



Hotel Management System

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About Hotel management

- ▶ Managing a hotel comes with a range of responsibilities. We must be able to adapt to new challenges, help different departments and ensure the hotel maintains a standard of excellence.
- ▶ As a hotel manager, we will be responsible for overseeing and having a strong knowledge of finance, planning, service and organization. While we have a team of managers working alongside us, as hotel manager we have to lead rather than follow.
- ▶ We must also make sure your staff are managing their time and departments efficiently, whether that be through improving their monthly profits or simply ensuring a guest's expectations are exceeded.

Motivation for the program

- ▶ Usually when we have to book a room/service in any hotel, we have to go through many different processes which may involve paperwork as well
- ▶ The program we have made is to simplify the existing hotel booking system and make it easily accessible
- ▶ Now all we need to do to book a room is to select a few options, which also saves a lot of time

About our program

- ▶ The program is about hotel management, and is coded using Microsoft Visual Studio [C++].
- ▶ It involves giving the customers 7 options, that is, book a room, a lounge, a table, mode of transport, facilities and an option to exit.
- ▶ Then there are 4 options to choose from while booking a room and 3 options while booking a table.

- ▶ After selecting the desired mode of stay, you are allotted a room number.
- ▶ You are then presented with options for room service, which includes Wi-Fi, swimming pools etc.
- ▶ Then you are greeted with a 'thank you' message.

Module-wise representation

1. Choosing the mode of service –

- ❖ 1.1 A room
- ❖ 1.2 A dining table
- ❖ 1.3 A tourist vehicle
- ❖ 1.4 Room service
- ❖ 1.5 Facilities

2. Options for rooms –

- ❖ 2.1 Single bedrooms
- ❖ 2.2 Double bedrooms
- ❖ 2.3 Premium rooms
- ❖ 2.4 Luxury rooms

