HOSTEL MANAGEMENT SYSTEM

by

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Thesis submitted to
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of

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DECLARATION

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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CERTIFICATE

It is certified that the work contained in the thesis titled "**HOSTEL MANAGEMENT SYSTEM**" by "MAREEDU ARAVINDH, bearing Roll No: 421217" and "TANGUDU PREMSAI,bearing Roll No: 421262" has been carried out under my supervision and that this work has not been submitted elsewhere for a degree.

Signature
B.S.S.MONICA
DCSE
N.I.T. Andhra Pradesh
April, 2023

Acknowledgement

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mention of people who made it possible, whose constant guidance and encouragement crowned our efforts with success. It is a pleasant aspect that I have now the opportunity to express my gratitude for all of them.

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LIST OF FIGURES

LIST OF ABBREVIATION

NOTATION	ABBREVIATION
HTML	HYPER TEXT MARKUP LANGUAGE
CSS	CASCADING STYLE SHEETS
PHP	HYPERTEXT PREPROCESSOR
SQL	STRUCTURED QUERY LANGUAGE

Abstract

Hostel Management System is a web-based mini project that aims to automate and manage the day-to-day activities of a hostel. The system is designed to simplify and streamline administrative tasks related to room allocation, local and non-local outings, inventory management, and billing. It provides a user-friendly interface for both the hostel administrators and guests to manage their reservations and payments.

The system is developed using web technologies such as HTML, CSS, JavaScript, and PHP. It can be accessed from anywhere with an internet connection, making it convenient for hostel staff and students to use. Hostel administrators can manage room availability, allocate rooms, and track the occupancy status of the hostel. They can also manage inventory, such as food and toiletries, and generate bills for guests.

Guests can use the system to book rooms, view room availability, and make payments online. They can also view their booking history and request additional services such as laundry or room service. The system also generates automatic email notifications to both guests and administrators for booking confirmations and cancellations.

The Hostel Management System provides numerous benefits for hostel owners, staff, and guests. It helps to reduce manual errors, improve efficiency, and provide better guest experiences. It also reduces the workload of hostel staff, enabling them to focus on other tasks such as guest satisfaction.

In conclusion, the Hostel Management System is a valuable tool for managing a hostel. It simplifies administrative tasks, improves efficiency, and provides better guest experiences. With its user-friendly interface and automation features, it is a must-have for any hostel looking to improve its operations.

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Introduction:

Hostel Management System is a web-based mini project that aims to automate and manage the day-to-day activities of a hostel. The system is designed to simplify and streamline administrative tasks related to room allocation, local and non-local outings, inventory management, and billing. It provides a user-friendly interface for both the hostel administrators and guests to manage their reservations and payments.

The traditional method of managing hostels involves manual record-keeping and paperwork, which can be time-consuming and prone to errors. With the Hostel Management System, hostel administrators can automate their day-to-day activities and reduce manual errors, making their operations more efficient and effective.

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2 LITERATURE REVIEW

Literature Review:

Hostel Management Systems have become increasingly popular in recent years due to the growing demand for efficient management systems in the hospitality industry. There is a significant amount of literature available on the topic of Hostel Management Systems, and most of it highlights the advantages of using such systems.

In their paper titled ”Development of Hostel Management System,” Anant Kulkarni and Rajiv Puri describe the benefits of using a Hostel Management System. They highlight that it helps to reduce the workload of hostel staff, eliminates manual errors, and increases the efficiency of operations. The system also provides better guest experiences by enabling them to make online reservations and payments.

Another study conducted by Sanjay Kumar and Rajesh Kumar Singh in their paper titled ”Web-Based Hostel Management System” highlights the importance of web-based systems. They describe how web-based systems provide a flexible and accessible platform for both hostel administrators and guests to manage their bookings and payments.

The study conducted by Alaba Oluwaseun Adewuyi and Olumide Adegbite in their paper titled ”Design and Implementation of Hostel Management System” also emphasizes the importance of automation and digitalization in hostel management. The authors describe how automation helps to reduce the time and cost of manual record-keeping and improves the accuracy of data management.

A similar study conducted by Pratiksha Jadhav and Bhagyashri Gunjal in their paper titled ”Development of Hostel Management System” highlights the importance of user-friendly interfaces in Hostel Management Systems. The authors describe how user-friendly interfaces help to improve the efficiency of operations and reduce the training time for hostel staff.

Overall, the literature review suggests that Hostel Management Systems provide numerous benefits to hostel owners, staff, and guests. They help to reduce manual errors, increase efficiency, provide better guest experiences, and reduce the workload of hostel staff. Web-based systems, automation, and user-friendly interfaces are critical factors that contribute to the success of such systems.

2.1 EXISTING SYSTEM

The existing system of the hostel management system involves manual methods of managing the day-to-day operations of the hostel. The hostel manager or administrator has to manage all the data related to the students residing in the hostel, including their personal information, room allocation, mess charges, and other details. The manual system leads to inefficiencies, inaccuracies, and a lack of transparency. It can also cause delays in handling the various hostel-related tasks, leading to increased workloads

2.2 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.

2.3 PROPOSED SYSTEM

The proposed system of the hostel management system involves a computerized system that automates all the hostel-related operations. The system has features to manage student records, room allocation, and other related tasks. It provides a user-friendly interface for the hostel manager to manage all the data related to the hostel. It also enables students to access their records and make requests related to hostel services. The proposed system is designed to reduce the workload of the hostel manager and improve the efficiency of the hostel operations. It also provides a transparent and secure platform for managing hostel-related tasks

2.4 ADVANTAGES

1. Less human error
   2. Strength and strain of manual labour can be reduced
   3. High security
   4. Data consistency
   5. Easy to handle
   6. Easy data updating
   7. Easy record keeping
   8. Backup data can be easily generated

2.5 FUTURE ENHANCEMENT

Future directions for the Hostel Management System include the integration of emerging technologies such as artificial intelligence (AI), machine learning (ML), and Internet of Things (IoT) to automate and optimize various aspects of hostel operations. Blockchain technology can also be incorporated to ensure secure and transparent transactions. The system can be expanded to include more personalized features such as virtual tours of rooms, real-time chat support, and personalized recommendations based on guest preferences. These advancements can improve guest experiences, increase customer loyalty, reduce costs, and enhance the functionality and usefulness of the Hostel Management System.

3 REQUIREMENTS AND SPECIFICATION

3.1 SOFTWARE REQUIREMENTS

The software requirements for an hostel management system project may vary depending on the specific needs of the project. However, there are some common software requirements that are essential for building an effective system.

