

**GREAT LAKES SAFARI APPLICATION: A case study of Greatlakes Safari
Travel Company**

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**UGANDA CHRISTIAN
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DECLARATION

I Musumba Martin declare that this project report is original and hasn't been submitted or referenced for the award of any degree to any university.

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APPROVAL

This project report as written by Musumba Martin is ready to be submitted to Uganda Christian University under the School of Business Administration for assessment.

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DEDICATION

I highly dedicate this project proposal to my family, friends and most of all my supervisor Mr. Mwesigye Joshua. A lot of gratitude for the support and effort offered to me through constant guidance.

My supervisor for guiding, correcting and ensuring to have a proper attainment of research.

The utmost gratitude to the Almighty God for enabling me to have done this write up and research.

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ABSTRACT

The Great Lakes Safari Travel Application was a transformative digital platform designed to enhance the safari and adventure travel experience in East Africa. While it successfully provided users with immersive access to stunning landscapes, rich wildlife, and vibrant cultures, it currently lacks a booking feature a critical component for modern travelers.

The need for and potential advantages of adding a booking feature to the Great Lakes Safari Travel Application are examined in this research. It explores the user-centric design ideas, iterative development techniques, and feedback integration procedures required for this feature's effective implementation. The study also describes a prototyping procedure to guarantee that the booking function perfectly matches user expectations.

By considering the application's technical and operational limitations, the report offers a comprehensive perspective on how the inclusion of a booking feature can elevate the Great Lakes Safari experience. It emphasizes the importance of continuous improvement, scalability, and user engagement to not only meet but exceed customer expectations.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Great Lakes Safaris is a well-established travel company and tour operator that has been operating in Uganda and East Africa since 2001. It was founded by Amos Wekesa, a Ugandan entrepreneur and tourism enthusiast. Great Lakes Safaris is known for its expertise in organizing safaris and providing exceptional travel experiences in the region.

The company focused on offering unique and tailor-made itineraries that showcase the natural wonders, wildlife, cultural heritage, and adventure opportunities of Uganda and other East African countries such as Rwanda, Kenya, and Tanzania. Great Lakes Safaris offers a wide range of services including gorilla trekking, wildlife safaris, bird watching, cultural tours, adventure activities, accommodations, transportation, and other travel-related services. They cater to various types of travelers, from budget-conscious backpackers to luxury-seeking adventurers. It puts a strong emphasis on responsible and sustainable tourism practices as they work closely with local communities and conservation organizations to support community development projects and promote the conservation of natural resources. The company has a team of experienced and knowledgeable tour guides who accompany travelers throughout their journey, providing insights, assistance, and ensuring their safety and satisfaction. Their guides are well-versed in the local culture, history, and wildlife, enhancing the overall travel experience for their clients.

Over the years, Great Lakes Safaris gained a reputation for its professionalism, attention to detail, and commitment to customer satisfaction. They have received several awards and recognition for their contributions to the tourism industry in Uganda and East Africa.

The travel company's website encountered a challenge of lacking a booking feature which limits the tourists to make instant booking of various packages. This caused frustration to the users and resulted in missing out on conversion opportunities for the company. Online booking increasingly gaining popularity it would be important for the company to enhance a booking feature for the website's functionality and to improve customer experience.

1.2 Problem Statement

Great Lakes faced a challenge of its website lacking a booking feature. This hinders travelers from booking tours and accommodation.

1.3 Main Objective

The main objective of this research report was to assess the suitability and benefits of implementing a booking feature on the Great Lakes website.

1.4 Specific Objective

The specific objective of this research report was the absence of a booking feature on their website, so as to implement a user friendly and efficient online booking system that would enable customers to easily reserve and confirm their desired travel services, thereby enhancing convenience, increasing conversion rates and improving overall customer satisfaction. The following objectives highlight further more into detail;

- To design a booking feature for Great Lakes Safari travel company.
- To develop a travel guide application with a booking feature for the travel company.
- To implement an online booking system for the ease of customers.

1.5 Scope of the study

The scope of the study was focusing on assessing the usefulness and benefits of implementing an online booking feature. The study was aimed at gathering data, analyzing the market trends and evaluating customer preferences. The following aspects were highly comprised in the scope of study;

1.5.1 Technical Suitability

The study was to evaluate the technical usability of having to implement an online booking system for Great Lakes Safari. It assessed the required infrastructure, integration with existing systems, potential challenges that arose during the implementation process.

1.5.2 User Experience Design

This involved developing a user experience design strategy for the proposed online booking feature. There was a consideration to factors such as ease of use, responsive design for different devices, and intuitive navigation to create a user friendly booking process.

1.5.3 Implementation Plan

The development of a detailed implementation plan which was to outline the steps, timeline and resources that are required to integrate the online booking feature for Great Lakes Safari.

1.5.4 Customer Preferences

The study was looking at customer preferences and expectations regarding booking methods, convenience, user experience. It was to gather information through surveys, feedback analysis to understand customer needs and identify key functionalities that are important to them.

1.6 Significance of the study

The study on implementing a booking feature for Great Lakes Safaris gets to possess a number of significances as further hinted on below.

- To ensure there was improved customer convenience through the online booking system.
- To increase the conversion rates in the sense of acquiring of potential customers to choosing their services.
- To enhance operational efficiency through the reservation process.
- To gain a competitive advantage in the travel industry .

CHAPTER TWO : LITERATURE REVIEW

2.1 INTRODUCTION

A reputable tour company with a reputation for offering outstanding wildlife and adventure encounters in the African Great Lakes region is Great Lakes Safari. The lack of a booking option on their website has been noted as a weakness, despite the fact that the business encourages ethical tourism practices and provides a variety of customized safari itineraries. This review of the literature addresses the significance of including a booking feature and considers how it might affect client satisfaction, operational effectiveness, and overall company growth. A booking feature is a vital component of any modern tour operator's website. It provides customers with a convenient and user-friendly platform to make reservations directly, eliminating the need for time-consuming phone calls or emails. Studies have shown that customers highly value the ability to book their preferred services instantly and independently.

By implementing a booking feature, Great Lakes Safari would enhance customer satisfaction by providing a seamless and efficient booking process that meets the expectations of today's tech-savvy travelers. Integrating a booking feature into Great Lakes Safari's website would significantly streamline their operations. Automating the reservation process reduces the reliance on manual methods, such as paperwork or email communication, minimizing the chances of errors or double bookings. Furthermore, a centralized booking system allows the company to manage reservations, availability, and payments more effectively, optimizing resource allocation and improving operational efficiency. This, in turn, enables staff to focus on other crucial aspects of service delivery, ultimately enhancing the overall customer experience.

Clients and operational effectiveness are benefited by a booking function, which also helps tour operators reach new clients and boost sales. Great Lakes Safari may reach a larger audience and capitalize on the enormous potential of the online market by utilizing an online booking platform. They can draw in potential consumers who prefer the ease of booking online by exhibiting their itinerary and availability online. A booking function also makes it possible to sell by providing further services or tailored recommendations while making a reservation, thereby increasing income streams for the company. In today's highly competitive tourism industry, embracing technology and providing an online booking feature is crucial for maintaining a competitive edge. Many other tour operators in the Great Lakes region have already integrated

online booking systems, giving them a clear advantage in attracting customers who prioritize convenience and instant access to services. By implementing a booking feature, Great Lakes Safari would level the playing field and position themselves as a modern and customer-centric tour operator, ultimately enhancing their brand reputation and market position.

2.1.1 Role of Online Booking Systems

Integrating a booking feature into Great Lakes Safari's website would streamline operations and improve efficiency. Automation of the reservation process reduces manual efforts, such as paperwork and email communication. According to Sigala (2004), a centralized booking system enhances resource allocation and minimizes errors, ensuring optimal utilization of staff and facilities. Moreover, a booking feature enables real-time availability management, minimizing the risk of overbooking or double bookings. This operational efficiency frees up staff time, allowing them to focus on enhancing the overall customer experience.

By incorporating a booking option, Great Lakes Safari is able to gather useful client information that can be used to gain company insights and make tactical decisions. Customer preferences, booking trends, and demographic data collected during the booking process can help guide marketing initiatives, service enhancements, and targeted advertising. The importance of data analytics in comprehending customer behavior and enhancing corporate performance is highlighted by research by Xiang et al. (2017).

2.1.2 Convenience and Level of Accessibility

Online booking systems have revolutionized the way travelers access and book tourism offerings in Uganda. The convenience and accessibility provided by these systems have become crucial factors in shaping travel decisions and contributing to the growth of the tourism industry. They offer a wealth of information about various aspects of Uganda's tourism offerings. Travelers can access detailed descriptions, high-quality images, maps, and customer reviews for accommodations, attractions, activities, and tour packages. This comprehensive information empowers travelers to make informed decisions and tailor their experiences according to their preferences and interests. The 24/7 accessibility of internet booking platforms is one of its key benefits. No matter where they are in the world or what time zone they are in, travelers can access the system at any time. This implies that visitors can investigate and reserve their desired

tourism experiences in Uganda even if they are in another nation and are not constrained by conventional office hours.

Online booking systems provide travelers with a high level of flexibility and independence. Rather than relying on travel agencies or intermediaries, travelers can directly explore the available options, compare prices, and customize their itineraries according to their desired dates, budget, and preferences. This flexibility empowers travelers to create personalized travel experiences that align with their individual needs. With the increasing adoption of digital channels, both domestic and international travelers rely heavily on online platforms to plan and book their trips. By integrating their offerings into online booking systems, tourism businesses in Uganda can capture the attention of these tech-savvy travelers. This expanded reach allows them to attract customers from various geographical locations, tapping into both local and international markets. Online booking systems provide tourism businesses with the opportunity to target and cater to niche markets. By offering specialized experiences or catering to specific interests, businesses can capture the attention of travelers looking for unique and tailored experiences. For example, operators focusing on adventure tourism, wildlife safaris, or cultural immersion can showcase their offerings to the relevant target audience through targeted marketing and specialized online booking platforms.

Online booking systems provide tourism businesses with the opportunity to target and cater to niche markets. By offering specialized experiences or catering to specific interests, businesses can capture the attention of travelers looking for unique and tailored experiences. For example, operators focusing on adventure tourism, wildlife safaris, or cultural immersion can showcase their offerings to the relevant target audience through targeted marketing and specialized online booking platforms.

