to hotel booking applications. For example, the use of block chain technology for transparent and secure transactions in booking and payment processes can enhance trust among users and reduce transaction costs [16]. Furthermore, leveraging augmented reality (AR) and virtual reality (VR) technologies can offer immersive experiences, allowing users to

virtually tour hotel rooms and facilities before making a reservation, thereby enhancing decision-making and user satisfaction [17]

Data analytics plays a crucial role in understanding user behavior and preferences, enabling personalized recommendations and targeted marketing efforts. By analyzing data on booking patterns, user demographics, and feedback, applications can tailor offerings to individual preferences and improve customer retention [18]. Moreover, predictive analytics can forecast demand trends, optimize pricing strategies, and enhance inventory management for hotels, fostering mutually beneficial relationships between the application and its hospitality partners [19]

Ensuring robust security measures is paramount in building trust among users. Applications must adhere to industry standards for data protection and privacy, such as ISO 27001 certification and compliance with DSS for payment security [20] [21]. Transparent communication of security practices and policies to users can further reinforce trust and encourage adoption of the application [22]

Increasingly, travelers are prioritizing sustainability and ethical practices when choosing accommodations. Integrating features that highlight eco-friendly options or partnerships with sustainable hotels can appeal to conscientious consumers and align with global sustainability goals [23]. Additionally, applications can support local communities by promoting cultural experiences and responsible tourism practices, thereby enhancing their social impact and appeal to socially conscious travelers [24]

Understanding regional variations in traveler preferences and cultural norms is crucial for international expansion and market penetration. For instance, preferences for specific amenities, payment methods, and customer service expectations vary across regions and demographic groups [25]. Tailoring the application's offerings and user interface to accommodate these differences can enhance user satisfaction and market penetration in diverse global markets.

The development of a successful hotel booking application requires a holistic approach that integrates technological innovation, data-driven insights, robust security measures, sustainability practices, and cultural sensitivity. The development of a successful hotel booking application requires a multifaceted approach encompassing market research, technological innovation, user-centric design, regulatory compliance, strategic marketing, revenue optimization, and scalability planning.

## 5. REQUIREMENT DOCUMENT

Requirement analysis is a crucial phase in the development cycle of a hotel booking application, providing detailed specifications essential for building the system and understanding its behavior. The collection of system requirements is particularly critical as it forms the foundation upon which the entire system is constructed and informs subsequent stages of the development life cycle. The benefits of thorough requirement analysis include:

- Alignment: Ensures clear understanding among developers.
- Preparation: Helps in avoiding deviations from the project goals.
- Direction: Facilitates easier software design and development.
- Efficiency: Streamlines coding efforts.
- Productivity: Enables accurate budgeting and reduces project costs.

| S.N. | Required Component          | Description  | Priority | Remarks                             |
|------|-----------------------------|--|----------|-------------------------------------|
| 1    | User Authentication         | Allows users to securely login/signup                      | High     | Compliance with security standards. |
| 2    | Hotel Search and<br>Filters | Provides options to search and filter hotels               | High     | Essential for user experience.      |
| 3    | Room Booking                | Enables users to book rooms                                | High     | Core functionality.                 |
| 4    | Admin Dashboard             | Provides<br>administrators<br>with control and<br>insights | High     | Necessary for management.           |
| 5    | Reporting and Analytics     | Generates reports<br>and analytics on<br>bookings          | Moderate | Supports business decisions.        |

Table 5.1.1: Hotel Booking Component Matrix

#### Types of Requirements:

- 1. Functional Requirements: These specify the functionalities, behaviors, and objectives the system must achieve. Functions defining system behavior are articulated as behavioral requirements and typically presented through use cases. Examples include user login and real-time monitoring completion times.
- 2. Non-Functional Requirements: Also referred to as system quality requirements, these provide insights into system operations rather than its functionalities. They complement functional requirements by focusing on system architecture to achieve quality goals and enhance system functionalities. Non-functional requirements encompass aspects such as security protocols and data accuracy during hotel booking.

A requirement document for a hotel booking application is an essential tool that outlines all the necessary features, functions, and user interactions that the application must have to meet the needs of its users effectively. This document serves as a roadmap for the development team, ensuring that everyone involved in the project is on the same page and working towards the same goal.

The requirement document clearly defines the target audience for the hotel booking application. This includes identifying the demographics of the users as well as their preferences and needs when it comes to booking accommodation. Understanding the target audience is crucial for designing a user-friendly interface and providing relevant features that attract and retain users.

The document outlines the specific features and functionalities that the hotel booking application offers. This includes search and filter options, booking processes, user registration and profiles, reviews and ratings.

The document includes a detailed description of the user journey for booking accommodation through the application. This includes the steps the user takes from searching for hotels to making a reservation, as well as any interactions with the system along the way. Understanding the user journey is essential for designing a smooth and intuitive user experience.

The document defines the performance and scalability requirements of the hotel booking application. This includes specifications for response times, loading speeds, and system resources, as well as the ability to handle a large number of users and transactions simultaneously. Performance and scalability are key factors in ensuring the application can meet the demands of its users without experiencing downtime or slowdowns.

The requirement document specifies the testing and QA requirements for the hotel booking application. This includes outlining the types of testing conducted, such as functional, usability, security, and performance testing, as well as the criteria for acceptance and release. Testing is essential for ensuring the application works as intended and is free of bugs and errors.

The document includes a timeline and budget for the development and launch of the hotel booking application. This includes estimating the time and resources needed for each phase of the project, from design and development to testing and deployment. A clear timeline and budget are essential for managing expectations and ensuring the project stays on track.

The requirement document outlines the maintenance and support requirements for the hotel booking application. This includes specifications for ongoing updates and enhancements, as well as user support and troubleshooting. Maintaining the application is essential for ensuring it remains relevant and competitive in the market.

Lastly, the document includes a list of stakeholders and their roles and responsibilities in the development and management of the hotel booking application. This includes the project team, key decision-makers, and any external partners or vendors involved in the project. Clearly defining the roles and responsibilities of each stakeholder is essential for effective communication and collaboration throughout the project.

A requirement document for a hotel booking application is a vital tool for ensuring the successful development and launch of the application. By defining the target audience, features, technical requirements, user journey, security and privacy measures, performance and scalability specifications, testing and QA requirements, timeline and budget, maintenance and support needs, and stakeholder roles and responsibilities, the document provides a comprehensive roadmap for the project. With a well-defined requirement document in place, the development team can work efficiently towards creating a hotel booking application that meets the needs of its users and delivers a seamless and enjoyable booking experience.

