



“A STUDY ON HOTEL MANAGEMENT SYSTEM”

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ABSTRACT:

The hotel industry is one of the fastest-growing industries worldwide. Hotel management software refers to any software package that is designed for reservation management & to assist with the day-to-day management of a hotel, resort or similar property. With the increase in tourism and business travels, hotels must be able to manage their operations efficiently. This paper presents a research study on the design and implementation of a hotel management system (HMS) that is capable of handling the daily operations of a hotel, including reservation management, room allocation, check-in and check-out, billing, and inventory management. The HMS is designed to automate and streamline these processes, improving operational efficiency and customer satisfaction. This software is designed for luxury full-service lodge, beds, breakfast and motels. It emphasizes the best stage of services for character visitors through our full capabilities that integrate rooms, restaurants and retail stores with records contained in book reserves for the fashionbook at the bottom of the office.

Keywords: Reservation Management, Integrated rooms, Automate, Guest Feedback Management etc.

1. INTRODUCTION

The hotel industry is a highly competitive market, and hoteliers must find ways to provide excellent customer service while keeping their costs low. One of the ways to achieve this is through the implementation of a hotel management system. A hotel management system is a software solution that can help hotels automate and streamline their daily operations. In this project the details are maintained like customer details, reservation details, booking details and billing details. The reservation process of reserving rooms for the customers, canceling the reserved rooms, booking the rooms, vacating the rooms, the restaurant management, billing process etc. All are computerized and the management is done without any difficulty. The reports can be viewed completely and the head of the management daily or weekly or monthly can review it. For company auditing it will be more useful. This Proposed System will be interactive, faster and user-friendly for the end users. A hotel management system (HMS) typically contains of various parts that can be customized to meet the specific needs of the hotel. The modules can

includes reception management, housekeeping management, accounting, inventory management, and guest relationship management. The modules work together to provide a seamless and efficient hotel operation. Hotel management systems have been around for many years, but with advances in technology, they have become more experienced and customizable to fulfill the specific needs of individual hotels. Today, hotel management systems are important tools for hotel operators to manage their works and provide guests with a memorable & luxury experience.

2. LITERATURE REVIEW

Online Hotel Reservations are becoming popular method for booking hotel rooms. Travelers can book rooms from home via their home computer by using online security to protect their privacy and financial information and by using several online travel agents to compare prices and facilities at different hotels. Prior to the internet, travelers could write, telephone the hotel directly or use a travel agent to make a reservation.

Large hotel chains typically have direct connections to the airline national distribution systems (GDS) (Sabre, Galileo, Amadeus, and World span). These in turn provide hotel information directly to the hundreds of thousands of travel agents that align themselves with one of these systems. Individual hotels and small hotel chains often cannot afford the expense of these direct connections and turn to other companies to provide the connections. Nowadays, online travel agents have pictures of hotels and rooms, information on prices and deals, and even information on local resorts. Many also allow reviews of the traveler to be recorded with the online travel agent. Online reservations are also helpful for making last minute travel arrangements. Hotels may drop the price of a room if some rooms are still available. There are several websites that specialize in searches for deals on rooms. In terms of specific features, the literature has identified several essential modules in hotel management systems, including front office management, housekeeping management, food and beverage management, accounting, and inventory management. These modules work together to provide a seamless and efficient hotel operations. There has also been research on the benefits and challenges of cloud-based hotel management systems. Cloud-based systems offer several advantages, including lower costs, scalability, and accessibility from anywhere with an internet connection. However, they also come with challenges such as data security, internet connectivity issues, and dependence on third-party providers.

2.1.Sharma A. (2013) Destination marketing strategies can be of great help for tourism industry and as well as hotel industries. The media sources must be used in more effective and efficient manner to grab the attention and to provide knowledge to more and more potential tourists. Because of the growing importance of MICE tourism most of the business people are paying attention on the branded places of tourist to conduct their meetings, conferences, exhibitions etc.

2.2.Singh S., et.al. (2012) Guest will choose where to stay and what to do on basis of the recommendations of their personal social network. Guest has reason not to trust all the hype and marketing when they have perfectly good friends and likeminded acquaintances that have been to a good hotel and done activities they would like to do. Not only are the distribution and commission margins costs area a lot lower, but the quality of referrals is a lot more credible and brings in exactly the kind of guests hotel is looking for.

3. METHODOLOGY

The system Development Life Cycle (SDLC) is a traditional methodology used to develop, maintain and replace or enhance information system. The main reason SDLC model is chosen because in SDLC it is possible to complete some activities in one phase

in parallel with some activities of another phase. The life cycle can also be interactive that is phase are repeated as required until an acceptable system is found.