Firstly, web development tools such as HTML, CSS, and JavaScript are essential to create the front-end of the system. This includes the user,admin and employee interfaces, and many other web pages that make up the system. A back-end language such as PHP is required to handle server-side processing and data management.

Secondly, a database management system (DBMS) is necessary to store and manage the data generated by the system. The DBMS system chosen should be secure, scalable, and capable of handling large volumes of data. Some commonly used DBMS systems include MySQL, Oracle, and Microsoft SQL Server.

3.2 TECHNICAL SKILLS

Developing an hostel management system requires a range of technical skills across several disciplines. Firstly, web development skills are essential for creating the front-end of the system. An understanding of web development technologies such as HTML, CSS, and JavaScript is necessary to create the user,admin and employee interfaces, and many other web pages that make up the system.

Secondly, back-end development skills are required to handle server-side processing and data management. Knowledge of back-end development languages such as PHP is essential for creating server-side scripts that handle database interactions and data processing.

Finally, database management skills are necessary for storing and managing the data generated by the system. A strong understanding of database management systems such as MySQL, Oracle, or Microsoft SQL Server is required for designing and managing databases that store registration data, student records, and other critical data.

In conclusion, developing an hostel management system requires a range of technical skills across several disciplines. By combining skills in web development, back-end development, database management, security, and project management, an hostel management system can be developed that is secure, reliable, and effective.

4 LANGUAGES USED

4.1 HTML AND CSS

HTML, or Hypertext Markup Language, is a markup language used to create the structure and content of web pages. It is the standard language for web development and works in conjunction with CSS and JavaScript to create dynamic and interactive web pages.

HTML uses a series of tags to define the structure and content of a web page. These tags allow developers to specify elements such as headings, paragraphs, images, links, and forms. HTML tags are enclosed in angle brackets, and most have an opening tag and a closing tag.

CSS, or Cascading Style Sheets, is a style sheet language used to describe the presentation and styling of HTML documents. CSS is used in conjunction with HTML to create visually appealing and responsive web pages.

CSS works by defining styles for specific HTML elements or groups of elements. These styles can include properties such as font size, color, background color, and positioning.

4.2 PHP

PHP is used to build dynamic web pages and applications by embedding code directly into HTML. It is an open-source language, meaning that it is freely available and can be used on virtually any platform or operating system.

PHP has a wide range of features that make it ideal for web development. It includes built-in support for interacting with databases, sending emails, and processing user input.

5 OVERVIEW OF THE PROJECT

The Hostel Management System mini project is a software application that aims to streamline and automate various aspects of hostel operations, including managing student registrations, room availability, room allocation, local and non-local outings, and billing. The system provides a user-friendly interface for both students and hostel staff, enabling them to manage hostel-related tasks efficiently.

The system's primary features include an online booking system that allows students to book their rooms online, view room availability and pricing, and pay for their stay securely and efficiently. The system also includes a room allocation module that automatically assigns rooms to students based on their preferences, availability, and booking history.

In addition to managing student bookings and room allocation, the Hostel Management System mini project provides a range of features to help hostel staff manage day-to-day operations effectively. These features include a student local and non-local outings module that provides real-time insights into hostel performance.

The Hostel Management System mini project is designed to be flexible and customizable, allowing it to be adapted to the specific needs of individual hostels. It is also scalable, allowing it to grow with the hostel's business as it expands and evolves over time.

Overall, the Hostel Management System mini project is a comprehensive solution that can help students to register online ,it enhances student experiences. By automating various aspects of hostel operations and providing real-time insights into hostel performance.

6 FRONT END PAGES

6.1 HOME PAGE

The home page of the hostel management system is the first page which includes student sign up and student login and also facilities,announcements and contact page

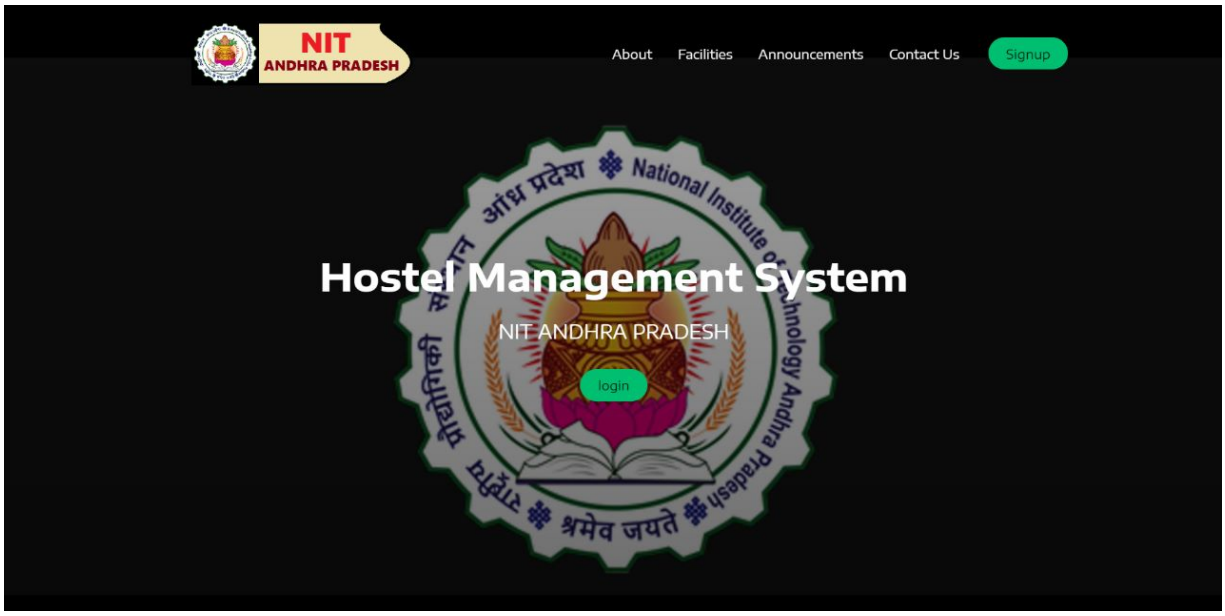


Figure 1: home page

6.2 STUDENT INTERFACE

6.2.1 STUDENT LOGIN

after clicking login in the home page the student can login to page by student id and password. After successfull login student will go to student dashboard.

