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ANDROID

. Android Application Development Internship .

PROJECT REPORT

Major Project

Hostel Management Application

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Summary

I have designed a Hostel Management Application for the Major Project of my Android Application Development Internship at Corizo. The Project Task stated that -

The Hostel Management Application is an advanced Android project idea that can be used by students who are looking for a challenging and innovative project topic. This application can be used to manage hostels, guest houses, and other similar accommodation facilities. It can be used to track guest information, manage bookings, and generate reports. This project would be ideal for students who are interested in developing Android applications with advanced features.

INTRODUCTION

PROJECT OVERVIEW

In the Project Overview Section of this report, I have briefly explained about all the details about the Hostel Management Application Project. I have mentioned about the platform used for developing the application, the Front End and Back End Languages and Technologies and the Database used.

METHODOLOGY

In the Methodology Section of this report, I have mentioned about the activities of the application in detail. I have discussed about the Java Class Files and Layout Resource Files and how they are in a workflow using codes.

DEMONSTRATION

In the Demonstration Section of my report, I have demonstrated the working procedure of my application from a User's point of view. I have explained all the necessary points that are to be followed while using the application. I have provided screenshots of the app for better understanding.

Figure 1

Project Overview

- **Project Name:** Hostel Manager

- **Project Description:** A Hostel Management Application in Android which can be used for managing accommodations in Guest Houses or Hotels also.

- **Project Type:** A Major Project for Android Mobiles and Tablets

- **Project Repository Link:**
  https://gitlab.com/sohamray.compscengineering/Hostel_Management_Android_App

- **Platform used for build the Project:** Android Studio

- **Front End of the Application made by:** XML

- **Back End of the Application made by:** Java

- **Database used in the Application:** SQLite

- **Size of the Application:** 6.44 MB

- **Available in Google Play Store ? :** No

This project is solely done by Soham Ray from Kolkata, West Bengal as the Major Project in the Android Application Development Internship at Corizo.

Date: 3rd July, 2023

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SOHAM RAY
Android Developer Intern

Methodology

I have used the Android Studio Platform to build the project. After starting the new project named "Hostel Manager" I created many files for designing the Front End and Back End of the application respectively.

I have created the layout resource files named in the layout folder under res for designing the front end of the application. I have written the XML code in a Relative Layout and used Scroll View wherever needed. I have assigned specific ids to each of the elements which is used in the Java class for referencing those particular elements.

The layout resource files are –

- outer_home_page.xml
- inner_home_page.xml
- activity_signup.xml
- activity_login.xml
- activity_add_student.xml
- activity_edit_student.xml
- activity_get_student.xml
- activity_delete_student.xml
- activity_all_student.xml

After completing the Front-End layout resource file, I created many Java classes in the specific package for writing the Back End of the application in Java Programming Language. I have established the connection between the front end and back end of the application in this file.

The Java classes are –

- OuterHomePage.java
- InnerHomePage.java
- SignupActivity.java
- LoginActivity.java
- AddStudentActivity.java

- EditStudentActivity.java
- GetStudentActivity.java
- DeleteStudentActivity.java
- AllStudentActivity.java

