

Hotel Management System

BRD

Introduced by G4

Executive Summary

Hotel Manager system made you don't have to sit and manage the entire activities on paper. And at the same time Owner of the Hotel will feel comfortable to keep a check on Hotel easily from anywhere around the world.

This System will give them power and flexibility to manage the entire system from a single online portal. Hotel management System provides room booking, staff management and bill generation features.

Document Overview

This document introduce Hotel Management System study plan. It introduce general description, technical description, development plan, operation plan, cost analysis and marketing study.

Business Objectives

- Offer easy and effective hotel management service .
- Offer huge room booking offers with several varieties.
- Offer effective way of booking , payment .
- Offer organized and secure way of bill generation features.

Introduction

Today, Online Hotel Management System is considered a fast management method because of its accuracy and speed. It is also needed less manpower to handle the management . Almost all Hotels today, are managing their services by online management system, since it reduces manager's and owner's time in management and check Hotel conditions .

Owners can also easily monitor the work of the stuff that they do through all day . It also helps diminishing the need for paper.

Online Management systems are very useful to learn it is significantly important to the management , saving the time and effort that is required to check the all management papers that related to the stuff , and all booking and the other services that the hotel offers to the customers .

Receptionists also know about any reservation done by the customers online on the hotel web site , therefore they can prepare the rooms for the customers before they came.

Before Hotel management systems , calculations of room cost , displaying it and anything like that is done manually, The chance of being wrong is higher .

with the development of information technology and use it in an orderly and properly helps to overcome the existing error in the manual system . Online Hotel Management system saves the changes information in a database, and this make it an easier way to give owners and managers can add theirs rules , and the stuff can take their attendance in an easy way.

The system allows the manager to keep track on available rooms in the system and even maintain staff details like their hours worked and salary.

Customers can view and book an available room online and the system will automatically generate the bill according to the number of days the type of room is booked.

System Description:

What is Hotel Management System

Imagine that the Hotel Manager don't have to sit and manage the entire activities on paper. And at the same time Owner of the Hotel will feel comfortable to keep a check on Hotel easily from anywhere around the world.

Management

The system allows the Owner to check the Progress of the hotel from interactive Graphs and he will be notified of each new change made in System.

It also allows the manager to keep track on available rooms in the system and even maintain staff details like their hours worked and salary.

Booking

Customers can view and book an available room online and the system will automatically generate the bill according to the number of days the type of room is booked.

The system will be so simple and attractive which will make the customer comfortable to use and choose their ideal room.

System Architecture

Hotel Management system introduces huge amount of reservation contents and many reservation services (as user accounts , the room they booked .. etc.)

The system offer the contents and service to both mobile and desktop users via web site.

The Hotel Management system contains huge Amount of Data .

The system offer the contents and service to both mobile and desktop users via web-based or dedicated Mobile software.

These are main Entities :

(1) Storage, (2) Data Processing, (3) Data Analytics,(4) Owner , (5) Manger , (6) Employee , (7) Client , (8) Hotel , (9) Book , (10) Payment
,(11) General Mobile Application

Storage :

There is a huge data storage for this project all of them are accessed to the Owner and Hotel Manger to be updated with everything happen in the hotel .

Main storage are developed using MYSQL Database system .

Data Processing:

We have developed a secure, user-friendly Hotel Management System. This System can take care of each member whether its Owner or Customer.

This System will Help them to properly Manage their Hotel and help in growth without creating and hassle. This System is completely secure since every user is provided with user ID and Password so there is no chance of any unauthorized access.

Data Analytics:

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.

- There are mainly Seven Entities Owner, Manager, Employee, client, hotel, Payment, book. These five entities would manage the whole system. There are mainly Seven Entities Owner, Manager, Employee, client, hotel, Payment, book.

These five entities would manage the whole system.

Owner:

The owner is a super user of the system. The owner is just like admin. The owner has all right to view and modify the data in the system. The owner has followings attributes.

OwnerID:

This is numeric 14 digits number which is unique to every admin. OwnerID is the primary key to admin table in the database.

Name:

This attribute would hold the name of the owner. The name is varchar type variable which holds the data length up to 250 characters.

Email:

This is an essential attribute of the table. Every owner must have a working email id to keep in contact with employees. This field has validation only email formatted values will be stored.

Contact.:

This is multi valued attributes which mean every owner can have more the one mobile number in database.

Address:

This attribute would hold the address of the owner. Each employee must provide the address.

Manager:

The manager is a secondary user of the system. The manager can view hotel details, manage employee, booking, solve client's problem. The manager has followings attributes.

ManagerID:

This is numeric 14 digits number which is unique to every Manager. ManagerID is the primary key to Manager table in the database.

Name:

This attribute would hold the name of the manager. The name is varchar type variable which holds the data length up to 50 characters.

