



G.M.D. ARTS, B.W. COMMERCE & SCIENCE
COLLEGE, SINNAR.

DEPARTMENT OF COMPUTER SCIENCE

A PROJECT REPORT ON

“Hostel Management System”

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Savitribai Phule Pune University
2022-2023



M.V.P. Samaj's.

G.M.D. ARTS, B.W. COMMERCE & SCIENCE COLLEGE, SINNAR.

CERTIFICATE

This is to certify that,

Pangavhane Rohan Annasaheb

Khule Dipak Ravindra

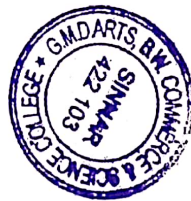
Chavanke Rahul Prakash


Student of B.Sc. Computer Science has satisfactory completed Project work on "Hostel Management System", towards partial fulfilment of degree course affiliated to Savitribai Phule Pune University for the Academic Year 2022-2023 at G.M.D. ARTS, B.W. COMMERCE & SCIENCE COLLEGE, SINNAR.


Project Guide

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Index

Sr .No	Topic	Page no.
1.	Abstract	1
2.	Introduction	2
	2.1 Motivation	3
	2.2 Problem statement	3
	2.3 Purpose/Objective and goals	4
	2.4 Literature survey	4
	2.5 Project scope and limitations	5
3.	System Analysis	6
	3.1 Existing System,	6
	3.2 Scope and limitation of existing systems	6
	3.3 Project perspective , features	7
	3.4 Stakeholder	7
	3.5 Requirement analysis	7
4.	System Design	10
	4.1 Design constraints	10
	4.2 System Model : Using OOSE	11
	4.3 Data Model	18
	4.4 User Interfaces	19
5.	Implementation Details	28
	Software/hardware specifications	28
6.	Outputs and Reports Testing	29
7.	Conclusion and Recommendations	30
8.	Future Scope	31
9.	Bibliography and References	32

1. ABSTRACT

“**HOSTEL MANAGEMENT SYSTEM**” is a software developed for managing various activities in the hostel. For the past few years the number of educational institutes is increasing rapidly. Thereby the number of hostels is also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hotel and avoids the problems which occur when carried manually.

Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly add more GUI oriented. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system.

- Less human error
- Strength and strain of manual labour can be reduced
- High security
- Data redundancy can be avoided to some extent
- Data consistency
- Easy to handle
- Easy to update
- Easy to record keeping
- Backup data can be easily generate

2. INTRODUCTION

The Online Hostel Management System is web-based software to provide college students accommodation to the university hostel more efficiently. This project also keeps details of the hostellers and applied students. It is headed by Warden. He will be the administrator. For accommodate a large number of students into hostel.

This document is intended to minimize human works and make hostel allocation is an easier job for coast student and hostel authorities by providing online application for hostel, automatically select the students from the waiting list and mess calculation, complaint registration, notice board etc. Students will get approval notification in their mails. Hostellers can view notice board, hostel fee, mess menu by login into the online system.

MOTIVATION:

1. In computer science a design analysis of algorithm is a particular way of organizing data in a computer so that it can be used efficiently. It can implement on or more particular abstract data types which are the means of specifying the contract of operations & their complexity in comparison it is a concrete implementation on the contract provided by an ADT data structures provided in meanstomanagelargeamountofdataefficientlyforusessuchaslargedatabases and internet indexingservices.

The information of a data structures usually requires writing a set of procedures that create and manipulate instances of that structure.

2. A hostel management project can provide a significant benefit to both hostel staff and guests. By using technology to manage reservations, room assignments, and guest information, staff can save time and increase efficiency. Additionally, guests can benefit from a streamlined check-in process, online booking capabilities, and access to information about the hostel's amenities and services.

3. Furthermore, a hostel management project can improve communication between staff and guests, allowing for prompt responses to inquiries and concerns. This can lead to higher guest satisfaction and increased repeat business. By utilizing data analysis tools, the project can also provide insights into guest behavior and preferences, allowing staff to tailor their services and offerings accordingly.

Overall, a hostel management project can enhance the guest experience, increase staff productivity, and lead to improved business outcomes..

PROBLEM STATEMENT:

We have got nine hostels in our university, which consist of four boy's hostels and five girl's hostels. All these hostels at present are managed by the hostel office. The Registration from verification to the different data processing are done manually.

Thus, there are a lot of repetitions which can be easily avoided. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually.

Identifications of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system.

PURPOSE/OBJECTIVES AND GOALS:

- Maintain the students as hostellers and waiting list students separately.
- Process allotment list.
- Admin can send the approval notification to every approved student via email.
- Automatically insert student's details to the hosteller's record when the allotment is confirmed by the admin and deleted when vacation is confirmed or after the course end date.
- Students can register their complaints.
- Admin can edit notice board and each student can view it.
- Hostel secretary can calculate hostel fee and can edit mess menu.
- Hostellers can check the status of every month's hostel fee.

LITERATURE SURVEY:

Literature review is to do research on similar topics that are concerned with the proposed system. This is with an idea of suggesting the best methods of information management through the use of data warehouse concepts for the proposed Greenville School Hostel Management System. The result of literature review gives us information with regard to the research done on the topic by others researchers. Result of this review will be the gaps features that can be suggested for the proposed system.

A data warehouse is projected in a way that can be stored and accessed and is not restricted only to tables and relational databases, user's queries do not cause any impact in these systems. Data warehouse contemplates the base and the resources needed for a Decision Support System (DSS), supplying historic and integrated data. These data are for top managers, for whom detailed data help to observe some tactical aspects of the organization. In this way, data warehouse provides a specialized. For a centralized database oracle will be used for storing details of data being brought from different hostel.

PROJECT SCOPE AND LIMITATION:

Scope:

- 1) Using computerized system, Time accuracy facts are considerable changed.
- 2) To make existing system friendly.
- 3) Fast and efficient information accessed.
- 4) Easy to run on browser.

Limitation:

- 1) User can have required any browser without browser user cannot run project.
- 2) Internet may be required.

3. SYSTEM ANALYSIS

The initial analysis is made by knowing the user requirements. In analysis phase, we have analysed

The user's requirement such as:

Addition of the record of the customer ego comes into the hotel, deletion of the record when customer leaves the hotel, printing and calculation of the bill, record of facilities available in the hotel, allotment of the rooms etc. In this project we have also analysed that the product or software should not be very costly but its quality and interface must be attractive. If any wrong operation is being performed then the software must invoke the operator accordingly.

EXISTING SYSTEM:

The existing system is manual based and need lot of efforts and consume enough time. In the existing system we can apply for the hostels online but the allotment processes are done manually. It may lead to corruptions in the allocation process as well as hostel fee calculation. The existing system does not deal with mess calculation and complaint registration.

DISADVANTAGES:

- More human power.
- More strength and strain of manual labour needed.
- Repetition of same procedure.
- Low security.
- Data redundancy.
- Difficulty to handle.
- Difficulty to update data.
- Record keeping is difficult.
- Backup data can be easily generated.

SCOPE AND LIMITATION OF EXISTING SYSTEM:

The main scope of the developing hostel management system is to save money and time. The proposed system generates following reports to help management of the hostel in decision making: Allocated Room report. Unallocated Room Report.

The system cannot handle online payment of student's accommodation fee and maintenance fee. The system cannot handle other hostel issues such as mess activities because the existing system does not have one.

Hostel management system is designed to manage all hostel activities like hostel admissions, fees, room, mess allotment, hostel stores & generates related reports for smooth transactions. It is also used to manage monthly mess bill calculations, hostel staff payroll, student certificates, etc.

PROJECT PERSPECTIVE, FEATURES:

Hostel management system has several functions which enable the staffs from accommodation office such as allocate students to the different hostels, reserve the room for the students, control status of rental payment and edit the details of the students & modify the student records.

Features of hostel management system:

- Systematic Control over Hostel Activities.
- Accurate Student Data Management.
- Complete Student Security.
- Online Admission & Fees Management.
- Room Allocation & Transfers.
- Alerts & Notifications.
- Mess Management.
- Paperless Student Attendance.
- Visitor Management Record.
- Hostel Report.

STAKEHOLDERS:

- ✧ Admin
- ✧ Student

REQUIREMENT ANALYSIS:

- User generate account number.
- User allow the hostel staff members or guardian to scan the student's id and access its profile.
- User have permission of renewing the student's registration every year.
- User shall generate the users profile containing the following information users account no, full name, address, phone no & room no.
- User will change dues status in database according to dues paid or not.
- User will allocate rooms to students according to the session or class.
- User must have the details of a mess of a student and sorted in a database.
- User must allow the warden to add new users to the system's database.
- User must allow to put hold on a room if any room is not available at the moment.
- User must allow the guardian to cancel the registration from the system's database who will leave room.

