APPENDIX 1

REVIEW ON HOTEL MANAGEMENT SYSTEM

Project Report submitted in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

Submitted by

KHUSHI ATHASIYA (19SCSE1010487) KANIKA MISHRA (19SCSE1010456)

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MR. ANUPAM LAKHANPAL



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SCHOOL OF COMPUTING SCIENCE AND ENGINEERING GALGOTIAS UNIVERSITY, GREATER NOIDA

CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the thesis/project/dissertation, entitled "**REVIEW ON HOTEL MAMAGEMENT**" in partial fulfillment of the requirements for the award of the B.Tech submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of month, Year to Month and Year, under the supervision of Mr. Anupam Lakhanpal Assistant Professor, Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

Khushi Athasiya(19scse1010487)

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Anupam Lakhanpal Assistant Professor

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of Khushi Athasiya, Kanika Mishra has been held on ______ and his/her work is recommended for the award of B.Tech.

Signature of Examiner(s)

Signature of Supervisor(s)

Signature of Dean

Signature of Project Coordinator

Date: December, 2021 Place: Greater Noida

ABSTRACT

This project aims at creating a Hotel Management System which can be used by Admin and Customers. This is a Web Application consists of composition of two web applications: Hotel Booking application and Hotel Managing application where admin and customers work at the same platform. The admin to advise/publish the availability of rooms in different hotels and customers are checking the availability of room in required hotel. Customers should be able to know the availability of the rooms on a particular date to reserve in hotel. They should be able to reserve the available rooms according to their need in advance to make their stay comfortable. The users can register and log into the system. The administrator will know the details of reservation and daily income. The hotel department maintain the seat availability and booking details in certain database. This project provides high security to Admin and user information. With this system, Customer can book their hotels online, saving the precious time. Online payment facility will be provided to the customers to make payments. In this system Cloud Database (Google Firebase) will be used for storing all types of data, which will reduce our own server space. Also, Google authentication will be provided to the customer/admin to login their credential which will exclude the time for signup process. Customer can remotely check-in into their hotel through the website, instead of physical check-in at the reception. Customers can pre-book their food & beverages which will be provided at the specific time told by you. Services like laundry, ironing will be ordered through this application on demand. These all facilities provided will lead to save customer's precious time.

APPENDIX 3

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1. INTRODUCTION

This hotel management system is developed for hotels those are using a manual system to handle hotel processes. There are two main users in hotel management system, admin and customer. Admin can maintain daily updates in the hotel records. This system will automate the major operations of the hotel. Admin can access to all system functionalities without any restrictions. Admin is must be an authorized user. He can further change the password. There is the facility for password recovery, logout etc. Manager can access to all system functionalities with limited restrictions. The main aim of the entire activity is to automate the process of day-to-day activities of hotel. It will be very effective with the touch of firebase, which will mainly work as database. Also, it will provide secure authentication, project analytics and testing. The Reservation System is to keep track in room and hall reservation and check availability. Using this system user can check which room is reserved and which room is available. He can reserve room from reservation module. The Room Management System is for manage all room types room services. Room management module help user to keep track of all information of hotel room. He can check room laundry service, food service and sweeping service from this module. Administration department will monitor the all. the main of developing this system is to computerize all the activity of the hotel like Admission of a New Customer, assign a room according to customer's demand, checkout of a customer and releasing the room and finally compute the bill etc. Using this system, you can manage check in and check out process easily. At check in, you can easily check the availability of rooms in the hotel. And at checkout you can easily generate the total bill. The main objective of the entire activity is to automate the process of day-to-day activities of hotel. Using this system, you can manage room activities and keep track of admission of a New Customer. Using this system, you can check rooms according to customer's need and can assign easily room to customer. Checkout of a customer and updating the releasing room information in the system is very easy. When user do checkout system will generate final bill after calculating all the bills. User can also check online, all the packages available. He can also book rooms online. He can also cancel booked room online. Hotel management can also check the list of Regular customers and feedback of the hotel's customer.

1.1 PROBLEM IN CURRENT SYSTEM:

The current manual system uses paperwork and direct human communication to manage the hotel. This

delays information transmission in the hotel. The guest's personal details are input recorded during booking in. The booking office orders for preparation of the guest's room before his/ her check in date. The documents are transferred manually to the filling department for compilation of the guest' File. On the reporting date, the file is transferred to the reception. On checking in the guest is given the key to his allocated room, he also specifies if he needs room service. The receptionist hands over the guest's file to the accountant on the next table. Here the guest Pays accommodation and meals fee. The guest's file is updated on daily basis of his expenditure costs. During checking out of guests, their expenditure outlines are generated a day before check outdate. The guests receive their outlines at the accounts desk as they check out, where they pay for bills balances if any.

1.2 PROBLEM STATEMENT:

- Difficulty in location of guest files
- Calculation is difficult
- Large storage space the physical files occupy too much space
- Human and computational errors
- Difficulty in data searching
- Difficulty in data entry
- Unnecessary duplication of data
- Retrieval of guest records is extremely difficult
- Guest records are extremely difficult to modify.

1.3 PROPOSED SYSTEM:

The proposed system will keep a track of Workers, Residents, Accounts and generation of report regarding the present status. This project has Web based software that will help in storing, updating and retrieving the information through various user-friendly menu-driven modules. The project "Hotel Management System" is aimed to develop to maintain the day-to-day state of admission/Vacation of Residents, List of Workers, payment details etc. Main 3 objective of this project is to provide solution for hotel to manage most their work using computerized process. This software application will help admin to handle customers information, room allocation details, payment details, billing information. Detailed explanation about modules and design are provided in project documentation. The existing

system is a manually maintained system. All the Hotel records are to be maintained for the details of each customer, Fee details, Room Allocation, Attendance etc. All these details are entered and retrieved manually, because of this there are many disadvantages like Time Consuming, updating process, inaccuracy of data. For avoiding this we introduced or proposed a new system in proposed system the computerized version of the existing system. provides easy and quick access over the data. In hotel operations, procurement of goods and services is the most vulnerable area which could lead to malpractice because hotels spend substantial amounts on goods (such as food and beverage, utensils, toiletries etc.) and services (such as cleaning and security services, group insurance services etc.). Besides making sure that purchases are value for money, it is important for the hotel management to establish a fair and competitive procurement system with sufficient safeguards to prevent abuse by unscrupulous staff.