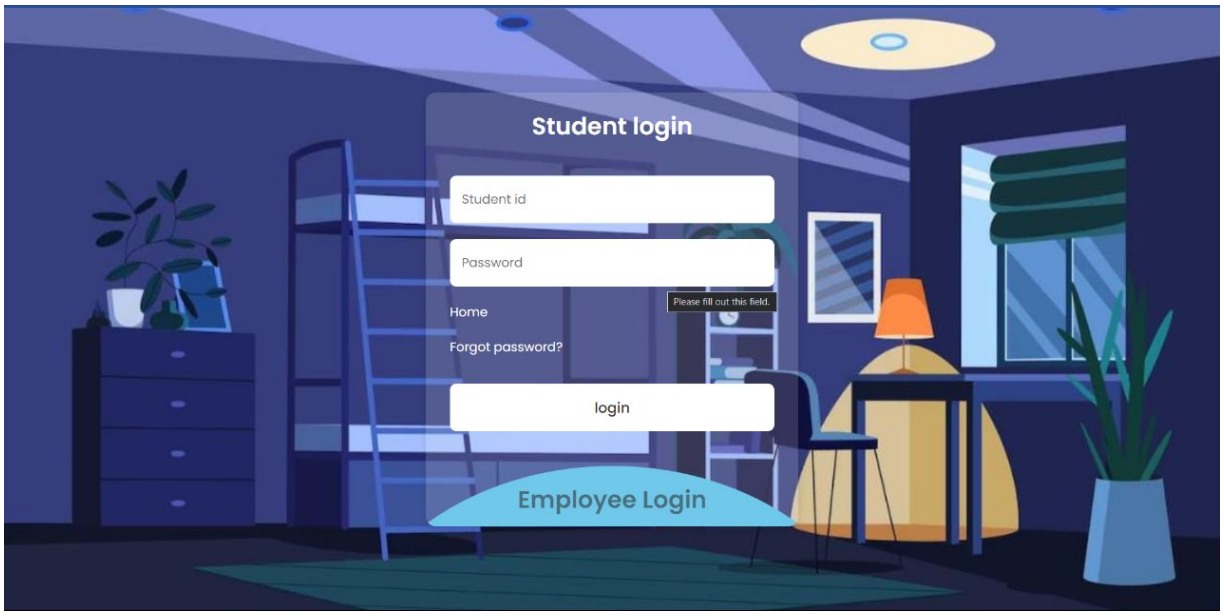


Figure 2: student login

6.2.2 STUDENT DASHBOARD

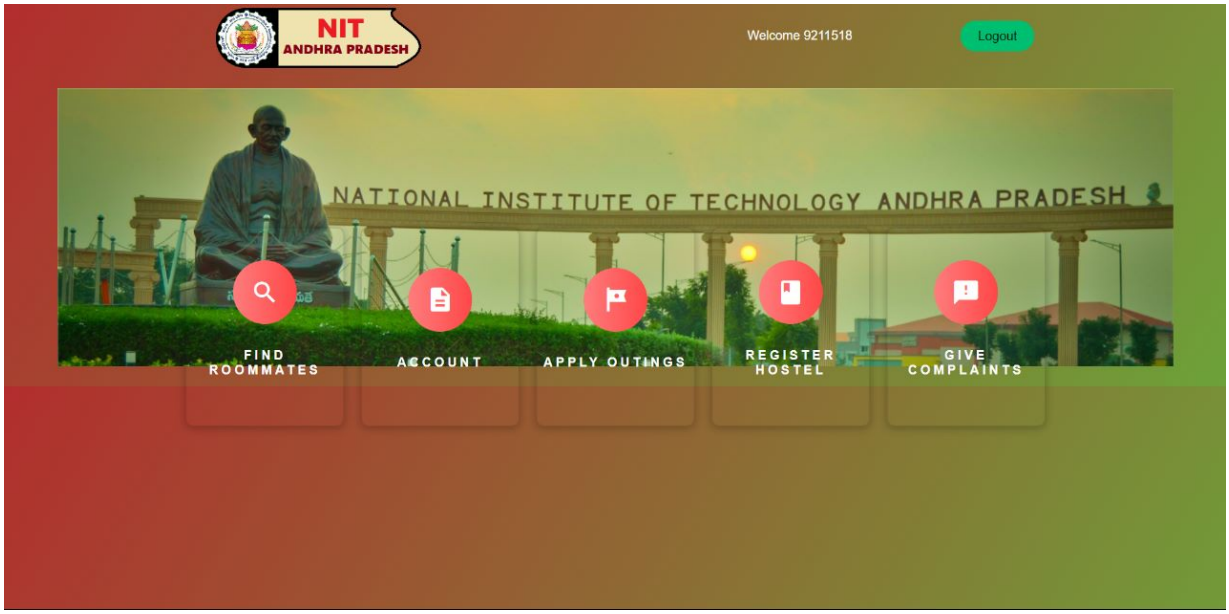


Figure 3: student dashboard

The student dashboard which includes Find Roommates,Account,Apply outings,Registration and Give complaints.

1. The student can find their roommates by clicking (Find roommates).
2. The student can change details by clicking (Account).
3. The student can apply local and non-local outings by clicking(Apply outings).

4.Student can register to hostel and book room by clicking (Register hostel).

5. Student can give complaints to the staff by clicking(Give complaints).

6.2.3 STUDENT REGISTRATION

The student can register here by giving required details after registration the student can select block and book room

