



N.M.A.M. INSTITUTE OF TECHNOLOGY

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(ISO 9001:2015 Certified), Accredited with 'A' Grade by NAAC

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Department of Computer Science and Engineering

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Report on Mini Project

HOSTEL MANAGEMENT SYSTEM

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Section: D

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Signature of Course Instructor

ABSTRACT

'Hostel Management System' is a web application which can be used to manage the various activities in a hostel, where students stay during their time of study. For the past few years, the number of educational institutions in the world is increasing rapidly with students enrolling in institutions far from their hometowns in search for better quality education. Consequently, the number of students opting for hostels are rising which prompts the colleges to add additional hostels to accommodate all the students. As a result, managing all these hostels becomes a tough job for the people in charge.

Students need to register and book rooms in the hostel according to their needs and pay the fees. The entire process when done manually is inefficient as the process requires the students to go through various procedures, which is done to ensure that the process is error-free. To tackle this complexity, this web application helps the students who want to stay in hostels to do all the necessary tasks completely online improving the overall experience. The implementation of a well-designed GUI with a system which can handle all possible test cases and avoid any errors will benefit both the students and the hostel staff. As a result, this project which deals with the problems in managing an hostel system offline, provides simple but efficient solutions by utilising the resources available in this modern world.

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INTRODUCTION

In computer systems, a web application is a client-side and server-side software application in which a client runs or requests in a web browser. Client-side programming will typically utilize HTML, CSS, and JavaScript. This project makes use of HTML, CSS, JavaScript and PHP as programming languages using which the students are provided a clean UI to facilitate hostel booking.

The students can login with their credentials, essentially their USN and date of birth, following which they can register and book the room of their choice. The web application stores the information of the student and the management can see the updated profile of any student immediately in the database.

The motive for this project is to reduce the problems which arise while managing a hostel system manually. Identification of the drawbacks of the existing system leads to the designing of a computerized system that will be compatible with the existing system which is more user friendly. This system is designed in favour of hostel managements helping them to save the records of students and their room details along with payment information. It helps both the students and the management to avoid all the manual work that'd actually be required while dealing with an offline system - like finding student records, calculating the total amount for each type of room, and the information of the room allotment while avoiding data repetitions. This system also provides additional security by allowing students to print an automatically generated receipt in case of errors – if any.

PROBLEM STATEMENT

In our country, the number of educational institutions has been increasing rapidly in the past few years. Therefore, the hostels are also increasing to accommodate the increasing number of students who require hostel facility. If the manual process is followed to handle the data of all students it's difficult to maintain the details. Also, the data can be lost or entered wrong when they are stored manually. It also becomes difficult to access and search for specific data. The efficiency of manual processes is less and time consuming. The error and data repetitions are more when the data is stored manually. This project deals with the problems of managing a hostel system and avoids the problems which occur when the process is implemented manually.

