PYTHON PROJECT
ON
HOTEL MANAGEMENT SYSTEM

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OBJECTIVE

To simplify the hotel operations by automating the major aspects of hotel management which include checking the availability of rooms, room amenities, check-in, check-out, ordering food, and viewing all booking records.

CODE ARCHITECTURE OVERVIEW

- Modular Design: Each function (`view_available_rooms()`, `room_info()`, `book_room()`, `restaurant()`, `checkout_room()`, `view_all_bookings()`) encapsulates specific functionality, promoting code reusability and maintainability.
- Database Interaction: Uses SQL queries to retrieve, insert, update, and delete data from the `rooms`, `bookings`, and `food_orders` tables.
- Error Handling: Incorporates basic error handling to manage database connections, SQL queries, and user inputs to enhance robustness.
- Data Integrity: Ensures data integrity by updating status (`Available`, `Booked`) in the `rooms` table and maintaining booking details (`bookings` and `food_orders` tables) accurately

CODE COMPONENTS AND FUNCTIONALITIES

1. Database Connectivity (`pyodbc` Setup):

- The `pyodbc` library is used to connect Python applications to SQL Server using ODBC (Open Database Connectivity).

2. Creating Tables:

- Two tables are created for storing data:

i. `bookings`: Stores booking details such as `Booking_Id`, `Room_Number`, `Name`, `Check_In_Date`, and `Check_Out_Date`.

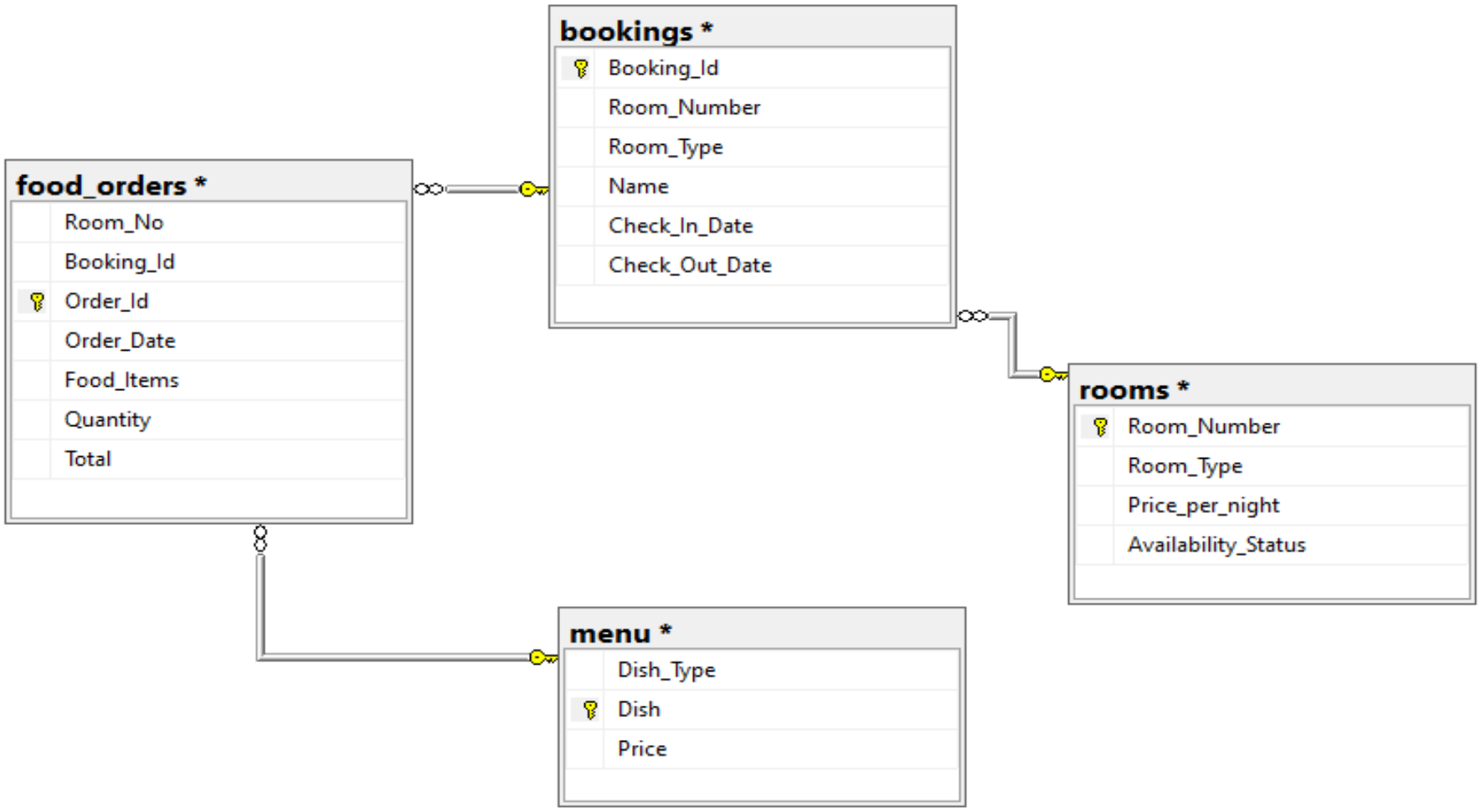
ii. ‘food_orders`: Stores food order details including `Room_No`, `Booking_Id`, `Order_Id`, `Order_Date`, `Food_Items`, `Quantity`, `Total`.

