

PyStay – Hotel Management System

PyStay is a desktop-based **Hotel Management System** built using **Python (Tkinter)** and **MySQL**. It provides an easy-to-use graphical interface for managing **customers, room bookings, and billing operations** in a hotel environment.

This project is suitable for learning:

- GUI development with Tkinter
 - Database connectivity with MySQL
 - CRUD operations in Python
-

Features



Authentication System


- User **Sign Up** and **Login**
 - Credentials stored in MySQL
 - Mandatory authentication before accessing the system
-

Main Dashboard

- Centralized, menu-driven interface
 - Easy navigation to:
 - Customer
 - Rooms
 - Details
 - Reports
 - Attractive UI with images and layouts
-

Customer Management

- Add, update, and delete customer records
- Auto-generate customer reference number
- Search customers by:
 -  Mobile number
 -  ID number

-  Reference ID
 - Display customer details using **TreeView**
-

Room Booking Management

- Book rooms with **check-in & check-out** dates
 - Fetch customer details using contact number
 - Select:
 - Room type (Single / Double / Luxury)
 - Meal type (Veg / Non-Veg)
 - Automatic bill calculation:
 - Tax
 - Subtotal
 - Total amount
 - Update or delete room bookings
-

Billing System

- Calculates cost based on:
 - Room type
 - Meal type
 - Number of staying days
 - Displays:
 - Tax
 - Subtotal
 - Final payable amount
-

Technologies Used

- **Python 3.x**
- **Tkinter** – GUI development
- **Pillow (PIL)** – Image handling
- **MySQL** – Database

- **mysql-connector-python** – Database connectivity
-

Project Structure

PyStay/

```
|
|
├── login.py      # Authentication (Login & Signup)
├── main.py       # Tkinter application handler
├── customer.py   # Customer management module
├── room.py       # Room booking & billing module
├── details.py    # Customer & room details handling
├── img/          # UI / UX images
├── screenshots/  # Application screenshots
└── README.md
```

Requirements

Software Requirements

- Python **3.8 or higher**
- MySQL Server
- MySQL Workbench (optional)

Python Libraries

Install the required libraries:

```
pip install pillow mysql-connector-python
```

Tkinter comes pre-installed with Python.

Database Setup

Create Database

```
CREATE DATABASE hoteldb;
```

```
USE hoteldb;
```

Create Customer Table

```
CREATE TABLE Customer (  
    c_ref VARCHAR(20) PRIMARY KEY,  
    c_name VARCHAR(100),  
    m_name VARCHAR(100),  
    gender VARCHAR(20),  
    zipcode VARCHAR(20),  
    mobile VARCHAR(20),  
    email VARCHAR(100),  
    nationality VARCHAR(50),  
    id_proof VARCHAR(50),  
    id_number VARCHAR(50),  
    address VARCHAR(255)  
);
```

Create Rooms Table

```
CREATE TABLE rooms (  
    contact VARCHAR(20),  
    CheckIn VARCHAR(20),  
    CheckOut VARCHAR(20),  
    RoomType VARCHAR(50),  
    RoomNumber VARCHAR(20),  
    StayingDays VARCHAR(10),  
    MealType VARCHAR(20),  
    PaidTax VARCHAR(20),  
    SubTotal VARCHAR(20),  
    TotalPrice VARCHAR(20)  
);
```

Database Configuration

Update MySQL credentials in
customer.py, **room.py**, and **login/signup module** if required:

```
mysql.connector.connect(  
    host="localhost",  
    username="root",  
    password="root",  
    database="hoteldb"  
)
```

▶ How to Run the Project (Step-by-Step)

Step 1 🔌 Clone the Repository

```
git clone https://github.com/your-username/PyStay.git  
cd PyStay
```

Step 2 🚀 Start MySQL Server

- Ensure MySQL service is running
- Database and tables must be created

Step 3 🏠 Run the Application

```
python main.py
```

□ How to Use the System

◆ Step 1: Sign Up (First-Time Users)

- Launch the application
- Click **Sign Up**
- Create a username and password
- Account will be saved in the database

◆ Step 2: Login





- Enter registered credentials
- Click **Log In**
- On successful login, the **Dashboard** opens

◆ Step 3: Dashboard Navigation

From the left menu, you can access:

- **Customer** → Add / Update / Delete customer details
 - **Rooms** → Book rooms & calculate bills
 - **Details** → View booking details
 - **Report** → View system data
 - **Logout** → Exit the application
-

Screenshots

-  Login Screen
-  Sign Up Screen
-  Main Dashboard
-  Customer Management Module

(Screens are available inside the screenshots/ folder)

Future Improvements

- Role-based login (Admin / Staff)
 - Room availability tracking
 - PDF invoice generation
 - Calendar date picker
 - Stronger password hashing
 - Improved validation & error handling
-

Author -**Shubham Das**

Python Developer | GUI & Database Enthusiast

PLEASE CREATE ACCOUNT AND ENTER CREDENTIALS AND THEN CLICK ON SIGNUP.

