

Hotel Sustainability and Resource Conservation Management System

Jain Umang NareshKumar
Jain Umang Naresh Kumar
Shah and Anchor Kutchhi
engineering college
IT STUDENT
umang.jain16823@sakec.ac.in

Pawar Shreya Rajesh
Shah and Anchor Kutchhi engineering
college
IT STUDENT
shreya.pawar16437@sakec.ac.in

Patil Sarvesh Prakash
Shah and Anchor Kutchhi engineering
college
IT STUDENT
sarvesh.patil16446@sakec.ac.in

Rathod Mohit Kiran
Shah and Anchor Kutchhi
engineering college
IT STUDENT
mohit.rathod16848@sakec.ac.in

Ms. Theres Bemila
Assistant professor
Shah and Anchor Kutchhi
engineering college
bemilajenet.theres@sakec.ac.in

Ms. Seema Jadhav
Assistant professor
Shah and Anchor Kutchhi
engineering college
seema.jadhav@sakec.ac.in

Abstract— This Project is primarily designed to give an insight to Front desk-based hotel management system. It is because of problem associated with the existing system which involves the use of manual method in processing and keeping information in the system. So, among the numerous problems associated with the existing system are, staff are spending far too much time chasing mistakes instead of attending to customers, sales going unrecorded, inventory does not match your tallies and other. Hence, we create hotel management system in a modular form so that it can be adapted by different hotels with different specifications. hotel front desk personnel can enter all the relevant data about the customers, staffs, rooms, and other hotel details. Hotel Managers can have overview of the hotel by looking through the database at a later stage for decision making. This approach will help you to better manage your resources eventually.

Keywords-Hotel, database, fault identification.

I. INTRODUCTION

Hotel management system aims for developing computerized system to make the work of a receptionist easier. This Project is primarily designed to give an insight to Front desk based hotel management system. It is as a result of problem

associated with the existing system which involves the use of manual method in processing and keeping information in the system. So among the numerous problems associated with the existing system are; staff are spending far too much time chasing mistakes instead of attending to customers, sales going unrecorded, inventory doesn't match your tallies and other. Hence we create hotel management system in a modular form so that it can be adapted by different hotels with different specifications, hotel front desk personnel can enter all the relevant data about the customers , staffs , rooms and other hotel details. Hotel Managers can have overview of the hotel by looking through the database at a later stage for decision making. This approach will help you to better manage your resources in the long run.

II. LITERATURE SURVEY

One of the development trends in the hospitality sector is smart hotels, which is a result of the quickly evolving information technology. Artificial intelligence technology is being used more and more in different areas of hotel management and services as hotels pursue digital transformation. New requirements and criteria for hotel personnel have been introduced by the growth of smart hotels and the use of artificial intelligence technologies. Investigating the use of artificial intelligence in the instruction of pertinent hotel management courses is

important. This study investigates the use of artificial intelligence technology in teaching Introduction to Hotel Management by combining the design of the course Introduction to Hotel Management and the analysis of the demand for talents from hotels against the backdrop of the growth of smart hotels. [1]

An optimisation technique of hotel data hierarchical management based on B/S mode is suggested in order to address the issues of current hotel data management challenges and low safety factor. The goal of managing hotel data hierarchically is achieved by following the feature collection principle, which entails the collection and classification of hotel data features, the division of data management levels based on the results of the classification, the setting of various security keys for various data levels, and the effective use of encryption management. Eventually, the experiment demonstrates that the hotel data hierarchical management approach based on B/S mode fully satisfies the research objectives and has greater operational efficiency and safety than the conventional way. [2]

The development of a smart hotel management system based on the integration of IoT and artificial intelligence technology is made in response to the issues that traditional hotel management, service quality, and check-in and check-out procedures are difficult to manage and are easily influenced by service staff. A workable concept for project planning and process monitoring is provided by first using process data collection to break the project down into relatively independent Sub-projects, then using the design structure matrix to express the relationship between the Sub-projects and using the corresponding algorithm to show the iterative relationship. Networking technology enables centralised control and management of hotel equipment and access control, as well as unmanned service throughout the entire check-in and check-out process, increasing efficiency by 7.8%. [3]

People's quality of life has continued to rise, making their free time more colourful than it ever was. Since more and more individuals want to travel for entertainment, hotels for travellers and business travellers began to emerge. Given the escalating

level of hotel competitiveness, employing information construction to raise management standards is unquestionably a good move. Hotel room management systems increase management level and efficiency to achieve automation, standardisation, and humanization of hotel management through information collection, transmission, sorting, processing, maintenance, and use. This system was created using the MyEclipse development tool and connects to the MySQL database using Java Swing technology, following the peculiarities of hotel room management. [4]

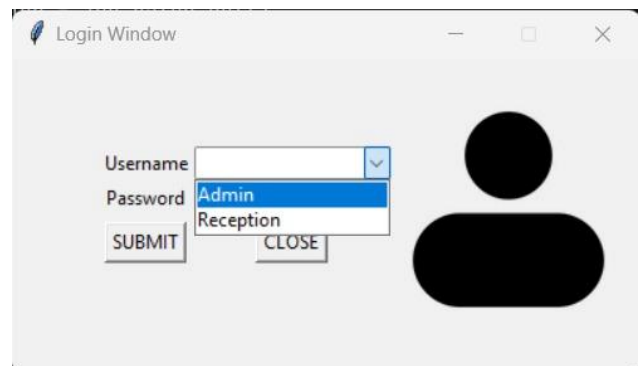
III. PROPOSED SYSTEM

This Hotel management system is developed on Python and SQL. The software used for the project are PyCharm and MySQL, respectively. The receptionist is the only person who can log in and can have all the records on a single tap on the screen.