- Two tables are there in the database to retrieve information:

i. ‘rooms’: Storing room details such as ‘Room_Number’, ‘Room_Type’, ‘Price_per_night’, ‘Availability_Status’.

ii. ‘menu’: Storing food items details such as ‘Dish_Type’, ’Dish’, ‘Price’.

- Tables and their relationship.



3. Functionalities:

- Room Management:

- Fetches and displays available rooms from the ‘rooms’ table (`view_available_rooms()` function).
- Allows users to view room amenities based on room type (`room_info()` function).

- Booking Management :

- Allows users to book a room (`book_room()` function), generating a unique `Booking_Id` and store details in the ‘bookings’ table.
- Marks room Availability status as `Booked` in the `rooms` table upon successful booking.

- Food Order Management :

  - Facilitates food ordering for guests (`restaurant()` function), retrieving food item details from the ‘menu’ table and storing the order in the ‘food_orders’ table, associating orders with specific bookings (`Booking_Id`).
  - Also allows modification of food orders (addition/removal of items).

- Check-out Process:

  - Manages the check-out process (`checkout_room()` function), calculating total charges including room stay and food orders.
  - Updates the `rooms` table to mark room Availability status as `Available` after check-out.

- Viewing All Bookings:

  - Displays all booking records (`view_all_bookings()` function) by retrieving data from the ‘bookings’ table, sorted by check-in date, offers a comprehensive view of the current reservations.

- User Interface (`home()` function):

  - Serves as the home page for users to interact with different functionalities.
  - Provides error handling and input validation to ensure smooth operation.