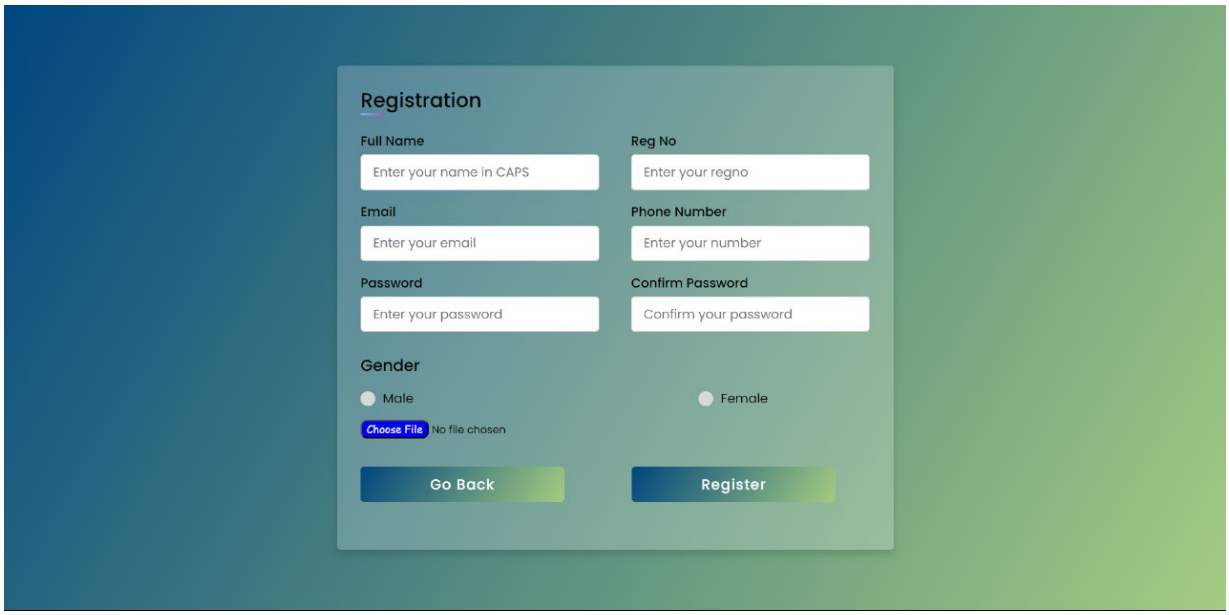


Figure 4: student registration

6.2.4 ROOM SELECTION

student can select room here and books the room by selecting room.

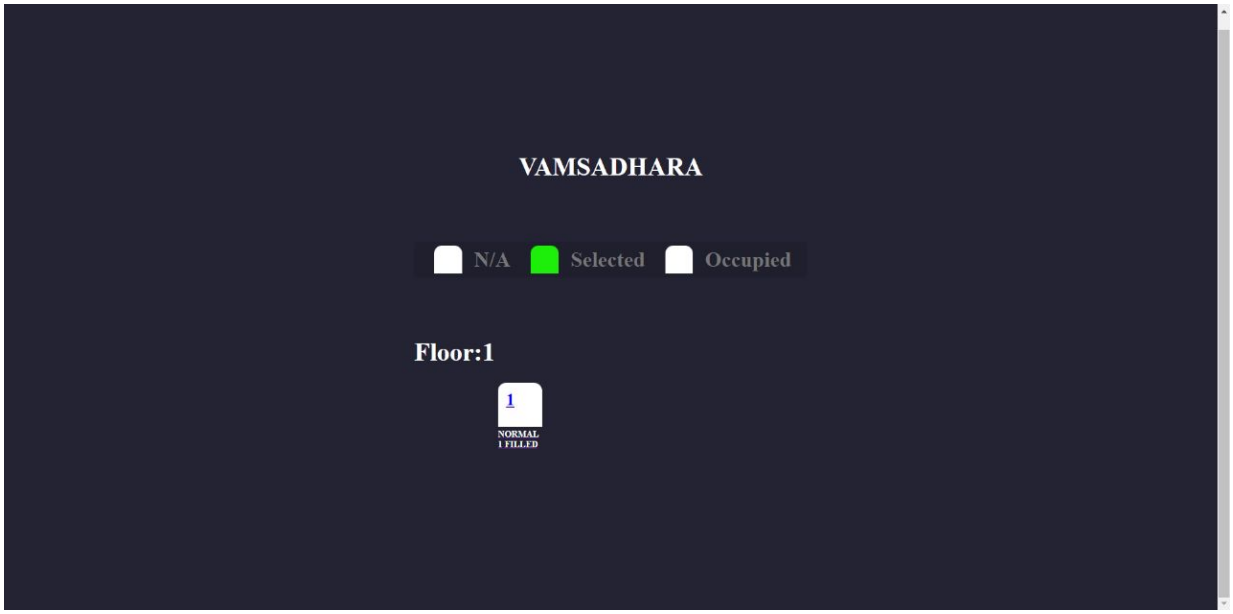


Figure 5: room selection

6.2.5 CHANGE DETAILS

When a student forgot the password then he/she can change details in this page

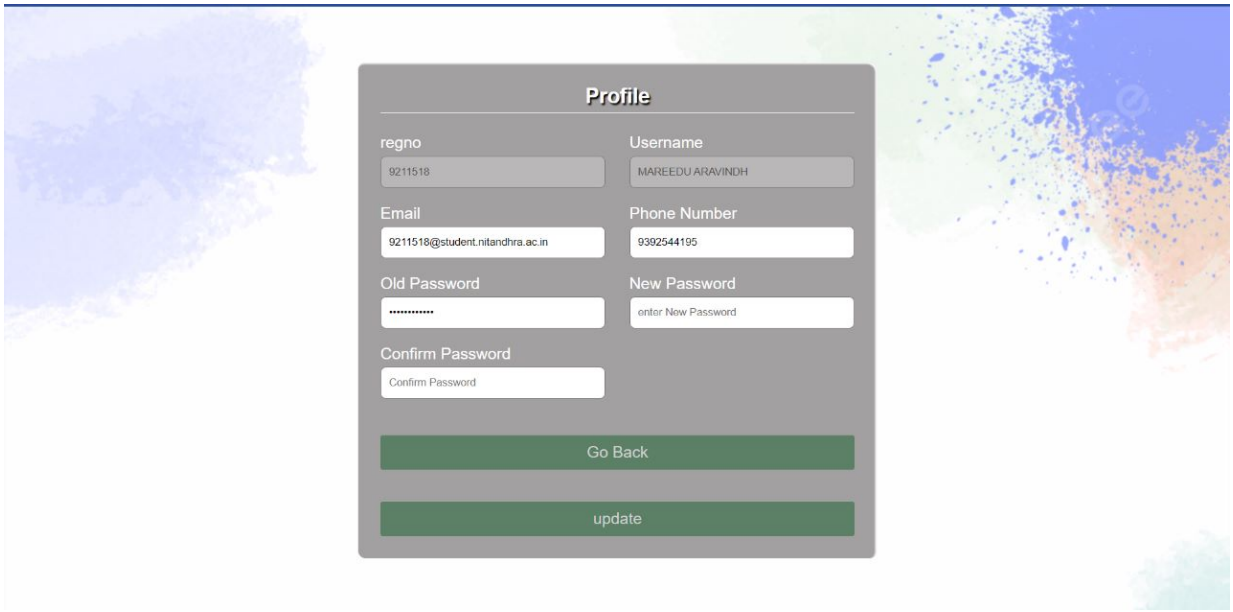


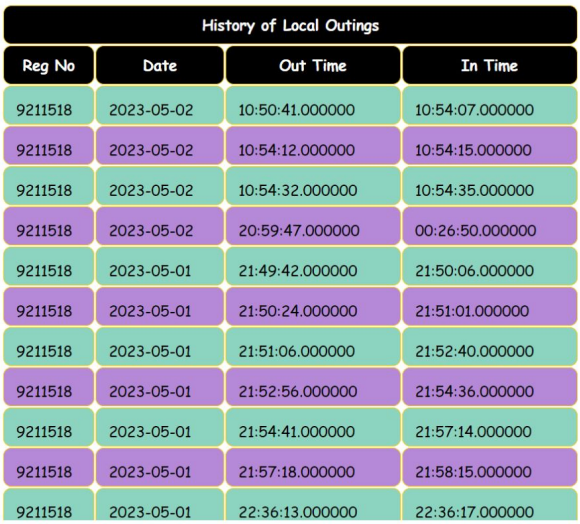
Figure 6: change details

6.2.6 OUTINGS

The student can apply local and non-local outings in this page.