## 6. SYSTEM DESIGN

## **6.1** Flow Chart

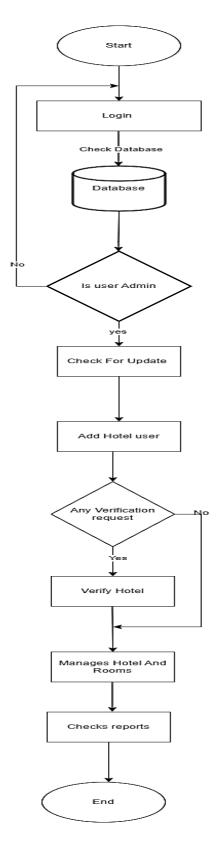


Figure No. 6.1.1: Flowchart-Admin

This flowchart outlines the process flow for an admin user in a hotel management system.

- 1. Start: The process begins.
- 2. Login: The user is prompted to log in.
- 3. Check Database: The system checks the database for the user's login credentials.
- 4. Is user Admin:
  - o Decision point to determine if the logged-in user is an admin.
  - o If the user is not an admin, the process ends here.
- 5. Check for Update: If the user is an admin, the system checks for any updates.
- 6. Add Hotel User: The admin can add a new hotel user to the system.
- 7. Any Verification Request:
  - o Decision point to check if there are any verification requests.
  - If there are no verification requests, the process proceeds to manage hotel and rooms.
- 8. Verify Hotel: If there is a verification request, the admin verifies the hotel.
- 9. Manages Hotel And Rooms: The admin manages hotel details and room allocations.
- 10. Checks Reports: The admin checks the reports for the hotel management system.
- 11. End: The process ends.

This flowchart primarily outlines the administrative functions within a hotel management system, focusing on login, user management, verification, and report checking.

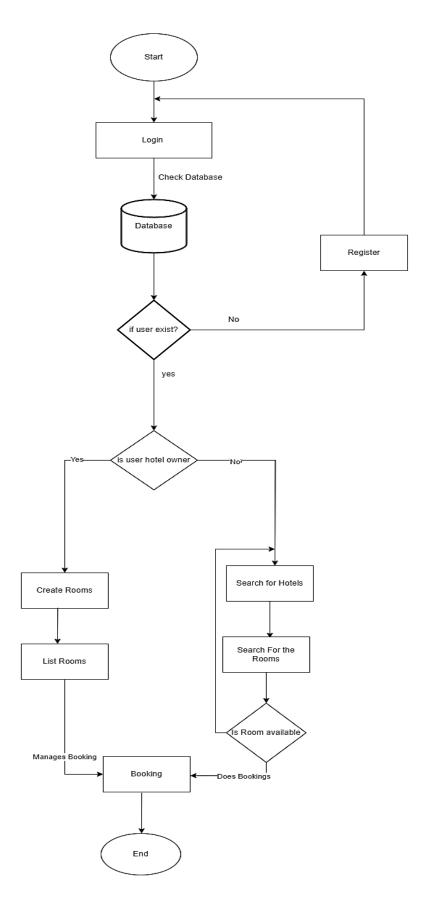


Figure No. 6.1.2: Flowchart-User

This flowchart outlines the process flow for a user in a hotel management system. Here are the steps described in detail:

- 1. Start: The process begins.
- 2. Login: The user is prompted to log in.
- 3. Check Database: The system checks the database for the user's login credentials.

#### 4. If User Exists?

- o Decision point to determine if the user exists in the database.
- o If the user does not exist, the user is directed to the registration process.

#### 5. Register:

- o If the user does not exist in the database, they must register to proceed.
- o After registration, the user returns to the login step.

#### 6. Is User Hotel Owner?

- o If the user exists in the database, the system checks if the user is a hotel owner.
- o If the user is a hotel owner, they proceed to manage their hotel rooms.
- o If the user is not a hotel owner, they proceed to search for hotels.

#### 7. For Hotel Owners:

- o Create Rooms: Hotel owners can create rooms in the system.
- o List Rooms: Hotel owners can list the rooms available in their hotel.
- o Manage Booking: Hotel owners manage the bookings for their rooms.

#### 8. For Regular Users:

- o Search for Hotels: Regular users can search for hotels in the system.
- Search for the Rooms: After selecting a hotel, users can search for available rooms.
- o Is Room Available? Decision point to check if the desired room is available.
  - If the room is available, the user proceeds to make a booking.
  - If the room is not available, the user can continue searching for other rooms.

- 9. Booking: Both hotel owners (managing bookings) and regular users (making bookings) proceed to the booking process.
- 10. End: The process ends.

This flowchart primarily outlines the user interactions within a hotel management system, focusing on login, registration, room management for hotel owners, and room booking for regular users.

## **\*** Importance

The flowchart of a hotel booking application is essential for the project because:

- Visual Representation: It visually outlines the entire booking process, ensuring everyone understands how the application works.
- Clarity and Understanding: It provides a clear overview, helping stakeholders grasp the process details easily.
- Identifying Improvements: Highlights potential bottlenecks or areas needing improvement before development.
- Communication Tool: Facilitates communication among teams, ensuring everyone is aligned on requirements.
- Testing and Validation: Guides testing teams in creating test cases to validate the application's functionality.
- Documentation and Maintenance: Serves as documentation for future updates and maintenance, preserving the original design intent.
- Efficient Development: Breaks down tasks for developers, reducing errors and speeding up development.

# 6.2 ER Diagram

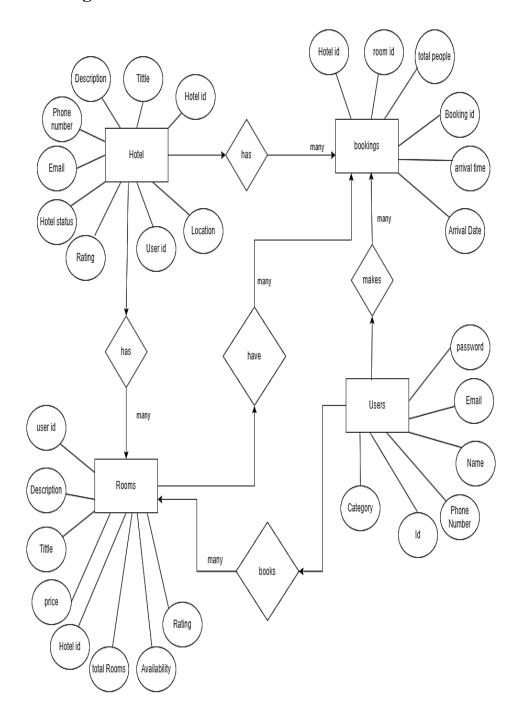


Figure No. 6.2.1: ER Diagram

This is an Entity-Relationship (ER) diagram that depicts the relationships between various entities in a hotel management system.