Module-wise representation

3. Enter table option –

- ❖ 3.1 Central tables
- ❖ 3.2 Pool side tables
- ❖ 3.3 Cozy corner tables

4. Enter desired tourist vehicle -

- ❖ 4.1 Bike
- ❖ 4.2 Car
- ❖ 4.3 Van

Module-wise representation

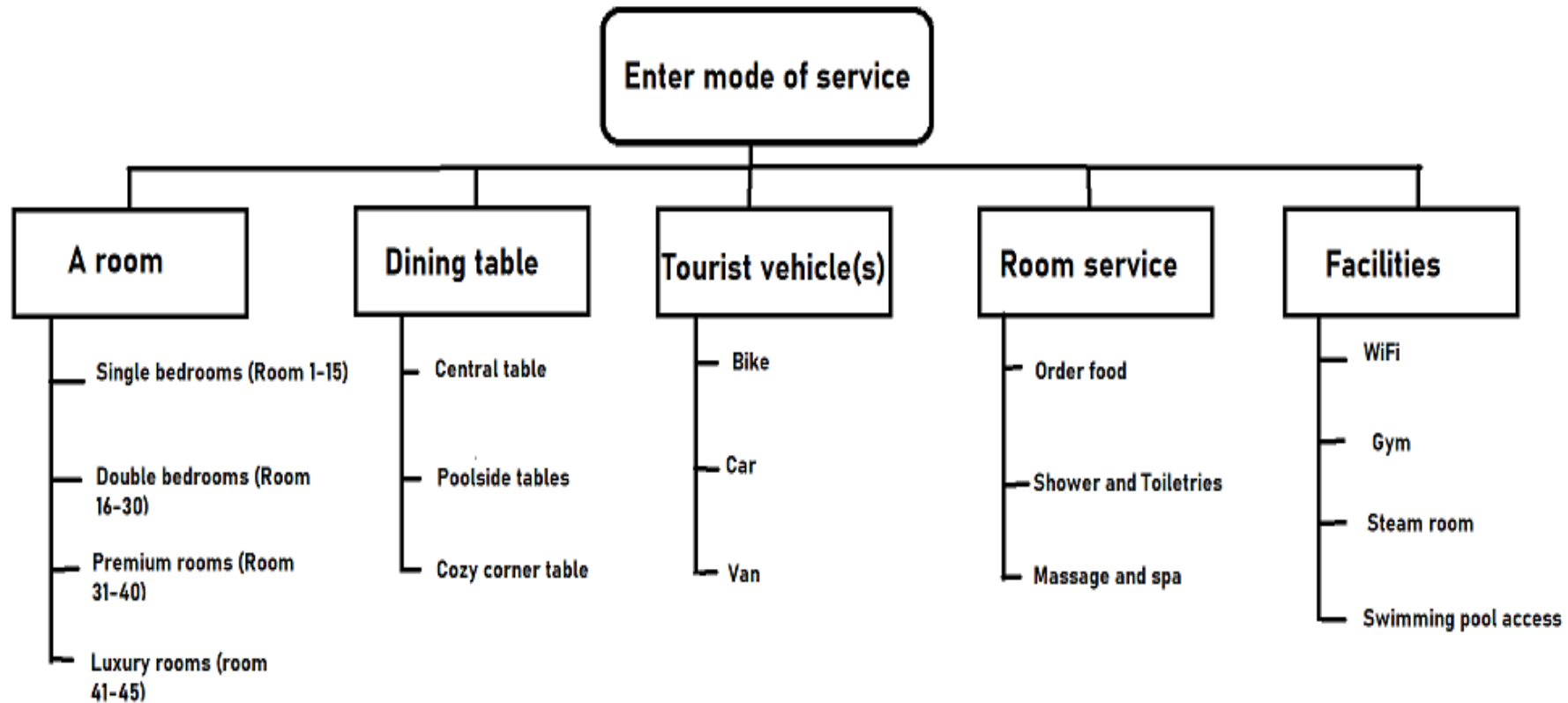
5. Room service options -

- ❖ 5.1 Order food
- ❖ 5.2 Shower and Toiletries
- ❖ 5.3 Massage and Spa

6. Facilities –

- ❖ 6.1 WIFI
- ❖ 6.2 Gym
- ❖ 6.3 Steam room
- ❖ 6.4 Swimming pool access

Rough flowchart of our program



Project Timeline



What exactly is C++?

- ▶ C++ is a programming language, which is an extension to the original C language. It was created by Bjarne Stroustrup.
- ▶ The modern C++ now has object-oriented, generic, and functional features in addition to facilities for low-level memory manipulation.



Different IDEs for coding in C++





Code will be shown now



Thank you!

Hotel Management Program

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```
#include<iostream>
using namespace std;
int main()
{
    cout<<"WELCOME TO OUR HOTEL"<<endl;
    cout<<"1.Book a Room"<<endl;
    cout<<"2.Book a Dining table"<<endl;
    cout<<"3.Book a Tourist vehicle"<<endl;
    cout<<"4.Room Service"<<endl;
    cout<<"5.Facilities"<<endl;
    int a;
    int y;
    cout<<"Enter the number of services you want:"<<endl;
    cin>>y;
    for(int p=1;p<=y;p++)
    {
        cout<<"WELCOME TO OUR HOTEL"<<endl;
        cout<<"1.Book a Room"<<endl;
        cout<<"2.Book a Dining table"<<endl;
        cout<<"3.Book a Tourist vehicle"<<endl;
        cout<<"4.Room Service"<<endl;
        cout<<"5.Facilities"<<endl;
        cout<<"6.Exit"<<endl;
        cout<<"Enter your desired action"<<endl;

        cin>>a;

        if(a==1)
        {
            cout<<"Single bed rooms          - Room no. 1-15"<<endl;
            cout<<"Double bed rooms          - Room no. 16-30"<<endl;
            cout<<"Luxury rooms              - Room no. 31-45"<<endl;
            cout<<"Premium rooms             - Room no. 46-60"<<endl;
            cout<<"Enter the room no. you want to book:"<<endl;
```



```

        while(1)
        {
            int b;
            cin>>b;
            if(b>0 && b<=60)
            {
                cout<<"THANK YOU for booking room no."<<b<<" Please
collect the room keys from the reception"<<endl;
                //j++;
                break;
            }
            else
                cout<<"Please enter a valid room no.:"<<endl;
        }
    }

    else if(a==2)
    {
        cout<<"1. Central tables          - Table no. 1 to 10"<<endl;
        cout<<"2. Pool side tables        - Table no. 11 to 20"<<endl;
        cout<<"3. Cozy corner tables      - Table no. 21 to 30"<<endl;
        cout<<"Enter the table no. you want to book:"<<endl;

        while(1)
        {
            int c;
            cin>>c;
            if(c>0 && c<=30)
            {
                cout<<" THANK YOU for booking table no."<<c<<" Your
table will be ready when you arrive"<<endl;
                //k++;
                break;
            }
            else
                cout<<"Please enter a valid table no:"<<endl;
        }
    }

    else if(a==3)
    {
        cout<<"1. Bike"<<endl;
        cout<<"2. Car"<<endl;
        cout<<"3. Van"<<endl;
        cout<<"Enter the Vehicle you want to book :"<<endl;

        while(1)
        {

```

```

        int d;
        cin>>d;
        if(d>0 && d<=3)
        {
            cout<<"THANK YOU for booking a vehicle. Your vehicle
will be ready when you arrive"<<endl;
            //l++;
            break;
        }
        else
            cout<<"Please enter a valid no."<<endl;
    }
}