In this application, customers and admins both have to work on a single platform. There is no third-party e- commerce sites are included to book their rooms. No commission for these websites will be made. For the customers, they first sign up on this website with valid information which will directly store in the cloud database. Second, they need to search for their respective hotel, their rooms by checking their prices, accommodations etc. When they find their expected room, they can directly make payments via inbuilt payment provider in which they can use debit card, credit card, UPI, net banking, wallets etc. After the successful completion of payment, the booking will be verified by the admin and the invoice will be attached to their billing section into their dashboard. Customers can do web check-in through this application. Also, they can order their snacks before they reach there. When they approach to the hotel, they will come into process of security check. Afterall, they will receive keys from the reception by showing their invoice. Now, they are welcomed to their room. If they want to order other services like laundry, they can do it on this application, invoices for all the service will be tracked online and attached to the billing section. When they want to leave, they will have to pay their dues and can check-out online. After the successful security check, they will be allowed to leave. For the first time of hotel, Admin are required to manage the hotel frontend basics like how many rooms are in the hotel, hotel picture to be uploaded so that it will be available to customers while searching this hotel. Admins have to set prices, accommodation provided in their hotel. Admins can track all over activities happening from customers to their staff members. Admin will have the record of their staff members weather they are on-duty or off-duty.

1.4 GENERAL OBJECTIVES:

- The System helps to increase productivity and informational management for the user.
- Computerize data management in the hotels
- Enable fast and easy retrieval of guest records and data for fast reference activities
- The system is developed specially to meet the needs of hotel companies

1.5 METHODOLOGY:

To ensure that our project is in par with our client needs, we used the waterfall model approach in developing the systems. The first process of the model is data gathering. Here we gather information about basic hotel management system functionalities. We designed the questionnaire what we should ask our clients. We also prepared other requirements in order to get permission to interview our clients. After the first phase of data gathering, we proceeded in interviewing our clients. We asked about what their expectations were in a hotel management system. Some clients already had a hotel management system such as implementing an attribute for passport information. After gathering all of the information from our clients we proceeded with the next step which is analyzing of data and problem solving. In here we began conceptualizing the components our system needed such as inputting name and creating a log in log out system. We also thought about what elements from our initial concept did not require. After conceptualizing all of the elements we need in creating our system we proceed to the next step which is implementing requirements.

1.6 SOFTWARE MODEL:

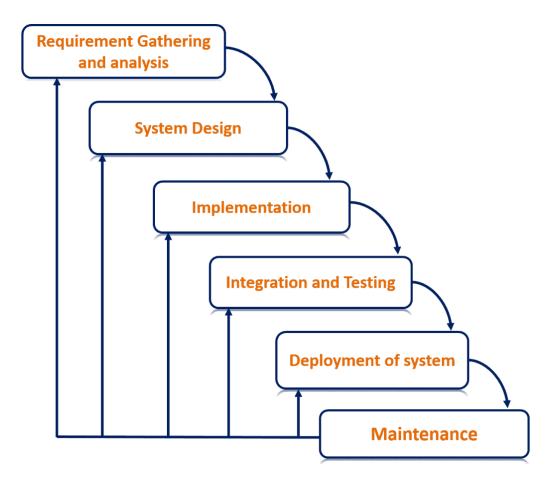


Fig. 1.1 Waterfall Model

Waterfall model is a sequential model that divides software development into pre-defined phases. Each phase must be completed before the next phase can begin with no overlap between the phases. Each phase is designed for performing specific activity during the SDLC phase. It was introduced in 1970 by Winston Royce.

Waterfall model can be used when:

- Requirements are not changing frequently
- Application is not complicated and big
- Project is short
- Requirement is clear
- Environment is stable

- Technology and tools used are not dynamic and is stable
- Resources are available and trained

Advantages of using waterfall model:

- Before the next phase of development, each phase must be completed
- Suited for smaller projects where requirements are well defined
- They should perform quality assurance test (Verification and Validation) before completing each stage
- Elaborate documentation is done at every phase of the software's development cycle
- Project is completely dependent on project team with minimum client intervention
- Any changes in software are made during the process of the development

1.7 SYSTEM ARCHITECTURE:

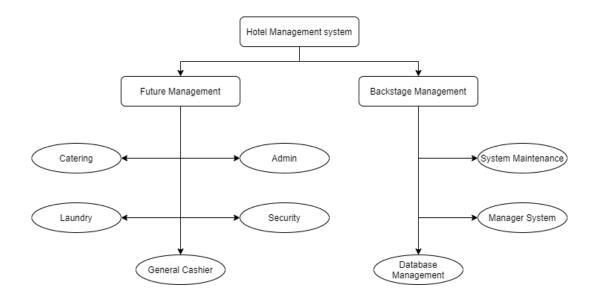


Fig. 1.2 System Architecture

2. LITERATURE REVIEW

According to Jain D. (2013), every country is in pace of getting more customers towards their tourist places. They believe in creating interests of peoples by creating the master plan for their markets. In tourism, every visitor wants to discover the amenities of the place where they want to travel. According to Jaswal S. S. (2014), Tourism in the country assists tourist ministries to take care of tourist sites by proclaiming as the Heritage Sites. After this, no one will have right to make any construction towards this site. For example, seven wonders situated in specific countries are preserved for tourist attractions.

