## **DELHI PUBLIC SCHOOL MATHURA ROAD**



**ACADEMIC YEAR: 2020-21** 

## **PROJECT REPORT ON**

## **HOTEL MANAGEMENT SYSTEM**

ROLL NO :

NAME : MOHAMMAD DANISH

CLASS : XII

**SUBJECT**: **COMPUTER SCIENCE** 

SUB CODE : 083

# **DELHI PUBLIC SCHOOL MATHURA ROAD**



# **CERTIFICATE**

Th	is is to certify tha	nt MOHAM	MA	D DANISH	CBSE Roll No:		has
successful	ly completed the	project Wo	rk e	entitled <b>EMI</b>	PLOYEE MANAGEMENT S	<b>YSTEM</b>	[ in
the subjec	t Computer Scien	ce (083) lai	d d	own in the	regulations of CBSE for the p	urpose	of
Practical	Examination in	Class XII	to	be held in	DELHI PUBLIC SCHOOL, M	MATHU	RA
ROAD on							

(Monica Sahni)

HOD Comp Sci

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#### **ACKNOWLEDGEMENT**

Apart from the efforts of me, the success of any project depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this project.

My sincere thanks to **Ms. Monica Sahni**, Teacher In-charge, A guide, Mentor all the above a friend, who critically reviewed my project and helped in solving each and every problem, occurred during implementation of the project

The guidance and support received from all the members who contributed and who are contributing to this project, was vital for the success of the project. I am grateful for their constant support and help.

#### PROJECT ON HOTEL MANAGEMENT SYSTEM

### **INTRODUCTION**

Hotel Management System deals with the maintenance of a guest's bill during one's stay at the hotel and withal the allocation of rooms for them. This software will be used mainly by the receptionist who will be the first staff member a guest conventionally sees on ingress and additionally the last one afore one leaves. The receptionist can utilize this software to allocate rooms to the newly arrived guests based on their budget requisites. The room number will be then engendered and given to the guest along with a unique customer ID. Any restaurant, laundry, recreational activity bills will be accounted by the receptionist of particular facility. The entire bill can then be paid by the guest at the time one wishes to depart from the hotel.

#### **OBJECTIVES OF THE PROJECT**

The objective of this project is to let the students apply the programming knowledge into a real-world situation/problem and exposed the students how programming skills helps in developing a good software.

- Ascertain that the software can run on any given platform.
- Facilely maintain the details of all the guests who have stayed at the hotel
- Make Reservation for each guest, if any room is available in hotel.
- Ascertain to have a user-amicable interface so that users are drawn into utilizing the software again.

#### **PROPOSED SYSTEM:**

HOTEL MANAGEMENT SYSTEM is a management system where in we schedule and reserve rooms for various guests. The Hotel has rooms and rooms have different seats. Only one room is reserved per guest and only if total seats required by guest matches the number of seats, the room is reserved to him/her.

The Structure of the Software is described as:

- When a new guest arrives, he is added to system and his profile is maintained for further processing.
- The guest can make a reservation on a particular date.
- The reservation is accepted by system only if the seats requested by guest can be served on that date, otherwise it is denied.
- If a guest demands reservation on any particular date and if the same guest has already any reservation on that day, then admij is notified about it and it is prompted that if him/her would change, delete or update reservation.
- The reservation is accepted on a particular date only if room is available on that date. Rooms may be occupied by other guests on same date and if no room is available on that day then request is denied

#### **DIFFERENT PHASES OF PROJECT:**

- 1. **ADD ROOM:** A new Room is added to the system. The room is identified by room number which serves as its unique key. The room has seats and total number are seats are also provided with this new room entry.
- 2. **ADD GUEST:** New Guest on arrival is added to the system. The Guest is identified uniquely by system generated key. Same named guests are allowed into the system, as uniqueness is guarenteed by key.
- 3. **ADD RESERVATION:** The reservation for a room is added using this phase of app. The guest can make reservation by providing a particular date and number of seats needed on that date. Admin then checks the availability of reservation and notifies the guest if reservation can be made.
- 4. **GUEST STATUS:** Admin can check the status of guest. The name and id related to particular guest can be found using this module.

