A PROJECT REPORT ON

HOTEL MANAGEMENT SYSYTEM

By

ROHIT PASALKAR

ASHISH BORATE

SHUBHAM RAUT

In partial fulfilment of B. Sc. (Computer Science)



Kannada Sangha Pune’s

Kaveri College of Arts, Science and Commerce, Pune

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**University Seat No**.:

**Date**:

**Teacher-in-charge Head of the Department**

**------------------------- ------------------------**

**[Internal Examiner] [External Examiner]**

**Principal**

**Kannada Sangha Pune’s**

**Kaveri College of Arts Science and Commerce.**



**Hotel Management System**

**Project Guide**

Prof. Nilesh Nemade

**Submitted and Performed by:**

|  |  |  |
| --- | --- | --- |
| **Sr. No** | **Name** | **Roll Number** |
| 1 | Rohit Vijay Pasalkar | 28 |
| 2 | Ashish Vijay Borate | 18 |
| 3 | Shubham Rajkumar Raut | 63 |

Prof. Nilesh Nemade

(Project Guide)

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**Abstract**

This project aims at creating on Hotel Management System which can be used by Admin. The admin to advise/publish the availability of rooms in different hotels and customers are checking the availability of rooms in the required hotel. The Admin hands the booking information of customers. The administrator will know the details of the reservation and daily income. The hotel department maintains the seat availability and booking details in a certain database. This project provides high security to Admin and user information.

The main objective of this project is to design a hotel management system for running a hotel business. The system should be as flexible as possible so that it can be used for different hotels.

**Introduction**

The project computerization of services in hotel management is designed once and can be updated many times, so the burden of applicationmaintenance is shortlisted by all general guidelines. The main task ahead is to see all things whether they are running smoothly or not. This software will be capable of doing or performing task

1. Walk in registration
2. Booking
3. Check in
4. Services
5. Billing
6. Checkout

**Problem Definition**

The existing system is being completely manual. Due to this many problem arises. It is very difficult to store and retrieve the record and also to handle the papers. Also for keeping details of the employee we have to keep records on paper. Due to this report generation may take long time and also to have the chances of errors in storing as well as retrieving the data from stored records. Different people are coming for different work like booking, enquiry etc. For this more man power is required. Keeping large and bulky value of different documents becomes major problem for them to maintain it . It also required more space and more time Due to this manual work report generation il is to be delayed. Updating existing stored data is difficult and time consuming.

The problems faced by the existing system and hope to be solved by the Hotel Management System are described below:

* Difficulty in the maintenance of records
* Time-consuming
* Editing data becomes a tedious job
* No security of data
* Mistakes occurring in the Calculation of funds
* Lack of efficiency
* Data redundancy
* Data inconsistency
* Incidence of Fraud

**Purpose and Need for System**

The purpose of the hotel management system is to automate the existing manual system with the help of computerized equipment and full-fledged computer software, fulfilling their requirement so that their value or information can be stored for a longer period with easy accessing and manipulating of the same. The required software and hardware are easily available and easy to work with. This proposes that the efficiency of hotel organizations could be improved by integrating service-oriented operations with project management principles. Such integration would instill innovation, proactive attitudes, and regulated risk-taking needed to pursue ongoing improvement and proactive response to change.

By managing each change as a project, embedded in smoothly running operations, hotels would extend their life span by continuously reinventing themselves.

* To check availability of rooms of requested type by customer.
* Updating records
* Bill generations
* Search for particular records
* Speed up work with less efforts.
* A proper computerized system also portrays a good image in competition
* E-registration for hotel accommodation plays a vital role in the transition and if effectively implemented, it will achieve the following:
* Reduce paperwork and redundancy thereby improving productivity and lowering the cost of printing and purchasing registration materials annually.
* Aid the hotel in data management and integration of customers’ profiles.