OUTPUT

```
**********************************************************WELCOME TO HOTEL ANCASA**********************************************************

*******************************************************************************************************************************************

Press 1. To View Available Rooms
Press 2. To Know Room Amenities Available
Press 3. To Check-In
Press 4. To Order Food
Press 5. To Check-Out
Press 6. To View All Bookings
Press 7. To Exit

*******************************************************************************************************************************************

Enter your choice: 1

-----------------------------------------------------Rooms Available-----------------------------------------------------------------------

Room No.:101 | Room Type:Basic | Price:Rs.1500/night
Room No.:102 | Room Type:Basic | Price:Rs.1500/night
Room No.:103 | Room Type:Basic | Price:Rs.1500/night
Room No.:104 | Room Type:Basic | Price:Rs.1500/night
Room No.:105 | Room Type:Basic | Price:Rs.1500/night
Room No.:201 | Room Type:Standard | Price:Rs.2200/night
Room No.:202 | Room Type:Standard | Price:Rs.2200/night
Room No.:203 | Room Type:Standard | Price:Rs.2200/night
Room No.:204 | Room Type:Standard | Price:Rs.2200/night
Room No.:205 | Room Type:Standard | Price:Rs.2200/night
Room No.:301 | Room Type:Delux | Price:Rs.3500/night
Room No.:302 | Room Type:Delux | Price:Rs.3500/night
Room No.:303 | Room Type:Delux | Price:Rs.3500/night
Room No.:304 | Room Type:Delux | Price:Rs.3500/night
Room No.:305 | Room Type:Delux | Price:Rs.3500/night

-------------------------------------------------------------------------------------------------------------------------------------------
Do you want to get room amenities information?(Y/N) y
```

```
To see the room amenities available
-----------------------------------------------------------------------------------------------------------------------------------------

Enter room type: delux

------Amenities Available are------
1.House Keeping
2.Toiletries
3.Towels,Bathrobes and Slippers
4.Personal Care Products
5.Telivision and Telephone
6.Free Wifi
7.Premium Coffee and Tea Making Kit
8.Free Breakfast
9.Free Parking
10.Gym or Fitness Centre access
11.Refrigerator-Mini Bar
12.Snacks Basket
13.Borrowing Closet
14.Personalized Books and Movies
15.Personalized Plant Set-up

Do you want to enter more?(Y/N): y
```

```
Enter room type: standard

------Amenities Available are------
1.House Keeping
2.Toiletries
3.Towels,Bathrobes and Slippers
4.Telivision and Telephone
5.Free Wifi
6.Coffee and Tea Making Kit
7.Free Breakfast

Do you want to enter more?(Y/N): n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*******************************************************************************************************************************************************

Enter your choice: 3
```

```
------------------------------------------------------------TO CHECK-IN-------------------------------------------------------------

Enter Room Number: 332

Invalid Room Number.
-------------------------------------------------------------------------------------------------------------------------------------
Do you want to enter more?(Y/N) y

Enter Room Number: 302
Available
Room_Type-Delux
Price/night is Rs.3500
BookingId: 2872
Enter number of guest (max.3/room): 2
Enter Name: Ananya Sharma
Enter Check-In Date(YYYY-MM-DD): 2024-02-16
Enter Name: Priyansh Sharma
Enter Check-In Date(YYYY-MM-DD): 2024-02-16

Room No.:302-Delux,Status-Booked
Booking Successful!!!

-------------------------------------------------------------------------------------------------------------------------------------
Do you want to enter more?(Y/N) y
```

```
Enter Room Number: 101
Available
Room_Type-Basic
Price/night is Rs.1500
BookingId: 3973
Enter number of guest (max.3/room): 1
Enter Name: Rahul Verma
Enter Check-In Date(YYYY-MM-DD): 2024-02-16

Room No.:101-Basic,Status-Booked
Booking Successful!!!

--------------------------------------------------------------------------------------------------------------------------------------------------------
Do you want to enter more?(Y/N) n


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Press 7. To Exit

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Enter your choice: 4
```

```
------------------------------------------------------------TO ORDER FOOD------------------------------------------------------------

Enter a Room Number: 101
Room Number: 101   Booking Id: 3973   Check-in Date: 2024-02-16

Order Id: 1984
Enter Order Date(YYYY-MM-DD): 2024-02-16

Enter Food Item: Uttapam
Enter Quantity: 1
Do you want to enter more dish?(Y/N): y
Enter Food Item: cutlet
Enter Quantity: 1
Do you want to enter more dish?(Y/N): n

Do you want to remove anything?(Y/N) n

Your Final Order is:
Food_Items: Uttapam   Quantity: 1
Food_Items: Cutlet   Quantity: 1

Total Bill: Rs 210

------------------------------------------------------------------------------------------------------------------------------------
Do you want to enter more order?(Y/N): y
```

```
Enter a Room Number: 302
Room Number: 302   Booking Id: 2872   Check-in Date: 2024-02-16

Order Id: 5289
Enter Order Date(YYYY-MM-DD): 2024-02-16

Enter Food Item: Mushroom masala
Enter Quantity: 1
Do you want to enter more dish?(Y/N): y
Enter Food Item: Plain roti
Enter Quantity: 4
Do you want to enter more dish?(Y/N): y
Enter Food Item: biryani
Enter Quantity: 1
Do you want to enter more dish?(Y/N): y
Enter Food Item: corn palak
Enter Quantity: 1
Do you want to enter more dish?(Y/N): n

Do you want to remove anything?(Y/N) y
Enter Food Item to remove: corn palak
Enter Quantity: 1
Do you want to remove anything?(Y/N) y
Enter Food Item to remove: plain roti
Enter Quantity: 1
Do you want to remove anything?(Y/N) n

Your Final Order is:
Food_Items: Mushroom Masala   Quantity: 1
Food_Items: Plain Roti   Quantity: 3
Food_Items: Biryani   Quantity: 1

Total Bill: Rs 510

--------------------------------------------------------------------------------------------------------------------------------
Do you want to enter more order?(Y/N): n
```

```
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Enter your choice: 5

-------------------------------------------------------------TO CHECK-OUT-------------------------------------------------------------------------

Enter Room Number to Check-Out: 101

Booking ID: 3973   Room Number: 101   Room Type: Basic   Name: Rahul Verma   Check-in Date: 2024-02-16

          ----------------------------------------------------FOOD ORDERED-----------------------------------------------------------------------
Order Id: 7979   Order Date: 2024-02-16   Food Item:   Masala Dosa   Qty- 1   Cost: 120
Order Id: 1984   Order Date: 2024-02-16   Food Item:   Uttapam   Qty- 1   Cost: 120
Order Id: 1984   Order Date: 2024-02-16   Food Item:   Cutlet   Qty- 1   Cost: 90
Order Id: 1962   Order Date: 2024-02-17   Food Item:   Manchurian   Qty- 1   Cost: 220
Order Id: 1962   Order Date: 2024-02-17   Food Item:   Garlic Naan   Qty- 2   Cost: 40

Total Food Bill is: Rs 590

Enter Check-Out Date(YYYY-MM-DD): 2024-02-18
Stay Duration: 2 days
Total Room Charge is Rs  3000
```

```
Your Total Payment is Rs 3590

Room No.-101 Successfully Checked-Out.
------------------------------------------------------------------------------------------------------------------------------------------------------
Do you want to enter more?(Y/N) y

Enter Room Number to Check-Out: 102

Booking ID: 5062   Room Number: 102   Room Type: Basic   Name: Tarun Verma   Check-in Date: 2024-02-17
Booking ID: 5062   Room Number: 102   Room Type: Basic   Name: Nihal Singh   Check-in Date: 2024-02-17

          ----------------------------------------------------FOOD ORDERED-----------------------------------------------------------------

No Food Ordered.

Enter Check-Out Date(YYYY-MM-DD): 2024-02-18
Stay Duration: 1 days
Total Room Charge is Rs  1500

Your Total Payment is Rs 1500

Room No.-102 Successfully Checked-Out.
------------------------------------------------------------------------------------------------------------------------------------------------------
Do you want to enter more?(Y/N) n
```

