COMPUTER REPORT

Hotel Management

NAME: Mann
CLASS:XII
SCHOOL: Geethanjali Vidyalaya
ACADEMIC YEAR: 2022-23

CERTIFICATE
GEETHANJALI VIDYALAYA

This is to certify that the following is a bonafide record of the computer project work done by Aanand Sanjenbam of Geethanjali Vidyalaya, under the guidance of Mrs. Seena (Subject Teacher), Board of Secondary Education (CBSE) during the academic year 2022-23

EXTERNAL EXAMINER INTERNAL EXAMINER

INSTITUTION STAMP

ACKNOWLEDGEMENT

This project would not have been possible without proper guidance and support of Mrs. Seena, my Computer teacher. I am highly indebted to her for sharing her indispensable time and knowledge to make this project a success.

I would also like to express my gratitude towards the school management and The Principal for providing me with best of the facilities and environment and giving such wonderful opportunities to shine.

Finally, I want to thank my classmates who have willingly helped me in every possible manner.

INDEX

INTRODUCTION

Title of the project:

Hotel Management System

Prologue:

The main objective of this project is to provide the user an interface to book a hotel reservation. The program deals with storing the data of all hotel rooms.

The purpose of this project is the create an application program interface for management to access and update attributes of hotel rooms

The program also stores the details of any guests occupying a room in a database table.

Team Members:

- Aanand Sanjenbam
- Abhinav Singh
- Mann

Team details:

- The project "**Hotel Management System**" has been designed and developed by the 3 mentioned individuals. The various components of the project were shared between the members.

Limitations:

- None

SYSTEM REQUIREMENTS

Recommended system requirements:

- Processor: Intel Core i3
- Disk Space: 2 to 4 GB
- OS: Windows 10
- Python version: 3.x.x
- MYSQL Command line client: 5.5 or higher

Minimum system requirements:

- Processor: Intel Atom or Intel i3
- Disk Space: 1 GB
- OS: Windows 7
- Python version: 2.7.x

Prerequisites before running the code:

- Python must be installed and, in the system's PATH
- MYSQL command line client is installed

SOURCE CODE

1. main.py

Main.py 2 Main.py\...

```
    ##Importing Modules##

from faulthandler import disable
from sys import byteorder
from tkinter import *
import tkinter.font as font
from PIL import Image, ImageTk
import database as db
from Constants import *
from tkinter import messagebox


    ##Success Output##

def messageboxy(floor=None):
        messagebox.showinfo(title = "Title", message="Success!")
        floorscreen(floor)

    ##Room Information GUI##

def init_info_widgets(room_num, floor, status):
    icon=booking_icon
    lblfloor1= Label(info_frame, text=f"Room Number: {room_num}             ", font="Helvetica 15 bold", bg=COLOUR_A, fg=COLOUR_B)
    lblfloor1.place(x=10, y=200)
    lblfloor2= Label(info_frame, text=f"Room Number: {floor}", font="Helvetica 15 bold", image=display1, bg=INFO  _FRAME_COLOUR)
    lblfloor2.place(x=10, y=500)
    Btn=Button(info_frame, font=myFont2, image=icon, borderwidth=0, height=100, width=150, text="Enter Booking \nDetails", compound

    ##Fetching Data from Database##

def get_room_data(btn_text):
    data = db.fetchdata(int(btn_text.strip()))[0]
    init_info_widgets(data[0], data[1], data[2])

    ##Room Number Creator##

def place_room_icons(floor_no, row, col):
    i = 1
    for y in range(row):
        for x in range(col):
            btn_text = f"{floor_no+i}"
            if db.check_occ(int(btn_text)):
                icon=occupied_icon
            else:
                icon=vacant_icon
            Button(option_frame, font=myFont, image=icon, borderwidth=0, height=100, width=150, text=btn_text,  compound="center",
            i+=1

    ##Main GUI Interface##

def floorscreen(floor):
    floor_no = floor*100
    row, col = 3, 4
```

Main.py 2 Main.py\...

```
    place_room_icons(floor_no, row, col)

    lblfloor1= Label(option_frame, text=f"Floor {floor}", font="Helvetica 14 bold", bg=MID_FRAME_COLOUR)
    lblfloor1.place(relx=0.46, y=630)
    mainlbl1= Label(option_frame, text=f"ROOMS ON FLOOR {floor}", font="Helvetica 14 bold", bg=MID_FRAME_COLOUR, fg=SIDEBAR_COLOUR)
    mainlbl1.place(x=50, y=10)

    ##Toggle for Floor Switching##

def arrowchecker():
    global floor
    arrowbtnright.place(relx= 0.7, y=625)
    arrowbtnleft.place(relx= 0.56, y=625)
    if floor==1:
        arrowbtnleft['state']= DISABLED
    elif floor==floors:
        arrowbtnright['state'] = DISABLED
    else:
        arrowbtnright['state'] = ACTIVE
        arrowbtnleft['state']= ACTIVE

    ##Initiation of FLoor Switching##

def floorup():
    global floor
    floor+=1
    floorscreen(floor)
    arrowchecker()

def floordown():
    global floor
    floor-=1
    floorscreen(floor)
    arrowchecker()

    ##Constants##

iconsize = (150, 120)
arrowsize= (40,35)
floor=1
floors=4

    ##GUI Initiation##

win= Tk()
win.geometry("1000x700+500+150")

    ##Font Constants##

myFont = font.Font(size=20, family="Adobe Heiti Std R", weight="bold")
myFont2 = font.Font(size=10, family="Adobe Heiti Std R", weight="bold")
```