3.1 Phase 1: Project identification and selection

In this phase the project information system needs are identified and analyzed such as identified the title of the project that is Web Based X path Analyzer, scope and objective of the Web Based X path Analyzer.

3.2 Phase 2: Project initiation and planning

During this phase the Gantt chart has been developed as a time line to determining the task involve in developing the Web Based path Analyzer.

3.3 Phase 3: Analysis

In the phase, the exiting system is studies by collecting the information through the Internet and analyzed the information to get alternatives for the used of proposed system. Determine what the Web Based path Analyzer should do.

3.4 Phase 4: Design

Logical design is the fourth phase in SDLC methodology. The functional features chosen for the proposed system in Analysis phase are described. Part of the logical design of the information system is to devise the user interface. The interface playsan important role to connect the user with the system and is thus extremely important.

4. OBJECTIVES

- a. Optimum utilization of technology to automate various hotel processes.
- b. Inducing simplicity to ensure that people are attracted and understand the related technology with ease not annoyance.
- c. To apply real time application for all functional areas and easy to configure interfaces to time and cost saving technologies.
- d. To keep real time records of all activities including accounting.
- e. Hotel management software (HMS) helps to increase the guest experience by offering seamless check-in and check-out processes.
- f. To provide fully-detailed reports on hotel occupancy rates, revenue, and guest demographics, which can help hotel managers to make informed decisions.

5. SYSTEM USE CASE MODEL

Use Case Diagram is widely applied in all kinds of system development is the first step in the software requirements analysis. It tells you how to use a system, which is how to understand the system in some functional purposes. Use case diagram shows the relationship between users and system requires the user to provide what kind of service, and user need to provide what kind of service system.

5.1.System Overall Use-case Diagram: Background management subsystem and Customer service subsystem is displays system which is divided into two subsystems, Customer and server through the system activity and generate data, managers can throughthis system to manage data between the client and waiter, as shown in Figure 1. Fig.1.

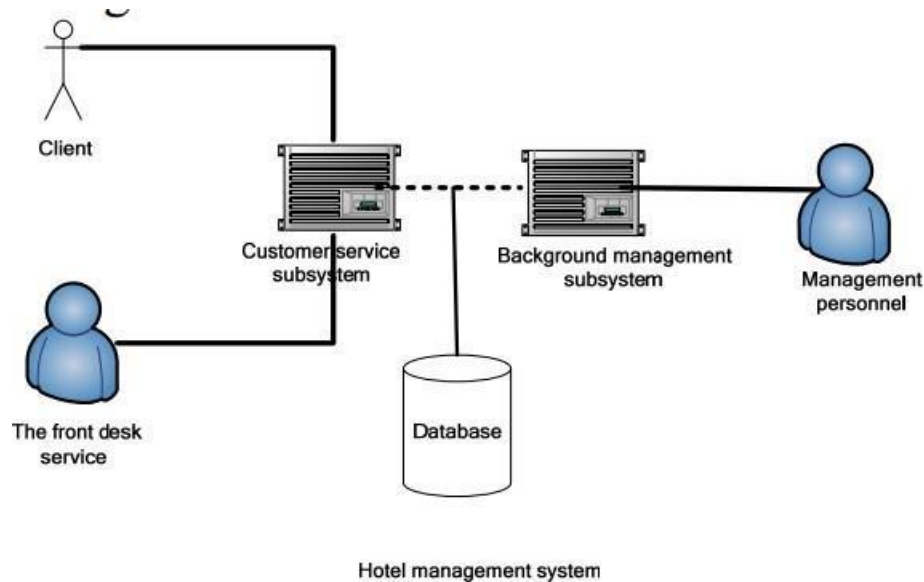


Fig.1. System use case UML diagram

5.2 Customer Service Subsystem Use Case Diagrams: This use case diagrams mean, when a customer has order, consultation, checkout as needed by the corresponding service calls, and told the waiter your accordingly demand. Waiter first on the computer operating system to the customer requirements in terms of registration, and then according to the telephone number information for clients homes, and update the management customer information, finally placing order for this service. Managers can also use this system to

the above between the customer and waitress what happened manage service activity [5], as shown in Figure 2. Fig.2.