2.1.3 Increased Visibility and Exposure

Being present on online booking platforms enhances the visibility and exposure of tourism businesses. These platforms attract a significant number of users actively searching for travel options, exposing businesses to a wider audience. Additionally, many online booking systems provide marketing tools and features that enable businesses to showcase their offerings, attract attention, and differentiate themselves from competitors. A tourism business's online visibility is

improved by having a presence on online booking platforms. These platforms frequently rank highly in search engine results and have a significant internet presence, making them readily visible to visitors looking for certain locations or travel experiences. Businesses gain from the platforms' robust web presence and increase their chances of being found by potential clients by adding their offerings to these platforms.

Many online booking platforms provide a range of marketing tools and features that enable businesses to showcase their offerings effectively. These tools include the ability to create compelling profiles, upload high-quality images, provide detailed descriptions, and highlight unique selling points. By leveraging these features, businesses can differentiate themselves from competitors, attract attention, and engage with potential customers. For example booking.com, Expedia, TripAdvisor are notably key platforms in the sector of tourism that pose as strong players in the market.

Online booking platforms allow businesses to create comprehensive profiles that highlight their unique selling points and provide detailed information about their offerings. These profiles typically include sections for business descriptions, amenities, location, and contact details. By crafting compelling profiles with engaging content and attractive visuals, businesses can make a strong first impression on potential customers and differentiate themselves from competitors (Law, Leung, & Buhalis, 2009). Businesses can effectively express their distinctive value proposition and appeal to certain client preferences by creating interesting and descriptive content (Zhang & Li, 2010). Platforms for online reservations provide tools that let companies promote their distinctive selling propositions and competitive advantages. This could emphasize certain features, eco-friendly programs, first-rate customer support, or unique experiences.

Businesses may stand out from the crowd and draw clients who are in line with their offers and values by showing their distinct qualities (Xiang et al., 2017). In the travel sector, visual content is essential since it may motivate and draw customers. Businesses can publish high-quality pictures of their lodgings, attractions, and experiences via online booking platforms. Businesses can attract potential clients' attention and persuade them to learn more by exhibiting aesthetically appealing photos that convey the essence and highlights of their offerings (Fuchs & Reichel, 2011).

2.1.4 Expanded Market Reach

Online booking systems allow tourism businesses to reach a broader audience, both domestically and internationally. Domestic travelers in Uganda are increasingly using digital channels to plan their trips, and online booking platforms provide a convenient and accessible way for them to discover and book local accommodations and tour packages. At the same time, international travelers who are planning a trip to Uganda can easily explore and book their travel arrangements through these platforms. This expanded reach enables businesses to attract a diverse range of customers from different geographical locations.

Online booking systems provide opportunities for tourism businesses to tap into niche markets. These platforms often offer advanced search filters and categories, allowing travelers to find specific types of accommodations, activities, or experiences that align with their interests. For instance, businesses specializing in ecotourism, adventure travel, cultural tours, or wildlife safaris can showcase their offerings to travelers actively seeking those specific experiences. By targeting niche markets, businesses can differentiate themselves and cater to the unique preferences of certain traveler segments. They provide valuable data and insights about customer preferences and behavior. This data can be leveraged by businesses to personalize their marketing efforts and target specific traveler segments. Through targeted promotions, tailored recommendations, and personalized communication, businesses can create a more engaging and relevant experience for potential customers. This level of personalization enhances the chances of attracting and retaining customers within specific traveler segments, thereby expanding the market reach of the business.

By utilizing online booking systems, tourism businesses can diversify their customer base and reduce dependency on a single market segment. These platforms expose businesses to a wide range of travelers with different backgrounds, preferences, and budgets. This diversification helps businesses mitigate risks associated with relying solely on one customer group or market segment. It also allowed businesses to adapt to changing market dynamics and capitalize on emerging trends and customer demands. Online reservation systems frequently encourage cooperation and alliances between tourism-related firms. Businesses might put up enticing bundles or packages by collaborating with other operators or lodging providers. Cross-marketing and cooperative marketing initiatives can assist companies in expanding their market reach and

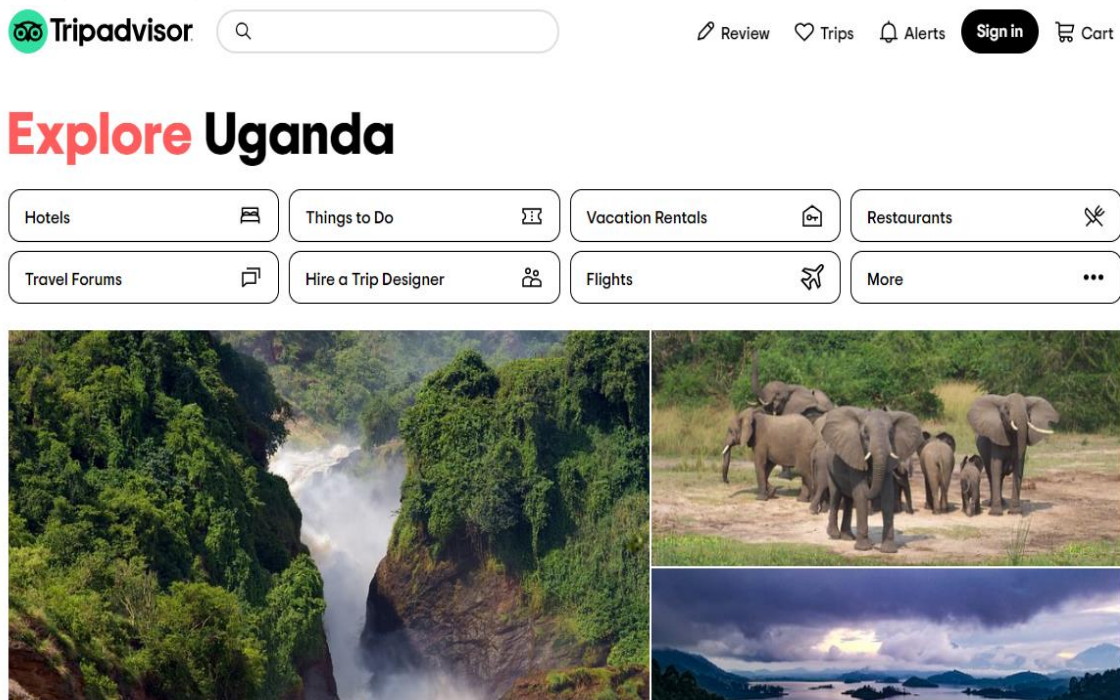
attracting new customers. A local lodge and a tour operator, for instance, may collaborate to offer combined lodging and tour packages, improving the total value proposition for clients.

2.2 Related applications

2.2.1 TripAdvisor Uganda

TripAdvisor Uganda is a widely used travel website and platform that offers comprehensive information, user-generated reviews, and booking features for travelers visiting Uganda. It serves as a valuable resource for trip planning, providing insights into accommodations, restaurants, attractions, and activities in the country. Users can access extensive user reviews and ratings to make informed decisions, book accommodations and restaurants directly through the platform, and explore a wide range of attractions and things to do in Uganda. TripAdvisor Uganda also includes travel forums and a community section where users can engage with fellow travelers, seek advice, and share knowledge. With its mobile app and extensive travel guides, TripAdvisor Uganda offers a convenient and reliable platform for travelers to plan their trips, access valuable information, and make bookings with confidence.

Figure 1 TripAdvisor Uganda



The image above gives an insight as to how users can interact with the website of TripAdvisor. It draws further into detail the services that are available to users with the section of reviews for various destinations, restaurants and hotels.

2.2.2 Wild Frontiers Uganda Safaris

Wild Frontiers Uganda Safaris is a highly reputable tour operator specializing in tailor-made safaris and adventure travel experiences in Uganda. With a focus on providing unique and immersive journeys, Wild Frontiers creates custom itineraries that cater to individual interests and preferences. Their expertise lies in wildlife encounters, gorilla trekking, birdwatching, cultural interactions, and more.

The proficiency of Wild Frontiers in gorilla trekking is one of its distinguishing qualities. They arrange guided hikes to see the amazing mountain gorillas in Bwindi Impenetrable Forest and Mgahinga Gorilla National Park, where they live in their native habitat. Travelers are guaranteed an exciting and moral interaction with these majestic creatures by their knowledgeable guides.

As advocates for sustainable and responsible tourism, Wild Frontiers works closely with local communities, supports conservation efforts, and promotes eco-friendly initiatives. They are committed to preserving Uganda's natural and cultural heritage for future generations. Travelers can feel good about choosing Wild Frontiers, knowing that their journey contributes to the long-term protection of Uganda's rich biodiversity.

Figure 2 Wild Frontiers Uganda Safaris



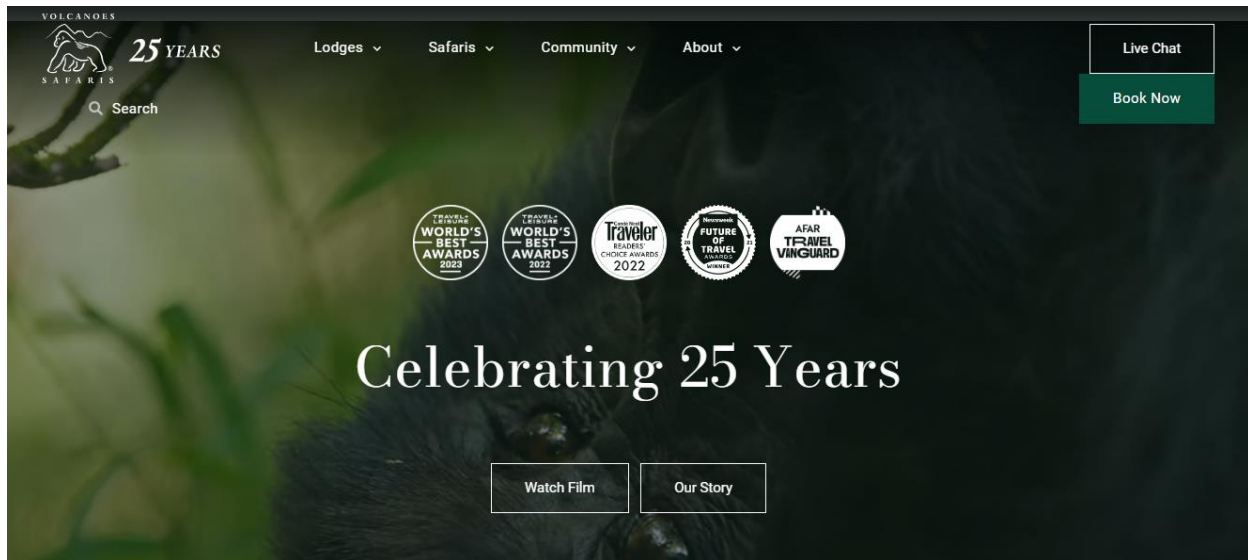
The image above looks at the point of display for various features from Wild Frontiers Safaris. It has features ranging from boat experiences, accommodations to safety information of responsible tourism.

