

Groundwater Private Resort Booking System

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Subject

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1.1 BACKGROUND OF THE STUDY

In today's widely developing civilization, modernity has made its way to the majority of the fields, areas, and aspects of society. Technology (the major contributor to modernization) has undeniably instilled growth and evolution in education, healthcare, business, security, etc. It made things much easier and more convenient to operate and helped people adapt and provide solutions to the rising management-related issues in the previously mentioned domains. This technology-driven development has made a significant positive impact, specifically in the business field.

Business owners all around the globe have been managing their transactions with the aid of computer and database management systems, websites, mobile and web applications, automated and AI-powered systems, etc. These things helped them gain an increased number of consumers, lessened workload, and organized institution data administration. However, some businesses, especially in the local zones, still operate their establishments manually. According to Robert Kolaski, technology has overhauled the way we do business, and even social purposes, to the point that we no longer rely on traditional methods. Hence, the researchers decided to develop a system for an existing business that uses a pen-and-paper approach.

Resorts have numerous business operations, which may seem complicated to manage if only one individual handles everything. In the prospect of this study which is the Groundwater Private Resort located at Barangay Bibirao Daet, Camarines Norte, they perform four (4) primary functions: maintenance for everyday utilization, appointment processing/listing through walk-in, and online through their Facebook page, accepting payment and reservation via cash or e-payment (Gcash), and business inventory.

To make these processes easier to perform, the researchers develop an online booking system. The project allows users to request the schedule of their appointment at Groundwater Private Resort without needing to wait for the reply of the resort owner, for it displays the available and not available slots on the website's users/audience.

1.2 STATEMENT OF THE PROBLEM

This study aims to evaluate the Groundwater Private Resort Booking System. Specifically, it seeks to answer the following questions:

1. What are the challenges that the business encounters?
2. What is the efficiency rate of the new booking system in lessening and solving business challenges based on the verification and validation conducted by Groundwater:
 - a. Owner
 - b. Clients
3. How effective is the booking system in terms of solving the following:
 - a. Double-booking
 - b. Wrong map location
 - c. Slow page response
4. What enhancement do the developers need to improve the proposed system?
5. How much will the project cost for five (5) years of operation?

1.3 PROJECT OBJECTIVES

This project aims to develop a Groundwater Private Resort Booking System that will eradicate the business challenges that the owners and clients encounter. Specifically, the proponents expect the project to do the following:

1. Eliminate double-booking issues by initially displaying the available slots to the users and allowing them to request appointments on their chosen dates on their own.
2. Display the correct and accurate location of the resort.
3. Create an automated response to booking-related inquiries limited to available appointment slots, fixed resort rates, and amenities included in the offered packages.

1.4 SCOPE AND DELIMITATION

This project aims to solve the problem of Groundwater Private Resort in their business transactions such as the double booking, accurate vicinity, and quick accommodation of inquiries. Nonetheless, this project will not be able to make an in-app payment and provide the resort's inventory. The team is only able to produce the whole website itself that will solve the resort's transaction problems and not the other necessities such as the internet, computer unit,

etc. The target project timeframe will be from first week of October until first week of December; a total of 8 weeks, before implementation.

1.5 SIGNIFICANCE OF THE STUDY

The findings, outcome, and development of this study will benefit the business, especially now that the majority of their competitors use advanced technology for their transactions. The demand for relaxing places—especially during the summer season is of significant quantity. Hence, a more effective system applied in the business will be beneficial not only to the owner but also to the people who are involved in the business process. Precisely, it will benefit the following:

OWNERS. The system will help the owners to generate higher resort income, lessen the job difficulty, improve the quality and efficiency of the business, and adapt to modern business trends and requirements.

EMPLOYEES. The resort employee will have more time to do other business-related tasks instead of responding to the inquiries on the Facebook page.