Email:

This is an essential attribute of the table. Every Manager must have a working email id to keep in contact with employees. This field has validation only email formatted values will be stored.

Contact.:

This is multi valued attributes which mean every manager can have more the one mobile number in database.

Address:

This attribute would hold the address of admin. Each employee must provide the address. Admin address is verified via Human resource team.

Employee:

The employee is another user of the system. An employee can view hotel details, verify the online booking room availability for clients. The employee has followings attributes.

EmpID:

This is numeric 14 digits number which is unique to every Employee. EmpID is the primary key to Employee table in the database.

Name:

This attribute would hold the name of Employee. The name is varchar type variable which holds the data length up to 50 characters.

Email:

This is an essential attribute of the table. Every employee must have a working email id to keep in contact with employees. This field has validation only email formatted values will be stored.

Contact:

This is multi valued attributes which mean every employee can have more the one mobile number in database.

Address:

This attribute would hold the address of the employee. Each employee must provide the address.

Client:

The client is the basic end user of our system most of the business is done through them. Clients would book the desired hotel room. The client would provide the feedback. The client has following attributes.

ClientID:

This is numeric 14 digits number which is unique to every Client. ClientID is the primary key to client table in the database.

Name:

This attribute would hold the name of clients. The name is varchar type variable which holds the data length up to 50 characters.

Email.:

This is an essential attribute of the table. Every client must have a working email id. This field has validation only email formatted values will be stored.

Address:

This attribute would hold the address of clients. Address of clients would help us to connect with them and visit the location. This would provide better services.

Hotel:

Every hotel registered with the system has the information in this entity. Hotel is the main concern of system.

HotelID:

This is numeric 14 digits number which is unique to every Hotel. HotelID is the primary key to case table in the database. Each hotel is uniquely identified using this id.

Name:

For customer point of view, every hotel does have its name. The name is very important.

No Of Rooms:

Every hotel has many rooms. To make it easy for the customer. And check availability no. of rooms should be in the database.

Address:

This attribute would hold the address of the hotel. Address of Hotel would help the client to find it easy and visit the location. This would provide better services.

Book:

Before going to book any room. The client should check the availability. If the desired room is available. They can book it.

BookID:

This is numeric 14 digits number which is unique to every Booking. BookID is the primary key to case table in the database. Each Payment is uniquely identified using this id.

RoomNO:

With reference to hotel booking must have room no.

Date:

This would hold the date of the transaction.

Payment:

Payment Entity store the data about payment. Every payment data is here. Any conflict can be resolved by looking to this.

PaymentID:

This is numeric 14 digits number which is unique to every Payment. PaymentID is the primary key to payment table in the database. Each Payment is uniquely identified using this id.

BookingID:

This is a reference to a booking. This would help the admin to find this payment is against booking.

Date:

This would hold the date of the transaction.

Transaction No.:

The transaction number is reference no given by the bank.

Status:

Status of every transaction either it would be pending or confirm is being updated in this field

System Features

Booking:

The customer can easily search their Room from the various options available. This all will be so user-friendly so that Customer will not find any trouble in the booking room.

Once the room is searched and the customer finds his choice room then this module helps the customer to book the room by following the rules of the Hotel like Check-in and check-out time of the Hotel, Limit of people per room etc.

If everything is done properly he will be asked to pay partial or complete money. And then he will be forwarded to Payment Gateway. Where he can easily pay Online.

Payment Details:

After filling the booking details clients need to pay the money using different options available like cash/net banking/ATM card. Payment portal would use a payment gateway to clear payment.

Once payment will clear receipt of payment will be generated automatically and this receipt will be sent to manager and Receptionist will get the notification to make the room ready before they arrive.

Add / update / delete Hotel Members / Booking Details:

Owner and Manager can easily add, update, or delete the Staff details. If the customer does not reach the hotel within 3hr of check-in time and if he does not give any prior details of this arrival then receptionist will have complete authority to remove his booking and allow another customer that room if needed.

User authentication according to his/her role:

This portal will take care of every profile in our system. No user will be allowed to use our system without a valid ID. Every profile must authenticate using system procedure. This would ensure the security of our system.

Owner Profile:

In Owner profile, he has full access to the system. The owner can view all the details in a graphical way and he has the authority to change the Cost of Room, Room Availability, Service Details and much more.

He can also check the details of receptionist and staff member currently working at that Hotel. He will get the notification of all the changes made by the Manager in the system.

He will also have special permission to revert those changes if needed. He can also check the transactions made through the day and throughout the month and an algorithm will check the progress the Hotel is making.

Manager Profile:

Manager profile can have partial access to the System. The manager can view the availability and can change the cost of room and other service details. He will also have a special interface where he can manage the staff of the hotel.