2.2.3 Volcanoes Safaris Uganda

Volcanoes Safaris Uganda is renowned for its expertise in gorilla trekking, allowing travelers to embark on unforgettable encounters with the majestic mountain gorillas of Uganda. They organize guided treks to Bwindi Impenetrable Forest and Mgahinga Gorilla National Park, where guests have the opportunity to observe these gentle creatures in their natural habitat. The company's experienced guides ensure that every gorilla trekking experience is safe, ethical, and awe-inspiring. In addition to gorilla trekking, Volcanoes Safaris offers a range of safari experiences and activities. Guests can embark on wildlife safaris, birdwatching tours, cultural visits, and community engagements, allowing them to discover the diverse beauty and rich heritage of Uganda. The company's itineraries are carefully crafted to provide a well-rounded and immersive experience for travelers.

The ethos of Volcanoes Safaris is based on sustainability and conservation. The business is committed to safeguarding Uganda's natural environments, animals, and local populations. They support regional conservation efforts, actively participate in community development programs, and advocate for ethical tourism practices. Volcanoes Safaris provides travelers with the assurance that their trip helps to save and preserve Uganda's unique ecosystems.

Figure 3 Volcanoes Safaris



The image illustrates in detail about the outlook of Volcanoes Safaris with the services it offers to travelers ranging from lodges for accommodation, safari experiences to the point of ably booking a preferred safari.

2.2.4 Market Positioning and Competitive Advantage

The absence of a booking feature can significantly impact Great Lakes Safari's competitive position in the market. According to Buhalis (2003), in today's digital age, travelers expect convenience and instant access to booking services. Without a booking feature, potential customers visiting Great Lakes Safari's website may find it inconvenient and frustrating to have to contact the company separately to make a reservation. This additional step can create a barrier and discourage potential customers from completing their bookings. In contrast, competitors who offer online booking capabilities provide a seamless and user-friendly experience, allowing customers to make immediate reservations at their convenience.

Competitors in the market who have embraced online booking systems gain a significant advantage over Great Lakes Safari. According to Gretzel et al. (2015), they can leverage the convenience and accessibility of online bookings to attract customers and capture a larger share of the market. By offering a seamless online booking experience, competitors are positioned as more technologically advanced and customer-focused, which can further diminish Great Lakes Safari's competitive position.

2.3 Conclusion

In summary, the absence of a booking feature in Great Lakes Safari has significant implications for its competitive position in the tourism market. The convenience and accessibility provided by online booking systems, as highlighted by scholars such as Buhalis (2003) and Gretzel et al. (2015), have become a standard expectation for travelers. Competitors who offer online booking capabilities, as discussed by Xiang et al. (2017) and Sigala (2015), gain a competitive advantage by providing a seamless and user-friendly booking experience. Additionally, the absence of a booking feature may impact customer perceptions, as noted by Neuhofer et al. (2015), and limit marketing opportunities, as highlighted by Xiang et al. (2017). To address these challenges, it is crucial for Great Lakes Safari to consider implementing an online booking system to enhance customer convenience, remain competitive, and leverage marketing opportunities in the digital era.

CHAPTER THREE : METHODOLOGY

3.0 INTRODUCTION

This section presented the methodology employed to investigate the impact of the absence of a booking feature on Great Lakes Safari website , a renowned tourism company in Uganda. The study aimed at assessing how the lack of a booking feature affected the company's operations, customer experience, and competitive position in the tourism market. By examining the implications of not having an online booking system, this research was to provide valuable insights for Great Lakes Safari to make informed decisions regarding the implementation of a booking feature and its potential benefits.

In order to gather knowledge about the significance of online reservation systems, their advantages for the travel and tourism sector, and their effects on consumer convenience, market reach, marketing opportunities, and data collection and analysis, a thorough literature research was undertaken. According to Buhalis (2003), tourists in the digital age have grown to expect conventional online booking systems. They provide accessibility and convenience by letting users book at their own leisure and from any location in the world. The lack of such a feature may annoy and irritate potential customers, which may result in a decline in sales.

In order to improve corporate operations and decision-making, data gathering and analysis are essential. Businesses can modify their services and customize marketing tactics by using data-driven decisions based on analysis of booking patterns, client feedback, and demographic data (Gretzel et al., 2015). Great Lakes Safari's capacity for data collecting and analytics is

constrained by the lack of a booking option, limiting the organization from gaining insightful knowledge into client behavior and preferences.

3.1 Research Design

3.1.1 Research Objective

The purpose of the study was to determine the consequences of establishing an online reservation system at Great Lakes Safari, with a focus on how it would affect consumer convenience, operational effectiveness, customer satisfaction, and the company's ability to compete in the travel industry.

3.1.2 Research Approach

A mixed-methods research approach was used for the study's data collecting and analysis, combining qualitative and quantitative techniques. This strategy captured both subjective experiences and objective measurements, enabling a thorough comprehension of the research issue.

3.3 Data Collection Methods

In the absence of a booking feature for Great Lakes Safari, it became essential to explore alternative data collection methods to gather information about customer preferences, interests, and booking needs. By employing diverse data collection techniques, we could effectively understand and cater to the requirements of potential safari enthusiasts. These are further hinted on below in detail.

3.3.1 Prototyping Methodology

Prototyping was a dynamic and iterative process that allowed developers and stakeholders to create a visual representation of the final product's key aspects and functionalities. Hence it's a valuable approach for designing and refining complex features like online booking systems.

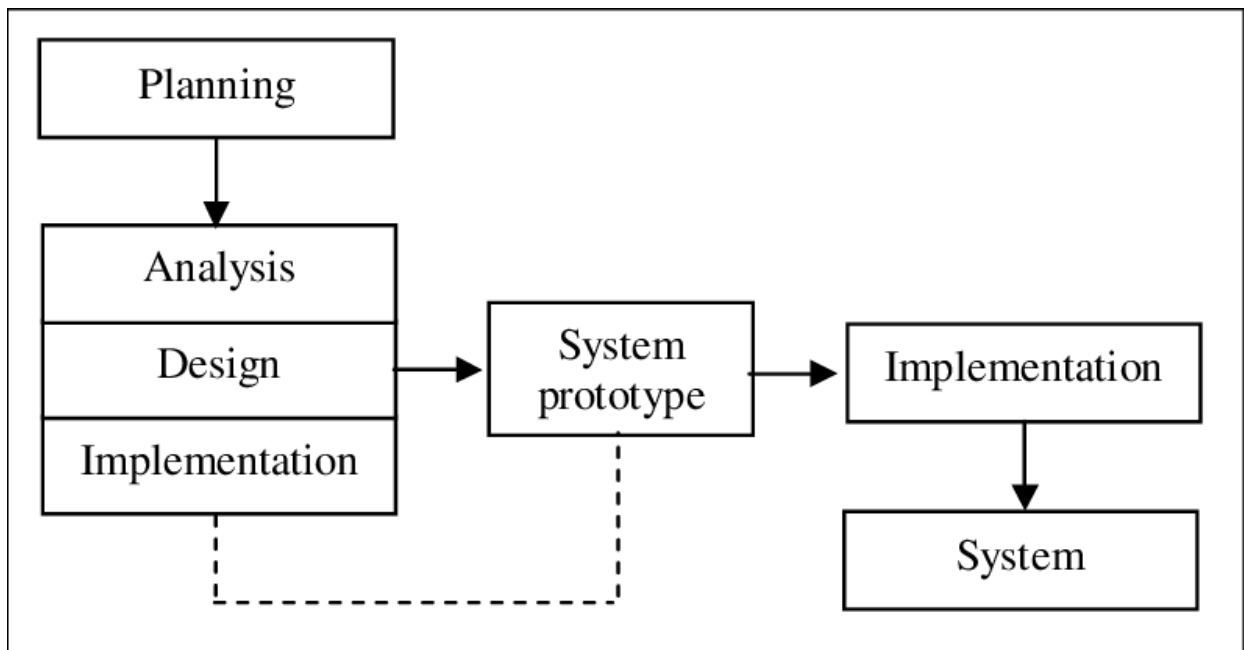
User-centered design is an ongoing process. The feature was launched thus continuing to gather user feedback and make refinements to enhance the user experience further. This commitment to improvement led to long-term customer loyalty and positive word-of-mouth.

By prioritizing user-centered design and actively involving users in the design and testing phases, Great Lakes Safari can create an online booking feature that not only meets user

expectations but also exceeds them, providing a seamless and enjoyable booking experience for its customers.

With prototyping there was risk reduction since incremental development reduces project risk by dividing it into smaller, more controllable components. This lowered the possibility of significant setbacks later in the process by enabling early detection and resolution of issues for the travel company. Early testing ensured the capability to test and validate key functionality by giving priority to critical components. This guaranteed that the core functions operated as expected and gave the prototype a strong basis.

The creation of low fidelity prototyping through using simple wireframes for initial feedback and ensuring to carry out usability tests with users. This enabled with the identification of issues early on for the system. High fidelity prototyping would also be used as there is an implementation of an interactive digital prototype to be utilized.