Figure 7: outing

6.2.7 LOCAL OUTINGS



History of Local Outings

Reg No	Date	Out Time	In Time
9211518	2023-05-02	10:50:41.000000	10:54:07.000000
9211518	2023-05-02	10:54:12.000000	10:54:15.000000
9211518	2023-05-02	10:54:32.000000	10:54:35.000000
9211518	2023-05-02	20:59:47.000000	00:26:50.000000
9211518	2023-05-01	21:49:42.000000	21:50:06.000000
9211518	2023-05-01	21:50:24.000000	21:51:01.000000
9211518	2023-05-01	21:51:06.000000	21:52:40.000000
9211518	2023-05-01	21:52:56.000000	21:54:36.000000
9211518	2023-05-01	21:54:41.000000	21:57:14.000000
9211518	2023-05-01	21:57:18.000000	21:58:15.000000
9211518	2023-05-01	22:36:13.000000	22:36:17.000000

Figure 8: local

6.2.8 NON-LOCAL OUTINGS

History of Non-Local Outings				
Reg no	Out Date	Out Time	In Date	In Time
9211518	2023-05-02	10:40:30.000000	2023-05-02	10:42:32.000000
9211518	2023-05-02	10:55:36.000000	2023-05-02	10:55:39.000000
9211518	2023-05-02	10:55:51.000000	2023-05-02	10:55:54.000000
9211518	2023-05-02	10:55:59.000000	2023-05-02	10:56:04.000000

Figure 9: non-local

6.2.9 STUDENT COMPLAINTS

The student can give complaints to the staff when he/she having issues in the hostel.

complaints				
Regarding	complaintFrom	Details	Date	Block
water is not comming in pranahitha	9211518	nothing is there say	2023-05-02	BH01
water is not comming in pranahitha	9211518	no issue	2023-05-02	BH01

Figure 10: complaints

6.3 ADMIN INTERFACE

6.3.1 ADMIN LOGIN

The admin can login to the admin dashboard by giving admin id and password.

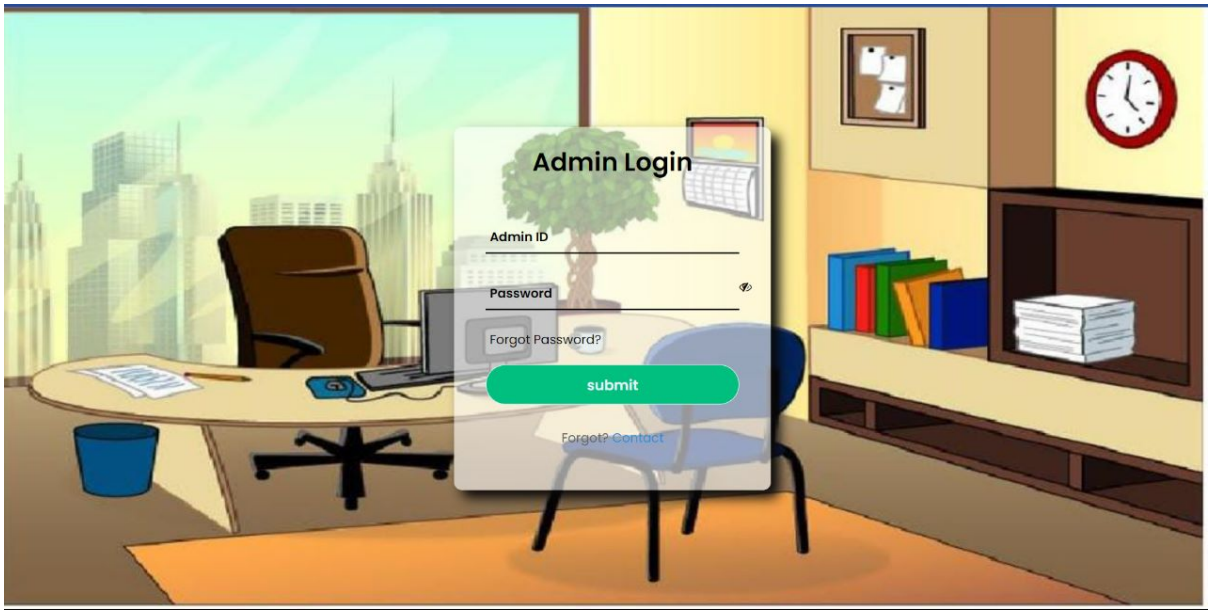


Figure 11: admin login

6.3.2 ADMIN DASHBOARD

The Admin dashboard which includes manage blocks,manage students,edit employee and announcements.