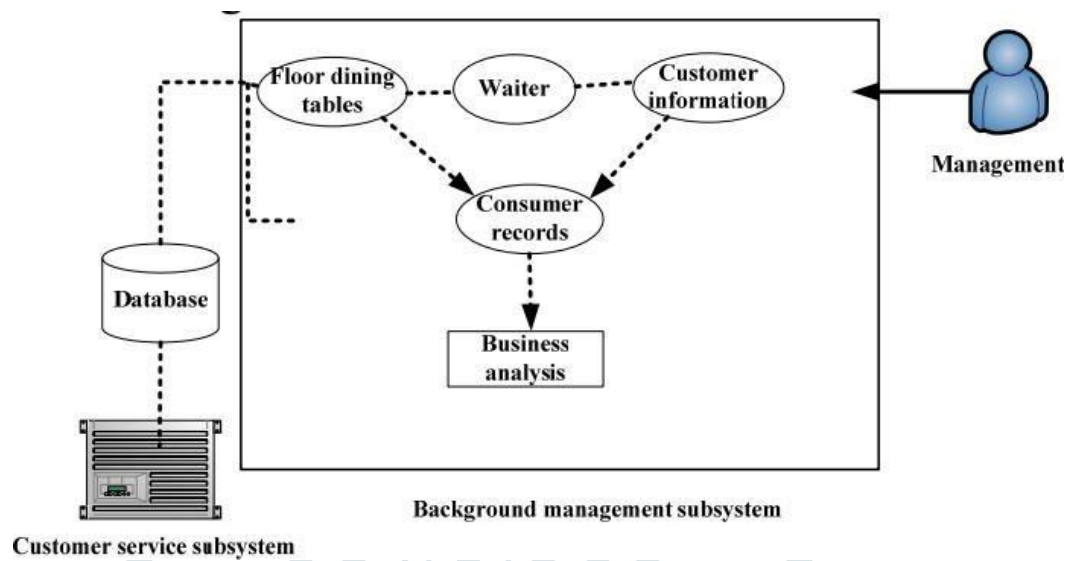


Fig.2. Customer service subsystem use case diagram

5.3 Use Case Diagram of Background Management Subsystem: This use case diagram means, through the system management function, the administrator to the customer of consumption record, the customer details, room number, floor number, dining tables/seats, manage business analysis function and so on, as shown in Figure 3.

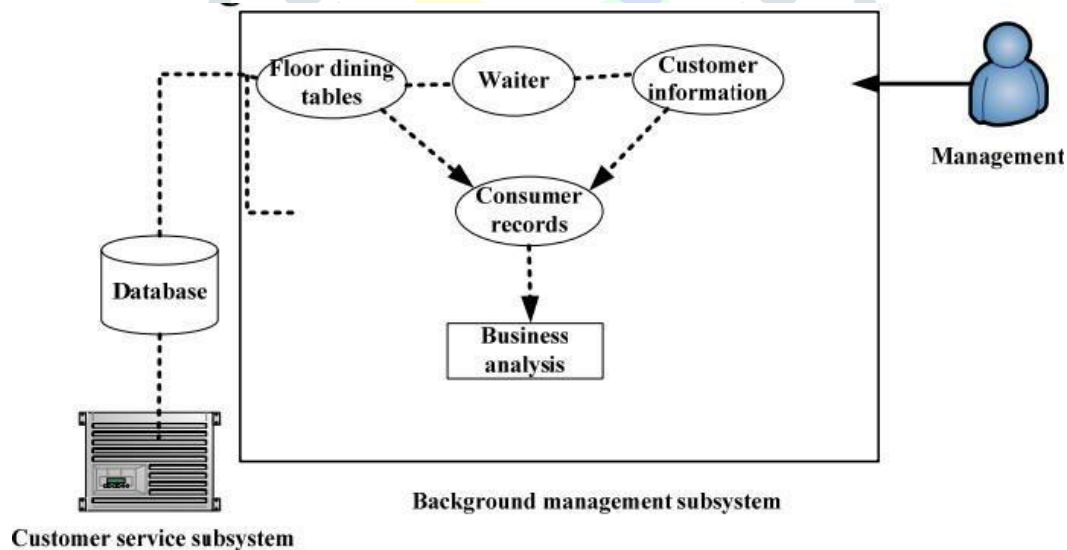


Fig.3. Use case diagram of customer management subsystem

6. The Design of the Database

In the hotel management system, database design work mainly includes the database management system, needed to create tables, can also design related views and stored procedures. All the design work is in SQL Server 2008 environment operation and implementation, Database Hotel contains the following tables: Users Info, Customers Info, Room Info, Room Status Etc.