#### **\*** Entities and Attributes

#### 1. Hotel:

- Attributes: Description, Title, Phone number, Email, Hotel status, Rating,
   Hotel id, Location, User id.
- Relationships:
  - A hotel has many rooms.
  - A hotel has many bookings.

#### 2. Rooms:

- Attributes: Description, Title, Price, Hotel id, Total Rooms, User id, Rating, Availability.
- Relationships:
  - A room is booked by many users (customers).
  - A hotel has many rooms.

#### 3. Users:

- o Attributes: Password, Email, Name, Phone Number, Category, Id.
- Relationships:
  - A user makes many bookings.
  - A user books many rooms.

#### 4. Bookings:

- Attributes: Hotel id, Room id, Total people, Booking id, Arrival time, Arrival date.
- o Relationships:
  - A booking is made by a user.
  - A booking is associated with a hotel.
  - A booking is associated with a room.

#### Relationships

#### 1. Hotel-Rooms:

- o A hotel has many rooms.
- A room belongs to one hotel.

#### 2. Hotel-Bookings:

- o A hotel has many bookings.
- A booking is associated with one hotel.

#### 3. User-Bookings:

- A user makes many bookings.
- o A booking is made by one user.

#### 4. User-Rooms:

- o A user books many rooms.
- A room is booked by many users.

## 5. Bookings-Rooms:

- o A booking is associated with one room.
- o A room can have many bookings.

## Key Points

- The Hotel entity is central to the diagram, connecting to both Rooms and Bookings.
- The Users entity interacts primarily with Bookings, indicating that users can make multiple bookings.
- Rooms can be managed by hotel owners and booked by users, showing a manyto-many relationship between rooms and users through bookings.

#### Diagram Representation

- Entities: Represented as rectangles labeled with entity names (Users, Booking, Room, and Hotel).
- Attributes: Listed inside the rectangles (e.g., Hotel has attributes like Description, Title, etc.).
- Relationships: Represented with lines connecting relevant entities, with cardinality (1, M) and optional participation (whether each entity is mandatory or optional in the relationship) indicated.

#### **\*** Importance

Creating an ER Diagram for a hotel booking application helps project by:

- Clarifying Structure: Clearly defining entities, attributes, and their relationships.
- Facilitating Design: Providing a blueprint for developers to build the database schema.
- Enhancing Communication: Allowing stakeholders to visualize and understand how data flows and interacts within the application.

This diagram serves as a foundational document for developers and stakeholders, ensuring everyone involved in the project has a clear understanding of the system's data model and relationships.

## **6.3 DFD**

A Data Flow Diagram (DFD) is a way to show how data moves through a system. It helps us understand what information is input to the system, how it's processed, and what outputs are produced. DFD is a powerful tool that helps in visualizing and understanding the flow of information within a hotel booking application, ensuring clarity and efficiency in its design and implementation.

#### Scenario

- External Entity: A customer uses a hotel booking application to reserve a room.
- Process: The booking system checks room availability and confirms the reservation.
- Data Store: Booking details are stored in the system's database.

#### **❖** Importance

Creating a DFD for a hotel booking application is crucial for project because it:

- Ensures Understanding: It ensures that everyone involved in the project understands how data flows through the system.
- Guides Development: It guides developers in building and integrating different parts of the application.
- Supports Planning: It supports planning by identifying dependencies and potential bottlenecks in data processing.

#### **6.3.1 DFD Level 0**

A Data Flow Diagram (DFD) level 0 is an overview that shows the major processes involved in a system and how they interact with external entities.

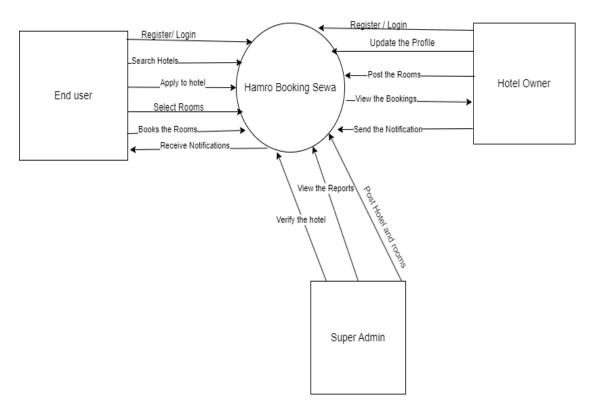


Figure No. 6.3.1: DFD Level 0

#### > External Entities

- Customer: The person who wants to book a hotel room.
- Hotel Staff: Staff members who manage bookings and room availability.
- Online Booking Platform: Websites or apps through which customers can make reservations.

#### > Processes

- Book Room: This process involves a customer selecting and booking a room.
- Check Availability: Determines if a room is available for booking on specific dates.
- Manage Booking: Allows hotel staff to update or cancel existing bookings.

#### Data Stores

- Booking Database: Stores information about bookings, such as customer details, room types, dates, and payment status.
- Room Availability Database: Stores current room availability information.
- Customer Database: Stores customer information like names, contact details, and booking history.

#### > Data Flows

- Customer Booking Request: Data flow from the Customer to the Book Room process, indicating the customer's request to book a room.
- Availability Status: Data flow from the Check Availability process to the Customer, informing them whether a room is available.
- Booking Details: Data flow from the Book Room process to the Booking Database, storing details of the new booking.
- Booking Confirmation: Data flow from the Booking Database to the Customer, confirming their booking with details.

#### > Diagram Representation

- External Entities: Represented as squares labeled with their names (End User, Hotel Owner, Super Admin).
- Processes: Represented as circles or bubbles labeled with their names (Book Room, Check Availability, Manage Booking).
- Data Stores: Represented as rectangles with labels (Booking Database, Room Availability Database, Customer Database).
- Data Flows: Represented as arrows showing the flow of data between entities, processes, and data stores.

## **6.3.2 DFD Level 1**

Moving from DFD level 0 to level 1 involves breaking down each major process into more detailed sub processes.

