Mini Project Report

HOTEL MANAGEMENT SYSTEM USING C PROGRAMMING

Submitted by:

SANJANA GUPTA (1903480100092)

TANISHKA GUPTA (1903480100113)

Under Supervision of:

Dr. Sumit Kumar
Dept. of Computer Science and Engineering

PSIT College of Engineering
Kanpur

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
PSIT College of Engineering, Kanpur

Declaration

I hereby declare that the project entitled-"HOTEL MANAGEMENT SYSTEM Using C Programming", which is being submitted as Mini Project of 3rd Semester in Computer Science and Engineering to PSIT COLLEGE OF ENGINEERING, KANPUR is an authentic record of my genuine work done under the guidance of Dr. Sumit Kumar, Dept. of Computer Science and Engineering, PSIT COLLEGE OF ENGINEERING, KANPUR.

-SANJANA GUPTA

-TANISHKA GUPTA

Acknowledgement

It is always a pleasure to remind the fine people in the PSIT College of Engineering for their sincere guidance I received to uphold my practical as well as laboratory skills in programming.

I am highly indebted to Dr. Sumit Kumar for his guidance and constant supervision as well as for providing necessary information regarding the project & also for his support in completing the project.

I would like to express my gratitude towards my parents for their kind co-operation and encouragement which helped me in completion of this project.

I would also like to thank to our HOD Mr. Pradeep Rai, Dept. of Computer Science and Engineering, PSIT College of Engineering, for his expert advice and counseling time to time.

My thanks and appreciations also go to my friends in developing the project and people who have willingly helped me out with their abilities.

- SANJANA GUPTA
-TANISHKA GUPTA

Certificate

This is to certify that the mini project report entitled “Hotel Management System Using C Programming” submitted by **Sanjana Gupta** and **Tanishka Gupta** has been carried out under the guidance of Dr. Sumit Kumar, Dept. of Computer Science and Engineering, PSIT COLLEGE OF ENGINEERING, KANPUR. The project report is approved for submission requirement for Mini Project in 3rd semester in Computer Science and Engineering from, PSIT COLLEGE OF ENGINEERING, KANPUR.

_____

_____

Mr. Pradeep Rai
Head of CSE Dept,
PSITCOE
Principal Investigator

Dr. Sumit Kumar
Dept of CSE, PSITCOE
Project In-charge

_____

External Examiner

Abstract

Hotel Management System is a simple console application without graphics that is developed in C platform. In our project as **"Hotel Management System"** we have tried to show how data / information in hotel is managed. This is just an overview of management in hotels. This has been achieved by dividing the project into various modules. The objective of the project is to design Hotel Management application which enables the manager to keep the record of the hotel and the customer. We have included only few modules as our purpose is to only have the idea or to study about how the management is done in hotels. By adding many more modules this type of

project can have scope in various hotels.

Login system is also available in this system to make it more secure. There's no chance of data misuse or loss & it's not time-consuming.

Contents

i. INTRODUCTION…….. **1**

ii. SYSTEM ANALYSIS…… **2**

iii. FEASIBILITY ANALYSIS…….. **4**

iv. REQUIRED SPECIFICATION…… **5**

v. SYSTEM DESIGN…… **6**

vi. DATABASE DESIGN…….. **8**

vii. SOURCE CODE…… **9**

viii. SOME SNAP SHOTS…….. **19**

ix. CONCLUSION…… **21**

x. REFERENCE…….. **22**

INTRODUCTION

The project titled **"Travel Stay Hotel"** is a simple console application without graphics that is developed in C platform. Our project on hotel management system gives an idea about the management in hotels the package gives all the information regarding the details of the customer. The customer can make his or her bookings for room it gives details of the customer and the time of arrival and departure of customer. The software is very useful to the departments for managing their activities. Although hotels are already having well developed software for information management, we just want to study how this is done. So, we have selected hotel management system as a project. Developing software on a topic like hotel management system has much scope, it can be made more attractive and many more modules can be attached to provide various services to customers . Login system is also available in this system to make it more secure. There's no chance of data misuse or loss & it's not time-consuming. The whole project is developed in 'C' Programming language, different variables and strings have been used for the development of this project. It's easy to operate and understand by users.