Hotel Management System

Create Account

Join us today

Username

Password

Sign Up

[Already have an account? Sign In](#)

THEN YOU WILL FIND A MESSAGE BOX SAYING SUCCESS ACCOUNT CREATED.

Hotel Management System

Create Account

Join us today

Username

Password

Sign Up

[Already have an account? Sign In](#)

Success

i Account Created Successfully!

OK

IT WILL REDIRECT YOU TO LOGIN PAGE, FILL CREDENTIALS AND THEN CLICK LOG-IN.

Hotel Management System

Welcome Back

Sign in to continue

Username

harry

Password

...

Log In



Don't have an account? [Sign Up](#)

AFTER LOGIN SUCCESS IT WILL REDIRECT YOU TO MAIN DASHBOARD.



HERE YOU CAN USE ALL THE BUTTONS. CLICK ON CUSTOMER BUTTON TO MANAGE CUSTOMER PANNEL



PyStay



HOTEL MANAGEMENT SYSTEM

MENU

- CUSTOMER
- ROOMS
- DETAILS
- REPORT
- LOGOUT



ADD CUSTOMER DETAILS

Customer Details

Customer Ref:

Customer's Name:

Mother's Name:

Gender:

Zip-Code:

Mobile:

Email:

Nationality:

Id Proof Type:

Id Number:

Address:

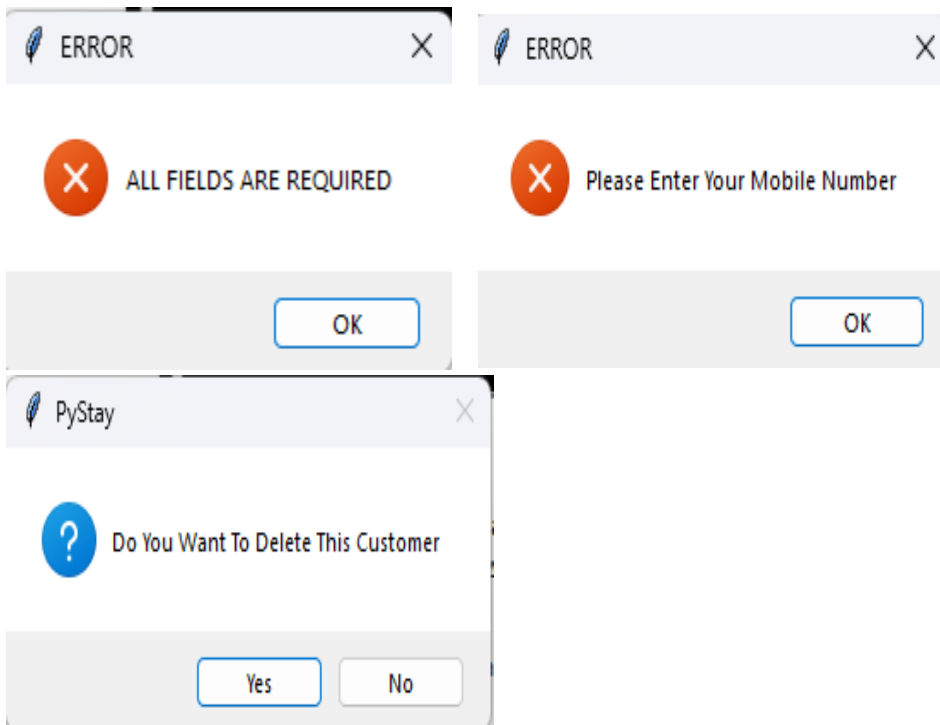
ADD UPDATE RESET DELETE

View Details & Search System

SearchBy: **SEARCH SHOW ALL**

Reference No	Name	Mother's Name	Gender	ZipCode	Mobile	Email
9135	shss	ffddf	Male	5657	8540932407	sss@gmail.c
9671	Pradeep Gupta	Sita Devi	Male	12345	779313212	prdp112@g
14293	SHUBHAM DAS	SHUBHASHINI D/	Male	847422	9516787305	sd745461@c
41496	Nirav Patel	Shri Devi	Male	854009	9771296247	np11@gmai
66418	Riya Choudhary	Ranjana Choudh	Female	854309	8540932407	riya2012@g



HERE YOU CAN FACE DIFFERENT PROBLEMS WHILE ADDING, UPDATING, AND DELETING CUSTOMER.