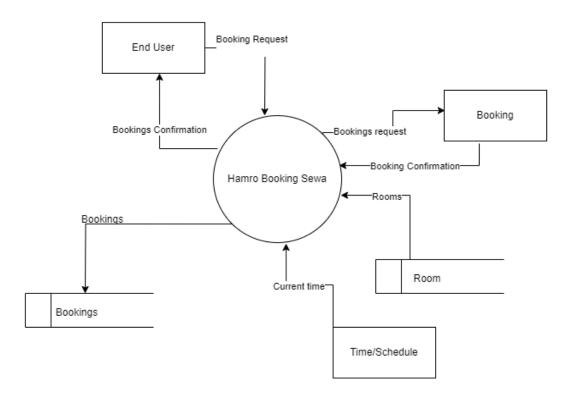


Figure No. 6.3.2: DFD Level 1

#### **Entities**

- 1. End User: The user who makes a booking request.
- 2. Booking: The process or system managing the booking requests and confirmations.
- 3. Room: The entity providing information about available rooms.
- 4. Time/Schedule: The entity providing current time or scheduling information.

#### > Processes

• Hamro Booking Sewa: The central process managing the interactions between the end user, booking system, room availability, and time/schedule information.

#### > Data Flows

- 1. Booking Request:
  - From: End User
  - o To: Hamro Booking Sewa
- 2. Bookings Request:
  - o From: Hamro Booking Sewa
  - o To: Booking
- 3. Booking Confirmation:
  - o From: Booking
  - o To: Hamro Booking Sewa
- 4. Bookings Confirmation:
  - o From: Hamro Booking Sewa
  - o To: End User
- 5. Rooms:
  - o From: Room
  - o To: Hamro Booking Sewa
- 6. Bookings:
  - o From: Hamro Booking Sewa
  - To: Bookings (Database or system)
- 7. Current Time:
  - o From: Time/Schedule
  - o To: Hamro Booking Sewa

#### > Key Interactions

• End User Interaction: The end user sends a booking request to Hamro Booking Sewa and receives booking confirmation.

- Booking System Interaction: Hamro Booking Sewa sends booking requests to the booking system and receives booking confirmations in return.
- Room Information Interaction: Room availability and details are sent to Hamro Booking Sewa.
- Time/Schedule Interaction: The current time or scheduling information is provided to Hamro Booking Sewa.
- Data Storage: Booking details are stored in a bookings system or database.

## **6.3.3 DFD Level 2**

DFD level 2 dives deeper into the sub processes identified in DFD level 1, providing more detailed insights into how each function within the hotel booking application operates.

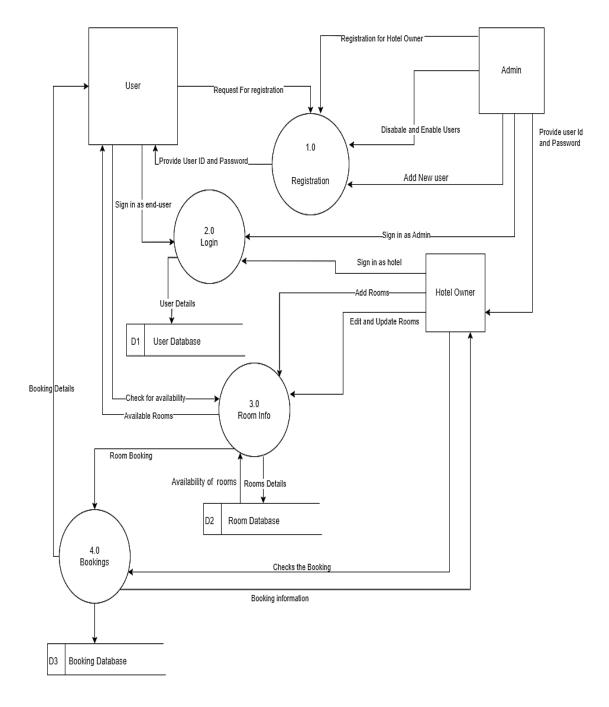


Figure No. 6.3.3: DFD Level 2

## DFD Level 2 for Hotel Booking Application

#### **Entities**

- 1. User: Represents a general user who wants to interact with the system.
- 2. Admin: The administrator responsible for managing users and the system.
- 3. Hotel Owner: The owner of the hotel who manages room details.

#### > Processes

- 1. 1.0 Registration:
  - o Input:
    - Registration request from the user.
    - Registration for hotel owner from the admin.
  - Output:
    - Provide User ID and Password.
    - Admin adds new users and enables or disables them.
  - o Data Stores: User details are stored in the User Database (D1).
- 2. 2.0 Login:
  - o Input: User credentials (User ID and Password).
  - Output: Successful login as end-user or hotel owner.
  - o Data Stores: Retrieves user details from the User Database (D1).
- 3. 3.0 Room Info:
  - o Input: Room details from the hotel owner.
  - Output: Availability of rooms.
  - o Data Stores: Stores and retrieves room details from the Room Database (D2).
- 4. 4.0 Bookings:
  - o Input: Booking request from the user.

- Output: Booking confirmation and details.
- o Data Stores: Booking information is stored in the Booking Database (D3).

#### > Data Stores

- 1. D1 User Database: Stores user details including login credentials.
- 2. D2 Room Database: Contains details about the rooms such as availability and descriptions.
- 3. D3 Booking Database: Holds information about room bookings made by users.

#### > Data Flows

- Users send registration requests, provide login credentials, and make room bookings.
- Admin manages user registrations, enabling or disabling users, and provides login credentials to hotel owners.
- Hotel owners sign in, add, edit, and update room details.
- The system checks the availability of rooms and processes bookings accordingly.

# > Key Interactions

- User Registration: Users request registration and get their credentials after being added by the admin.
- User Login: Users log in using their credentials.
- Room Management: Hotel owners add and update room details which are checked for availability by the system.
- Room Booking: Users book available rooms and the system updates the booking database with the details.

# 7. DEVELOPMENT

# 7.1 Gantt Chart

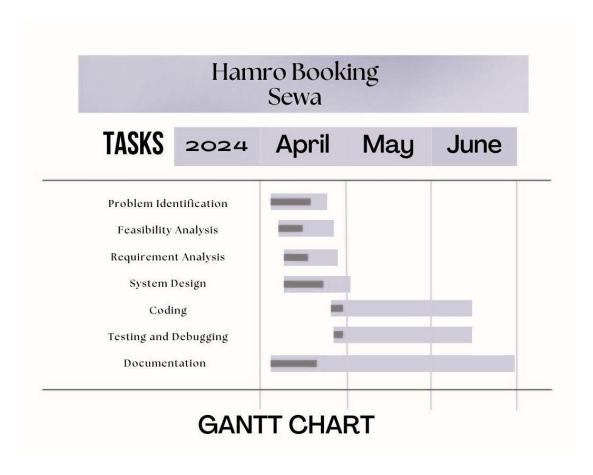


Figure No. 7.1.1: Gantt Chart

# 1. Problem Identification and Feasibility Analysis

- Identify stakeholders' needs and pain points in current booking systems.
- Conduct feasibility study on technical, economic, and operational aspects.
- Determine project scope, constraints, and risks.