**********WELCOME TO HOTEL ANCASA**********

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Press 6. To View All Bookings
Press 7. To Exit

****

Enter your choice: 6

----------ALL BOOKING RECORD----------

Booking_Id	Room_Number	Room_Type	Name	Check-In_Date	Check-Out_Date
7105	201	Standard	Priyal Malhotra	2024-01-03	2024-01-05
7105	201	Standard	Anaya Malhotra	2024-01-03	2024-01-05
6516	101	Basic	Sanjeev Singh	2024-01-03	2024-01-04
2235	202	Standard	Nikit Verma	2024-01-03	2024-01-04
8725	301	Delux	Rishab Oberoi	2024-01-07	2024-01-10
8725	301	Delux	Ritika Oberoi	2024-01-07	2024-01-10
4742	203	Standard	Sakshi Choubey	2024-01-07	2024-01-09

```
7345            301          Delux       S.Srikant           2024-02-03             2024-02-10
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7345            301          Delux       V.Priyamani          2024-02-03             2024-02-10
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1786            201          Standard       Sakshi Sinha          2024-02-03             2024-02-06
-------------------------------------------------------------------------------------------------------------------------------------------
9707            201          Standard       Vandana Singh          2024-02-15             None
-------------------------------------------------------------------------------------------------------------------------------------------
2872            302          Delux       Ananya Sharma          2024-02-16             None
-------------------------------------------------------------------------------------------------------------------------------------------
2872            302          Delux       Priyansh Sharma          2024-02-16             None
-------------------------------------------------------------------------------------------------------------------------------------------
3973            101          Basic       Rahul Verma          2024-02-16             2024-02-18
-------------------------------------------------------------------------------------------------------------------------------------------
5062            102          Basic       Tarun Verma          2024-02-17             2024-02-18
-------------------------------------------------------------------------------------------------------------------------------------------
5062            102          Basic       Nihal Singh          2024-02-17             2024-02-18
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*******************************************************************************************************************************************

Enter your choice: 7
```

```
-------------------------------------------------------------------------------------------------------------------------------------------
7345            301          Delux       S.Srikant           2024-02-03             2024-02-10
-------------------------------------------------------------------------------------------------------------------------------------------
7345            301          Delux       V.Priyamani          2024-02-03             2024-02-10
-------------------------------------------------------------------------------------------------------------------------------------------
1786            201          Standard       Sakshi Sinha           2024-02-03             2024-02-06
-------------------------------------------------------------------------------------------------------------------------------------------
9707            201          Standard       Vandana Singh          2024-02-15              None
-------------------------------------------------------------------------------------------------------------------------------------------
2872            302          Delux       Ananya Sharma          2024-02-16             2024-02-19
-------------------------------------------------------------------------------------------------------------------------------------------
2872            302          Delux       Priyansh Sharma          2024-02-16             2024-02-19
-------------------------------------------------------------------------------------------------------------------------------------------
3973            101          Basic       Rahul Verma          2024-02-16             2024-02-18
-------------------------------------------------------------------------------------------------------------------------------------------
5062            102          Basic       Tarun Verma          2024-02-17             2024-02-18
-------------------------------------------------------------------------------------------------------------------------------------------
5062            102          Basic       Nihal Singh          2024-02-17             2024-02-18
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***************************************************************************************************************************************

Enter your choice: 7
```


