

SMART HOSTEL AUTHENTICATION SYSTEM USING ANDROID

Mr. V. R. Sugumaran*¹, G. Abishek Singh*², B. Joseph Ruben Kevin*³, M. Afsal Musharraf*⁴

*¹Assistant Professor, EGS Pillay Engineering College, Nagapattinam, India.

*^{2,3,4}UG Student, Department Of Computer Science And Engineering, EGS Pillay Engineering College, Nagapattinam, India.

ABSTRACT

The project title is "Hostel in and out Authentication System" is a Android application. The main objective of the system was allow the authenticate person in the hostel and maintain the in time and out time for student. In this system, check the valid user was entered or exploit from the region. This system was implemented in the college Hostel. Because the student in time and out time was maintain in the record. Sometimes the student was not entered their name in the record. The staff needs the student hostel details search the details through records. So, it's made an time delay and find the result very trouble. In this system was fully computerized process. The student goto out of the college first they given their note so mechanically the details was stored. The note and face must be same otherwise the system was not allowed the user to go out. Mechanically the alert was send to the head of the department. The staff was find the unauthorized person easily. The staff search the student details easily because both the details are stored in the database. Using the Student id card number to fetch the details easily. The front of the project was android studio.and also apply leave at college hostel.

Keyword: Hostel Authentication, Computerized Process, MIT App Inventor.

I. INTRODUCTION

The Main Objectives of the project is to create a Android Application for Hostel Authentication Purpose. The goal of our system is to provide security to hostel students and alert their parents about their in/out timing in the hostel. Parents get the sense of security by knowing the current information about in and out of their child in hostel.

The project title is "Hostel Authentication system" is a Android application.

The main objective of the system was allow the authenticate person in the hostel and maintain the in time and out time for student.

In this project, check the valid user was entered or exit from the region.

This system was implemented in the college Hostel. Because the student in time and out time was maintain in the record.

City in the organization is one of the most persistent issues that organization must address. Nowadays security is a prime concern in each individual's life.

Currently student's attendance becomes more vital element for every organization. Entering and monitoring of hostel attendance is an area of administration that can involve essential of time and effort in a hostel atmosphere.

A biometric system basically comprises entering and scrutiny biometric characteristics.

II. LITERATURE SURVEY

G. RAJKUMAR¹ and T. SIVAGAMA SUNDARI² -2018 The biometric system plays the most important role in this current century. Finger print identification is one among the foremost distinguished and familiar identity verification system due to its individuality. Security within the hostel is one of the foremost repetitive issues. To keep up day by day attendance verification is sophisticated and time consuming system for the hostel management. There are number of existing attending systems are available for college students, for hostel students it must improve. Within the existing system wardens are manually maintain the attendance for hostel students. This paper deals with, avoid of an entire problem in hostel management system together with this monitoring system also proposed. The administrator of this system was college principal or warden. Biometric system is used to accommodate a large number of students within the hostel. This system makes automatically to monitor the entry and exit of students from hostel and offers alert SMS to parents for their safety.

Ritesh Kumar Bista, Aman Jung Karki, Beesu Venkat Mounesh Reddy, Utkarsh Aakash, Dr. Rajasimha A Makaram, Shilpa Da 2023-Hostel Management System The Hostel Management framework is a web application which is created for managing different activities in the hostel. It will take long time.

Tanmay Nandanwar School of Mechanical Engineering, Vellore Institute of Technology, Vellore, India ; **Priyanka Bahutule; Raviteja Buddala** 2020-A Study on Shift towards Digitization of Hostel Room Allotment for a University The present work aims to develop an online room allocation process over a conventional room allotment process held in several big universities or colleges facing main problem of it takes a lot of time.