3.4 Design Tools

Prototyping. Prototyping was a valuable design tool that allowed for the creation of interactive and visual representations of a product or feature, facilitating stakeholder engagement and iterative refinement to ensure user-centered design and successful implementation.

Unified Modeling Language (UML) Diagrams. Making UML diagrams that represented the app's design and functionality, such as class diagrams and sequence diagrams.

Information Architecture. Establish a clear information architecture and sitemap for the booking feature. Tools like Draw.io helped organize the structure and hierarchy of information. This ensured that users could easily navigate through the booking process, find relevant information, and complete their reservations efficiently.

User Journey Mapping. Creating user journey maps to understand the steps and touchpoints involved in the booking process. Tools such as Miro were used to map out the customer's interactions, pain points, and opportunities for improvement. User journey mapping helped identify areas where the booking process was streamlined and optimized.

3.5 Implementation

Implementing a booking feature for Great Lakes Safari was a crucial step towards enhancing customer experience, streamlining the reservation process, and staying competitive in the tourism industry. By integrating a user-friendly and efficient booking system, Great Lakes Safari provided convenience and accessibility to its customers, expanded its market reach, and optimized operational efficiency for sustainable growth.

3.6 Testing and Validation

Creating a booking function for Great Lakes Safari required performing testing and validation. Great Lakes Safari makes sure that the booking feature works flawlessly, lives up to user expectations, and provides a simple and dependable reservation experience by putting it through rigorous testing and validation processes. Any problems or areas for improvement found are fixed through user testing, usability evaluations, and feedback gathering, ensuring a high-quality and user-centric booking system that boosts client satisfaction and fuels business success.

CHAPTER FOUR: SYSTEMS ANALYSIS AND DESIGN

4.0 Introduction

Chapter Four of this research report focused on the implementation of a booking feature for Great Lakes Safari to address the current lack of online booking capabilities. This chapter outlined the research design and ethical considerations that would guide the study.

4.1 Findings

The absence of a booking feature on the Great Lakes Safari website led to user frustration and inconvenience. Potential customers visiting the website are unable to make immediate bookings or inquire about available services, resulting in a less seamless user experience. The lack of a booking feature directly impacts the website's ability to convert website visitors into actual customers. Visitors who are interested in booking tours or accommodations may abandon the website in search of alternative options that provide a more straightforward booking process.

4.2 Strengths and weakness of the current system

The strengths and weaknesses of the travel guide system of Great Lakes Safari are further discussed below.

Strengths

- Extensive regional coverage. The system provided access to a wide range of safari destinations within Uganda cutting across to Kenya, Rwanda and Tanzania allowing tourists to explore various ecosystems and wildlife habitats.
- Professional tour operators: The current travel system ensured to provide professional tour guides to tourists by possessing the required means of transport . The system enables tourists to have a preview of the packages offered to the various destinations to effectively select from for their trips.
- Customizable packages: Tourists were able to have the flexibility to choose from different safari packages, catering to different budgets ,interests and the durations of the trips. The system enables tourists to have a preference on the safari packages as well as being cost friendly.

- Expert naturalist guides: The travel system management employed skilled naturalist guides that are passionate about wildlife and ecology to enrich tourists. They maintain a strong level of work ethic to ably serve the tourists.
- Well established infrastructure: The current system had a well set up line of infrastructure ranging from hardware, software and network components which ensures proper running of activities on a daily basis.
- Destination comparison. The system offered travelers with the option to view different destinations to enable them make informed decisions basing on factors such as cost, weather and attractions.

Weaknesses

- Lack of booking feature: The current system did not possess the feature of booking which results in potential customer conversions neglecting the system.
- Incomplete coverage. The system lacked information about certain destinations which makes users have limited options and hence miss out on appealing places.
- Inadequate user reviews: The system possessed a static rating for the provided destinations. This can push tourists to have a lack of confidence in the recommendations.
- Insufficient focus on safety: The system highlighted on the travel packages but did not include safety tips and guidelines as users may be less prepared to face potential risks during their travels.

4.3 Developed System

Great Lakes Safari is a renowned travel company specializing in safari and adventure experiences in East Africa. While the company excelled in providing remarkable travel adventures, there was a notable gap in their online presence, the absence of an online booking feature on their website. The developed system was aimed at ensuring that people interacting with the travel company are able to book safaris. It was projected to ensure that the booking feature is responsive and aligns with the company's commitment to excelling in customer service. The system proposed would aim at enabling efficient tour management, scheduling and customer management for Great Lakes Safari. With this initiation users can ably interact with the

system since they would be availed with the options of destinations and safari packages offered by the travel company.

The key users for the system are the user and the administrator. The user had the capability of registering and being able to manage their profiles. Users also made bookings of their selected destinations, submitted reviews and had a view from their dashboard on the status of their booking as well as make inquiries. The admin managed the booking, packages, as well as the inquiries submitted for the travel company basing on the level of interaction. The level of security was handled with the usage of a password system for the user and admin with the rights to change and adjust one's password accordingly. The technology would comprise of HTML, CSS, JavaScript handling the front end and PHP for managing the side of the database which is the backend.

4.3.1 Requirements Specification

The developed system's functional and non-functional needs were described in the requirements specification. It had particular features, functionalities, and skills that were required to achieve Great Lakes Safari's goals.

FUNCTIONAL REQUIREMENTS

- Registration and User Profile Management. The user had the capability to create an account and manage their profiles. This enables an easy interaction with the system features of Great Lakes Safari.
- Booking Request: A user was availed with the option to book a feature from the packages listed by the travel company. This must enable users select a time period of when they would book with the view of details such as booking id, name of the package and the schedule.
- Review and Inquiry Management. It was important for users to navigate through the system and make reviews on the packages that have been offered. This enables getting of feedback on the services offered as well as the inquiries generated for better management.

NON FUNCTIONAL REQUIREMENTS

Reliability: The system's availability was guaranteed at all given times to enable accessibility to users. It is able to handle hardware or software glitches without any loss of data.

Performance: Great Lakes Safari system responded to users' requests within a short time period and have an extensive coverage of users without any performance challenges.

Usability: The system ensured simplicity of use for clients booking tours and services by having a user friendly interface.

Flexibility and Scalability : The system was flexible to enable easy customization of content that is through tour descriptions and pricing to accommodate the business needs which keep on changing. It enables integration with third party systems such as customer relationship management.

Compatibility: The system was able to access various devices and browsers for the easy interaction by users that are accessing the application.

4.3.2 System Architecture and Components

This looked at the overview of the system architecture and its various components. There was an insight into the level of structure of the proposed system looking at the front end interactions, back end servers, the mobile and web based interfaces as well as the integration with external systems.

SYSTEM REQUIREMENTS

Table 1 Software Requirements

| Software | Requirements |
|---------------------------------|--|
| Operating system for the server | Windows 2010 and above |
| Web server | Apache web server version 2.0 or 2.0.64 |
| Web browser | MS Internet Explorer 6.0, Mozilla Firefox 3.6 or Google chrome |
| Database Management System | PHP. |

Table 2 Software Requirements

| Hardware | Requirements |
|----------|--------------|
|----------|--------------|

| | |
|-----------|----------------------------|
| Processor | Intel Pentium III or above |
| Hard disk | Minimum 4GB |
| RAM | 512MB |

Table 3 Hardware Requirements

Software Requirements

| Software | Requirements |
|----------------------------|---|
| Operating System | Windows |
| Database Management System | MySQL Server , PhpMyAdmin |
| Programming Languages | PHP, ,JavaScript |
| Frameworks and Libraries | HTML,CSS and JavaScript front end development |

4.3.3 User Interface Design

The user interface design looked at creating a user friendly and built in interaction for various stakeholders for instance customers, travelers and administrators. This sub section looked at describing the design principles, layout and navigation that would ensure usability and accessibility.

4.3.3.1 User Requirements

- ✓ Registration of users: Enabling users with the rights to create accounts and log in for access of the system's functionalities and features.
- ✓ Booking. A platform to enable users track the bookings they would have made of the various packages offered by the travel company.
- ✓ Placing inquiries: Users were able to make inquiries about the tour packages and the breakdown of information in detail.

4.3.3.2 Operational Requirements

- ✓ Performance: Great Lakes Safari application was responsive to an easy level of navigation and giving a positive user experience.
- ✓ Compatibility: The application was able to operate on Android and iOS by having a proper level of interaction seamlessly on different devices such as smartphones, tablets and laptops.
- ✓ Reliability: The app was reliable as users would require to access the system at given times and have a minimal level of errors by ensuring to carry out regular testing and fixing of bugs.
- ✓ Level of Scalability: Enabled the application to be designed in that its able to handle increasing users and thus not affecting performance. This indicates that the application can handle continuous growth.

4.4 SYSTEMS DESIGN

4.4.1 Context Diagram (DFD Level 0)

The data flow diagram highlighted on the movement of data through the system in various parts. They help stakeholders to have an understanding of the interaction between the different components of the system. The diagram also enabled define the boundaries and identifying entities interacting with the system.