4. SYSTEM DESIGN

System analysis is a method of problem-solving that deals with the breaking down of a system into components parts in order to study how well the individual parts work and interact to accomplish their purpose. It involves the process of enumerating the existing problems, analysing the proposed system for costs and benefits, analysing the system and user requirements, and considering possible alternative system.

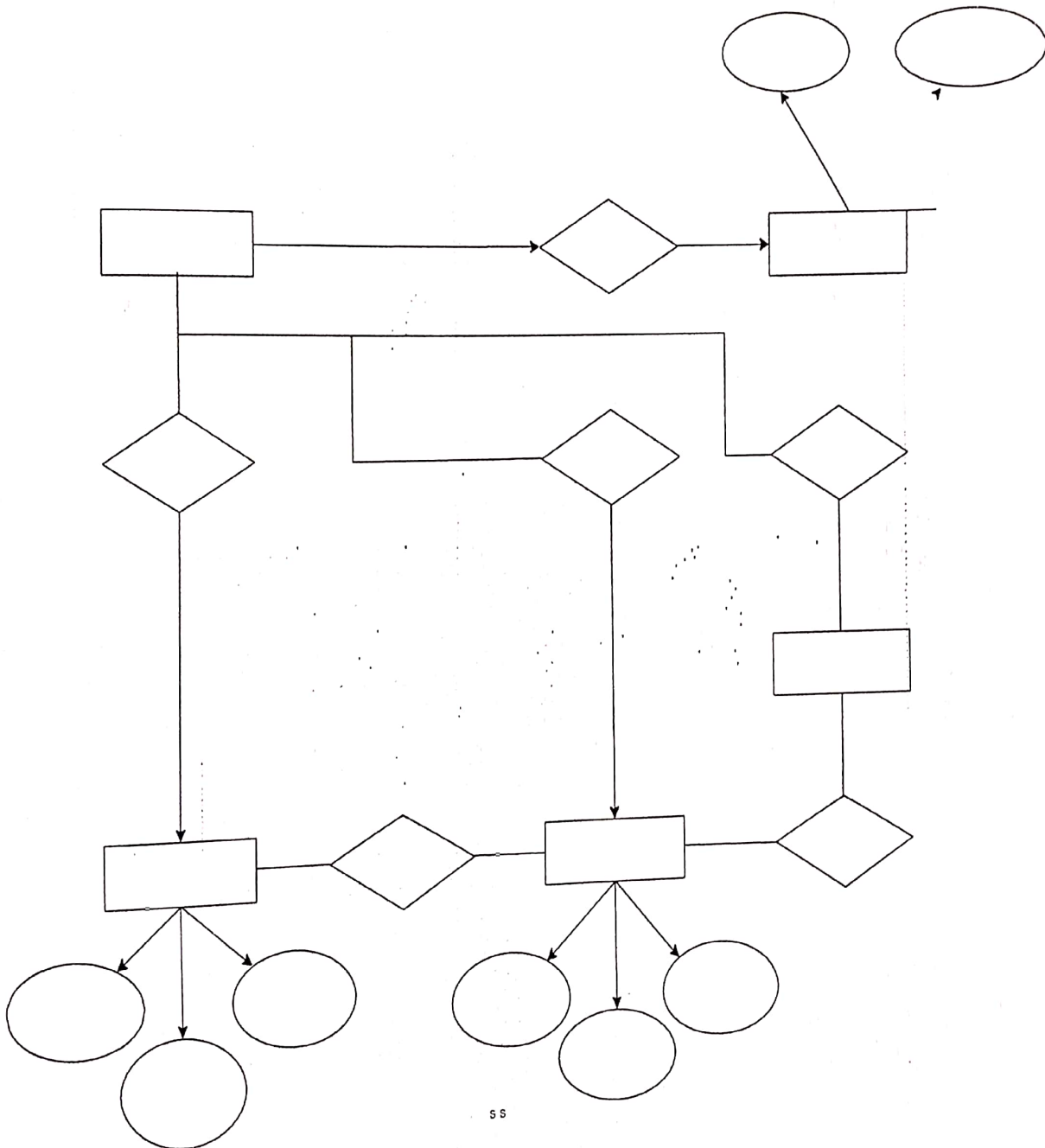
System analysis is important in the design of subsequent systems. System design consists of design activities that produce system specifications which satisfy the functional requirements that have been developed in the system analysis process. System design is basically the structural implementation of system analysis. The proposed system is being designed in such a way that students only need to input their data online which is then entered into a computer database. Students will also upload a passport photograph to their profile for easy identification.

DESIGN CONSTRAINTS:

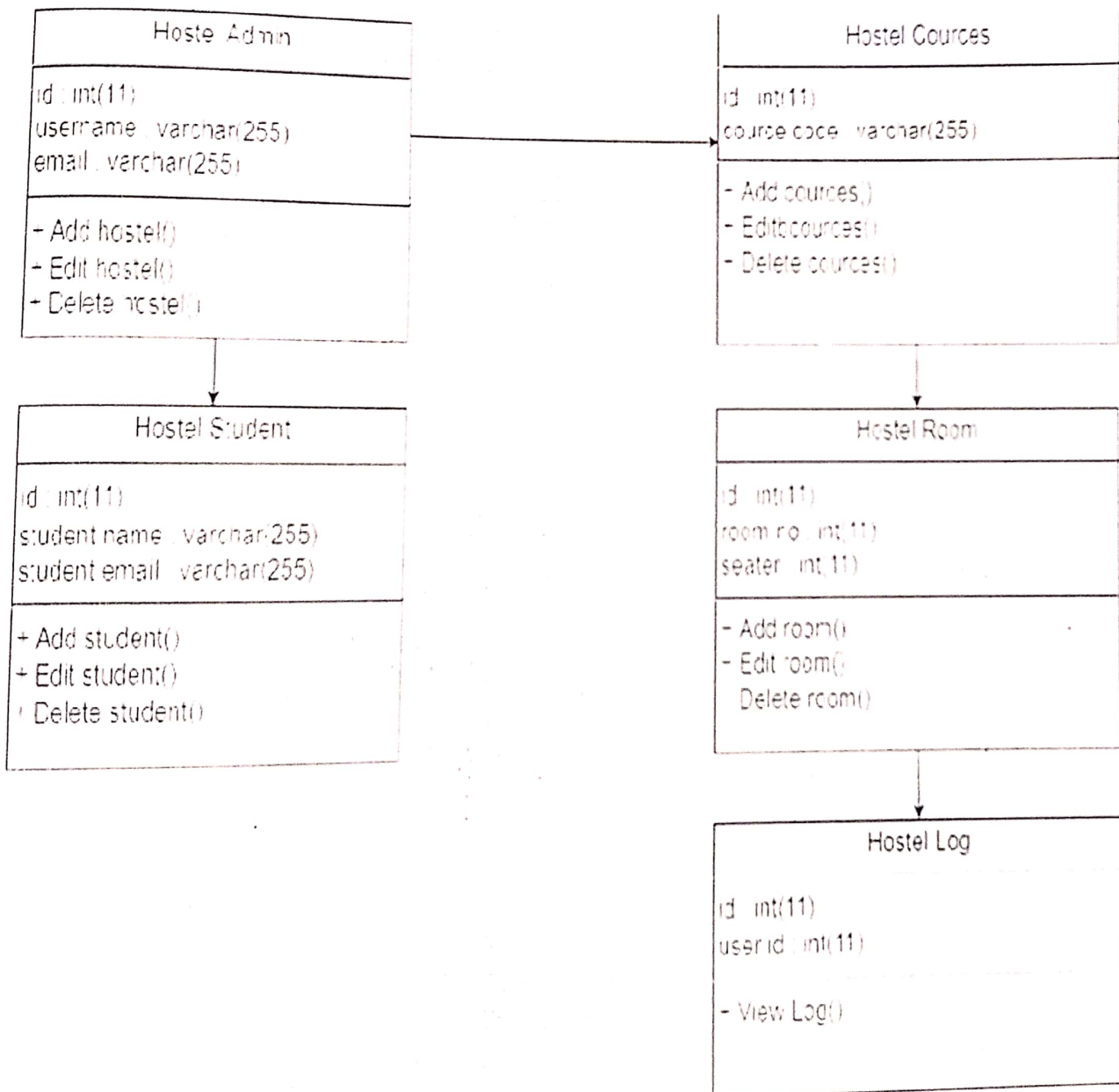
Common Diagram Containing Following- The Symbols used in ER diagram are as follow: ER Diagram describes data at rest, data being stored. Data relationship is the relation between the entities. Entity is an object that exist and its distinguishable from other objects. ER diagram shows data at rest. This means ER diagram does not show data flow.