- 5. **ROOM STATUS:** The details about room can be checked by using this module. Details include Room Number and total seats are available in this phase.
- 6. **EDIT GUEST:** Guest name can be edited in this module, however guest id remains same and continues to serve as unique identifier.
- 7. **EDIT ROOM:** Room details can be edited also, like room no, total seats. This module provides the functionality.
- 8. **DELETE GUEST:** Guest can be deleted at any by this functionality of the module. All reservation associated with this guest are deleted along with the deleted guest.
- 9. **DELETE ROOM:** Room can be dropped anytime and reservation including this room are also deleted. New rooms should be reserved for those reservations.
- 10. **RESERVATION STATUS:** Admin can anytime check the reservations made by guests. Using this functionality admin is aware of all the reservations in the database.

#### **DATABASE STRUCTURE**

The structure of database for the project is as:

- 1. **ROOM TABLE:** The table holds all the information about rooms. It has fields 'room\_no' and 'seats'. The room\_no serves as unique identifier and seats are total seats available to this room.
- 2. **GUEST TABLE:** Holds information about guests. The guests are identified by system generated keys which implies that duplicate named guests can also be inserted into this table.
- 3. **RESERVATIONS TABLE:** This table holds information about all the reservations made. The table has four field i.e 'c\_id', 'date', 'room\_no' and 'seats'. The foreign keys 'c\_id' refers to 'guest\_id' of Guest Table and 'room\_no' refers to 'room\_no' of Room Table. The operation on foreign key is specified as on\_delete =CASCADE, which ,means if we delete room or guest all their reservations get deleted automatically.

#### **SOURCE CODES:**

#### 1. ADD ROOM:

```
import mysql.connector as connector
def addroom():
    conn = connector.connect(host="localhost", user="root",
                                         database="HOTEL")
                             password=
    temp cursor = conn.cursor()
    print("\n")
    print("-"*60)
    print("\n\n\tADD ROOM MENU ")
    print("-"*60)
    room no = input("\n\tEnter Room no : ")
    seats = input("Total seats in above room : ")
    query = f"INSERT INTO ROOM (room no,seats) VALUES({room no},{seats})"
    temp cursor.execute(query)
    conn.commit()
    print("\n\n\tRoom ADDED!")
    print("\n\n\t Returned to Main Menu")
    conn.close()
```

#### 2. ADD GUEST:

```
import mysql.connector as connector
from prettytable import PrettyTable
def addcustomer():
    conn = connector.connect(host="localhost", user="root",
                             password=
                                         database="HOTEL")
    print("\n")
    print("-"*60)
    print("\n\n\tADD CUSTOMER MENU ")
    print("-"*60)
    temp cursor = conn.cursor()
    name = input("\n\tEnter Customer Name : ")
    query = "INSERT INTO CUSTOMER(c name) VALUES('{}')".format(name)
    temp cursor.execute(query)
    conn.commit()
    print("-"*60)
    print("\n\tCustomer ADDED!")
    print("\n\n\t Returned to Main Menu")
    conn.close()
```