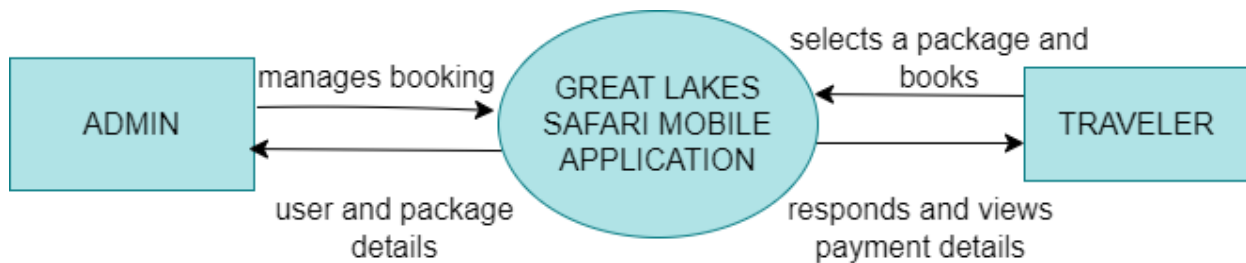
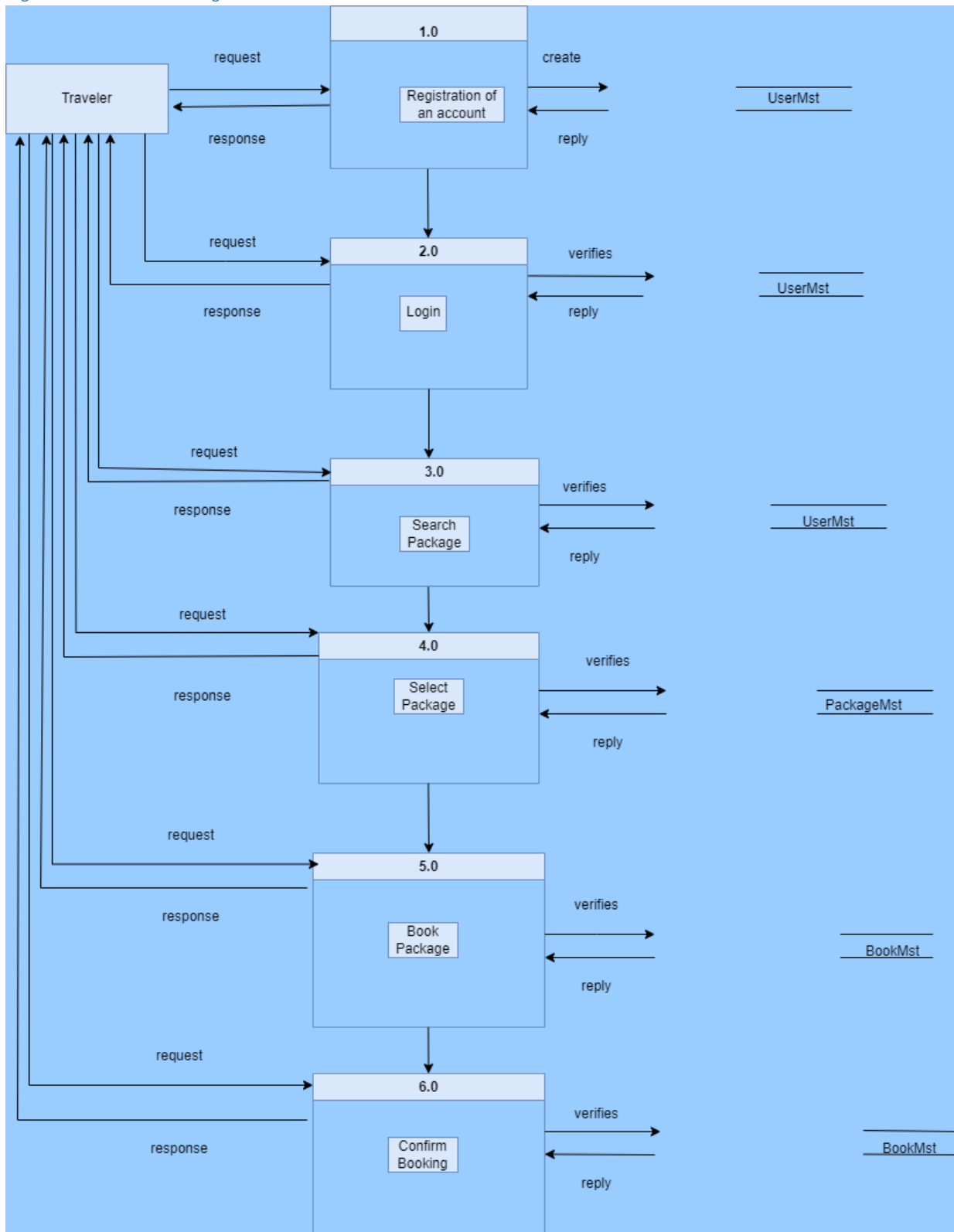


Figure 1 Context Diagram DFD Level 0

The context diagram above shows the flow of data from the admin to the traveler. The admin manages booking made by the traveler and receives input from the user details as well as of the package. The traveler selects and makes a booking and further receives feedback from the admin.

4.4.2 Data Flow Diagram Level 1 (User)

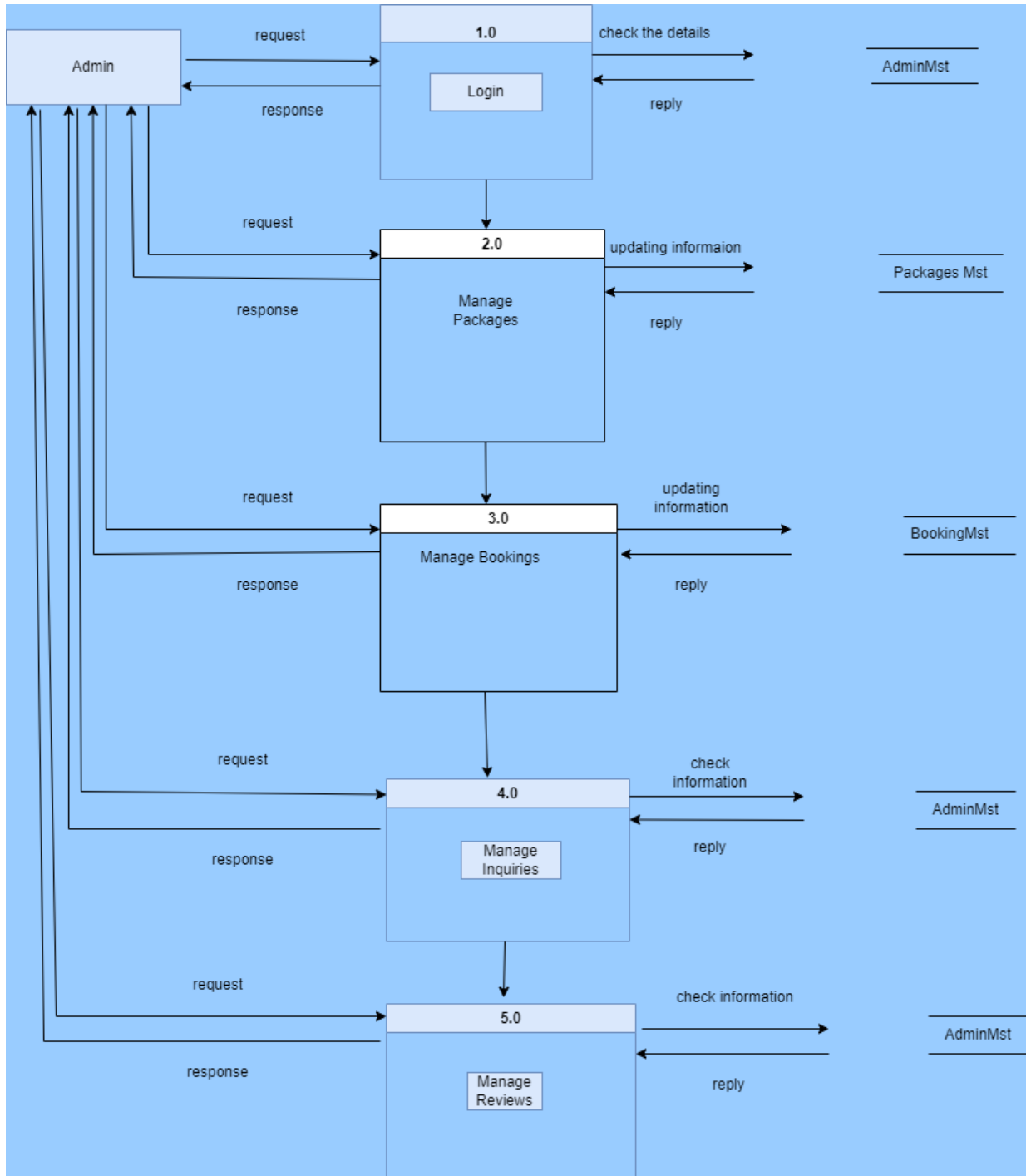
Figure 2 Data Flow Diagram Level 1 User



The diagram above looks at the level of interaction of the user to the application from the point of registering an account, logging in, searching for a package, selecting a package, booking and confirm booking.

4.4.3 Data Flow Diagram Level 1 (Admin)

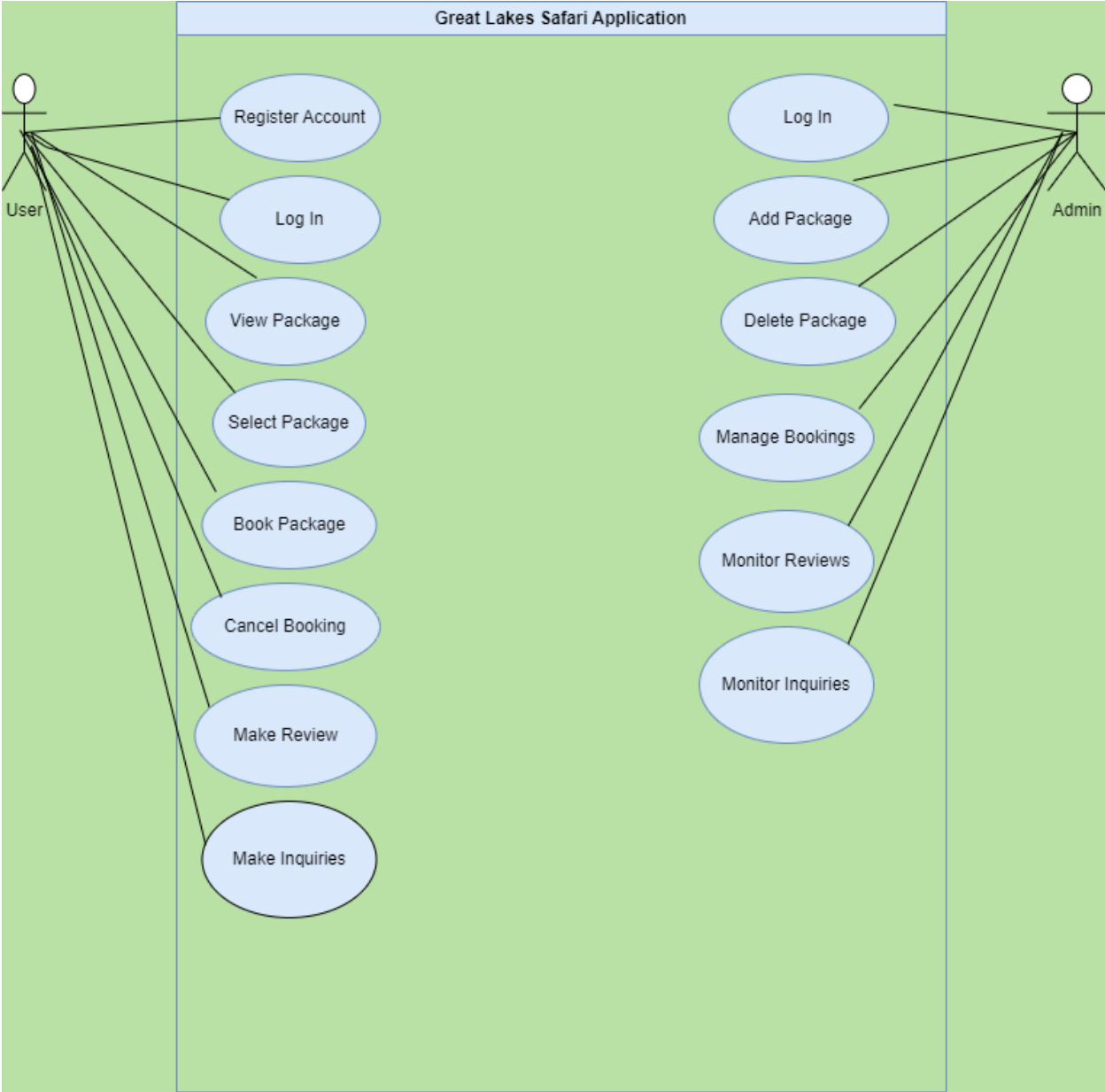
Figure 3 Data Flow Diagram Level 1 Admin