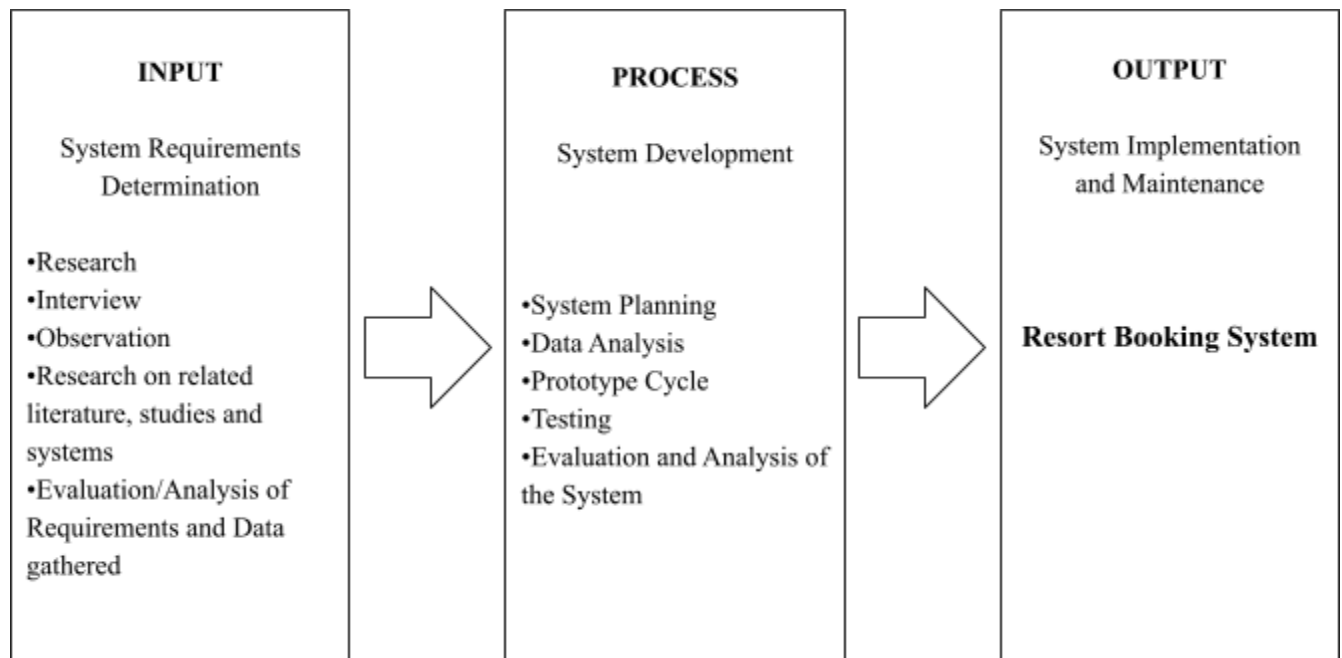
CLIENTS. The booking system will authorize resort clients to request and personally select booking dates and amenities without needing to wait for a reply from the administrator, which will help them save time and effort. Also, they can explore the offers of the business all at once by merely looking at the site.

SYSTEM PROPONENTS. The development of the system will help the proponents improve their skills in website development, critical thinking, and problem-solving abilities. Moreover, the learnings they get during the task fulfillment will help them in their future careers as professionals in the field of Information Technology.

FUTURE RESEARCHERS. Groundwater Booking System will benefit future researchers who would like to conduct an appointment system for other businesses, operations, agencies, institutions, etc. It will serve as their basis and guide for designing and crafting future projects.

1.6 CONCEPTUAL FRAMEWORK

The conceptual framework is presented in the figure below. The framework provides an interpretation of the project's overall process of development using the input, process, output model or IPO model.



1.7 DEFINITION OF TERMS

The following terms that are needed by the readers to understand the concepts throughout the project:

- **Application programming interface (API)** - a mechanism that allows two components of applications to communicate with each other.
- **Double-booking** – an instance where there are two bookings in the same schedule and mostly caused by a human error.
- **Groundwater Private Resort** – a resort that is located at Barangay Bibirao, Daet, Camarines Norte that allows their clients to book for an exclusive experience.
- **Online Booking System** – a type of system that allows users to pick a schedule for their visit or appointment.
- **Pen-and-paper Approach** – a type of transaction that is only using pen and paper to keep records.

- **Third-Party App** - an application software created by a party other than the creator of a mobile device's operating system.
- **Web-hosting Services** - a web hosting service is typically used to host websites, but it can also hold business email, files, games, and other content.

2.0 REVIEW OF RELATED STUDY AND LITERATURE

2.1 RELATED LITERATURE

Resort hotels are one of many places where people who want to experience a vacation often associate quality accommodations that offer relaxation (Murphy, 2007). Jafari (2000) and King & Spearritt (2001) perceive resorts and hotels to be tourist complexes in themselves, offering recreation, accommodation, and social or leisure activities in one place where people gather in large numbers.

