HOTEL MANAGEMENT SYSTEM

Project submitted to the

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for the partial fulfillment of the requirements to award the degree of

Bachelor of Technology

in

Computer Science and Engineering
School of Engineering and Sciences

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CERTIFICATE

This is to certify that the work present in this Project entitled "**HOTEL MANAGEMENT SYSTEM**" has been carried out by **K .Venkatesh , D . Srinadh , G. Dhakshayani , Chandan shah** under my/our supervision. The work is genuine, original, and suitable for submission to the SRM University – AP for the award of "**Bachelor of Technology**" in **School of Engineering and Sciences**.

Signature of the Supervisor   Signature of Head of the Dept.

Mohammad Miskeen Ali   **JATINDRA KUMAR DASH**

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Introduction

1.1 Introduction to the topic

Almost all people travel around the world and not all have home around the world so they will prefer to live in hotels. The first thing that come upon people's mind is, if they can secure a room when they reach to their destination.

This is a huge task for the staffs in hotel as a lot of data of the customers need to be stored properly and efficiently. Implementing a system which can handle all the information about the hotel guest along with the needed facilities all under one system would help the staffs of the hotel.

The system will be optimized to add, modify the details about customer with what facilities they want to add as food, laundry and more. All will be handled by the hotel staff and will be managed well. Humans tend to make simple errors like calculating the total bill of a hotel guest can have a huge impact on small hotels, so with the help of my project '**DVCS' Hotel** will not have such problems and the database will be safe as well.

1.2 Aim of the project

The main aim of this project is to fabricate a web application for lodgings around the world, however concentrating more on India as this is the new innovation here. The system will deal with all the fundamental services done by the hotel, however the online frame work like room booking, checking for room info, restaurant menu and ordering food, payment online or offline.

The system won't be huge, however if necessary in future, more exertion and work should be possible to cause it to develop regarding usefulness and usability.

Abstract:

The Hotel Management System is one of the best sources for all stages of people as they provide detailed information about the rooms, food service, management, etc. The hotel management project is not an easy task because we develop more than 100 modules for implementation.

Let's Talk about the features of this Simple Hotel Management System using Python, at first, the user has to enter their data. It includes the Full Name of the user, check-in, User's Address, check-out dates and so on .

This system teaches us how we can manage a hotel, restaurant, etc.,

It is a user friendly and very easy to use. We have created this project based on the knowledge gained about Python programming so far.

Hotel Management System is a desktop application software system where the management of entire hotel is computerized.

This project is very useful and can be helpful to many people.

Project Implementation Process:

<u>**Technology Used:**</u>

Language: Python

IDLE : Python IDLE

Operating System : Windows 11

<u>**System Requirements :**</u>

Processors : Intel Core i5 processor

Disk space : 3 to 4 GB.

Python Version : Python 3.9. 8

Features:

- It inputs the following features in our project
  a) Booking of Hotel
  b) Rooms info required
  c) Restaurant (Food)
  d) Payment method
  e) Record book
  f) Exit

```
======== RESTART: C:\Users\venka\python codes\HOTEM MANAGMENT SYSTEM.py ========
                              WELCOME TO HOTEL DVCS

                1 Booking

                2 Rooms Info

                3 Restaurant

                4 Payment

                5 Record

                0 Exit

->
```

Methodology:

Concept of functions is used in this project

Functions Created

Home() - Function to display the project's main screen i.e. the home page of the project or you can say the main menu for selecting the desired operation to perform.

Date (str) - Function to validate date entered by the user/customer.

Booking () - Function for booking room in hotel by entering user/customer details.

Room Info() - Function to provide users/customers with hotel rooms information(i.e. about room amenities).

Restaurant () - Function for room service which provides user/customer with the restaurant's menu card to order food at the room.

Payment () - Function for payment of hotel room and restaurant bill generation at the time of check-out.