Features:

1. Proper login system
2. Book a room
3. View customer record
4. Delete customer record
5. Search customer record
6. Edit customer record

SYSTEM ANALYSIS

Existing System :

System analysis is a detailed study of the various operation performed by a system and their relationships within and outside of the system. Here the key question is- What all problems exist in the present system? What must be done to solve the problem? Analysis begins when a user or manager begins a study of the program using existing system.

During analysis data collected on the various files, decision points and transactions handled by the present system. Training, experience and common sense are required for collection of relevant information needed to develop the system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution.

A good analysis model should provide not only the mechanisms of problem understanding but also the framework of the solution. Thus, it should be studied thoroughly by collecting data about the system. Then the proposed system should be analyzed thoroughly in accordance with the needs.

System analysis can be categorized into four parts:

- System planning and initial investigation
- Information Gathering
- Applying analysis tools for structured analysis
- Feasibility study
- Cost/ Benefit analysis

The main aim of the entire activities is to automate the process of day-to-day activities of hotel like, room activities, admission of a new customers, assign a room according to customers demand. The limited time and resources have restricted us to incorporate in this project ,only a main activities that are performed in hotel management system but atmosphere has been taken to make the system efficient and user-friendly.

Proposed System:

The hotel management system provides the quality service to the end user. This project aims at creating on Hotel Management System which can be used by Admin with the help of login details. This system stores the data /information of each customer to prevent any further issues. The Admin stores the booking information of customers.

ADVANTAGES:

•To overcome the problems of Existing System, online hotel management system is proposed.

•The central objective of hotel management is to provide facility for booking rooms.

•This project provides high security to user's information.

•This software can manage and keep records of hotel.

FEASIBILITY ANALYSIS

Whatever we think need not be feasible. It is wise to think about the feasibility of any problem we undertake. Feasibility is the study of impact, which happens in the organization by the development of a system. The impact can be either positive or negative. When the positives nominate the negatives, then the system is considered feasible. Here the feasibility study can be performed in two ways such as Technical Feasibility and Economical Feasibility.

- **Technical Feasibility:** We can strongly say that it is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. All the resources needed for the development of the software as well as the maintenance of the same is available in the organization; here we are utilizing the resources which are available already.

- **Economical Feasibility:** Development of this application is highly feasible. The organization needed not spend much more for the development of the system already available. The only thing is to be done is making an environment for the development with an effective supervision. I we are doing so, we can attain the maximum usability of the corresponding resources. Even after the development the organization will not be in a condition to invest more in the organization. Therefore, the system is economically feasible.

REQUIRED SPECIFICATION

1. **Hardware Requirements:**

   - PC with Pentium IV processor.
   - 512 MB RAM or above.
   - 40 GB Hard Disk or above.

2. **Software Requirements:**

   - Operating System: Windows 7,8,10 (or latest).
   - Integrated development environment(IDE) : Dev-C++ or Turbo C.

SYSTEM DESIGN

- **Input Design:**

  Input Design is the process of converting user-oriented input to a computer based format. Input design is a part of overall system design, which requires very careful attention. Often the collection of input data is the most expensive part of the system.

  The main objectives of the input design are:

  1. Produce cost effective method of input
  2. Achieve highest possible level of accuracy
  3. Ensure that the input is acceptable to and understood by the staff.

  Input Data: The goal of designing input data is to make enter easy, logical and free from errors as possible. The entering data entry operators need to know the allocated space for each field; filed sequence and which must match with that in the source document. The format in which the data fields are entered should be given in the input form. Here data entry is online; it makes use of processor that accepts commands and data from the operator through a keyboard. The input required is analyzed by the processor. It is then accepted or rejected. Input stages include the following processes:

  - Data recording
  - Data Transcription
  - Data Conversion
  - Data Verification
  - Data Control
  - Data Transmission
  - Data Correction

One of the aims of the system analyst must be to select data capture method and devices, which reduce the number of stages so as to reduce both the chances of error and cost. Input types can be categorized as:

- External
- Internal
- Operational
- Interactive
- Computerized

Input files can exist in document from before being input to the computer. Input design is rather complex since it involves procedures for capturing data as well as inputting it to the computer.

- **Output Design:**
  Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of these results for latter consultation. Computer output is the most important and direct source of information to the users. Designing computer output should proceed in an organized well throughout the manner. The right output must be available for the people who find the system easy to use. The outputs have been defined during the logic design stage. If not, they should defined at the beginning of the output designing terms of types of output connect, format, response, etc.