The diagram above looks at the interaction of the application by the admin from logging in, managing packages, managing bookings, managing inquiries and reviews.

4.4.4 Use Case Diagram

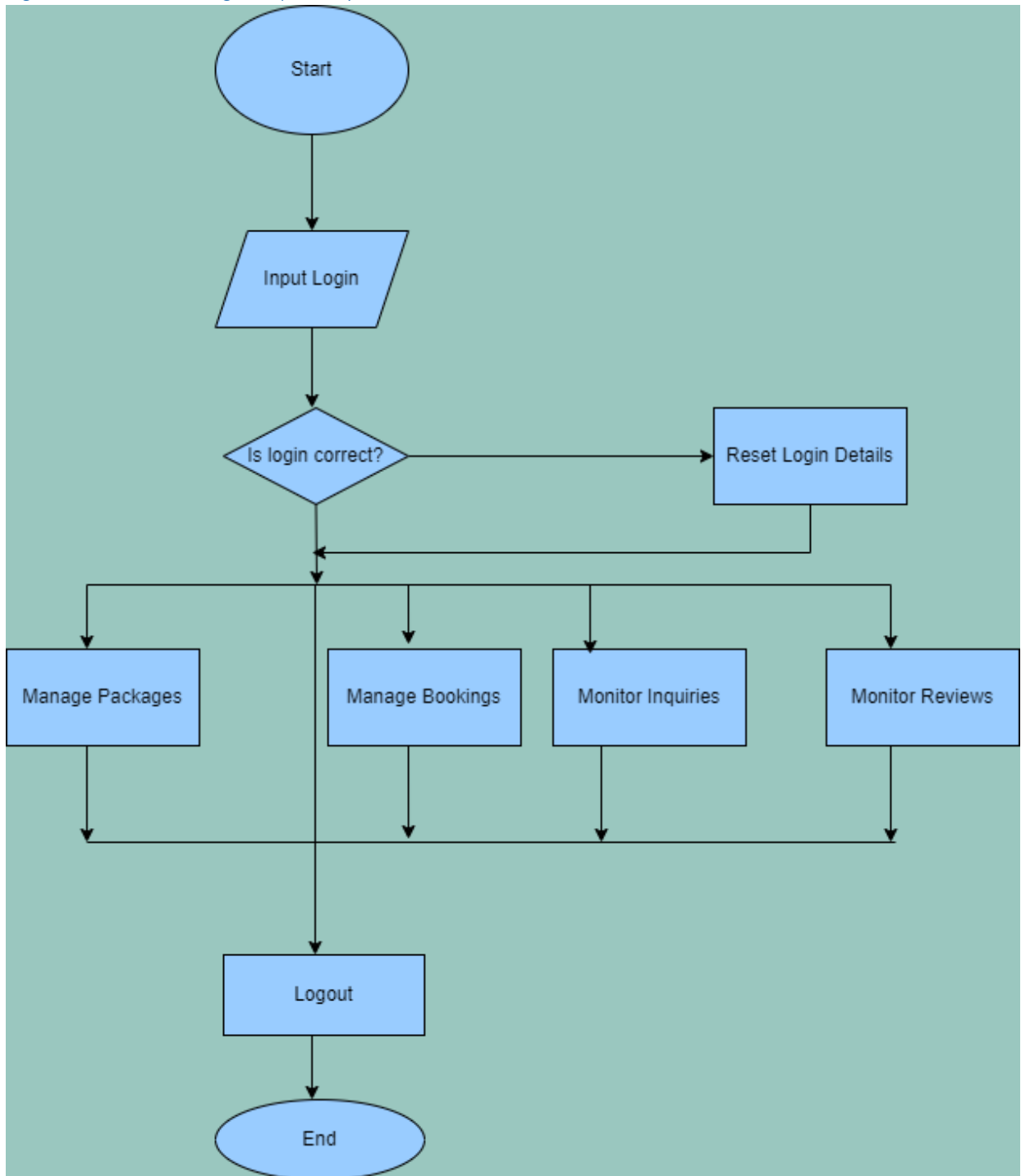
Figure 4 Use Case Diagram



The use case diagram above illustrates the user and admin as the primary actors of the application with the level of data flow on both ends.

4.4.5 Flowchart Diagram (Admin)

Figure 5 Flowchart Diagram (Admin)



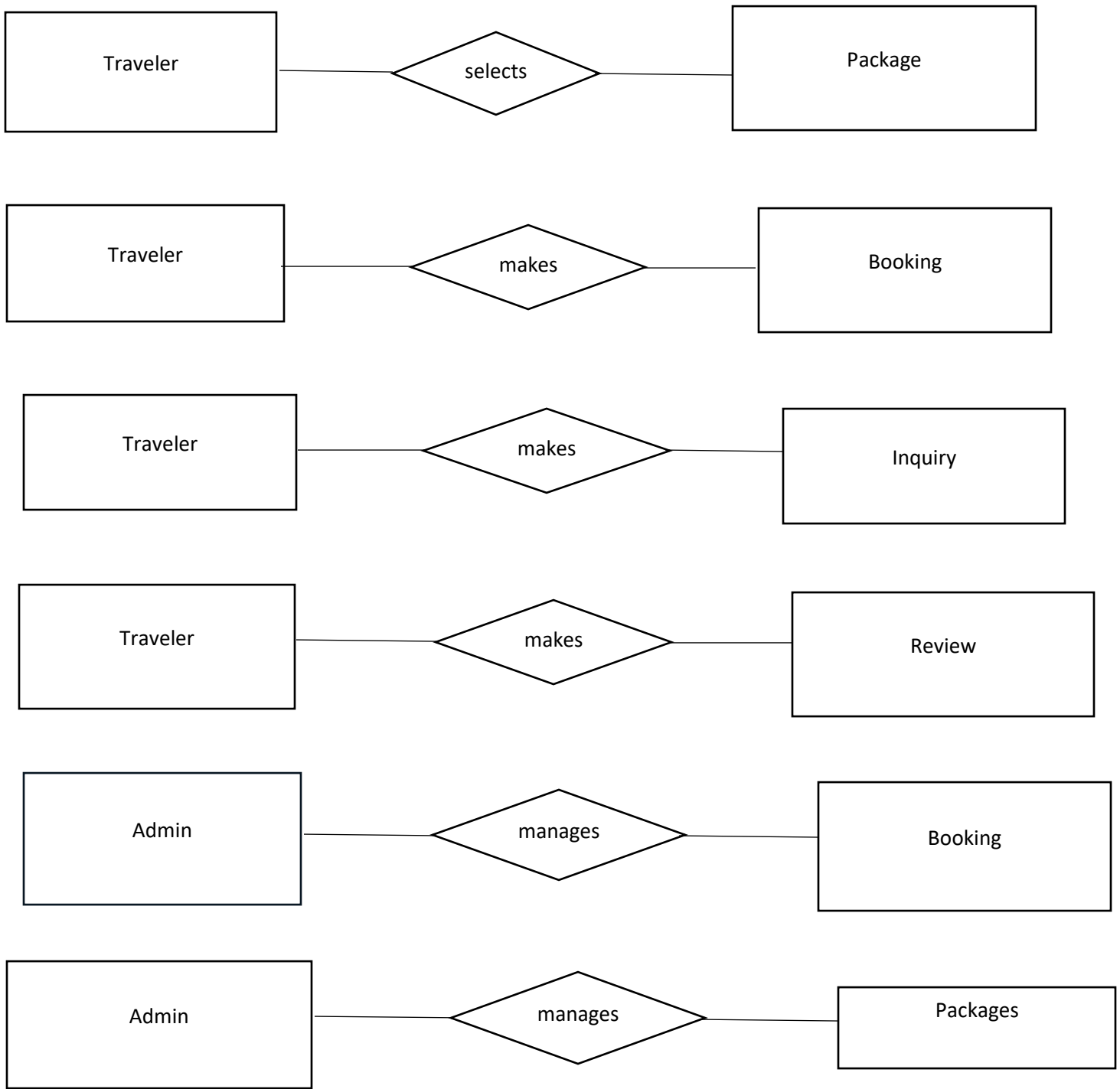
The flowchart above looks at how the admin interacts with the application from logging where in the case scenario if the login details are incorrect the admin would have to reset and gain access

to the application. The admin would be able to manage packages, bookings, monitor inquiries and reviews.