else if(a==4)
{
    cout<<"1. Order food"<<endl;
    cout<<"2. Shower and Toileteries"<<endl;
    cout<<"3. Massages and Spa"<<endl;

    while(1)
    {
        int e;
        cin>>e;
        if(e==1)
        {
            cout<<"Thank you for your call we'll soon send the
drinks and the menu so that you can order your food via reception"<<endl;
            break;
        }
        else if(e==2 || e==3)
        {
            cout<<"THANK YOU for your call we will help you as
soon as possible "<<endl;
            //m++;
            break;
        }
        else
            cout<<"Please enter a valid response"<<endl;
    }
}

else if(a==5)
{
    cout<<"1.WIFI"<<endl;
    cout<<"2.GYM"<<endl;
    cout<<"3.STEAM ROOM"<<endl;
    cout<<"4.SWIMMING POOL"<<endl;
}

```

```

        while(1)
        {
            int f;
            cin>>f;
            if(f==1)
            {
                cout<<"We will soon provide you with the WIFI
password"<<endl;
                break;
            }
            else if(f==2 || f==3 || f==4)
            {
                cout<<"We have booked your slots. THANK YOU for
booking the slots"<<endl;
                //n++;
                break;
            }
            else
                cout<<"Please enter a valid no."<<endl;
        }
    }
}
cout<<"*****THANK YOU FOR VISITING
US*****"<<endl;
}

```

Output attached below