  Various types of outputs are:
  - External Outputs
  - Internal Outputs
  - Operational Outputs
  - Interactive Outputs
  - Turn around Outputs

  All screens are informative and interactive in such a way that the user can full fill his requirements through asking queries.

DATABASE DESIGN

The general theme behind a database is to handle information as an integrated whole. A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and effectively. After designing input and output, the analyst must concentrate on database design or how data should be organized around user requirements. The general objective is to make information access, easy quick, inexpensive and flexible for other users. During database design the following objectives are concerned:-

- Controlled Redundancy
- Data Independence
- Accurate and integrating
- More information at low cost
- Recovery from failure
- Privacy and security
- Performance
- Ease of learning and use

SOURCE CODE

```
#include<stdio.h>
#include<conio.h>
#include<ctype.h>
#include<windows.h>
#include<stdlib.h>
#include<time.h>

void add();  //FUNCTIONS
void list();
void edit();  //GLOBALLY DECLARED FUNCTIONS N VARIABLE
void delete1();
void search();

void setcolor(int ForgC)
{ WORD wColor;
HANDLE hStdOut=GetStdHandle(STD_OUTPUT_HANDLE);
CONSOLE_SCREEN_BUFFER_INFO csbi;

if(GetConsoleScreenBufferInfo(hStdOut,&csbi))
{
        wColor=(csbi.wAttributes & 0xB0)+(ForgC & 0x0B);
//      SetConsoleTextAttributes(hStdOut,wColor);
        SetConsoleTextAttribute(hStdOut,wColor);
```

```
}
}

void login()
{

        int a=0,i=0;
   char uname[10],c=' ';
   char pword[10],code[10];
   char user[10]="user";
   char pass[10]="pass";
   do
{
        system("cls");

   printf("\n  *********  LOGIN FORM  *********  ");
   printf(" \n                  ENTER USERNAME:-");
        scanf("%s", &uname);
        printf(" \n                  ENTER PASSWORD:-");
        while(i<10)
        {
          pword[i]=getch();
          c=pword[i];
```

```
    if(c==13) break;
    else printf("*");
    i++;
  }
  pword[i]='\0';
  //char code=pword;
  i=0;
  //scanf("%s",&pword);
   if(strcmp(uname,user)==0 && strcmp(pword,pass)==0)
  {
  printf("  \n\n\n      WELCOME !!!! LOGIN IS SUCCESSFUL");

  break;
  }
  else
  {
   printf("\n       SORRY !!!!  LOGIN IS UNSUCESSFUL");
   a++;

   getch();

  }
}
  while(a<=2);
```

```
		if (a>2)
		{
		 printf("\nSorry you have entered the wrong username and password for four times!!!");

		 getch();

		 }
		 system("cls");
}

struct CustomerDetails   //STRUCTURE DECLARATION
{
		char roomnumber[10];
		char name[20];
		char address[25];
		char phonenumber[15];
		char nationality[15];
		char email[20];
		char period[10];
		char arrivaldate[10];
}s;

int main(){    // MAIN FUNCTION
```

```
int i=0;


time_t t;
time(&t);
char customername;
char choice;


system("cls");   // FOR CLEARING SCREEN
setcolor(15);
printf(" ------------------------------------------------------------------------
-\n");
printf("|                                                        |\n");
printf("|                                                        |\n");
printf("|  OOOOOO   OOOOOO OOOOOO OOOOOO OOOOOO
OOOOOO O     O OOOOOOO  OOOOOO   |\n");
printf("|  O      O   O O     O      O     O   O O   O O      O      |\n");
printf("|  O  OOOOO OOOOOO OOOOO  OOOOO   O     O   O  O   O
O  OOOOO OOOOOO   |\n");
printf("|  O    O   O  O  O     O      O     O   O   O  O O   O      O
|\n");
printf("|  OOOOOO   O   O  OOOOOO OOOOOO   O   OOOOOO O
O O OOOOOO   OOOOOO   |\n");
printf("|                                                        |\n");
printf(" ------------------------------------------------------------------------
-\n");
printf("\t\t*****************\n");
```

```
            printf("\t\t*                                *\n");
            printf("\t\t*      ----------------------------      *\n");
            printf("\t\t*       WELCOME TO HOTEL DESERT CAVE
*\n");
            printf("\t\t*      ----------------------------      *\n");
            printf("\t\t*                                *\n");
            printf("\t\t*                                *\n");
            printf("\t\t*                                *\n");
            printf("\t\t*    Brought To You By code-projects.org      *\n");
            printf("\t\t*             ESP,XYZ                *\n");
            printf("\t\t*    CONTACT US:18-87454575552,035455852
*\n");
            printf("\t\t*****************\n\n\n");
             for(i=0;i<80;i++)
             printf("-");
               printf("\nCurrent date and time : %s",ctime(&t));
               for(i=0;i<80;i++)
             printf("-");
            printf(" \n Press any key to continue:");


            getch();
   system("cls");
   login();
   system("cls");
            while (1)     // INFINITE LOOP
```

```
{
 system("cls");
 setcolor(10);
  for(i=0;i<80;i++)
 printf("-");
 printf("\n");
 printf("   **********  |MAIN MENU|  ********** \n");
 for(i=0;i<80;i++)
 printf("-");
 printf("\n");
 setcolor(10);
 printf("\t\t Please enter your choice for menu:");
 printf("\n\n");
 printf(" \n Enter 1 -> Book a room");
 printf("\n-----------------------");
 printf(" \n Enter 2 -> View Customer Record");
 printf("\n---------------------------------");
 printf(" \n Enter 3 -> Delete Customer Record");
 printf("\n---------------------------------");