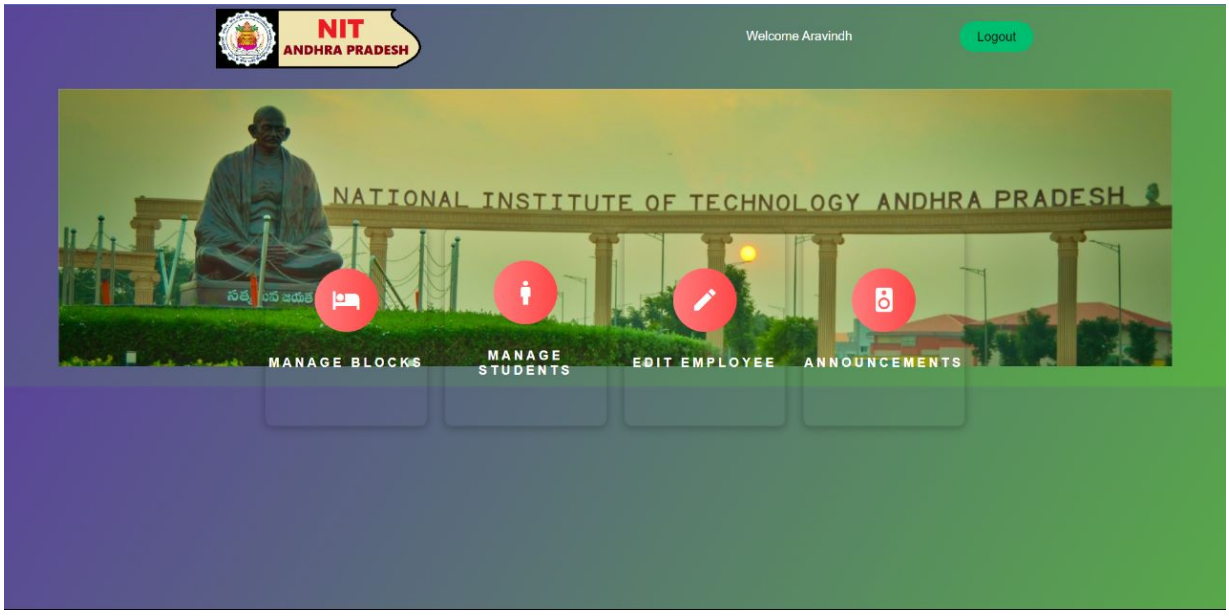


Figure 12: admin dashboard

6.3.3 MANAGE BLOCKS

The admin can manage blocks by adding new rooms and blocks,admin can block the room when room is in maintenance.

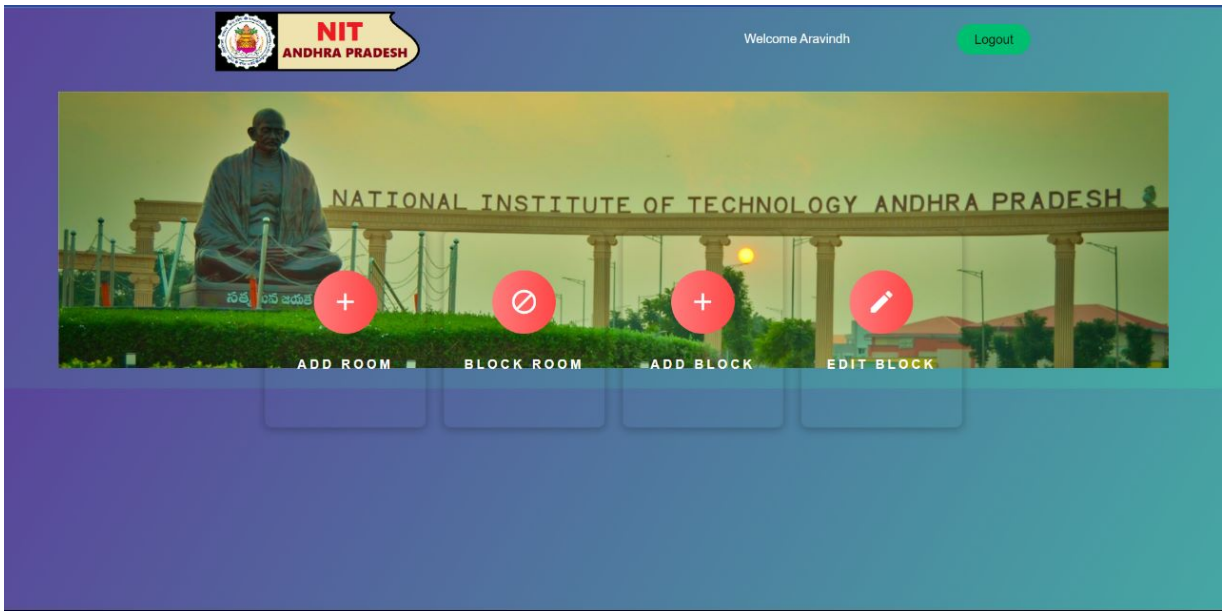


Figure 13: manage block

6.3.4 MANAGE STUDENTS

In this page the admin can search students,can check complaints given by the students,can check local and non-local outing records .

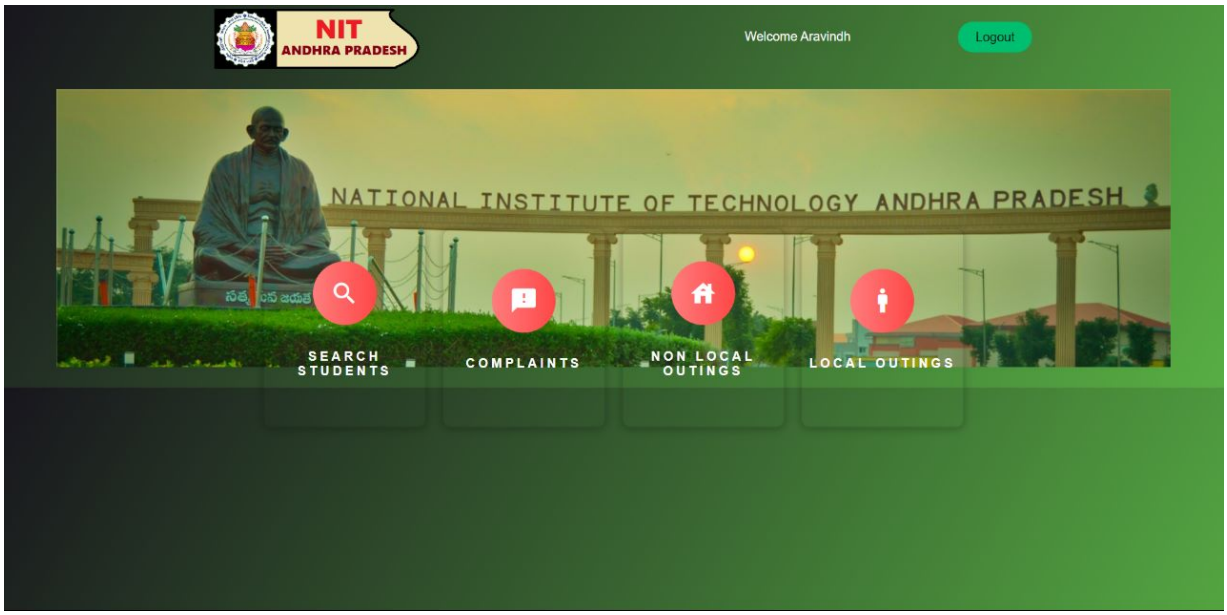


Figure 14: manage students

6.3.5 EDIT EMPLOYEE

Admin can edit employee.He can add or delete employee and can search for employee.