ENTITY RELATIONSHIP DIAGRAM (ERD)

ENTITIES:

- Traveler
- Admin
- Package
- Booking
- Inquiry
- Review



ATTRIBUTES TO ENTITIES

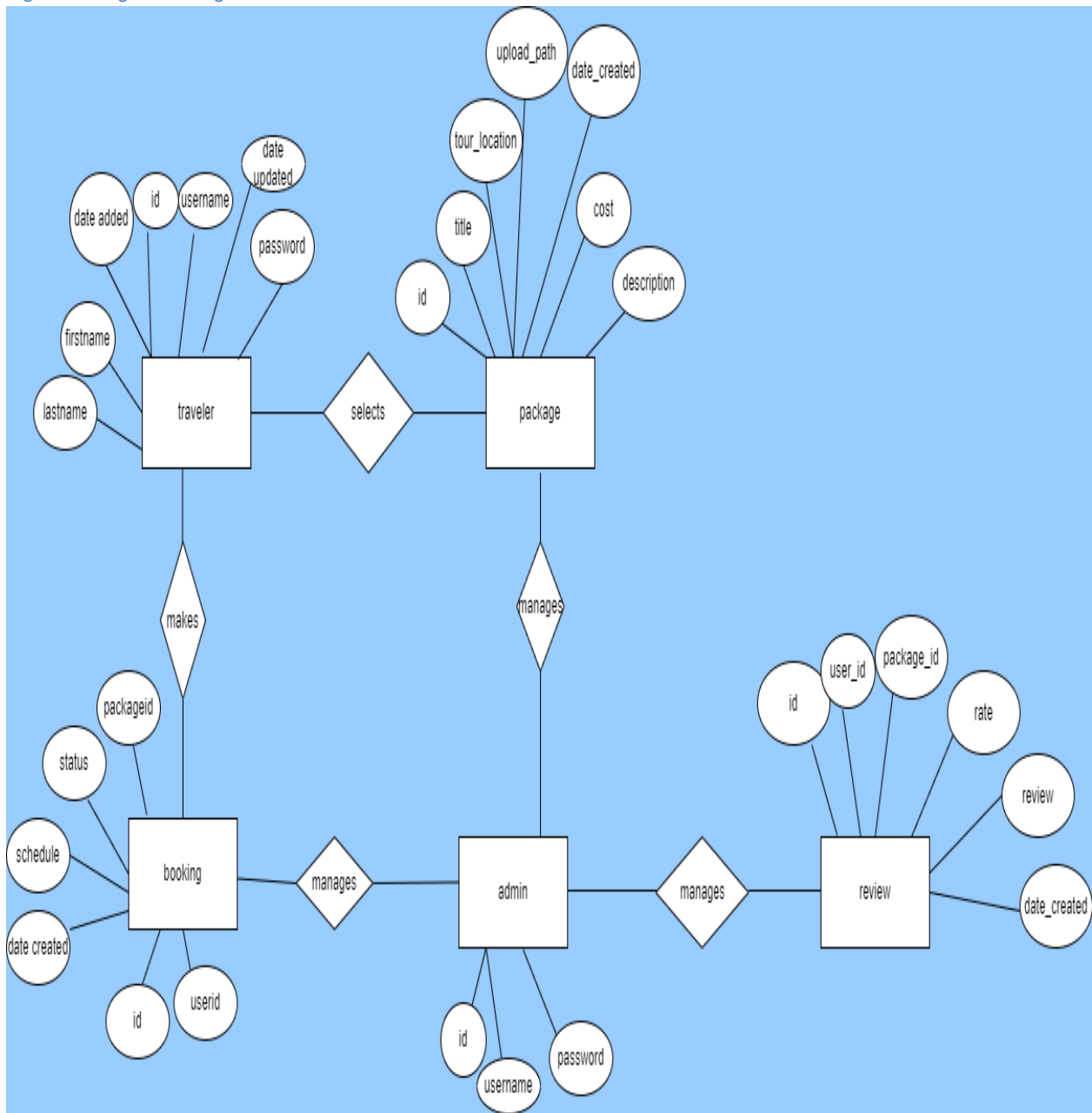
| Entities | Attributes |
|----------|--|
| Booking | Booking-id, user-id, package-id, status, schedule, date-created |
| Packages | Package-id, title, tour-location, cost, description, upload-path, status, date - created |
| Review | Review-id, user -id, package-id, rate, review, date-created |
| Inquiry | Inquiry-id, name, email, subject, message, status, date-created |
| Admin | Admin-id, username, password |
| Traveler | Traveler-id, username, password |

IDENTIFYING PRIMARY, CANDIDATE KEYS

| ENTITY | PRIMARY KEY |
|----------|-------------|
| Traveler | Traveler ID |
| Admin | Admin ID |
| Booking | Booking ID |
| Packages | Package ID |
| Review | Review ID |
| Inquiry | Inquiry ID |

4.4.5 Logical Design

Figure 6 Logical Design



The logical design shows the flow of data from the traveler being able to select a package and also making a booking. Bookings are thereafter managed by the admin. The admin also manages reviews made by travelers.

4.4.6 Data Dictionary

| Entity | Attributes | Data types | Constraints |
|----------|---------------|------------------|-------------|
| Traveler | Traveler ID | Int(15) | Not Null |
| | Username | Varchar(25) | Not Null |
| | Password | Varchar(35) | Not Null |
| Booking | Booking ID | Int(15) | Not Null |
| | User ID | Int(15) | Not Null |
| | Package ID | Int (15) | Not Null |
| | Status | Varchar(25) | Not Null |
| | Schedule | Varchar(25) | Not Null |
| | Date Created | Date(0000-00-00) | Not Null |
| Packages | Package ID | Int(15) | Not Null |
| | Title | Varchar(25) | Not Null |
| | Tour Location | Varchar(25) | Not Null |
| | Cost | Int(30) | Not Null |
| | Description | Varchar(25) | Not Null |
| | Upload Path | Varchar(25) | Not Null |
| | Status | Varchar(25) | Not Null |
| | Date created | Date(0000-00-00) | Not Null |
| Review | Review ID | Int(15) | Not Null |
| | User ID | Int(15) | Not Null |
| | Package ID | Int(15) | Not Null |

| | | | |
|---------|--------------|-------------------|----------|
| | Rate | Number(25) | Not Null |
| | Review | Varchar(25) | Not Null |
| | Date created | Date (0000-00-00) | Not Null |
| Inquiry | Inquiry ID | Int(15) | Not Null |
| | Name | Varchar(25) | Not Null |
| | Email | Varchar(25) | Not Null |
| | Subject | Varchar(25) | Not Null |
| | Message | Varchar(25) | Not Null |
| | Status | Varchar(25) | Not Null |
| | Date created | Date(0000-00-00) | Not Null |
| Admin | Admin ID | Int(15) | Not Null |
| | Username | Varchar(25) | Not Null |
| | Password | Varchar(25) | Not Null |

CHAPTER FIVE: IMPLEMENTATION

5.0 Introduction

The implementation of Great Lakes Safari application was highlighted upon in this chapter. The general outlook was based on the designing and development of the application to the point of it being able to run effectively.

5.1 Print Screen

This is to show the display of the system and the level of interaction. It gave an insight into the different features that are interacted with for Great Lakes Safari application. This enables individuals to have a visual overview of the application for Great Lakes Safari.

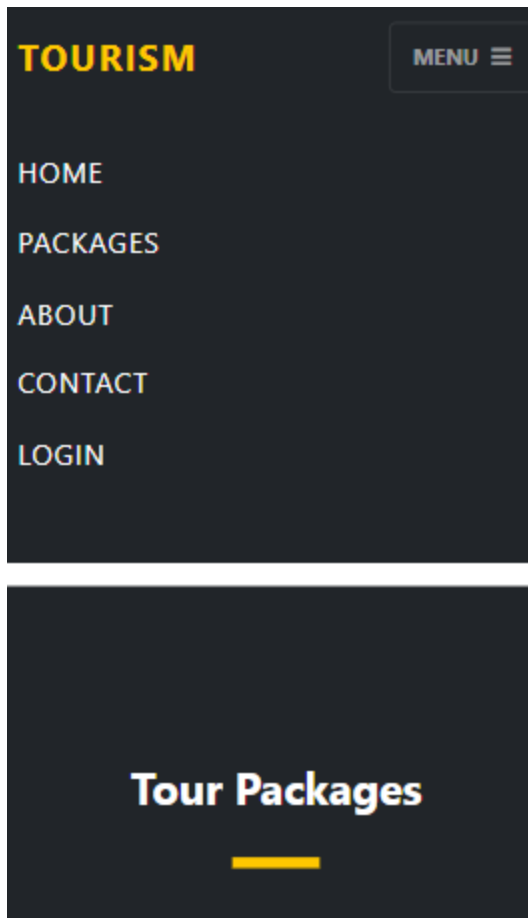


Figure 1 Home Screen

This shows a section for a dropdown menu for users to interact accordingly with the application.

A login form titled "Login" with a close button (X) in the top left corner. Below the title is a horizontal line. The form contains two input fields: "Username" and "Password". Below the "Password" field is a yellow "Login" button.

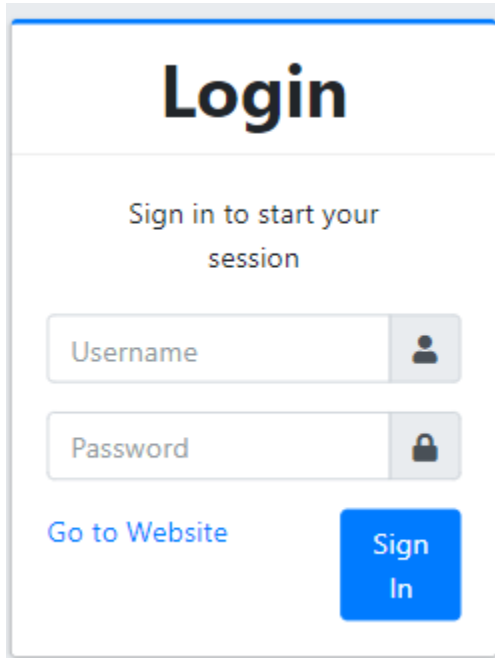
Figure 2 Login Section

This page above shows a section for users to login in their details so as to gain accessibility to the application.