I have used intents in the Java classes to go from one activity to another when specific button is pressed using the SetOnClickListener.
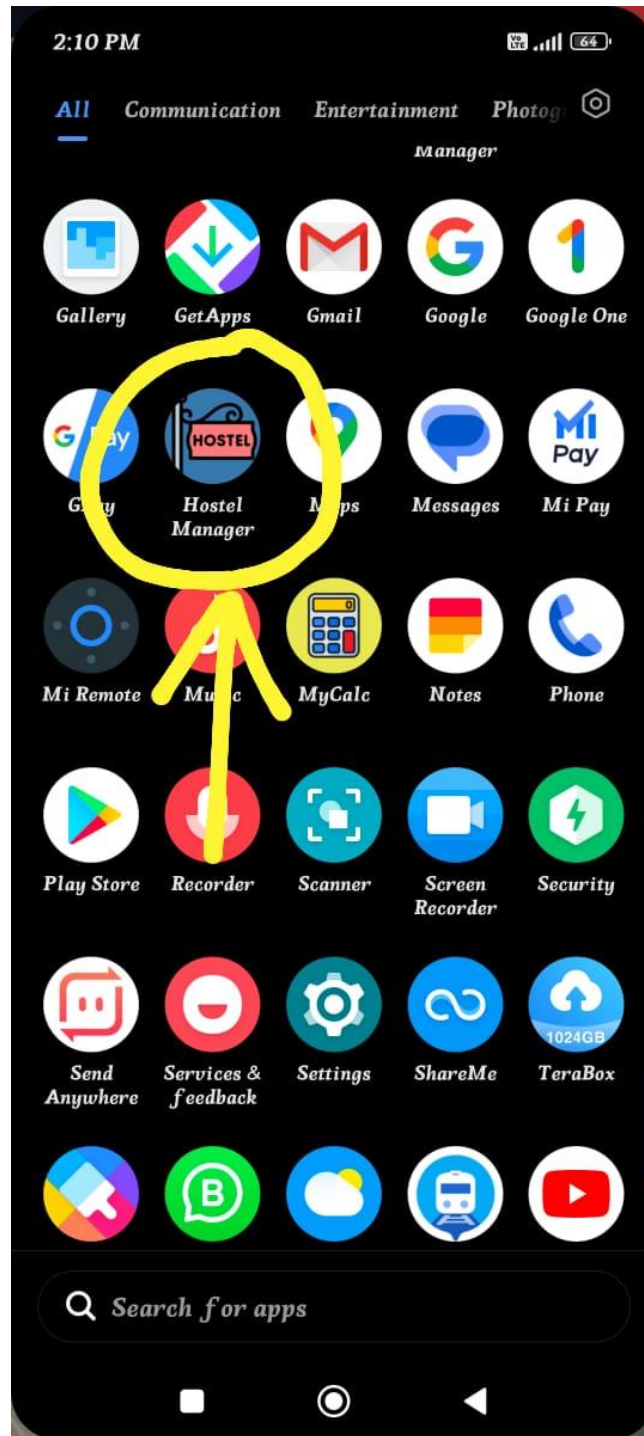
I have used SQLite Database for this application and written two separate Java Classes for this purpose. They are –

- StudentDatabase.java
- DatabaseHelper.java

Finally, I have mentioned the activities in Android Manifest File and incorporated the intent filter in the activity which will be opened first which is the Outer Home Page in this case.

