Established – 1961 Subject: WEB

SEVA SADAN'S

R. K. TALREJA COLLEGE

OF

ARTS, SCIENCE & COMMERCE

ULHASNAGAR – 421 003

CERTIFICATE

This is to certify that Mr./Ms. Rahil Yasin Baig of F.Y. Information Technology (FYIT) Roll No. 2541002 has satisfactorily completed the Web Designing Mini Project entitled : PORTFOLIO WITH ANIMATED SKILL BARS LOADED FROM JSON. during the academic year 2025 – 2026, as a part of the practical requirement. The project work is found to be satisfactory and is approved for submission.

PROF. INCHARGE **HEAD OF DEPT**

SAHIL SHUKLA **LAKSHMI JAISWANI**

INDEX

1.INTRODUCTION

The Hotel Reservation System is a software application developed to manage hotel room bookings in an efficient way. In many small hotels, bookings are handled manually, which can lead to mistakes and confusion. This project provides a computerized solution to manage rooms and customer details properly.

The system is developed using C++ programming language and is based on Object Oriented Programming (OOP) concepts. It allows the user to add rooms, check availability, book rooms, and calculate the total bill.

The main purpose of this project is to understand practical implementation of OOP concepts such as encapsulation, inheritance, and polymorphism. The system is simple, menudriven, and easy to use

2.REQUIREMENT SPECIFICATION

The system requires basic hardware and software to run properly. A computer with at least 4GB RAM and an Intel i3 processor is sufficient. A keyboard and monitor are needed for input and output.

The software requirement includes Windows operating system and a C++ compiler such as Turbo C++ or CodeBlocks. The program runs in a command-line environment.

The system should allow adding rooms, checking availability, booking rooms, and calculating bills. It should work smoothly without errors and provide correct output.

3.SYSTEM DESIGN

The system is designed using Object Oriented Programming principles. It is divided into different classes to organize the program properly.

The main classes are Room, Customer, and Reservation. The Room class stores room number, price, and booking status. The Customer class stores customer details. The Reservation class manages booking and bill calculation.

The system follows a menu-driven structure. When the program starts, options are displayed. The user selects an option, and the system performs the required task.

The design is simple, structured, and easy to understand.

4.SYSTEM IMPLEMENTATION

The Hotel Reservation System is implemented using C++ language. All classes and functions are written according to OOP concepts.

Encapsulation is used to protect data inside the class. Inheritance is used to create relationships between classes. Constructors are used to initialize data. Polymorphism allows flexibility in functions.

When the program runs, it shows a menu. According to the user’s choice, the system checks availability, books rooms, or calculates the bill. The program runs successfully and gives accurate results

5.SYSTEM TESTING AND RESULTS

The system was tested using different test cases to ensure that it works correctly and meets all requirements.

5.1 Test Case 1

Input: Room Booking

Expected Output: The room status should change to booked.

Result: The room was successfully booked and the status was updated correctly. 5.2 Test Case 2

Input: Availability Check

Expected Output: The system should display the list of available rooms.

Result: The system displayed the correct available rooms.

5.3 Test Case 3

Input: Bill Calculation

Expected Output: The total amount should be calculated correctly based on the number of days.

Result: The bill was calculated accurately. The system executed all test cases successfully and ran properly without any errors.

6.FUTURE SCOPE AND CONCLUSION

Future Scope

. An online booking system can be added to allow customers to reserve rooms through the internet.

. Database integration can be implemented to store records permanently and manage data efficiently.

* A payment gateway can be added to enable online payments.

* An admin login system can be included to improve security and access control.

Conclusion

* The Hotel Reservation System is a useful software that makes hotel management easier.

* Through this project, we gained practical knowledge of Object Oriented Programming (OOP) concepts.

* The system was successfully implemented and tested.

7.REFERENCES

The following resources were used while developing this project:

- C++ Programming by E. Balagurusamy
- Classroom notes and practical sessions
- Online tutorials from GeeksforGeeks
- Educational videos from YouTube

8.GLOSSARY

OOP – Object Oriented Programming
Class – Blueprint of object
Object – Instance of class
Encapsulation – Data hiding
Inheritance – Parent child relationship
Polymorphism – Many forms
Constructor – Special function for initialization