 printf(" \n Enter 4 -> Search Customer Record");
 printf("\n---------------------------------");
 printf(" \n Enter 5 -> Edit Record");
 printf("\n----------------------");
 printf(" \n Enter 6 -> Exit");
```

```
printf("\n-----------------");
printf("\n");
for(i=0;i<80;i++)
printf("-");
  printf("\nCurrent date and time : %s",ctime(&t));
  for(i=0;i<80;i++)
printf("-");

choice=getche();
choice=toupper(choice);
switch(choice)          // SWITCH STATEMENT
{
        case '1':
                add();break;
        case '2':
                list();break;
        case '3':
                delete1();break;
        case '4':
                search();break;
        case '5':
                edit();break;
        case '6':
                system("cls");
```

```
                printf("\n\n\t **THANK YOU**");
                printf("\n\t FOR TRUSTING OUR SERVICE");
        //      Sleep(2000);
                exit(0);
                break;
        default:
                system("cls");
                printf("Incorrect Input");
                printf("\n Press any key to continue");
                getch();
         }
        }
}

void add()
{
        FILE *f;
        char test;
        f=fopen("add.txt","a+");
        if(f==0)
        {   f=fopen("add.txt","w+");
         system("cls");
         printf("Please hold on while we set our database in your
computer!!");
```

```
 printf("\n Process completed press any key to continue!! ");
 getch();
}
while(1)
{
 system("cls");
 printf("\n Enter Customer Details:");
 printf("\n**********");
 printf("\n Enter Room number:\n");
 scanf("\n%s",s.roomnumber);
 fflush(stdin);
 printf("Enter Name:\n");
 scanf("%s",s.name);
 printf("Enter Address:\n");
 scanf("%s",s.address);
 printf("Enter Phone Number:\n");
 scanf("%s",s.phonenumber);
 printf("Enter Nationality:\n");
 scanf("%s",s.nationality);
 printf("Enter Email:\n");
 scanf(" %s",s.email);
 printf("Enter Period(\'x\'days):\n");
 scanf("%s",&s.period);
 printf("Enter Arrival date(dd\\mm\\yyyy):\n");
```

```
                scanf("%s",&s.arrivaldate);
                fwrite(&s,sizeof(s),1,f);
                fflush(stdin);
                printf("\n\n1 Room is successfully booked!!");
                printf("\n Press esc key to exit,  any other key to add another customer detail:");
                test=getche();
                if(test==27)
                        break;

        }
        fclose(f);
}

void list()
{
        FILE *f;
        int i;
        if((f=fopen("add.txt","r"))==NULL)
         exit(0);
        system("cls");
        printf("ROOM    ");
        printf("NAME\t ");
        printf("\tADDRESS ");
```

```
printf("\tPHONENUMBER ");
printf("\tNATIONALITY ");
printf("\tEMAIL ");
printf("\t\t  PERIOD ");
printf("\t ARRIVALDATE \n");

for(i=0;i<118;i++)
  printf("-");
while(fread(&s,sizeof(s),1,f)==1)
{
  /*printf("ROOMNUMBER :\t%s\n",s.roomnumber);
  printf("NAME:\t%s\n",,s.name);
  printf("ADDRESS:\t%s\n",s.address);
  printf("PHONENUMBER:\t%s\n",s.phonenumber);
  printf("NATIONALITY \n");*/
  printf("\n%s \t%s \t\t%s \t\t%s \t%s  \t%s  \t   %s  \t
%s",s.roomnumber, s.name , s.address , s.phonenumber ,s.nationality
,s.email,s.period,  s.arrivaldate);
}
printf("\n");
for(i=0;i<118;i++)
  printf("-");

fclose(f);
getch();
```

```
}

void delete1()
{
        FILE *f,*t;
        int i=1;
        char roomnumber[20];
        if((t=fopen("temp.txt","w"))==NULL)
        exit(0);
        if((f=fopen("add.txt","r"))==NULL)
        exit(0);
        system("cls");
        printf("Enter the Room Number of the hotel to be deleted from
the database: \n");
        fflush(stdin);
        scanf("%s",roomnumber);
        while(fread(&s,sizeof(s),1,f)==1)
        {
         if(strcmp(s.roomnumber,roomnumber)==0)
         {      i=0;
                continue;
         }
         else
                fwrite(&s,sizeof(s),1,t);
```

```
            }
            if(i==1)
            {
              printf("\n\n Records of Customer in this  Room number is not
found!!");
              //remove("E:/file.txt");
               //rename("E:/temp.txt","E:/file.txt");
              getch();
              fclose(f);
              fclose(t);
              main();
            }
            fclose(f);
            fclose(t);
            remove("add.txt");
            rename("temp.txt","add.txt");
            printf("\n\nThe Customer is successfully removed....");
            fclose(f);
            fclose(t);
            getch();
}

void search()
{
```

```
system("cls");
        FILE *f;
        char roomnumber[20];
        int flag=1;
        f=fopen("add.txt","r+");
        if(f==0)
          exit(0);
        fflush(stdin);
        printf("Enter Room number of the customer to search its
details: \n");
        scanf("%s", roomnumber);
        while(fread(&s,sizeof(s),1,f)==1)
        {
          if(strcmp(s.roomnumber,roomnumber)==0){
                flag=0;
                printf("\n\tRecord Found\n ");
                printf("\nRoom Number:\t%s",s.roomnumber);
                printf("\nName:\t%s",s.name);
                printf("\nAddress:\t%s",s.address);
                printf("\nPhone number:\t%s",s.phonenumber);
                printf("\nNationality:\t%s",s.nationality);
                printf("\nEmail:\t%s",s.email);
                printf("\nPeriod:\t%s",s.period);
                printf("\nArrival date:\t%s",s.arrivaldate);
```

