Hotel management system

A PROJECT REPORT

SUBMITTED IN COMPLETE FULFILLMENT OF

THE REQUIREMENTS

FOR THE AWARD OF THE DEGREE

OF

BACHELOR OF TECHNOLOGY

IN

MATHEMATICS AND COMPUTING

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CANDIDATE'S DECLERATION

We, Sajal Sameer(2K20/A7/61) and Gaurav Manik Satpute (2K20/A7/04) students of B. Tech. (Mathematics and Computing) hereby declare that the project Dissertation titled "Hotel Management System" which is submitted by us to the Department of Computer Science, Delhi Technological University, Delhi in partial fulfilment of the requirement for the award of the degree of Bachelor of Technology, is original and not copied from any source without proper citation. This work has not previously formed the basis for the award of any Degree, Diploma Associateship, Fellowship or other similar title or recognition.

Place: Delhi   Sajal Sameer(2K20/A7/61)

Date:06-07-2021   Gaurav Manik Satpute 2K20/A7/04)

CANDIDATE'S DECLARATION

We Sajal Sameer(2K20/A7/61) and Gaurav Manik Satpute(2K20/A7/04) student of B. Tech. (Mathematics and Computing) hereby declare that the project Dissertation titled "**Hotel Management System**" which is submitted by me to the Department of Computer Science, Delhi Technological University, Delhi in partial fulfilment of the requirement for the award of the degree of Bachelor of Technology, is original and not copied from any source without proper citation. This work has not previously formed the basis for the award of any Degree, Diploma Associate-ship, Fellowship or other similar title or recognition.

Place: Delhi   Sajal Sameer(2K20/A7/61)

Date: 06-07-2021   Gaurav Manik Satpute(2K20/A7/04)

CERTIFICATE

I hereby certify that the project Dissertation titled "**Hotel Management System**" which is submitted by Sajal Sameer(2K20/A7/61) and Gaurav Manik Satpute(2K20/A7/04) [Mathematics and Computing], Delhi Technological University, Delhi in complete fulfilment of the requirement for the award of the degree of the Bachelor of Technology, is a record of the project work carried out by the students under my supervision. To the best of my knowledge this work has not been submitted in part or full for any Degree or Diploma to this University or elsewhere.

Place: Delhi   Gull Kaur

Date:06-07-2021   (Subject Teacher)

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CONTENTS

Introduction

We choose this topic as we thought that in these tough covid times it is important to spend some quality time with family for which the best thing is to go to new places and you will need to stay in a hotel for that but can safety be compromised for fun "BIG NO" so we come up with the idea of making a hotel management system so you can book review and view a hotel through the comfort of your home and you can easily enjoy your quality time without taking the headache of coming to the hotel before your trip and then booking manually which obviously puts you at threat of coming in contact with covid.

We know that these covid times have limited fun to a great extent so our program encourages people to start enjoying life once again and spend quality time with their loved ones. Our program is user-friendly and allows you to learn a lot about the hotel you are booking.

Background

We have given three options to the user namely:

1. Booking

2. Reviewing

3. Viewing

These three functionalities help the user to book his room easily and without any problem. We have used c language in our program and have used basically five concepts:-

1. Structure
2. Functions
3. Strings
4. Pointer
5. File Handling

The previous works on this topic were very basic as they can't distinguish between different users but our project is different as it is user friendly and also we have made it sure that if the user inputs anything wrong then the program stops him and till the time he/she don't give a correct value the program flow doesn't advance. So basically our program doesn't allow garbage values as it creates a challenge for management and having the hotel distinguish between fake and real accounts.

People thought that making a management project in a group was a mistake but we tried to make our project as complex as possible and used all the concepts learned in class to full caliber and we at last came up with our project which is something complex and is not that easy as people thought it was.

We tried to give our best and we face many issues in the programming as well but we at last were able to succeed and came up with our management software as something which any hotel can buy from us and have his booking system shifted to online.

Project

We first made a basic layout and then added functionalities to it as and when needed according to the level of complexity we needed for a group project and upto the standards of our esteemed college.