# 2. Requirement Analysis

- Gather detailed functional and non-functional requirements from stakeholders.
- Prioritize features and functionalities based on user stories and use cases.
- Create requirement specification document

# 3. System Design

- Design database schema for hotels, rooms, users, bookings, and transactions.
- Architect application structure (frontend and backend) using UML diagrams.
- Define API specifications and integration points with third-party services

#### 4. Frontend Development

- Develop user interfaces for hotel listings, room booking, user registration, and account management.
- Implement responsive design for mobile view.

## 5. Backend Development

- Implement server-side logic using chosen technology stack
- Develop APIs for user authentication, booking management, and data retrieval.

# 6. Integration and Testing

- Integrate frontend and backend components to ensure seamless functionality.
- Conduct unit testing for individual modules and components.
- Perform system testing, including usability testing, performance testing, and compatibility testing across browsers and devices.

#### 7. Testing and Debugging

- Identify and resolve bugs, errors, and performance issues through iterative testing.
- Conduct user acceptance testing (UAT) with stakeholders to validate against initial requirements.
- Prepare for deployment by finalizing documentation and training materials.

#### 8. Documentation

- Document all phases of development including requirements, design decisions, and implementation details.
- Create user manuals, admin guides, and API documentation.
- Prepare deployment instructions and system maintenance guidelines.

# Dependencies and Constraints:

- Resource Availability: Ensure availability of developers, testers, and designers as per the schedule.
- Technology Integration: Coordinate with third-party APIs and services to meet integration deadlines.
- Scope Management: Manage scope changes through effective communication and change control processes.

# 7.2 Development Model

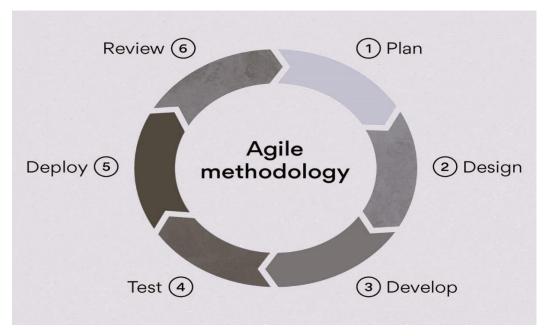


Figure 7.2.1: Agile Model

Agile development is a methodology that focuses on delivering high-quality software in a flexible and iterative manner. It allows for quick adaptation to changes and improvements throughout the development process. This approach is particularly well-suited for developing a hotel booking application, as it enables rapid responses to customer feedback and market demands.

The agile development model for a hotel booking application involves breaking down the development process into small, manageable chunks called sprints. Each sprint typically lasts two to four weeks and results in a functional piece of the application. This allows for continuous testing, feedback, and iteration, ensuring that the final product meets the needs of users and stakeholders.

One of the key principles of agile development is prioritizing customer collaboration and feedback. In the context of a hotel booking application, this means involving hotel managers, staff, and customers in the development process to ensure that the features and functionalities meet their needs. This customer-centric approach helps to create a more user-friendly and efficient application.

Another important aspect of the agile development model is the concept of continuous improvement. Developers are encouraged to regularly review and adjust their work

based on feedback and changes in the market. For a hotel booking application, this involves adding new features, optimizing existing ones, or improving the overall user experience in response to customer feedback and competitive analysis.

Agile development also emphasizes the importance of transparency and communication within the development team. Regular meetings, known as stand-ups, are held to discuss progress, issues, and priorities. This fosters a collaborative environment where team members can share ideas, provide support, and work together towards a common goal.

Scalability is another advantage of the agile development model for a hotel booking application. As the business grows and evolves, new features and functionalities can be easily added to the application in response to changing needs and market demands. This allows the application to remain relevant and competitive in the rapidly changing hospitality industry.

One of the key benefits of using the agile development model for a hotel booking application is the ability to quickly respond to changes and market trends. By breaking down the development process into small, manageable chunks, developers easily adapt to new requirements and incorporate feedback from customers and stakeholders.

Furthermore, the iterative nature of agile development allows for early detection and resolution of issues. Regular testing and feedback help to identify bugs, usability issues, and other problems early on in the development process, reducing the risk of costly rework and delays later on.

Additionally, the agile development model promotes a culture of continuous learning and improvement within the development team. By encouraging regular reflection and feedback, developers can identify areas for improvement and implement changes to enhance their skills and productivity.

The agile development model is well-suited for the development of a hotel booking application due to its flexibility, customer-centric approach, and focus on continuous improvement. By breaking down the development process into small, manageable chunks, involving customers and stakeholders in the process, and fostering transparency and communication within the development team, developers create a high-quality, user-friendly, and competitive product that meets the evolving needs of the hospitality industry.

# 8. TESTING

STLC is a framework that defines a task performed at each step to make sure that software goals are achieved.

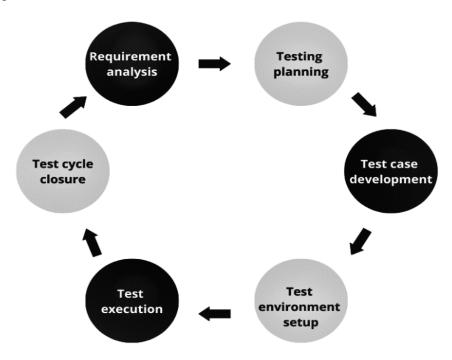


Figure No. 8.1.1: Software Testing Life Cycle

# 1. Requirement Analysis

- Review user stories and use cases related to booking rooms, managing reservations, and user accounts.
- O Define testing objectives and scope based on business requirements.
- o Identify risks associated with booking processes and user data security.

# 2. Test Planning

- Estimate testing efforts for various modules
- Determine test strategy including types of testing
- Create a test plan outlining test objectives, test environment setup, and test case development milestones.

#### 3. Test Case Designing

- Create test cases for booking a room, modifying/cancelling reservations, and handling payment transactions.
- o Define test scripts for scenarios like multiple user sessions, and error handling.
- Prepare test data including sample bookings, and user profiles, for different test scenarios.