```
4
input
WELCOME TO OUR HOTEL
1.Book a Room
2.Book a Dining table
3.Book a Tourist vehicle
4.Room Service
5.Facilities
Enter the number of services you want:
4
WELCOME TO OUR HOTEL
1.Book a Room
2.Book a Dining table
3.Book a Tourist vehicle
4.Room Service
5.Facilities
6.Exit
Enter your desired action
1
Single bed rooms      - Room no. 1-15
Double bed rooms     - Room no. 16-30
Luxury rooms         - Room no. 31-45
Premium rooms        - Room no. 46-60
Enter the room no. you want to book:
35
THANK YOU for booking room no.35 Please collect the room keys from the reception
WELCOME TO OUR HOTEL
input
THANK YOU for booking room no.35 Please collect the room keys from the reception
WELCOME TO OUR HOTEL
1.Book a Room
2.Book a Dining table
3.Book a Tourist vehicle
4.Room Service
5.Facilities
6.Exit
Enter your desired action
2
1. Central tables      - Table no. 1 to 10
2. Pool side tables    - Table no. 11 to 20
3. Cozy corner tables  - Table no. 21 to 30
Enter the table no. you want to book:
3
THANK YOU for booking table no.3 Your table will be ready when you arrive
WELCOME TO OUR HOTEL
1.Book a Room
2.Book a Dining table
3.Book a Tourist vehicle
4.Room Service
5.Facilities
6.Exit
Enter your desired action
24
input
4.Room Service
5.Facilities
6.Exit
Enter your desired action
24
WELCOME TO OUR HOTEL
1.Book a Room
2.Book a Dining table
3.Book a Tourist vehicle
4.Room Service
5.Facilities
6.Exit
Enter your desired action
5
1.WIFI
2.GYM
3.STEAM ROOM
4.SWIMMING POOL
1
We will soon provide you with the WIFI password
*****THANK YOU FOR VISITING US*****
```



**B. Tech Program First Year
Course: Experiential Learning
Course Code: DA1001**

“HOTEL MANAGEMENT PROGRAM”

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Certificate

This is to certify that the project titled “**Hotel Management Program**” is a record of the bona fide work done by **Ashwin Shetty and Prathamesh Nimkar** (Reg No:219302485 and Reg No:219302489 respectively) submitted for the partial fulfilment of the requirements for the completion of the Experiential Learning (DA1001) course in the Department of Information Technology of Manipal University Jaipur, during the academic session October-February 2022.

Signature of the mentor

Name of the Mentor

Designation of the mentor

Department of _____

Signature of the HoD

Name of the HoD

Head of the Department

Department of _____

Abstract

We have chosen to work on the topic of “Hotel Management”, where we aim to simplify the existing hotel booking platforms and make it easier for managers and customers alike to access and book any service of their choice.

The program’s main function is to take inputs from the user and then present them with various choices so that the user can choose what he/she prefers during their stay at the hotel.

Introduction

Hotel management is really about overseeing every operation of the property. This requires knowledge of distribution strategy, finance, customer service, staff management, marketing, and more. Ultimately effective hotel management will not only ensure your hotel stays in business, but is able to profit and grow over time. Think of the hotel as an ecosystem that will get healthier the better you manage it. As your hotel becomes more successful you can upgrade and charge higher rates, pay staff higher wages, and create an experience that guests want to come back for.

We have made this program to ease the burden on the reception/the booking area of hotels and help them sort all bookings easily.

Literature review

The history of hotels is intimately connected to that of civilisations. Or rather, it is a part of that history. Facilities offering guests hospitality have been in evidence since early biblical times. The Greeks developed thermal baths in villages designed for rest and recuperation. Later, the Romans built mansions to provide accommodation for travellers on government business. The Romans were the first to develop thermal baths in England, Switzerland and the Middle East. Later still, caravanserais appeared, providing a resting place for caravans along Middle Eastern routes. In the Middle Ages, monasteries and abbeys were the first establishments to offer refuge to travellers on a regular basis. Religious orders built inns, hospices and hospitals to cater for those on the move.

Hotel chains, attentive to their customers' wishes, started to offer an increasingly varied range of services. Their rooms became more spacious and the cuisine more refined.

Gradually, too, various first-class hotels (among them former palaces and city centre hotels) which had fallen into disrepair began systematic renovation programmes.

The end of the seventies, when China opened its doors to foreign tourists, also saw the first congresses of international hotel experts.

All hotels need some variation of a property management system (PMS). However, they come in many different forms and are not all created equal.

There are still properties trying to manage their business in a traditional way with books and ledgers, others are using server-based systems, while many used web-based systems.

One of the most valuable things to a hotel manager is time, and money of course. The first two systems listed are a drain on both time and finances, while the latter has obviously become the optimal way to manage hotel operations.

Methodology

Me and my partner (Ashwin) used our basic C++ knowledge for making this project a success and a bit of help from our mentor, Mr. Dhananjay sir. We also used the google search engine to research the interesting world of hotel management and dived deep into its history and modern advancements.

For C++, we used the concept of loops (for loops) and if-else to come about the program. I went through some hotel managing websites such as booking.com and trivago.com to properly understand which choices are presented and what are the exact steps to do so that our program will run properly.

Results and Discussions

*October – We started our project in October, our stage 1. We did some brainstorming on what topic to choose and after some guidance by our mentor Mr. Dhananjay sir, we came up with the idea of a “Hotel management program”.

We then decided about which programming language must be used for our program, and C++ was chosen as our language as we already had some basic knowledge about how the language works.

Result – We did 3-4 slides for the PowerPoint presentation and started the code.

*November – In this month, we did some research on loops and on hotel management. We learnt about various options we could put in the program so that the user could choose. At this point we only put 3 options and an exit option. We then created a rough flowchart so that me and Ashwin could follow and make the code and PowerPoint presentation side-by-side.

Result – We coded in the program with 3 options and completed the rough presentation and showed it to our mentor.

*December – After some helpful suggestions by Dhananjay sir, we made major changes in our project (the presentation where I added the table of contents, motivation for the project and our code where did some debugging tweaks). Then we completed our code and after some debugging, we submitted it for our mid-term examination.

*January and *February also mainly consisted of giving finishing touch to our presentation and making our code a bit more advanced by adding a few more choices and more debugging so that it runs error free.

Our code basically involves giving 5 options, namely, book a room - a table - mode of transport – room service and facilities. Then after choosing the number of services we need we are presented with options to choose from.

For “book a room” there are 4 options, and they are 15 single bedrooms, 15 double bedrooms, 10 luxury rooms and 5 premium rooms, with their respective room numbers.

For “book a table”, there are 3 options, which are central tables, pool-side tables and cosy corner tables.

For “tourist vehicles”, there are 3 modes of transport, a bike, car and a family van to travel from the hotel to a close destination of the user’s choice.

For “Room service”, there are 3 services currently available, which are ordering food, shower and toiletries and massage+spa.

For “Facilities”, there is a Wi-Fi facility, a gym, steam room and access to the hotel swimming pool.

Conclusions

Concluding our project, I think me and my partner have done this project as it was planned in the start and we carried the map throughout our project. Our aim was to make the jobs of receptionists in hotels and the user easier by this program by making it nicely ordered in a particular fashion. It is found to be error-free as per the testing measures that were implemented by both of us and our mentor. This project has a huge future development prospect and we can work on it to make it a better version of what it is now, which can be done with perseverance and patience.

Future prospects

We could add the following features to our program to make it look more advanced –

- a. arrays to our programs to have a better room allotment system.
- b. We can also add a few more options for choice.

- c. Allow customers to comment and rate hotel stay.
- d. An email/SMS notification after successful hotel booking.
- e. An encrypted page to ensure customer privacy and transaction security.
- f. Create a more user-friendly interface.

References

References used in the study should be included in standard format, Example:

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Thanks to this project I have learned many new things about C++ programming and hotel management and about its pros and cons.

I also express my gratitude to all staff members who were, directly and indirectly, medium in enabling me to stay committed to the project.

Thank You!