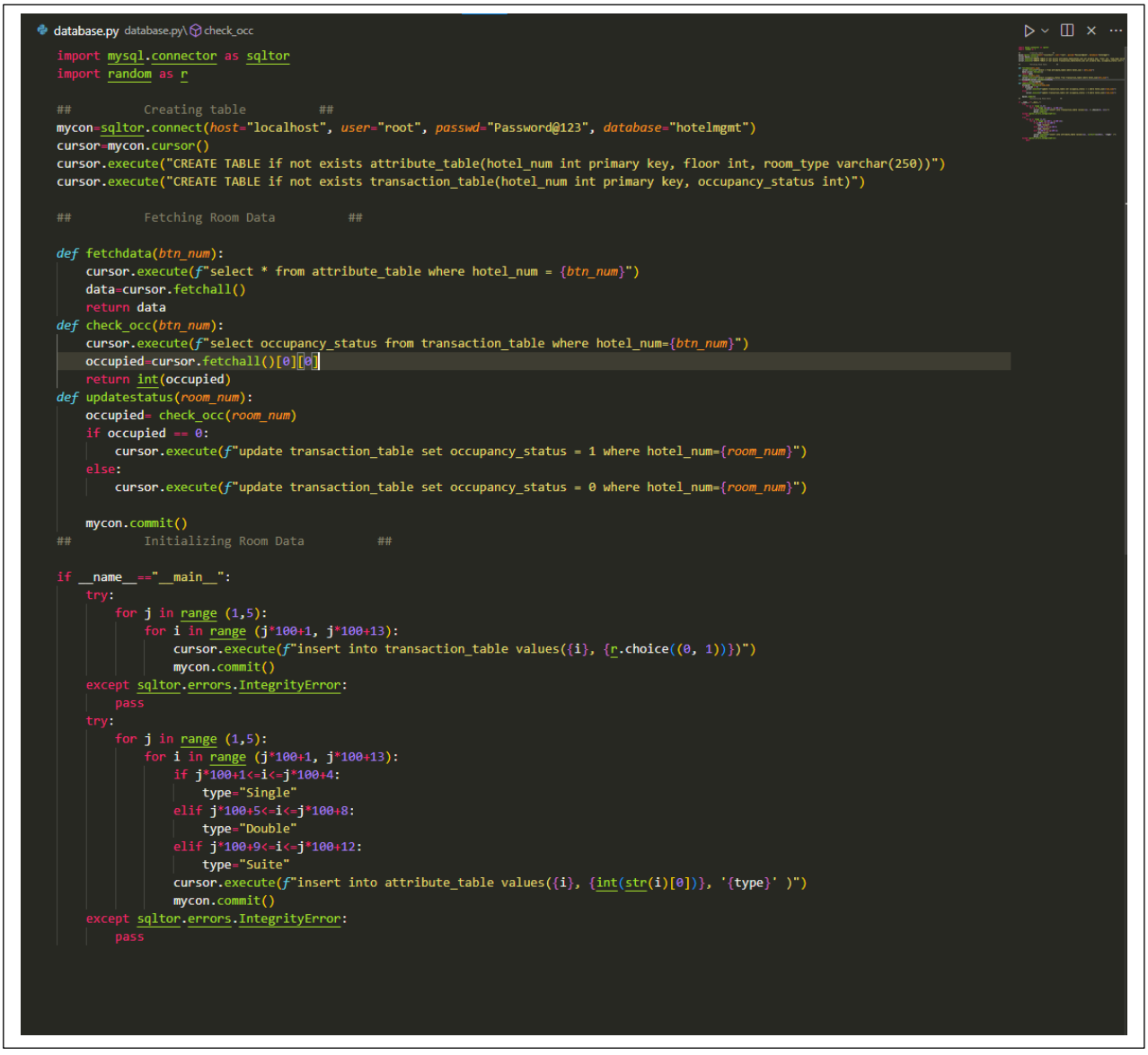
Main.py 2 Main.py\ floordown

```
    ##GUI Building using Tkinter##

info_frame= Frame(win, bg=SIDEBAR_COLOUR)
info_frame.place(x=0, y=0, relwidth=0.3, relheight=1)
option_frame= Frame(bg=OPTION_FRAME_COLOUR)
option_frame.place(relx=0.3, rely= 0, relheight=1, relwidth=0.7)
colorframe1= Frame(option_frame, bg=MID_FRAME_COLOUR)
colorframe1.place(height=50, relwidth=1)
colorframe2= Frame(option_frame, bg= MID_FRAME_COLOUR)
colorframe2.place(y= 155, height=95, relwidth=1)
colorframe3= Frame(option_frame, bg= MID_FRAME_COLOUR)
colorframe3.place(y= 355, height=95, relwidth=1)
colorframe4= Frame(option_frame, bg= MID_FRAME_COLOUR)
colorframe4.place(y= 555, height=200, relwidth=1)

    ##Importing of program assets##

vacant_icon= PhotoImage(file= r"UI Elements\vacant_icon.png")
occupied_icon= PhotoImage(file= r'UI Elements\occupied_icon.png')
booking_icon= PhotoImage(file= r'UI Elements\booking.png')
right_icon=PhotoImage(file=r"UI Elements\right_arrow.png")
left_icon=PhotoImage(file=r"UI Elements\left_arrow.png")
display1=PhotoImage(file=r"UI Elements\Display1.png")

arrowbtnleft= Button(height= 30, width=50, image= left_icon, borderwidth=0, command= lambda: floordown(), bg=MID_FRAME_COLOUR)
arrowbtnright= Button(height= 30, width=50, image= right_icon, borderwidth=0, command= lambda: floorup(), bg= MID_FRAME_COLOUR)

floorscreen(1)
arrowchecker()

win.mainloop()
```