**Goals**

* The project, Hotel Management System is an application that allows the hotel manager to handle all hotel activities.
* Interactive GUI and the ability to manage various hotel activities.
* Software solution for Hospitality that can be used at hotels, motels, inns, and resorts.
* The hotel management project provides room allocation and other necessary hotel management features.
* The system will be useful for managers to manage the hotel activities such as room booking, keeping customer details, and Daily/weekly/monthly reports.
* Input will be taken by the user from the graphical user interface. Input will be taken by the user from the graphical user interface.
* The major attributes such as name, address, email-Id, mobile no, and other personal-related values will give input to the dataset.
* Software Should be able to provide daily or weekly or monthly reports to the admin.

**System Analysis**

**Existing System**

we provide a detailed description of the existing system and the problems faced by the existing system. At this stage there was no digital existing system previously; we are developing a new system. Till now no system is available with this type of features and facilities. . The industry has always been lagging behind the needs‚ not being able to offer the latest advances in technology. This system is developed for all types of users with a highly flexible and configurable product envisaged to ensure global marketing The existing system only provides information about the particular hotel and only some of the hotels can reserve the rooms. The existing system of Hotel Management was manual. All the daily routines are carried out manually and the records are maintained in the record books or the registers. Paper-based processes of registration are time-consuming and expensive. The manual system requires a longer time for allocation of the customer to the room. Due to the increasing number of people staying in the hotel the current Manual System becoming difficult for data collection and data handling of the customers. The development of the application reduces the inefficiency of the hotel system. During special events, demand for rooms is much higher than on normal business days and the historical method of record-keeping might not be suitable.

The hotel Information management system can automate the process of hotels. It is useful for the authorities which keeps track of all the users registered in a particular state. The authority can add hotel packages, room details, and availability of rooms.

**Scope**

A customer comes and want to reserve a room owner check in the big record to find is any room is empty If there any room found empty the owner ask the customer which type of room you want like AC or NON-AC. The owner explain the details of the rooms like rate facilities which are provided to the customer. Customer wants to reserve a room then owner create user login then accept all the details of the customer and confirm room. The system once created and successful will help the hotel administration will be able to track customer records since customers will be registered with the system.

Bill generation is depends on hotel rate chart also depends on time duration of check in and check. These details stored in checkout table.

**Feasibility Study**

Feasibility study refers to the determination that it is possible to automate the existing system. Feasibility study forms the most important phase in the system development life cycle so that the people who are affected by the system benefit from the change. This involves some very crude estimates of schedules of completion of the proposed system meets the objectives of the

organization before it can be approved for development. It also involves the study of different risks involved in developing the system. The proposed system is reviewed considering three different feasibility phases. There are three types of Feasibility Studies

1. Technical Feasibility Study
2. Economical Feasibility Study
3. Resource Feasibility Study

**Technical Feasibility Study**

Hotel management system is a technically feasible since the whole system is designed in a latest technology. The computerized system may work on any type of operating system. Hardware requirement can be easily supported by any medium sized organization. Recommended equipment can be cosily hold capacity of data required to use the system. The organization has computer & required knowledge on computer operation thus installation of computerized system is technically feasible.

**Economical Feasibility Study**

It is most frequently used method for evaluating the effectiveness of the development system. It is also known as cost benefit analysis. The procedure is to determine the benefit & saving that are expected from developed system. It requires less manpower than manual system & also provides accurate managerial information thus it provides effective control thus in all system provides beneficial and economical facilities.

**Resource Feasibility Study**

User-friendly interfaces, which are very easy, lets user get acquainted with software relatively short period. Once advantages of using a computerized system is made apparent to user it becomes casy to train and Educate user about system. Proposed system is beneficial only if they can be turned into information system that will meet organization requirements. The system is user-friendly, provides interfaces exactly like other windows applications. Also at each step, system provides help message and error messages.