R. Haumshini Independent T.M. Sathia Dev Independent

R. Mahendran Independent Date Written: January 21, 2020 The main objective of the proposed Leave Management system is to decrease the paper work to the maximum and easier record maintenance by having a separate system for leaves maintenance. This system basically deals with the record of leaves taken by students staying in hostels of an organization. This system also helps to reduce the formalities for applying leave and time delay faced by students for the approval of leave. Hostel Leave management project is a web based system which can be accessed by all students of a particular university. This system is an automated system for managing leave of students and approval of leaves. Every student is provided with a unique user id and password for login to the system and send request for leave whereas in our project their login is being connected with Student Information System (SIS). Wardens will look after the request and they may accept or reject, seeing the students' parents' approval and the students' attendance details in case of working days. Before approving the leave, different department people will look after the request through this system and take decisions. This system will update the process of leave management system inside the hostel by saving time and resources. This helps the students to view their own leave balance, leave status, view past leave history and also helps wardens to review and approve leave applications. This Leave Management system is very useful for any hostel of any organization where there may be more number of people (students). It is a single click process. The Hostel Leave Management system also aims at linking academic and hostel activities, leave details to a unique Student Information System of a particular organization.

Sneha Sonar¹ Rajendra Patil²-2016 Security in the hostel is one of the most persistent problems that organization needs to address. Nowadays security is a prime concern in every human being's life. To maintain daily attendance record is complicated and time-consuming system for the hostel management. The numbers of existing systems are based on RFID monitoring and making students' attendance at school but having limitations. To avoid this entire problem, hostel in/out management and monitoring system is proposed. The system makes automatically monitor entry/exit of student from hostel and gives alert SMS to student parents for high safety. In this system each and every student has to store their finger print data base, unique RFID card No. and photograph with their parents' mobile number. Face recognition is known to be the most natural one, since that uses to identify students in hostel. Fingerprint identification also provides better performance. The system is based on the ARM 11 microcontroller, Finger print scanner, Camera, GSM module, RFID reader and passive RFID tag. Microcontroller ARM 11 is the heart of system which will process the functioning of total system. In present system In/Out management and monitoring of student in hostel is done by using RFID technology, Face Recognition system and Finger Print scanner. Alert student parents by sending SMS using GSM module. This system is working without human interface. The goal of our system is to provide security to hostel students and alert their parents about their in/out timing.

III. RESEARCH METHODOLOGY

TOOLS:

MIT APP INVENTOR

MIT App Inventor (App Inventor or MIT AI2) is a high-level block-based visual scheduling language, originally built by Google and now maintained by the Massachusetts Institute of Technology. It allows newcomers to create computer applications for two operational systems: Android and iOS, which, as of 25 September 2023, is in beta testing. It is free and open-source released under dual licensing: a Inventive Commons Attribution ShareAlike 3.0 Unported license and an Apache License 2.0 for the source code. Its target is primarily children and students studying computer programming, similar to Scratch.

EXISTING SYSTEM :

- For the past few years the number of educational institutions are increasing rapidly.
- Thereby the number 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.

DISADVANTAGE:

- Low security
- Data redundancy
- Difficult to handle
- Difficult to update data

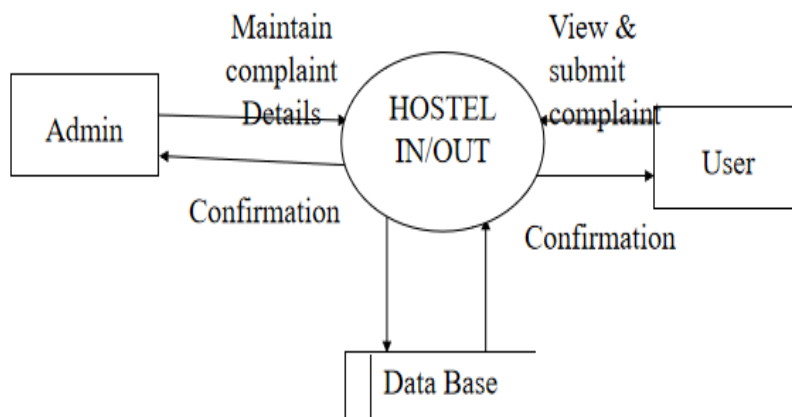
PROPOSEDSYSTEM

- The proposed system is having many advantages over the existing system.
- It require less overhead and very efficient.
- The proposed system maintained the hostel in time and out time .

