

# HACKATHON REPORT

## **SYNHACK'25**

November 8-9<sup>th</sup>, 2025

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**VNIT Guest House Booking &  
Approval Management System**

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**Rakshit Singhvi (Leader)**

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**Mihir Vijay**

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## INTRODUCTION

Our team participated in **SynHack 2025**, a 30-hour hackathon organized at VNIT Nagpur. The hackathon aimed to encourage innovative solutions to real-world institutional problems using technology.

We selected the problem statement “**VNIT Guest House Booking and Approval Management System**”, which focused on digitizing and streamlining the existing manual booking process of the VNIT guest house. The project was built using the **MERN stack (MongoDB, Express.js, React.js, Node.js)** to ensure scalability, speed, and modern UI/UX design.







## PROBLEM STATEMENT

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### DESCRIPTION

The current guest house booking process at VNIT involves multiple manual steps — students or staff must submit room requests via offline forms or email. These requests are then verified by faculty advisors, after which payments are made and rooms are allocated manually.

This manual system suffers from several issues:

- Time-consuming and inefficient verification process
  - High chances of miscommunication and human error
  - No centralized tracking of approval and payment status
  - Lack of transparency for users
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# OUR OBJECTIVE

Our main objectives were:

1. To design a **centralized digital platform** for booking and managing guest house rooms.
  2. To enable **faculty approval workflow** directly through the web interface.
  3. To allow **secure payment tracking and booking history management**.
  4. To create an **intuitive and responsive frontend interface** for students and staff.
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SYNHACKERS

08 NOVEMBER 2025

# VNIT GUEST HOUSE MANAGEMENT



TEAM- SYNHACKERS

RAKSHIT SINGHVI(Leader)

VRAJ BORAD

LUVSINGH RAJPUT

MIHIR VIJAY

# PROPOSED SOLUTION

We proposed and developed a **web-based Guest House Booking and Approval Management System** that automates the end-to-end process.

## Features Implemented:

- **User Authentication:** Secure login and signup for students, faculty, and admin.
- **Room Availability Check:** Users can view available rooms with dates and prices.
- **Booking Request Form:** Students can submit booking details through a digital form.
- **Faculty Approval:** Faculty can log in to approve or reject booking requests.
- **Admin Dashboard:** Admins can manage rooms, view all bookings, and verify payments.

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**VNIT Guest House**  
Booking System

Email  
Enter your email

Password  
Enter your password

Login

**Demo Credentials:**  
Student: student@vnit.ac.in / student123  
Faculty: faculty@vnit.ac.in / faculty123  
Admin: admin@vnit.ac.in / admin123

# TECHNOLOGY STACK

Layer	Technology Used	Description
Frontend	React.js	For building a responsive and dynamic user interface
Backend	Node.js, Express.js	For handling API requests and server-side logic
Database	MongoDB	For storing user, room, and booking data
Styling	CSS	For creating a clean and user-friendly UI
Version Control	Git & GitHub	For collaborative development and code tracking

**Reference Repo used:** <https://github.com/SamiurRahmanMukul/Hotel-Room-Booking-System?tab=readme-ov-file>



# SCREENSHOTS OF WEBSITE

## VNIT Guest House

Booking System

Email

Password

Login

Demo Credentials:

Student: student@vnit.ac.in / student123  
Faculty: faculty@vnit.ac.in / faculty123  
Admin: admin@vnit.ac.in / admin123

### New Booking Request

Select Rooms

Boys Guest House

☐ Room 102

Capacity: 2  
Price: ₹500/night  
AC, WiFi, Attached Bathroom

Girls Guest House

☐ Room 201

Capacity: 2  
Price: ₹500/night  
AC, WiFi, Attached Bathroom

☐ Room 202

Capacity: 2  
Price: ₹500/night  
AC, WiFi, Attached Bathroom

Institute Guest House

☐ Room 302

Capacity: 3  
Price: ₹800/night  
AC, WiFi, Attached Bathroom, TV

#### Booking Details

Check-in Date

Check-out Date

Number of Guests

Purpose of Stay

Submit Booking Request

## My Bookings

#528418

PAID

**Rooms:** Boys Guest House - 101, Institute Guest House - 301

**Check-in:** 18/11/2025

**Check-out:** 20/11/2025

**Total Amount:** ₹2600

**Remarks:** Booking approved

Download Receipt

### System Analytics

#### Bookings Overview

Total Bookings: 1

Pending: 0

Approved: 0

Paid: 1

Rejected: 0

#### Revenue

Total Revenue: ₹2600

#### Room Status

Total Rooms: 6

Available: 4

Occupied: 2

#### Bookings by Guest House

Boys Guest House: 1

Institute Guest House: 1

### Room Management

+ Add Room

#### Boys Guest House

Room 101 ☐ Unavailable

Capacity: 2  
Price: ₹500/night  
Amenities: AC, WiFi, Attached Bathroom

New price

Delete

Room 102 ☒ Available

Capacity: 2  
Price: ₹500/night  
Amenities: AC, WiFi, Attached Bathroom

New price

Delete

#### Girls Guest House

Room 201 ☒ Available

Capacity: 2  
Price: ₹500/night  
Amenities: AC, WiFi, Attached Bathroom

New price

Delete

Room 202 ☒ Available

Capacity: 2  
Price: ₹500/night  
Amenities: AC, WiFi, Attached Bathroom

New price

Delete