Gee, in his book, "Resort Development and Management (2nd edition)," written in 1996, notes that since resorts are unique, management must be more visible to provide outstanding customer service to guests. They also pointed out that managers need inimitable skills to attract and convert visitors into loyal guests and hold them on-site by providing advanced attractions and amenities offering superior service for their satisfaction (Murphy, 2007).

In providing clients with an efficient and systematic distribution of services, resorts need to have a reservation system. A reservation system enables guests to book reservations with the business. In the Philippines, the largest resort reservation companies employ advanced technology. However, some resort reservation businesses still use manual reservation systems, such as the target business, which ends up with various issues in the current system. For reservation purposes, they utilize logbooks to keep track of client information and reservations. (Lacalle, 2022).

Similar to a bookkeeping system, a manual reservation system involves maintaining records by hand without computer aid or another automatic system (PadaKuu, 2022). In a manual reservation system, the client makes reservations by hand and notes data to logbooks that do not automatically compile data to a particular database. This system may fall into issues in the long run of the operation.

While on the other hand, according to Economist Newspaper Limited, computer reservation systems, or central reservation systems (CRS), are computerized systems used to store and retrieve information, conduct transactions related to reservation activities, and compile information on databases for data retrieval and security purposes.

According to Adams (2004), experts recognize technology as an integral part of resort management. Additionally, technology has become essential to gathering information, understanding guests, and measuring satisfaction from a consumer perspective (Baumann, 2005). It also plays an active role in the success of resort management, from collecting guest feedback on services (Higgins, 2005) to providing a basic framework for day-to-day operations. In

contrast, from an employee perspective, technology has become a pivotal component of HR's function, from employee tracking and hiring to employee training (Berkshire, 2005; Levine, 2005). Hence, utilizing an automated booking system at the Groundwater Private resort will be more effective in terms of resort management, from gaining more sales to the efficient working of the people behind it.

2.2 RELATED STUDIES

Having an online booking platform where guests and property owners can communicate and exchange information directly is the simplest way to connect with them. Integrating cutting-edge technology can improve traditional customer service and give property owners a competitive edge over rivals. However, if the website has a user-friendly design that attracts users' attention, the potential competitive advantage could become a genuine advantage.

According to Shweta Mirani 2021, using an online reservation ensures that customers can find ease. With the help of an online booking system, business owners can provide benefits such as less time-consuming, streamlined reservation processes, improved revenue, and the promotion of sales and marketing synergy.

On the other hand, customers or guests want a fast, easy and convenient way to organize their vacation. They don't want to waste their own time going to make personal reservations. They can easily reserve or book a trip, a hotel room, or an appointment by using reservation services. And thanks to the fast and evolutionary expansion of online and new-age devices into our lives.

As stated by Vujinović (2019), A large percentage of the population uses a smartphone, so it is no surprise that most of them are acquainted with the simple process to make a reservation. They are more likely to book their business trip online than to come directly to the agency. Online booking options have many advantages for both – customers and booking agencies as well. Today, most people prefer to make their reservations online, because that is a no-hassle experience. But there are also many reasons why companies should have an online reservation system. The use of online services in today's generation has become necessary in various fields. Due to the fact that there are advantages and useful effects to many people when it comes to online reservations because our society has a rapid growth of need in terms of different commercial web-based applications.

3.0 PROJECT METHODOLOGY

3.1 PROJECT METHOD

This project intends to solve major problems of a certain resort named Groundwater Private Resort such as booking, wrong map location, and slow admin response for inquiry. Moreover, the

team decided to develop an online booking system to make the business transactions easier, saves time and accurately. In this project, the team is actually a website so that clients can access the system anytime and anywhere by just having an internet and web browser. While developing and testing the system, the group will temporarily use a free web-hosting provider. The project ensures the success of the development process of the system and addresses the problem and needs.