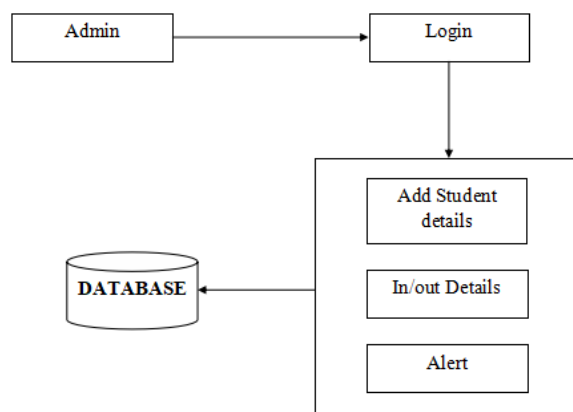
ADVANTAGES:

- High security
- Easy to handle
- Fatly update to data

SYSTEM IMPLEMENTATION:



ARCHITECTURE



SYSTEM IMPLEMENTATION:

User Login

Home

This consist of the different pop-up menus showing the details of the different hostels

It allows the different users to access the registration forms.

He can view the In/out Time.

Registration Form

This section provides an online form to the students which can be filled by them hostel in and out time

Admin Panel

Administrator Login

1 Home

The Administrator can :

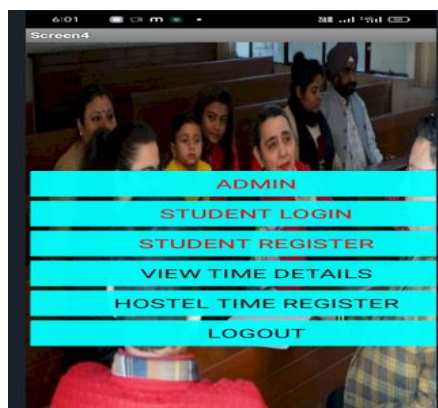
1. Allot different students to the different hostels.
2. Alert the details.
3. Control the status of the in/out time.
4. Edit the details of the students & modify the student records.

Notify of the hostels time to Parent

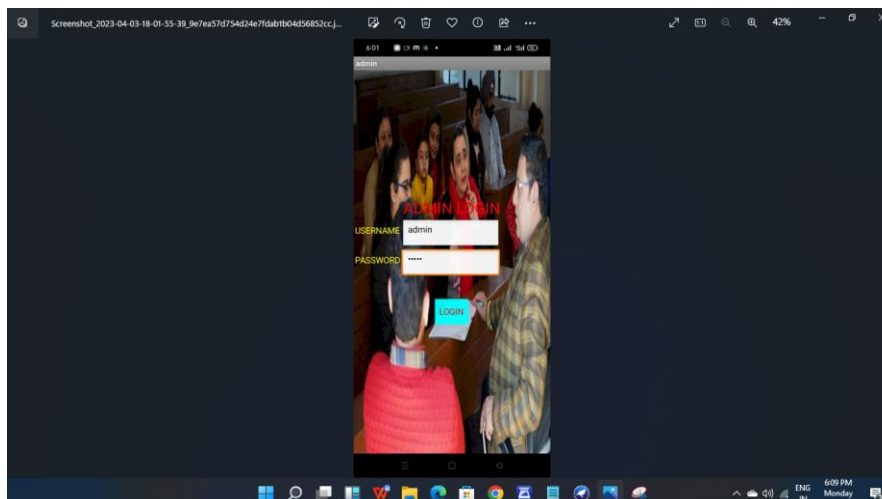
Their will be pre-defined criterias for the admission to the hostels. He checks the student details and send to the Parent.

