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Hostel Management System (HMS)

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Abstract: This is a design and implementation of an online Hostel Management System. " ONLINE HOSTEL MANAGEMENT SYSTEM " is software developed for managing various activities in the hostel. For the past few years the number of educational institutions 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 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. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system
Keywords: Hostel, Booking System, Bridge, Students

I. INTRODUCTION

In our current era of automated systems with it being either software or hardware, it's not advisable to be using manual system. Hostels without a management system are usually done manually. Registration forms verification to other data saving processes are done manually and most at times, they are written on paper. Thus a lot of repetitions can be avoided with an automated system. The drawbacks of existing systems lead to the design of a computerised system that will help reduce a lot of manual inputs. With this system in place, we can improve the efficiency of the system, thus overcome the drawbacks of the existing manual system.This system is designed in favour of the hostel management which helps them to save the records of the students about their rooms and other things. It helps them from the manual work from which it is very difficult to find the record of the students and the mess bills of the students, and the information of about the those ones who had left the hostel years before.

A. Objectives

The main objective of the Hostel Management System is to manage the details of Rent, Allotees, Hostel, Rooms, Payments. It manages all the information about Rent, Beds, Payments, Rent. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Rent, Allotees, Beds, Hostel. It tracks all the details about the Hostel, Rooms, Payments.

1) Provides the searching facilities based on various factors. Such as Rent, Hostel, Rooms, Payments.
2) College Management System also sells the employees details online for students details, employees details, courses.
3) College Management System also sells the employees details online for students details, employees details, courses.
4) Provide the functionality to make your own bookings
5) Update your web site without the need to get a web designer involved.
6) It tracks all the information of Allotees, Beds, Rooms etc
7) Manage the information of Allotees.
8) Shows the information and description of the Rent, Hostel
9) To increase efficiency of managing the Rent, Allotees.
10) It deals with monitoring the information and transactions of Rooms.
11) Manage the information of Rent.

II. PROBLEM DEFINITION

There are a lot of drawbacks in keeping and maintaining a hostel. Especially with a manual system. Since most hostels are being run by only one hostel manager, the number of students in a room are sometimes not known by the officer. He has to go room by room to ensure that a room is occupied or not. Sometimes people may be owing in the hostel and they are saved on papers or huge notebooks, and sometimes receipts. If the books should go missing or stolen, one would never be able to know if a student is owing or not. Room allocation also becomes a problem as the officer might not know which rooms are available or not. And some hostels have a lot of rooms or have mare storeys and it would be very tedious to go through all storeys in search of a free room for an applicant. Also the officer might not know the number of students in a room or know if a room is full or not.

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A. 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 deals with mess calculation and complaint registration.

B. Proposed System

This project is aimed at developing a system for keeping records and showing information about or in a hostel. This system will help the hostel officer to be able to manage the affairs of the hostel. This system will provide full information about a student in the hostel. It will show rooms available or not and number of people in a particular room. This will also provide information on students who have paid in full or are still owing. This system will also provide a report on the summary detail regarding fees and bills students are owing. Also included is a user module for employees or the hostel officer. There will also be an administrator module which will accessed by the administrator and has the ability to delete, add and edit employee records. This system will be developed based on Software Development Life Cycle (SDLC) with PHP and XAMPP server. PHP And JS is good for the development and design of web based programs whiles XAMPP is good for databases because of its security and its advanced features and properties.

III. REQUIREMENT ANALYSIS

A. Functional Requirements

1) User shall generate the users profile containing the following information users account no, full name ,address, phone no & room no.
2) User will change dues status in database according to dues paid or not.
3) User must allow the warden to add new users to the system's database.
4) User must allow the guardian to cancel the registration from the system's database who will leave rooms.

B. Non-Functional Requirements

1) The system should be reliable. It should always bep and running.
2) The system should have high performance.

C. Hardware Quirements

The section of hardware configuration is an important task related to the software development. Insufficient random access memory may affect adversely on the speed and efficiency of the entire system. The process should be powerful to handle the entire operations. The hard disk should have sufficient capacity to store the file and application.