According to Kalaskar P. (2013), hotels are categorized in accordance with the amenities provided by the hotels like 5 Star, which means hotel is luxury. Preceding these stars, the hotels will have lower facility options. These ratings are determined by reviewing all the factors which are required to put best facilities to the hotels. These ratings are considered in every 5 years. According to Popat K. (2013), managing a hotel system requires courageous team which works in a manner that will make proper coordination with all the facilities or services they are providing in their hotel. All the functions of managing the system should work smoothly. It involves laundry service, food and catering service, finance department, hotel administration etc.

According to Saraswathy R. and Premakumari P. (2014), promotion of hotels plays a vital role in attracting the customers interest towards their hotels. In the current generation, most of the parts in our world has technical facilities like internet, smartphones, computer, laptops etc. Our youth is deeply involved in these kinds of facilities. So, online promotion may attract more customers. It has been observed that from the last two decades, online tourism is in the top of the marketing promotion. This is also known as e-marketing.

According to Sharma A. and Kukreja S. (2013), hotel industry is carving a great segment of tourist's traffic. But India is proceeding in comparison to the other countries. The main reason behind is that these hotels are having poor facilities, kind of deleterious food, aggravation of customers being caught in some places.

Rumekso (2002:2) states that hotel is a building which hires the rooms with the facilities such as food and beverage which is run well to get the benefits. Sulastiyono (2007:3) says that hotel is an

accommodation that gives the facilities like rooms, food and beverage and other supporting facilities such as sport area, and laundry. According to Tarmoezi and Manurung (2007:1) hotel is a building that provides the rooms with the supporting facilities such as the food and beverage. Base on the definition, hotel is not only selling the room but hotel is one of accommodation that sell the other facilities.

Steadmon (2003:8) in Fadmawati also states that a hotel may be defined as an establishment whose primary business is providing lodging facilities for the general public and which furnishes one or more of the following services. Yoeti (1995:111) explains hotel must have 4 elements or main requirements. They are Physical infrastructure and facilities, quality of product and service, employees' attitude, and competitive price. According to Manullang (1999:69) management is controlling an organization for reaching certain purpose that has been decide before with general rule. Management is culture and planning science, organizing, arranging, coordinating, and controling human resource for reaching a certain purpose which has been previously decided.

According to Amstrong in Ester (2008), marketing is human activity that aims to satisfy the needs and desires through exchange process. The main point to remind by sales team in promoting their product is communication. According to Kotler and Amstrong in Fadmawati (2011) marketing strategy is a marketing logic which the company hopes to create customer value and achieve profitable relationships. Opportunities that occur today are not necessarily going to remain a chance in the future could have an opportunity to be a threat and the threat can become an opportunity, Changes in external factors can cause changes in internal factors so that strengths and weaknesses is also changing.

Reid and Bojanic in Fadmawati (2011) states there are four concepts in formulating marketing strategy in conjunction with the management of existing and new products in new markets. According to Wilson et al (2015) there are some strategies to increase occupancy. Free wireless internet access. For business travelers, the internet is essential to doing business. Hotel Manager.net says, "Today, quite literally almost everything is done through the Web, so being able to access those important facilities in the comfort of your hotel room is essential for most travelers. While some hotels offer WiFi on a payper-day system or free in common areas only, going the extra step by offering (and promoting) free inroom WiFi will bring a lot of people knocking on your door".

According to Roberts in Demand Media Owning and operating a hotel is often rewarding and fulfilling, but it's not easy. In the hotelbusiness, occupancy is essential, as the rate of a hotel's

occupancy determines the success of the business. Increasing occupancy starts with implementing a creative marketing plan that attracts new and repeat guests. Hoteliers can use various ideas to create a successful marketing campaign.

Based on Wilson et al (2015) came up with some easy ways for increasing hotel occupancy. Use an internet booking engine. beginning an in-depth discussion of how internet booking engines (IBE) can help you gain more customers and attention. IBEs can be customized to your site and allow you to create your own brand. The Managing a hotel is not an easy job. It requires a direct contact with customers, their purchases for the hotel and the room reserved for them. The manual hotel manages by defining specific tasks. These tasks should complete in very effective way and should be punctual with time to achieve the objective.

According to Srinivasa R. (2014), keeping aside the complication in the hotels, today hotel management are run through internet-based system. With the help of the internet tourist can now book their hotel room, flight ticket by just few steps on the internet. This saves guest's precious time also it may be loved by them. This factor of booking hotel room by sitting at home may lead to gain in the hotel industry.

According to Ambardar A. (2013), training in any industry may lead to higher growth of the organization. Staffs that are trained to hold the customer's interest by providing such facilities or their behavior are more likely to achieve great place in the attraction of customers. According to Bagri S.C., et al. (2012), in order to equip the level of customer's satisfaction, hotel management have to work hard on their strategies, offers etc.

According to Batra M. (2014) factors related to the service which are provided in the hotel are not good enough to hold customer's satisfaction. These factors should be majorly analyzed. Some luxury hotel charges too high prices in comparison of their services that holds bad impact in terms of their customer feedback and satisfaction.

3. REQUIREMENTS, FEASIBILITY AND SCOPE

3.1 REQUIREMENTS:

3.1.1 HTML: HTML stands for Hypertext Markup Language. It allows the user to create and structure sections, paragraphs, headings, links, and blockquotes for web pages and applications. HTML is not a programming language, meaning it doesn't have the ability to create dynamic functionality. Instead, it makes it possible to organize and format documents, similarly to Microsoft Word.

3.1.2 CSS: CSS stands for Cascading Style Sheets. CSS describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work. It can control the layout of multiple web pages all at once. External stylesheets are stored in CSS files. It is a style sheet language which is used to describe the look and formatting of a document written in markup language. It provides an additional feature to HTML. It is generally used with HTML to change the style of web pages and user interfaces. It can also be used with any kind of XML documents including plain XML, SVG and XUL.