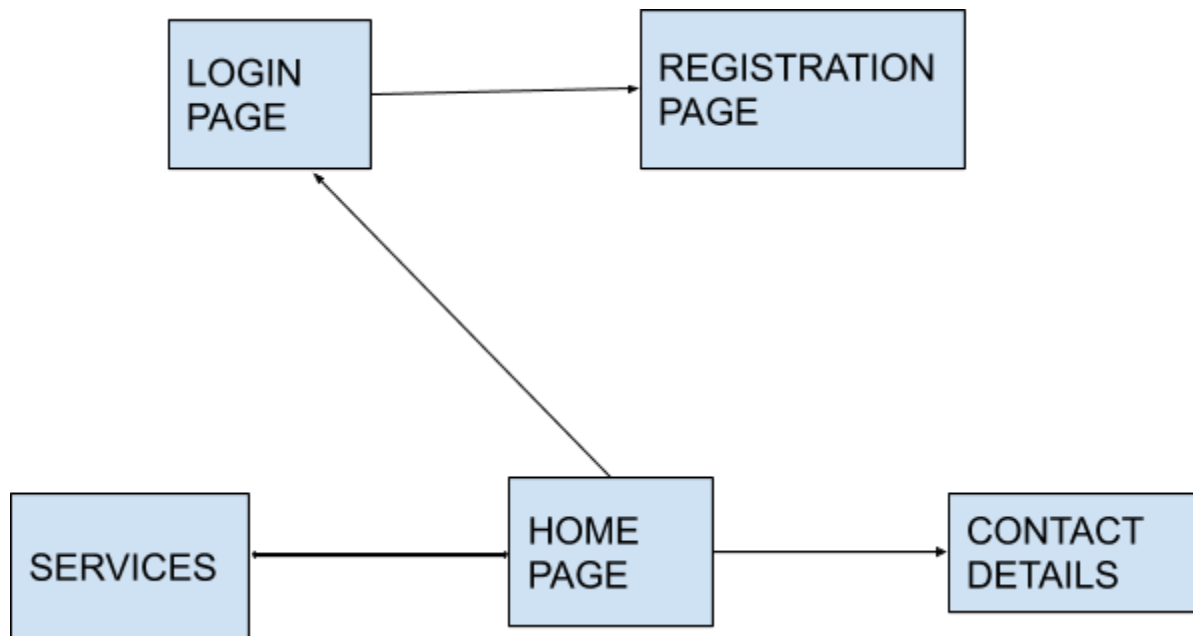
OBJECTIVES

The specific objectives of the project include:

1. Implementing an online hostel management system.
2. Students can register through the site.
3. Stores the details of the students in the database.
4. Retrieve the information of students from the database.
5. Generate the bill and print the bill.
6. User friendly software with more efficiency.

METHODOLOGY

The software for the development of the hostel management system was decided based on the above objectives. As a result, HTML, CSS, and JavaScript are chosen to develop the front-end and back-end that is created using PHP. JavaScript is the scripting language. JavaScript is used to add web functionality, web form validation and so on. The back-end database used to store the data is MySQL. MySQL queries are used for the retrieval and updation of data. The front-end and back-end are connected using PHP. The system provides easy access to the database for all types of data manipulations. Security of the database is ensured by the use of password which allows only the system administrator the access privileges.