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----------HOTEL MANAGEMENT SYSTEM----------

[ ]:

[1]:
```
# Connected to SQL Server.
import pyodbc

connection=pyodbc.connect(
    "Driver={SQL Server};"
    "Server=DESKTOP-THH90DU;"
    "Database=AnCasa;"
    "Trusted_Connection=yes;"
)

cursor=connection.cursor()

# To select all data from the table 'rooms' of connected database.

cursor.execute("SELECT * FROM rooms")
cursor.fetchall()
```

[1]:
```
[(101, 'Basic', 1800, 'Available'),
 (102, 'Basic', 1800, 'Available'),
 (103, 'Basic', 1800, 'Available'),
 (104, 'Basic', 1800, 'Available'),
 (105, 'Basic', 1800, 'Available'),
 (201, 'Standard', 2200, 'Available'),
 (202, 'Standard', 2200, 'Available'),
 (203, 'Standard', 2200, 'Available'),
 (204, 'Standard', 2200, 'Available'),
 (205, 'Standard', 2200, 'Available'),
 (301, 'Delux', 3500, 'Available'),
```

```
 (302, 'Delux', 3500, 'Available'),
 (303, 'Delux', 3500, 'Available'),
 (304, 'Delux', 3500, 'Available'),
 (305, 'Delux', 3500, 'Available')]
```

[2]:

```
import pyodbc

connection=pyodbc.connect(
    "Driver={SQL Server};"
    "Server=DESKTOP-THH90DU;"
    "Database=AnCasa;"
    "Trusted_Connection=yes;"
)

cursor=connection.cursor()

# To create a table 'bookings' in SQL Database to store all the booking records.

cursor.execute(
    '''
    CREATE TABLE bookings (
    Booking_Id int,
    Room_Number int ,
    Name varchar(30),
    Check_In_Date date,
    Check_Out_Date date
    )'''
)

connection.commit()
```

```
[ ]: import pyodbc

connection=pyodbc.connect(
    "Driver={SQL Server};"
    "Server=DESKTOP-THH90DU;"
    "Database=AnCasa;"
    "Trusted_Connection=yes;"
)

cursor=connection.cursor()

# To create a table 'food_orders' in SQL Database to store all the food ordered records.

cursor.execute('''create table food_orders(
Room_No int,
Booking_Id int,
Order_Id int,
Order_Date date,
Food_Items varchar(30),
Quantity int,
Total int)'''
)

connection.commit()
```