1) *Users Processor:* Pentium IV and above Processor speed: 1.4 GHz Onwards
2) *System Memory:* 128 MB minimum (256 MB recommended) Cache size: 512 KB
3) *RAM:* 512 MB (Minimum)
4) *Network Card:* Any card can provide a 100mbps speed Network connection: UTP or Coaxial cable connection Printer: Inkjet/Laser Colour printer provides at least 1000 Dpi Hard disk: 80 GB
5) *Mouse:* 104 keys US Key Serial, USB or PS/2

D. Software Configuration

A major element in building a system is the section of compatible software since the software in the market is experiencing in geometric progression. Selected software should be acceptable by the firm and one user as well as it should be feasible for the system. This document gives a detailed description of the software requirement specification. The study of requirement specification is focused specially on the functioning of the system. It allow the developer or analyst to understand the system, function to be carried out the performance level to be obtained and corresponding interfaces to be established

1) Technology Implemented: Apache Server
2) Language Used: HTML, PHP , JAVA SCRIPT, AJAX, CSS or newer versions
3) Database: MySql XAMPP Server
4) User Interface: HTML, AJAX, CSS, J -FRAME
5) Web Browser: Mozilla, Chrome or Internet Explorer 8(or newer)
6) Software: MySQl Server & XAMPP

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7) Operating System : Windows XP or Higher Versions

