International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Web Based Hotel Management System

Dukare Siddhesh Sudam [1], Bhalerao Akanksha Santosh[2].

[1,2] *Department of computer engineering, Samarth Polytechnic, Belhe, Tal-Junnar, Dist-Pune, Maharashtra, India*

A B S T R A C T

The purpose of an automated hotel management system is to handle all aspects of the hotel's information and booking system. In the 21st century, the use of the computers and electronic devices have made several different jobs and aspects of management is not difficult very easy. This project is the design and assumption of an electronic hotel management system. That supplies proper management of data and transaction in a centralized and organized rule. And also provides a user friendly interface is a software interface where the user can easily understand and navigate through the application in an efficient way.

This project is implement to create a platform that allows the one as well as the other user and administrator to keep track of transactions like room reservations, booking, financial management of the hotel, online reservation and other activities involved in the running and handling of a hotel. The hotel management abstract was achieved by dissociate the project into distinct modules. The implementation is predicated on the wants for hotel management system.

Keywords: web based Management, System Modeling, Requirements Analysis, Restaurant

1. INTRODUCTION

The purpose of this project is to develop an integrated Hotel Management System. That one as well as the other administrators and customers can use. Admin will apprise customers of the availability of rooms in sundry (various) hotels, and customers will verify the availability of rooms in the desired hotel. Customers should be capable to find out if a room in a particular hotel is available. They should be capable to book accessible rooms in advance based on their needs to make their stay more comfortable.

In this project the details are maintained as customer details, reservation details, booking details and billing details. The reservation process of reserving rooms for customers, canceling the rooms, booking the rooms, the restaurant management, billing process, etc. all are the computerized and the management is done without any problems. Hotel Management System is a software system, where the system of entire hotel is computerized. The hotel management system is created using VB.net as the rich GUI for front end and SQL Servers are the secured back-end database.

The reports can be observable fully and the head of the management daily or weekly or monthly can review it. For company auditing it will be more helpful. This Proposed System will be interactive, faster and is a software interface where the user can easily understand for the end users. Using the hotel management system, the under mentioned activities can be performed.

● Rooms Service

● Check In

● Check Out

● Staff Master

● Staff Attendance

● Login

2. LITERATURE SURVEY

 the literature review we consider and examine the work done by researchers who have broached on this particular topic (Hotel Management System). As mentioned above, the main purpose of hotel industry is to offer consumers' hospitality services. Technology has a considerable impact on Hospitality industry in previous years and will continue to do so with the increasing use of computer Technology, controlled equipment" (Jones and Lockwood, 1989,) Really in the last two to four year, technology has become far more advanced, easy to use and far more widely used throughout all types of industry . They mostly use a range of computer programs system from everything to bookings, communications, security and payments. the reason why hotels utilize technological systems in their operations is because it keeps them up to date in terms of where they are placed in the Technology market. priority

is maintaining their position of the brand and status as a luxury brand, rather than cutting high or low costs, which would be more of a priority for budget hotels which cater to a lower-high end market. It is clear that technology used in hospitality establishments and it is also used to make customers' lives more convenient and easy to understanding. [1].

The hospitality comprises a wide range of fields within the hotel industry that includes accommodations, restaurants, event planning and other sectors with tourism. (Law, 2009) It seems that if a hospitality company can provide valuable web sites that attract their visitors, they will also get benefits ultimately [3] .There are several definitions of a hotel. The following is two of them.

1. Providing services in food, beverages, and room for people who are travelling, and they are able to pay amount of money based on the service they got without any special arrangment.

Endang classified a hotel which is

1. It is Based on the layout of the hotel building

2. It is Based on long time stay with hotel

3. It is Based on room tariff

4. It is Based on the number of hotel rooms and available .

There are several definitions of performance. Performance management is an agreement-based and the interactive control model in hotel. Performance measurement is the essential part. That the performance management. [2]   According to that, if we can promote hospitality better from our website, we can get more reviewers for our system. Therefore, providing better hospitality service is crucial fact in the hotel management system.

With the current state of the economy and the strong rivalry in the hotel industry, internet marketing has been seen as a very successful technique to stand out as distinctive in the business. According to Srinivasa R. (2014), keeping aside the complication in the hotels, today hotel management are basically performed as internet-based system [4]. The majority of the world's regions in the modern day have technological amenities like the internet, smartphones, computers, laptops, etc. With the use of the internet, customers can book a hotel room, purchase their desired meals and beverages at any time etc. by following a few simple online steps. This may be appreciated by customers since it saves them valuable time. Our system also is an ecommerce web application that provide numerous facilities for the customer such as booking rooms, order foods and beverages from the user friendly and convenient way.