The complete code for this project is available in the repository of my GitLab for which I have already provided the link.
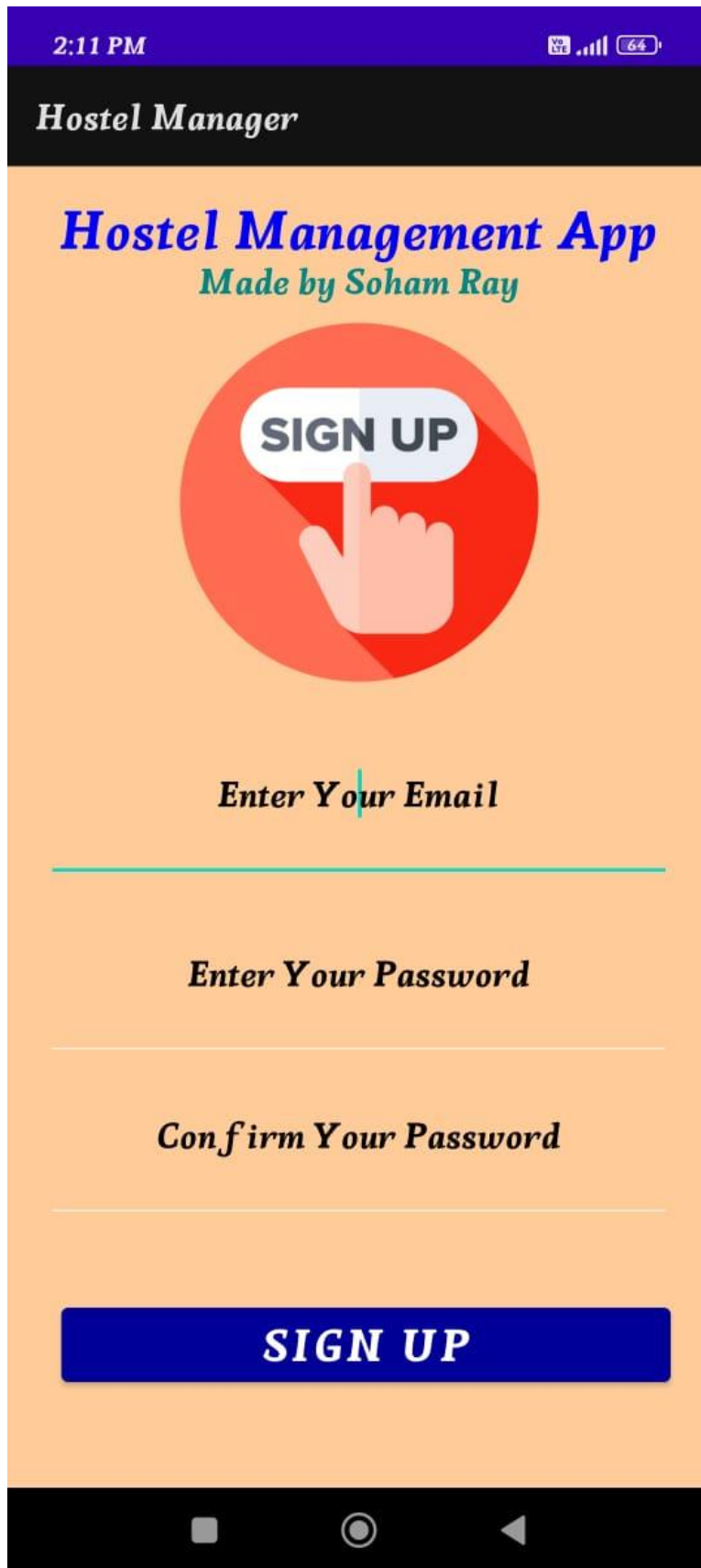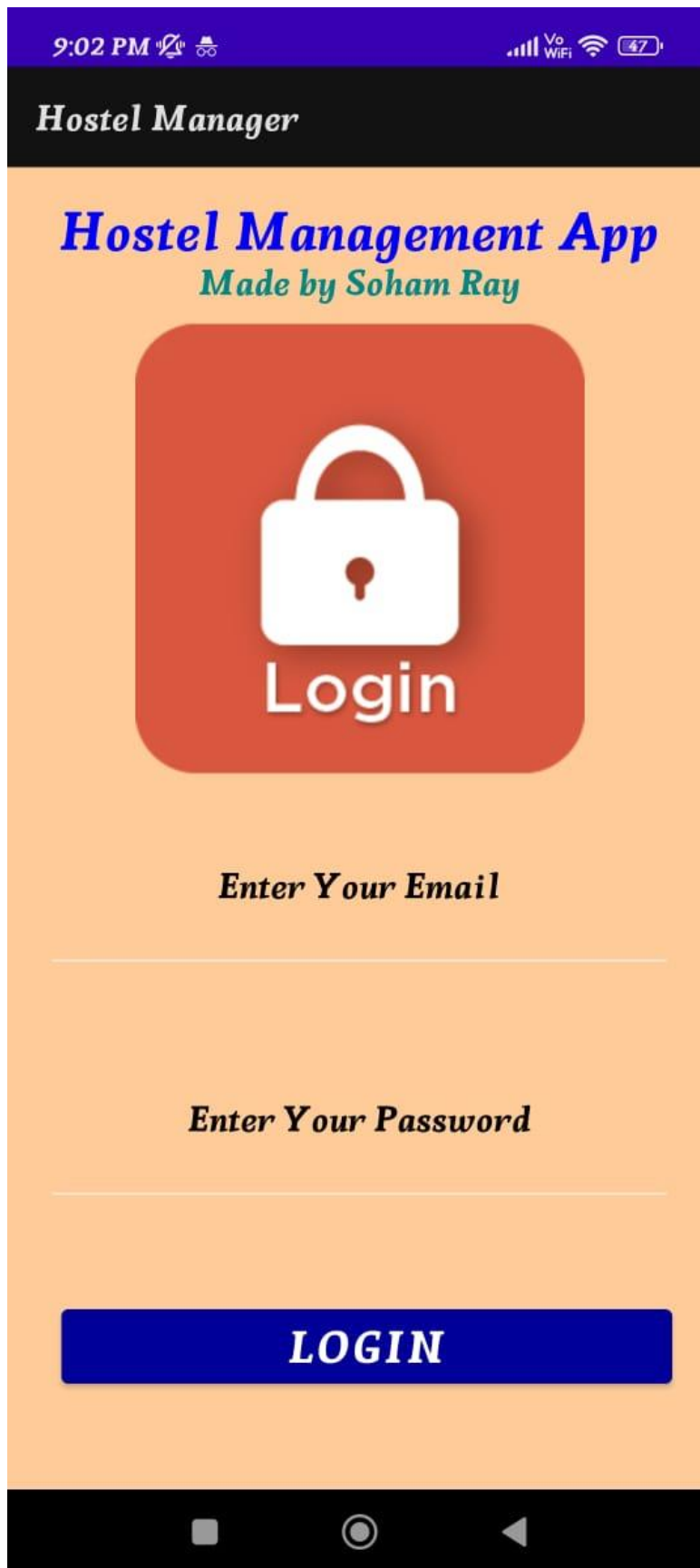
Demonstration