IV. SYSTEM DESIGN

A. Data Flow Diagram (DFD)

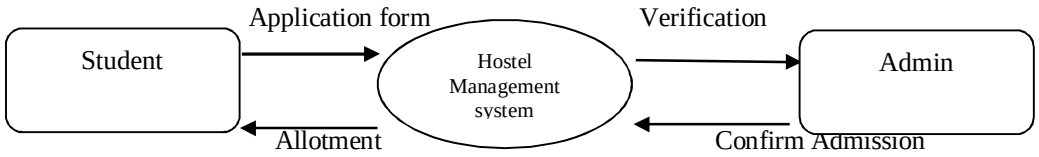


Fig 1 DFD For Allotment Process

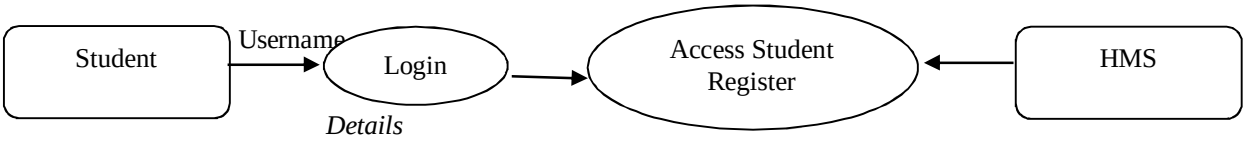


Fig 2 DFD For Student Login

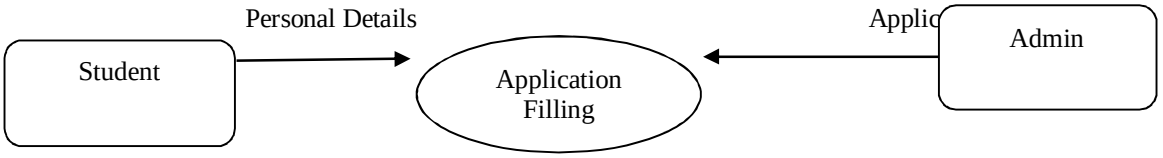


Fig 3 DFD For Student Registration

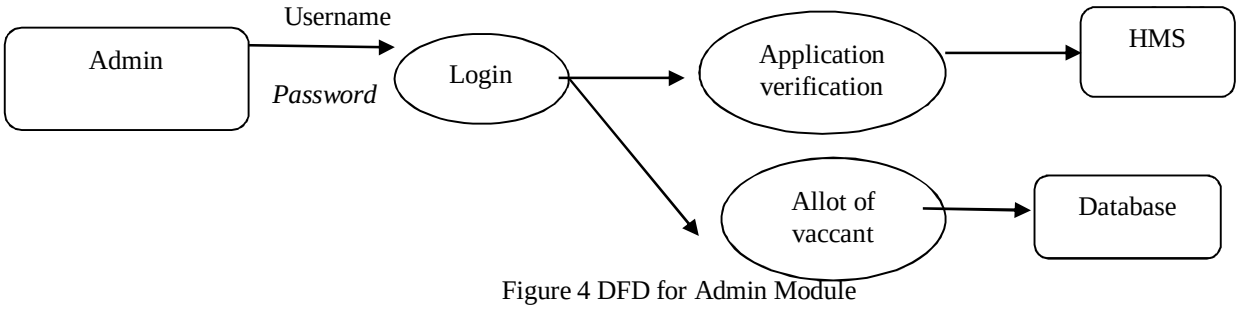
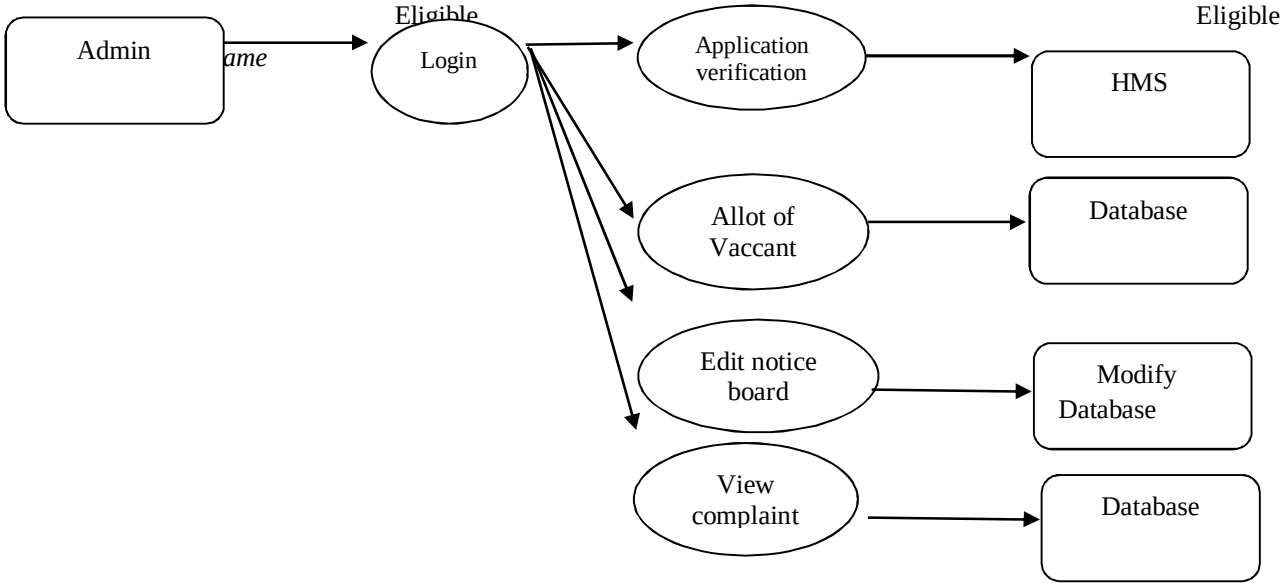


Figure 4 DFD for Admin Module



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B. Usecase Diagram (HMS)