We had used many functions apart from book review and view to make our project look good like allot function and date check function, this not only increases complexity but

improves customer friendly nature of our program and the management system.

We have also used structures and pointers to make the flow of the program easy and also to effectively use program flow to make the booking system effective.

In our opinion any small idea can be enhanced and can be transformed to a very good program so one should not thing about a complex program but should think how to modify already existing programs and correct their defaults to improve the program and help mankind by making their work easier.

Design

We have basically added 3 main features in our "Hotel Management Project". These features are book, review, and view. We have made 3 functions to implement these features, which are void book( ), void review, and void view( ) So, we will be describing these features in detail.

1. Void book()

This function is basically for the booking mechanism.

We first ask the user to enter the name. Now we compare the name of all existing users with the new user if the name matches then the user is asked to enter the password, if the password is wrong then the user will have to make a new Id. On the other hand, if the user is a new one then he will have to set the password.

```c
do
{
    flag1 = 0;
    printf("\nEnter Name: ");
scanf("%s",a.name);
    pass = fopen("user Password Id","r");
    do
    {
        fscanf(pass,"%s : %s",user.name,user.password);
        if( strcmp(user.name,a.name) == 0 )
        {
            printf("\nYou are already an existing user\n\nEnter your password: ");
            char ipassword[100];
            scanf("%s",ipassword);
            if(strcmp(user.password,ipassword) == 0)
            {
                flag1 = 1;
            }
            else
            {
                flag1 = -1;
                printf("\nInvalid password, You will have to make a new account with a different name\n\n");
            }
            break;
        }
    }
    while( !feof(pass) );
    fclose(pass);
}
while(flag1 == -1);
```

Now the user will have to enter the date of check-in and check-out as per the format specified. Now check( ) function will be called. It will check whether the date entered is in the correct format or not. If the date entered is not in the correct order, then the user will be asked to enter the date again. This process will continue until the user enters the date in the correct format. Then a function checkdate( ) is called which checks whether the date entered is correct or not.

```c
if (flag1 == 1)
{
    printf("\nFROM date\n");
    r=check();
    a.from_day=r.d;
    a.from_month=r.m;
    a.from_year=r.y;
    printf("\nTO date\n");
    r=check();
    a.to_day=r.d;
    a.to_month=r.m;
    a.to_year=r.y;
    b=checkdate(a.from_day,a.from_month,a.from_year,a.to_day,a.to_month,a.to_year);
    while(b==1)
    {
        printf("\nThe dates you entered are not in proper order.Try again\n\n");
        printf("\nFROM date\n");
        r=check();
        a.from_day=r.d;
        a.from_month=r.m;
        a.from_year=r.y;
        printf("\nTO date\n");
        r=check();
        a.to_day=r.d;
        a.to_month=r.m;
        a.to_year=r.y;
        b=checkdate(a.from_day,a.from_month,a.from_year,a.to_day,a.to_month,a.to_year);
    }
}
```

Now a user will be asked to enter the no. of rooms he/she wants to book . Then the customer will be asked to enter the type of room. After getting this input from the user our program will check whether the room is available or not. This will be done by the repetitive calling of functions.

For Allotment of Room

Primarily printroom(....) is called, then allot(....) is called from the printroom function, then available(...) is called from allot, and at last compare(...) is called by available.
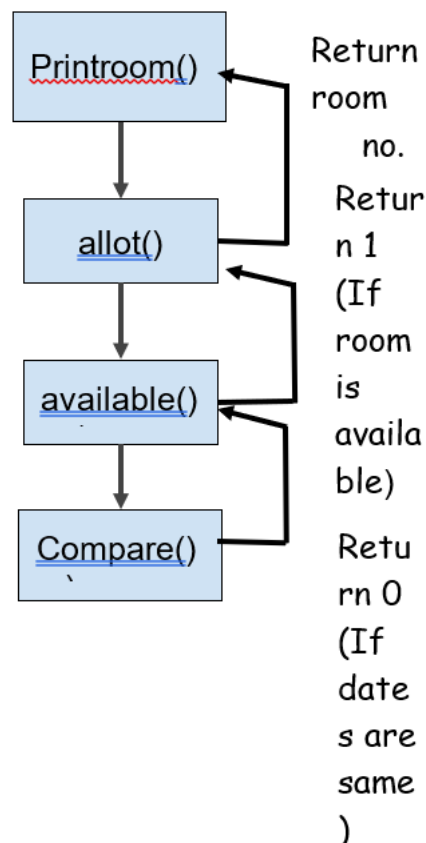
Printroom()

```c
int printroom(int choice)
{
    int choice1,num=0;
    num=allot(a.name,choice,a.from_day,a.from_month,a.from_year,a.to_day,a.to_month,a.to_year,a.status);
    if(num==0)
    {
        printf("\nSorry No room available of this type!\nTry another type:");
        scanf("%d",&choice1);
        printroom(choice1);
    }
    else
    {
        return num;
    }
}
```