6.1.1. User Information Database Table: User information table (Users Info) used to store the system user basic information, the table Users Info structure as shown in table 1.

| NAME | AGE | GENDER | ROOM NO. | ID PROOF ID | NUMBER | STATE | MOBILE NO. | CHECK- IN DATE | CHECK- IN TIME | DEPOSITED AMOUNT |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|----------------|------------------|
| Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) |

Table.1. User info table (Users Info)

6.1.2. Staff Information Database Table: Staff information table (Staff Info) used to store the system staff basic information, the table Staff Info structure as shown in table 2.

| NAME | AGE | GENDER | JOB | SALARY | MOBILE NO. | AADHAR NO. |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) | Varchar(50) |

Table.2. Staff info table (Users Info)

6.1.3. Driver Information Database Table: Driver's information table (Driver's Info) used to store the system driver's basic information, the table driver Info structure as shown in table 3.

| NAME | AGE | GENDER | AADHAR NO. | CAR COMPANY | MODEL | LOCATION | AVAILABILITY |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Varchar (50) | Varchar (50) | Varchar (50) | Varchar (50) | Varchar (50) | Varchar (50) | Varchar (50) | Varchar (50) |

Table.3. Driver info table (Driver's Info)

7. SOME ADVANTAGES OF THE SYSTEM

- a. Accurate daily report:** Hotel management, finance and revenue teams will have access to accurate daily earnings reports thanks to data-savvy hotel management software. Meanwhile, operations and marketing reports will help you and your team to make reliable, data-driven decisions across your business.
- b. Better decision-making:** With the help of analytics and reporting tools, hotel managers can access real-time data on room occupancy rates, revenue, and other key performance indicators, enabling them to make better-informed decisions about pricing, staffing, and other operational aspects.
- c. Analyze your customer base:** Market and guest segmentation is another important benefit of the right guest management software system. The GM and Marketing Managers can keep track of the different types of visitors, with key demographic breakdowns such as age, gender and nationality. This data allows you to make informed decisions on your marketing strategy, and increase the long-term revenue trends of your business.
- d. Decrease workload:** Without the hotel management system software, all the employees were worked manually and it takes time. But with the help of hotel management system software, the workload will decrease from employees and it makes work error (mistake) free.

8. SOME DISADVANTAGES OF THE SYSTEM

While hotel management system software can provide numerous benefits, there are also some potential disadvantages to consider:

- a. High initial cost:** The initial production cost and ongoing maintenance of the system can be high.
- b. Technical failure:** The software may experience some glitches in unfavorable condition or due to some error and this may lead to system failure, loss of data etc.
- c. Trained Employees:** Staff members/employees requires training to learn how to use this software efficiently. So, it is necessary that our employee who handle software will be educated. This training may be time consuming or of high cost.
- d. Security:** Security is one of the biggest drawback of today's industry because a small bug can crash a whole system. So, the software must be regularly updated and secured to prevent such incidents.

9. FUTURE SCOPE OF THE SYSTEM

This project can be used in the hotels after adding some useful modules in the project for which hotels are providing services. Utmost care and back-up procedures must be established to ensure 100% successful implementation of the computerized hotel system. In case of system failure, the organization should be in a position to process the transaction with another organization or if the worst comes to the worst, it should be in a position to handle it manually.

Scope of Improvement

Nowadays hotel providing many other facilities, this project can also be improved with the improvement in the Hotels.

10.RESULT

The HMS was successfully developed and tested. The system was capable of handling the daily operations of a hotel, including reservation management, room allocation, check-in and check-out, billing, and inventory management. The system was able to improve operational efficiency and reduce the time required to manage hotel operations. The system was also able to provide accurate and timely information to hotel staff, improving decision-making. A more streamlined check-in and check-out experience will boost your guest happiness. And that's only the tip of the iceberg – anything from improved communication and additional services will also heighten guest loyalty. Choosing the best property management software will likely mean an increased level of retention in both guests and staff. The right hotel management software will vastly cut down the time you spend on manual administrative tasks. The software does the majority of the work and lets you divert your time to more important tasks, such as serving your guests. More than any other software you use, a hotel management system will touch every department at your property. Front of house, revenue management, housekeeping... If you pick the right solution, you can make significant time savings across almost every area of your business, also boosting your staff's productivity and satisfaction.

11.CONCLUSION

In this paper, the system overall design was described; the system framework design part of the system uses a three-tier architecture analysis and elaboration. In the introduction to the design of the database, the system involved in the main table structure and storage processes were introduced. Finally, in the Online hotel management system, we have developed a secure, user-friendly Hotel Management System. This system is completely secure since every user is provided with a user ID and Password so there is no chance of any unauthorized access. Online Payment, Booking, and cancellation make it easier to use. So, using this system will help in reducing the labor and provide more facility for Customer to like Hotel and visit again and again.

12.REFERENCES

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