SYSTEM MODEL:

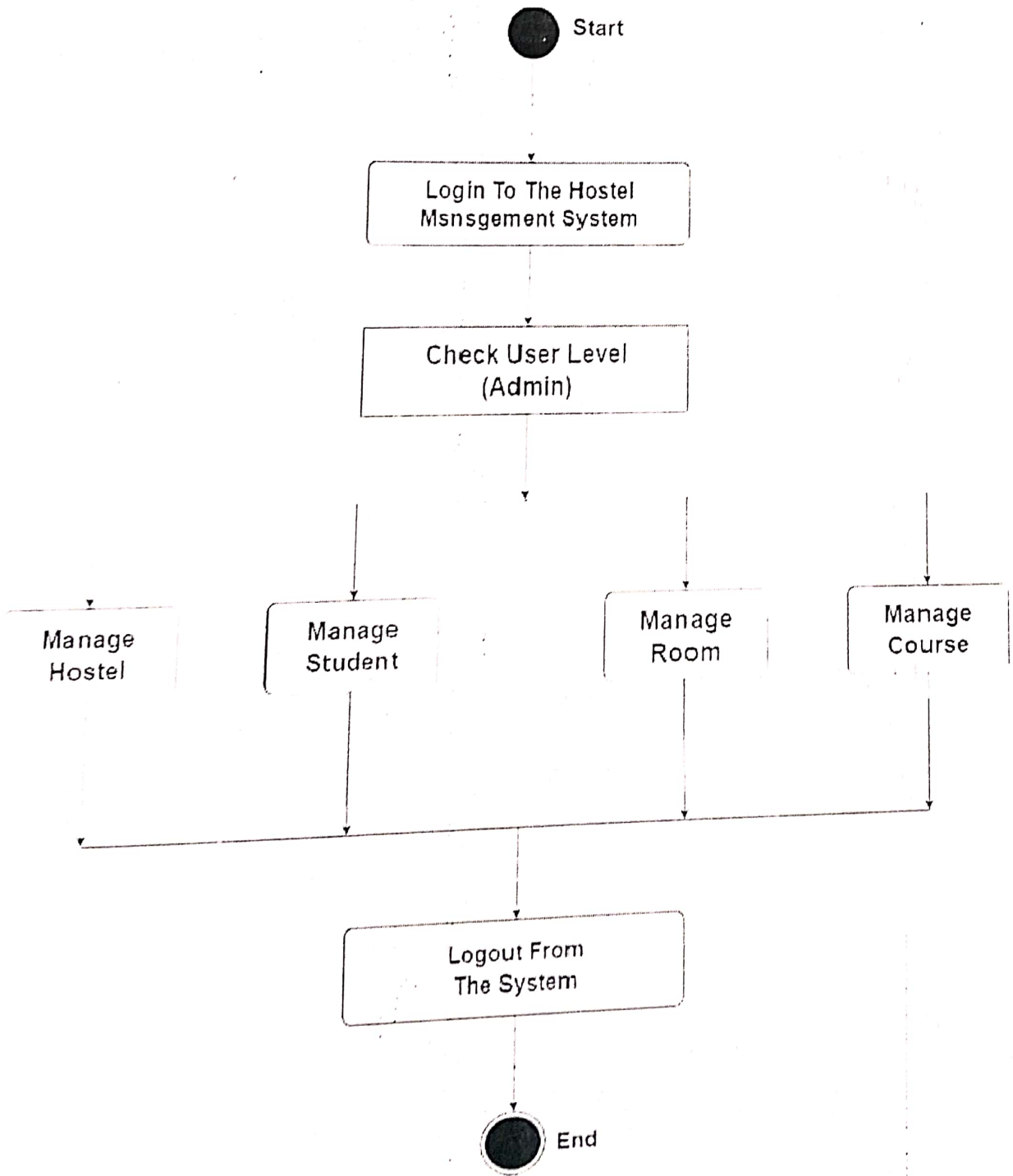
➤ ER Daigram-



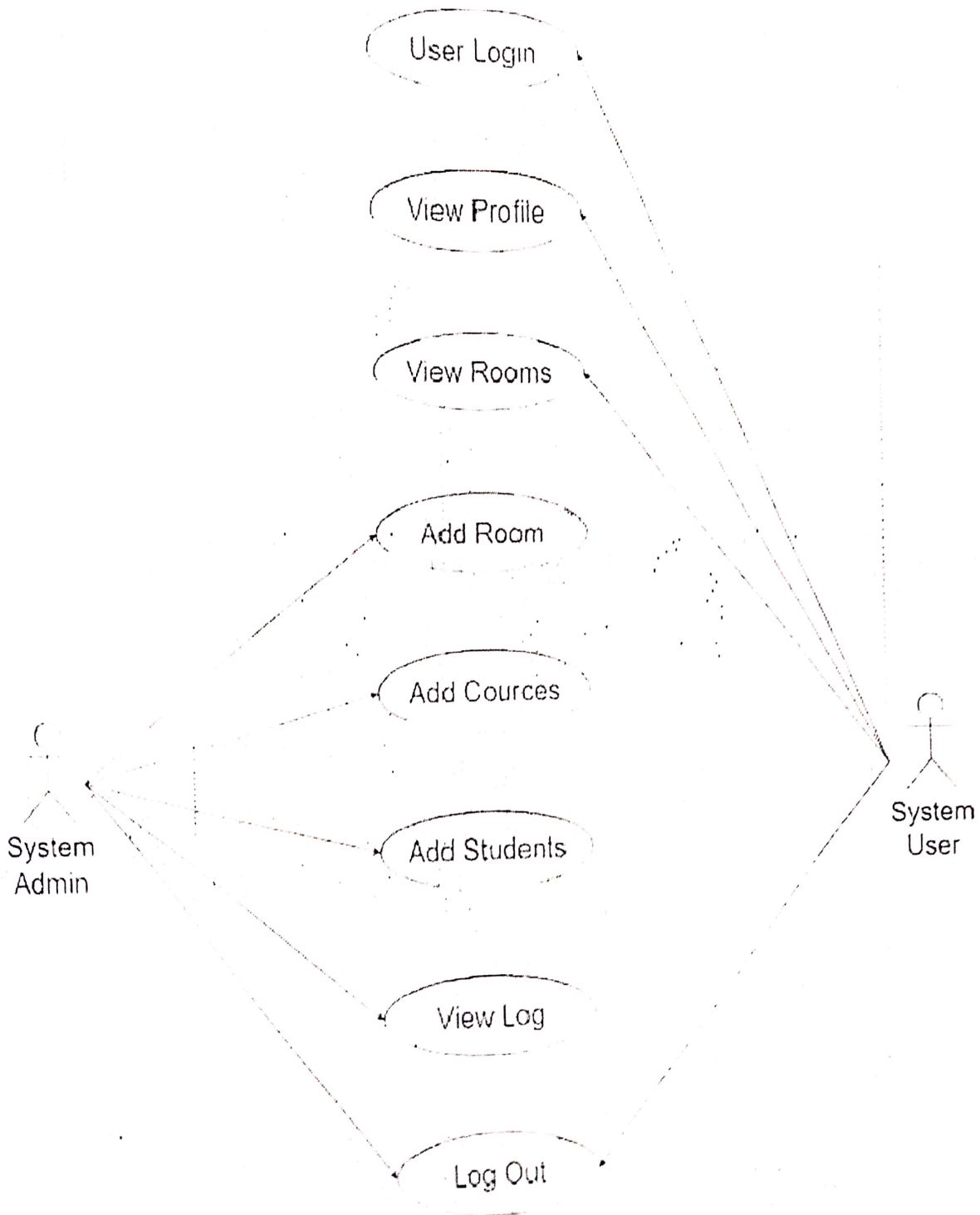
➤ Class Diagram -



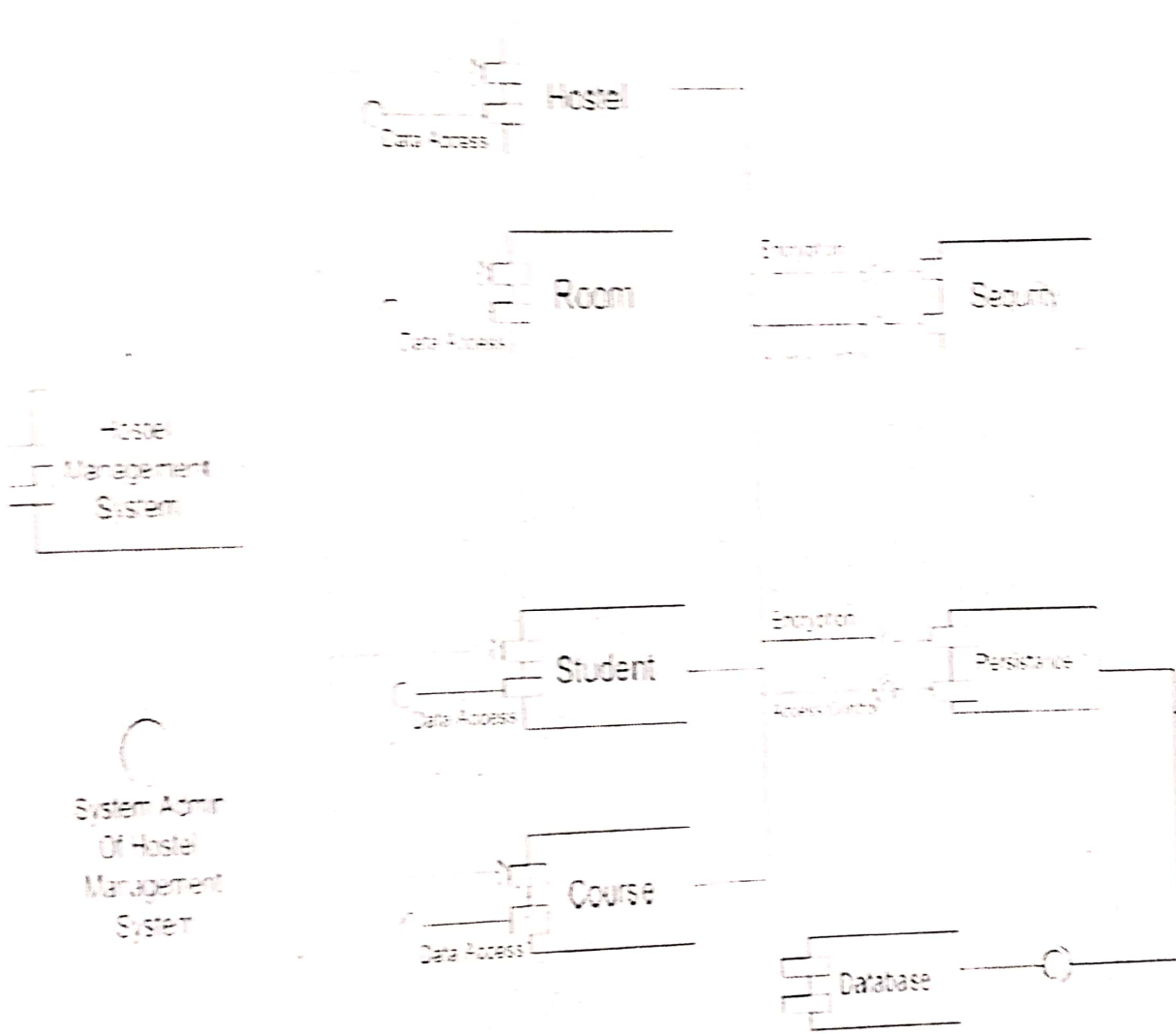
➤ Activity Diagram-



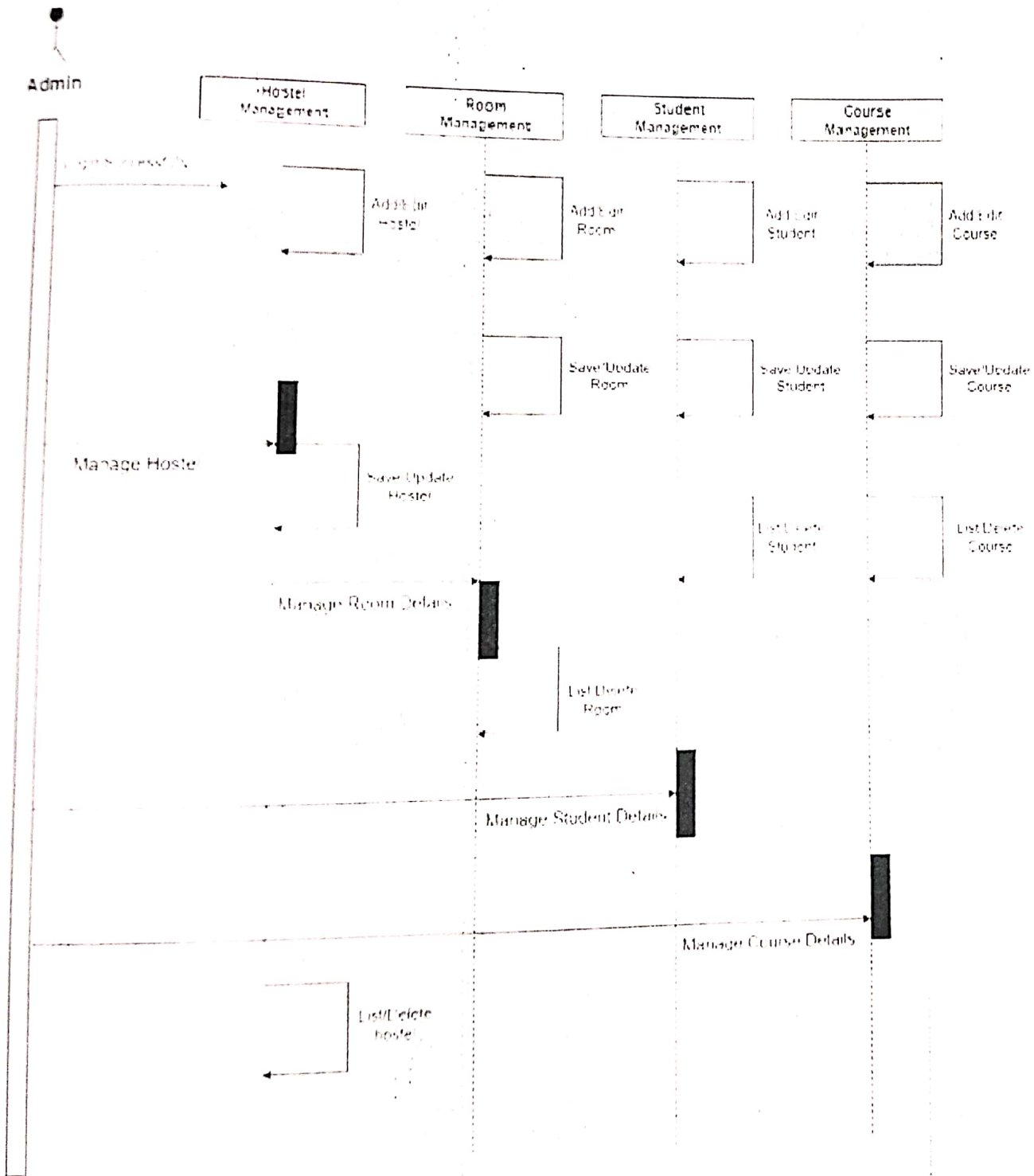
➤ Use – Case Diagram-



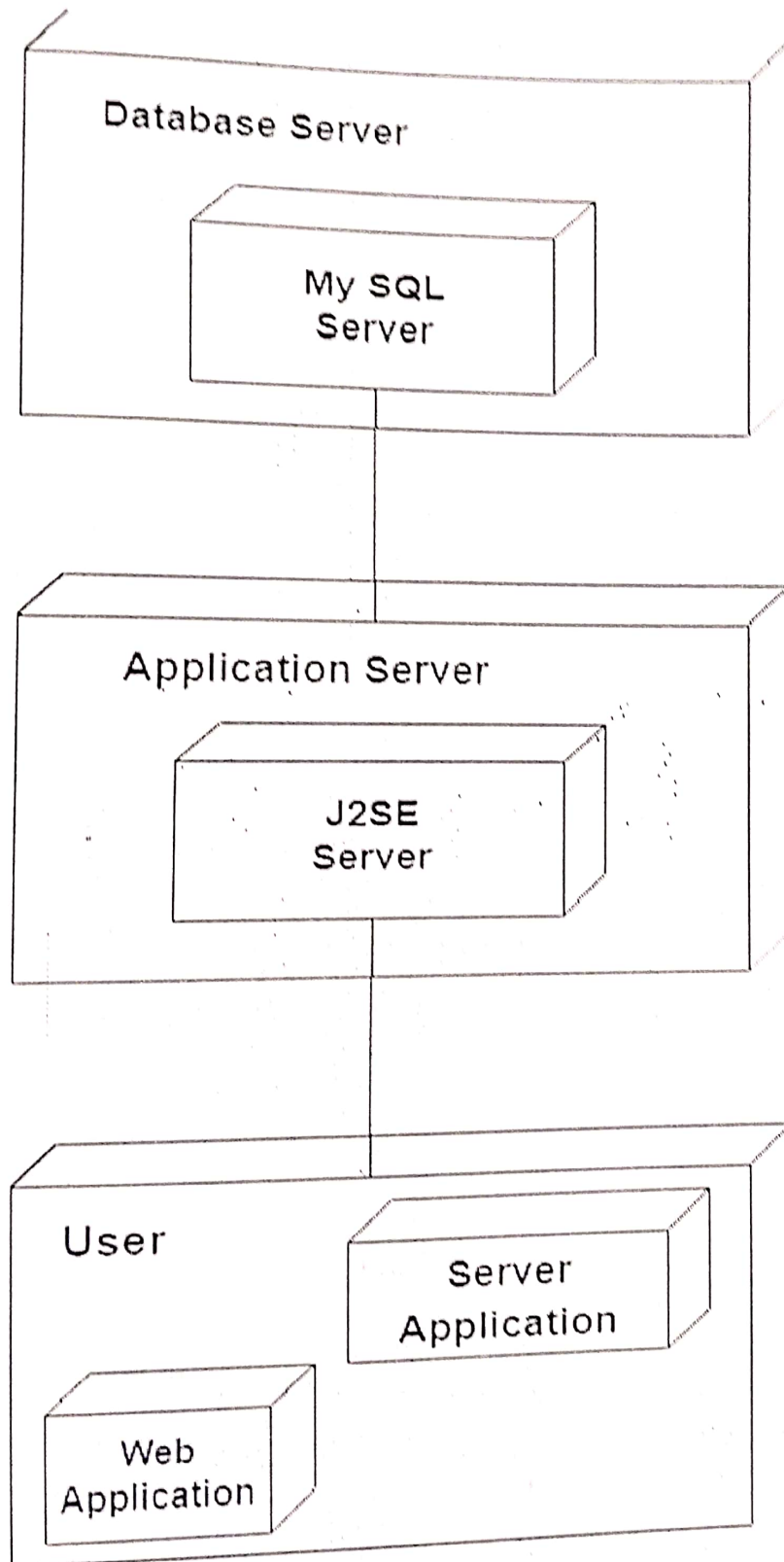
➤ Component Diagram-



➤ Sequence Daigram-



➤ Deployment Diagram-



DATAMODEL:

1) Table 1 – Admin:

Field	Data Type	Key	Size