2. constants.py

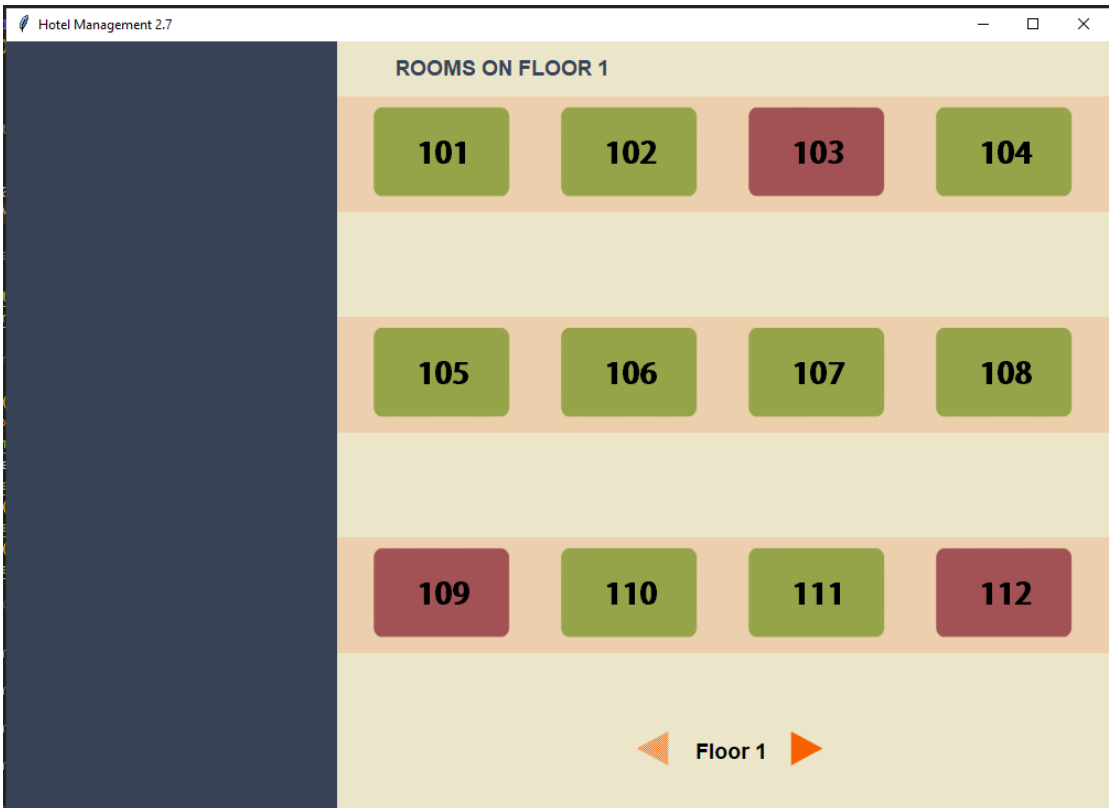
```python
from PIL import Image, ImageTk
from tkinter import *


SIDEBAR_COLOUR="#394358"
OPTION_FRAME_COLOUR="#eccfad"
MID_FRAME_COLOUR="#ebe5ca"
COLOUR_A="#262626"
COLOUR_B="#d6d3d1"

iconsize = (150, 120)
```