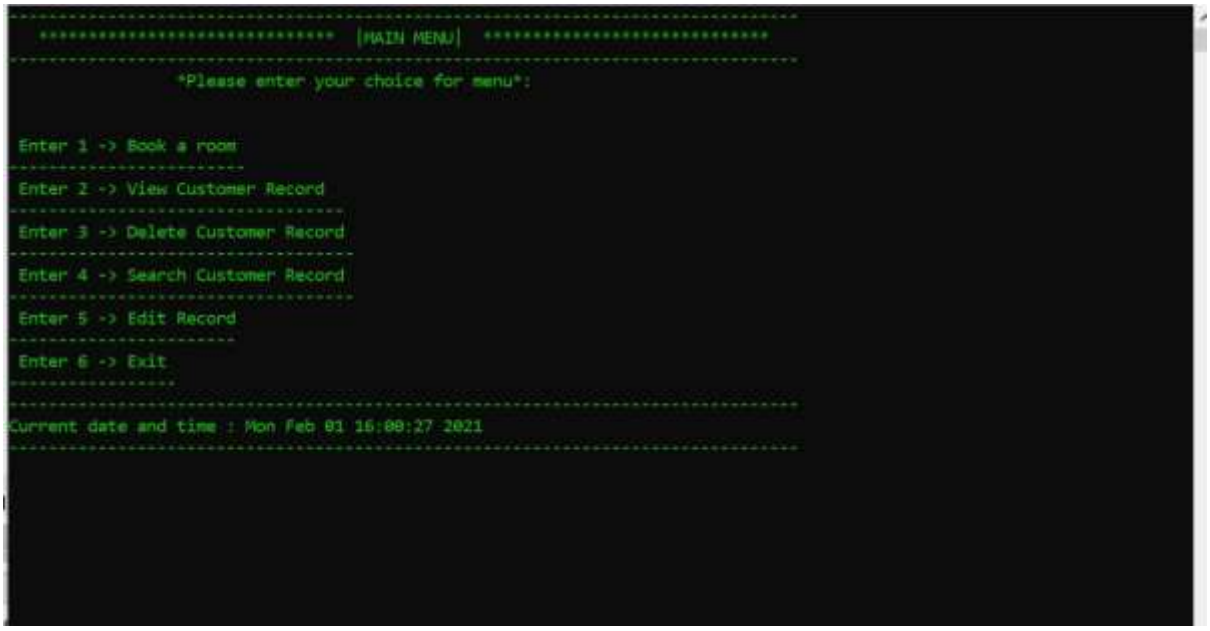
```
                flag=0;
                break;
             }
            }
            if(flag==1){
              printf("\n\tRequested Customer could not be found!");
            }
            getch();
            fclose(f);
}

void edit()
{
            FILE *f;
            int k=1;
            char roomnumber[20];
            long int size=sizeof(s);
            if((f=fopen("add.txt","r+"))==NULL)
              exit(0);
            system("cls");
            printf("Enter Room number of the customer to edit:\n\n");
            scanf("%[^\n]",roomnumber);
            fflush(stdin);
            while(fread(&s,sizeof(s),1,f)==1)
```

```
{
 if(strcmp(s.roomnumber,roomnumber)==0)
 {
        k=0;
        printf("\nEnter Room Number    :");
        gets(s.roomnumber);
        printf("\nEnter Name    :");
        fflush(stdin);
        scanf("%s",&s.name);
        printf("\nEnter Address       :");
        scanf("%s",&s.address);
        printf("\nEnter Phone number :");
        scanf("%f",&s.phonenumber);
        printf("\nEnter Nationality :");
        scanf("%s",&s.nationality);
        printf("\nEnter Email :");
        scanf("%s",&s.email);
        printf("\nEnter Period :");
        scanf("%s",&s.period);
        printf("\nEnter Arrival date :");
        scanf("%s",&s.arrivaldate);
        fseek(f,size,SEEK_CUR);  //to go to desired position infile
        fwrite(&s,sizeof(s),1,f);
        break;
```

```
        }
      }
      if(k==1){
        printf("\n\nTHE RECORD DOESN'T EXIST!!!!");
        fclose(f);
        getch();
      }else{
      fclose(f);
      printf("\n\n\t\tYOUR RECORD IS SUCCESSFULLY EDITED!!!");
      getch();
}
}
```


