

# 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
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### Main Dashboard

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

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## ⚙ 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.

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## 🗄 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)
);
```

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### 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"  
)
```

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## ► 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
```

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## □ 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)

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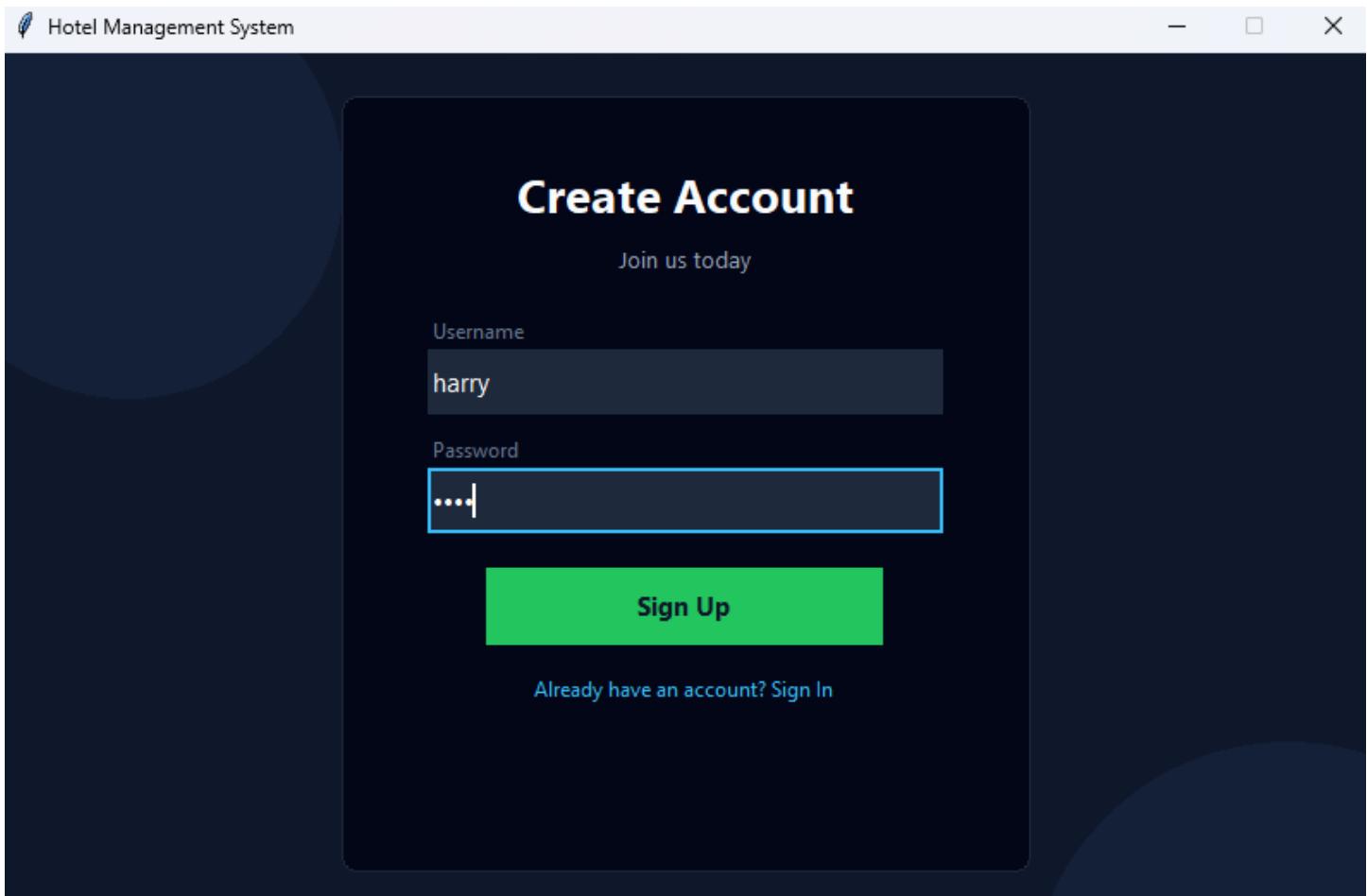
