

E-Gatepass System

Chaitanya Lengure¹, Laxmikant Kakde², Mamta Bargat³, Saachi Jambhulkar⁴,

Prof. Ashish Palandurkar⁵, Prof. Hemant Wade⁶

^{1,2,3,4}Student, Dept. of Computer Science & Engineering, Nagpur Institute of Technology, RTMNU, Nagpur, India.

^{5,6}Assistant Professor, Dept. of Computer Science & Engineering, Nagpur Institute of Technology, RTMNU, Nagpur, India.

Abstract - The objective and scope of the Project E-Gatepass System (Redpass application) is to record the details and various activities of the user. It simplifies the task and reduces the paperwork. In this project, we are reducing the paperwork which is done by giving the paper gate pass. We are providing the electronic version of the paper gate pass. We provided appropriate training to the user which suit their specific needs. Specific support has been provided at key points within the academic calendar. Admin is monitoring all the user and system. In this project, the only faculty is approving the user E-gate application if they want to allow student then gate pass system is a popup on the guard system database. Training has been provided timely basis and they got trained as the E-Gatepass System is new and rolled out to their area of responsibility. At the moment we are in the very early stages, so it is difficult to put a specific time on the training, but we will keep people informed as plans are developed. The system is very user-friendly and it is anticipated that functions of the system are easily accessed by administrators, Faculties, students, and applicants.

Key Words: E-Gatepass, MVC, End-To-End Application, Redpass

1. INTRODUCTION

“E-Gatepass System” is a Client-Server application software. It uses the concept of MVC (Model View Controller) to implement the application. The main objective of E-Gatepass System is to enhance and upgrade the existing system by increasing its efficiency and effectiveness by reducing the manual work. The software improves the working methods by replacing the existing manual system with the computer-based system. This software enables the right security, where you could keep a vigilant eye on the people who are taking the access out of the premises. This Gate Pass Management System is used to overcome the entire problem which they are facing currently, and making complete atomization of manual system to computerized system.

2. LITERATURE SURVEY/REVIEW

Oki Electric Industry Co. Ltd. “US6734783 B1” by- Noriyoshi Anbai “Gate Management System”. A gate management system for controlling an operation of a gate of a vault including a biometrics information management device having a first memory, storing biometric information of at

least a first and second persons, the first person being required to be accompanied with the second person to pass through the gate and the second person being able to pass the gate alone. A gate management device having a second memory, temporarily storing biometrics information of the first and second person in the second memory, and comparing the temporarily stored information with the information stored in the first memory. A controller controlling an operation of the gate based on a result of the comparison performed by the gate management device.

Hitachi International Ltd. “US7755480 B2” by- Shoji Suzuki, Hiroshi Hanyu, Fumio Enmei “Smart Security System”. A security system with processing optimized for monitoring the actions of a Surveillance Subject and detecting abnormal actions. The action record of an individual is monitored using a sensor network security system SNS and the development of an action event is reported as inaction and the corresponding processing of the security system SCS is determined based on this action.

Honeywell International Inc. “US7362210 B2” by- Rida M. Hamza, David W. Meyers “System for Gate Access Control”. A system for providing stand-off biometric verification of a driver of a vehicle at a control gate. While the vehicle is moving, including a pre-verification. System and post-verification systems. The pre-verification system is installed before an entrance of a facility and comprises an RFID vehicle tag reader, an RFID personal tag reader and a facial detection and recognition (verification) system. The RFID vehicle tag reader scans and reads an ID from an RFID vehicle tag of the vehicle that is trying to pass through the gate. The RFID personal tag reader reads an ID from an RFID personal tag carried by personnel who are driving in the vehicle. The facial detection and verification system scans and reads facial images for the driver. The post-verification system is installed on at least one of an entrance and an exit for post-verification to ensure that the vehicle that enters the entrance or leaves from the exit is the one that has been verified/denied at the control gate. In one embodiment, the post-verification system comprises an RFID personal tag reader and an RFID vehicle tag reader. In another embodiment, the post-verification system also comprises a facial detection and recognition system.