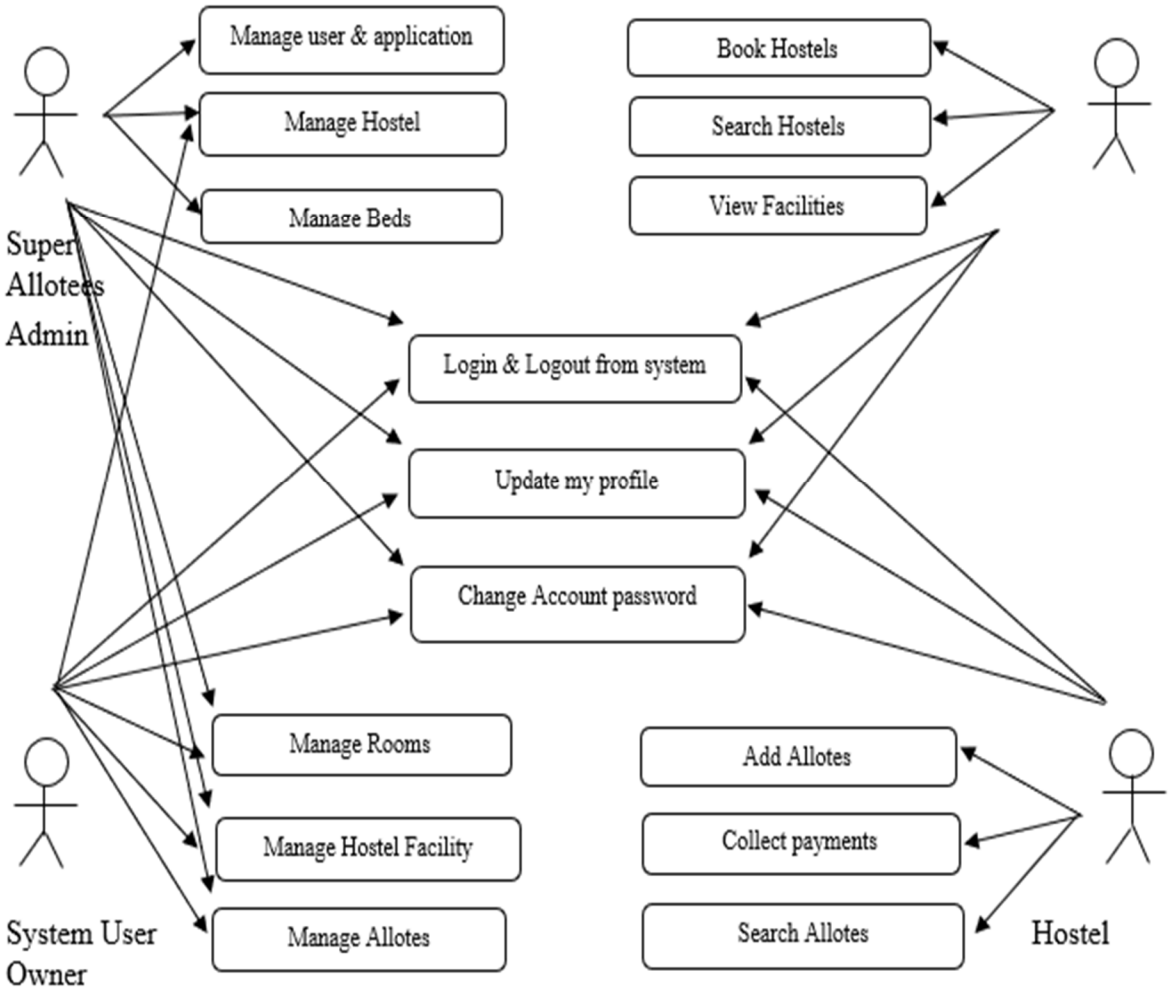


Fig 6 Use Case Diagram of HMS

This Use Case Diagram is a graphic depiction of the interactions among the elements of Hostel Management System. It represents the methodology" used in system analysis to identify, clarify, and organize system requirements of Hostel Management System. The main actors of Hostel Management System in this Use Case Diagram are: Super Admin, System user, Allotees, Hostel Owner, who perform the different type of use cases such as Manage Hostel, Manage Beds, Manage Rooms, Manage Rent, Manage Allotees, Manage Payments, Manage Hostel Facility, Manage Users and Full Hostel" Management System Operations. Major elements of the UML use case diagram of Hostel Management System are shown on the picture below.

C. Sequence Diagram