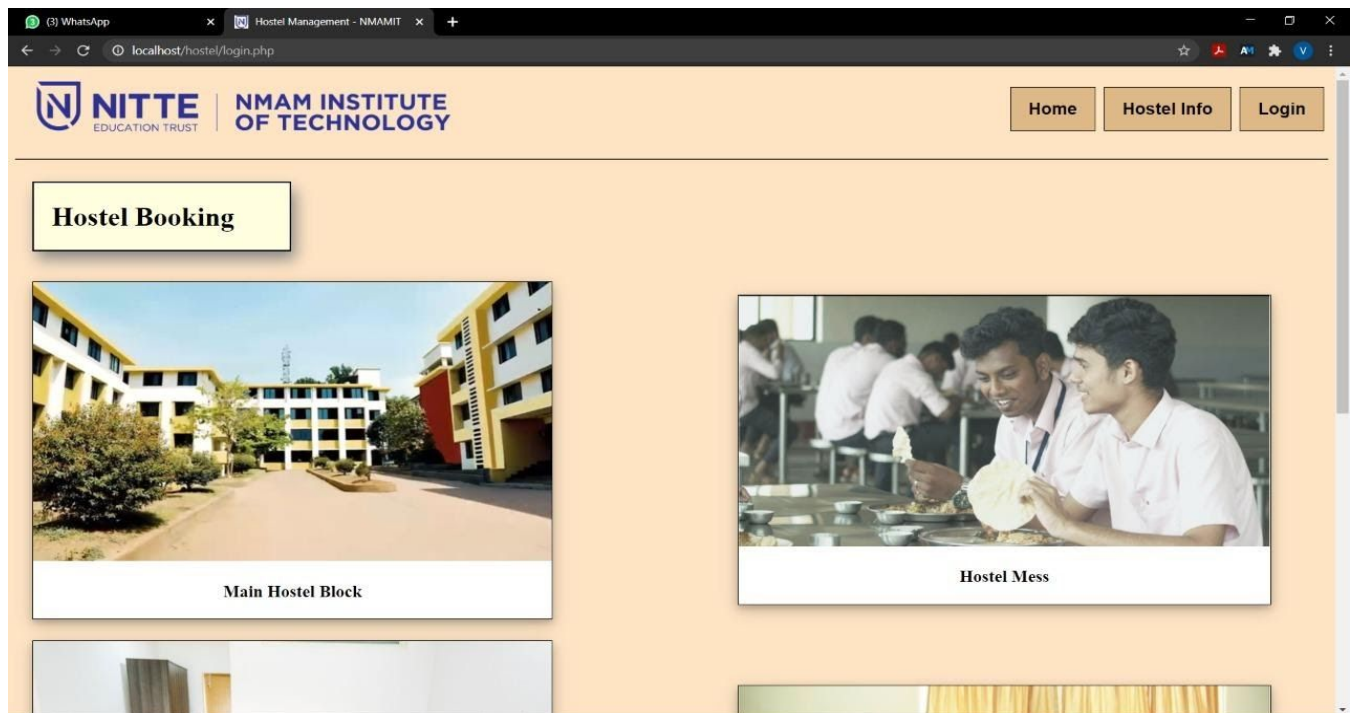


IMPLEMENTATION AND RESULT

The set of tables is created using the relational database for the identified entities at the design stage. The uniqueness of the data fields in these tables are established using primary keys, while the relationships are maintained using foreign keys.

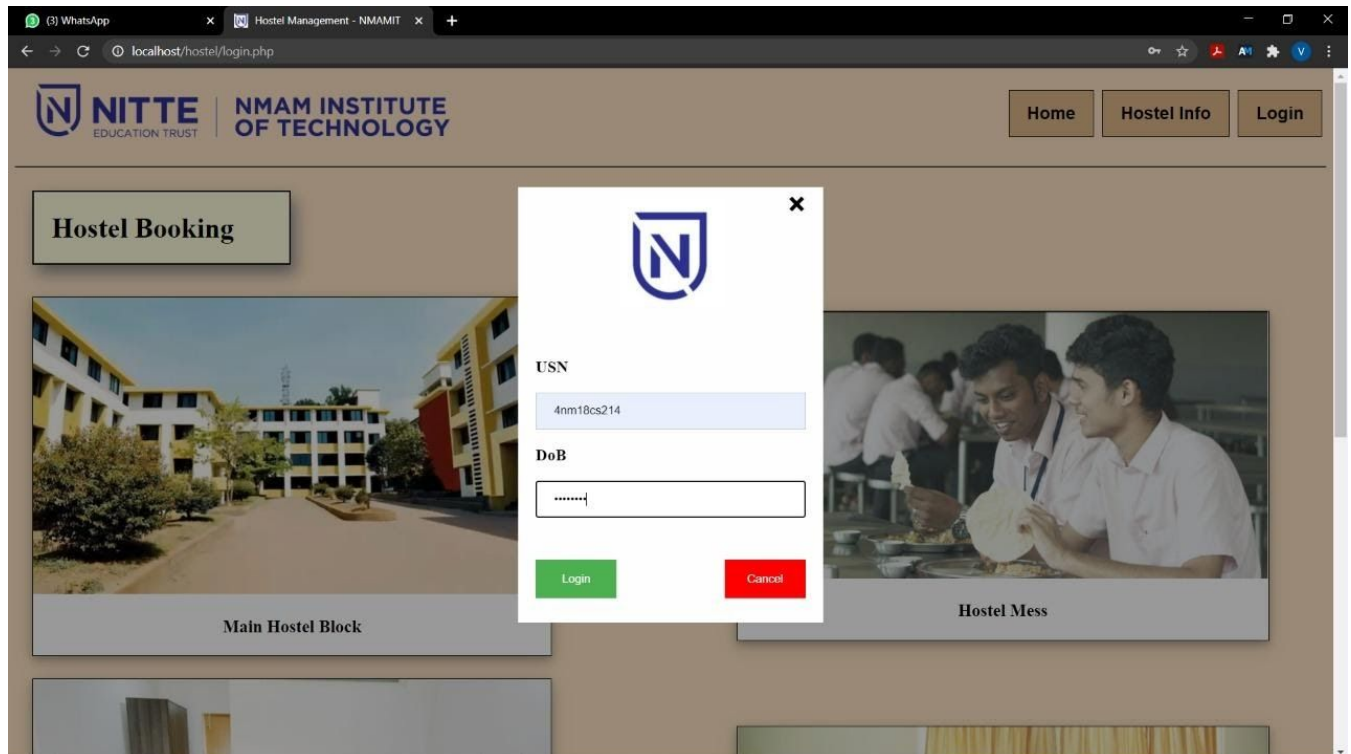
Home Module:

The homepage of the website is the index page of the website. This page is the first page of the web application. In the home page important information about the hostel is available. The user can get various information about the site when they click the home button on the homepage. The user can contact us with social media if he/she faces any problems during the process.



Login Module:

In order to get access to the website, the user needs to register for the hostel facility which is done by the administrator. Then he/she can login to the website. Every user needs to login using USN and DOB as a password.



Booking Module:

The booking module is visible if the user has not selected a hostel room yet. The user needed to login to his account and click the booking option. The user can then choose his required room type and the corresponding amount will be displayed. Only available room types will be displayed and in case of all the rooms being booked, the user will be directed to contact the administrator.

The screenshot displays the 'Hostel Management - NMAMIT' web application. The header includes the NITTE logo and navigation links: Home, Hostel Info, and Logout. The main content area is divided into two sections: 'Your Details' and 'Hostel Details'.

Your Details:

Name:	Suraj Naik
USN:	4NM18CS196
Branch:	CSE
Year:	5th

Hostel Details:

Room ID:	-----
Block:	-----
Room No:	-----
Room Type:	-----

Note: You haven't Booked a Room Yet!

A modal window titled 'Download Hostel Fee (2020-2021)' is open, showing the following details:

Choose From Available Room Type

Gents: 2-Seater

Amount

Rs 66600

Buttons: Pay, Cancel


On the right side of the page, there is a section titled 'Register for Hostels Here:' with a 'Book' button and a 'Print Receipt' button.

Details Module:

The details module has detailed information about the user and hostel details if a room has been booked. The details are automatically updated and can be used by the students for reference.

Hostel Management - NMAMIT

localhost/hostel/main.php

 **NITTE**
EDUCATION TRUST

**NMAM INSTITUTE
OF TECHNOLOGY**

HomeHostel InfoLogout

Your Details:

Name:	Vishnu A C
USN:	4NM18CS214
Branch:	CSE
Year:	5th

Hostel Details:

Room ID:	1001
Block:	M01
Room No:	1
Room Type:	Gents: 2-Seater

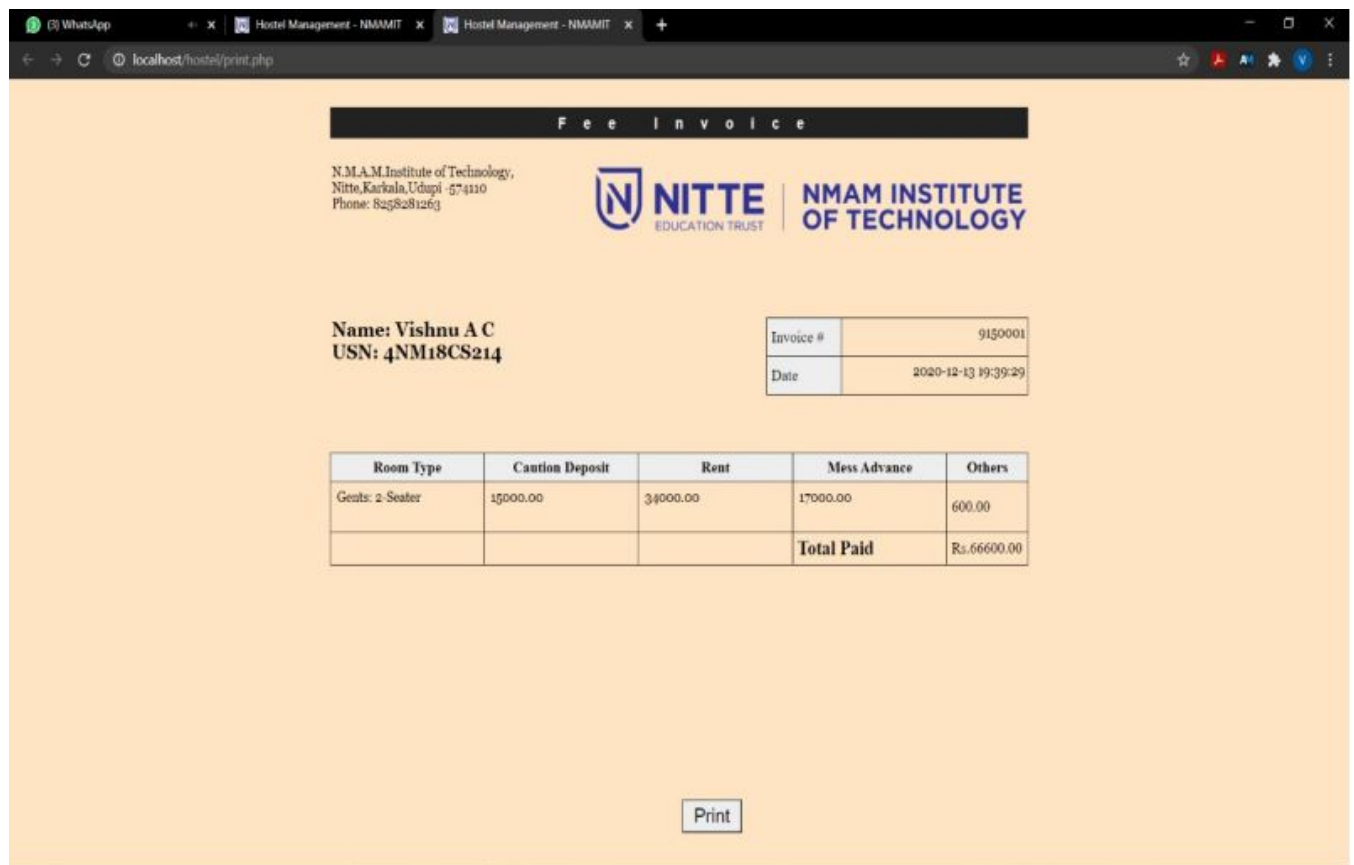
Register for Hostels Here:

Book

Print Reciept

Print Module:

When you register on the website, your details are visible. In the end of the details module print receipt button is visible. When you click on the print receipt button the receipt module is visible to the user. The receipt is generated automatically as per the user registration and the fee receipt can be printed.



The screenshot shows a web browser window with the URL `localhost/hostel/print.php`. The page has a light orange background and a dark header bar with the text "F e e I n v o i c e".

On the left, the institute's contact information is listed:

N.M.A.M.Institute of Technology,
Nitte,Karkala,Udupi -574110
Phone: 8258281263

To the right of this is the institute's logo, which consists of a stylized 'N' inside a square, followed by the text "NITTE EDUCATION TRUST" and "NMAM INSTITUTE OF TECHNOLOGY".

Below the contact information, the user's name and USN are displayed:

Name: Vishnu A C
USN: 4NM18CS214

To the right of this, there is a small table with two rows:

Invoice #	9150001
Date	2020-12-13 19:39:29

Below this, there is a larger table with five columns: "Room Type", "Caution Deposit", "Rent", "Mess Advance", and "Others".

Room Type	Caution Deposit	Rent	Mess Advance	Others
Gents: 2 Seater	15000.00	34000.00	17000.00	600.00
			Total Paid	Rs.66600.00

At the bottom center of the page, there is a button labeled "Print".

CONCLUSION AND FUTURE SCOPE

This is the work to show that the creation of this kind of hostel management system is feasible. In the stage of gradual increase in the educational institutes and hostels the manual process of storing the information of all the students is very difficult. Also, the retrieval of the information of students takes lots of time and there may be a chance of losing the data. This system helps the hostel management to store all student information in the database. It's easy to retrieve the data from the database of the required student and it doesn't take much time. This project deals with the problems of managing a hostel and avoids the problems which occur when carried manually. This project, developed using PHP and MySQL is based on the requirement specification by the user and the analysis of the existing system, with the flexibility for future enhancement.

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