HOSTEL MANAGEMENT SYSTEM

A MINI-PROJECT REPORT

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BONAFIDE CERTIFICATE

Certified that this project **"HOSTEL MANAGEMENT SYSTEM"** is the bonafide work of **"ARCHANA D, BOWMIGA R"** who carried out the project work under my supervision.

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INTERNAL EXAMINER **EXTERNAL EXAMINER**

ABSTRACT

The **Hostel Management System** is a web-based application designed to streamline and automate the various administrative tasks involved in managing hostel operations. The system efficiently handles student registration, room allocation, fee management, and record maintenance, reducing manual work and minimizing errors. It provides a centralized database that stores all essential information, including student details, room availability, and payment records, ensuring quick retrieval and easy updates.

Through its user-friendly interface, the application allows administrators to manage rooms, track fee payments, and monitor occupancy status in real time. Students can view their room details, payment history, and personal information conveniently. The system also enhances transparency and improves communication between students and hostel authorities.

Overall, the Hostel Management System improves operational efficiency, data accuracy, and accessibility, replacing traditional paper-based processes with an integrated, secure, and automated digital solution.

ACKNOWLEDGEMENT

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2. BOWMIGA R

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INTRODUCTION

1.1 INTRODUCTION

The project helps students and administrators to know the necessary information and list of room allocations and assess the availability of accommodation in the hostel. The necessary details about available rooms, student occupancy, and booking status will be displayed according to user convenience. The system provides an easy way for administrators to manage hostel records, update room details, and monitor fee payments efficiently. It also allows students to view their allocated rooms, fee status, and personal information through a simple and interactive interface. This project ensures transparency, reduces manual effort, and helps maintain accurate and up-to-date hostel data for better management and decision-making.

SCOPE OF THE WORK

The Hostel Management System will help in efficiently managing hostel-related activities and accommodation facilities within educational institutions. It provides easy access to information regarding room availability, student details, and fee status, ensuring smooth hostel operations. The system allows administrators to allocate rooms, monitor occupancy, and manage fee payments with greater accuracy and convenience. For students, it offers a user-friendly interface to check room assignments, update personal information, and view payment records. Overall, the project enhances transparency, reduces manual workload, and ensures effective

utilization of hostel resources for both management and residents.

1.2 PROBLEM STATEMENT

The need for the project is that many educational institutions still manage hostel activities manually, which causes difficulty in maintaining accurate records of students, room allocations, and fee details. The increasing number of students has made it hard to manage hostel facilities efficiently, leading to confusion and mismanagement. Many hostels do not have an organized system to check room availability, fee status, or student information, which creates inconvenience for both students and hostel administrators. Therefore, there is a need for a Hostel Management System that helps in maintaining all hostel-related information digitally and makes management easier, faster, and more reliable.

1.3 AIM AND OBJECTIVES OF THE PROJECT

Aim:

The main aim of this project is to manage hostel accommodation efficiently by maintaining accurate records of students, rooms, and fees.

Objectives:

- To store and manage student details, room allocations, and fee payments in a digital database.
- To make the process of room allocation faster and more organized.

- To help administrators monitor room availability and student occupancy easily.
- To reduce manual work and errors in record maintenance.
- To provide students with quick access to their hostel and payment information.

CHAPTER 2

2.1 SOFTWARE SPECIFICATIONS

Operating System	:	WINDOWS 10
Front – End	:	HTML, CSS, Java Script or Java
Back - End	:	Python, MySql
Language	:	python,SQL

CHAPTER 3

MODULE DESCRIPTION

This application consists of two main modules. When the program runs, it will ask for confirmation in the login window. The person who interacts can log in as an **Administrator** or as a **Student/User**. The description of the modules is as follows:

1. **Admin Login**

   When the person tries to log in as an Administrator, they must enter a valid username and password. The administrator has full access to the system and can add, update, or delete student records, room details, and fee information. The admin can also view overall hostel reports, monitor room occupancy, and manage all hostel-related activities stored in the database.

2. **User (Student) Login**

   When the person logs in as a Student, they are prompted to enter their username and password to access their hostel details. The student can view their allocated room, fee payment status, and personal details. This module allows students to check updates regarding their hostel accommodation and maintain transparency between the hostel administration and residents.