Record () - Function for keeping records of customers stayed in the hotel

Source Code-

```python
import random
import datetime


name = []
phno = []
add = []
checkin = []
checkout = []
room = []
price = []
rc = []
p = []
roomno = []
custid = []
day = []



i = 0



def Home():

    print("\t\t\t\t\t\t WELCOME TO HOTEL DVCS\n")
    print("\t\t\t 1 Booking\n")
    print("\t\t\t 2 Rooms Info\n")
    print("\t\t\t 3 Restaurant\n")
    print("\t\t\t 4 Payment\n")
    print("\t\t\t 5 Record\n")
    print("\t\t\t 0 Exit\n")

    ch=int(input("->"))

    if ch == 1:
        print(" ")
        Booking()

    elif ch == 2:
        print(" ")
        Rooms_Info()

    elif ch == 3:
        print(" ")
        restaurant()
```

```python
    elif ch == 4:
        print(" ")
        Payment()

    elif ch == 5:
        print(" ")
        Record()

    else:
        exit()



def date(c):

    if c[2] >= 2010 and c[2] <= 2050:

        if c[1] != 0 and c[1] <= 12:

            if c[1] == 2 and c[0] != 0 and c[0] <= 31:

                if c[2]%4 == 0 and c[0] <= 29:
                    pass

                elif c[0]<29:
                    pass

                else:
                    print("Invalid date\n")
                    name.pop(i)
                    phno.pop(i)
                    add.pop(i)
                    checkin.pop(i)
                    checkout.pop(i)
                    Booking()


            elif c[1] <= 7 and c[1]%2 != 0 and c[0] <= 31:
                pass


            elif c[1] <= 7 and c[1]%2 == 0 and c[0] <= 30 and c[1] != 2:
                pass


            elif c[1] >= 8 and c[1]%2 == 0 and c[0] <= 31:
                pass
```

```python
            elif c[1]>=8 and c[1]%2!=0 and c[0]<=30:
                pass

            else:
                print("Invalid date\n")
                name.pop(i)
                phno.pop(i)
                add.pop(i)
                checkin.pop(i)
                checkout.pop(i)
                Booking()

        else:
            print("Invalid date\n")
            name.pop(i)
            phno.pop(i)
            add.pop(i)
            checkin.pop(i)
            checkout.pop(i)
            Booking()

    else:
        print("Invalid date\n")
        name.pop(i)
        phno.pop(i)
        add.pop(i)
        checkin.pop(i)
        checkout.pop(i)
        Booking()


def Booking():

    global i
    print(" BOOKING ROOMS")
    print(" ")

    while 1:
        n = str(input("Name: "))
        p1 = str(input("Phone No.: "))
        a = str(input("Address: "))


        if n!="" and p1!="" and a!="":
```

```
                name.append(n)
                add.append(a)
                break

        else:
                print("\tName, Phone no. & Address cannot be empty..!!")

    cii=str(input("Check-In: "))
    checkin.append(cii)
    cii=cii.split('/')
    ci=cii
    ci[0]=int(ci[0])
    ci[1]=int(ci[1])
    ci[2]=int(ci[2])
    date(ci)

    coo=str(input("Check-Out: "))
    checkout.append(coo)
    coo=coo.split('/')
    co=coo
    co[0]=int(co[0])
    co[1]=int(co[1])
    co[2]=int(co[2])

    if co[1]<ci[1] and co[2]<ci[2]:

        print("\n\tErr..!!\n\tCheck-Out date must fall after Check-In\n")
        name.pop(i)
        add.pop(i)
        checkin.pop(i)
        checkout.pop(i)
        Booking()
    elif co[1]==ci[1] and co[2]>=ci[2] and co[0]<=ci[0]:

        print("\n\tErr..!!\n\tCheck-Out date must fall after Check-In\n")
        name.pop(i)
        add.pop(i)
        checkin.pop(i)
        checkout.pop(i)
        Booking()