"This is the Sequence Diagram of Hostel Management System, where admin will be able to login in their account using their credentials. After" "login user can manage all the operations on Hostel, Rooms, Allotees, Payments, Rent. All the pages such as Allotees, Payments, Rent are secure and user can access these page after login. Tile diagram below helps demonstralte how tile login page worKs in a Hostel Management System. The various objects in the Payments, Hostel, Rooms, Allotees, and Rent page-interact over the course of the sequence, and user will not be able to access this" page without verifying their identity. This is the UML sequence diagram of Hostel Management System which shows the interaction between the objects of Rooms, Allotes, Hostel, Rent, Payments

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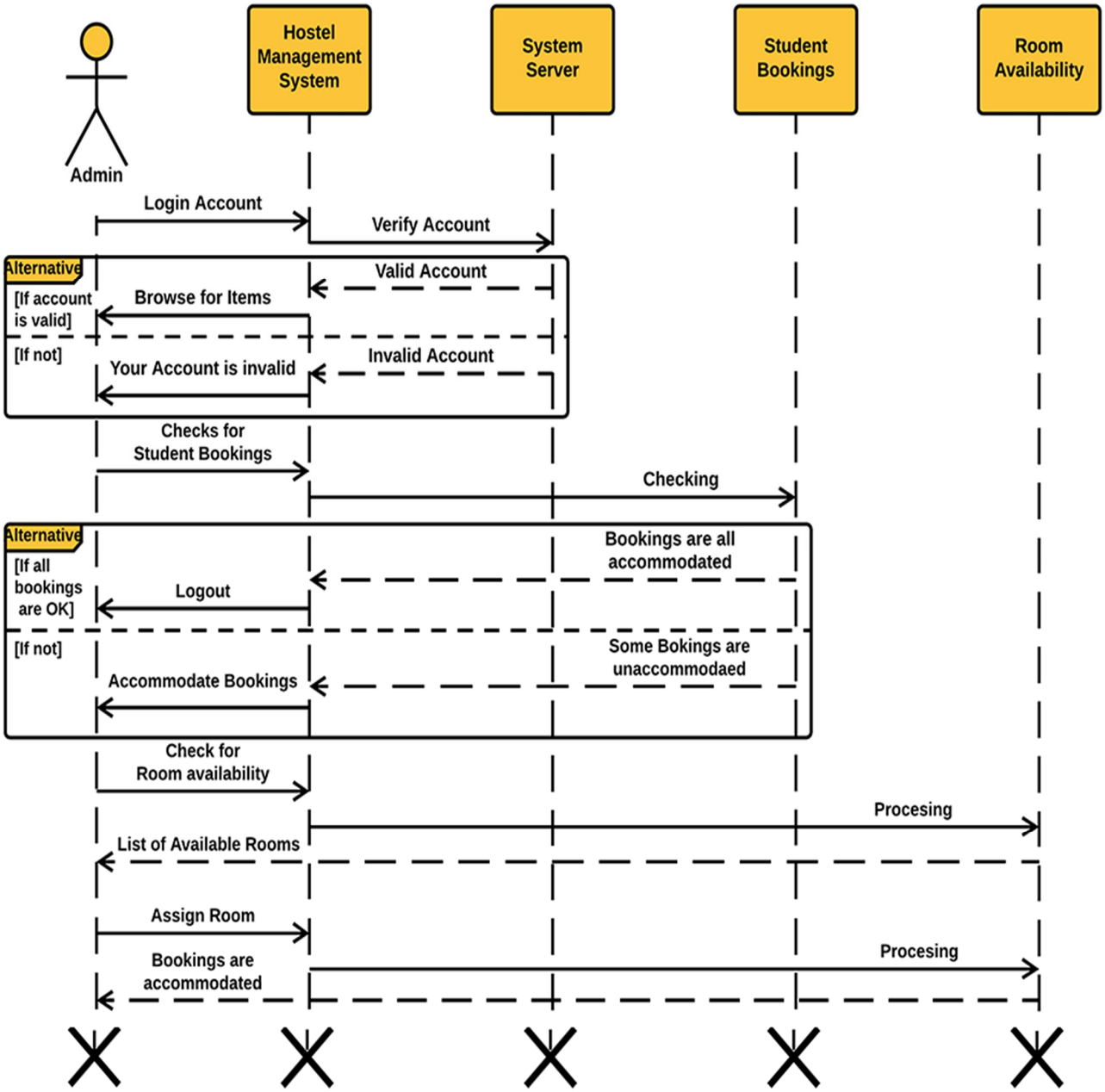