Allot()

```c
//if the room is available then the user is alloted that room
int allot(char name1[],int type,int from_day,int from_month,int from_year,int to_day,int to_month,int to_year,char status1[])
{
    int i;
    for(i=(type*100)+1;i<(type*100)+10;i++)
    {
        if(available(name1,i,from_day,from_month,from_year,to_day,to_month,to_year,status1)==1)
        {
            return i;
        }
    }
    return 0;
}
```

Available()

```c
//checking if there is a room available in the user entered to and from date
int available(char name2[],int room,int from_day,int from_month,int from_year,int to_day,int to_month,int to_year,char status2[])
{
    FILE *q;
    int f=0,flag1=0,d1,m1,y1,d2,m2,y2,i=0,j,g=0;
    q=fopen("data","r");
    do
    {
        fscanf(q,"%s : Room no. %d from %d %d %d to %d %d %d : %s",a2.name,&a2.num,&a2.from_day,&a2.from_month,&a2.from_year,&a2.to_day,&a2.to_month,&a2.to_year,a2.status);
        if(a2.num==room)
        {
            if(compare(a2.from_day,a2.from_month,a2.from_year,a2.to_day,a2.to_month,a2.to_year,from_day,from_month,from_year,to_day,to_month,to_year)==0)
            {
                if(strcmp(a2.status,"Booked") == 0)
                {
                    return 0;
                }
            }
            flag1=1;
        }
    }while(!feof(q));

    if(flag1==1)
    {
        fclose(q);
        return 1;
    }
}
```

2. Void Review()

This is a review mechanism.

Primarily users will be asked to enter the name, If the user is a new user then a message that is "Invalid Username" will be printed on the screen. If the user is an existing user then his booking history will be displayed on the screen.
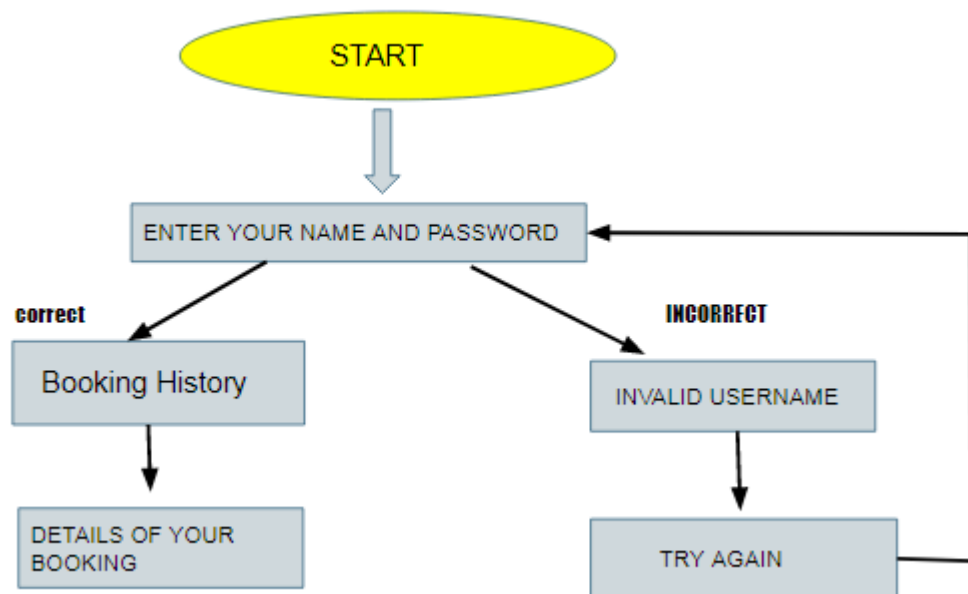
3. Void View()

