Gate Security System

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Abstract: In this growing age of technology, it is necessary to have a proper gate security system, which should provide security and having primary intone to disallow unauthorized intruders into the premises. The system provides insights into the security aspects of a hostel, it was an image basis authencate for in or out the entry of a student The analysis applied on the data generated will indicate the security loop hold and help startle the behavior of the inmates of the hostel. The system can be further linked to guardians or parents who could be assured to in out OTP for perming their wards for out permission. This paper is about the smart gate entry management system which is developed for the visitors of an organization to supervise and record their entry related activity. The enre system is developed with network-based application software running at the other end.

Keywords: OTP (One Time Password), Web Portal, Android Application, Barcode

I- INTRODUCTION

Technology has changed human existence by extending life spans and improving communications and due to advancement in technology the growth and development of the naon are faster. It has made human life more comfortable but as everything has its pros and cons so thus this effective use of technology. It is a Mobile Application cum Web Access System. It is new because of its ability to resolve security issues. It helps the hostel management to keep an eye on unauthorized intruders for the purpose of security since students staying in hostels far away from their home. The security is one of the most important concern to make environment secure, trustable and reliable in the eyes of student's parents or guardians. Guard of the hostel use Android Application having features of Bar Code scanning and taking live pic of the student during in and out from Hostel. When student going out from hostel then the barcode of id card is the first scan out by the

guard along with the live picture of student and the data is send to the web portal displaying red status ll the same procedure is repeat out during student's entry into the hostel Warden of the college have web access having all the details of the student not present in the hostel and the details of guard who take out the attendance of particular student For Web Portal we are using PhP and User Interface and the data from both the Mobile application And Web Portal is access from live server For connecting Mobile application and Web Portal we make an API that connects our Web Portal and

Mobile application together fetching all the information from server. We are using MYSQL database further integrated with Tomcat server

II- DESIGN AND METHODOLOGY

The proposed system will be implemented as an Android-Based application. Due to the current trend of smartphone the android application will be best suited. The application will be built using the Android IDE. The application will be synchronized with the database stored at the web server and SQLite. The database will be used as the main asset of this application. A database will be maintaining all the diseases, symptoms, effects, and medicines possible.

A-Software

The application is designed on the Android software stack produced by Google. Android[1] is an open source framework designed for mobile devices. It has an operating system, middleware, and key programs. The Android Software development kit provides libraries needed to interface with the hardware at a high level and make/deploy Android application. An application is written in Java and use SQL databases to store persistent data. We choose Android platform because of its ability to allow multi-processing in background, the polished Navigation API, and comp ability with other Android devices. Unlike Diligent systems, this software is

intended to integrate with the device existing application
.

B- Web Portal

The web application is designed using Php[2] and User Interface techniques like HTML CSS and Java script. Php is general purpose open source scraping language that is especially suited for web application and can be embedded into an HTML. A hypertext markup language (HTML)[3] is the major markup language used to display Web pages on the Internet. In other words, Web pages are composed of HTML, which is used to display text, images or other resources through a Web browser Cascading Style Sheets (CSS) is a standard (or language) that describes the formatting of markup language pages. CSS[4] defines formatting for the following document types:

·HyperText Markup Language (HTML)
·Extensible Hyper Text Markup Language (XHTML)
·Extensible Markup Language (XML)
·Scalable Vector Graphic (SVG)
·XML User Interface Language (XUL)

Javascript[5] is a scripng language, that is used on the Web. It is used to enhance HTML pages and is embedded in HTML code. JavaScript is an interpreted language. So it doesn't need to be compiled. JavaScript provides web pages in an interactive and dynamic fashion. This allowing the pages to act to events, reveal special effects, accept variable text, validate data, create cookies, detect a user's browser, etc.

C- System Design

Guard just need to login first using guard employee number and password into the mobile applicaon. When student going out from hostel Guard need to scan out the BarCode of student id and taking the live picture of student and save it. The details are submied as aendance on web portal managed by admin i.e warden of the hostel keeping track of students coming into the hostels and also keeps out the record if they return or not Warden uses web portal for accessing and controlling all the mechanism and the whole of the data from both mobile application and web portal is accessed from MYSQL database integrated with the tomcat server. The web application is connected with the mobile application using API (An application programming interface (API) is a set of protocols, routes, functions and/or commands that programmers use to develop software or facilitate interaction between `dissection systems). APIs are available for both desktop and mobile use. APIs are typically useful for programming GUI (graphic user interface) components and allowing a software program to request as well and accommodate services from another program.

III-   MOBILE APPLICATION FEATURES

Attendance IN Mechanism

●When student going out from the hostel
●Guard opens the mobile application and clicks on the scan button, the application asks for scanning barcode and capturing a live picture.
●On clicking IN button attendance would be submitted on MySQL database integrated with the server.

Attendance OUT Mechanism

●When student coming IN to the Hostel
●Guard opens the mobile application and clicks on the scan button, the application asks for scanning barcode and capturing a live picture.
●On clicking OUT button attendance would be submitted on MySQL database integrated with the server

IV-   WEBSITE FEATURES

When Student is not in the hostel premises

●Status column entry in table attendance details for student x remains **red** ll the student x returns back
●The **exit** of student from hostel is marked by the **guard** of the gate and the entry is recorded to the website that can only be managed by **Admin** or **warden** of the hostel.

When student takes entry to the hostel

●Status column entry in table attendance details for student becomes **green** indicating student entry back into the hostel.
●The **entry** of student into hostel is marked by the **guard** of the gate and the entry is recorded to the website that can only be managed by **Admin** or **warden** of the hostel.

V-   CONCLUSION

The objective behind this paper is:
This Project needs Further improvement and more action on towards the security of the system.
Future work idea is to add on image processing through machine learning and feature for student special gate pass which is given by specific teacher via OTP.
Also instead of staff members student can generate their pass via mobile(OTP BASED) which will be valid for limited period of me.

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