AFTER SUCCESSFULLY HANDLING THIS YOU CAN ADD, UPDATE, DELETE THE CUTOMER & ALSO RESET.

THEN AFTER COMMITTING THIS DESTROY THE WINDOW OF CUSTOMER DETAILS & MOVE TO NEXT BUTTON OF ROOMS TO HANDLE THE ROOM PANNEL WHERE YOU CAN FETCH DATA OF CUTOMERS AND USE THE FUNCTIOALITY OF ADD, UPDATE, DELETE. BILL GENERATION IS PERFORMED AUTOMATICALLY AND THE TAX,SUB-TOTAL AND TOTAL-PRICE IS ALSO CALCULATED AUTOMATICALLY ACCORDING TO MEAL-TYPE AND CHECK-IN CHECK-OUT DATE.

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ROOM BOOKING PAGE

MENU



CUSTOMER

ROOMS

DETAILS

REPORT

LOGOUT

ROOM BOOKING INFORMATION

ROOM BOOKING DETAILS

Customer Contact: FETCH

Check-In-Date:

Check-Out-Date:

Room-Type: Single

Room-Number:

Staying-Days: 1

Meal-Type: Veg


Paid-Tax:

Sub-Total:

Total-Price:

ADD UPDATE RESET DELETE

BILLING-DETAILS



View Details & Search System



SearchBy: Contact SEARCH SHOW ALL

Contact	CheckIn	CheckOut	RoomType	RoomNumber	StayingDays	MealType
9516787305	20/01/2026	31/01/2026	Single	103	11	Veg
9771296247	30/05/2025	05/06/2025	Single	901	6	Veg

FETCHING THE DATA THROUGH CONTACTS – CLICK ON FETCH DATA AFTER FILLING CONTACT

A WINDOW WILL BE OPENED ON THE RIGHT FRAME CONTAINING DATA OF THE EXISTING CUSTOMER

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ROOM BOOKING PAGE

ROOM BOOKING INFORMATION

MENU



CUSTOMER

ROOMS

DETAILS

REPORT

LOGOUT

ROOM BOOKING DETAILS

Customer Contact: 9516787305 FETCH

Check-In-Date:

Check-Out-Date:

Room-Type: Single ▼

Room-Number:

Staying-Days: 1 ▼

Meal-Type: Veg ▼

Paid-Tax:

Sub-Total:

Total-Price:

ADD

UPDATE

RESET

DELETE

BILLING-DETAILS

Customer's Name: {SHUBHAM DAS}


Customer's Gender: Male

Customer's Email: sd745461@gmail.com

Customer's Nationality: Indian

Customer's ID-Prof-No: 1234588

Customer's Address: Delhi



View Details & Search System

SearchBy: Contact ▼ SEARCH SHOW ALL

Contact	CheckIn	CheckOut	RoomType	RoomNumber	StayingDays	MealType
9516787305	20/01/2026	31/01/2026	Single	103	11	Veg
9771296247	30/05/2025	05/06/2025	Single	901	6	Veg

YOU CAN FACE SOME ISSUE HERE IN THIS ROOMS PANNEL DUE TO SOME VALIDATIONS

ERROR

✕

✕

ENTERED NUMBER DIDN'T MATCHED WITH RECORDS

OK

ERROR

✕

✕

Please Enter Your Mobile Number

OK

ERROR

✕

✕

ALL FIELDS ARE REQUIRED

OK

Invalid Date

✕

✕

Please enter dates in DD/MM/YYYY format

OK

AFTER HANDLING ALL OF THIS YOU CAN ADD, UPDATE AND DELETE DATA.YOU CAN USE CURSOR FROM THE SCROLL BAR TO GET THAT DATA AGAIN IN YOUR ENTRY FIELD BY JUST CLICKING ON SCROLL-BAR'S COLUMNS DATA.