Korean Society of Computer Information by-Kwon, Ki-Hyeon ; Lee Hyung-Bong “Gate Management System by Face Recognition using Smart Phone”. In this paper, we design

and implement of gate management system by face recognition using a smartphone. We investigate various algorithms for face recognition on smartphones. The first step in any face recognition system is face detection. We investigated algorithms like colour segmentation, template matching etc. for face detection, and Eigen & Fisher face for face recognition. The algorithms have been first profiled in MATLAB and then implemented on the Android phone. While implementing the algorithms, we made a trade off between accuracy and computational complexity of the algorithm mainly because we are implementing the face recognition system on a smartphone with limited hardware capabilities.

3. PROPOSED SYSTEM

The objectives for creating this system is to reduce the paperwork and to maintain the document in electronic form.

Accurate maintenance of accurate and consistent records on gate usage.

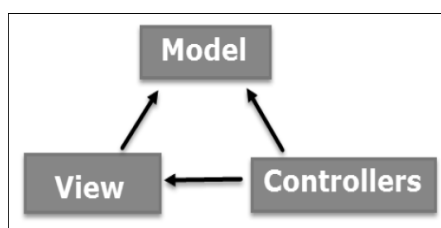
To remove the duplicity of the pass and allow the verified student to cross the premises.

In the earlier system, there were a lot of duplicities done by the students which are going to be removed by using this system.

4. METHODOLOGY

4.1 MVC Architectural pattern

The fundamental methodology of the function is to construct an MVC Architectural knee-jerk reaction that separates a review into three main coherent components: the model, the view, and the controller. Each of these components is built to manage specific knowledge aspects of an application. MVC is much of the closely frequently secondhand industry-standard web lifestyle framework to entwine scalable and extensible projects.



Model

The Model principle corresponds to en masse the data-related signification that the user all of it with. This can describe either the message that is for transfer during the View and Controller components or whole other trade logic-related data. For concrete illustration, a Customer challenge the status quo will protect the customer reference from the database, prompt it and show the lay of the land it data strengthen to the database or manage it to perfect data.

View

The View coal and ice is second hand, for the most part, the UI heart of the application. For lesson, the Customer regard will include bodily the UI components a well known as matter in hand boxes, dropdowns, etc. that the indisputable user interacts with.

Controller

Controllers clear as an interface during Model and View components to process en masse the engagement in activity application logic and incoming requests, bias data by the Model element and interact by all of the Views to confirm the ironclad output. For concrete illustration, the Customer controller will manage all the interactions and inputs from the Customer View and prepare the database for the Customer Model. The cognate controller will hand me down to regard the Customer data.

4.2 SQL Server

SQL Server is a client/server database system. The server runs the SQL Server database software, which processes requests submitted separately database shopper software and sends the results to uphold to the client. The SQL Executive and the SQL Server Database Engine business are examples of database services performed by SQL Server. The SQL Server software is arranged in infinite layers. The Net-Library protect, which accepts connections from clients, hides the combine connectivity schedule when a shopper communicates by all of a server one after the other SQL Server. Net-Libraries evaluate inter practice communication (IPC) mechanisms one as referred to pipes, quiet procedure calls (RPCs) and Windows Sockets. Several Net-Libraries are included mutually SQL Server for both the server and the client. Net-Libraries on server beware of client banding together attempts.