IV. RESULT

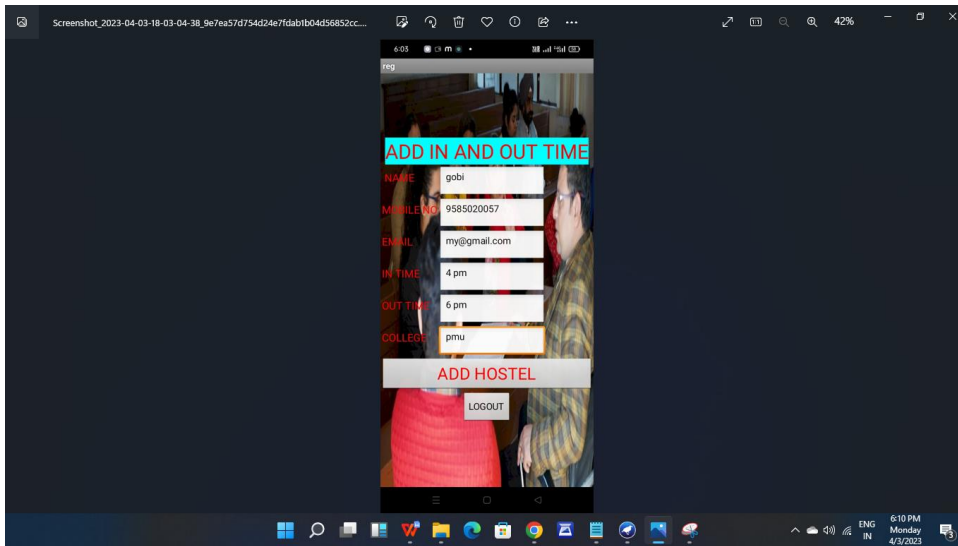
MENU



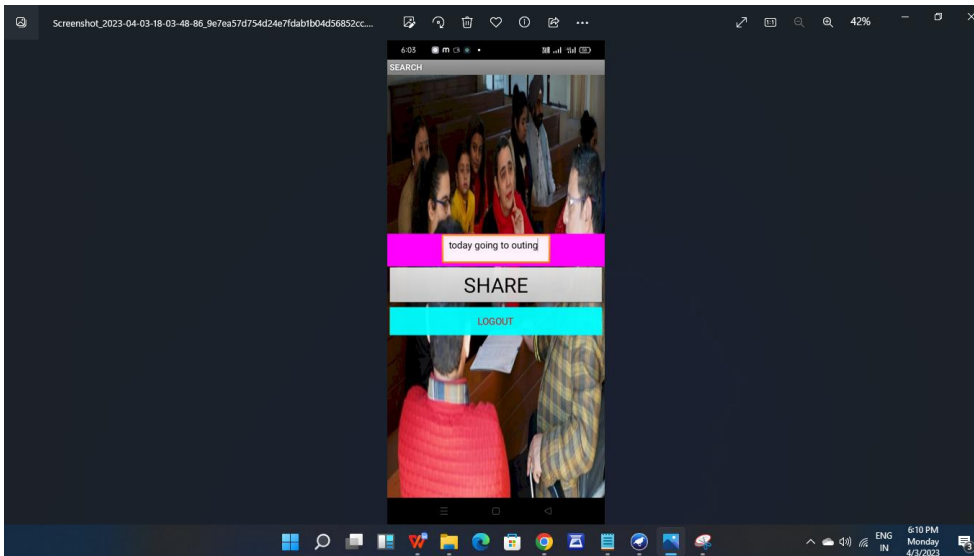
LOGIN



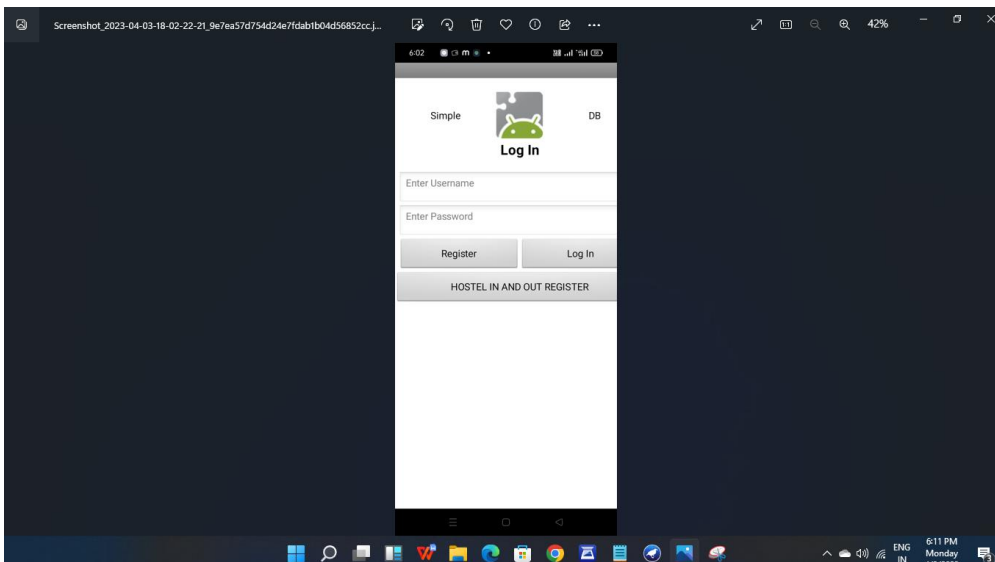
REGISTER HOSTEL TIME

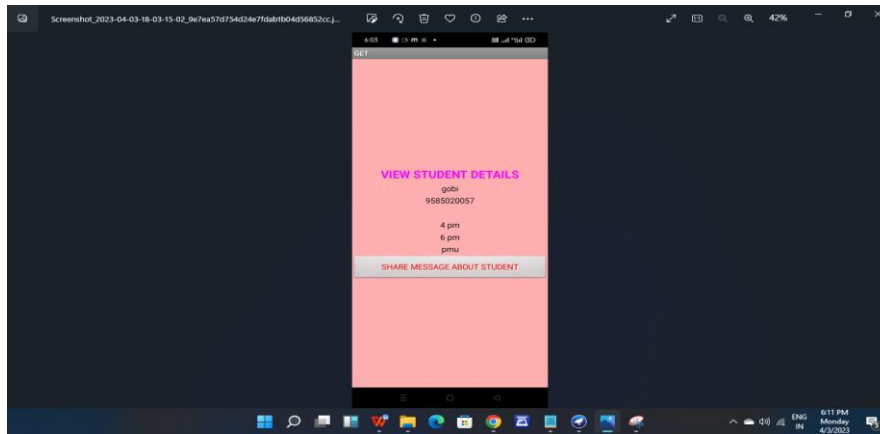


SHARE DETAILS ABOUT STUDENT



REGISTER



STUDENT DETAILS**V. CONCLUSION**

In conclusion, the hostel In and out authentication system developed in Android provides a platform for students of College of E.G.S Pillay Engineering College to carryout hostel application online and to alsoenable the Staffs manage the hostel applications. The proposed system is faster andefficient compared to the existing system and can perform the following task:

- a. Online hostel application.
- b. Online students and staff information management.
- c. Online hostel application approval based on first come first served.
- d. Viewing hostel application status online.
- e. Sending of application alert to students via SMS

VI. REFERENCE

- [1] Barbadekar Ashwini, "Performance Analysis of Fingerprint Sensors", Vishwakarma Institute of Technology, Pune, 2010.
- [2] Mohamed Basheer K P, Raghu C V, "Fingerprint Attendance System for classroom needs", NIT Calicut, Kerala, 2012.
- [3] Haumshini, R. and Sathia Dev, T.M. and Mahendran, R., Digitalized Hostel Leave Management System (January 21, 2020). International Journal of Emerging Technology and Innovative Engineering, Volume 6, Issue 01, January 2020 , Available at SSRN: <https://ssrn.com/abstract=3542404> Yohei Kawaguchi, Tetsuo Shoji, "Face Recognition-Based Lecture Attendance System", 2005.