## Future Improvements

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

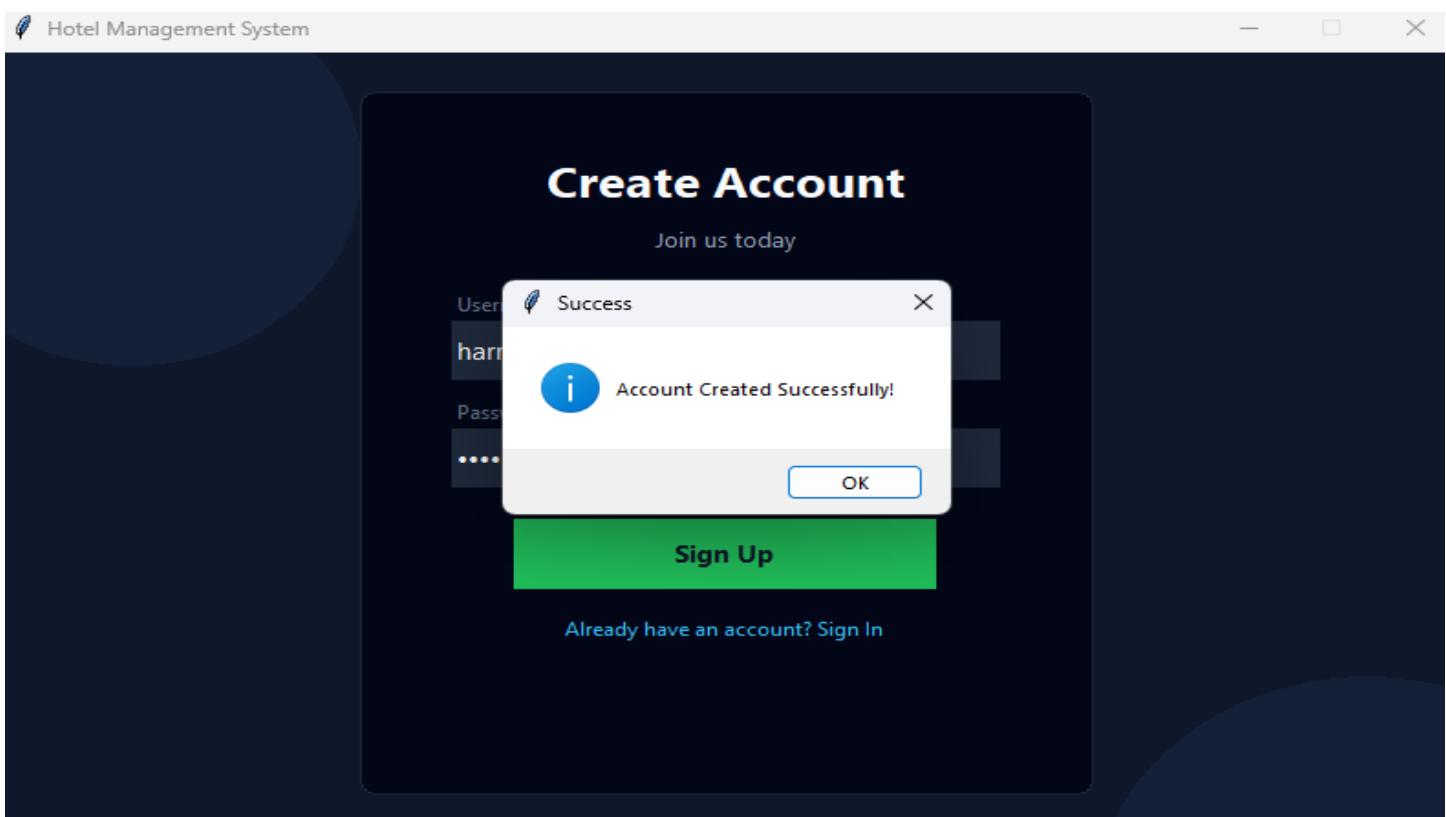
## Author -Shubham Das

Python Developer | GUI & Database Enthusiast

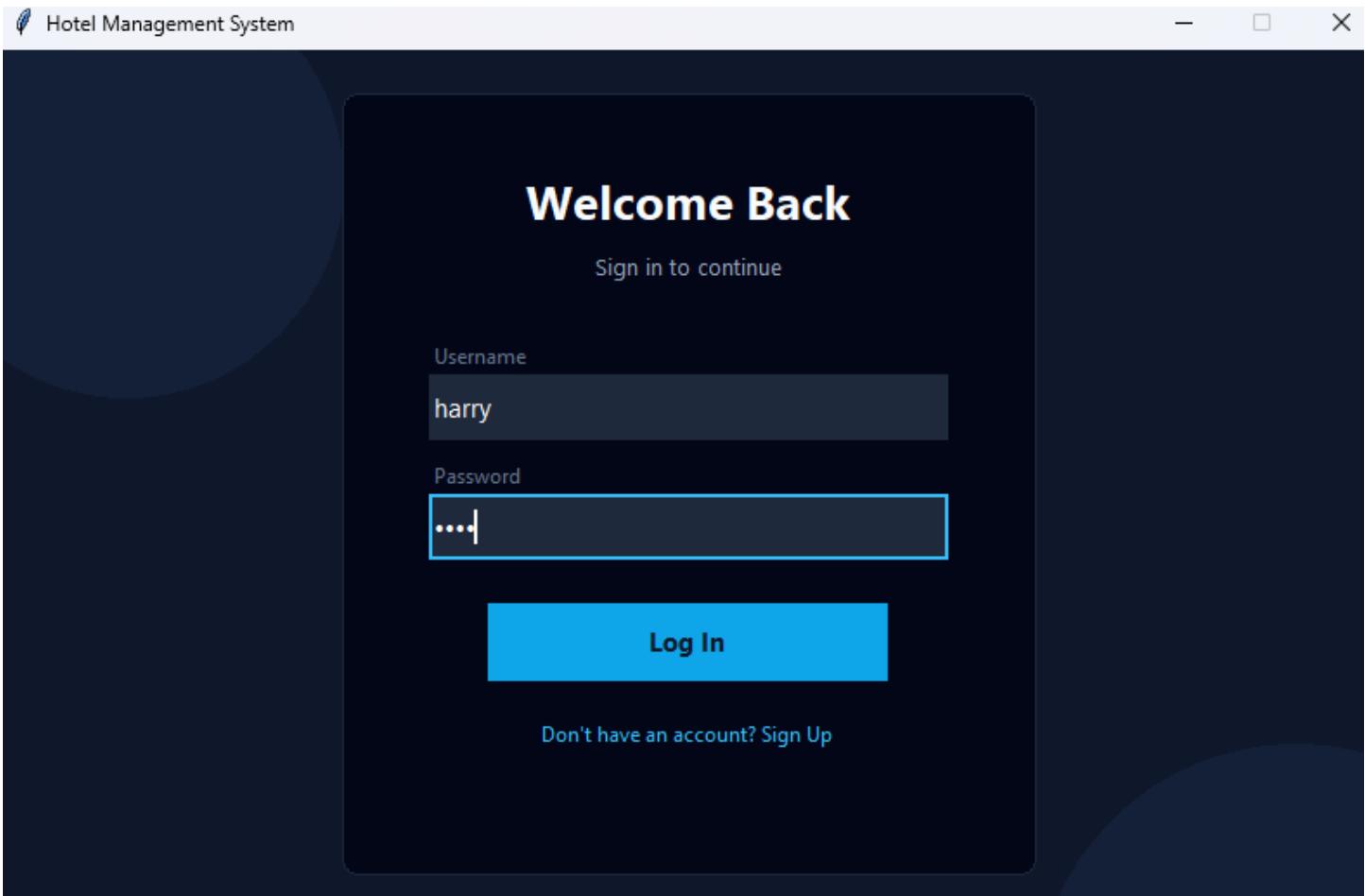
PLEASE CREATE ACCOUNT AND ENTER CREDENTIALS AND THEN CLICK ON SIGNUP.



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



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



AFTER LOGIN SUCCESS IT WILL REDIRECT YOU TO MAIN DASHBOARD.