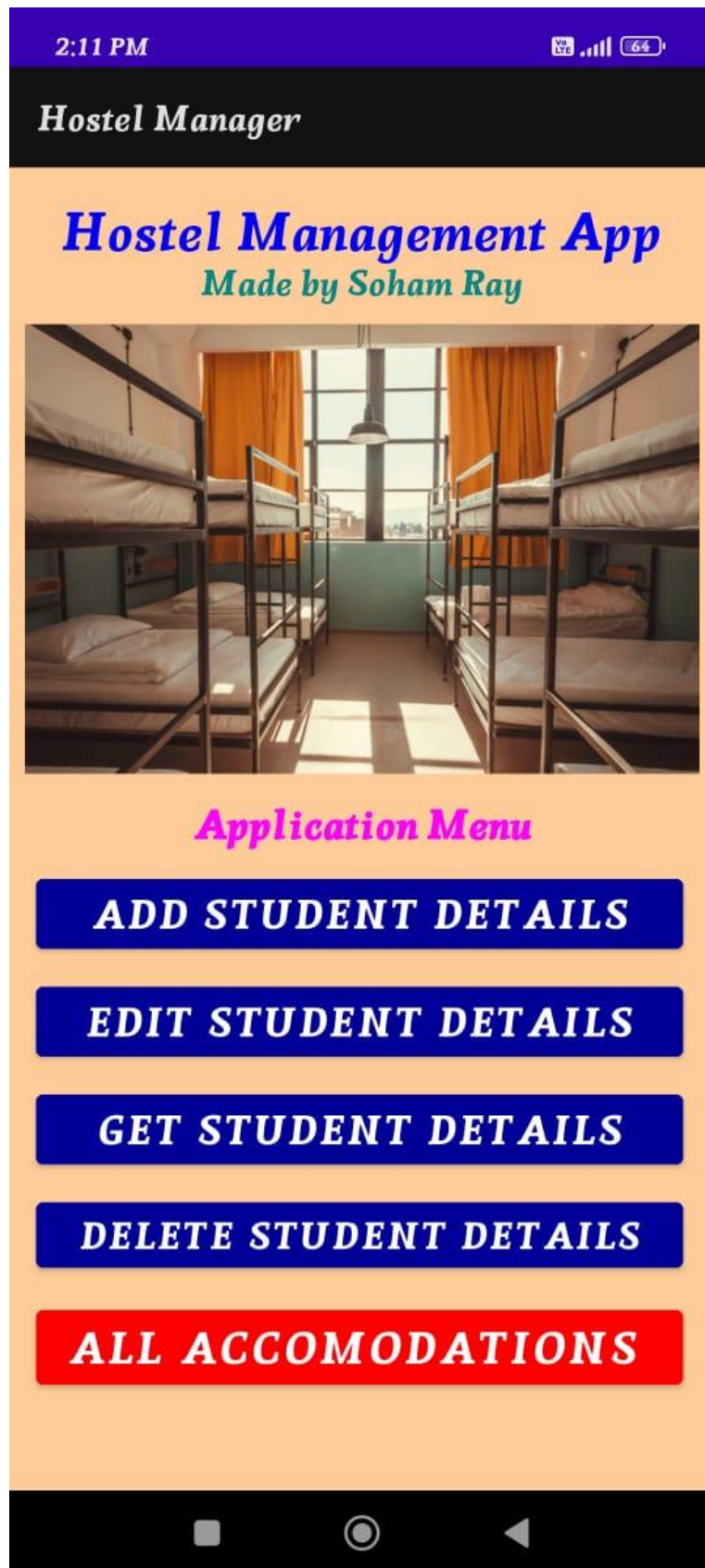After successful installation, open the "Hostel Manager" from Application Menu

After opening the App, do Sign Up.
This is a one-time process, from next time you can just log in

Sign up using an email and password

Then Log in with that email and password used for Sign Up

After successful Log In , you will see this Home Page
Lets do 'Add Student' first

Hostel Manager

Hostel Management App
Made by Soham Ray

Add New Student Details

Soham Ray

Giridhari Ray

8420680442

sohamray@gmail.com

4th

Computer Science

12

3rd   304

Hostel Manager

Add New Student Details

Soham Ray

Giridhari Ray

8420680442

sohamray@gmail.com

4th

Computer Science

12

3rd   304

01/07/2023

ADD

Fill up all the Fields and press 'ADD' , the student details will be added.
Now we will go to 'Get Student' from Home Page

9:01 PM

Hostel Manager

Hostel Management App
Made by Soham Ray
Get Student Details

12|

GET

Name : Soham Ray

Guardian : Giridhari Ray

Phone No : 8420680442

Email : sohamray@gmail.com

Year of Study : 4th

Department : Computer Science

Roll No : 12

Floor : 3rd

Room No : 304

Allotment Date : 01/07/2023

BACK

Enter the Roll Number and Press 'Get'
All the details of the student will be fetched

For 'Edit Student' the procedure is same as 'Get'. Enter the Roll Number and the details will be fetched. But here you can edit the fields and save it again. The details will be modified.