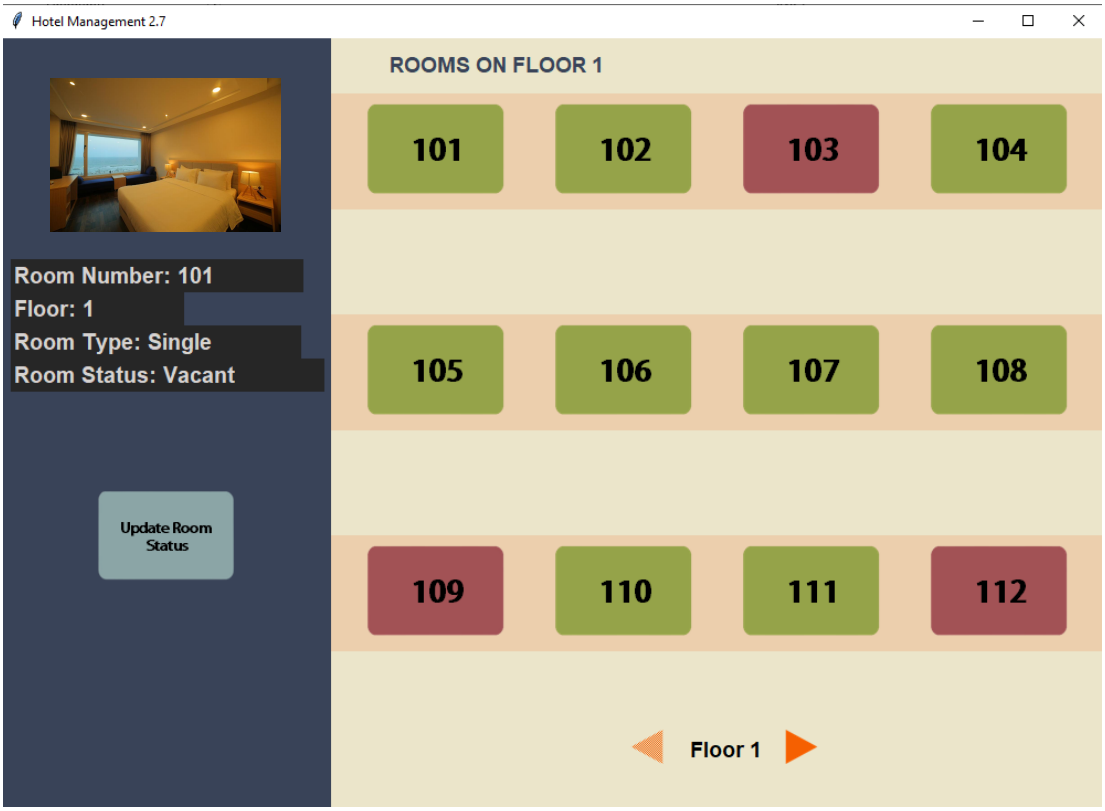
3. db.py

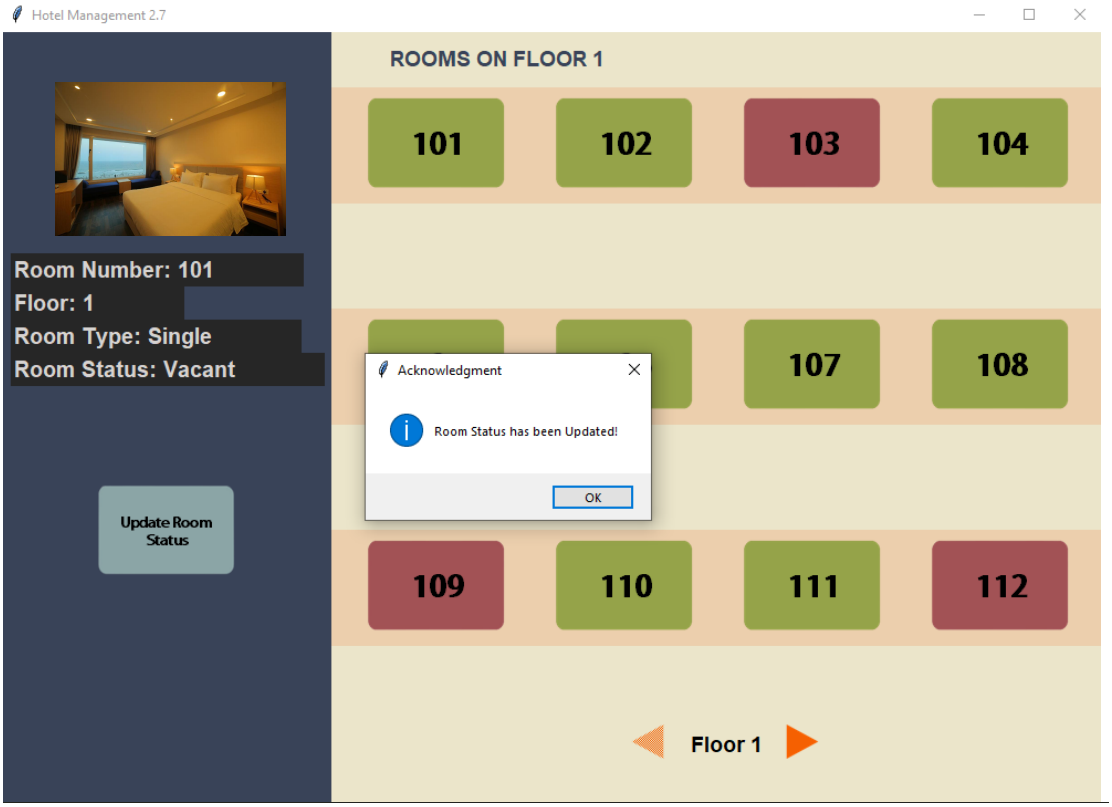


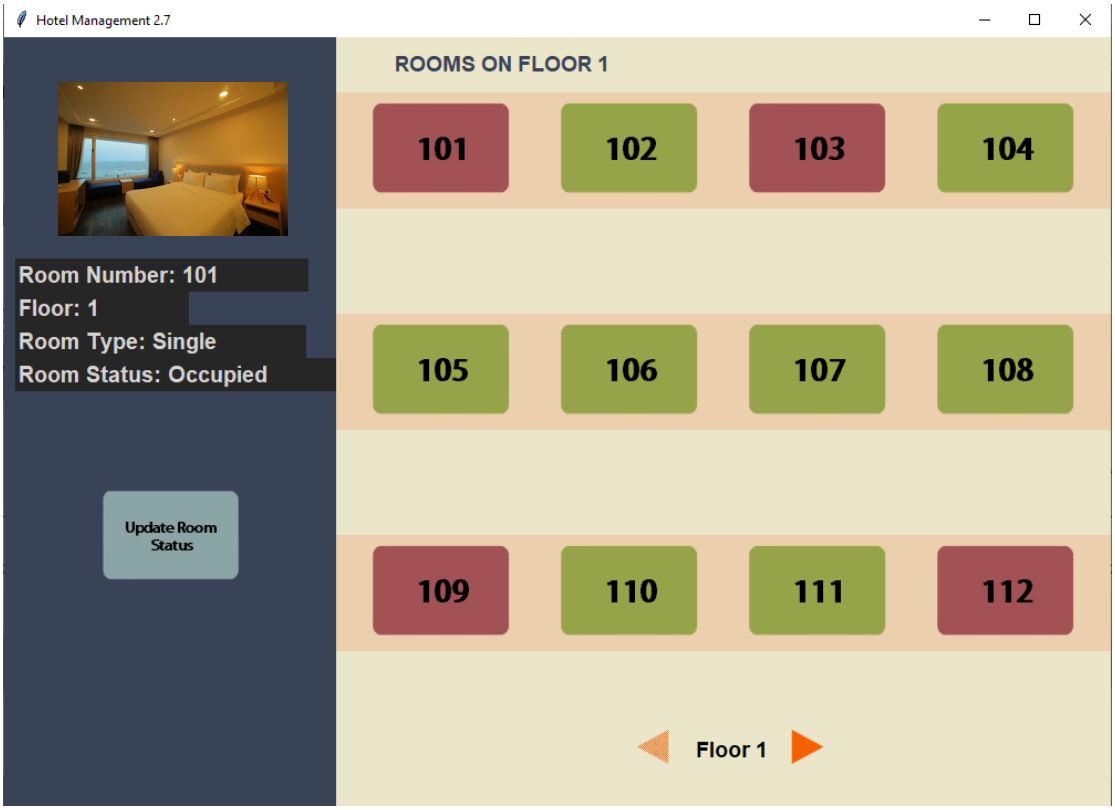
```python
import mysql.connector as sqltor
import random as r

##          Creating table          ##
mycon=sqltor.connect(host="localhost", user="root", passwd="Password@123", database="hotelmgmt")
cursor=mycon.cursor()
cursor.execute("CREATE TABLE if not exists attribute_table(hotel_num int primary key, floor int, room_type varchar(250))")
cursor.execute("CREATE TABLE if not exists transaction_table(hotel_num int primary key, occupancy_status int)")

##          Fetching Room Data          ##

def fetchdata(btn_num):
    cursor.execute(f"select * from attribute_table where hotel_num = {btn_num}")
    data=cursor.fetchall()
    return data
def check_occ(btn_num):
    cursor.execute(f"select occupancy_status from transaction_table where hotel_num={btn_num}")
    occupied=cursor.fetchall()[0][0]
    return int(occupied)
def updatestatus(room_num):
    occupied= check_occ(room_num)
    if occupied == 0:
        cursor.execute(f"update transaction_table set occupancy_status = 1 where hotel_num={room_num}")
    else:
        cursor.execute(f"update transaction_table set occupancy_status = 0 where hotel_num={room_num}")

    mycon.commit()
##          Initializing Room Data          ##

if __name__=="__main__":
    try:
        for j in range (1,5):
            for i in range (j*100+1, j*100+13):
                cursor.execute(f"insert into transaction_table values({i}, {r.choice((0, 1))})")
                mycon.commit()
    except sqltor.errors.IntegrityError:
        pass
    try:
        for j in range (1,5):
            for i in range (j*100+1, j*100+13):
                if j*100+1<=i<=j*100+4:
                    type="Single"
                elif j*100+5<=i<=j*100+8:
                    type="Double"
                elif j*100+9<=i<=j*100+12:
                    type="Suite"
                cursor.execute(f"insert into attribute_table values({i}, {int(str(i)[0])}, '{type}' )")
                mycon.commit()
    except sqltor.errors.IntegrityError:
        pass
```