Id	int	primary	11
Password	vvarchar	not null	255
Email	vvarchar	not null	255

2) Table 2 – Student:

Field	Data Type	key	Size
Id	int	primary	11
Name	vvarchar	not null	255
Email	vvarchar	not null	255

3) Table 3 – Course:

Field	Data Type	key	Size
Id	int	primary	11
Course Code	vvarchar	not null	25

4) Table 4 – Room:

Field	Data Type	key	Size
Id	int	primary	11
No.	int	not null	11
Seater	int	not null	11

USERINTERFACE:

The user interface is as follows:

Login

Student Module: Profile

Student Module: Apply Room

Student Module: Status of Application

Student Module: View History

Student Module: Change Password

Student Module: Logout

Administrator Module: Adduser

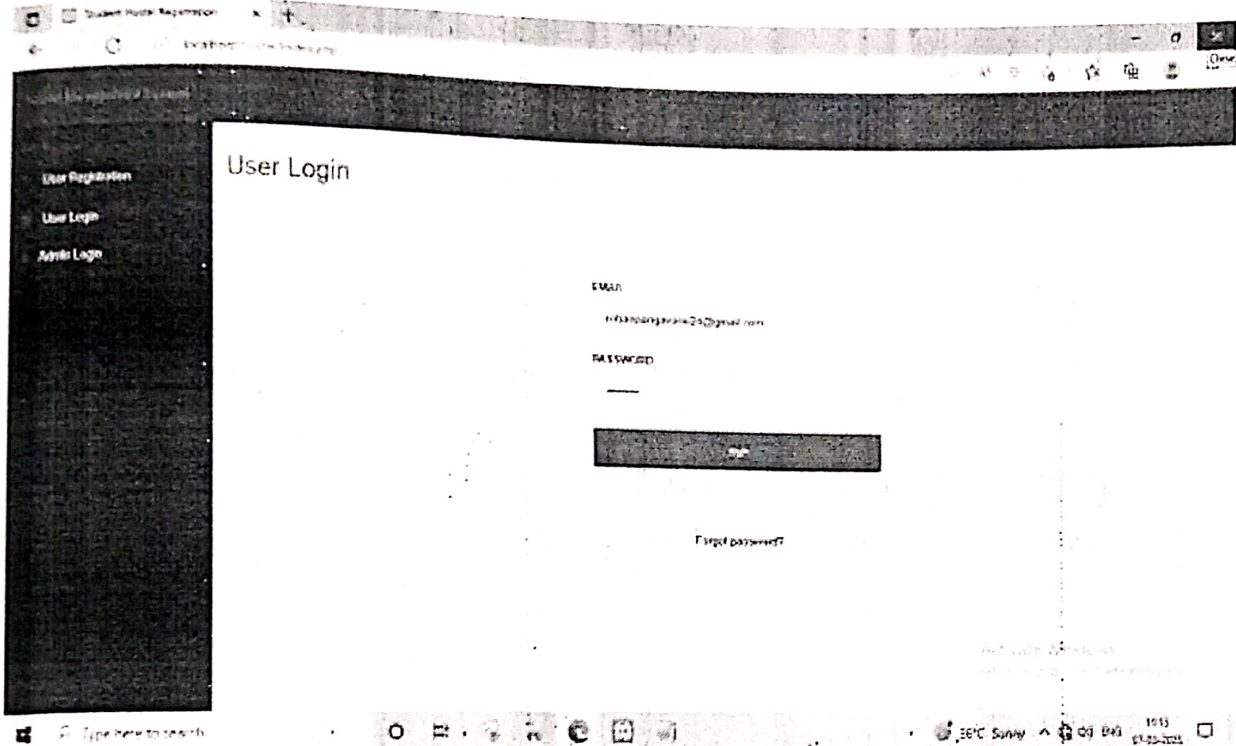
Administrator Module: View Applicant

Administrator Module: View Student

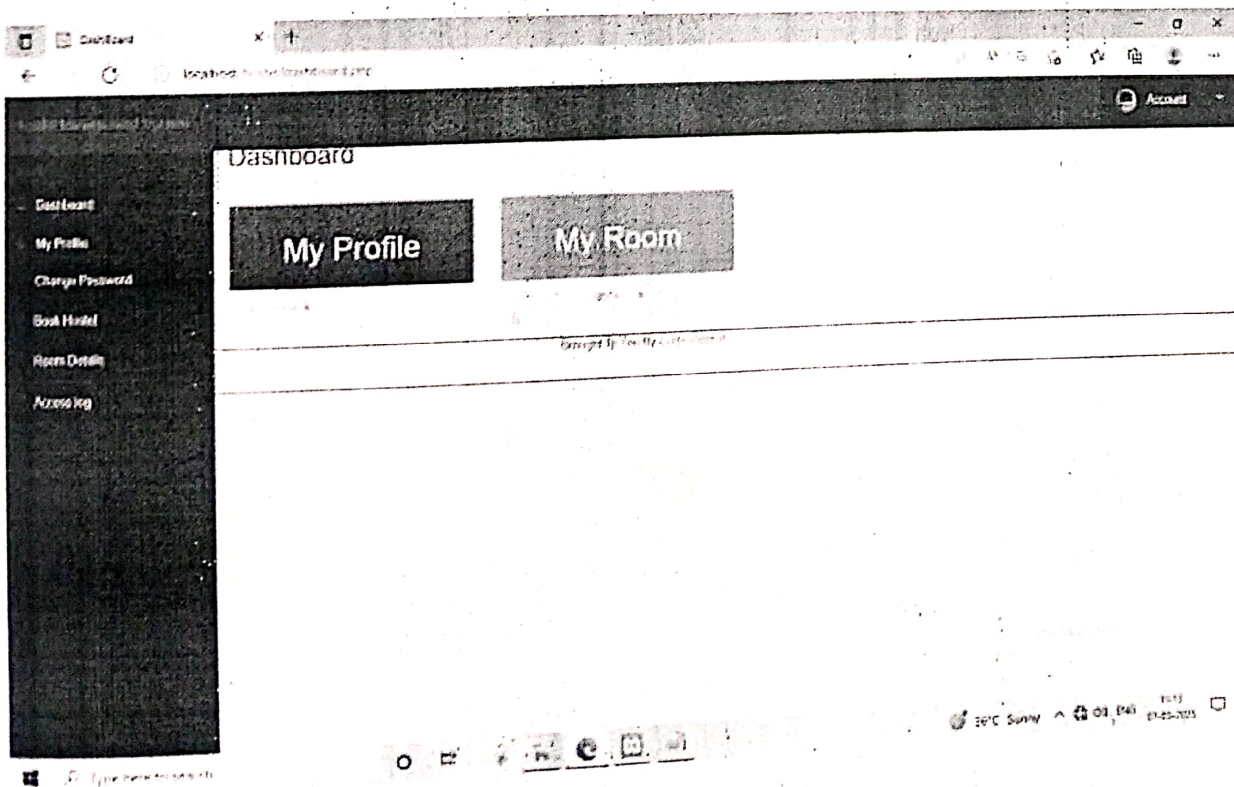
Administrator Module: Change Password

OUTPUT SCREEN:

➤ USER LOGIN



➤ DASHBOARD



➤ Profile

The screenshot shows a web browser window with the address bar displaying "localhost:3000/". The page title is "Rohan's Profile". On the left, there is a dark sidebar menu with the following items: Dashboard, My Profile, Change Password, Book Profile, Floor Details, and Access log. The main content area is titled "METAPHORIC" and contains a form with the following fields:

Registration No.	111
First Name	Rohan
Middle Name	Ashwath
Last Name	Thirupavai
Gender	Male
Contact No.	8800011111
Email ID	bilalstanger1981@alibaba.com

At the bottom of the form, there is a "Save Profile" button. The Windows taskbar at the bottom shows the system tray with the date "07-03-2021" and temperature "36°C Sunny".

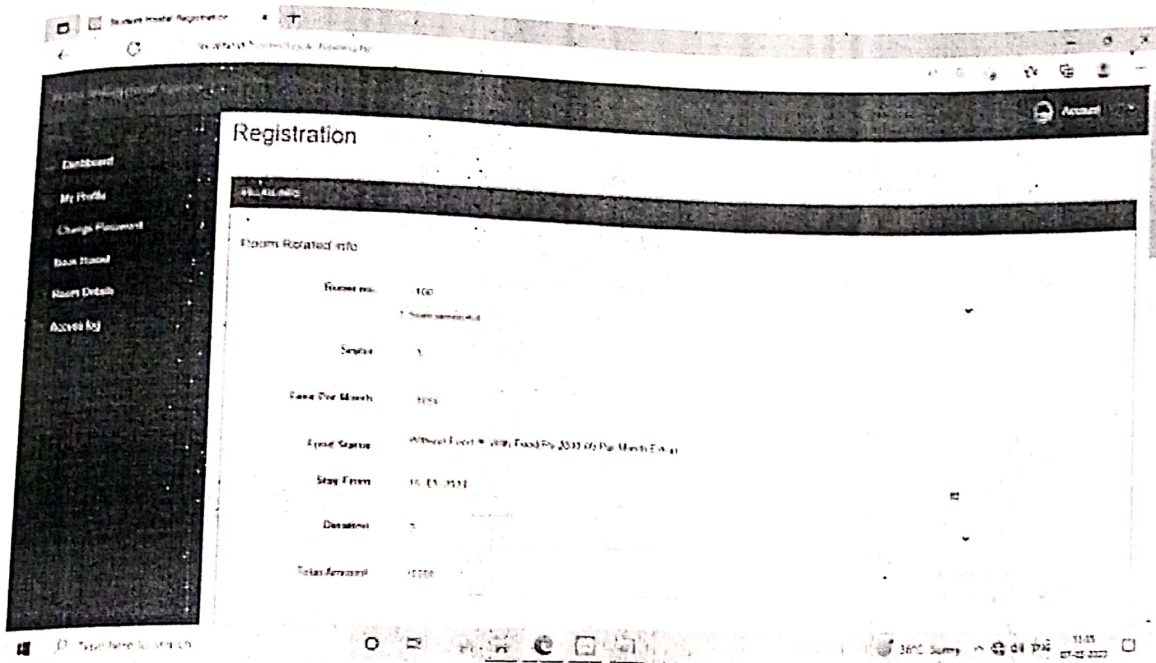
➤ CHANGE PASSWORD

The screenshot shows a web browser window with the address bar displaying "localhost:3000/change-password.html". The page title is "Change Password". On the left, there is a dark sidebar menu with the following items: Dashboard, My Profile, Change Password, Book Profile, Floor Details, and Access log. The main content area contains a form with the following fields:

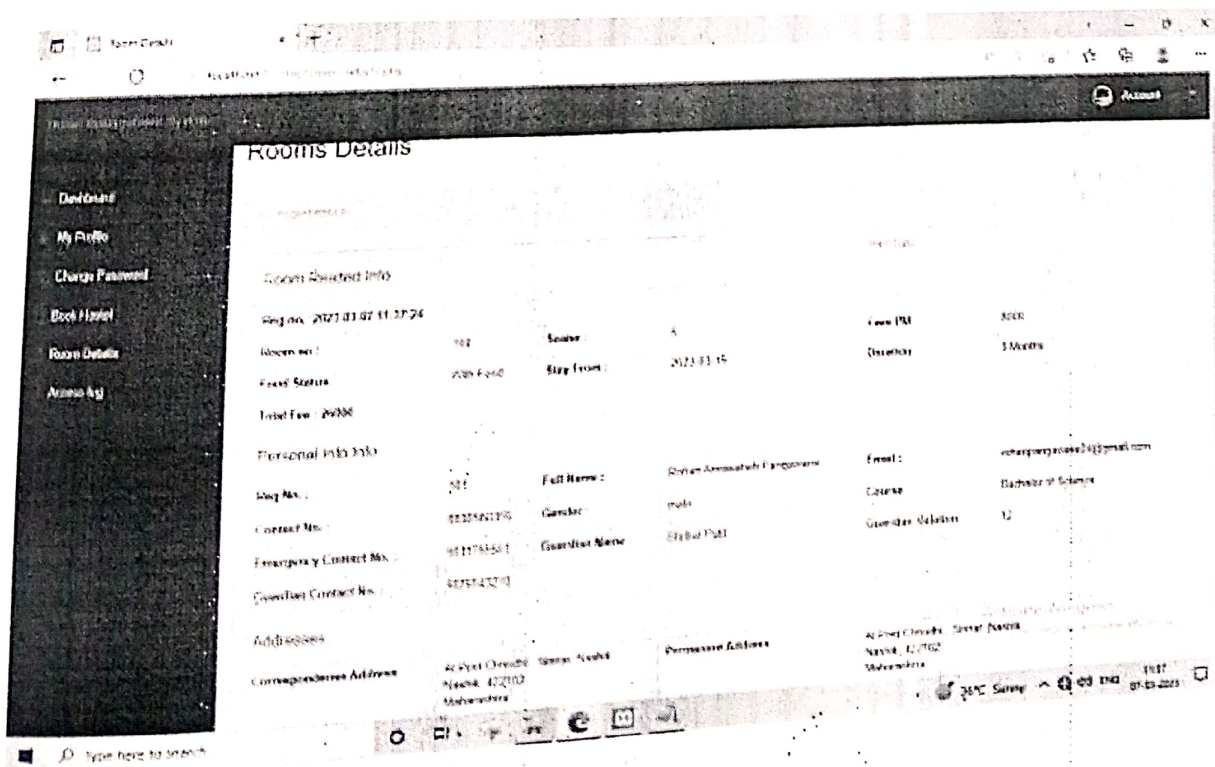
- Old Password:
- Current number:
- New Password:
- Confirm Password:

At the bottom of the form, there are two buttons: "Cancel" and "Change Password". The Windows taskbar at the bottom shows the system tray with the date "07-03-2021" and temperature "36°C Sunny".