#### 4. Test Environment Setup

- o Acquire or configure hardware and software required for testing
- o Install and configure the application under test along with necessary dependencies
- Validate the test environment to ensure compatibility with different devices

#### 5. Test Execution

- Execute test cases to verify room availability, booking confirmation, and processing workflows.
- Record and report test results including pass/fail status, defects found, and test coverage.
- Conduct regression testing to ensure new features or bug fixes do not adversely affect existing functionality.

#### 6. Test Closure:

- o Review test coverage metrics against defined test objectives and acceptance criteria.
- Assess software quality based on reliability, performance, usability, and security aspects.
- Prepare test closure reports documenting testing outcomes, lessons learned, and recommendations for future enhancements.

| Test Case ID | Test Case                    | Test Steps  | Test Data                                 | Results                                      |
|--------------|------------------------------|---|---|--|
| TC001        | Verify application interface | Navigate Login  | -   | Hotel booking interface loads successfully   |
| TC002        | Admin login                  | <ol> <li>Open browser</li> <li>Navigate to login page</li> <li>Enter admin credentials</li> <li>Click login button</li> </ol>                                 | Admin<br>username,<br>password            | Admin is logged in successfully              |
| TC003        | Admin logout                 | <ol> <li>Logged in as admin</li> <li>Click logout button</li> </ol>   | -   | Admin is logged out successfully             |
| TC004        | Admin add hotel              | <ol> <li>Logged in as admin</li> <li>Navigate to hotel management</li> <li>Click 'Add Hotel'</li> <li>Enter hotel details</li> <li>Save changes</li> </ol>    | Hotel details (name, address, etc.)       | Hotel is added successfully                  |
| TC005        | Admin manage hotel details   | <ol> <li>Logged in as admin</li> <li>Navigate to hotel management</li> <li>Find existing hotel</li> <li>Update hotel details</li> <li>Save changes</li> </ol> | Updated hotel details                     | Hotel details<br>are updated<br>successfully |
| TC006        | Admin add room               | 1.Logged in as admin 2. Navigate to room management 3.Click 'Add Room'  | Room<br>details<br>(type, price,<br>etc.) | Room is added successfully                   |

|       |                           | <ul><li>4. Enter room details</li><li>5. Save changes</li></ul>  |                                 |   |
|-------|---------------------------|--|---------------------------------|---|
| TC007 | Admin manage room details | <ol> <li>Logged in as admin</li> <li>Navigate to room management</li> <li>Find existing room</li> <li>Update room details</li> <li>Save changes</li> </ol> | Updated room details            | Room details<br>are updated<br>successfully                               |
| TC008 | User<br>registration      | <ol> <li>Open application</li> <li>Navigate to registration page</li> <li>Enter user details</li> <li>Click 'Sign Up'</li> </ol>                           | User<br>registration<br>details | User is registered successfully   |
| TC009 | User login                | <ol> <li>Open application</li> <li>Navigate to login page</li> <li>Enter user credentials</li> <li>Click login button</li> </ol>                           | User<br>username,<br>password   | User is logged in successfully  |
| TC010 | User search for hotels    | <ol> <li>Logged in as user</li> <li>Enter search criteria (location, names)</li> <li>Click 'Search'</li> </ol>   | Search<br>criteria              | Relevant<br>hotels are<br>displayed                                       |
| TC011 | User view hotel details   | <ol> <li>Logged in as user</li> <li>Select a hotel from search results</li> <li>View hotel details</li> </ol>  | -                               | Hotel details<br>(amenities,<br>room types)<br>are displayed<br>correctly |
| TC012 | User book a room          | 1. Logged in as user   | Booking details                 | Booking is confirmed successfully   |

|       | 1                         |   | 1                     |   |
|-------|---------------------------|---|-----------------------|---|
|       |                           | 2. Select a hotel and room  |                       |   |
|       |                           | 3. Enter booking details (dates, guest info)                                    |                       |   |
|       |                           | 4. Confirm booking  |                       |   |
| TC013 | User cancel booking       | 1. Logged in as user  | -                     | Booking is canceled successfully                    |
|       |                           | 2. Navigate to booking management   |                       | saccessiany   |
|       |                           | 3. Find booking to cancel   |                       |   |
|       |                           | 4. Click 'Cancel Booking'   |                       |   |
| TC014 | User view booking history | <ol> <li>Logged in as user</li> <li>Navigate to</li> </ol>                      | -                     | All past bookings are listed correctly              |
|       |                           | booking history   |                       | confectly   |
| TC015 | User logout               | 1. Logged in as user  | -                     | User is logged out                                  |
|       |                           | 2. Click logout button  |                       | successfully  |
| TC016 | Password reset            | <ul><li>1.Open application</li><li>2. Navigate to password reset page</li></ul> | Registered email      | Password<br>reset link is<br>sent and<br>functional |
|       |                           | 3. Enter registered email   |                       |   |
|       |                           | 4. Click 'Reset<br>Password'  |                       |   |
| TC017 | Error handling            | 1.Open browser  | Invalid               | Error message                                       |
|       | (invalid login)           | 2. Navigate to login page   | username,<br>password | indicates<br>invalid login<br>attempt               |
|       |                           | 3. Enter invalid credentials  |                       | attempt   |
|       |                           | 4. Click login button   |                       |   |