3.1.3 JavaScript: JavaScript is a scripting or programming language that allows you to implement complex features on web pages — every time a web page does more than just sit there and display static information for you to look at — displaying timely content updates, interactive maps, animated 2D/3D graphics, scrolling video jukeboxes, etc. — you can bet that JavaScript is probably involved. It is the third layer of the layer cake of standard web technologies, two of which (HTML and CSS) we have covered in much more detail in other parts of the Learning Area.

3.1.4 Firebase: Firebase is a toolset to "build, improve, and grow your app", and the tools it gives you cover a large portion of the services that developers would normally have to build themselves, but don't really want to build, because they'd rather be focusing on the app experience itself. This includes things like analytics, authentication, databases, configuration, file storage, push messaging, and the list goes on. The services are hosted in the cloud, and scale with little to no effort on the part of the developer. A bunch of these features apply to iOS and Android but not to web.

- Remote Config
- Test Lab
- Crash
- Notifications

• AdMob

Features:

- Authentication using Email & password, Google, Facebook, and Github.
- Realtime data
- Ready-made api
- Built in security at the data node level
- File storage backed by Google Cloud Storage
- Static file hosting

DATABASE TECHNOLOGY: According to the database specialists, if a database is having best architectural connection, then it will be minimizing the data loss or data leakage. We are making use of Google Firestore, it is a cloud database which can be termed as cloud-computing database. It is used by many MNC's to run their project because it helps in virtual portability. Companies doesn't require to build their project, which are dependent on physical hard-drives and decreases maintenance cost as well. Google Firestore is a part of Google Firebase app, which has many functions required to build a project efficiently. If a team requires data analysis for their business purposes, then it is inside the app itself. App crash technology is provided. Authentication with Google, Facebook and GitHub is provided as well. Google Firestore is a NoSQL database. With the help of cloud Firestore, we can create application using different language platforms. Best part of this database is that it syncs data all in real-time.

3.2 FEASIBILITY:

The objective of feasibility study is to determine whether or not the proposed system is feasible. The feasibility is determined in terms of three aspects. These are: -

3.2.1 Technical Feasibility: In this, one has to test whether the system can be developed using existing technology or not. We have used Visual Basic as front-end and MS ACCESS as back-end. It is evident that necessary hardware and software are available for development and implementation of proposed system. We acquired the technical knowledge of working in Visual Basic language, and then only we have started designing our project.

3.2.2 Behavioral Feasibility: The hotels are already using various software for managing their

information and since it is acceptable by both hotel administration as well as hotel staff, it is proven to be operationally feasible.

3.2.3 Economic feasibility: As a part of this, the costs and benefits associated with the proposed system are compared and the project is economically feasible only if tangible and intangible benefits outweigh the cost. The cost for proposed hotel management system is outweighing the cost and efforts involved in maintaining the registers, books, files and generation of various reports. The system also reduces the administrative and technical staff to do various jobs that single software can do. So, this system is economically feasible.

3.2.4 Legal Feasibility: Legal feasibility determines whether the proposed system conflicts with legal requirements, e.g., the Data Protection Act. It will be done by some legal advisors.

3.3 SCOPE:

The Web Application to be developed deals with creating a Hotel Management system which will automate the major hotel operations such as generating COD, billing and keeping track of records of daily transaction. This Application will save time in collecting cash, management of database, security. Admin have the authority to control and modify the database. Admin can access to all system functionalities without any restrictions. Manager can access to all system functionalities with limited restrictions. The objectives of the automated Hotel Management System are to simplify the day-to-day processes of the hotel. The system will be able to handle many services to take care of all customers in a quick manner. As a solution to the large amount of file handling happening at the hotel, this software will be used to overcome those drawbacks. Safety, easiness of using and most importantly the efficiency of information retrieval is some benefits the development team going to present with this system. The system should be user appropriate, easy to use, provide easy recovery of errors and have an overall end user high subjective satisfaction.

4. ANALYSIS

4.1 FEASIBILTY ANALYSIS:

At present, the computer-aided automation, convenient and efficient system of hotel management are only used by some of the star hotel management, and each hotel has different needs, but most of the existing management system's definition of a project cannot be applied to general hotel management, so identifying these specific needs is the content should be made clear first before build a management information system.

Hotel management information system using feasibility analysis mainly focused on the operator's actual situation and environmental aspects. Operation situation analysis focuses on the hotel specific section's attitudes and awareness toward management information system specific functions, such as its system or part of systems capabilities considered not needed or are not willing to use, system construction and use will appear a series of problems. Therefore, when carrying out feasibility analysis, first focused on specific sectors, particularly mission critical jobs such as hotel General Manager, Department head's awareness and orientation on the system. In addition, when system is using feasibility analysis, it should consider the environmental conditions, particularly special circumstances in business activities, such as quickly to make the guest registration and organization when receive group guest.

4.2 REQUIREMENT ANALYSIS:

Requirement analysis is the analysis definition process of requirements, is the start of the planning and development period of the project. Needs analysis task is to thoroughly describe the function and performance of the software, identify limits of software design and software interface details with other elements of the system, defining the effectiveness of software requirements. Requirement analysis includes business requirements, functional requirements and development requirements.

4.2.1 BUSINESS REQUIREMENT ANALYSIS: Room booking capability can handle customer bookings by various means, such as phone book, online bookings, and reservations at the front desk. Rooms of the hotel have different grades, and require the system to be able to categorize the room management, and according to book different types of rooms to offer available prices, booking discount timing function settings such as lowest price, easy to fit individual traveler and group

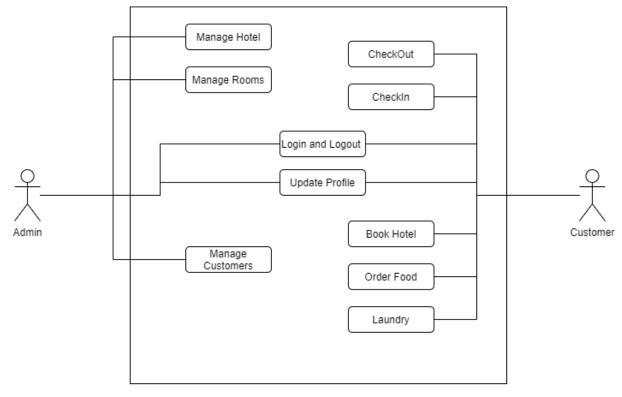
reservations.