According to Kalaskar P. (2013), hotels upgrade as luxury accordance with the amenities provided by the hotels like 5 Star [4]. All the criteria necessary to provide the greatest amenities to the hotels are examined to arrive at these ratings. According to Popat K. (2013), hotel system requires courageous team which works in a manner that will make proper coordination with all the facilities or services that they are providing in the hotel [4], [5]. The system should have no issues with any of its management features. It involves the hotel administration, financial department, Room service, employee department and food and catering service etc. Our system also provides a user-friendly way to manage those administrators for the user. This system features number of managements that are integrated with one another, including user management, staff and supplier management, room and reservation management, and restaurant management. These enable the administrator to manage hotel resources with ease, which will improving the property's ratings.

Reviews and comments are particularly influential for all industries' development. Review articles become very important role not only for the users but for the hotels and travel industry [6], [7]. Customers who utilize hotel reservation services can post reviews of their experiences, and potential customers can request these reviews based on their own stays. This hotel management system has a review management that customer can give comments according to their experiences. After reviewing research papers on the hotel management systems built in such developed countries, we believe it is important to design this web application for even our country in an effort to provide a better user experience and boost the nation's economic growth

3. METHODOLOGY

Our hotel management system is an e-commerce web application that support to manage the chores of the hotel system. When developing this system, we used different types of tools and technologies. Tools that we used for this application are, Azure Boards, GitHub, SonarQube and Selenium. Azure Boards provides interactive and customizable tools for the software development teams which they need to manage their software projects. It provides a wide variety of features, such as calendar views, configurable dashboards, and integrated reporting, as well as native support for Agile, Scrum, and Kanban processes. From this we tracked the tasks, issues and code defects immersed during implementation that related to our project. The Kanban board shows the features that enable us to add, edit and filter tasks, bugs, features and epics.

GitHub is a platform that provide internet hosting service and version control using Git. Utilizing the version control system will make merging and branching for the project easier and display interactions with each project contributor. In addition to the distributed version control of Git, it provides access control, bug tracking, software feature requests, task management, continuous integration, and wikis for every project.
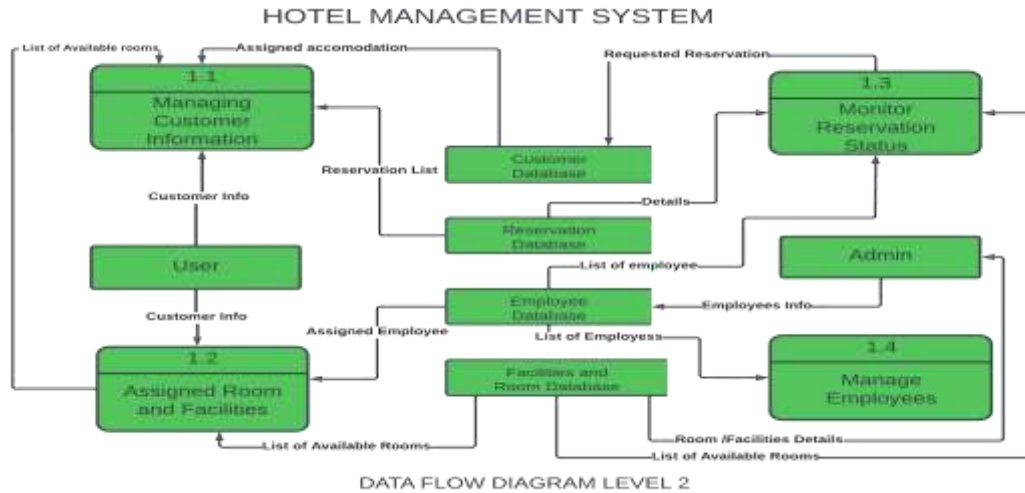
Figure 1: System Function Module Diagram

Managed and automatic code review features. It will assist to enhance the process of controlling code quality, which is a crucial step in the software development process. SonarQube may help to perform ongoing code inspections of the projects by integrating into the current process and identifying problems in the code. element is an umbrella project for a range of tools and libraries that enable . they support the automation of web browsers. It provides playback tools for writing functional tests that can be executed in the current web browsers and provide interface to write test scripts in different programming languages

4. PROPOSED SYSTEM

This system consists of four main interconnected components such as Website, Admin frontend, system back-end and the database server. Here, both customers and administrators must work on same platform. First users need to sign up or sign-in to the system with valid information which will directly store in the Mongo DB. Then users can follow user-flow as follows according to their opinion.