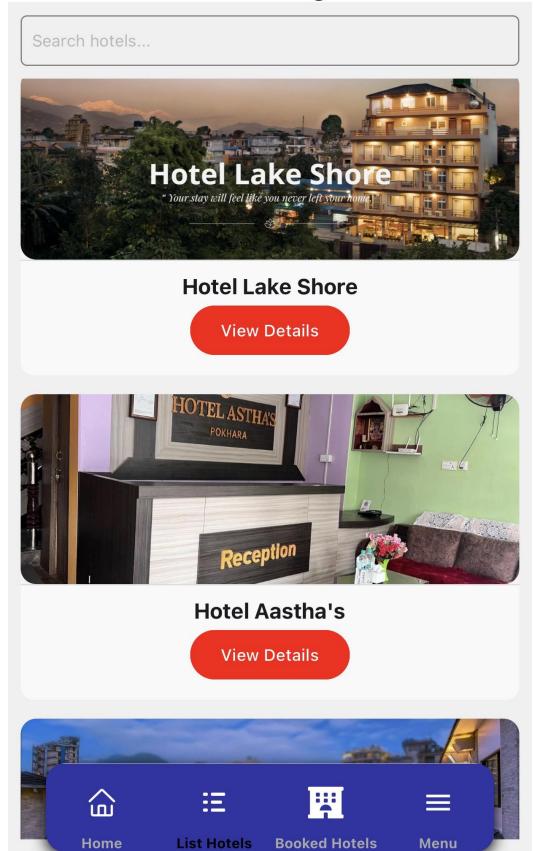
Table 8.1.1: User Acceptance Testing

# 9. PROJECT RESULT

- Illustrated the real time use and memory space of science project by programming in React Native, a framework of JavaScript and React for front end and PHP framework Laravel for backend.
- Find hotels based on price, streamlining the booking process.
- Access to a wide range of hotels, from budget to luxury, catering to diverse preferences and budgets.
- Comprehensive details about each hotel, including photos, amenities, and room types empowering users to make informed decisions.
- Access to reliable customer support for assistance with bookings, and queries, ensuring a positive user experience and support throughout the process.
- Determined user's expectations for a modified product considering the easiness of our system in real version monitoring mode
- Distinguished the role of the codes involved while developing a simple android application.
- Evaluated and corrected project modification risks related with its completion and estimating the effects on properties, energy and development.
- Achieved basic and intermediate skills of android application development to nurture our programming with frequently communicated system features
- Generated an extra interface in the booking application using available structures in React Native and Laravel.
- Identified and justified the specific use of the codes in React Native and Laravel in system development

The result of our project is our system is working perfectly fine. The booking theory is accurate. The best part of our system is that its very user friendly. Anyone can use it and find it easy to use. We have documented the design of our system in such a way that anybody can alter it by reading our documentation. Finally, the application is suitable to use by any kind of age group.

# **Hamro Booking Sewa**



# 10. FUTURE ENHANCEMENT

- Implement different levels of subscriptions, where hotels can get benefits according to their booking rates.
- Implement a "Like and Dislike" feature to enhance user feedback on hotel stay content for better personalization and hotel recommendations.
- Expand language options to cater to a larger audience.
- Implement personalized notifications for new hotels, discount offers, and hotel community events.
- Offer the option to view hotel details for offline viewing, catering to users with limited internet access.

## Budget Program

This hotel booking application can be further enhanced by a budget program in future. In budget program every hotel owner will have support to manage and utilize specific amount of money in a better way. With this amount they will manage everything like hotel expenditures and employees' salaries.

#### Visual Representation of Data

Graphs and charts can be added into future version of hotel booking application. Through these charts or graphs, hotel management can see the change in the salary of an employee and over all increment in rates of hotel rooms. Management can also analyze the tax paid by hotel in different time periods.

# 11. CONCLUSION

Hotel booking applications are a technology that has completely changed the travel industry as well as booking models among travelers. A lot has changed since that very first online reservation system in the early 1990s. Since then, technology has been constantly improving, making booking and accommodation access easier no matter the location or the type of lodging.

We have seen some effects emerge regarding hotel booking applications. Travel experts fear travelers may be turning 'platform indifferent,' booking accommodations regardless of the size of the hotel or the service quality. Nonetheless, travelers have proven they are willing to seek out unique experiences if the destination and accommodations are worth the price. However, the abundance of accommodation options has made travelers more inclined to book 'solo,' always connected to a device and somewhat isolated from traditional booking methods. Apparently, travelers are willing to sacrifice personal interactions 'offline' in favor of personalized booking experiences.

Our hotel booking application is a platform that enables travelers to book their accommodations with ease. It has an intuitive interface so that users can easily find the perfect place to stay, and hoteliers can also easily manage their listings and connect with travelers.

Hotel booking applications are here to stay. The future of travel planning is just beginning; more and more options will appear for users who want to book accommodations from their own devices. There is no way to predict how far hotel booking technology will advance, but it's clear that convenience and accessibility will continue to drive its evolution. As technology improves, so too will the ways travelers interact with and choose their accommodations.

Despite concerns about the impact of digital booking platforms on traditional travel agencies and face-to-face interactions, the demand for convenient, immediate booking options remains strong. Travelers appreciate the ability to compare prices, read reviews, and make decisions quickly and efficiently from their smartphones or computers. This shift towards digital booking also benefits hoteliers, who can reach a broader audience and manage their properties more efficiently through centralized booking systems.

In conclusion, while some may lament the potential loss of personal touch in travel planning, hotel booking applications offer unparalleled convenience and choice for modern travelers. As the industry continues to innovate, these platforms will play an increasingly important role in shaping how people experience and enjoy their journeys around the world.

# 12. REFERENCES

- 1. Nielson, "What's in-store for online grocery shopping," 2017. [Online]. Available: http://www.nielsen.com/us/en/insights/reports/2017/whats-in-storefor-online-grocery-shopping.html. [Accessed: 15-Feb-2017].
- 2. A. Hussain, N. L. Hashim, N. Nordin, and H. Mohamad Tahir, "A Metric-Based Evaluation Model For Applications On Mobile Phones," J. ICT, pp. 55–71, 2013.
- 3. J. Nielsen, "MOBILE ACTS AS A NERVE CENTER OF THE CANADIAN SHOPPING EXPERIENCE," 2016. [Online]. Available: http://www.nielsen.com/us/en/insights/news/2017/mobile-acts-as-a nerve-center-of-the-canadian-shopping-experience.html. [Accessed: 15-Mar-2017].
- 4. Bronto Software Inc., "Younger consumers turn increasingly to mobile devices for buying as well as browsing," 2016. [Online]. Available: https://www.digitalcommerce360.com/2016/04/25/younger consumers-turn-increasingly-mobile-devices-buying/. [Accessed: 14 Mar-2017].
- Yulisman, N. Iman, E. Sabna och H. Fonda, "Sistem Pintu Otomatis Menggunakan E-KTP Berbasis Internet of Things (IoT) pada Kamar Hotel," Jurnal Sains Teknologi dan Sistem Informasi, vol. I, nr 7, pp. 85 - 91, 2021.
- 6. W. Wendanto, D. J. N. Salim och D. W. T. Putra, "Rancang Bangun Sistem Keamanan Smart Door Lock Menggunakan E-KTP (Elektronik Kartu Tanda Penduduk) Dan Personal Identification Number Berbasis Arduino Mega R3," GO INFOTECH: JURNAL ILMIAH STMIK AUB, vol. II, nr 10, pp. 133-142, 2019.
- 7. J. R. Tangkilisan, J. I. Kindangen och Suryono, "Hotel Resort (Intelligent Building)," nr 10, pp. 166-175, 2017.
- 8. Transportation, hospitality & services. (2024, May 28). Deloitte. https://www.deloitte.com/global/en/Industries/transportation.html
- Global overview of the hotel and restaurant industry. (n.d.). Euromonitor. https://www.euromonitor.com/global-overview-of-the-hotel-and-restaurant-industry/report