This function will help the user to get a better view of the hotel. User will be provided 2 options:-

1. General floor view

2. Building view.

General floor view will help the user to see all the rooms at a particular floor. On the other hand, Building view will help the user to have a complete view of all the floors of the hotel.

RESULT

Home screen:-

```
********************************************************************************
********************************************************************************
**                                                                          **
**                                                                          **
**                                                                          **
**     |  | |   ____  _____  ____  _       |   ____  __  __    ___    _____  **
**     |  | |  |  _ \|_   _|| ___|| |      |  |____  |  |  |  |   |  |     | **
**     |__| |  | | | | | |  |___  | |      |      |  |  |  |  |   |  |     | **
**     |  | |  | | | | | |  | ___|| |      |      |  |  |  |  |   |  |     | **
**     |  | |  |_| |_| | |  |____||____|   |   ___|  |__|__|  |___|  |___|_| **
**     ------------------------------------------------------------------    **
**     ------------------------------------------------------------------    **
**                                                                          **
**               *********************************************           **
**               | CO-FOUNDERS ARE:                          |           **
**               |                                           |           **
**               |       Sajal Sameer  &  Gaurav Satpute     |           **
**               *********************************************           **
**                                                                          **
**                                                                          **
********************************************************************************
********************************************************************************

Enter:

1.  Book

2.  Review booking

3.  View

4.  Exit

Enter your choice: █
```

Booking:-

```
Enter Name: SRIJAN
You are a new user, please enter a password for your account: 12345

FROM date
Enter date in format (dd mm yyyy): 25 03 2021

TO date
Enter date in format (dd mm yyyy): 29 03 2021


Here are the type of rooms and their maximum occupancy with tariffs:
  Type            Max Occupancy      Tariff(/Night)
1.Single AC            1                 Rs.2500
2.Non AC Single        1                 Rs.2000
3.Double AC            2                 Rs.3500
4.Double Non AC        2                 Rs.3000
5.Duplex               4                 Rs.4500
6.Suite                5                 Rs.5000

Enter Number of Rooms you want:1

Enter Type of Room(Type 1 to 6):3

Hey SRIJAN, your booking is successful and your room number is 301!!

Total fare is Rs.14000
```

Review Booking :-

```
Enter your choice: 2

Review

Enter Name: SRIJAN

Enter your password: 12345

Booking History:

SRIJAN : Room no. 301 from 25 3 2021 to 29 3 2021 : Booked Fare:14000
```

Hotel View:-

```
Enter your choice: 3
Enter your choice:
 1.General floor
 2.All Floor view
 3.Exit
1
                        Sea Facing
|*****************************************************|
|                                                     |
|      _____       _____       _____      |
|     |         |     |         |     |         |     |
|     |    1    |     |    2    |     |    3    |     |
|     |_____|     |_____|     |_____|     |
|                                                     |
|                                                     |
|      _____       _____       _____      |
|     |         |     |         |     |         |     |
|     |    4    |     |    5    |     |    6    |     |
|     |_____|     |_____|     |_____|     |
|                                                     |
|                                                     |
|      _____       _____       _____      |
|     |         |     |         |     |         |     |
|     |    7    |     |    8    |     |    9    |     |
|     |_____|     |_____|     |_____|     |
|                                                     |
|*****************************************************|
Enter your choice:
 1.General floor
 2.All Floor view
 3.Exit
```

MOTIVATION

In these though time of covid we tried to make hotel booking system online as it will eradicate the potential threat of you being contacted with covid 19 if you manually book a hotel for your stay.

CONCLUSION

Our program helps any consumer to book a hotel room of his choice from the comfort of his home and also help him see the view of hotel as it will give him a better idea of which room he should book.