A. Restaurant Management

The main objective of this section is the ordering the food items according to their preference and manage food menus. In here, after customer successfully signing, he/she can navigate to the Restaurant page as shown in Figure 2 and view the different types of food that currently available in the hotel. From here, customer can select one or more food items. Every customer has a cart that shows the selected food items with the quantity and will display the calculated total price. Customer can increase or decrease the quantity from either 'Restaurant' page or cart. Then customer can make the payment by giving relevant details. In here, he/she can pay via credit card or debit card. Furthermore, when user need to manage food menus, he/she need to be signing as admin. Admin can view all food menus available in the hotel via 'Manage Restaurant' page. Also, admin can search relevant food menu by name, add new food menu, update existing food menu details, or delete food menu that are not used anymore. In 'All Orders' page, admin can view all the order details that made by each customer as shown in Figure 2. Additionally, there is another feature was implemented as report generation that will generate a report about details of food menus as PDF.

Figure 2: Restaurant page- Customer view

Figure 3: all Order page- Admin view

B.   Room and Reservation Management

The main objective of this section is booking the preferred rooms and manage rooms and reservations. If user signing as customer, he/she can navigate to the 'Rooms' page to view all the rooms that are available in the hotel. From here, customer can get brief idea about the preferred room. Then customer can book the room by entering check-in and check-out dates. Afterwards in 'Booking' page as shown in Figure 4, will display the calculated total price and total days, room details and user details. Customer can make the payment via credit card or debit card. Customer can view the booking details from his/her profile. If user signing as admin, he/she can navigate to the 'Manage Rooms' page that shows all the

Figure 4: Manage Rooms page – Admin view

C.   Review and User Management

The main objective of this section is managing comments that given to the rooms and manage all user details. After customer successfully signing to the system, he/she can give the comments according to their experiences in the 'Booking Room' page as shown in Figure 5.
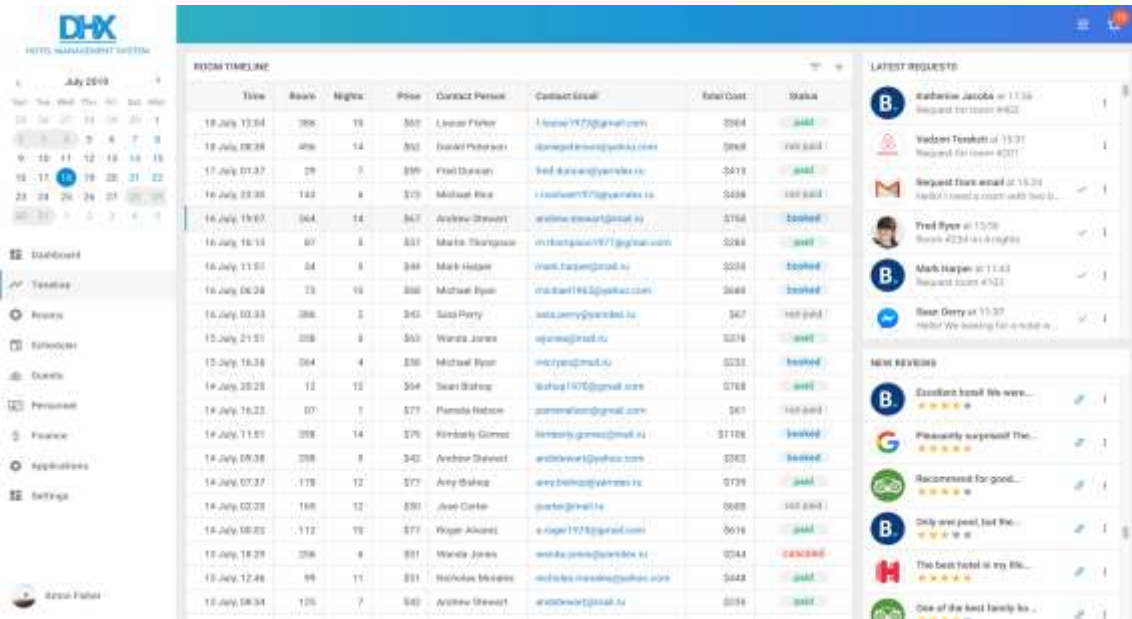
Figure 5: Manage Users page – Admin view

Here, there is a rating system. customer can give ratings based on the service and quality. Also, customer can search comments, update, and delete their own comments only. Every customer can give reactions (Heart reaction) to the comments that given to the relevant room. Apart from that, as shown in Figure 6 admin can manage all user details that signing to the system from the 'Manage Users' page. admin can view all user details . they delete users if needed. Additionally, admin can generate a report that demonstrate about all user details as PDF and Excel.