**Requirement Analysis**

* Hardware constraints: -

1. P.2 or higher for better performance
2. Hard disk: - Min 10GB
3. 128 RAM or more
4. Mouse, Keyboard, Printer, CD ROM driver

* Software constraints: -

1. JD 1.5 and above.
2. PostgreSQL.
3. Operating system: Linux.

**System Design**

**System Models**

**1.ER-Diagram**

N

RESERVE

**ROOM**

**RECEPTIONIST**

BOOKED BY  
E

MAINTAIN

**CUSTOMER**

**EMPLOYEE**

**2.Use Case Diagram**

**3. State Chart Diagram**

Room Book

Bill

Quit

Room Selected

Search Room

Payment

**4. Deployment Diagram**

Database Server

Printer

Hotel Local Server

Customer

M

1

<<Primary Network>>

<<Private Network>>

**5. Class Diagram**

Hotel

Name:String

Address:varchar(50)

Ph:int

Name:String

Desg:Sring

Add:Varchar(30)

Ph:int

Department

Rno:int

Bookingamount:float

Cname:String

Totalnamr:float

Bill

cid:int

Cname:String

Cadd:varchar()

Cph:int

CIdate:Date

COdate:date

Customer

+Booking()

+Print receipt()

+Record

Department

Name:String

Joined\_date:date

Education:string

Certificate:String

Language:String

+Booking()

+Print receipt()

+Record

1

1

+Booking()

+Checkin()

+Checkout

+Paybill()

+Fill()

+Print()

**Data Model**

**Customer**

|  |  |  |  |
| --- | --- | --- | --- |
| DATA ELEMENTS | PURPOSE | KEY CONSTRAINTS | FIELD TYPE |
| room No | Room number of customer | Primary key | Varchar(30) |
| c\_name | To store customer name | - | Varchar(30) |
| room type | To store Room type | - | Varchar(30) |
| id | To store Id of Customer | Unique | Varchar(30) |
| address | To store Address of Customer | - | Varchar(30) |
| cindatetime | To store the Check in datetime | - | Varchar(30) |
| coutdatetime | To store customer Check out datetime | - | Varchar(30) |
| contact\_no | To store customer contact number | - | Varchar(30) |
| no\_people | To store No of people | - | Integer |
| days | To store number of days customer going to stay | - | Integer |

**Bill**

|  |  |  |  |
| --- | --- | --- | --- |
| DATA ELEMENTS | PURPOSE | KEY CONSTRAINTS | FIELD TYPE |
| billno | Bill no to store bill no | Primary key | SERIAL |
| c\_name | To store customer name | - | Varchar(30) |
| bill | To store bill amount | - | Float |

**Customer (Permanent)**

|  |  |  |  |
| --- | --- | --- | --- |
| DATA ELEMENTS | PURPOSE | KEY CONSTRAINTS | FIELD TYPE |
| room\_no | Room number of customer | - | Varchar(30) |
| Cust\_name | To store customer name | - | Varchar(30) |
| room\_type | To store Room type | - | Varchar(30) |
| id | To store Id of Customer | Unique | Varchar(30) |
| addr | To store Address of Customer | - | Varchar(30) |
| cindatetime | To store the Check in datetime | - | Varchar(30) |
| coutdatetime | To store customer Check out datetime | - | Varchar(30) |
| contact\_no | To store customer contact number | - | Varchar(30) |
| no\_people | To store No of people | - | Integer |
| Days | To store number of days customer going to stay | - | Integer |
| billno | To store total bill amount | Foreign key bill(billno) | Integer |

**Employee**

|  |  |  |  |
| --- | --- | --- | --- |
| DATA ELEMENTS | PURPOSE | KEY CONSTRAINTS | FIELD TYPE |
| Enm | To store booking number | - | Varchar(30) |
| Eid | Registration number of customer | Primary key | Interger |
| Addr | To store customer name | - | Varchar(30) |

**Implementation Details**

* Hardware constraints: -

1. P.2 or higher for better performance
2. Hard disk: - Min 10GB
3. 128 RAM or more
4. Mouse, Keyboard, Printer, CD ROM driver

* Software constraints: -

1. JD 1.5 and above.
2. PostgreSQL.
3. Operating system: Linux.

**Login Page Code**

import java.awt.\*;

import javax.swing.\*;

import java.awt.event.\*;

public class log extends JFrame implements ActionListener

{

JButton bt1,b2;