#### 3. ADD RESERVATION:

```
import mysql.connector as connector
import sys
from prettytable import PrettyTable
def addreservation():
    conn = connector.connect(host="localhost", user="root",
                             password= , database="HOTEL")
    temp cursor = conn.cursor()
    temp_cursor.execute("SELECT * from CUSTOMER")
    customers = []
    for i in temp cursor:
        customers.append(i)
   print("\n")
print("-"*60)
print("\tRESERVATION MENU ")
print("-"*60)
    table = PrettyTable()
    table.field_names = [' ', 'Names']
    print("\n\n\tSelect a Customer whose Reservation is to made!")
    j = 1
    for i in customers:
        table.add row([f"Press {j} for", f" {i[0]}"])
        j += 1
    print(table)
    customer id = int(input("\n\n\tPlease Select one Among above : "))
       c id = customers[customer id-1][1]
    except Exception:
        print("\n\n\tWrong Selection Returned!")
    # print(c_id)
    date = input("\n\n\tPlease enter date of Reservation format dd/mm/yyyy : ")
    # print(date)
    # CHECK IF ALREADY RESERVED OR NOT ON THIS DATE
    query = "SELECT * FROM RESERVATION WHERE date='{}' and c id = {}".format(
        date, c_id)
    temp cursor.execute(query)
    flag = 0
    update = 0
    for i in temp_cursor:
        flag = 1
        print(
            "\n\n\tRESERVATION ALREADY MADE on {} for {} seats".format(date, i[3]))
        print("\n\n\tWould u like to update Reservation? Press 1 else press 0: ")
        update = int(input("\n\t ->"))
        if update != 1:
            print("\n\nRESERVATION MAINTAINED")
            return
        break
    seats = int(input("\n\n\tSeats Required : "))
```

```
# SELECT A ROOM ON BEST FIT BASIS
rooms = []
temp cursor.execute("SELECT * from ROOM ORDER BY seats asc")
for i in temp cursor:
   # print(i)
    rooms.append(i)
room no = '
for \overline{i} in rooms:
    query = "SELECT * FROM RESERVATION WHERE room no = '{}' and date = '{}' LIMIT 1".format(
       i[0], date)
    temp_cursor.execute(query)
    row = temp_cursor.fetchone()
    if row is not None:
        continue
    if i[1] >= seats:
        room no = i[0]
        break
# IF UPDATION IS NOT POSSIBLE:
if update == 1 and room no == '':
   print("\n\n\tReservation can't be updated on {} for {} seats, Would You like to maintain previous r
    maintain = int(input('\n\n\t->'))
    if maintain != 1:
        query = "DELETE FROM RESERVATION where c_id = {} and date ='{}'".format(
           c id, date)
        temp cursor.execute(query)
        conn.commit()
        print("\n\n\tRESERVATION DELETED!")
        return
    else:
        print("\n\n\tPREVIOUS RESERVATION MAINTAINED!")
# MAKE A RESERVATION
if room no:
    #c_id, room_no, seats
    if update == 1:
        query = "UPDATE RESERVATION SET room no = '{}' , seats = {} where c id={} and date='{}'".format
            room no, seats, c id, date)
   else:
        query = "INSERT INTO RESERVATION(c id,date,room no,seats) VALUES({},'{}','{}','{}','{}',' format(
            c_id, date, room_no, seats)
    # print(query)
    temp cursor.execute(query)
    conn.commit()
    if update == 1:
        print("\n\ on {}".format(
           customers[customer_id-1][0], date))
    else:
        print("\n\n\tReservation made for {} on {}".format(
            customers[customer id-1][0], date))
```

```
# IF UPDATION IS NOT POSSIBLE:
if update == 1 and room_no == '':
   print("\n\n\tReservation can't be updated on {} for {} seats, Would You like to maintain previous r
   maintain = int(input('\n\n\t->'))
   if maintain != 1:
       query = "DELETE FROM RESERVATION where c_id = {} and date ='{}'".format(
    c_id, date)
       temp_cursor.execute(query)
       conn.commit()
       print("\n\n\tRESERVATION DELETED!")
       return
   else:
       print("\n\n\tPREVIOUS RESERVATION MAINTAINED!")
# MAKE A RESERVATION
if room no:
   #c_id, room_no, seats
   if update == 1:
       room_no, seats, c_id, date)
       query = "INSERT INTO RESERVATION(c id,date,room no,seats) VALUES({},'{}','{}','{})".format(
           c_id, date, room_no, seats)
   # print(query)
   temp_cursor.execute(query)
   conn.commit()
   if update == 1:
       print("\n\n\tReservation Updated for {} on {}".format(
           customers[customer_id-1][0], date))
       print("\n\n\tReservation made for {} on {}".format(
           customers[customer_id-1][0], date))
   print("\n\n\tNo room available on this date, Please select a different date or different number of
conn.close()
name == " main ":
addreservation()
```

### 4. GUEST STATUS:

```
import mysql.connector as connector
from prettytable import PrettyTable
def customers():
   table = PrettyTable()
    print("\n")
    print("-"*60)
    print("\tCUSTOMERS STATUS ")
    print("-"*60)
    table.field names = ['Name', 'ID']
    conn = connector.connect(host="localhost", user="root",
                            password= database="HOTEL")
    temp cursor = conn.cursor()
    query = "SELECT * from CUSTOMER"
    temp cursor.execute(query)
    for i in temp_cursor:
        table.add_row(i)
    print(table)
    conn.close()
```

#### **5. ROOM STATUS:**

```
import mysql.connector as connector
from prettytable import PrettyTable
def rooms():
   table = PrettyTable()
   print("\n")
   print("-"*60)
   print("\tROOMS STATUS ")
   print("-"*60)
   table.field names = ['Room No', 'Seats']
   conn = connector.connect(host="localhost", user="root",
                            password= , database="HOTEL")
   temp cursor = conn.cursor()
    query = "SELECT * from ROOM"
   temp cursor.execute(query)
   for i in temp cursor:
       table.add row(i)
   print(table)
   conn.close()
```