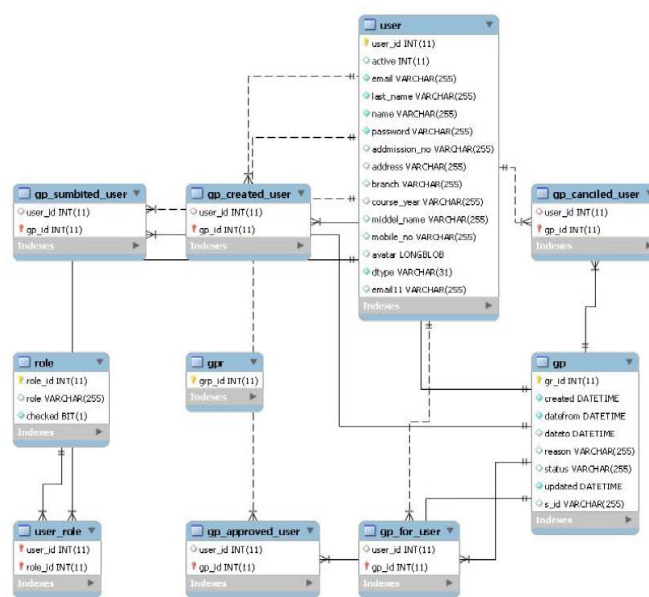


Fig. ER-Diagram of Database

5. MODULES SNAPSHOT/WORKING

5.1 LOGIN MODULE:

In this module various user can perform the login activity and new user can register in the system to perform the activities. This module helps the user to login in the application. This module also helps to register the user.

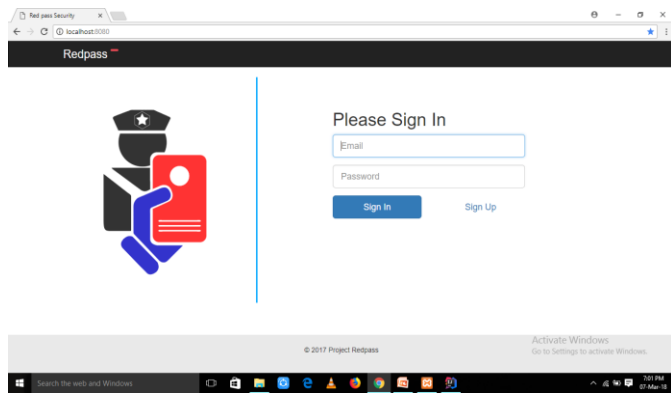


Fig. Login Form

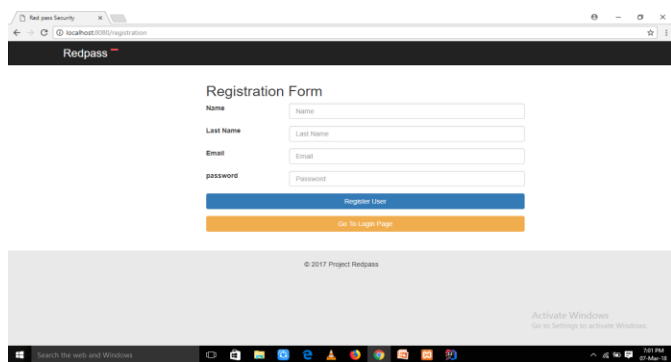


Fig. Registration Form

5.2 ADMIN MODULE:

Admin Module is used by the Administrator or the Admin of the system who has the authority of the system. He/She may have the authority to keep an eye on the system and check whether the system is working properly or not. The Admin even has the authority to enable or disable the unauthorized user from the system

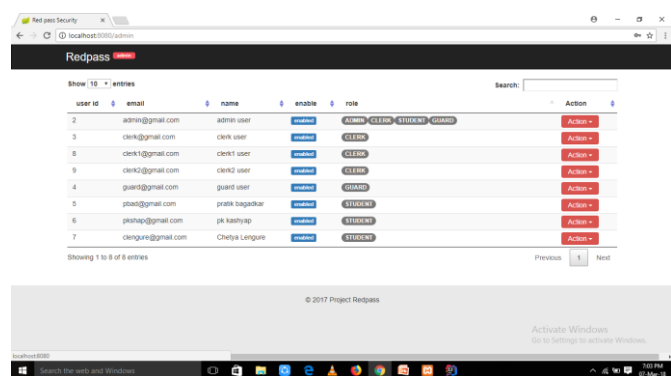


Fig. Admin Module

5.3 CLERK MODULE:

In this module, The authorized clerk user may provide the Gatepass to the legal student. The clerk user may also use this module to fill the new students detail in the database and store it for further use. The clerk user can Add new students to the database and also may update the data of the students it may also delete the data of the students which are no further in the college or organization.