JFrame f;

JLabel l1,l2;

JTextField at1,at2;

ImageIcon img1;

log()

{

l1=new JLabel("ADMIN");

at1 = new JTextField(20);

at1.setBounds(820,230,150,45);

l2=new JLabel("PASSWORD");

at2 = new JPasswordField();

at2.setBounds(820,280,150,45);

bt1 = new JButton("Login");

bt1.setBounds(700,350,150,40);

bt1.setMnemonic(KeyEvent.VK\_L);

bt1.setBackground(Color.white);

bt1.setForeground(Color.BLACK);

l1.setBounds(670,235,160,50);

l2.setBounds(670,285,160,50);

img1=new ImageIcon("room.jpg");

JLabel id=new JLabel("",img1,JLabel.CENTER);

id.setBounds(50,130,568,377);

add(l1); add(l2); add(at1);

add(at2); add(bt1); add(id);

bt1.addActionListener(this);

l1.setFont(new Font("TIMES NEW ROMAN",Font.BOLD,20));

l2.setFont(new Font("TIMES NEW ROMAN",Font.BOLD,20));

at1.setFont(new Font("TIMES NEW ROMAN",Font.BOLD,20));

at2.setFont(new Font("TIMES NEW ROMAN",Font.BOLD,20));

bt1.setFont(new Font("TIMES NEW ROMAN",Font.BOLD,20));

setLayout(null);

setSize(1100,700);

setVisible(true);

}

public void actionPerformed(ActionEvent e)

{

if(e.getSource()==bt1)

{

String unm = at1.getText();;

String pwd = at2.getText();;

if(pwd.length()==0 && unm.length()==0)

{

JFrame fr2 = new JFrame("Warning");

JOptionPane.showMessageDialog(fr2,"Enter Username Password");

}

else if(unm.length()==0)

{

JFrame fr2 = new JFrame("Warning"); JOptionPane.showMessageDialog(fr2,"Enter User Name");

}

else if(pwd.length()==0)

{

JFrame fr2 = new JFrame("Warning"); JOptionPane.showMessageDialog(fr2,"Enter Password");

}

else

{

if((unm.equals("Rohit") && pwd.equals("Rohit123"))||(unm.equals("Ashish") && pwd.equals("Ashish123")))

{

frame2 f1 = new frame2();

dispose();

}

else

{

JOptionPane.showMessageDialog(null, "Please Enter Correct Username and Password");

at1.setText("");

at2.setText("");

}

}

}

}

public static void main(String[] args)

{

log l=new log();

}

}

**Output & Reports**

**User Interface**

**1.Menu Frame**

**Graphical user interface

Description automatically generated with medium confidence**

**2.Registration Frame**

**Table

Description automatically generated with low confidence**

**3.Employe Registration Frame**

**Chart, bar chart

Description automatically generated**

**4.Customer Search Frame**

**Graphical user interface, application

Description automatically generated**

**5.Employe Search Frame**

**Graphical user interface, application

Description automatically generated**

**6.Bill Frame**

**Graphical user interface, text, application

Description automatically generated**

**Test Cases & Test Results**

A test case is a set of conditions or variables and inputs that are developed for a particular goal or objective to be achieved on a certain application to judge its capabilities or features. It might take more than one test case to determine the true functionality of the application being tested. Every requirement or objective to be achieved needs at least one test case. Some so fiware development methodologies like Rational Unified Process (RUP) recommend creating at least two test cases for each requirement or objective; one for performing testing through positive perspective and the other through negative perspective.