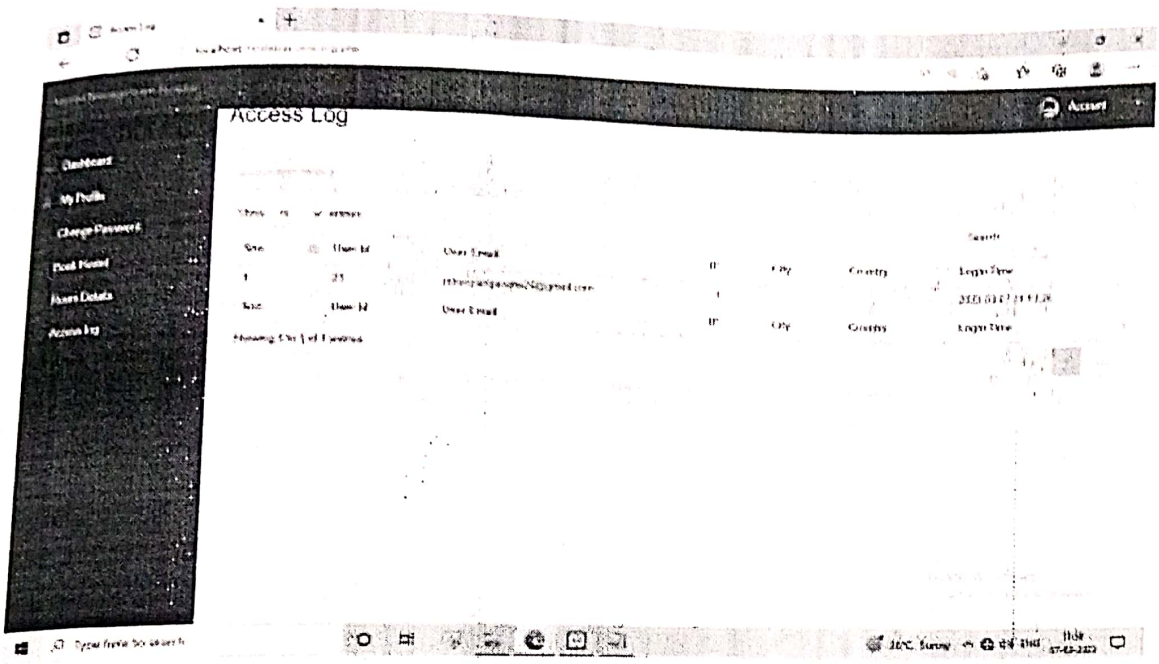
➤ REGISTRATION



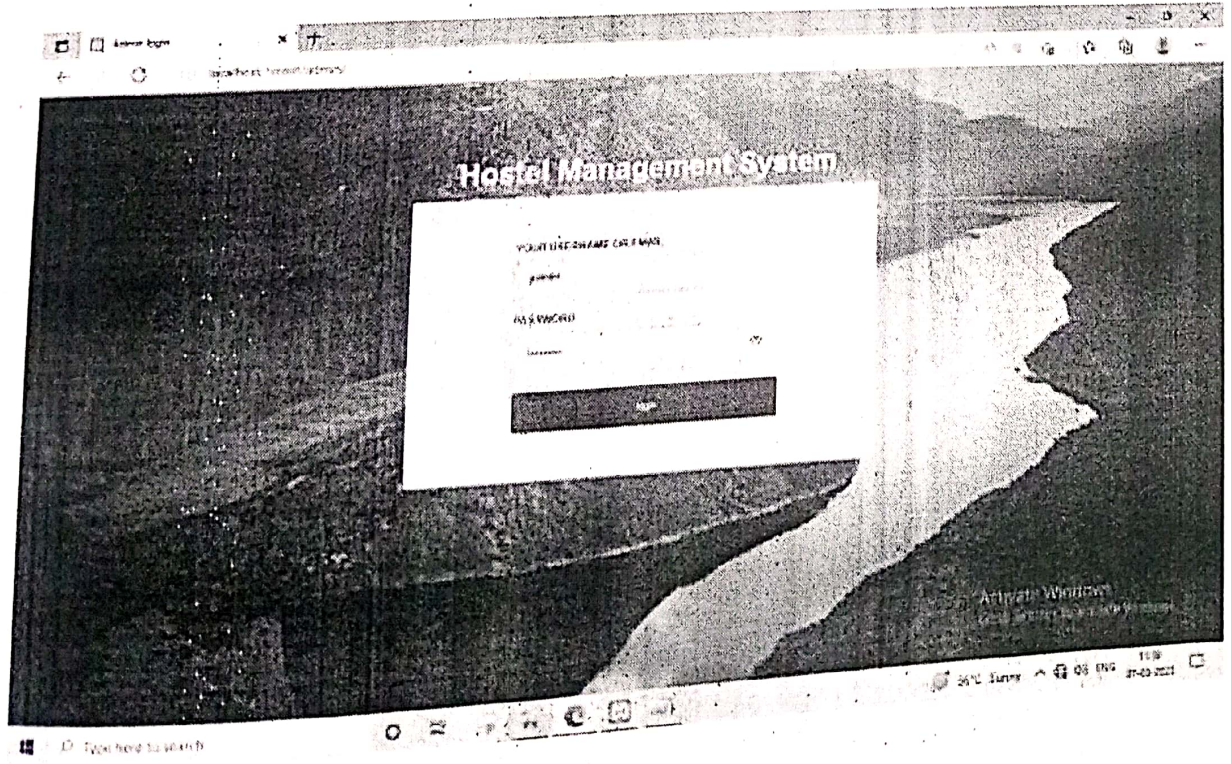
➤ ROOMSDetails



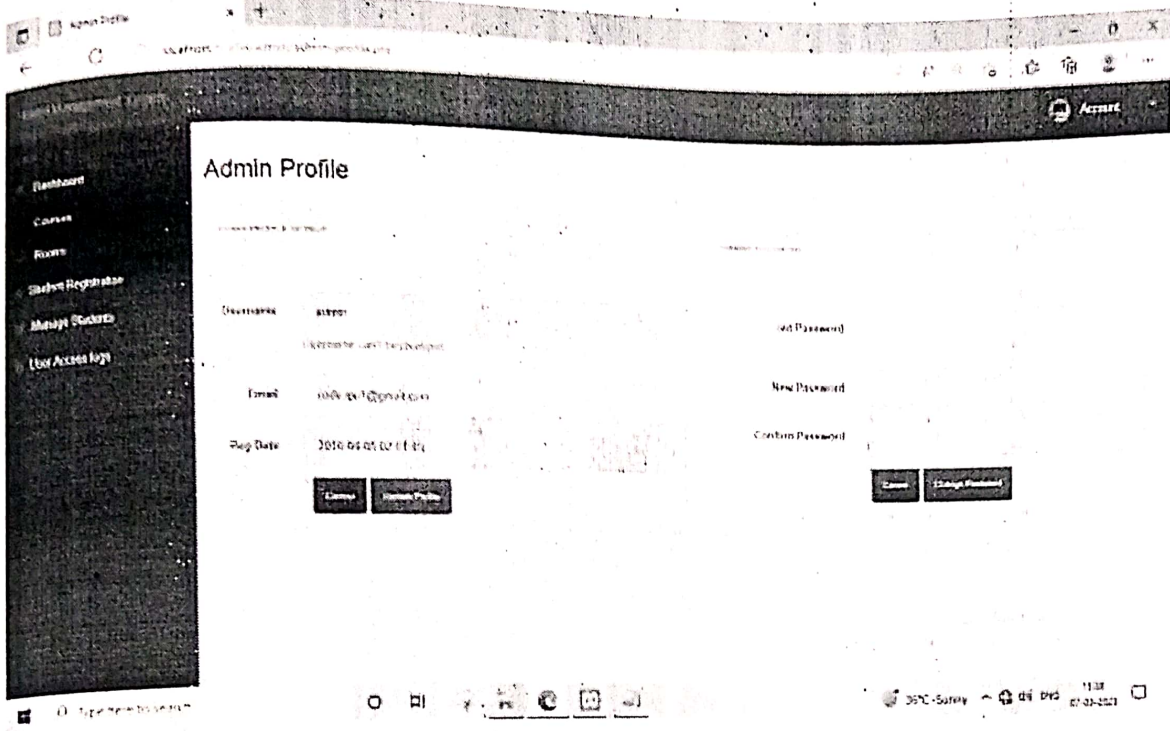
➤ ACCESSLOG



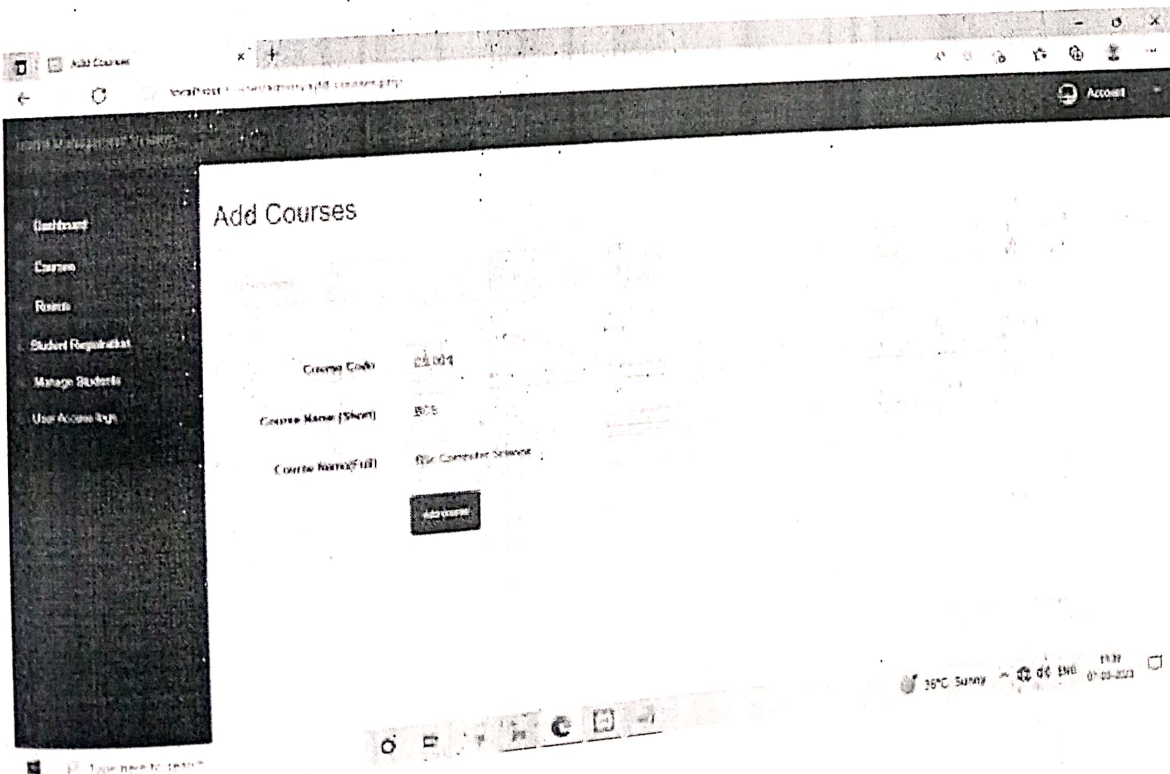
➤ ADMINLOGIN



➤ ADMINPROFILE



➤ ADDCOURSES



➤ MANAGE COURSES

Manage Course

S.No	Course Code	Course Name (Short)	Course Name (Full)	Reg Date	Action
1	BT0032	B Tech	Bachelor of Technology	2016-04-12 01:21:43	Edit Delete
2	BKXMT001	B Com	Bachelor of Commerce	2016-04-12 01:22:43	Edit Delete
3	BBC12	BSC	Bachelor of Science	2016-04-12 01:23:21	Edit Delete
4	BKXW150	B.Tech	Bachelor of Technology	2016-04-12 01:24:13	Edit Delete
5	BCA002	MCA	Master of Computer Applications	2016-04-12 01:24:43	Edit Delete
6	MAA15	MBA	Master of Business Administration	2016-04-12 01:24:43	Edit Delete
7	BE15A	B.E.	Bachelor of Engineering	2016-04-12 01:25:19	Edit Delete
8	CS 201	B.Tech	Bachelor of Technology	2023-03-07 11:35:56	Edit Delete

Showing 1 to 8 of 8 records

➤ ADD A ROOM

Add a Room

Select Section: 1st Section

Room No: 001

Fee (Per Student): 5000

MANAGE ROOM

The screenshot displays the 'MANAGE ROOM' interface. The main content area features a table with the following data:

Name	Room No.	Total of No.	Booking Date	Status
1	100	1000	2018-12-12 17:41:23	Active
2	101	1000	2018-12-12 17:41:23	Active
3	200	1000	2018-12-12 17:41:23	Active
4	102	1000	2018-12-12 17:41:23	Active
5	103	1000	2018-12-12 17:41:23	Active
6	104	1000	2018-12-12 17:41:23	Active

The sidebar on the left includes the following menu items: Dashboard, Classes, Rooms, Student Registration, Manage Students, and User Account Page. The top navigation bar shows 'Account' and 'Logout' options.

MANAGE STUDENTS

The screenshot displays the 'MANAGE STUDENTS' interface. The main content area features a table with the following data:

Name	Reg No.	Exam Date	Score	Status
1	1000121	02/11/19	100	Active
2	1000121	04/11/19	100	Active
3	1000121	06/11/19	100	Active
4	1000121	08/11/19	100	Active
5	1000121	10/11/19	100	Active

The sidebar on the left includes the following menu items: Dashboard, Classes, Rooms, Student Registration, Manage Students, and User Account Page. The top navigation bar shows 'Account' and 'Logout' options.

➤ ACCESS LOG

The screenshot displays the 'ACCESS LOG' interface. On the left, a dark sidebar lists navigation options: Dashboard, Course, Quiz, Student Registration, Manage Students, and User Access logs. The main content area features a table with the following data:

Sess	User Id	User Email	IP	City	Country	Login Time
1	10	test@gmail.com				2016-06-23 11:45:42
2	10	test@gmail.com				2016-06-24 10:50:28
3	10	test@gmail.com				2016-06-24 15:52:47
4	10	test@gmail.com				2016-06-26 21:57:31
5	22	test@gmail.com				2016-06-26 22:16:57
6	10	test@gmail.com				2023-03-04 21:27:44
7	10	test@gmail.com				2023-03-05 11:09:32
8	10	test@gmail.com				2023-03-07 11:07:13
9	21	test@gmail.com				2023-03-07 11:12:26

At the bottom of the browser window, the system tray shows a temperature of 36°C, a sunny weather icon, and the date and time: 07:03:2023.

5. IMPLEMENTATION DETAILS

SOFTWARE AND HARDWARE SPECIFICATIONS:

Software:

- (1) Google chrome (using runtime the project).
- (2) Apache server
- (3) XAMPP server
- (4) Notepad (used as editor).
- (5) Internet explorer (using runtime).
- (6) Ms Word.