D.   Employee and Supplier Management

The main objective of this section is managing employees who work in the hotel and managing supplier details who supply different supplies for the hotel. After successfully signing to the system, admin can navigate to the 'Manage Employee' page to view all the employee details as shown in Figure 6. From here, admin can search relevant employee by name, add new employee, update existing employee details, and delete employee that are not worked anymore. Then admin can navigate to 'Manage Supplier' page as shown in Figure 6 to view all supplier details. From here, admin can search relevant supplier by name, add new supplier, update existing supplier details, and delete supplier that are not supply supplies anymore. Additionally, there is another feature as report generation that demonstrate all the supplier details as PDF.
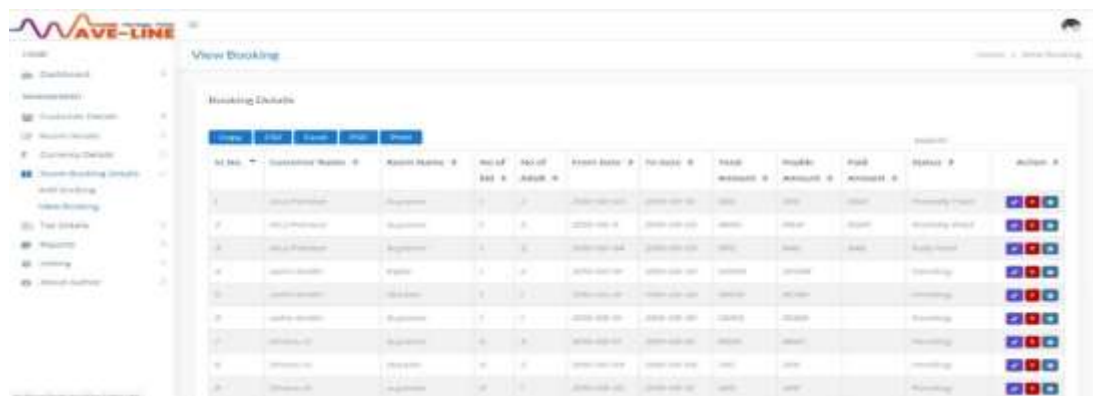

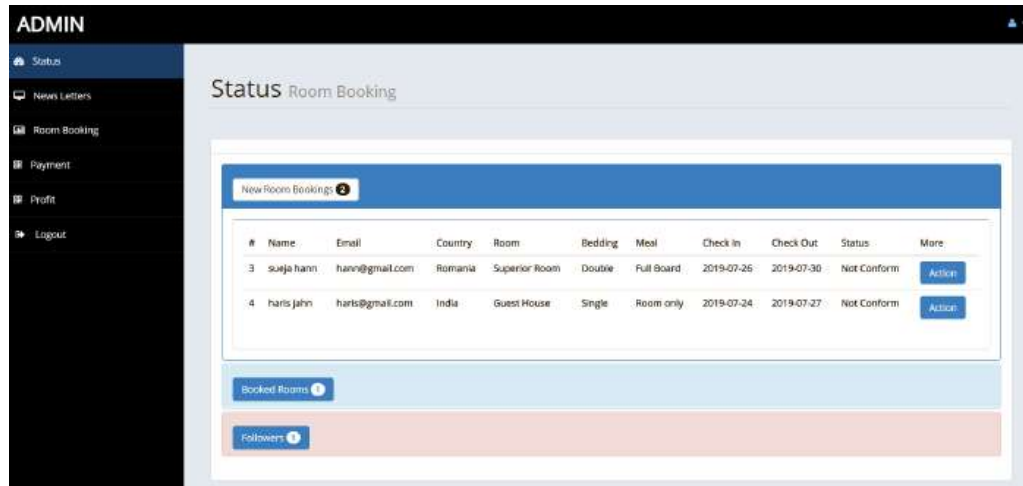**Figure 6:** Manage Employee page – Admin view

Figure 7: Manage Employee page

Conclusion

In this paper, we believe this project if properly utilized will save time, reduces cost of work, Hotel in improving company performance management system quality. The system should also serve as a major tool to improving the performance efficiency in Hotel management . this system provide various security. Better management of financial data. This system is user friendly

References

1. 1https://www.irjmets.com/uploadedfiles/paper/volume2/issue_3_march_2020/276/1628082965.pdf

2. https://www.researchgate.net/publication/307559570_The_Design_of_Hotel_Performance_Management_System_in_Padang

   https://www.coursehero.com/u/file/13388557/CIS-500- Research-paper/.

3. J. Wu. (2010). A study of the hotel industry's application of the web site as a marketing tool. 3rd International Conference on Information Management, Innovation Management and Industrial Engineering, pp. 632-635. DOI: 10.1109/ICIII.2010.471.

4. A. Pathak, A. Singhal & B. K. Rana. (2021). Review on hotel management system. 3rd International Conference on Advances in Computing, Communication Control and Networking (ICAC3N), pp. 1834-1837. DOI: 10.1109/ICAC3N53548.2021.9725658.

5. Gray, W. S. & S. C. Liguori. (2002). Hotel and motel management and operations.

6. https://journals.resaim.com/ijresm/article/view/2185/212