- 10. Statista. (2024, February 6). Travelers expecting to use AI to plan trips in 2033 worldwide 2022, by aspect. https://www.statista.com/statistics/1381319/expected-use-artificial-intelligence-for-travel-planning-worldwide/
- 11. Mobile User Experience Guidelines. (2013, December 11). Digital.gov. https://digital.gov/resources/mobile-user-experience-guidelines/
- 12. Big data, privacy and intangible assets. (n.d.). https://iapp.org/resources/topics/web-conferences/a0l1a000000SJvPAAW/
- 13. HubSpot. (n.d.). Digital Marketing Made Simple | HubSpot. https://www.hubspot.com/digital-marketing
- 14. Magnus, K., & Ibáñez, P. (2024, May 24). Reimagining the apparel value chain amid volatility. McKinsey & Company. https://www.mckinsey.com/industries/retail/our-insights/reimagining-the-apparel-value-chain-amid-volatility
- 15. ThoughtWorks: Agile Innovation in the Digital Era ^ CB0257. (n.d.). HBR Store. https://store.hbr.org/product/thoughtworks-agile-innovation-in-the-digital-era/cb0257?sku=CB0257-PDF-ENG
- 16. 4 sector leaders predict the future of tourism. (2023, January 11). World Economic Forum. https://www.weforum.org/agenda/2022/05/future-of-travel-tourism-sector-leaders-report/
- 17. PricewaterhouseCoopers. (n.d.). Virtual and augmented reality could deliver a £1.4trillion boost to the global economy by 2030 PwC. PwC. https://www.pwc.com/gx/en/archive/news-room/press-releases/seeing-is-believing-vr-ar.html
- 18. Poon, V. (2024, June 10). Five Best practices for optimizing data and analytics in your supply chain. Forbes. https://www.forbes.com/sites/forbesbusinesscouncil/2024/06/07/five-best-practices-for-optimizing-data-and-analytics-in-your-supply-chain/
- 19. Path to Predictive Quality: Center Predictive Analytics on Critical Business Problems. (n.d.). https://www.gartner.com
- 20. ISO/IEC 27102:2019. (n.d.). ISO. https://www.iso.org/standard/72436.html

- 21. PCI Security Standards Council. (2022, June 20). PCI Security Standards Council
   Protect Payment Data with Industry-driven Security Standards, Training, and
   Programs. https://www.pcisecuritystandards.org/privacy-policy/
- 22. Cybersecurity Best Practices | Cybersecurity and Infrastructure Security Agency CISA. (n.d.). https://www.cisa.gov/topics/cybersecurity-best-practices
- 23. Toward UN Sustainable Development goals | Department of Economic and Social Affairs. (n.d.). https://sdgs.un.org/statements/toward-un-sustainable-development-goals-11559
- 24. Good tourism practices to advance sustainable development in the Americas. (2018, March 22). UN Tourism. https://www.unwto.org/americas/press-release/2018-03-22/good-tourism-practices-advance-sustainable-development-americas
- 25. TrustYou. (2022, March 21). TrustYou's 2022 Global Review Insights report shows steady recovery of hospitality industry with increasing review volume. Hospitality Net. https://www.hospitalitynet.org/news/4109544.html
- 26. Colcol, S. (2024, January 31). Hotel reservation system: Everything you need to know. SiteMinder. https://www.siteminder.com/r/hotel-reservation-system/
- 27. About the Booking.com connectivity APIs. (n.d.). https://developers.booking.com/connectivity/docs/
- 28. Hoodoo klub masáže. (n.d.). https://wall.hoodooclub.cz/16041332153336017061/what-is-the-agile-methodology-in-software-development-skywell-software/

# 13. ANNEX



# **Hamro Booking Sewa**

Start Booking Your Desired Hotel Rooms.

Log in

Create an account

 $\leftarrow$ 



# **Enter your login info**

| Email              |           |
|--------------------|-----------|
| Password           | 8         |
| Forgot your pass   | vord ?    |
| Log in             |           |
| Don't have an acco | unt yet ? |
| Create Nov         | .1        |





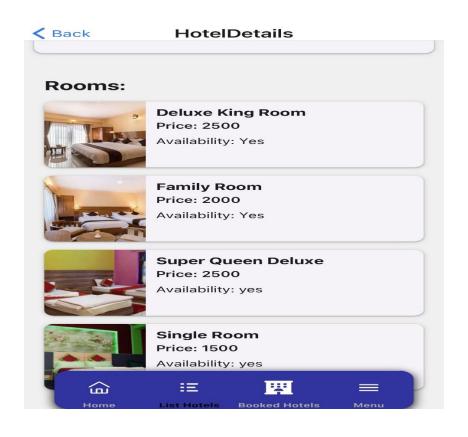
#### Fill up your details

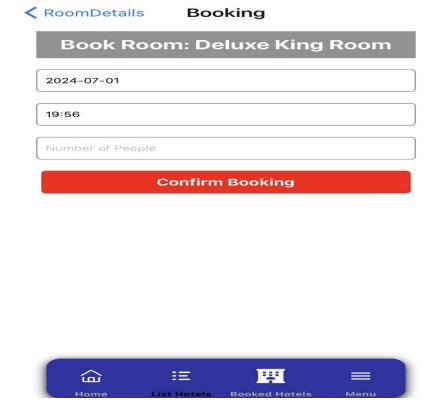
| Full Name    |  |  |
|--------------|--|--|
| Category     |  |  |
| Email        |  |  |
| Password     |  |  |
| Phone Number |  |  |
|              |  |  |



A homelike environment of our hotel along with our friendly and professional staffs makes your stay memorable. The list of accommodation at our hotel includes Deluxe Rooms, Superior Rooms, and Family Rooms. Each of these rooms is elegantly decorated with modern interiors. Equipped with all the modern day amenities, all the rooms are comfortable and convenient. Choose the room that suits your preference and enjoy a lovely stay with your dear ones. Located at the beautiful city Pokhara, our hotel also offers breathtaking views from the rooms. The beautiful views of the mountain ranges add a cherry on the top during your comfortable stay at our hotel. You can reach our hotel within 6 minutes from the airport. Also, explore the nearby places from our hotel that includes Tal Barahi, Basundhara, Peace Pagoda, Davis fall, Fewa Lake, Sarangkot and Nayapul.







#### **Hamro Booking Sewa**