[ ]:
```
# MAIN PROGRAM FOR HOTEL MANAGEMENT SYSTEM.
```

[19]:
```
#Function to view room amenities.

def room_info():
    while True:
        print('To see the room amenities available')
        print('-------------------------------------------------------------------------------------------------------------------------------------------')
        print('')
        type=input("Enter room type:")
        print('')

        if type.lower()=="basic":
            print('------Amenities Available are-------')
            print('1.House Keeping')
            print('2.Toiletries and Towels')
            print('3.Telivision and Telephone')
            print('4.Coffee and Tea Making Kit')
            print('')

        elif type.lower()=="standard":
            print('------Amenities Available are------')
            print('1.House Keeping')
            print('2.Toiletries')
            print('3.Towels,Bathrobes and Slippers')
            print('4.Telivision and Telephone')
            print('5.Free Wifi')
            print('6.Coffee and Tea Making Kit')
            print('7.Free Breakfast')
            print('')
```

```
elif type.lower()=="delux":
    print('------Amenities Available are------')
    print('1.House Keeping')
    print('2.Toiletries')
    print('3.Towels,Bathrobes and Slippers')
    print('4.Personal Care Products')
    print('5.Telivision and Telephone')
    print('6.Free Wifi')
    print('7.Premium Coffee and Tea Making Kit')
    print('8.Free Breakfast')
    print('9.Free Parking')
    print('10.Gym or Fitness Centre access')
    print('11.Refrigerator-Mini Bar')
    print('12.Snacks Basket')
    print('13.Borrowing Closet')
    print('14.Personalized Books and Movies')
    print('15.Personalized Plant Set-up')
    print('')

choice=input('Do you want to enter more?(Y/N):')
print('')
if choice.upper()=='N':
    break
```

```python
#Function to view rooms available

def view_available_rooms():
    import pyodbc

    connection=pyodbc.connect(
        "Driver={SQL Server};"
        "Server=DESKTOP-THH90DU;"
        "Database=AnCasa;"
        "Trusted_Connection=yes;"
    )

    cursor=connection.cursor()

    print('----------------------------------------------------Rooms Available----------------------------------------------------------------------------------------')
    print('')
    cursor.execute("select*from rooms where Availability_Status='Available'")
    for i in cursor.fetchall():
        print(f"Room No.:{i[0]} | Room Type:{i[1]} | Price:Rs.{i[2]}/night")
    print('')
    print('-----------------------------------------------------------------------------------------------------------------------------------------------------------')

    info=input('Do you want to get room amenities information?(Y/N)')
    print('')
    if info.upper()=='Y':
       room_info()
    else:
        print('')
```

```python
#Function to book a room.

def book_room():
    import datetime
    import random
    import pyodbc

    connection=pyodbc.connect(
        "Driver={SQL Server};"
        "Server=DESKTOP-THH90DU;"
        "Database=AnCasa;"
        "Trusted_Connection=yes;"
    )

    cursor=connection.cursor()

    print('----------------------------------------------------------------TO CHECK-IN-----------------------------------------------------------------')
    print('')
    while True:
        rn=input("Enter Room Number:")
        cursor.execute(f"select Room_Number from rooms where Room_Number={rn}")
        room= cursor.fetchone()
        if room :
                cursor.execute(f"select Availability_Status from rooms where Room_Number={rn}")
                for r in cursor.fetchall()[0]:
                    if r=='Available':
                        cursor.execute(f" select Availability_Status,Room_Type,Price_per_night from rooms where Room_Number={rn}")
                        for j in cursor.fetchall():
                            print(f"{j[0]}")
                            print(f"Room_Type-{j[1]}")
                            print(f"Price/night is Rs.{j[2]}")
                            rt=j[1]
                        bi=random.randint(1000,9999)
                        print('BookingId:',bi)
```

```
                print('BookingId:',bi)
                try:
                    guest=int(input('Enter number of guest (max.3/room):'))
                    for g in range(guest):
                        name=input('Enter Name:')
                        cin=input('Enter Check-In Date(YYYY-MM-DD):')
                        cursor.execute(
                                  ''' insert into bookings( Booking_Id,Room_Number,Room_Type, Name,Check_In_Date) values(?,?,?,?,?)''',
                                              bi,rn,rt,name,cin)
                        connection.commit()
                    cursor.execute(f"update rooms set Availability_Status='Booked' where Room_Number={rn}")
                    connection.commit()
                    cursor.execute(f"select*from rooms where Room_Number={rn}")
                    for k in cursor.fetchall():
                        print('')
                        print(f"Room No.:{k[0]}-{k[1]},Status-{k[3]}")
                    print('Booking Successful!!!')
                    print('')
                except:
                    print('Invalid Input.')