- [4] Abhishek Jha, "Class Room Attendance System Using Facial Recognition System", International Journal of Mathematics, Science, Technology and Management, Vol. 2, Issue 3, 2006.
- [5] Tabassam Nawaz, Saim Pervaiz, "Development of Academic Attendance Monitoring System Using Fingerprint Identification", International Journal of Computer Science and Network Security, Vol. 9, No. 5, May 2009.
- [6] Herdawatie Abdul Kadir, "Fusion of Radio Frequency Identification And Fingerprint in Boarding School Monitoring System", February 2010.
- [7] Rajan Patel, Nimisha Patel, Monika Gajjar, "Online Students Attendance Monitoring System in Classroom Using Radio Frequency Identification Technology: A Proposed System Framework", International Journal of Emerging Technology and Advanced Engineering, Volume 2, Issue 2, February 2012. Hemlata Patel, Pallavi Asrodia, "Employee Attendance Management System Using Fingerprint Recognition", International Journal of Electrical, Electronics and Computer Engineering, April 2012.
- [8] Nurbek Saparkhojayev, Selim Guvercin, "Attendance Control System based on RFID Technology", International Journal of Computer Science, Volume 9, Issue 3, No 1, May 2012.
- [9] O. Shoewu, O. A. Idowu, "Development of Attendance Management System using Biometrics, The Pacific Journal of Science And Technology, Volume 13, Number 1, May 2012.