### **6. EDIT GUEST:**

#### 7. EDIT ROOM

```
import mysql.connector as connector
from prettytable import PrettyTable
def edit_room():
     temp_cursor = conn.cursor()
     table = PrettyTable()
table.field_names = [' ', 'Room No', 'Seats']
temp_cursor = conn.cursor()
query = "SELECT * from ROOM"
     temp cursor.execute(query)
     print("\n")
print("-"*60)
print("\tedlit ROOM MENU ")
print("-"*60)
print("\n'\n\tellit ROOMS : ")
     rooms = []
     print("\n\n\tPlease Select Room which you want to edit! : ")
for i in temp_cursor:
    table.add_row([f"Press {j} ", f" {i[0]}", f"{i[1]}"])
          j += 1
          rooms.append(i)
     print(table)
          choice = int(
          input("\n\n\tEnter Room No to Update or Any Other Key to Return : "))
# print(rooms[choice-1][0])
          conn.commit()
          print("\n\n\tRoom Updated SUCCEFULLY!")
     except Exception:
    print("\n\n\tReturned!")
```

#### **8. DELETE GUEST:**

```
import mysql.connector as connector
from prettytable import PrettyTable
def deletecustomer():
    print("\n\tDELETE CUSTOMER MENU")
    table = PrettyTable()
    table.field names = [' ', 'Customer Name']
    conn = connector.connect(host="localhost", user="root",
                             password=
                                                database="HOTEL")
    temp cursor = conn.cursor()
    query = "SELECT * from CUSTOMER"
    temp cursor.execute(query)
    print("\n\tSELECT CUSTOMER : ")
    customers = []
    j = 1
    for i in temp_cursor:
        table.add row([f"Press {j} ", f" {i[0]}"])
        j += 1
        customers.append(i)
    print(table)
    # print(customers[choice-1][0])
    try:
        choice = int(input("Enter ID of Customer to DELETE : "))
        query = "DELETE FROM CUSTOMER WHERE c id = {}".format(
            customers[choice-1][1])
        # print(query)
        temp cursor.execute(query)
        conn.commit()
        print("\n\n\tCUSTOMER DELETED SUCCEFULLY!\n")
    except Exception:
        print("\n\n\tReturned!\n")
```

#### 9. DELETE ROOM:

```
import mysql.connector as connector
from prettytable import PrettyTable
def deleteroom():
    print("\n\t DELETE ROOM MENU")
    table = PrettyTable()
    table.field_names = [' ', 'Room No']
    conn = connector.connect(host="localhost", user="root",
                             password=
                                                database="HOTEL")
    temp cursor = conn.cursor()
    query = "SELECT * from ROOM"
    temp cursor.execute(query)
    print("\n\t SELECT ROOMS : ")
    j = 1
    rooms = []
    for i in temp_cursor:
        table.add row([f"Press {j} ", f" {i[0]}"])
        j += 1
        rooms.append(i)
    print(table)
    try:
        choice = int(
            input("Enter Room No. to delete Or Any Key to return : "))
        # print(rooms[choice-1][0])
        query = "DELETE FROM ROOM WHERE room no = '{}'".format(
            rooms[choice-1][0])
        # print(query)
        temp cursor.execute(query)
        conn.commit()
        print("\n\n\tRoom DELETED SUCCEFULLY!\n")
    except Exception:
        print("\n\n\tReturned!\n")
```

#### **10. RESERVATION STATUS:**

```
import mysql.connector as connector
from prettytable import PrettyTable
def reservationstatus():
    table = PrettyTable()
   table.field_names = ['Name',
                         'Date of Reservation', 'Room Alloted', 'Seats']
   conn = connector.connect(host="localhost", user="root",
                            password= database="HOTEL")
    temp cursor = conn.cursor()
    query = "SELECT * from RESERVATION"
    temp_cursor.execute(query)
    reservations = []
    for i in temp cursor:
       reservations.append(i)
    j = 0
    for i in reservations:
       query = "SELECT c name FROM CUSTOMER WHERE c id ={} LIMIT 1".format(
           i[0])
        temp cursor.execute(query)
        name = temp cursor.fetchone()
        reservations[j] = [name[0]]+list(i[1:])
        j += 1
    table.add rows(reservations)
    print(table)
    conn.close()
```