    else:
        pass

    date(co)
    d1 = datetime.datetime(ci[2],ci[1],ci[0])
    d2 = datetime.datetime(co[2],co[1],co[0])
    d = (d2-d1).days
    day.append(d)
```

```python
print("----SELECT ROOM TYPE----")
print(" 1. Standard Non-AC")
print(" 2. Standard AC")
print(("\t\tPress 0 for Room Prices"))

ch=int(input("->"))



if ch==0:
    print(" 1. Standard Non-AC - Rs. 3500")
    print(" 2. Standard AC - Rs. 4000")
    ch=int(input("->"))
if ch==1:
    room.append('Standard Non-AC')
    print("Room Type- Standard Non-AC")
    price.append(3500)
    print("Price- 3500")
elif ch==2:
    room.append('Standard AC')
    print("Room Type- Standard AC")
    price.append(4000)
    print("Price- 4000")
else:
    print(" Wrong choice..!!")




rn = random.randrange(40)+300
cid = random.randrange(40)+10



while rn in roomno or cid in custid:
    rn = random.randrange(60)+300
    cid = random.randrange(60)+10

rc.append(0)
p.append(0)

if p1 not in phno:
    phno.append(p1)
elif p1 in phno:
    for n in range(0,i):
        if p1== phno[n]:
            if p[n]==1:
                phno.append(p1)
elif p1 in phno:
    for n in range(0,i):
```

```python
                if p1== phno[n]:
                    if p[n]==0:
                        print("\tPhone no. already exists and payment yet not
done..!!")
                        name.pop(i)
                        add.pop(i)
                        checkin.pop(i)
                        checkout.pop(i)
                        Booking()
        print("")
        print("\t\t\t**ROOM BOOKED SUCCESSFULLY**\n")
        print("Room No. - ",rn)
        print("Customer Id - ",cid)
        roomno.append(rn)
        custid.append(cid)
        i=i+1
        n=int(input("0-BACK\n ->"))
        if n==0:
            Home()
        else:
            exit()

def Rooms_Info():
    print("        ------ HOTEL ROOMS INFO ------")
    print("")
    print("STANDARD NON-AC")
    print("----------------------------------------------------------------")
    print("Room amenities include: 1 Double Bed, Television, Telephone,")
    print("Double-Door Cupboard, 1 Coffee table with 2 sofa, Balcony and")
    print("an attached washroom with hot/cold water.\n")
    print("STANDARD AC")
    print("----------------------------------------------------------------")
    print("Room amenities include: 1 Double Bed, Television, Telephone,")
    print("Double-Door Cupboard, 1 Coffee table with 2 sofa, Balcony and")
    print("an attached washroom with hot/cold water + Window/Split AC.\n")
    print()
    n=int(input("0-BACK\n ->"))
    if n==0:
        Home()
    else:
        exit()


def restaurant():
    ph=int(input("Customer Id: "))
    global i
    f=0
    restaurantbill=0
```

```python
    for n in range(0,i):
        if custid[n]==ph and p[n]==0:
            f=1

            print("1. Vegetarian Combo -----> 300 Rs.")
            print("2. Non-Vegetarian Combo -----> 500 Rs.")
            print("3. Vegetarian & Non-Vegetarian Combo -----> 750 Rs.")
            choice_dish = int(input("Enter Your Choice :\n "))
            quantity=int(input("Enter Your quantity:\n"))
            if choice_dish==1:
                print("\nSO YOU HAVE ORDER: Vegetarian Combo ")
                restaurantbill = quantity * 300
            elif choice_dish==2:
                print("\nSO YOU HAVE ORDER: Non-Vegetarian Combo ")
                restaurantbill = quantity * 500
            elif choice_dish==3:
                print("\nSO YOU HAVE ORDER: Vegetarian & Non-Vegetarian Combo
")
