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Hostel Girls' Security System

Anushree Bobhate

anubobhate@gmail.com

Datta Meghe Institute of Engineering, Technology,
and Research, Wardha, Maharashtra

Dnyaneshwari Chutke

neha16.chutke@gmail.com

Datta Meghe Institute of Engineering, Technology,
and Research, Wardha, Maharashtra

Mayuri Udan

Udanmayuri@gmail.com

Datta Meghe Institute of Engineering, Technology,
and Research, Wardha, Maharashtra

Kajal Pal

[iamkajalpal@gmail.com](mailto:iamakajalpal@gmail.com)

Datta Meghe Institute of Engineering, Technology,
and Research, Wardha, Maharashtra

Pranjali Hulke

Pranjalihulke10@gmail.com

Datta Meghe Institute of Engineering, Technology
and Research, Wardha, Maharashtra

ABSTRACT

Nowadays as the crime rate has increased, security is an essential factor for girls. So, this proposed system is "Hostel girls' Security System" helps to provide security. This proposed work enlightens upon the technology advancement in the field of security. In this, the concept of fingerprint authentication will be used as a special identification.

So, whenever the girl wants to leave the hostel, she will enter her in-time and will carry a security module with her which is a mobile application. When the girl is in danger, she will press the key on the security module and one message will be sent to the warden's mobile, also the message will be sent to the parent's mobile number along with the location of that girl. The technology used in the system is based on the fingerprint, GPS modem. This system will be helpful for girls in the different organizations.

Keywords: Fingerprint Authentication, GPS, Micro-Controller Kit.

1. INTRODUCTION

Today, in the age of 21st century where the technology and new gadgets are being developed still women and girls are facing social problems. People are aware of women safety, but we must see that they should be properly protected. Girls are not physically as fit as men, so to help her in an emergency we thought to provide a helping hand as in a danger situation she feels helpless.

According to a global poll conducted by Thomson Reuters, India is the "fourth most dangerous country" in the world for women. Statistics released by the country's National Crime Records Bureau, more than 34,000 cases of harassment were reported across India last year. Also, some left unreported due to some reasons and because some think that the complaint is of no use. So she needs to take care of herself before anything wrong happens. Our project focuses on a system designed which serves the purpose of providing security and safety to women so that they never feel helpless while facing such social challenges.

In modern India, women continue to face social challenges and are often victims of abuse and violent crimes. In the current global scenario, the crime rate has gradually increased. To avoid this, girls need to be protected when they are away from the parents. If the girl is in danger, if she is able to acknowledge the guardian it will be very helpful. Specifically, hostel girls also need security as they are away from parents. The hostel warden herself has the responsibility of the whole girls residing in the hostel. Also, parents have concern for their daughter's safety. They need to make sure she is safe or not.

The highest statistics of the crimes related to girls is the greatest motivation for the project. It is the time we girls need to be very cautious. This project will help the society for a good change.

2. REVIEW OF LITERATURE

A. Implementation of student safety system using RFID-

Recently, a crime against children is increasing at a higher rate and it is high time to offer safety system for the children going to school. This paper presents a system to inform parents about the status of their children such as absence. The system checks and detects which child entered the wrong bus and issues an alert to this effect. RFID-based detection unit located inside the bus detects the RFID tags worn by the children. In addition, the system checks the children absence and updates the database. The parents can log into the system website and monitor the details of their children.

B. Real-time Security Management using RFID, Biometric and Smart Messages

The proposed scheme presents the real-time security managing methods that can be implemented using RFID, Biometric, and Smart Messaging. Entry doors to the restricted areas are controlled using the Biometric Machines. Registered Staff manages their entry through their RFID card, which is verified with Biometric. The relay in the Biometric reader will unlock the door if the verification is successful after comparing their duty roster timings. Staff details, time of entry/exit get recorded in the database.

3. PROBLEM STATEMENT

In girls' hostel, currently, for leaving the hostel girls have to write their name and in-out information in the record book. But sometimes girls do not make proper entry of in-time and out- time. Also sometimes girls who did not enter the hostel at a time or sometimes they make proxy entries with the help of our friends so warden is not able to keep the record of that girl who left or arrived the hostel. It helps to maintain the data of student's information in girl's hostel. The existing system required more time for maintaining the student details manually. Also earlier used a paper pen which lost lots of renewable sources.

4. OBJECTIVE

The main objective is very clear that is to design a security system for girls. The sub-objectives include:

- i. Proxy entries will be avoided because everyone has a different fingerprint.
- ii. The desktop application will help warden to maintain a record of girls who entered or left the hostel.
- iii. We are going to use fingerprint detection hardware module.