4.2.2 FUNCTIONAL REQUIREMENT ANALYSIS: Hotel management system consists of both background and foreground parts, front office is responsible for booking, reception and cashier services, the background used for administrators to manage systems, such as setting room type, room settings, operator settings, financial management and warehouse management. An integrated cash register system should have the following functional requirements: cash register charge of project settings, various payment methods (cash, accounting and business summary report).

5. DESIGN

5.1 USE CASE DIAGRAM:

A use case diagram is a dynamic or behavior diagram in UML. Use case diagrams model the functionality of a system using actors and use cases. Use cases are a set of actions, services, and functions that the system needs to perform. In this context, a "system" is something being developed or operated, such as a web site. The "actors" are people or entities operating under defined roles within the system.





5.2 ACTIVITY DIAGRAM:

An activity diagram visually presents a series of actions or flow of control in a system similar to a flowchart or a data flow diagram. Activity diagrams are often used in business process modelling. They can also describe the steps in a use case diagram. Activities modelled can be sequential and concurrent. In both cases an activity diagram will have a beginning (an initial state) and an end (a final state).

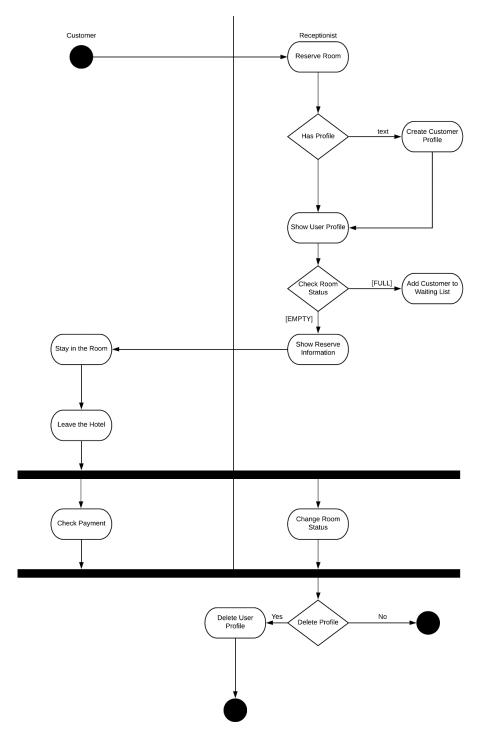


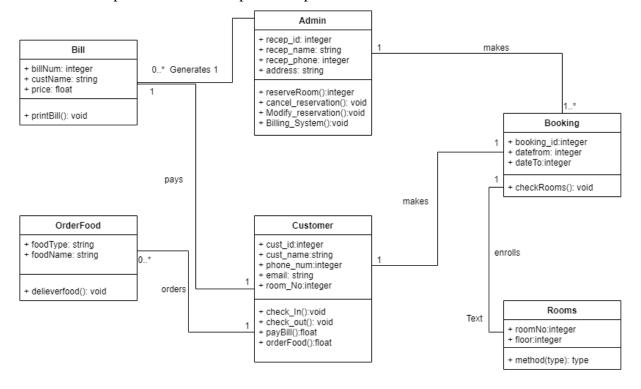
Fig 5.2

5.3 CLASS DIAGRAM:

Class diagrams are the main building block in object-oriented modelling. They are used to show the different objects in a system, their attributes, their operations and the relationships among them. Classes

in class diagrams are represented by boxes that are partitioned into three:

- The top partition contains the name of the class.
- The middle part contains the class's attributes.
- The bottom partition shows the possible operations that are associated with the class.





5.4 STATE CHART DIAGRAM:

The name of the diagram itself clarifies the purpose of the diagram and other details. It describes different states of a component in a system. The states are specific to a component/object of a system. A State chart diagram describes a state machine. State machine can be defined as a machine which defines different states of an object and these states are controlled by external or internal events. Activity diagram explained in the next chapter, is a special kind of a state chart diagram. As State chart diagram defines the states, it is used to model the lifetime of an object.

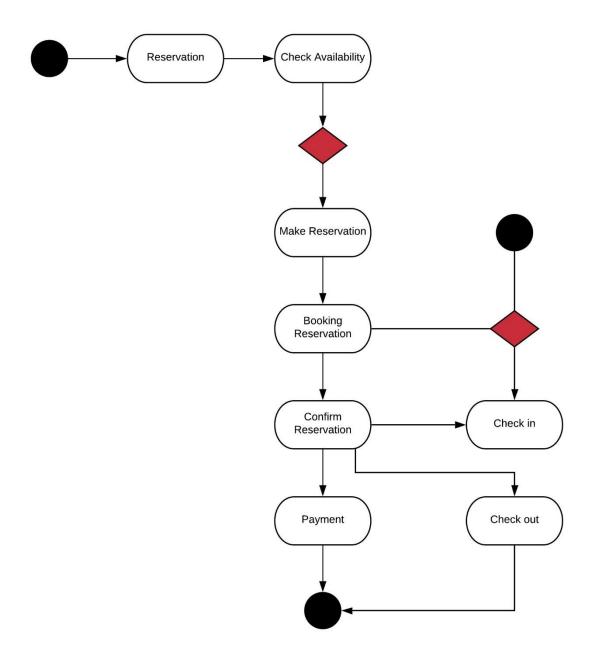
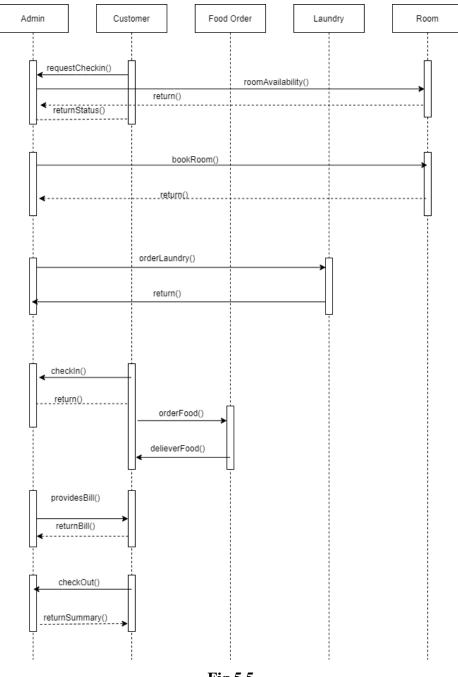