# **OUTPUT:**

# 1. ADD ROOM:

**********
ADD ROOM MENU
Enter Room no : 106 Total seats in above room : 3
Room ADDED!
Returned to Main Menu ************************************
Press 'C' to continue! Any other key to Exit
2. ADD GUEST
ADD CUSTOMER MENU
Enter Customer Name : DANISH
Customer ADDED!
Returned to Main Menu ************************************
Press 'C' to continue! Any other key to Exit

### 3. ADD RESERVATION:

***************************************	****	**
RESERVATION MENU		

Select a Customer whose Reservation is to made!

!	Names
Press 1 for	ZAKIR
Press 2 for	SUHAIL
Press 3 for	ZUBAIR
Press 4 for	ISHFAQ
Press 5 for	ZUBAIR
Press 6 for	SAKIB
Press 7 for	ISHFAQ
Press 8 for	Danish
Press 9 for	DANISH

Please Select one Among above : 9

Please enter date of Reservation format dd/mm/yyyy : 12/05/2021

Seats Required : 2

Reservation made for DANISH on 12/05/2021

Press 'C' to continue! Any other key to Exit

#### **4. GUEST STATUS:**

Press 'C' to continue! Any other key to Exit

### **5. ROOM STATUS**

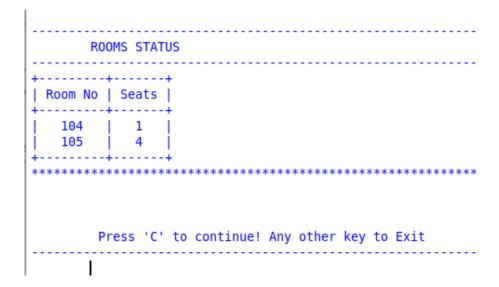
# **6. DELETE GUEST**

*******	*******	***************************************
DEL	ETE CUSTOMER MENU	J
SEL	ECT CUSTOMER :	
	Customer Name	
Press 1 Press 2 Press 3 Press 4 Press 5 Press 6 Press 7 Press 8 Press 9	ZAKIR SUHAIL ZUBAIR ISHFAQ ZUBAIR SAKIB ISHFAQ Danish DANISH	
CUS		

Name	ID
ZUBAIR AKBAR     SUHAIL	4
ZUBAIR	7 8
ISHFAQ     ZUBAIR	9
SAKIB     ISHFAQ	10 11
DANISH	13

Press 'C' to continue! Any other key to Exit

#### 7. DELET ROOM:



### **8. EDIT GUEST:**

SELECT ROOMS:

Please Select the Customer Which You want To Edit :

	Customer Name
Press 1	ZAKIR
Press 2	SUHAIL
Press 3	ZUBAIR
Press 4	ISHFAQ
Press 5	ZUBAIR
Press 6	SAKIB
Press 7	ISHFAQ
Press 8	DANISH
<u> </u>	

Enter the Number You Want to Edit of Any Other Key To Return to Main Menu: 1

Enter New Name : ZUBAIR AKBAR

Press 'C' to continue! Any other key to Exit

ricase select the customer which for want to Eurt .

Customer Name
ZUBAIR AKBAR
SUHAIL
ZUBAIR
ISHFAQ
ZUBAIR
SAKIB
ISHFAQ
DANISH
•

Enter the Number You Want to Edit of Any Other Key To Return to Main Menu:

# 9. EDIT ROOM:

S	ELECT ROOMS	:
P	Please Select	Room whi
i I	Room No	+
+   Press 1   Press 2		1 1
		<b></b>
E	nter Room No	to Updat
E	inter Total S	eats in F
R ******	loom Updated	SUCCEFULL
******	*******	******
	EDIT ROOM ME	IU 
9	SELECT ROOMS	:
ı	Please Selec	Room wh
<u>+</u>	Room No	+
Press 1		1 1
+	2   105	+
E	Enter Room No	to Upda

# **10. RESERVATION STATUS:**

Name	Date of Reservation	Room Alloted	•
UBAIR	12/02/2021	105	4
SHFAQ	03/03/2021	105	4
DANISH	12/05/2021	105	2

Press 'C' to continue! Any other key to Exit

# **BIBLIOGRAPHY**

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2. Website: https://www.youtube.com

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