A. IMPLEMENTATION:

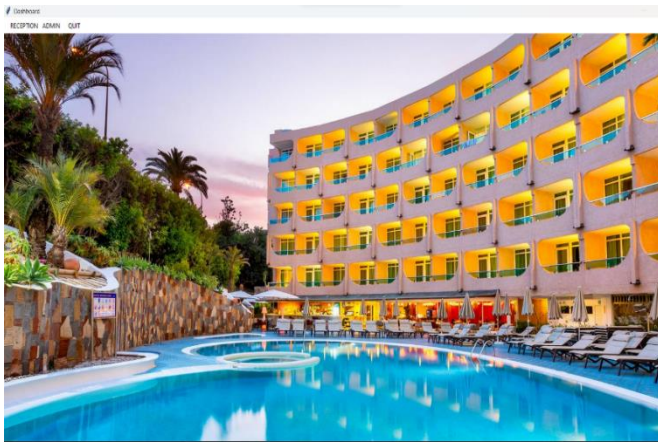
1. Login Page:

It comprises of fields for username which has a drop-box and it consist of admin and reception, and password for logging in. Only authorized person can log into the system.



2. Dashboard:

It includes of two options namely receptionist and admin while there is also an option to quit the dashboard



3. Add Rooms:

The receptionist needs to add information of the room like room number, and check whether the room is available or not, the receptionist can also change the status of cleaning, price will be added.

4. Update Status:

It contains the information about the customer and the receptionist can made updates in the status, It shows the room number where the customer is staying, name of the customer, checkin time, amount paid and pending amount.

5. Reception:

This is the main interface, it holds all the buttons, and all the actions can be performed through this interface. It contains various buttons namely- NEW CUSTOMER FORM, ROOM, DEPARTMENTS, ALL EMPLOYEES, CUSTOMER INFO, MANAGER INFO, CHECKOUT, UPDATE STATUS, SEARCH ROOMS, LOGOUT.



6. New customer form:

To add a customer, we this interface is used, the receptionist needs to fill the details of the customer and then just press add so that the data of the new customer can be stored in the data base.

7. Employee info:

This interface shows all the employee currents working in the system.

name	age	gender	job	salary	phone	email
Survesh	20	MALE	Front Desk Clerk	500000	9062178954	survesh@gmail.com
Shreya	25	FEMALE	Manager	500000	1237894560	shreya@gmail.com
John	55	MALE	Porters	20000	7894561230	john@gmail.com
		null	Front Desk Clerk			

BACK

8. ADMIN:

The admin has the access to add employees and rooms.


ADMIN

ADD EMPLOYEES

ADD ROOMS

QUIT

BACK



9. Add Employee:

Only admin can add employee, and for the admin needs to fill the necessary details of the employee and press submit so that it can be stored in the data base.

Add Employee

Name:

Age:

Gender: ☒ MALE ☐ FEMALE

Job:


Salary:

Phone:

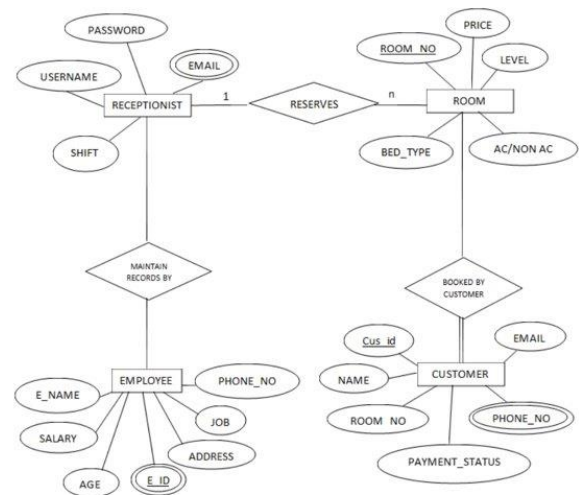
EMAIL:

SUBMIT

CANCEL



10. ER DIAGRAM:



IV. RESULT AND DISCUSSION

The major advantages of the Hotel Management System that it reduces the risk of losing data and damaging data. It reduces paper work, it is convenient to use, hence it does not consume a lot of time. It can help receptionist/admin to manage the transaction or record more effectively. Overall, it is time saving.

V. CONCLUSION

The project HOTEL MANAGEMENT SYSTEM is for computerizing the working of a hotel. In conclusion, a hotel management system is a valuable investment for any hotel, providing a streamlined approach to managing operations, improving guest satisfaction, and increasing profitability.

VI. REFERENCES

- [1] " Research on the Application of Artificial Intelligence Technology in Teaching Introduction to Hotel Management in the context of Smart Hotel ", Qinghui Guo, IEEE, 2021 7th Annual International Conference on Network and Information System for Computers(ICNISC), 155-157.
- [2] "Optimization and Implementation of Hotel Data Hierarchical Management Method Based on B/S Mode", Yangjingjing, IEEE, 2019 International Conference on Robots & Intelligent System(ICRIS), 281-286
- [3]" Construction of Hotel Management Intelligence System based on Process Data Collection and Optimization Algorithm", Fei Liu & Jiali Kang, IEEE, Proceedings of the

International Conference on Applied Artificial Intelligence and Computing (ICAAIC 2022), 111-114

[4] *"Design and Implementation of Hotel Room Management System", Wei Wei & Zhengwei Lou, IEEE, 2019 IEEE Symposium Series on Computational and Intelligence (SSCI), 956-961*