Fig 5.4

5.5 SEQUENCE DIAGRAM:

Sequence Diagrams are interaction diagrams that detail how operations are carried out. They capture the interaction between objects in the context of a collaboration. Sequence Diagrams are time focus and they show the order of the interaction visually by using the vertical axis of the diagram to represent time what messages are sent and when.





5.6 ER DIAGRAM:

An Entity–relationship model (ER model) describes the structure of a database with the help of a diagram, which is known as Entity Relationship Diagram (ER Diagram). An ER model is a design or blueprint of a database that can later be implemented as a database. The main components of E-R

model are: entity set and relationship set.

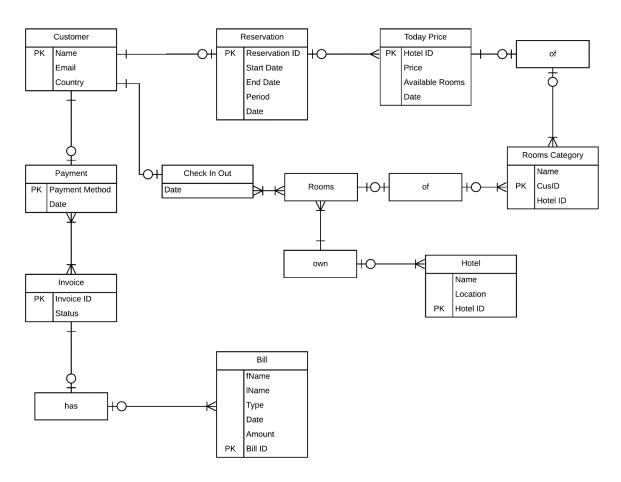


Fig 5.6

6. IMPLEMENTATION & TESTING

6.1 IMPLEMENTATION:

Hotelgenix	Home About Us	Login								
	Search Hotels									
	start typing hotel names OR pincode									
	Search									
	A Destination Far The									

A Destination For The

Now

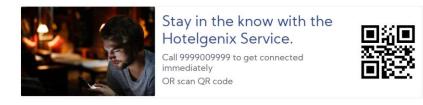
Fig 6.1 Homepage of Web Application.

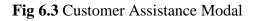
S	Sign Up 🕨 (Quick Access
	First Name	Last Name
	Email	
	anaad@gmail.com	
	Password	
	Confirm Password	
	⊖ Customer	⊖ Admin
		2

Fig 6.2 Signup for customer and admin



Explore a world of travel with Hotelgenix





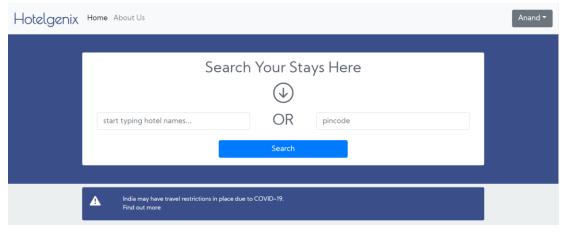


Fig 6.4 Customer Dashboard

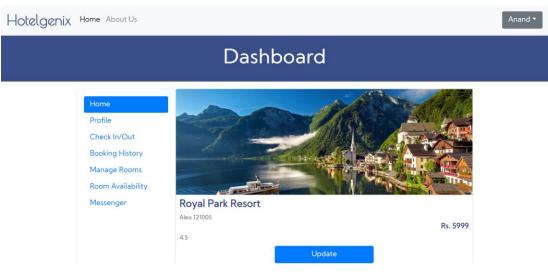


Fig 6.5 Admin Dashboard

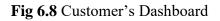
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	Room Availa	Hotel Pincode 121005	2				Non Minut	
	Messenger							
					Close	Update	Rs. 5999	
			4.5					

Fig 6.6 Hotel data updating dialogue

Home	
Profile	First Name : Anand Last Name : Kumar
	Email : anaad@gmail.com Mobile : 7532123412 Address : 929
	Update

Fig 6.7 Profile data dialogue

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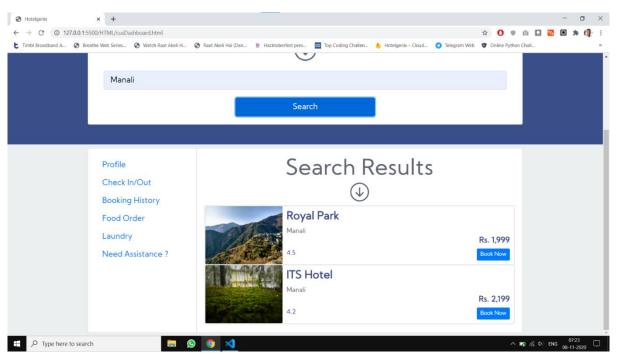


Fig 6.9 Search Results

Select Dates										
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	26	27	28	29	30	31	1			
	2	3	4	5	6	7	8			
	9	10	11	12	13	14	15			
	16	17	18	19	20	21	22	d to payment page		
	23	24	25	26	27	28	29			
otel	30	1	2	3	4	5	6			
						То	day			