A form titled "Create New Account" with a yellow horizontal line below the title. The form contains four input fields: "Firstname", "Lastname", "Username", and "Password". Below the "Password" field are two buttons: a yellow "Register" button and a yellow "Admin Login" button.

Figure 3 Creating An Account

This screen above enables new users to the application so as to set up their accounts and also has a provision for an administrator to ably be redirected to the page for logging in.



The login form features a large 'Login' title at the top. Below it, the text 'Sign in to start your session' is centered. There are two input fields: 'Username' with a user icon and 'Password' with a lock icon. A blue 'Sign In' button is positioned to the right of the password field. A blue link 'Go to Website' is located at the bottom left of the form.

Figure 4 Log In (Admin)

This section headlines the point where an administrator can ably log in to manage and handle the application.

Booked Packages Manage Account

Show entries Search:

| # | DateTime | Package | Schedule | Status | Action |
|---|------------------|------------------------|------------|---------|--------|
| 1 | 2023-08-17 16:15 | Kibale National Park | 2023-08-11 | Done | Action |
| 2 | 2023-08-17 16:22 | Mgahinga National Park | 2023-07-28 | Done | Action |
| 3 | 2023-08-17 16:24 | Kibale National Park | 2023-08-16 | Pending | Action |

Showing 1 to 3 of 3 entries Previous **1** Next

Figure 5 User Dashboard

This dashboard is mainly for the user enabling them to monitor their bookings and also be in position to cancel their bookings.

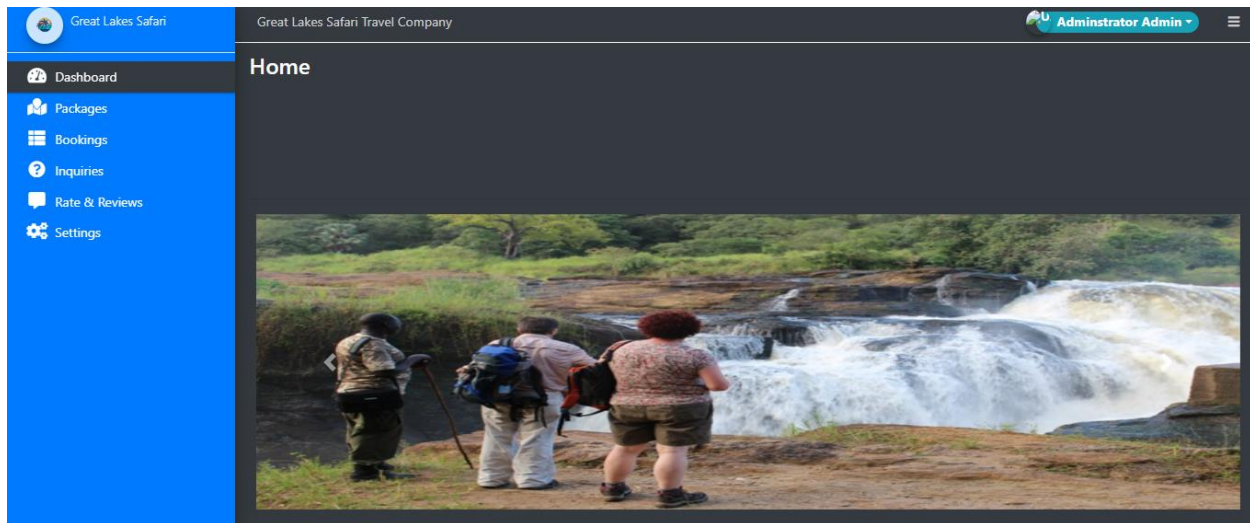


Figure 6 Admin Dashboard

This image shows in detail the dashboard of the admin. The admin monitors and makes changes from this point for the packages, bookings and reviews.

5.2 Limitations

There were noticeably limitations to the application of Great Lakes Safari as is the case with any given project during its implementation. The technical, operational, resource limitations are further hinted on below in detail basing on the application.

5.2.1 Technical Limitations

Connectivity: The start up with Great Lakes Safari application would require a well established internet connection as it initially took sometime to load. Hence areas with connectivity issues would be highly affected limiting their interaction with the application.

Offline functionality: Great Lakes application was limited to enabling users have offline access to the application hence requiring users to be online and can affect users accessing it in areas where network can be tricky to engage.

Compatibility: It is essential to note that the application's compatibility to different operating systems was limited thus the level of accessibility on some devices would pose as a challenge.

Integration challenges: The integration of third party gateways could pose challenges relating to the level of data being synchronized and compatibility.

Testing and assurance: Ensured that the application was running properly and is less likely to be affected by bugs requiring extensive testing measures which can affect the implementation time for Great Lakes application.

User Adoption: Getting to engage users to interact with the Great Lakes safari application was challenging and required proper marketing strategies to engage users .

5.2.3 Functional and Scope Limitations

Limited functionality: Due to time and resource limitations, the program was able to initially only offer a small number of functionality. Some sophisticated or anticipated features might be postponed to later editions.

Restricted Geographic Coverage: The Great Lakes Safari application was able to concentrate on particular safari locations or regions, with ambitions to gradually broaden its geographic coverage.

Limited Customer care Integration: In the initial version, the extent of automated customer assistance may be limited due to the integration with customer care tools or chatbots.

CHAPTER SIX: RECOMMENDATIONS , CONCLUSIONS AND SUMMARY

6.0 Introduction

This chapter looked at the final stages highlighting on recommendations, conclusions and a summary for the report in detail.

6.1 Recommendations

This section looked at the suitable improvements for the application of Great Lakes Safari having analyzed the implementation and phases of research. These are further hinted on below in detail.

6.1.1 User experience enhancements

Generating user feedback from time to time was key so as to identify the likely possible areas of improvement. This can be further worked on by carrying out a usability testing so as to ensure that the booking process remains to the suitability of users and is highly interactive.

6.1.2 Offline mode functionality

Taking the initiative to ensure that an offline functionality was enabled since in some areas there can be a challenge of network connectivity. With the enhancement of this users can gain access to the application and go on ahead to interact with the packages offered.

6.1.3 User loyalty program

Initiating a loyalty program to users was key when accessing the packages offered by the travel company. This can be done in a way that when users continuously make bookings a loyalty card would be generated with the likelihood of discounts or early access to confirmation of bookings.

6.1.4 Marketing and Promotion

Keeping constant marketing efforts was essential so as to attract new users and effectively retain the existing ones. This can be done by ensuring a wide outreach on social media, making promotions to generate interest from various individuals.

6.1.5 Security Updates

Taking the time to stay up to date with security updates. Regular penetration testing was important so as to protect user data and ensure there isn't any security breach to the application. With this taken into consideration the application won't be affected by any security errors.

6.1.6 Mobile Responsiveness

It is important to ensure that the application can be accessed on mobile devices and fit the screen sizes for easy navigation for users.

6.2 Conclusions

The Great Lakes Safari application in conclusion is aimed at solving the challenge of lacking a booking feature on the Great Lakes Safari website with the goal of enabling users to ably book packages that are offered. The objective of attaining a functioning application for Great Lakes was ably done with the continuous level of implementation. The application looked at addressing the challenge of lacking a booking feature on the website of Great Lakes.

Great Lakes implementation involved addressing the key challenges of a booking feature and reviews. The application was generated in its initial stages by ensuring to place a booking feature for users to book preferred packages. As well as ensuring that a section for reviews is placed to enable users interact with the application effectively to generate feedback to the travel company. An administrator would have rights to manage and monitor the bookings, reviews and inquiries that would have been made by users when using the application.

Engaging user feedback through the reviews and inquiries on the application enabled identify key areas of improvement. This ensures that improving user experience is essential and making required changes for the suitability of users.

In conclusion therefore the Great Lakes Safari application projected to solving the issue of the website lacking a booking feature and thus was taken as an initiative to implement it for the easy conversion of individuals on the website to potential travelers.

6.3 Summary

This innovative application empowered travelers to embark on safari adventures with ease and confidence. From the palm of their hand, users can access a world of breathtaking destinations,

exotic wildlife, and vibrant cultures. The application's robust features include booking capabilities, making reviews ,placing inquiries and offering travelers the freedom to design their dream safaris.

A literature review, system design , implementation were critically looked at in the build up of the application for Great Lakes Safari. Examining the existing literature on the different travel agencies helped gain an insight on what would be a key indicator for the improvement of the Great Lakes Safari travel company.

CHAPTER SEVEN: APPENDIX

A.1 Budget

| Category | Estimated Cost |
|--|-----------------------|
| Development Costs | |
| Application Development (Front End & Back End) | \$25,000-\$80,000 |

| | |
|--------------------------------|---------------------|
| Database Development | \$5,000- \$10,000 |
| User Interface Design | \$15,000-\$30,000 |
| Testing and Quality Assurance | \$20,000-\$40,000 |
| Operational Costs | |
| Maintenance and Updates | \$25,000-\$50,000 |
| Security and Compliance | \$7,000-\$15,000 |
| Infrastructure Costs | |
| Hosting and Server Costs | \$15,000-\$30,000 |
| Domain and SSL Certificate | \$120-\$500 |
| Booking Feature Costs | |
| Payment Gateway Integration | \$10,000-\$20,000 |
| Booking Management System | \$20,000-40,000 |
| Marketing and Promotion | |
| Marketing and Promotion | \$15,000-\$40,000 |
| Content Creation | \$7,000-\$20,000 |
| Miscellaneous | |
| Legal and Licensing | \$5,000-\$10,000 |
| Contingency | \$15,000-\$30,000 |
| Total | \$250,000-\$500,000 |

A.2 Project Timeline

| Phase | Timeline |
|-------------------------------------|-----------------|
| Application Development | 1-2 months |
| Database Development | 2-4 weeks |
| User Interface design | 1-2 months |
| Booking Feature Development | 1-2 months |
| Quality Assurance and Testing | 2-4 weeks |
| Hosting and Server | 1 month |
| Integration and Testing | 1 month |
| Deployment and Launch | 1 month |
| Post launch and ongoing development | Ongoing |
| Maintenance and support | Ongoing |

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