            elif r=='Booked':
                print('Room Not Available.')
                print('')

    else:
            print('')
            print('Invalid Room Number.')

    print('-------------------------------------------------------------------------------------------------------------------------------------------')
    choice1=input('Do you want to enter more?(Y/N)')
    print('')
    if choice1.upper()=='N':
       break
```

```python
# Function to order food from the hotel.

def restaurant():

    import random
    import pyodbc

    connection=pyodbc.connect(
        "Driver={SQL Server};"
        "Server=DESKTOP-THH90DU;"
        "Database=AnCasa;"
        "Trusted_Connection=yes;"
    )

    cursor=connection.cursor()

    print('----------------------------------------------------------------TO ORDER FOOD-----------------------------------------------------------------')
    print('')
    while True:
        rno=int(input('Enter a Room Number:'))
        cursor.execute(f"select Room_Number from rooms where Room_Number={rno}")
        room=cursor.fetchone()
        if room:
            cursor.execute(f"select Availability_Status from rooms where Room_Number={rno}")
            for i in cursor.fetchall()[0]:
                if i=='Booked':
                    cursor.execute(f"select distinct(Room_Number), Booking_Id, Check_In_Date from bookings where Room_Number={rno} and Check_In_Date=(sel
                    for all in cursor.fetchall():
                        print('Room Number:',all[0],' ','Booking Id:',all[1],' ','Check-in Date:',all[2])
                        bid=all[1]
                    oid=random.randint(1000,9999)
                    print('')
                    print('Order Id:',oid)
```

```
od=input('Enter Order Date(YYYY-MM-DD):')
cost=0
print('')
while True:
    order=input('Enter Food Item:').title()
    cursor.execute(f"select Dish, Price from menu where Dish='{order}' ")
    o=cursor.fetchone()
    if o:
        qty=int(input('Enter Quantity:'))
        total=(qty*o[1])
        cost=cost+total
        cursor.execute(f"insert into food_orders(Room_No,Booking_Id,Order_Id,Order_Date,Food_Items,Quantity,Total) values(?,?,?,?,?,?
                       rno,bid,oid,od,order,qty,total)
        connection.commit()
    else:
        print('Item not available or inavalid input.')
    choice=input('Do you want to enter more dish?(Y/N):')
    if choice.upper()=='N':
        print('')
        break


while True:
    final=input('Do you want to remove anything?(Y/N)')
    if final.upper()=='Y':
        item=input('Enter Food Item to remove:').title()
        q=int(input('Enter Quantity:'))
        cursor.execute(f"select Quantity from food_orders where Order_Id={oid} and Food_Items='{item}'")
        for qty in cursor.fetchall()[0]:
            if qty>1 and q<qty:
                cursor.execute(f"update food_orders set Quantity= Quantity-{q} where  Order_Id={oid} and Food_Items='{item}' ")
                connection.commit()
```

```
                        else:
                            cursor.execute(f"delete food_orders where  Order_Id={oid} and Food_Items='{item}' ")
                            connection.commit()
                        cursor.execute(f"select Price from menu where  Dish ='{item}' ")
                        for p in cursor.fetchall()[0]:
                            removed=p*q
                        cost=cost-removed

                    else:
                        break

                print('')
                print('Your Final Order is:')
                cursor.execute(f"select Food_Items, Quantity from food_orders where Room_No={rno} and Order_Id={oid}")
                for f in cursor.fetchall():
                        print('Food_Items:',f[0],' ','Quantity:',f[1])


                print('')
                print('Total Bill: Rs',cost)
                print('')
            else:
                print('')
                print('Room not booked.')

    else:
        print('')
        print('Invalid Room Number')

    print('-------------------------------------------------------------------------------------------------------------------------------')
    choice1=input('Do you want to enter more order?(Y/N):')
    print('')
    if choice1.upper()=='N':
        break
```

```
#Function to check-out.

def checkout_room():
    import datetime
    import pyodbc

    connection=pyodbc.connect(
        "Driver={SQL Server};"
        "Server=DESKTOP-THH90DU;"
        "Database=AnCasa;"
        "Trusted_Connection=yes;"
        )

    cursor=connection.cursor()

    print('-----------------------------------------------------------------TO CHECK-OUT-----------------------------------------------------------------')
    print('')
    while True:
            rno=int(input('Enter Room Number to Check-Out:'))
            print('')
            cursor.execute(f"select Room_Number from rooms where Room_Number={rno}")
            co=cursor.fetchone()
            if co:
                cursor.execute(f"select Availability_Status from rooms where Room_Number={rno}")
                for i in cursor.fetchall()[0]:
                   if i=='Booked':
                        cursor.execute(f"select * from bookings where Room_Number={rno} and Check_In_Date=(select max(Check_In_Date) from bookings where