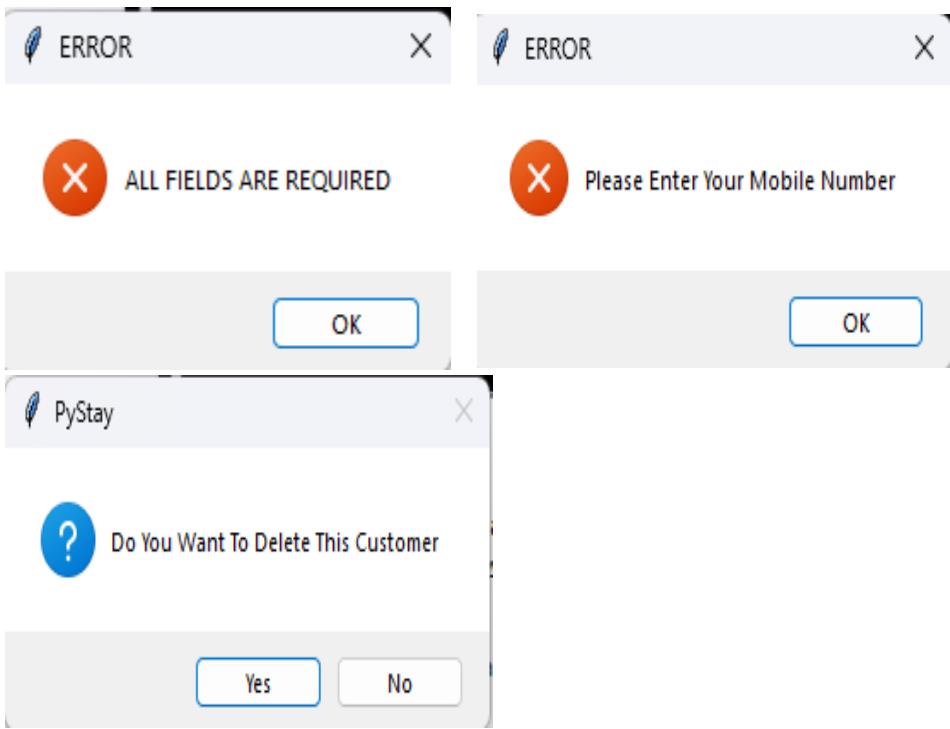


HERE YOU CAN USE ALL THE BUTTONS. CLICK ON CUSTOMER BUTTON TO MANAGE CUTOMER PANNEL

The screenshot shows a Windows application window titled "HOTEL MANAGEMENT SYSTEM". The main title bar has a logo on the left and standard window controls on the right. The application interface is divided into several sections:

- Left Sidebar (MENU):** Contains links for "CUSTOMER", "ROOMS", "DETAILS", "REPORT", and "LOGOUT". Below these are two small images: one of an outdoor restaurant and another of a hotel building at night.
- Header:** Displays the "PyStay" logo and a large image of a brightly lit hotel building at night.
- Form Section (Customer Details):** A form with fields for "Customer Ref:", "Customer's Name:", "Mother's Name:", "Gender:" (set to "Male"), "Zip-Code:", "Mobile:", "Email:", "Nationality:" (set to "Indian"), "Id Proof Type:" (set to "Pan"), "Id Number:", and "Address:". Below the form are four buttons: "ADD", "UPDATE", "RESET", and "DELETE".
- Search and View Section:** A search bar with dropdown options for "SearchBy" (set to "Mobile") and a text input field, followed by "SEARCH" and "SHOW ALL" buttons. To the right is a table titled "View Details & Search System" with columns: Reference No, Name, Mother's Name, Gender, ZipCode, Mobile, and Email. The table contains several rows of customer data.

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.