CHAPTER 4

SAMPLE CODINg

```
from tkinter import *

import sqlite3

import pyttsx3


# connection to database

conn = sqlite3.connect('hostel.db')

c = conn.cursor()


# empty lists to append later

student_ids = []

students = []
```

```
# fetching data from database

sql = "SELECT * FROM hostel_records"

res = c.execute(sql)

for r in res:

ids = r[0]

name = r[1]

student_ids.append(ids)

students.append(name)



# window

class Application:

def __init__(self, master):

self.master = master

self.x = 0

# heading

self.heading = Label(master, text="Hostel Allotments",
font=('arial 60 bold'), fg='darkblue')
```

```
self.heading.place(x=400, y=50)

# button to change records

self.change = Button(master, text="Next Student", width=25,
height=2, bg='lightgreen', command=self.func)

self.change.place(x=500, y=550)

# empty text labels to display info

self.sid = Label(master, text="", font=('arial 70 bold'))

self.sid.place(x=500, y=210)

self.sname = Label(master, text="", font=('arial 70 bold'))

self.sname.place(x=500, y=320)


# function to speak and display student info

def func(self):

y = str(student_ids[self.x])

self.sid.config(text="ID: " + str(y))

self.sname.config(text=str(students[self.x]))

engine = pyttsx3.init()
```

```
voices = engine.getProperty('voices')

rate = engine.getProperty('rate')

engine.setProperty('rate', rate - 30)

engine.say('Student ID ' + str(y) + ' Name ' +
str(students[self.x]))

engine.runAndWait()

self.x += 1



root = Tk()

b = Application(root)

root.geometry("1530x780+0+0")

root.resizable(False, False)

root.mainloop()
```

Sample 1

Sample 1 depicts the **display code**, which retrieves student and room details from the database that are already stored and displays them to the user when required. The system uses a simple interface layout where each record is shown with predefined measurements and style, making it easy for the hostel administrator to view student details and room allotments.

```
from tkinter import *

import tkinter.messagebox

import sqlite3


# connection

conn = sqlite3.connect('hostel.db')

c = conn.cursor()


class Application:

    def __init__(self, master):

        self.master = master
```

```
        # heading label

        self.heading = Label(master, text="Hostel Records", fg='navyblue',
font=('arial 40 bold'))

        self.heading.place(x=500, y=20)



        # search criteria

        self.name_label = Label(master, text="Enter Student Name",
font=('arial 20 bold'))

        self.name_label.place(x=400, y=142)



        # entry for student name

        self.name_entry = Entry(master, width=35)

        self.name_entry.place(x=800, y=150)



        # search button

        self.search_btn = Button(master, text="Search", width=14,
height=2, bg='steelblue', command=self.search_db)
```

```
        self.search_btn.place(x=700, y=210)


    def search_db(self):
        self.input = self.name_entry.get()
        sql = "SELECT * FROM hostel_records WHERE name LIKE ?"
        self.res = c.execute(sql, (self.input,))
        for self.row in self.res:
            self.name1 = self.row[1]
            self.room = self.row[2]
            self.fees = self.row[3]
            self.phone = self.row[4]


            tkinter.messagebox.showinfo("Hostel Details", f"Name:
{self.name1}\nRoom No: {self.room}\nFees: {self.fees}\nPhone:
{self.phone}")


root = Tk()
b = Application(root)
```

```
root.geometry("1530x780+0+0")

root.resizable(False, False)

root.mainloop()
```