- (7) 64-bit Windows Operating System.

Hardware:

- (1) HP Pavilion laptop (used as server).
- (2) DESKTOP-8M8NEI
- (3) RAM.
- (4) Mouse.
- (5) Keyboard.
- (6) Printer.

6. OUTPUTS AND REPORT TESTING

Test Plan:

The project test plan is a document that outlines for project stakeholders the product functions to be tested, what specific tests will be performed, the approach to be taken for those tests, what to test and what not to test, how the tests will be performed, who will be responsible for performing each test, what results are expected. Testing is vital to the success of the system. Testing is the process of executing a program with the explicit intention of finding errors that is making the program fail. The tester may be an analyst, programmer or a specialist trained for software testing.

Black Box Testing:

The black box is a powerful technique to check the application under test from the user's perspective. Black box testing is used to test the system against external factors responsible for software failures. This testing approach focuses on the input that goes into the software, and the output that is produced. The testing team does not cover the inside details such as code, server logic, and development method. Black box testing is based on the requirements and checks the system to validate against predefined requirements.

White Box Testing:

White box testing refers to a scenario where (as opposed to black box testing), the tester deeply understands the inner workings of the system or system component being tested. White box testing is a type of testing where the tester can see the code. The main purposes of this type of testing are to test the inner workings of the software, as well as strengthen its security, and improve its usability and design. This is also known as structural testing as the tester chooses which inputs to test and follows their paths through the software to reach their expected outputs. White box testing is used in the unit, integration and systems phases of software testing.

7. CONCLUSION AND RECOMMENDATIONS

To conclude the description about the project, the project developed using PHP with My SQL is based on the requirement specification of the user and the analysis of the existing system, with flexibility for future enhancement.

“HOSTELMANAGEMENTSYSTEM” is very useful for hostel allotment and mess fee calculation. This hostel management software is designed for people who want to manage various activities in the hostel. For the past few years the number of educational institutions are increasing rapidly. Thereby the numbers of hostels are also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context.

This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually.

Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented.

8. FUTURE SCOPE

It is easy to extend the system that we have proposed. A person could see any of the issued, unissued or all the rooms according to his/her will. In future we can implement some features for "HOSTEL MANAGEMENT SYSTEM" project. In this system its possible to categorize room rent for particular concession for the entire year.

9. BIBLIOGRAPGY ANDREFERENCE

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2. <https://www.codeprojet.com>
3. www.mysql.com
4. www.google.com