Fig 7 Sequence Diagram For Hostel Management System

V. FEASIBILITY STUDY

A. Technical Feasibility

The technical feasibility in the proposed system deals with the technology used in the system. It deals with the hardware and software used in the system whether they are of latest technology or not and if it happens that after a system is prepared, a new technology arises and the user wants the system based on that technology. This system use windows platform, Apache XAMPP server, MySQL for database, PHP as the language and html or xml as user interface. Thus HOSTEL MANAGEMENT SYSTEM is technically feasible

B. Economic Feasibility

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis. Php, html, xml and MySQL database are easily available on internet

VI. RESULT ANALYSIS

Fig : 8 Hostel management Login-Page :

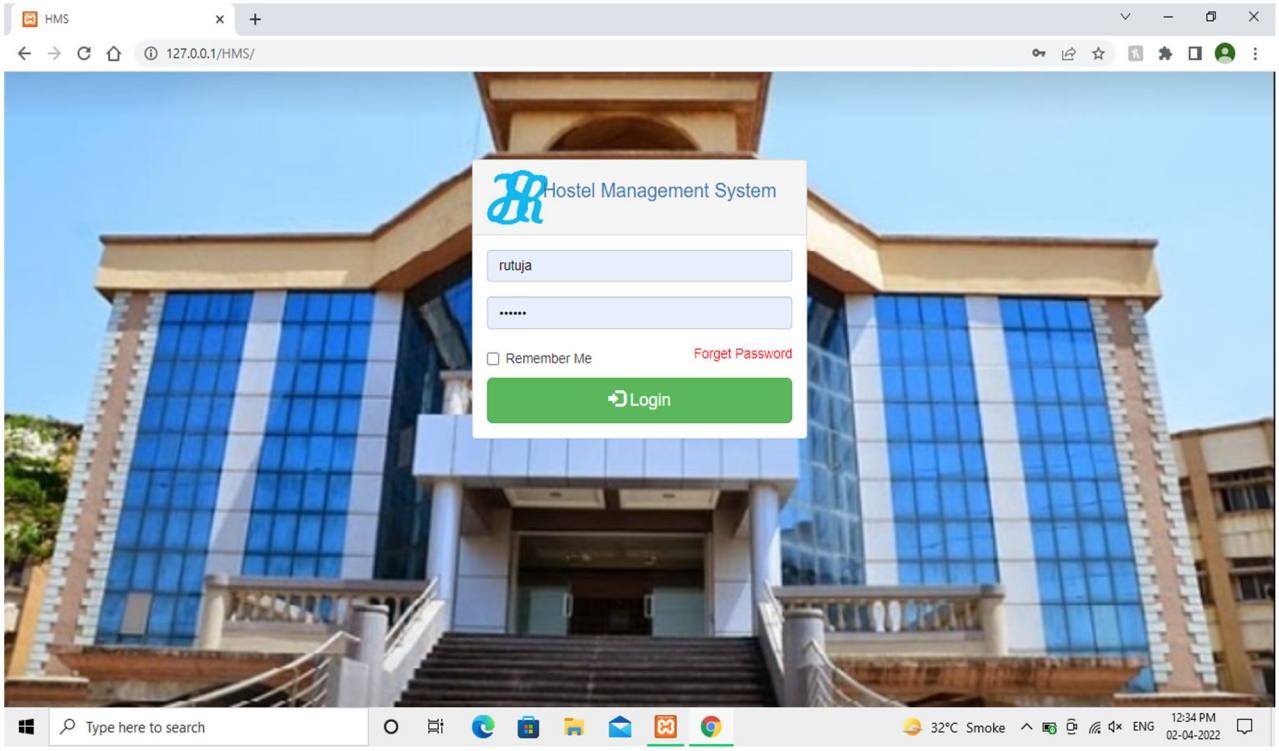


Fig : 9 HMS Main Dash-Board :

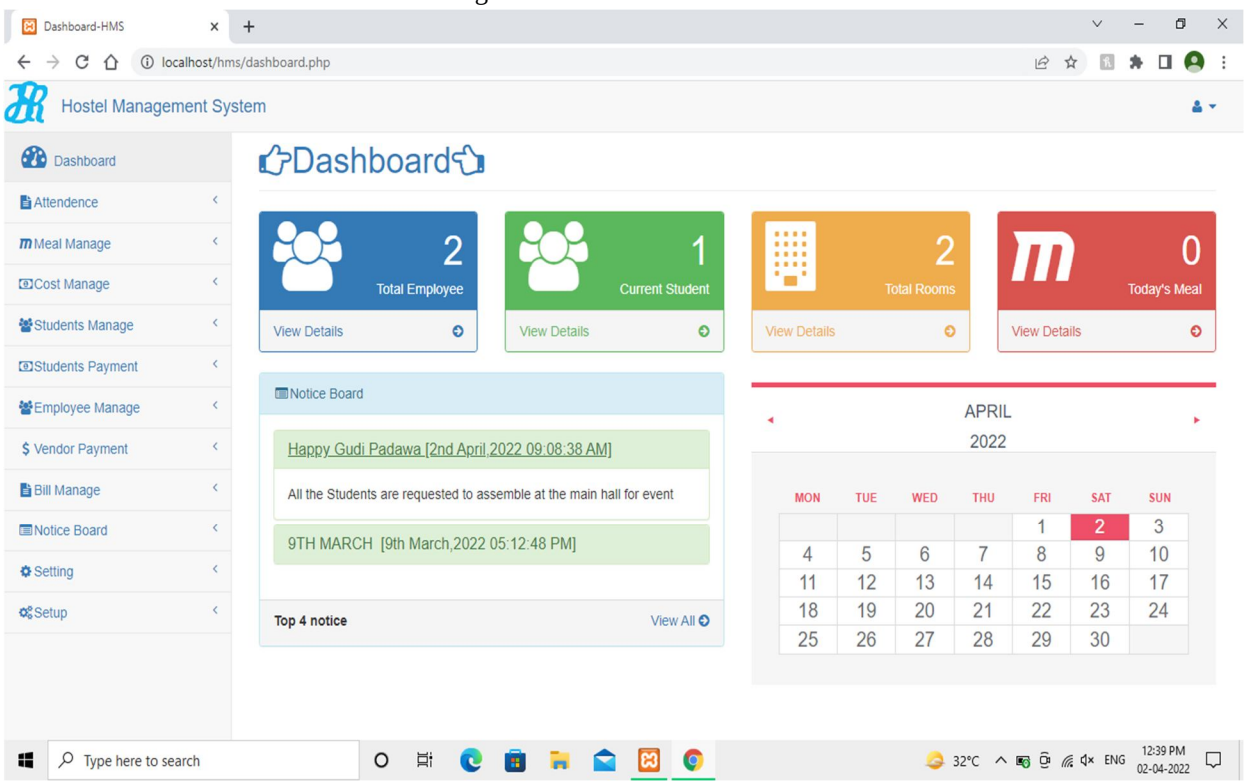


Fig: 10 Add New Student :