PyStay




ROOM BOOKING PAGE

ROOM BOOKING INFORMATION																						
<b>MENU</b>	<b>ROOM BOOKING DETAILS</b> Customer Contact: <input type="text"/> <input type="button" value="FETCH"/> Check-In-Date: <input type="text"/> Check-Out-Date: <input type="text"/> Room-Type: Single Room-Number: <input type="text"/> Staying-Days: 1 Meal-Type: Veg Paid-Tax: <input type="text"/> Sub-Total: <input type="text"/> Total-Price: <input type="text"/>  <input type="button" value="ADD"/> <input type="button" value="UPDATE"/> <input type="button" value="RESET"/> <input type="button" value="DELETE"/> <b>BILLING-DETAILS</b>																					
																						
	<b>View Details &amp; Search System</b> SearchBy: Contact <input type="text"/> <input type="button" value="SEARCH"/> <input type="button" value="SHOW ALL"/> <table border="1"> <thead> <tr> <th>Contact</th> <th>CheckIn</th> <th>CheckOut</th> <th>RoomType</th> <th>RoomNumber</th> <th>StayingDays</th> <th>MealTyp</th> </tr> </thead> <tbody> <tr> <td>9516787305</td> <td>20/01/2026</td> <td>31/01/2026</td> <td>Single</td> <td>103</td> <td>11</td> <td>Veg</td> </tr> <tr> <td>9771296247</td> <td>30/05/2025</td> <td>05/06/2025</td> <td>Single</td> <td>901</td> <td>6</td> <td>Veg</td> </tr> </tbody> </table>	Contact	CheckIn	CheckOut	RoomType	RoomNumber	StayingDays	MealTyp	9516787305	20/01/2026	31/01/2026	Single	103	11	Veg	9771296247	30/05/2025	05/06/2025	Single	901	6	Veg
Contact	CheckIn	CheckOut	RoomType	RoomNumber	StayingDays	MealTyp																
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

PyStay




### ROOM BOOKING PAGE

**ROOM BOOKING INFORMATION**

ROOM BOOKING DETAILS		Customer's Details							
Customer Contact:	<input type="text" value="9516787305"/>	FETCH	Customer's Name:	{SHUBHAM DAS}					
Check-In-Date:	<input type="text"/>		Customer's Gender:	Male					
Check-Out-Date:	<input type="text"/>		Customer's Email:	sd745461@gmail.com					
Room-Type:	<input type="text" value="Single"/>		Customer's Nationality:	Indian					
Room-Number:	<input type="text"/>		Customer's ID-Prof-No:	1234588					
Staying-Days:	<input type="text" value="1"/>		Customer's Address:	Delhi					
Meal-Type:	<input type="text" value="Veg"/>		View Details & Search System						
Paid-Tax:	<input type="text"/>		SearchBy:	Contact	<input type="text"/>	SEARCH	SHOW ALL		
Sub-Total:	<input type="text"/>		Contact	CheckIn	CheckOut	RoomType	RoomNumber	StayingDays	MealTyp
Total-Price:	<input type="text"/>		9516787305	20/01/2026	31/01/2026	Single	103	11	Veg
			9771296247	30/05/2025	05/06/2025	Single	901	6	Veg

**BILLING-DETAILS**

**ADD UPDATE RESET DELETE**

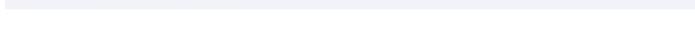




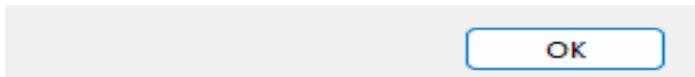
YOU CAN FACE SOME ISSUE HERE IN THIS ROOMS PANNEL DUE TO SOME VALIDATIONS

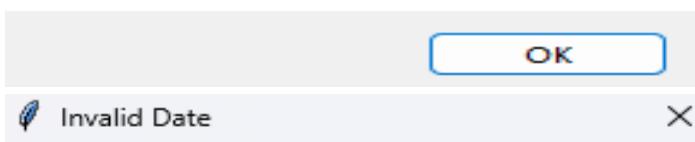
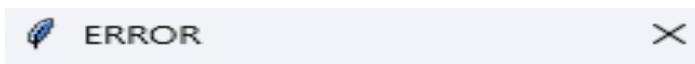


ENTERED NUMBER DIDN'T MATCHED WITH RECORDS



Please Enter Your Mobile Number





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.