He can add new people and he can also remove anyone from the system. And at the same time Owner will receive the notification of these changes.

Customer Profile:

In Customer profile, people can check the availability of rooms and they can also book a room according to their budget and need. Customer profile contains their name, Contact details, address, and other necessary details etc.

They need to sign-up for booking the hotel, which will make them as well as manager of the hotel to easily interact with each other. They can pay the amount Online and if they need to do payment Offline they must give some advance amount to confirm their room.

Receptionist Profile:

In Receptionist Profile, who so ever is the Receptionist he must log-in and then he can book the hotel for the customer and this will serve the customer as offline mode.

When he will log-in his attendance will be taken and it will be easy for Manager and Owner to monitor them. Here they will also get a notification of booked room so that they can beforehand maintain the room.

Staff Profile:

In staff profile, there will be complete details of each staff of the hotel like their personal details and their post at the hotel. They can easily give their attendance to the receptionist and that attendance details will be visible in Real-time to Manager.

SYSTEM DESIGN OF ONLINE HOTEL MANAGEMENT SYSTEM:

This complete System run on the simple Interface was there are only three users i.e. Owner, Manager, and Customers.

The case of Customers of Online Hotel Management System:

The customer can view the Availability of Room in Hotel. If he wishes to book he has to sign-up by providing his contact details and then a user ID will be generated using this he can securely enter the System and then he can book and Pay Online with full security.

He can also change his check-in time and check-out time if possible. He can also cancel the booking if he doesn't wish to visit.

The case of Receptionist of Online Hotel Management System:

The receptionist will check all the details of Customer check-in and check-out date and time and settles any pending payments. And He will have authority to allow Room number to Customer on their arrival. He will take care of all customer needs and their comfort.

The case of Owner/Manager of Online Hotel Management System:

The owner, as well as the manager, has almost the same Authority. Both can see all the details of the hotel and can Change. The manager can change details but Owner will receive the notification of any changes made by him.

So that it will be easy for the Owner to keep track on his hotel even if he is far away. This all will take place securely since both Manager and Owner will have separate IDs and whatever they will do all will be fully secure in this system.

The owner, as well as the manager, has almost the same Authority. Both can see all the details of the hotel and can Change. The manager can change details but Owner will receive the notification of any changes made by him.

So that it will be easy for the Owner to keep track on his hotel even if he is far away. This all will take place securely since both Manager and Owner will have separate IDs and whatever they will do all will be fully secure in this system.

USER INTERFACE OF ONLINE HOTEL MANAGEMENT SYSTEM:

The user interface is very important part of the system. This helps every member of the system to interact with each detail properly. As we have shown several use cases in this system.

We have developed these interfaces to interact with the system.

Login Page:

Owner or Manager need to log in using login id and password.

Customer Page:

Can view their details as well as Booking details.

Receptionist Page:

He can Offline Book the available room at the hotel.

Payment Page:

This interface helps in paying the money via several modes.

System Development and Operation

Overview

The system development is performed using Agile methodology. Initial R&D activity should be applied to experiments tools and techniques. Later continuous R&D activity will run beside the system development activities.

The first version of the system should take two months . After release, the system will enter an initial operation phase for one weak. During that phase the whole development team will communicate directly with the operation and business team. Later the system will enter the final operation and maintenance phase. During that phase a minor development team will provide an indirect technical support.

Development Plan

	1	2	3	4	5	6	7	8	9
Study requirements									
Database management									
Preparation									
Research									
Implementation									
Integration									
System Testing									

Team

Team	Role	
Management Team	Tasks Manager	
	Project Manager	

Development Team	Team Leader	
	Customer frontend designer	
	Customer backend developer	
	Manger frontend designer	
	Manger backend developer	
	Owner frontend designer	
	Owner backend designer	

Tools

Operating Systems	Win 10
Documents	Google Docs ...
Messaging, Authentication, Mapping	Facebook messenger
Software SRS/SDA/SDD	Pycharm,django
Edit tools	Notepad ++ , brackets,Sublime text , Pycharm

Hotel management system will be developed using open source tools, languages and servers. While development only online methods will be used for management, tracking, testing and source control. This will increase the collaboration between team members even they are not located at the same place. Also, this will allow external teams and members to participate.

Operation	Recommended Tool
Source Control and Versioning	GitHub/Git
Tasks and Issues Tracking	GitHub/Issues
Structured Database	MySQL lite
Programming Languages	Python, HTML , CSS , JQuery

Cost

Domain : 10\$

Hosting : 50\$

Total 60\$ per year

Assumptions

- The system completely depends on personal contribution of owner and manager to build the rooms and the prices .
- The system completely depends on free open source tools and languages.
- Users should approve to give the copyright of their material to the system.