Fig 6.10 Select preferred date for hotel stay

Select D	ates			
From	08-11-2020			ılts
То	10-11-2020			
Number	of Days: 3			
	Close	Proceed to payme	nt page	
	ITS Manali	Hotel		

Fig 6.11 Number of days will be automatically selected

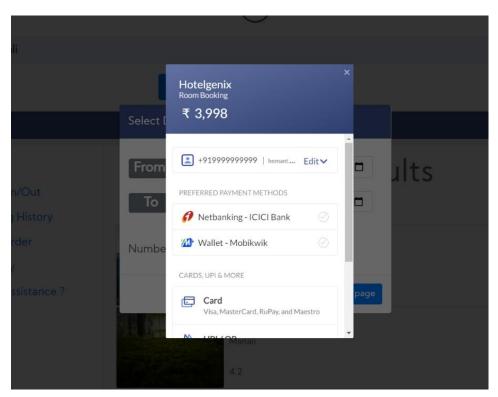


Fig 6.12 This is an online payment dialogue.

This service is provided by Razor pay. Your Name and Email ID will be automatically entered into this dialogue box for future reference. Amount will be automatically calculated.

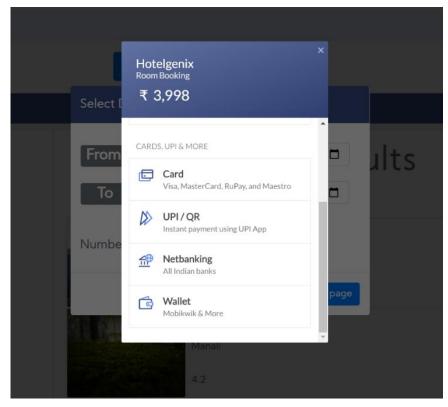


Fig 6.13 Various payment methods provided for customer's flexibility.

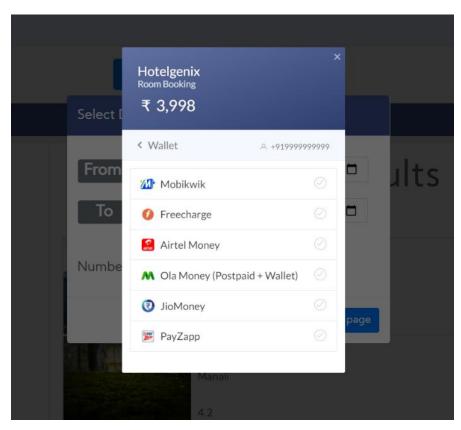


Fig 6.14 Various wallet payment are provided.

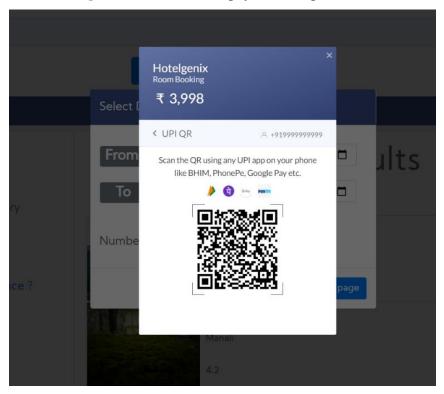


Fig 6.15 UPI payment through QR Code.

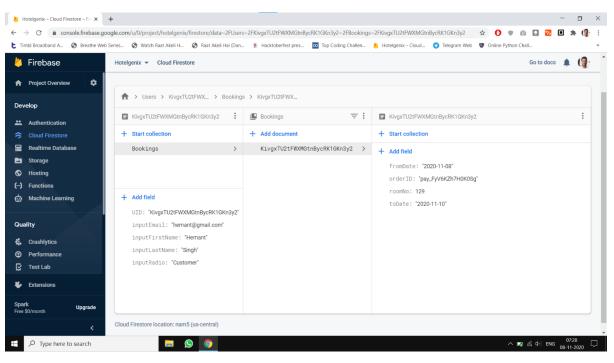


Fig 6.16 Database Record in Firebase

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Fig 6.17 Remote Check-in & Check-out.

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Fig 6.18 Booking history for Customer

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Fig 6.19 Online Food order

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Fig 6.20 Online Food Service

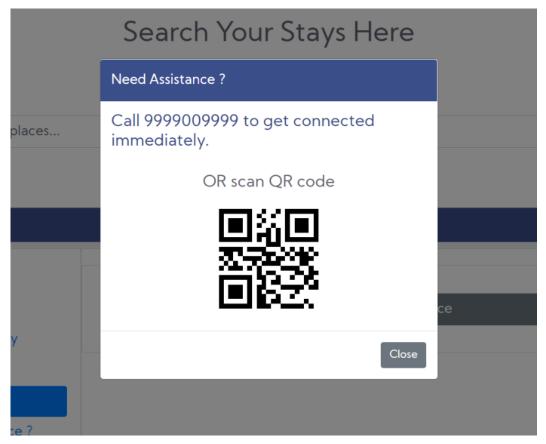


Fig 6.21 Customer Assistance

Home Customer Name: Hemant Singh Mobile: 999999999
M 1/1 - 000000000
Profile Mobile: 999999999 Check In/Out From Date: 2020-11-08 To Date: 2020-11-10 Price: Rs.5,997