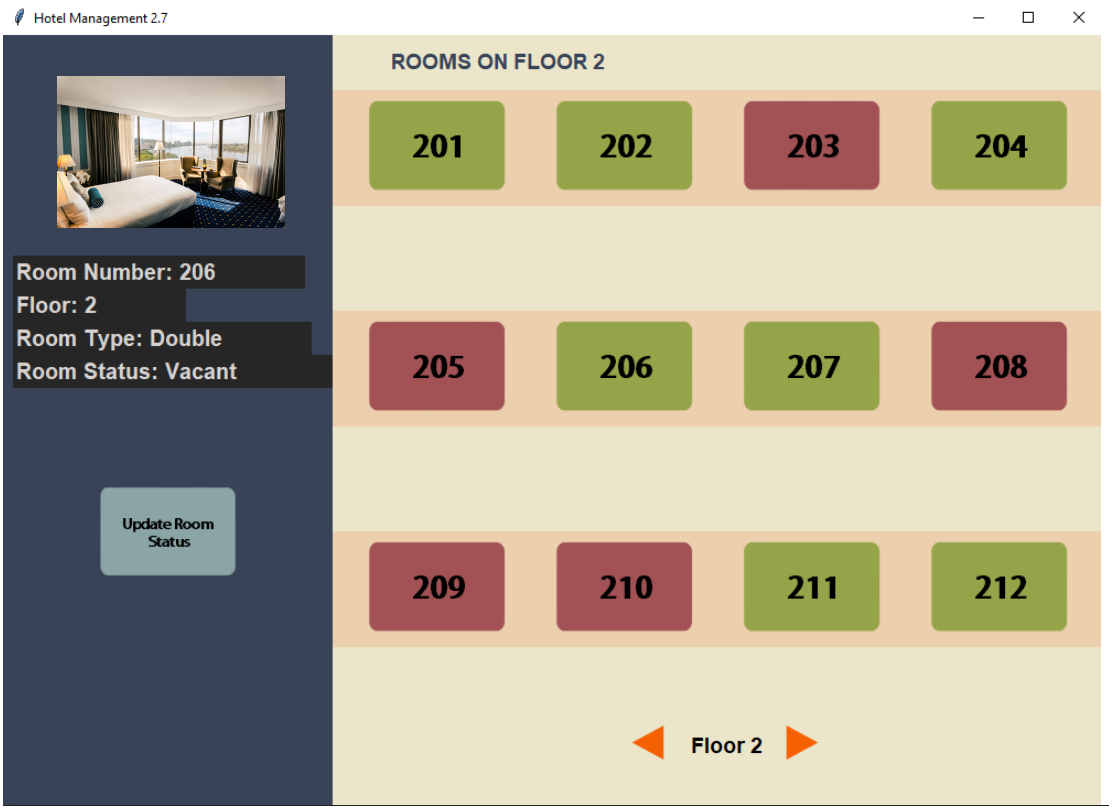
OUTPUT

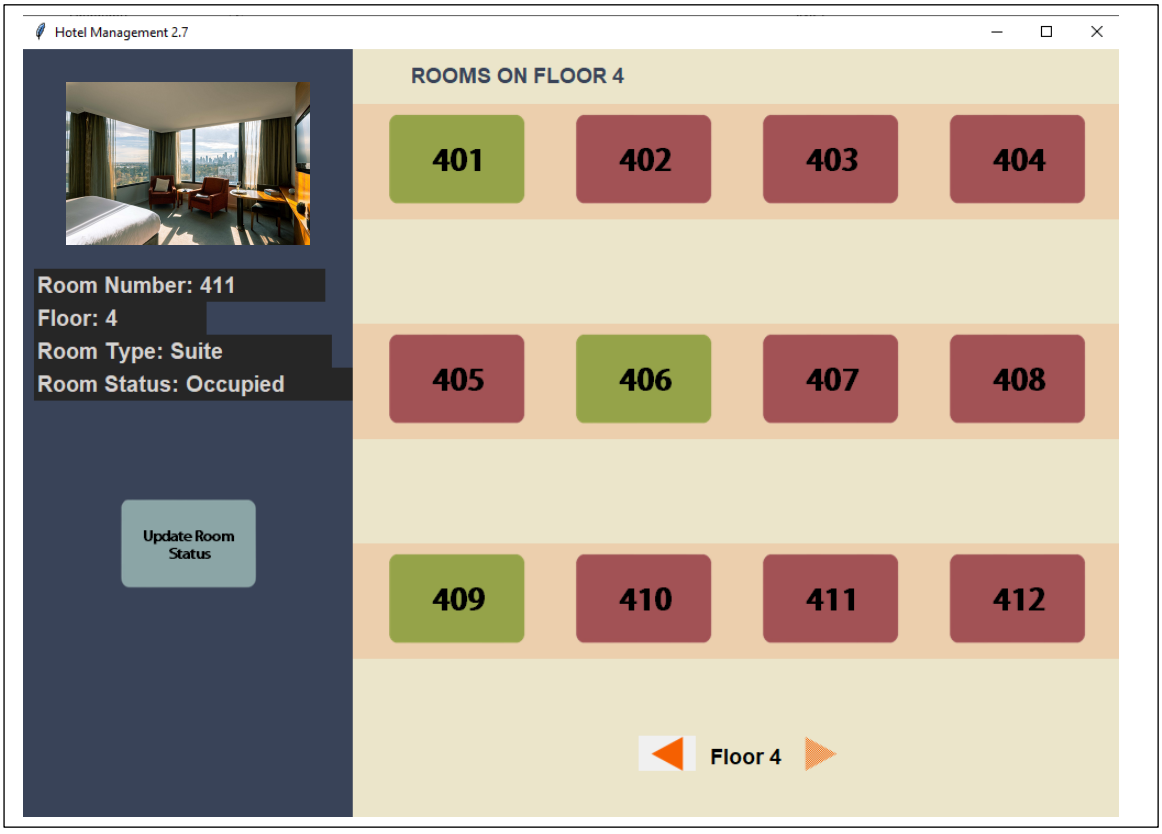

Hotel Management 2.7
ROOMS ON FLOOR 1
101
102
103
104
105
106
107
108
109
110
111
112
Floor 1


Hotel Management 2.7
ROOMS ON FLOOR 1
Room Number: 101
Floor: 1
Room Type: Single
Room Status: Vacant
Update Room Status
101
102
103
104
105
106
107
108
109
110
111
112
Floor 1


Hotel Management 2.7
ROOMS ON FLOOR 1
101
102
103
104
107
108
109
110
111
112
Room Number: 101
Floor: 1
Room Type: Single
Room Status: Vacant
Update Room Status
Acknowledgment
Room Status has been Updated!
OK
Floor 1