WELCOME TO HOTEL Travel Stay
-:PROJECT MAKERS:-
Tanishka & Sanjana
WELCOMES YOU!
Current date and time : Mon Feb 01 15:55:17 2021
Press any key to continue:


|MAIN MENU|
Please enter your choice for menu:
Enter 1 -> Book a room
Enter 2 -> View Customer Record
Enter 3 -> Delete Customer Record
Enter 4 -> Search Customer Record
Enter 5 -> Edit Record
Enter 6 -> Exit
Current date and time : Mon Feb 01 16:08:27 2021

CONCLUSION

- This project is designed to meet the requirements of Online Hotel Management.
- It has been developed with keeping in mind the specifications of the system.
- For designing the system we have used simple data flow diagrams. Overall the project teaches us the essential skills like:
    - Using system analysis and design techniques like data flow diagram in designing the system.
- In Online hotel management system, We have developed a secure, user-friendly Hotel Management System.
- This System will Help them to properly Manage their Hotel and help in growth without creating and hassle. This System is completely secure and there is no chance of any unauthorised access.
- So, using this system will help in reducing the labour and provide more facility to like Hotel and visit again and again.

REFERENCES

projectnotes.org

blog.eduonix.com

P.S DeshPandey,"C and Data Structure",Wiley DreamTech Publication

Codewithc.com

Kanetkar Yashavant P "Let Us C",BPB Publications

programiz.com