**OBJECT ORIENETED PROGRAMMING WITH C++**

**Project Report on**

# "SRM Hostel Management system"

Submitted in partial fulfilment for the award of the degree in

**BACHELOR OF TECHNOLOGY**

**IN**

## COMPUTER SCIENCE AND ENGINEERING

# ABSTRACT

In this project we will be creating a desktop application for the SRM hostel management system using a C++ programming language. This system will manage all hostel activities such as

- Admissions
- Fees
- room assignments
- mess allotment
- as well as provide relevant data for smooth transactions.

# CONTENTS

# CHAPTER 1

## INTRODUCTION

The project "HOSTEL MANAGEMENT" is a command line project which uses C++. It is mainly used to keep track of registrations, fees, and mess payments. It will also include room details, block lists, mess reports and joining reports to help hostel warden manage daily tasks.

It will also help to create a report on hostel room availability, including the total number of rooms in each hostel, the number of students who need to be accommodated, and the name of the staff person responsible for the hostel's facilities. Students can choose from a range of hostels with room details and semester cost.

C++ is one of the world's most popular programming languages. It is an object-oriented programming language which gives a clear structure to programs and allows code to be reused, lowering development costs. C++ is portable and can be used to develop applications that can be adapted to multiple platforms. We can easily find C++ in today's operating systems, Graphical User Interfaces, and embedded systems.

File handling in C++ is a mechanism to store the output of a program in a file and help perform various operations on it. Files help store these data permanently on a storage device.

# CHAPTER 2

## OBJECTIVE

Our objective of this project is keeping track of registration, fees, and mess payments that manually require paper to be done.

### 2.1 EXISTING SYSTEM:

The existing system of maintaining manual records like registers which are generally written records by humans, takes a lot of manual work to enter the data. Even a small mistake can make a huge mess.

### 2.2 PROPOSED SYSTEM:

The proposed system helps to maintain all the details in a database where the chance of errors is less. It is easy and time saving method to enter the data in database and also can be maintained efficiently. It also reduces the risk of mistakes compared to the existing system. Even less manual work is required.

# CHAPTER 3

# SYSTEM REQUIREMENTS

A System Requirements Specification that describes the features and behaviour of a system or

software application.

## 3.1. SOFTWARE REQUIREMENTS:

The software requirements are description of features and functionalities of the target system.

1. Language used: C++

## 3.2. HARDWARE REQUIREMENTS:

Hardware requirements often specify the operating system version, processor type, memory

size, available disk space and additional peripherals.

1. Operating System: Windows 7(minimum)

2. Hard Disk: 1 Tb (minimum)

3. Processor: i3 (minimum)

# CHAPTER 4

## SYSTEM DESIGN

**Algorithm:**

**Step 1:** The interface of our project would start with a login page.

Student, Faculty, warden will have an option to login but if they

don't have an account, they will need to create an account first!

**Step2:** While creating the account, student / staff / warden should do the room registration.

**Step3:** The user will have flexibility to pick tower, room and also level.

[There is a clear division for girls and boys hostels' in the portal].

**Step4:** After the user picks his choice, if the user is a student, he needs to pay fee for hostel, mess and laundry

[There is no need to pay for all features!]

If the user is staff or warden, for them everything would be offered by the university.

**Step 5:** Once the user is done with payment, he/she will be redirected to the login page.

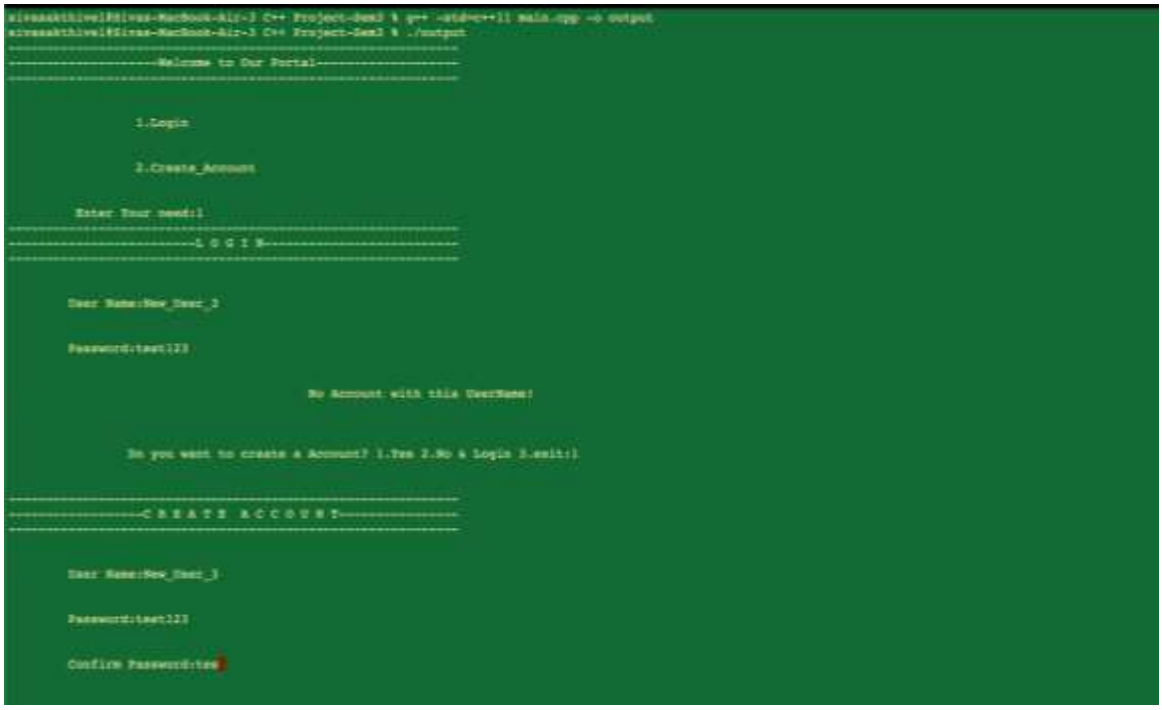
[Payment details will be saved in database files from hostel booking to payment history!]