                restaurantbill= quantity * 750
            else:
                print("Sorry ,May Be You Are Giving Me Wrong Input, Please
Try Again !!! ")
                return
    print("Your Total Bill Amount Is : Rs. ",restaurantbill)
    print("\n\n**** WE HOPE YOU WILL ENJOY YOUR MEAL ***\n\n")
    restaurantbill=restaurantbill+rc.pop(n)
    rc.append(restaurantbill)
    if f == 0:
        print("Invalid Customer Id")
    n=int(input("0-BACK\n ->"))
    if n==0:
        Home()
    else:
        exit()



def Payment():

    ph=str(input("Phone Number: "))
    global i
    f=0

    for n in range(0,i):
        if ph==phno[n] :


            if p[n]==0:
```

```
            f=1
            print(" Payment")
            print(" ------------------------------")
            print("  MODE OF PAYMENT")

            print("  1- Credit/Debit Card")
            print("  2- Paytm/PhonePe")
            print("  3- Using UPI")
            print("  4- Cash")
            x=int(input("-> "))
            print("\n  Amount: ",(price[n]*day[n])+rc[n])
            print("\n           Pay For AnCasa")
            print("  (y/n)")
            ch=str(input("->"))

            if ch=='y' or ch=='Y':
                print("\n\n ------------------------------")
                print("            Hotel DVCS")
                print(" ------------------------------")
                print("              Bill")
                print(" ------------------------------")
                print(" Name: ",name[n],"\t\n Phone No.: ",phno[n],"\t\n
Address: ",add[n],"\t")
                print("\n Check-In: ",checkin[n],"\t\n Check-Out:
",checkout[n],"\t")
                print("\n Room Type: ",room[n],"\t\n Room Charges:
",price[n]*day[n],"\t")
                print(" Restaurant Charges: \t",rc[n])
                print(" ------------------------------")
                print("\n Total Amount: ",(price[n]*day[n])+rc[n],"\t")
                print(" ------------------------------")
                print("          Thank You")
                print("          Visit Again :)")
                print(" ------------------------------\n")
                p.pop(n)
                p.insert(n,1)

                roomno.pop(n)
                custid.pop(n)
                roomno.insert(n,0)
                custid.insert(n,0)

            else:
                for j in range(n+1,i):
                    if ph==phno[j] :
                        if p[j]==0:
                            pass
```

```python
                        else:
                                f=1
                                print("\n\tPayment has been Made :)\n\n")
    if f==0:
        print("Invalid Customer Id")

        n = int(input("0-BACK\n ->"))
    if n == 0:
        Home()
    else:
        exit()




def Record():


    if phno!=[]:
        print("           *** HOTEL RECORD ***\n")
        print("| Name          | Phone No.     | Address       | Check-In  |
Check-Out     | Room Type     | Price         |")
        print("-----------------------------------------------------------
-----------------------------------------------------")


        for n in range(0,i):
            print("|",name[n],"\t
|",phno[n],"\t|",add[n],"\t|",checkin[n],"\t|",checkout[n],"\t|",room[n],"\t|"
,price[n])

        print("-----------------------------------------------------------
-----------------------------------------------------")

    else:
        print("No Records Found")
    n = int(input("0-BACK\n ->"))
    if n == 0:
        Home()

    else:
        exit()


Home()
```