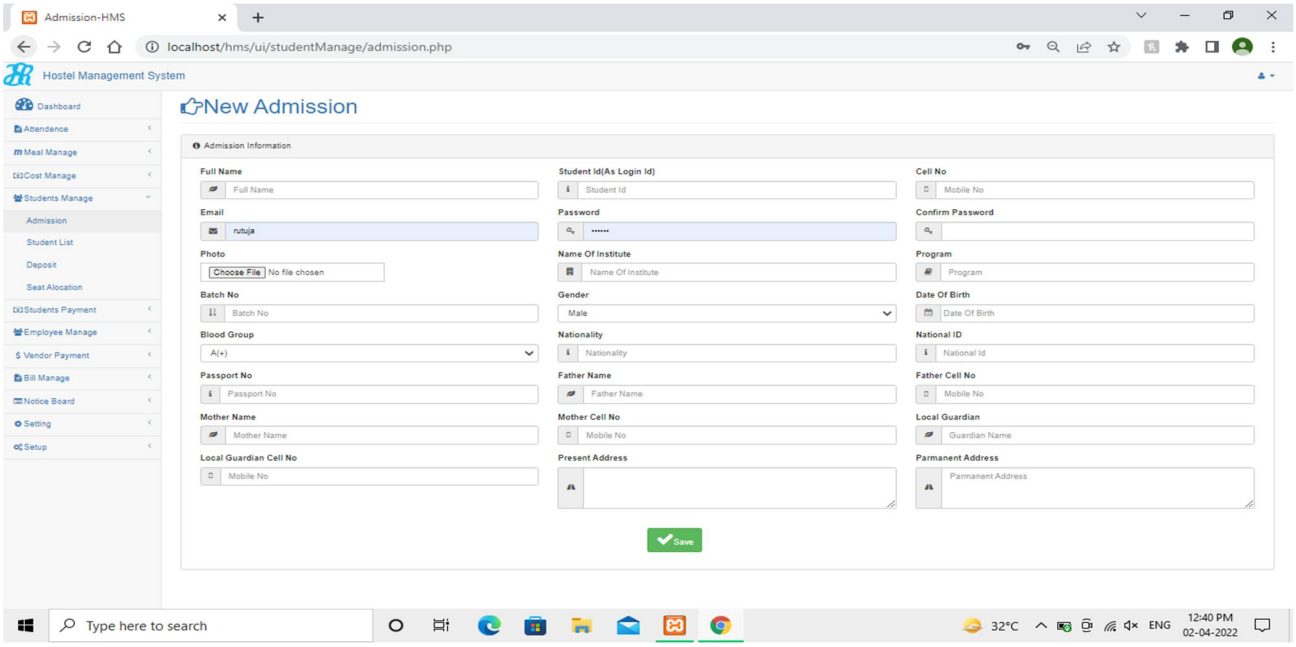
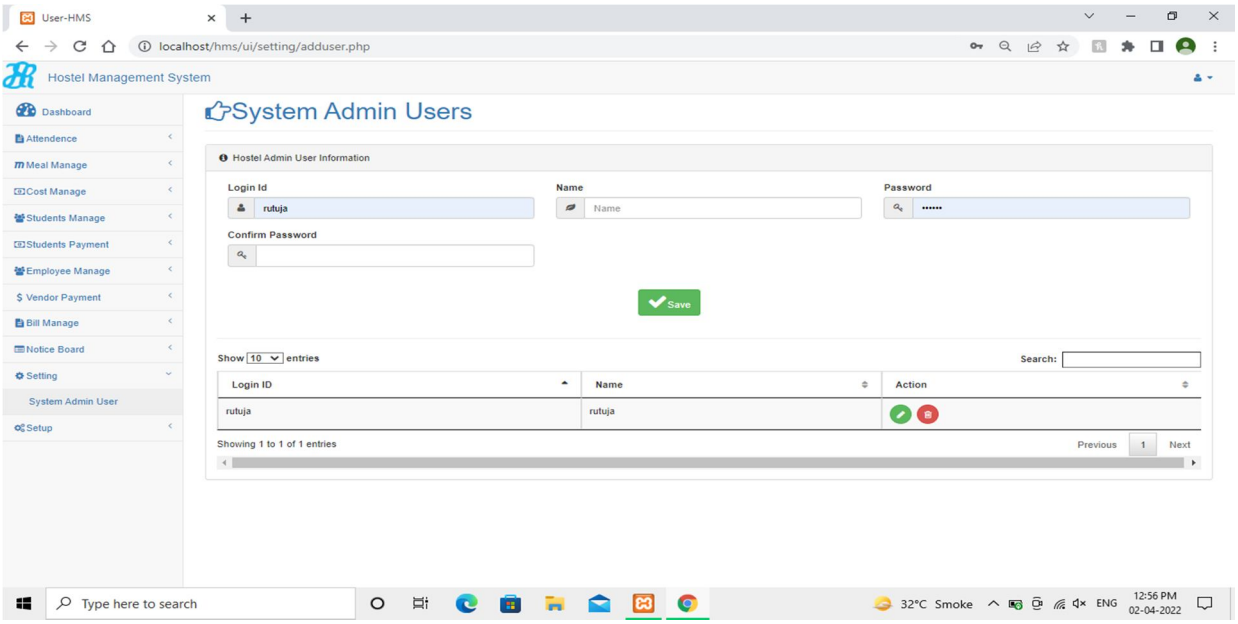