PyStay

MENU

CUSTOMER
ROOMS
DETAILS
REPORT
LOGOUT

ROOM BOOKING PAGE

ROOM BOOKING INFORMATION

ROOM BOOKING DETAILS

Customer Contact: 9516787305

Check-In-Date: 20/01/2026

Check-Out-Date: 31/01/2026

Room-Type: Single

Room-Number: 103

Staying-Days: 11

Meal-Type: Veg

Paid-Tax: 1359.90

Sub-Total: 1511.00

Total-Price: 2870.90

ADD

UPDATE

RESET

DELETE

BILLING-DETAILS

Customer's Name: {SHUBHAM DAS}

Customer's Gender: Male

Customer's Email: sd745461@gmail.com

Customer's Nationality: Indian

Customer's ID-Prof-No: 1234588

Customer's Address: Delhi

View Details & Search System

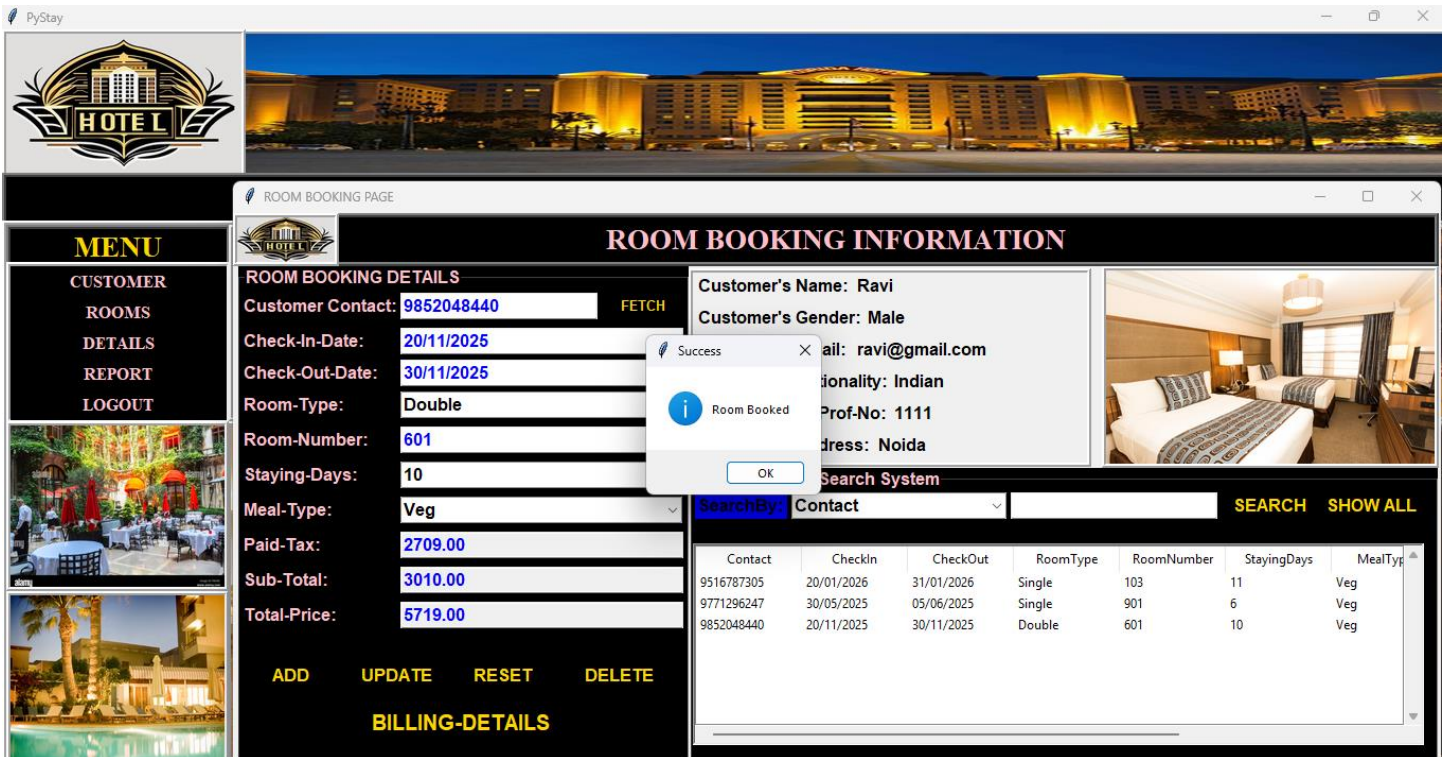
SearchBy: Contact

SEARCH

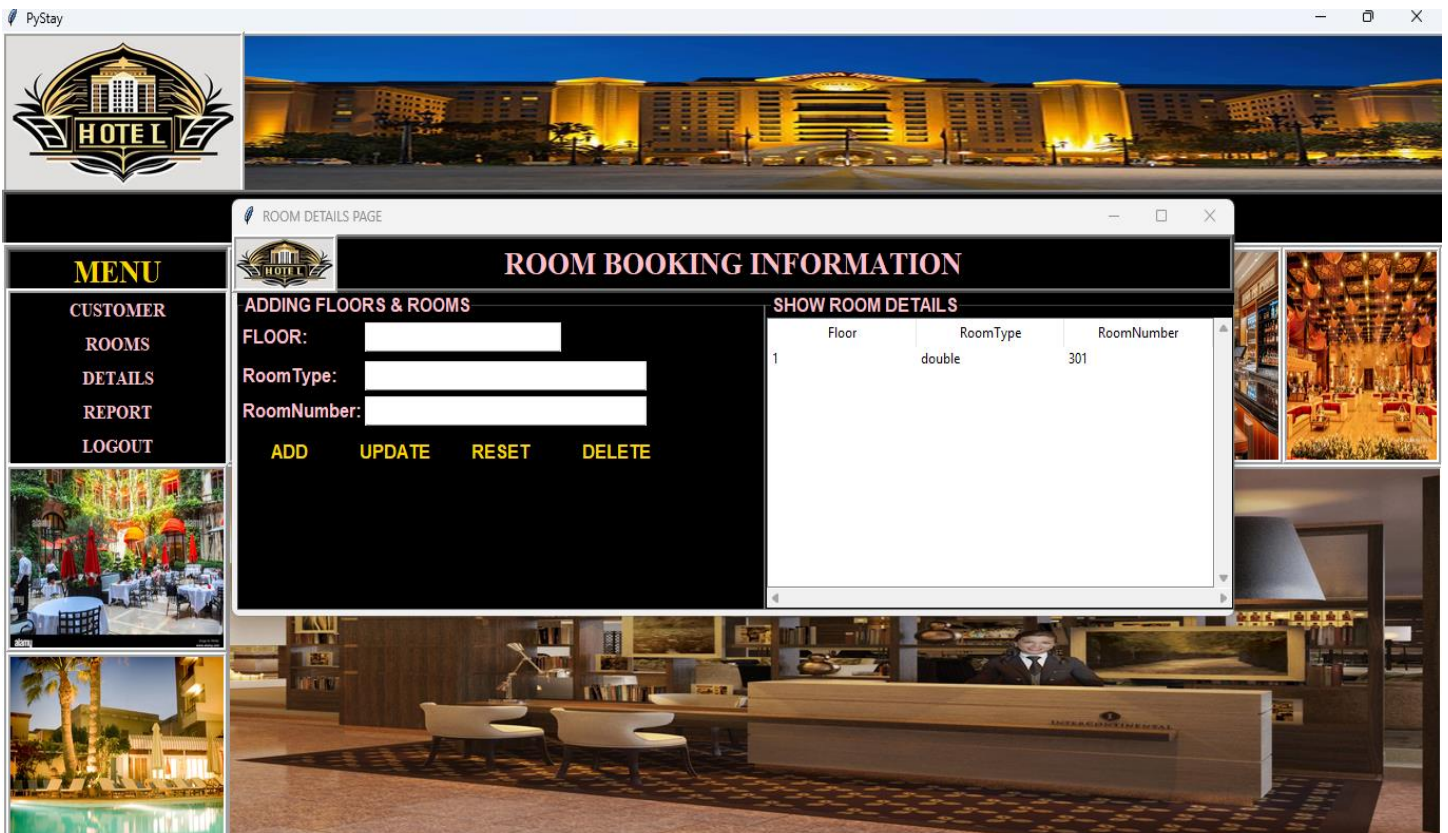
SHOW ALL

Contact	CheckIn	CheckOut	RoomType	RoomNumber	StayingDays	MealType
9516787305	20/01/2026	31/01/2026	Single	103	11	Veg
9771296247	30/05/2025	05/06/2025	Single	901	6	Veg