                        for all in cursor.fetchall():
                            print('Booking ID:',all[0],' ','Room Number:',all[1],' ','Room Type:',all[2],' ','Name:',all[3],' ','Check-in Date:',all[4])
                            bid=all[0]
                        print('')
                        print('          ------------------------------------------------FOOD ORDERED-------------------------------------------------')
                        cursor.execute(f"select * from food_orders where  Room_No={rno} and Booking_Id={bid}")
```

```
                for j in cursor.fetchall():
                    print('Order Id:',j[2],' ','Order Date:',j[3],' ','Food Item:',' ',j[4],' ','Qty-',j[5],' ','Cost:',j[6])
                print('')
                cursor.execute(f"select sum(total) as Total_Food_bill from food_orders where Room_No={rno} and Booking_Id={bid}")
                for k in cursor.fetchall():
                    if k[0] is None:
                        fb=0
                        print('No Food Ordered.')
                    else:
                        fb=k[0]
                        print('Total Food Bill is: Rs',k[0])
                print('')
                cout=(input('Enter Check-Out Date(YYYY-MM-DD):'))
                date2=datetime.datetime.strptime(cout,'%Y-%m-%d')
                date1=datetime.datetime.strptime(all[4],'%Y-%m-%d')
                diff=(date2-date1).days
                print('Stay Duration:',diff,'days')
                cursor.execute(f" select Price_per_night from rooms where Room_Number={rno}")
                for i in cursor.fetchall():
                     rc=i[0]*diff
                     print("Total Room Charge is Rs ",i[0]*diff)
                print('')
                print('Your Total Payment is Rs',fb+rc)
                cursor.execute(f"update bookings set Check_Out_Date='{date2}' where Booking_Id={bid}")
                connection.commit()
                cursor.execute(f"update rooms set Availability_Status='Available' where Room_Number={rno}")
                connection.commit()
                print('')
                print(f"Room No.-{rno} Successfully Checked-Out.")
            else:
                print('Room Currently Not Booked.')

    else:
        print('Invalid Room Number.')


    print('-----------------------------------------------------------------------------------------------------------------------------------------------------------')
    choice2=input('Do you want to enter more?(Y/N)')
    print('')
    if choice2.upper()=='N':
        break
```

```python
#Function to view all bookings

def view_all_bookings():
    import pyodbc

    connection=pyodbc.connect(
        "Driver={SQL Server};"
        "Server=DESKTOP-THH90DU;"
        "Database=AnCasa;"
        "Trusted_Connection=yes;"
            )

    cursor=connection.cursor()
    cursor.execute("select*from bookings order by Check_In_Date")
    print('------------------------------------------------------------ALL BOOKING RECORD-------------------------------------------------------------')
    print('')
    print('Booking_Id  Room_Number    Room_Type        Name             Check-In_Date       Check-Out_Date')
    print('-------------------------------------------------------------------------------------------------------------------------------------------')
    for all in cursor.fetchall():
        print(all[0],'         ',all[1],'        ',all[2],'     ',all[3],'         ',all[4],'          ',all[5])
        print('-------------------------------------------------------------------------------------------------------------------------------------------')
```

```python
#Function for Home Page

def home():
    while True:
        print('')
        print('**********************************************************WELCOME TO HOTEL ANCASA**********************************************************')
        print('')
        print('*******************************************************************************************************************************************')
        print('')
        print('Press 1. To View Available Rooms')
        print('Press 2. To Know Room Amenities Available')
        print('Press 3. To Check-In')
        print('Press 4. To Order Food')
        print('Press 5. To Check-Out')
        print('Press 6. To View All Bookings')
        print('Press 7. To Exit')
        print('')
        print('*******************************************************************************************************************************************')
        print('')

        try:
            choice=int(input('Enter your choice:'))
            print('')
            if choice==1:
                    view_available_rooms()

            elif choice==2:
                    room_info()

            elif choice==3:
                    book_room()
```

```
            elif choice==4:
                    restaurant()

            elif choice==5:
                    checkout_room()

            elif choice==6:
                    view_all_bookings()

            elif choice==7:
                    break

            else:
                print('Invalid Input.')

        except:
             print('Invalid Input.')

home()
```

THANK-YOU