Fig : 11 HMS Admin Management :



VII. CONCLUSION

To conclude the description about the project, the project, developed using PHP with MySQL & XAMPP is based on the requirement specification of the user and the analysis of the existing system, with flexibility for future enhancement. HOSTEL MANAGEMENT SYSTEM 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 numbers 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 contex. 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.

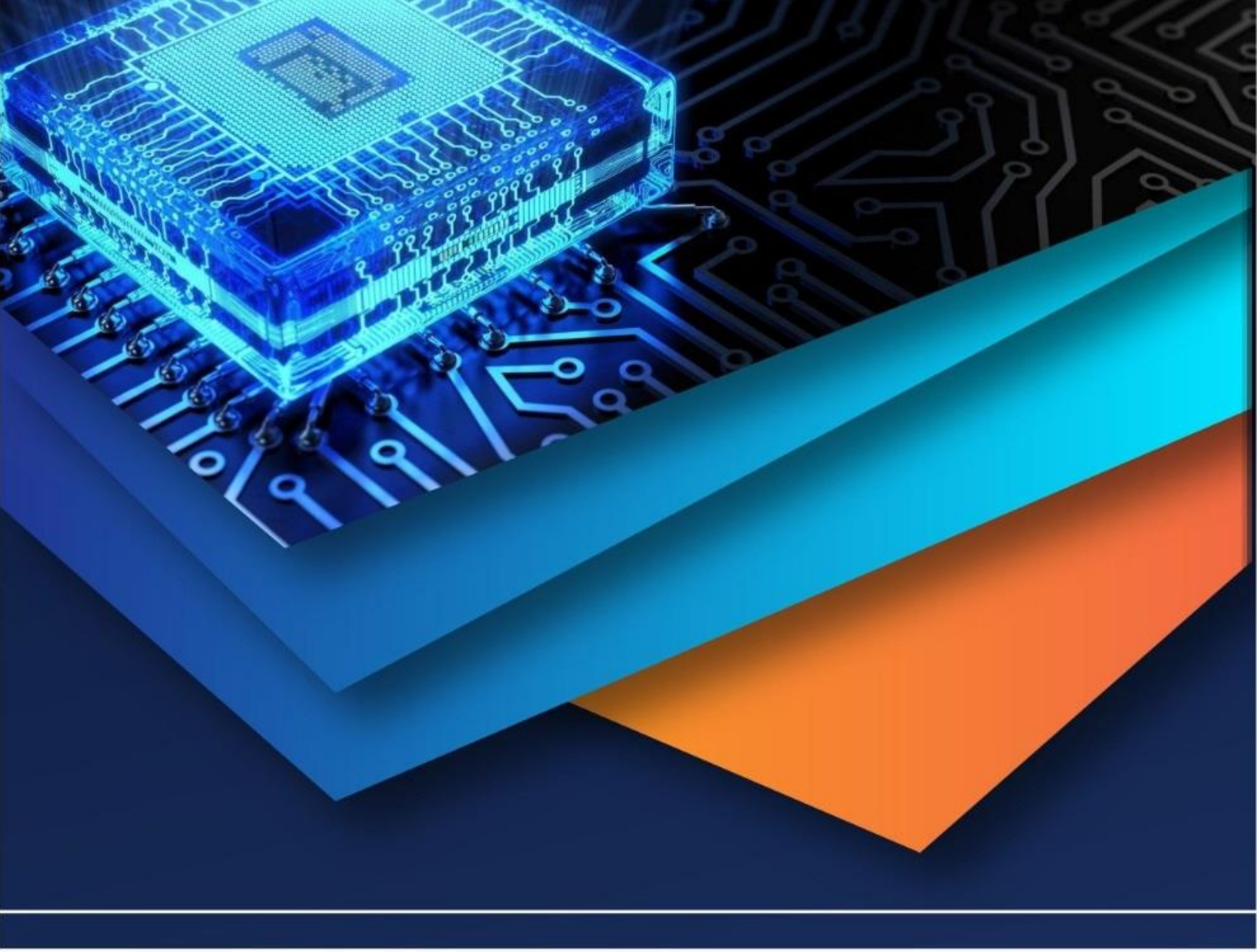
VIII. ACKNOWLEDGEMENT

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