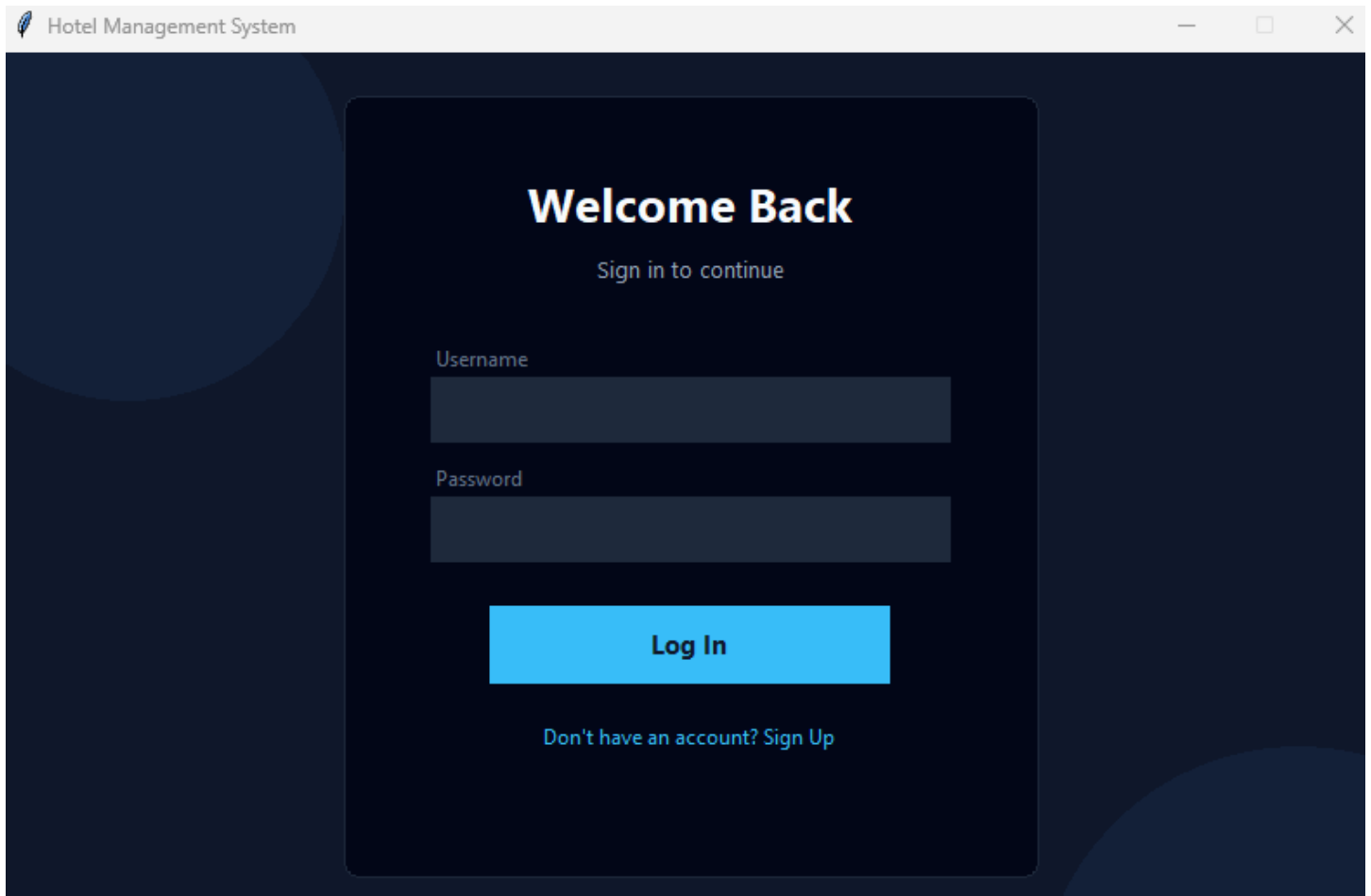
AFTER SETTING UP THE ROOM PAGE AND AFTER GENERATING BILL YOU WILL GET A SUCCESS MESSAGE OF ROOM BOOKED.



THEN DESTROY THIS WINDOW AND MOVE TO DETAILS PAGE FROM WGERE YOU CAN ADD ROOM DETAILS.FROM HERE AGAIN YOU CAN USE THE BUTTON FUNCTIONALITIES.



AFTER DOING ALL OF THIS YOU CAN SIMPLY DESTROY THE WINDOW OF DETAILS AND CLICK ON LOGOUT BUTTON WHICH WILL REDIRECT YOU TO THE LOGIN PAGE.



THE END);