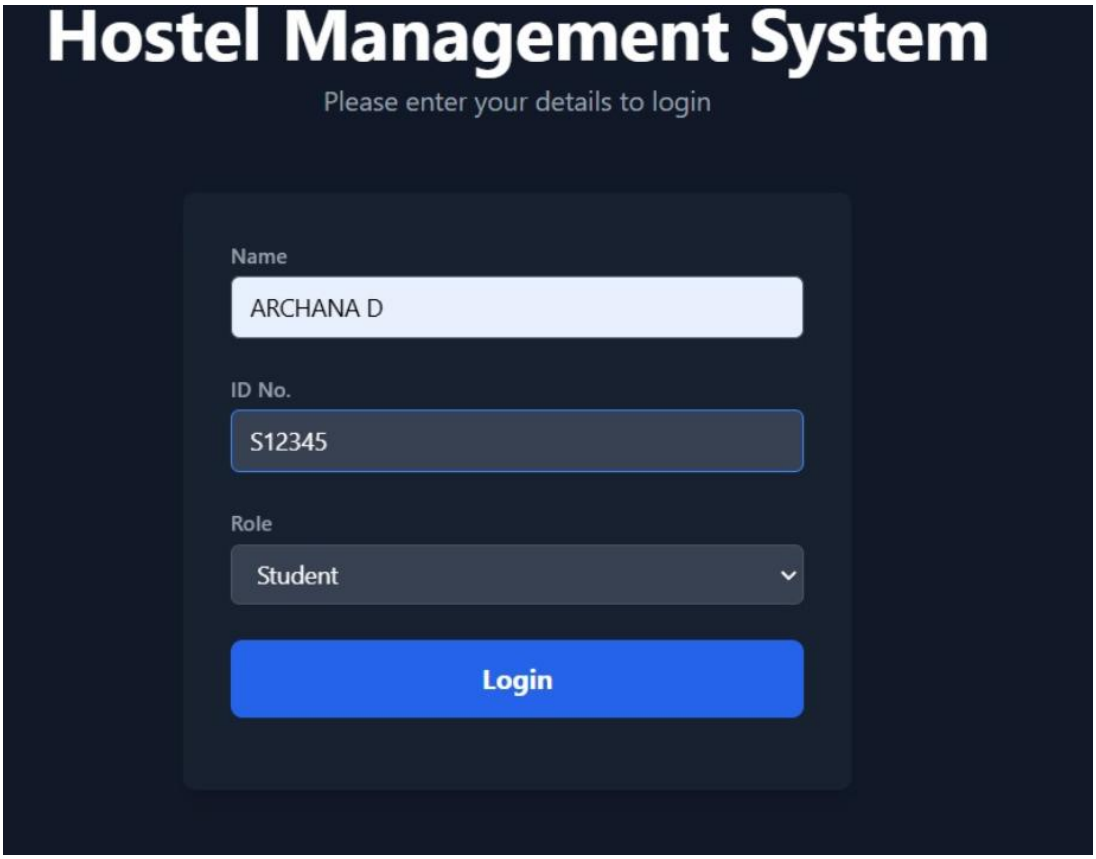
Sample 2

Sample 2 depicts the room allocation part of the code, where it displays student and room details. It allows the administrator to enter student information and store it in the hostel database.