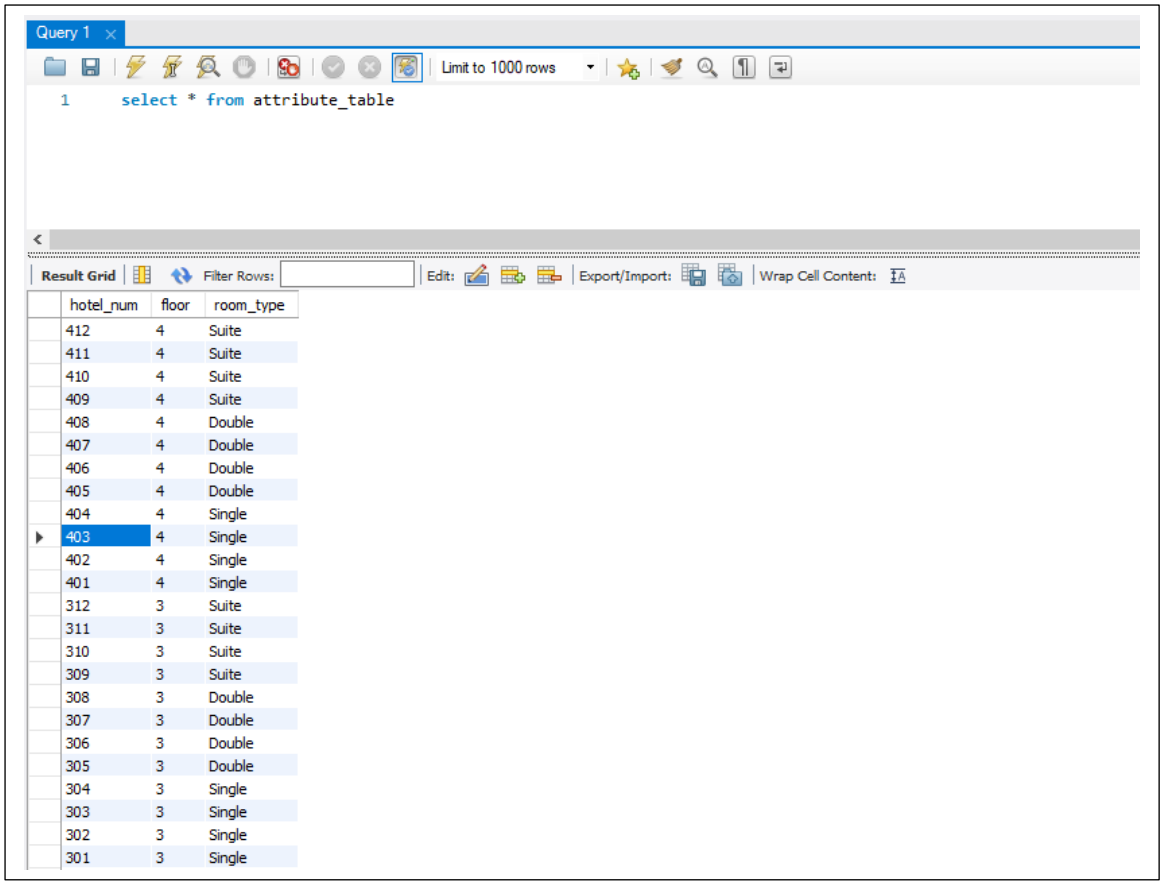

Hotel Management 2.7
ROOMS ON FLOOR 1
101
102
103
104
105
106
107
108
109
110
111
112
Room Number: 101
Floor: 1
Room Type: Single
Room Status: Occupied
Update Room Status
Floor 1


Hotel Management 2.7
ROOMS ON FLOOR 2
201
202
203
204
205
206
207
208
209
210
211
212
Room Number: 206
Floor: 2
Room Type: Double
Room Status: Vacant
Update Room Status
Floor 2


Hotel Management 2.7
ROOMS ON FLOOR 4
401
402
403
404
405
406
407
408
409
410
411
412
Room Number: 411
Floor: 4
Room Type: Suite
Room Status: Occupied
Update Room Status
Floor 4

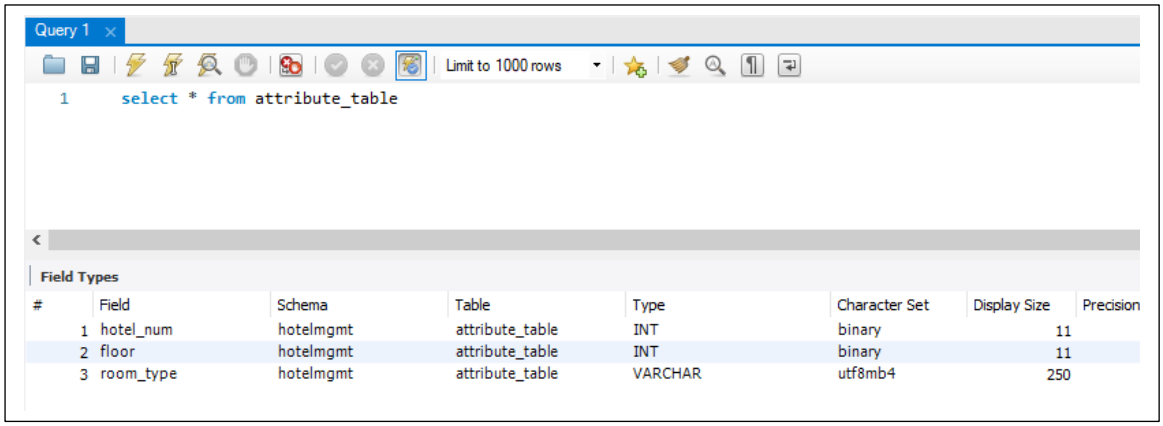
Data Design

1. Sample Output



hotel_num	floor	room_type
412	4	Suite
411	4	Suite
410	4	Suite
409	4	Suite
408	4	Double
407	4	Double
406	4	Double
405	4	Double
404	4	Single
403	4	Single
402	4	Single
401	4	Single
312	3	Suite
311	3	Suite
310	3	Suite
309	3	Suite
308	3	Double
307	3	Double
306	3	Double
305	3	Double
304	3	Single
303	3	Single
302	3	Single
301	3	Single

2. Table structure



#	Field	Schema	Table	Type	Character Set	Display Size	Precision
1	hotel_num	hotelmgmt	attribute_table	INT	binary	11	
2	floor	hotelmgmt	attribute_table	INT	binary	11	
3	room_type	hotelmgmt	attribute_table	VARCHAR	utf8mb4	250	

REFERENCES

- Google
- Computer science with Sumita Aurora