**Test Cases & Results**

**Login Validation:**

|  |  |  |
| --- | --- | --- |
| **Test Case** | **Test Result** | **Test** |
| No any input in username and password | Display Message “Enter Username and Password” | Pass |
| Input in Username Field & blank Password Field | Display Message “Enter Password” | Pass |
| Input in Password Field & blank Username Field | Display Message “Enter Username” | Pass |
| Input Incorrect Username and Password | Display Message “Enter Correct Username & Password” | Pass |

**Registration Form Validation:**

|  |  |  |
| --- | --- | --- |
| **Test Case** | **Test Result** | **Test** |
| Input in all Fields & blank Customer Name | Display Message “Enter Customer Name” | Pass |
| Input in all Fields & blank Address | Display Message “Enter Address” | Pass |
| Input in all Fields & blank Contact No. | Display Message “Enter Contact No.” | Pass |
| Enter Contact No. of length less than 10 and greater than 10 | Display Message “Enter Correct Contact No.” | Pass |
| Input in all Fields & blank ID | Display Message “Enter ID.” | Pass |
| Input in all Fields & blank Check Out | Display Message “Set Check Out Date” | Pass |
| Enter No Days as “2” and click on set button | Display the date after 2 days from current in checkout text field | Pass |
| Enter No Peoples greater than 3 and less than 1 | People less than 1 & more than 3 are not allowded | Pass |
| Check all buttons working or not | All buttons working properly | Pass |

**Employee Registration Form Validation:**

|  |  |  |
| --- | --- | --- |
| **Test Case** | **Test Result** | **Test** |
| Input in all Fields & blank Employee Name | Display Message “Enter Employee Name” | Pass |
| Input in all Fields & blank Address | Display Message “Enter Address” | Pass |
| Enter Contact No. of length less than 10 and greater than 10 | Display Message “Enter Correct Contact No.” | Pass |

**Customer Search Form Validation:**

|  |  |  |
| --- | --- | --- |
| **Test Case** | **Test Result** | **Test** |
| Enter Room No which is not present and click Search Button | Display Message “No data for this room no” | Pass |
| Enter Room No which is empty and click Search Button | Display Message “No data for this room no” | Pass |
| Enter Correct Room No and click Search Button | All details of customer of that room will be displayed | Pass |
| Click on Reset Button | All text field should become blank | Pass |
| Update any detail and click on Update Button | Data should be updated and “Updated successfully” message should be displayed | Pass |

**Employee Search Form Validation:**

|  |  |  |
| --- | --- | --- |
| **Test Case** | **Test Result** | **Test** |
| Enter Employee No which is not present and click Search Button | Display Message “No data for this id” | Pass |
| Enter Correct Employee No and click Search Button | All details of Employee will be displayed | Pass |
| Click on Reset Button | All text field should become blank | Pass |
| Update any detail and click on Update Button | Data should be updated and “Updated successfully” message should be displayed | Pass |

**Conclusion**

Data processing and presentation is very fast as compared to existing system. It's saving an employee's time which can be utilized for other work. The paper work is reduced, customer service can be improved and there will be less possibility of human error.

This project report is basically developed by taking into consideration the problems and the drawbacks that are faced by existing system. This system provides the user the best available information and knowledge, We have tried to make this system error free. We have been successful enough to conclude that our system is appropriate and useful for all hotel management.

Whenever a system is developed, the factors taken into consideration are the present existing system in which, work is being carried out and people who are using the system. Similarly, this system has few areas where if implements done would make it versatile. More online help will make this system more users friendly

**Limitations**

The system is for admin use only. Only the admin can enter data in the database and update it as per his choice. Online room booking is not Available. The software is designed based on the role of Hotel Manager Only. The monitoring module will display an overview of the system, the administrator is the only authorized person to view and manipulate the content of this module (Overview, Room Overview, Confirmed Reservation Overview, and User Overview).

* Hotel Management System is meant to be for Hotels and resorts only.
* The hotel management system makes use of one lone centralized database running a central server.
* The data transactions are executed in off-line mode, hence online data for Rooms, Customers capture and modification is not possible.
* Another limitation of the system is that customer’s signature will not be captured. This process might make procedures cumbersome, which is what the study hopes to eliminate; however, it captures full details of the customer

**Future Scope**

1. Updating of data can be added and more reports can be added to improve the system.
2. More security features for reports and transactions can be added to the system.
3. All other transactions carried out in the systems which are not included in the developed software can be considered in future.
4. To make software for customer use also.
5. Get this software online.

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**Links-**

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