5. FLOWCHART

1) Flowchart for working of software:

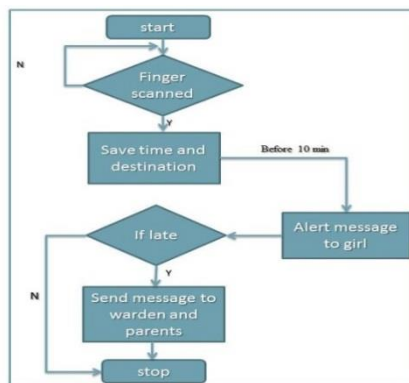


Fig 1: Working of Software

2) Flowchart for working of software:

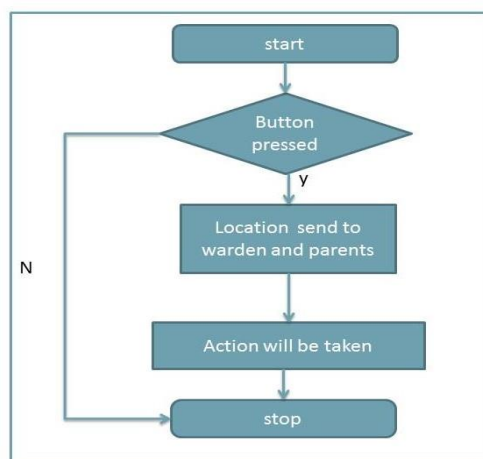


Fig 2: Working of Mobile Application

6. SYSTEM ARCHITECTURE

1) Working of software

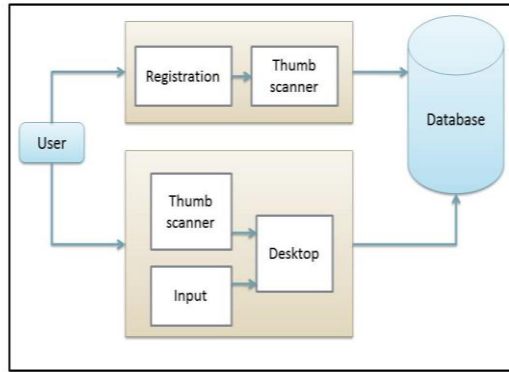


Fig 3: Working of Software

2) Working of mobile application

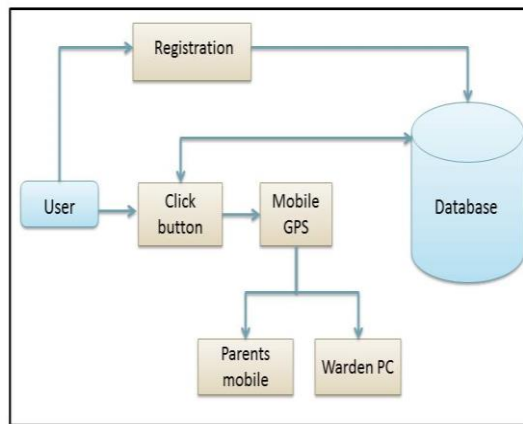


Fig 4: Working of Mobile Application

7. METHODOLOGY

a. The working of software is as follows:

When a girl goes out, she will scan the finger and also enter her in-time in warden's PC. The fingerprint algorithm will work here and her information will be stored in temporary database which will be used to send her an alert message. Then before 10 minutes of her in-time, an alert message will be sent to the girl. In case if she is late, a message will be sent to the warden and her parent.

b. The working of mobile application is as follows:

In case if girl is in danger, she will press the button in mobile application, one request will be sent to warden's PC. The GPS location will now be taken from girl's mobile. Here, the two functions are to be performed. One function is to detect whose request is received, take her information and display it on the desktop and another one is to take contact number of her parents from database and send them the message. Then corrective action will be taken to help her.

8. OUTPUT

The screenshots of the system outputs are as follows:

1) Screenshots of Warden's PC:



Fig 5: Screenshot of Homepage



Fig 6: Registration form for Hostel-Girl



Fig 7: Get Stored Data

2) Screenshots from mobile-application:



Fig 8: Send Button in Mobile-Application

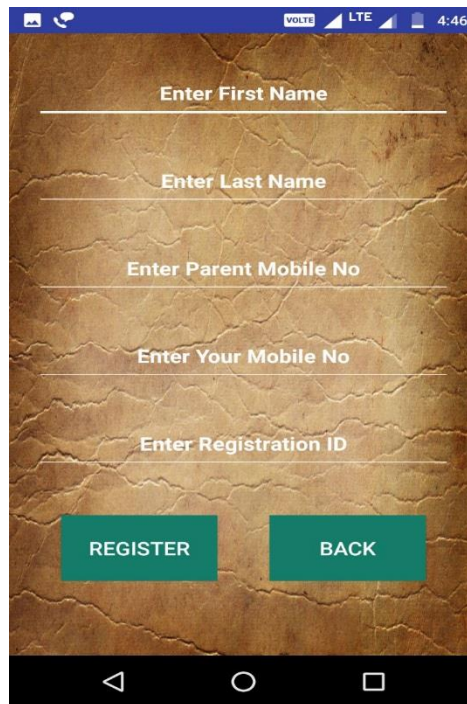


Fig 9: Registration for Mobile-Application

9. CONCLUSIONS

This system provides the security for the girls in the hostel. It uses the GPS which enables efficient and easy way of monitoring in big organization. It provides an easy way of monitoring security. Also alert message is an advantage of this project. We use fingerprint technology, hence no one can use the other name as the every human being has different design pattern on finger. By this system, girl can get automatic permission to leave the hostel without wastage of time and warden also get whole day report of all girls in the hostel.

10. ACKNOWLEDGMENT

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