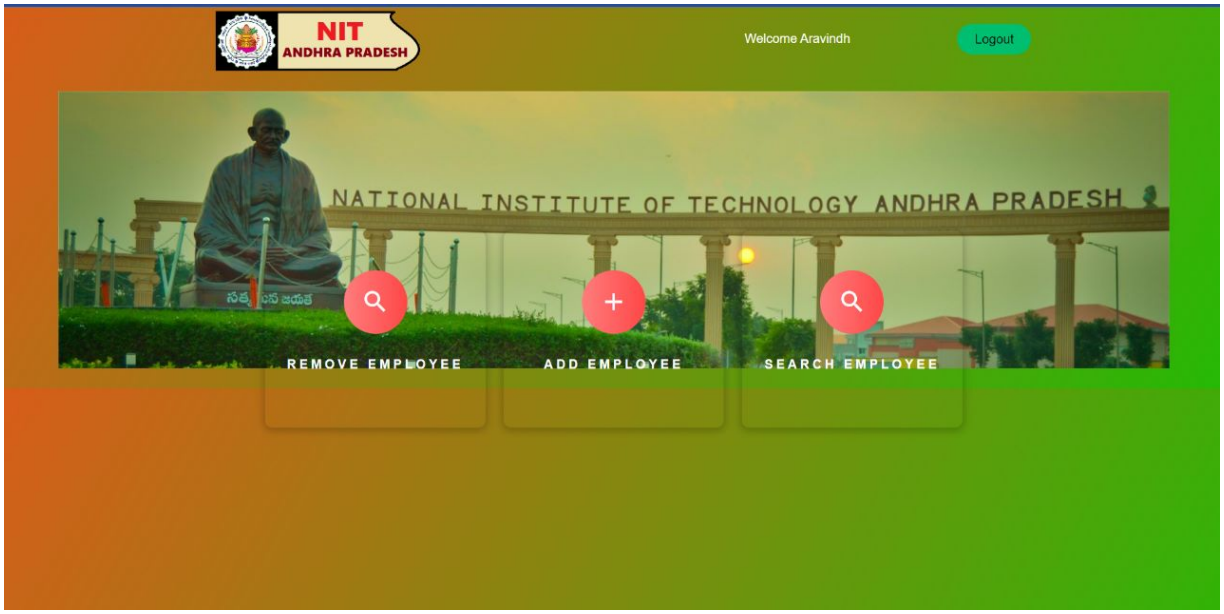


Figure 15: edit employee

6.3.6 EMPLOYEE SEARCH

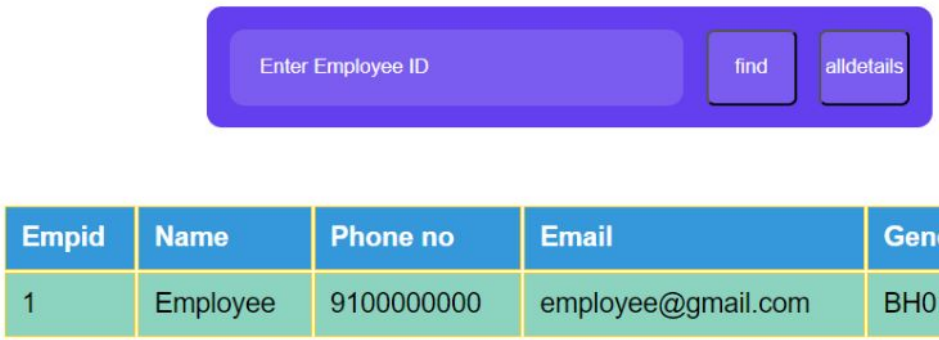


Figure 16: employee search

6.3.7 ANNOUNCEMENTS DASHBOARD

The admin can give announcements to the students and employees.

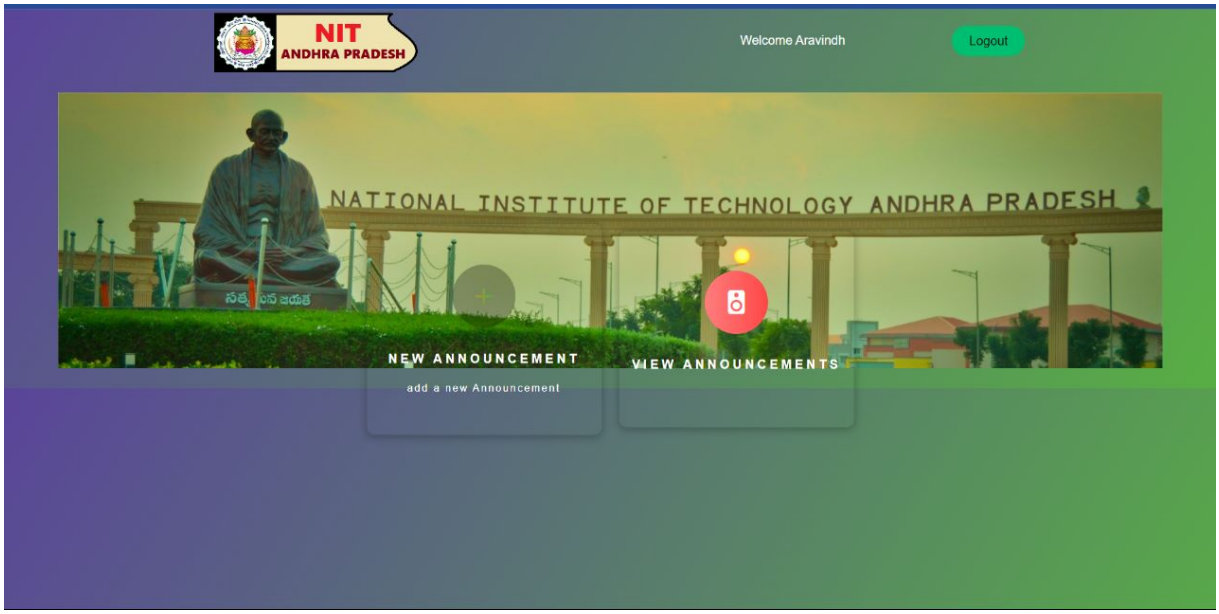


Figure 17: announcements

6.4 EMPLOYEE INTERFACE

6.4.1 EMPLOYEE LOGIN

The employee can login to the page by giving required details.

