



SMART TRAINERS

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Internship Hands-on Task No. 2

25/01/2026 Batch-02 Smart Trainers

Due Date:

Marks Assigned: 25

Assignment Submission Instructions:

- Ensure all tasks are finished and correct.
- Save Your File in this format: PDF/MS Word.
- File name: (Your Name)
- Late submissions may not be accepted.
- Submit your assignment on google classroom.

Assignment/Task:

Assignment: HOTEL RESERVATION SYSTEM

Project Overview:

This project is a basic hotel reservation system created using simple classes, objects, and functions. It helps hotels manage rooms, register guests, handle bookings, calculate bills, and perform guest check-in and check-out. The system is beginner-friendly and easy to understand.

Main Parts of the System:

1. Room Class:

The Room class is used to create rooms in the hotel. Each room stores a **room number**, **room price**, and **room status (available or occupied)**. Rooms are available by default. This helps the system track which rooms exist, which are free, and which are booked.

2. Guest Class:

The Guest class stores guest details such as **the guest's name and phone number**. When a **guest books a room**, **their information is saved**. This allows the hotel to know who is staying and which room belongs to each guest.

3. Hotel Class:

The Hotel class acts as the main controller of the system. **It manages all rooms and bookings. It includes functions to add rooms, show available rooms, book rooms, generate bills, and check guests out.** It works like the hotel's management office.

How the System Works:

Step 1: Add Rooms

The hotel creates and stores room objects.

Step 2: Show Available Rooms

The system displays only rooms that are currently free.

Step 3: Guest Booking

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The system checks if the room exists and is available. If it is free, the guest is assigned the room. If not, the booking is denied.

Step 4: Generate Invoice

The system calculates the total bill using the formula:

Room Price × Number of Nights Stayed.

Step 5: Check-Out Guest

When the guest leaves, the system clears the booking and marks the room as available again.

What This System Demonstrates:

This project teaches how classes, objects, and functions are used together. It helps beginners understand OOP structure, logic building, and how to organize a real-world **system in code**.

Why This Project is Useful:

It provides practical learning for students. It explains hotel operations, programming logic, and data handling. It is a great starting point before moving on to advanced OOP or web-based reservation systems.