For 'Delete Student' , enter the student Roll Number and Press 'Delete'.
The corresponding details will be deleted.

Hostel Manager

Hostel Management App
Made by Soham Ray

All Student Details

Total Students : 1

Name : Soham Ray
Guardian : Giridhari Ray
Phone : 8420680442
Email : sohamray@gmail.com
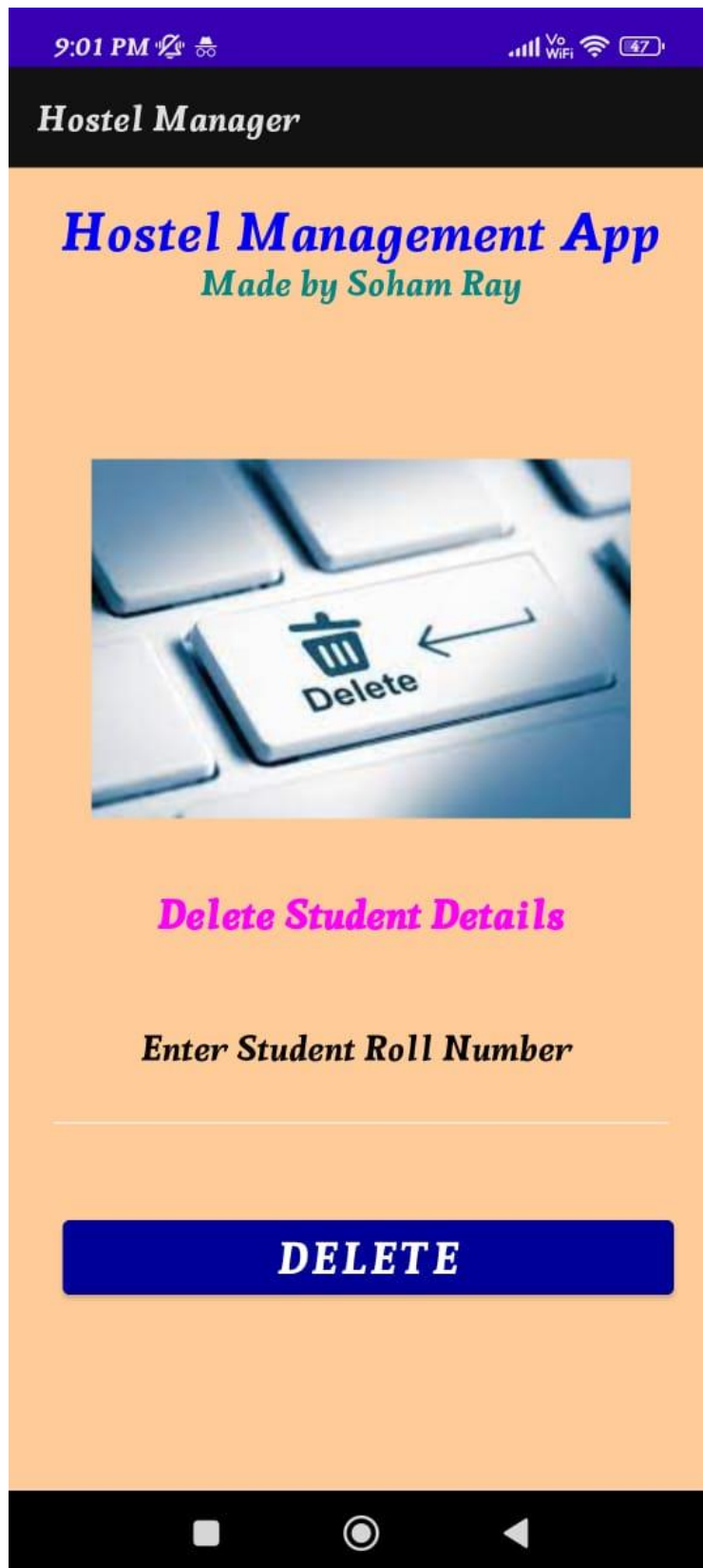Year : 4th
Department : Computer Science
Roll No : 12
Floor : 3rd
Room : 304
Allotment Date : 01/07/2023

BACK

If you press 'All Accommodations', then all the student details will be shown with the total student count in the Hostel