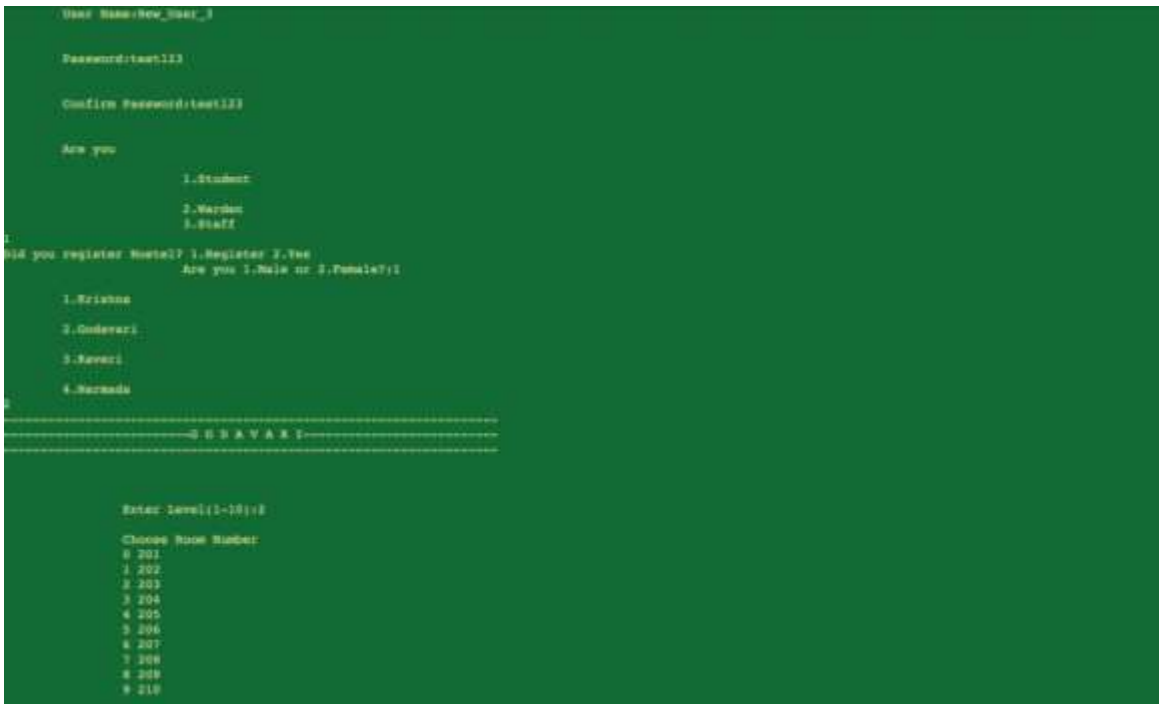
**Step 6:** There is a good security check for both the login and payment page. Once the user enters into the portal, could see his/her profile. If user is warden, he will be able to manage and view all data of his hostel. All users will have payment history option [so that they can view their transactions.]

**Step 7:** Like a real-world application, we gave following options back, logout, register to improve the user's experience!
Our app does hostel management in an efficient way!