🗖 🖸 🥥

Fig 6.22 Booking History for Admin

6.2 TESTING:

₽ Type here to search

				Actual	
S.No.	Test Case	Input	Expected Output	Output	Remarks
1	101: whether login modal working?	NA	Yes	Yes	Passed
2	102: whether page tabs working?	NA	Yes	Yes	Passed
3	103: whether search button working?	NA	Yes	No	Failed
4	104: char input in place of PINCODE	pin	NA	pin	Failed
	105: whether assistance QR code				
5	working?	NA	Yes	Yes	Passed
	106: whether message modal				
6	working?	NA	Yes	Yes	Passed
7	107: whether profile details retrieving?	NA	Yes	Yes	Passed
	108: whether customer menus				
8	working?	NA	Yes	Yes	Passed
9	109: whether hotel details updating?	Royal Park	Royal Park	Royal Park	Passed
10	110: whether Admin details updating?	Hotel 1	Hotel 1	Hotel 1	Passed
11	111: whether search result appears?	NA	Yes	Yes	Passed
	112: whether booking detail modal				
12	appears?	NA	Yes	Yes	Passed
13	113: whether calendar sets details?	NA	Yes	Yes	Passed
	114: whether no. of days appears				
14	correctly?	NA	Yes	Yes	Passed
15	115: char input in ADULT field?	demo	demo	NA	Failed

7. LIMITATION AND FUTURE SCOPE

The scope of the system is as followed: the system has two user types which is the administrator and user access. The administrator has to all modules, forms and functionality of the system. The user access is limited in terms of forms, modules and functionalities. They are not allowed to change data information such as room types, discount type, and administrator password.

Often the selection is based on the interest of the student, and future scope. The Hotel management is one of the highly job-oriented field; it covers a wide range of services including food service, accommodation and catering. A hotel management professional can be employed in any of the abovementioned fields. This Application will save time in collecting cash, management of database, security. Admin have the authority to control and modify the database. Admin can access to all system functionalities without any restrictions. Manager can access to all system functionalities with limited restrictions. The objectives of the automated Hotel Management System are to simplify the day-to-day processes of the hotel. The system will be able to handle many services to take care of all customers in a quick manner.

CONCLUSION

At present, information management technology has been pushed at frontier of time by global information tide, thus the information management system becomes hot issue that all the society concerned about. With the development of science and technology, computer science become matures; they play an increasingly important role in all areas of society. People can give a lot of tedious work to computer systems to process, thus improve work efficiency. Hotel management system in this paper is to analyses and design on the basis of the current development of the computer technology. Through analysis of the feasibility of the system, and a variety of needs analysis, modularize the system, analyses and give simple introduction on function of every module, then given the logical structure of the database design of the management system, provides a theoretical basis for the realization of the management system. This management system overcome shortcomings of modern operating system that computation is not strict and systematic, such as heavy workload, data transmission is not timely, error-prone management statistics and so on; enhance the competitiveness of the hotels.

Computer has got clear advantage over the manual system. The computerized system is more reliable, efficient and fast at the end of the project, I can say that computer play a very crucial role in the development of firm. All the daily reports generated by the system are to be checked by the concerned official so as to ensure that all the transactions have been put through in appropriate accounts and this is tallied with the new vouchers. Computer does maximum work with in minimum time. Because it is used in every field so that it provides comfort and suitability to everyone. Providing maximum facilities and comfort to customers to customers is main goal of the firm. To achieve this goal, other modern facilities relating to computer should have to be provided.

REFERENCES

[1] Li, H., Ye, Q., & Law, R. (2013). Determinants of customer satisfaction in the hotel industry: An application of online review analysis. Asia Pacific Journal of Tourism Research, 18(7), 784-802.

[2] Gebreslassie, H. H. (2020). Software Architecture And Development Plan For Hotel Management System. [3] Guo, G., & Qingdao, Y. L. Design and analysis of hotel management system based on information technology. Qingdao, Shandong: otel Management College. e-: otel Management College.

e- otel Management College. e-. etrieved from http://www. cmnt. lv/upload files/ns_8art50_CMNT1806-124_S_Guo.

[4] Joseph S V, Joey F G, Jefferey A H 2005 Essentials of System Analysis & Design Tsinghua University Press 378-402

[5] Yang Z 2009 Hotel Industry E-commerce System Planning Based on B/S Modern Economic Information (8) 208-9

[6] Yang, J. (2013, June). Research and Design of Hotel Management System Model. In International Conference on Education Technology and Information System.

[7] O' Connor P, Murphy J 2005 Research on Information Technology in the Hospitality Industry Hospitality Management (24) 281-94

[8] Xin L 2011 Design and Implementation of Hotel Management System Base on B/S Jilin: Jilin University

[9] Lei X, Zhongwei L 2008 Java Tutorial Beijing: People's Telecon Publishing House

[10] Jiajing Z 2008 My SQL and E-commerce Practice Beijing: People's Telecon Publishing House

[11] Ogirima, S. A. O., Awode, T. R., & Adeosun, O. O. (2014). Online computerized hotel management system. J. Comput. Biosci. Eng., ISSN, 2348-7321.

[12] Akazue, M. I. (2016). Enhanced hotel management information system for multiple reservation booking. International Management Review, 12(1), 52.

[13] Xiaolei Y 2012 Design and Implementation of Hotel Management System Jilin: Jilin University

[14] Ogirima, S. A. O., Awode, T. R., & Adeosun, O. O. (2014). Online computerized hotel management system. J. Comput. Biosci. Eng., ISSN, 2348-7321.

[15] Prasad, K., Wirtz, P. W., & Yu, L. (2014). Measuring hotel guest satisfaction by using an online quality management system. Journal of Hospitality Marketing & Management, 23(4), 445-463.

[16] Shukla, P., Singh, A. K., & Srivastava, A. Hotel Management System and their Modern Approaches.

[17] Bing G 2010 Hotel Management Information System Based on B/S Dalian: Maritime Affairs University Of Dalian.

[18] Jing W 2010 Hotel Management System Design Government Office 174 23-7

[19] Bandara, S. S. G. B. (2017). Online Hotel Management System for Trevene Hotel Group (Doctoral dissertation).

[20] Ham S W, Kim G, Jeong S 2005 Effect of information technology on performance in upscale hotels Hospitality Management (24) 281-94