3.2 PROJECT SCHEDULING

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System Presentation																
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Table 1. Gantt Chart

3.3 COST-BENEFIT ANALYSIS

Annual Business Expenses			
	Cost		Benefit
Expenses/Loss	Pen-and-Paper	Automated	
Pen	Php 50.00		Php 50.00
Record Notebook	Php 100.00		Php 100.00
Internet	Php 2,000.00	Php 2,000.00	Php 0.00
Electricity	Php 2,000.00	Php 2,000.00	Php 0.00
Server-hosting		Php 170.00	Php -170.00
Web-hosting		Php 290.00	Php -290.00
Loss from double booking	Php 10,500.00		Php 10,500.00
Client service dissatisfaction	Php 17,500.00		Php 17,500.00
		Total Benefit	Php 27,690.00

Table 2. Cost-Benefit Analysis

The table of cost-benefit analysis above shows the estimated and calculated expenses and possible loss of present transaction and proposed system project. The group got those costs by identifying the expenses of the current business transactions. The direct costs are included such as the materials used every transaction, of course there are indirect costs such as monthly expenses, intangible and opportunity cost are added for the possible impact of customer

satisfaction. To sum up the table above, there will be approximately P27,690.00 that the resort will prevent to lose using the proposed system.

4.0 SYSTEM OVERVIEW

4.1 OVERVIEW OF THE SYSTEM

The Groundwater Private Resort online booking system is an online system wherein it allows the clients of the said resort to set appointments or inquire without waiting for the response of the resort's administrator. The system will show the available and unavailable dates for the clients to rent the resort. It will use web-hosting services in order to deploy the system through the internet. In order to access the system, the user should be capable of having internet access and run an internet browser (Google Chrome, Mozilla Firefox, Opera, etc.). It can be accessed through a computer or a smartphone due to the system's responsive capabilities.

4.2 SYSTEM OBJECTIVES

The Groundwater Private Resort online booking system allows users to request the schedule of their appointment at Groundwater Private Resort without having the need to wait for the reply of the resort owner. It displays the available and not available slots to the website's users/audience. The project objectives include:

1. Eliminate double-booking issues by initially displaying the available slots to the users and allowing them to request appointments on their chosen dates on their own.
2. Display the correct and accurate location of the resort.

4.3 SYSTEM SCOPE AND DELIMITATIONS

The system's scope are the following:

1. Allow users to easily access the resort's daily booking status as well as the vacancies/available dates.
2. Create an automated response to booking-related inquiries limited to available appointment slots, fixed resort rates, and amenities included in the offered packages.
3. Provide the accurate location as well as the steps on how to travel to the Groundwater Private Resort.

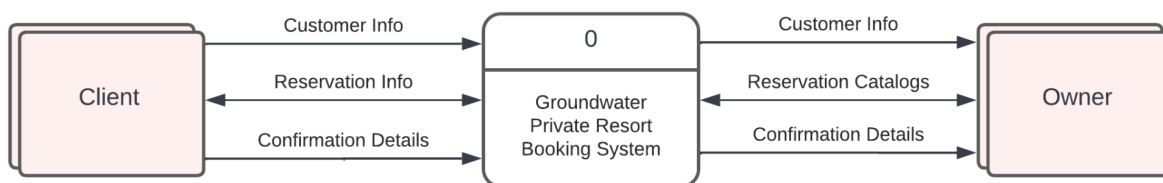
4. Users are permitted only to set bookings while the system/booking administrator/s of the resort are permitted to confirm and grant the bookings of the users.
5. Provide a dashboard that will enable admin to monitor and track sales, total number of bookings, current, pending, and canceled bookings, and the preview of the last, current, and next customers.

However, the system will NOT:

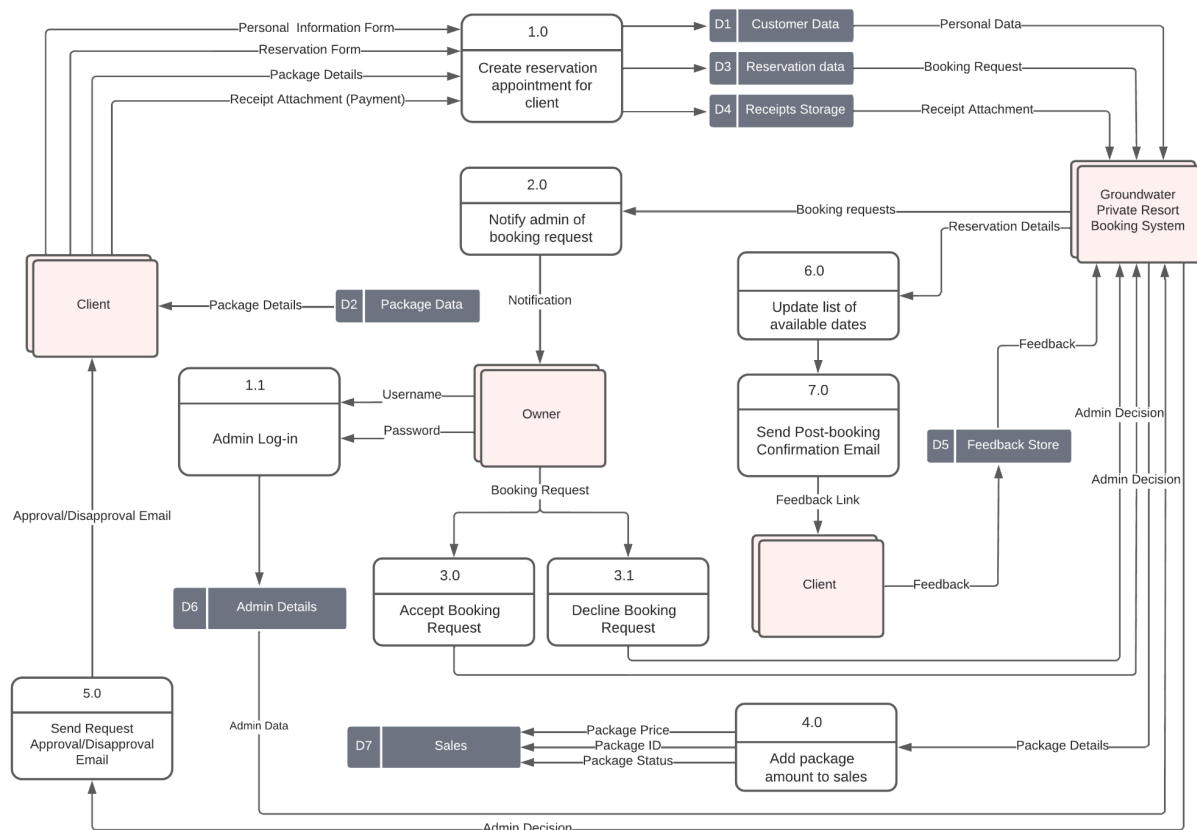
1. Allow users to pay via cash app redirect. Instead, it will ask clients to attach cash app receipts and wait for the administrator (owner) to approve or decline their requested appointment.
2. Gather any personal information that is not necessary for booking details.
3. Provide/manage the resort's inventory records/data.

4.4 SYSTEM DESIGNS

The System Design of this study's system includes the modules, architecture, components and their interfaces and data for a system based on the specified requirements. In order to have a better understanding on how the proponents will solve the particular problem. The system design of the Groundwater Private Resort booking system will ensure its scalability, reliability, availability, and maintainability.



Level 0 Data Flow Diagram



Level 1 Data Flow Diagram

4.5 SYSTEM FUNCTIONS

The Groundwater Private Resort online booking system functions are the following:

1. Provide a list of available and unavailable booking dates for the resort.
2. Allow the administrator to view the records of occupied dates for confirmation.
3. Provide accurate location of the resort to the user/s.
4. Allow the administrator to confirm the bookings of the interested client.
5. Prevent other clients to book on occupied dates.

4.6 PHYSICAL ENVIRONMENT AND RESOURCES

In order for the booking system to run and operate, various resources are required. The physical environment and resources are vital in operating and managing an online booking system. The resources include:

1. Computer Unit - either a laptop or a desktop, a decent computer is required to perform the tasks and operations inside the system,
2. Internet Connection - since the system is online, the computer unit should be connected to an internet connection.
3. Web Hosting Service - in order for the system to be accessible by anyone, the system/website as well as its files should be stored in a web-hosting service.
4. Third-Party Cash App - the resort accepts online payment through a third-party cash app such as GCash, in order to complete the transaction and confirm the client's booking through the online booking system, both the client and the administrator should have a cash app installed.

4.7 DESIGN AND IMPLEMENTATION ISSUES

In developing a system like the Booking System, issues could arise and are inevitable. The following issues may arise in implementing the booking system:

1. Accessibility when internet outage occurs - our system is an online system and it requires internet connection. Therefore, when an internet outage occurs, the administrator could not confirm bookings of customers as soon as possible.
2. Service interruption/downtime of web hosting services - downtimes specifically in web hosting services may occur as it is inevitable.

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