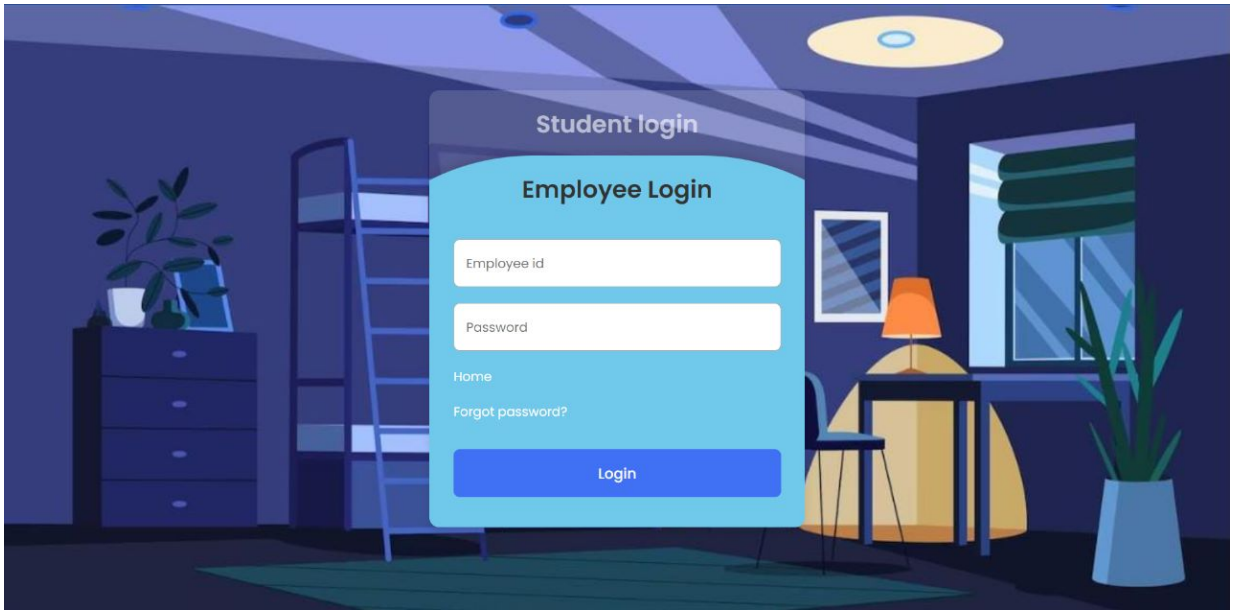


Figure 18: employee login

6.4.2 EMPLOYEE DASHBOARD

The employee can manage students and he/she can edit their account.

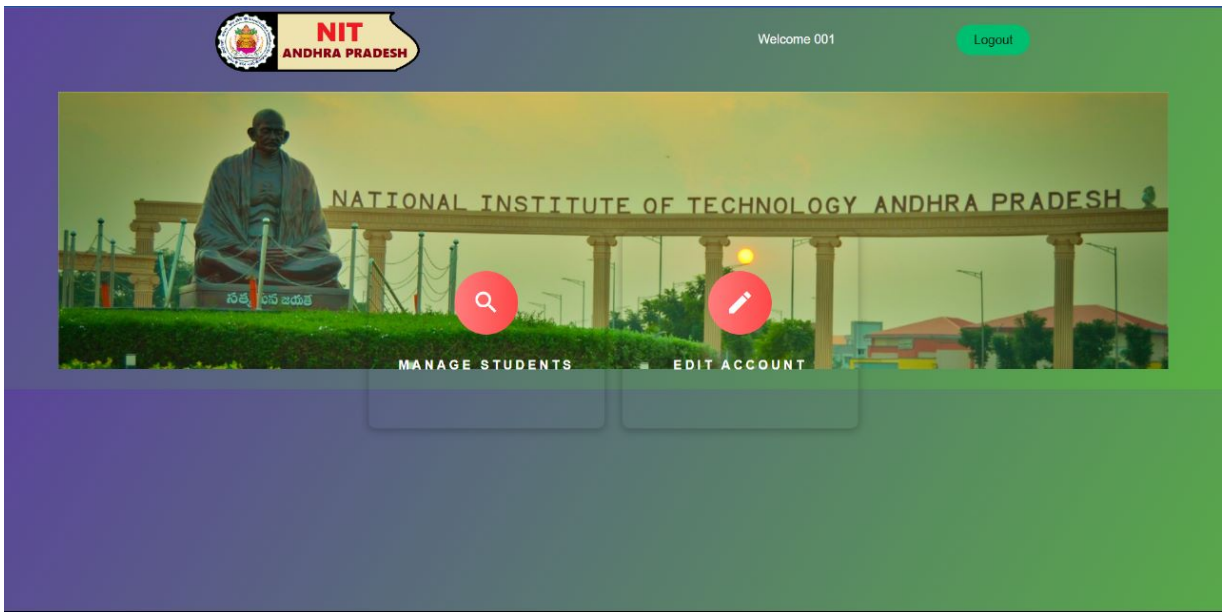


Figure 19: employee dashboard

7 FUTURE SCOPE

Future Scope:

The future scope of the Hostel Management System mini project is vast and can be further enhanced with additional features and functionalities. Some of the potential areas of improvement and future enhancements are:

1. Mobile Application: Developing a mobile application for the Hostel Management System can allow guests to access the system's features more conveniently and efficiently. The mobile application can provide real-time updates on room availability, booking status, and payment reminders, among other features.

2. Integration with Smart Technology: Integrating the system with smart technology, such as smart locks and smart thermostats, can enhance the guest experience and improve operational efficiency. This integration can allow guests to access their rooms using their smartphones and regulate room temperature and lighting based on their preferences.

3. Artificial Intelligence and Machine Learning: Implementing artificial intelligence and machine learning algorithms can help predict guest preferences and improve room allocation accuracy. It can also enhance the system's reporting module, providing more detailed insights into hostel performance.

4. Social Media Integration: Integrating the system with social media platforms, such as Facebook and Instagram, can allow hostels to engage with guests more effectively and increase brand awareness. This integration can also enable guests to book rooms directly through social media platforms.

5. Online Reputation Management: Implementing an online reputation management module can help hostels monitor and respond to guest feedback on online review platforms, such as TripAdvisor and Google. It can also help identify areas of improvement and enhance guest satisfaction.

Overall, the Hostel Management System mini project has significant potential for future enhancements and improvements. By incorporating new technologies and features, hostels can stay ahead of the competition and provide guests with a seamless and enjoyable experience.

8 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 .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.

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2. https://www.geeksforgeeks.org/web-technology/html-css/

3. https://youtube.com/playlist?list=PLGevxjyhYfA7mmrJ0H1Y4NC$_C f zd95Tl-$

4. As for YouTube, it is a popular video-sharing platform that provides a vast range of tutorials and resources for web development. YouTube can be a valuable resource for learning about web development technologies and techniques, including HTML, CSS, and PHP.

Overall, the combination of HTML, CSS, PHP, and YouTube can provide developers with the tools and knowledge they need to create robust and dynamic web applications, such as an hostel management system.