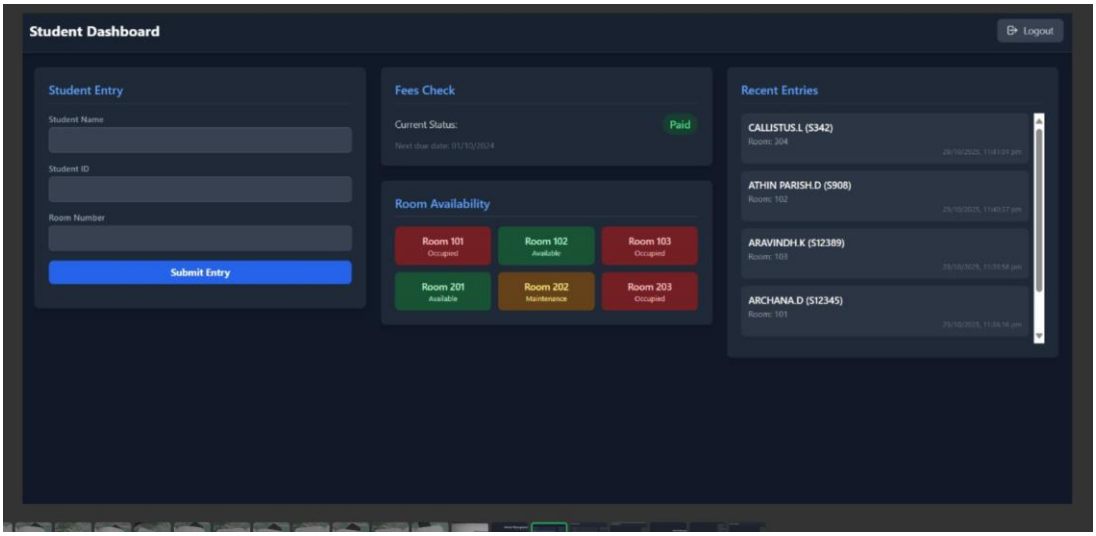
CHAPTER 5

SCREEN SHOTS

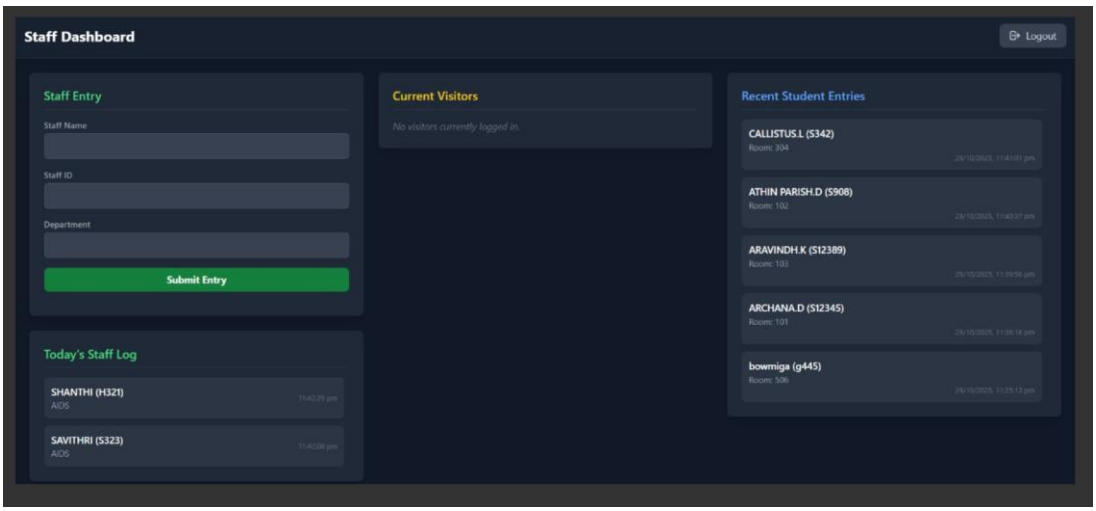
5.1. LOGIN PAGE



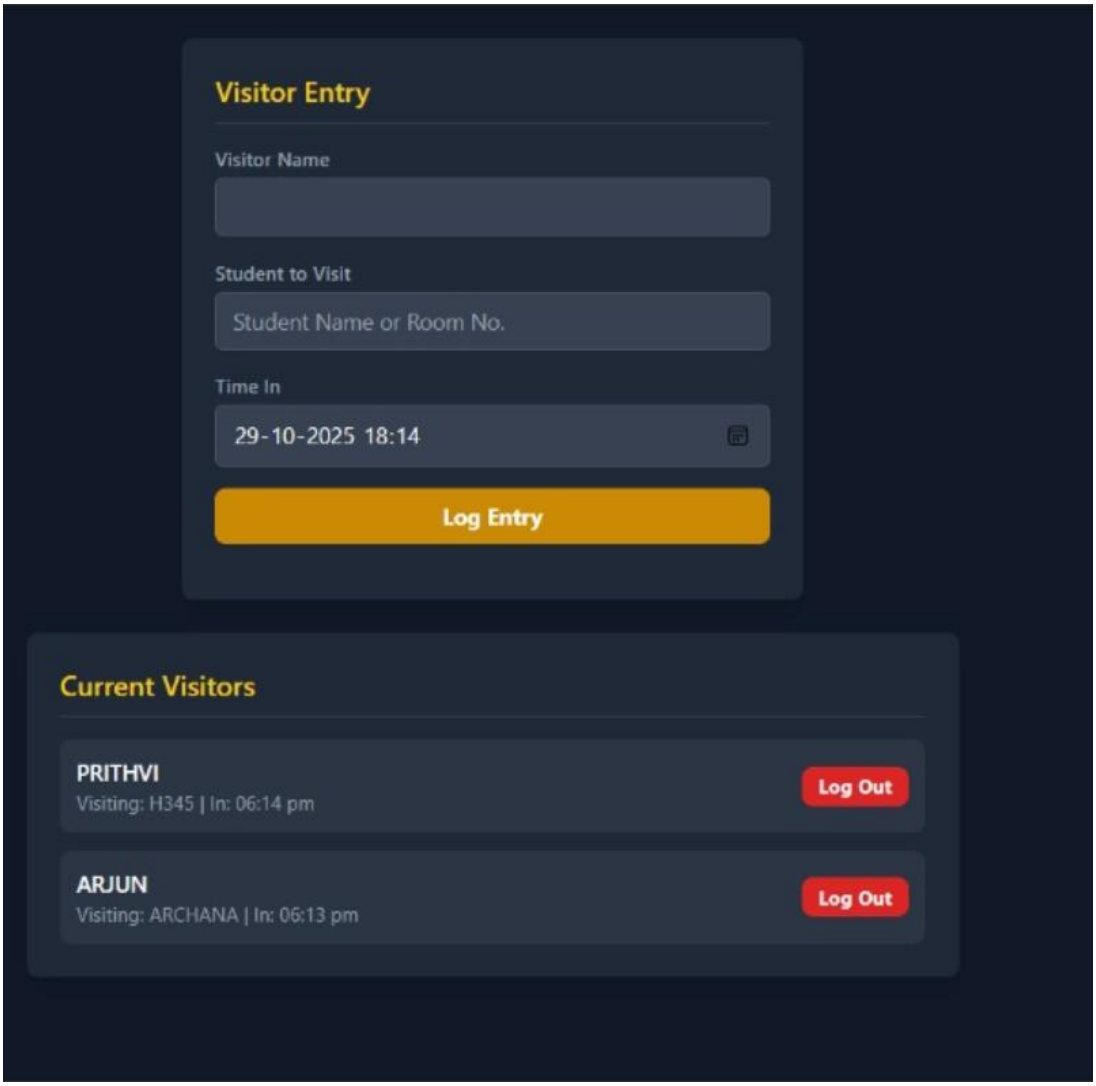
5.2. REGISTER PAGE



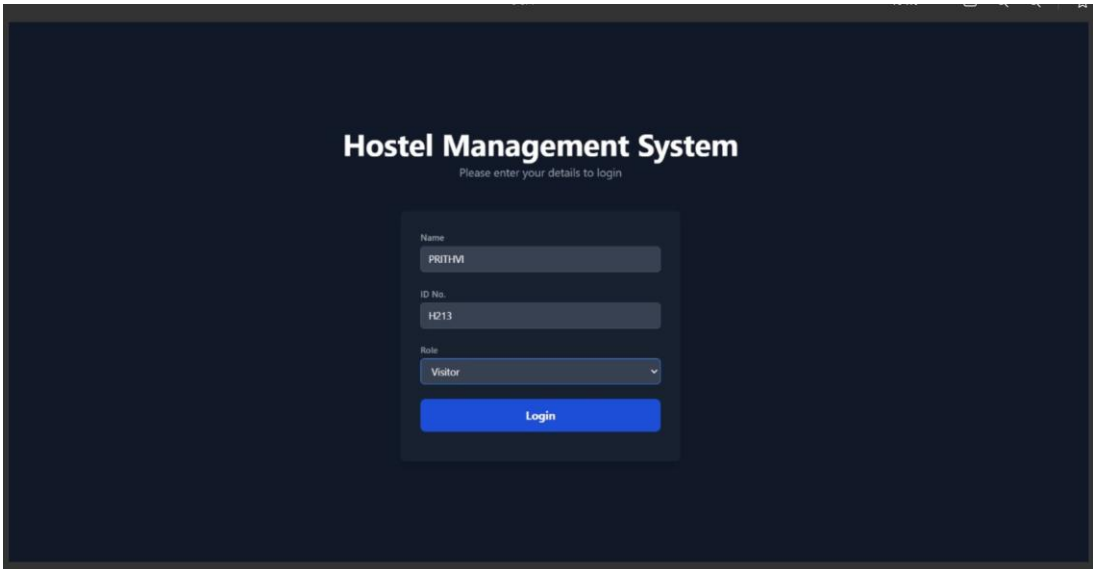
5.3. USER DETAILS



5.4. RISK PREDICTOR



5.5. DATA CREATION



CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

In such a way, with the help of our project, students and administrators will be able to manage hostel accommodations efficiently. The system clearly represents student details, room allocations, and fee status, making hostel management easier and more organized. In the future, the system can be enhanced to allow online room booking, automated fee payment, and real-time updates on room availability. Hence, this project provides convenience, transparency, and effective management for both students and hostel authorities.

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