Output

```
WELCOME TO HOTEL DVCS

            1 Booking

            2 Rooms Info

            3 Restaurant

            4 Payment

            5 Record

0 Exit

->1
BOOKING ROOMS

Name: Surya
Phone No.: 9999988888
Address: Mysore
Check-In: 10/12/2022
Check-Out: 15/12/2022
----SELECT ROOM TYPE----
 1. Standard Non-AC
 2. Standard AC
        Press 0 for Room Prices
```

```
        Press 0 for Room Prices
->2
Room Type- Standard AC
Price- 4000

            **ROOM BOOKED SUCCESSFULLY**

Room No. -  306
Customer Id -  40
0-BACK
 ->0
 WELCOME TO HOTEL DVCS

            1 Booking

            2 Rooms Info

            3 Restaurant

            4 Payment

            5 Record

            0 Exit

->2
```

```
->2
------ HOTEL ROOMS INFO ------

STANDARD NON-AC
-----------------------------------------------------------
Room amenities include: 1 Double Bed, Television, Telephone,
Double-Door Cupboard, 1 Coffee table with 2 sofa, Balcony and
an attached washroom with hot/cold water.

STANDARD AC
-----------------------------------------------------------
Room amenities include: 1 Double Bed, Television, Telephone,
Double-Door Cupboard, 1 Coffee table with 2 sofa, Balcony and
an attached washroom with hot/cold water + Window/Split AC.



0-BACK
 ->0
 WELCOME TO HOTEL DVCS

              1 Booking

              2 Rooms Info

              3 Restaurant
```

```
              4 Payment

              5 Record

              0 Exit

->3
Customer Id: 40
1. Vegetarian Combo -----> 300 Rs.
2. Non-Vegetarian Combo -----> 500 Rs.
3. Vegetarian & Non-Vegetarian Combo -----> 750 Rs.
Enter Your Choice :
 3
 Enter Your quantity:
3
SO YOU HAVE ORDER: Vegetarian & Non-Vegetarian Combo
Your Total Bill Amount Is : Rs.  2250



**** WE HOPE YOU WILL ENJOY YOUR MEAL ***



0-BACK
 ->0
 WELCOME TO HOTEL DVCS
```

```
WELCOME TO HOTEL DVCS

           1 Booking

           2 Rooms Info

           3 Restaurant

           4 Payment

           5 Record

           0 Exit

->4
Phone Number: 9999988888
Payment
 --------------------------------
  MODE OF PAYMENT
  1- Credit/Debit Card
  2- Paytm/PhonePe
  3- Using UPI
  4- Cash
-> 2
Amount:  22250
```

```
           Pay For AnCasa
   (y/n)
->y
 --------------------------------
           Hotel DVCS
 --------------------------------
              Bill
 --------------------------------
 Name:  Surya
 Phone No.:  9999988888
 Address:  Mysore

 Check-In:  10/12/2022
 Check-Out:  15/12/2022

 Room Type:  Standard AC
 Room Charges:  20000
 Restaurant Charges:     2250
 --------------------------------

 Total Amount:  22250
 --------------------------------
           Thank You
           Visit Again :)
 --------------------------------
```

```
                      WELCOME TO HOTEL DVCS

            1 Booking

            2 Rooms Info

            3 Restaurant

            4 Payment

            5 Record

            0 Exit

->5
*** HOTEL RECORD ***

| Name          | Phone No.   | Address       | Check-In  | Check-Out    | Room Type
       | Price     |
-----------------------------------------------------------------------------------
       -------------------------------
| Surya        | 9999988888   | Mysore     | 10/12/2022   | 15/12/2022    | Standard
   AC  | 4000
-----------------------------------------------------------------------------------
       -------------------------------
0-BACK
```

Conclusion

At this moment on the world everything is going computerized from small things to huge things which has brought a huge change on our lives. A few years ago computer was not even considered as an essential but just a rich person's toy but the time has changed and as we all know it has a huge impact on our lives. Huge companies like Apple, Microsoft and many others companies all are investing to make a better future with efficiency. Tourism has boosted all around the world and hotels need to manage their data properly . Major parts of the world need to manage their customers as anything can happen and even data which were over a decade ago can have a huge impact on some cases. A person often makes some mistakes and with a proper management system those error will be deleted. Data will be stored properly and bills with some features with of the hotel can be added easily without any errors. Sometime people forget the things needed by the customer but with proper management then it can't be forgotten and easy management

Future work

The provided system is updated according to the present time but with time everything evolves and maybe new features will be added in the hotel which is not implemented now but it is open and change can be made easily even after many time.

References

- **https://youtu.be/1fDCJMP5VIw**

Thankyou