# CHAPTER 5

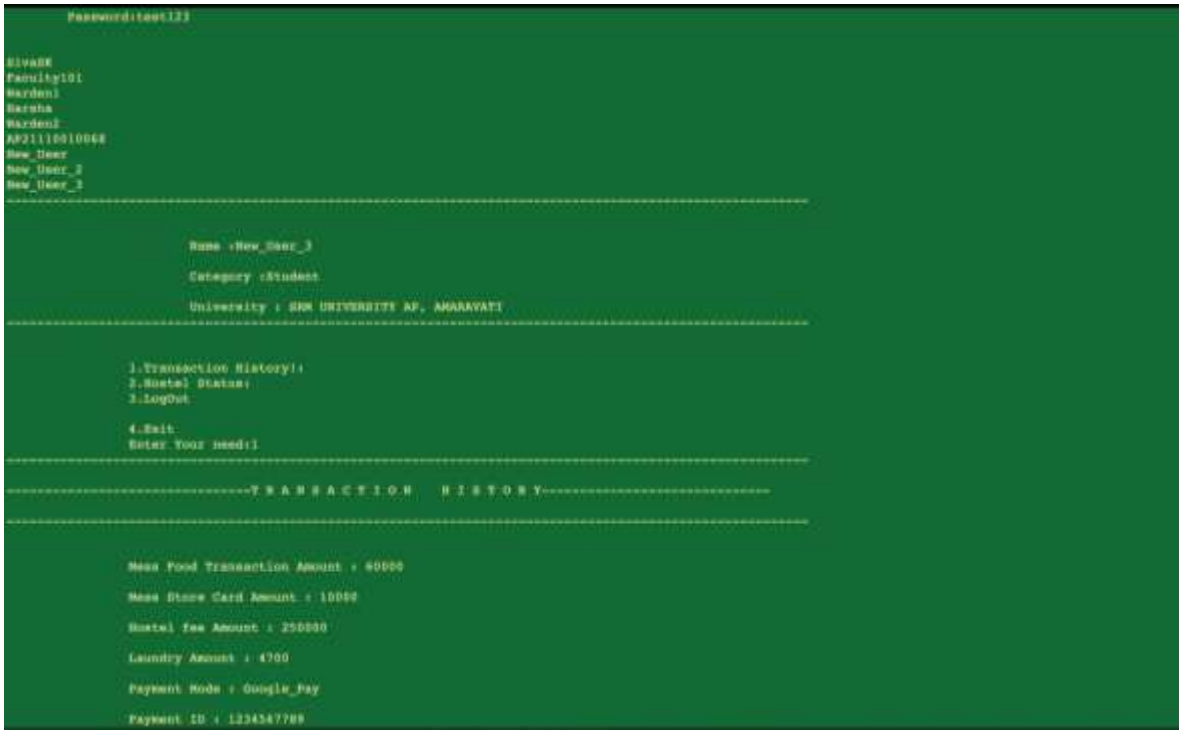
## RESULTS



```
Enter room_no:

                REGISTER        SUCCESSFULLY

        Do you want to register for MESS FOOD?

1.YES
2.NO
        Enter:1

        Enter the payment option:

                1.Debit/Credit Card

                2.Paytm

                3.Google Pay

                4.UPI


                 GOOGLE    PAY


Do you wanna pay for Mess food?:1

Do you wanna pay for Mess_store_card?:1

Do you wanna pay for Hostal room(1Sharing):1
```

```
Do you wanna pay for Laundry(1Year):1

                Thanks for Choosing your needs!

Mess Food (Rs.40000)!

Mess Store Card(Rs.10000)!

Hostal room(Rs.250000)!

Laundry(Rs.4700)!

Total amount to pay is 324700!

Enter Google Pay Number:1234567789

Enter Your Password:test123

ACCESS          ALLOWED

Confirm Payment 1.YES 2.NO :1
RANSACTION  DONE      SUCCESSFULLY!
Account Created Successfully!

------------------------------------------------------------
----------------------LOGIN---------------------------------
------------------------------------------------------------


  User Name:New_User_3
```


Password:test123
SivaSK
Faculty101
Warden1
Harsha
Warden2
AP21110010068
New_User
New_User_2
New_User_3
Name :New_User_3
Category :Student
University : SRM UNIVERSITY AP, AMARAVATI
1.Transaction History:
2.Hostel Status:
3.LogOut
4.Exit
Enter Your need:1
TRANSACTION HISTORY
Mess Food Transaction Amount : 60000
Mess Store Card Amount : 10000
Hostel fee Amount : 250000
Laundry Amount : 4700
Payment Mode : Google_Pay
Payment ID : 1234567789


TRANSACTION_SUCCESSFULL
Enter any number to back:3
SivaSK
Faculty101
Warden1
Harsha
Warden2
AP21110010068
New_User
New_User_2
New_User_3
Name :New_User_3
Category :Student
University : SRM UNIVERSITY AP, AMARAVATI
1.Transaction History:
2.Hostel Status:
3.LogOut
4.Exit
Enter Your need:2
HOSTEL STATUS
Name : New_User_3
Category : Student
Hostel Tower : Godavari


Room Number : 309
Do you want to back to screen(Enter any number):?:3
SivaSK
Faculty101
Warden1
Harsha
Warden2
AP21110010068
New_User
New_User_2
New_User_3
Name :New_User_3
Category :Student
University : SRM UNIVERSITY AP, AMARAVATI
1.Transaction History:
2.Hostel Status:
3.Logout
4.Exit
Enter Your need:3
LOGIN