The screenshot shows the PyStay software interface. At the top, there's a logo and a banner image of a hotel at night. Below that is a navigation menu with options: CUSTOMER, ROOMS, DETAILS, REPORT, and LOGOUT. To the right of the menu is a large section titled "ROOM BOOKING INFORMATION". This section contains a form with the following data:

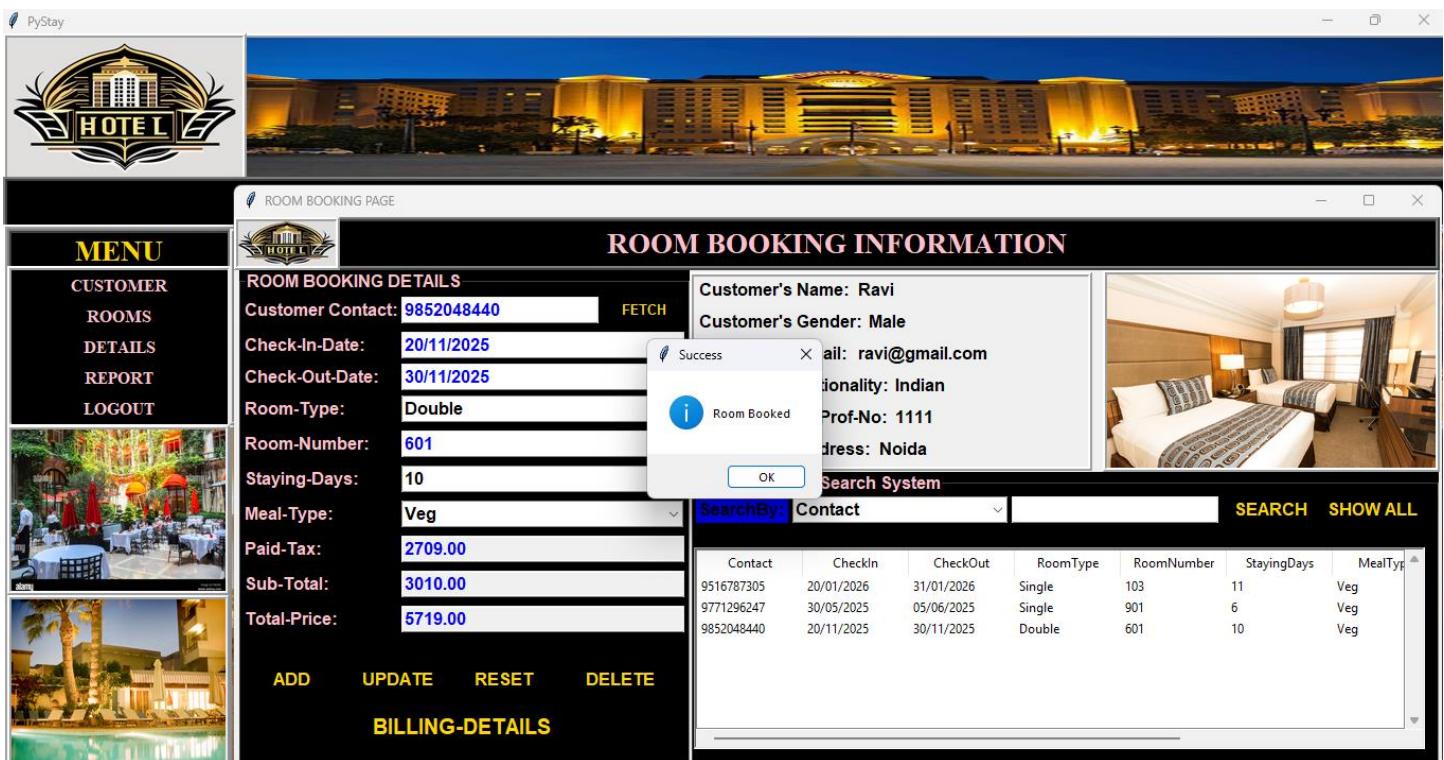
ROOM BOOKING DETAILS	
Customer Contact:	9516787305
Check-In-Date:	20/01/2026
Check-Out-Date:	31/01/2026
Room-Type:	Single
Room-Number:	103
Staying-Days:	11
Meal-Type:	Veg
Paid-Tax:	1359.90
Sub-Total:	1511.00
Total-Price:	2870.90

On the right side of the booking details, there's a summary of customer information:

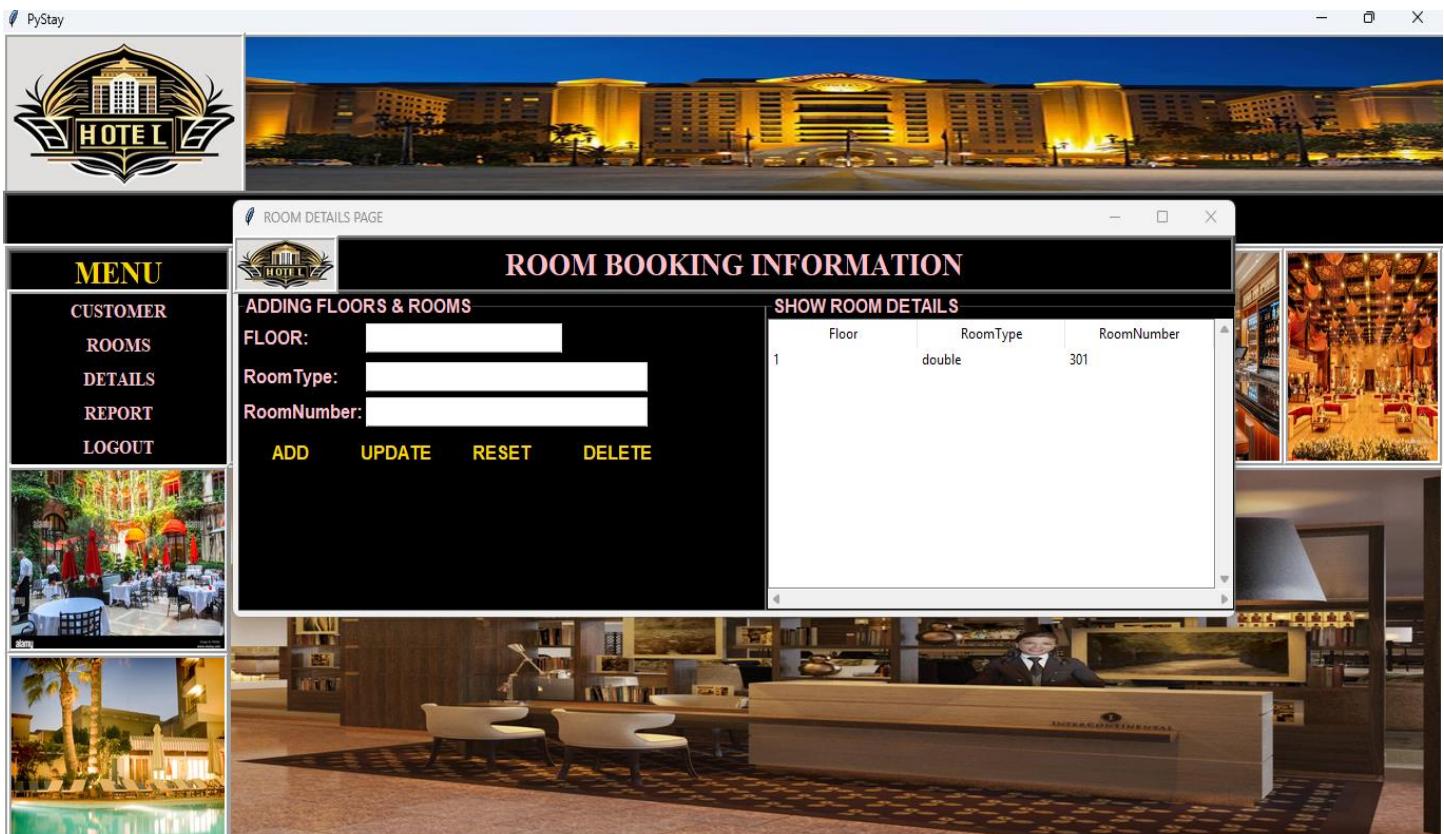
- Customer's Name: {SHUBHAM DAS}
- Customer's Gender: Male
- Customer's Email: sd745461@gmail.com
- Customer's Nationality: Indian
- Customer's ID-Prof-No: 1234588
- Customer's Address: Delhi

Below the booking details is a search bar with "SearchBy: Contact" and buttons for "SEARCH" and "SHOW ALL". At the bottom of the main window, there are buttons for "ADD", "UPDATE", "RESET", and "DELETE". A section titled "BILLING-DETAILS" is also present. On the far left, there are two smaller image thumbnails of the hotel's exterior and interior.

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 WHERE 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.

# Welcome Back

Sign in to continue

Username

Password

**Log In**

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

THE END );