# Introduction

Hotels are one of the fastest-growing tourism sectors that provide accommodation for travelers, visitors, and even those who find a place for executing business transactions. Hotels are critical parts of developing a country's tourism and adds value to its economy. (Medlik & Ingram, 2006)

As easy as it sounds, achieving a successful hotel is not easy. A hotel should be appropriately managed and organized, especially the operations like housekeeping, accommodation in the front desk, the kitchen, and even managing the establishment's funds and accounting. These things can be controlled inside the actual establishment. However, a hotel also thrives depending on their location, how they provide experience to the customers, and how they communicate with the guests (Social, 2017) . Without a proper system that can manage the following processes efficiently and adequately may lead to the downfall of a hotel.

Some hotels in the country are still using the manual system to manage hotels. Hotel managers and staff are utilizing the traditional method of pen and paper, which requires little investment. Although this system's use is efficient in the first stages, it becomes insignificant in the long run as humans make mistakes that cause trouble in retrieving and managing transactions. Manual managing of a hotel should be flexible depending upon the situation. It is continuously changed due to some unexpected event that happens inside and out of the hotel premises. Luckily, technology kicks in, which makes these processes more accessible and automated. On the other hand, mistakes are also minimized because of computers, and retrieving information about completed and ongoing transactions became easier.

Although the integration of technology in managing hotels starts to become popular, many hotel managements are still not using it as they do not have the proper knowledge of using such resources. As the software available in the market features complex designs and sells unnecessary features, which creates pressure on the staff. (Delizo & Esguerra, 2013) Another problem faced by hotels is that most of them lack marketing platforms due to the rise of online booking sites that do not support some hotel management systems currently available in the market. Also, because of the current situation faced this year, contactless operations start to become popular. Without using a proper hotel management system that is supported by these online booking sites, these hotels may face the worst outcomes.

The researchers aim to solve this problem by developing an efficient Hotel Management System that presents only necessary features such as storing, managing, and processing transactions such as hotel room reservations, cancellations, payments, and customer information. It will also be linked or incorporated into a website where prospect users can compare prices and find hotel rooms suitable for their needs.

## Statement of the Problem

### General Problem

How to design, develop, and implement a digital hotel management system where Hotel managers and cashiers can enhance their performance in collecting, storing, and retrieving customer and room information and providing an improved service by keeping up with larger companies using technology?

### Specific Problems

#### Keeping up with the incoming guests

One of the disadvantages of using a manual system for managing hotels is when incoming guests suddenly become heavy. Without proper organization, hotel staffs become disordered, which results in a bad customer experience.

#### Loss of customer records

Some customers reserve a room many days ahead of their actual day of arrival. However, due to multiple reservations, some documents get lost or misplaced, resulting in confusion and trouble in the future.

#### Room booking and management of reservations and cancellations.

Using the pen and paper approach usually takes time, and managing room bookings, reservations, and cancellations are not as easy as it sounds. Without the proper and efficient system for managing these three transactions could lead to a hotel's failure.

## The Current State of Technology

Use of a Manual management system for hotels is still occurring in the country where hotel managers use bill books and the traditional pen and paper approach in running a hotel. This system is efficient for some tasks like housekeeping and customer service but unsuitable for keeping track of customer information, marketing, and accounting management. Although computers are not new in performing human operations, Hotel Management System software is becoming inefficient due to complex designs and lack of updates and development.

## Objectives of the Study

### General Objective

Design, develop and implement a Hotel Management System where Hotel managers and cashiers can enhance their performance in collecting, storing, and retrieving customer and room information and providing an improved service by keeping up with larger companies using technology.

### Specific Objectives

#### To develop a module that will aid in storing customer and room information that will also allow the management to maintain, manage, and secure data.

A file maintenance module is implemented in this system which is responsible for maintaining and managing the customers' and hotel rooms' information which are necessary for future transactions. The user can create new information, but only the management can delete and archive it.

#### To create a module that will process transactions like bookings, reservations, and cancelations.

The system has a transaction module that processes transactions like room bookings, reservations, and cancellations, including payment and accurate data retrieval.

#### To implement a module where the management can efficiently acquire accurate reports and necessary information.

A report module is also implemented responsibly for generating reports of all processed information during transactions that may be used as a future reference.

#### To develop a user-friendly website where prospective customers can efficiently find hotel rooms suitable for their needs.

The system built for computers is also accompanied by a website where customers can search for hotels they want and process a reservation, booking, or cancellation through a contactless transaction.

## Scope and Limitations

### Scope of the Study

#### File Maintenance Module

This module includes data management such as customer information, user accounts, and access rights.

##### Customer Information

This module is responsible for the management of customer information. The user can add a new record and edit its information, such as the customer's name, age, address, and telephone number.

##### User Accounts

This module handles the creation and deletion of user accounts assigned to different roles which the administrator manages.

##### User Roles

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#### Transactions Module

Allows the user to perform operations that require stored information.

##### Reservations

This module processes the information of customers who booked a hotel room from the website supported by the system, which also includes their check-in information.

##### Cancellations

This module handles all processes that are related to hotel room cancellation.

##### Payment

This module processes payments from transactions like booking, checking in, cancellations, and checking out of a hotel room.

#### Reports Module

This module contains data such as the list of past transactions, rooms, and archived customer information.

##### List of Past Transactions

This module shows the list of the records of all transactions that have been completed.

##### List of Rooms

This module shows the list of all information of available rooms stored in the database.

##### Archived Customer Information

This module shows the summary of all transactions a customer had been completed.

#### Website

The website allows the user to create an account, find room recommendations, search for rooms suitable for his/her needs, and process transactions.

##### User Account

This module handles the creation of a user account of a customer and editing information the user had given.

##### Room Recommendations

This module provides room recommendations for the customer based on his/her last transaction or his current location.

##### Search Engine

This module provides a list of hotel rooms based on the value of the user's filters. This information includes the customer's target location, his/her estimated date of checking in and checking out, and the type of room he/she wants.

##### Contactless Transactions

Transactions like room booking, cancellation, and payment are done on the website's premises are managed by this module.

### Limitations

#### The system is currently inaccessible online due to a lack of financial resources for hosting.

#### The hotel model used in this research is fictional.

* + - 1. The website for customers is currently not responsive which means the website is only accessible in desktops and cannot be used in mobile devices.