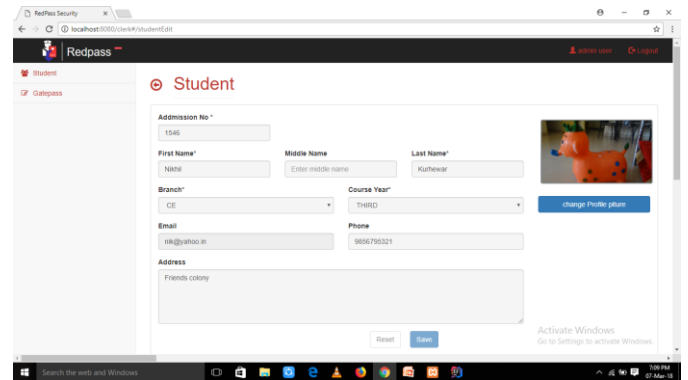


Fig. Student Details Form

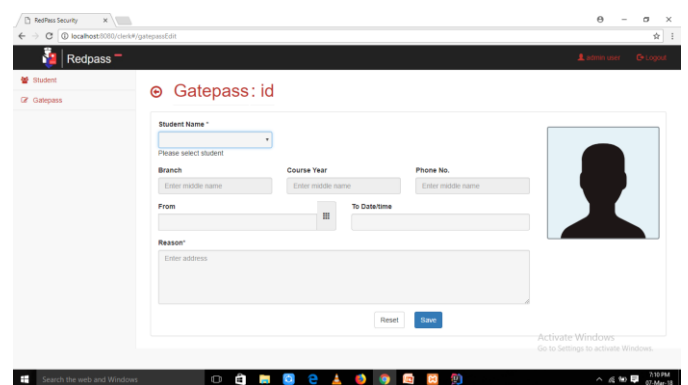


Fig. Gatepass Form

5.4 GUARD MODULE:

In this module, The authorized Guard user may allow the legal students to leave the premises. If and only if the students having the legal gatepass issued by the student.

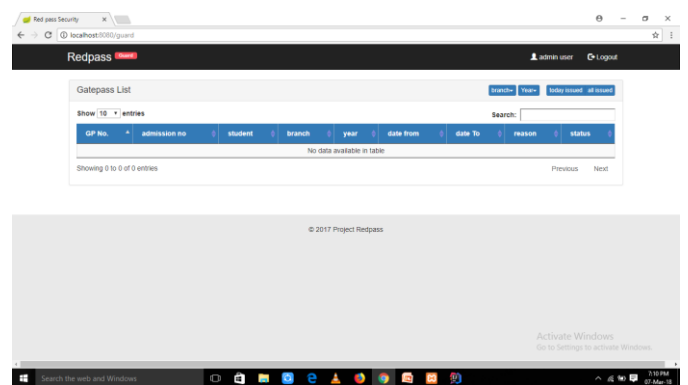


Fig. Guard Gatepass list

6. SOFTWARE & HARDWARE REQUIREMENTS

6.1 SOFTWARE REQUIREMENTS:

OPERATING SYSTEM: MICROSOFT WINDOWS 7& ABOVE

JAVA : JDK 1.8.0

IDE: SPRING TOOL SUITE

BROWSER: ANY

6.2 HARDWARE REQUIREMENTS:

PROCESSOR: INTEL PENTIUM AND ABOVE

RAM: 1 GB RAM MINIMUM,

HARD DISK: 2 GB OF AVAILABLE DISK SPACE MINIMUM MB FOR IDE)

7. CONCLUSION

In this report, Therefore the offline gate pass system using department effective tool which can be used to a great extent. The system is portable and can be easily installed and used in the department. Using this application proxy are completely avoided with a pure software approach. The activity will take up most of the student's time.

It will reduce the time, effort and resources such as paper for both the parties involved in the process. Also, it will eliminate the tedious work of the teachers of maintaining different gate pass papers The system will also avoid a number of proxies in a college as the teacher will have constant eye contact with the student activity.

REFERENCES

- [1] Oki Electric Industry Co. Ltd. "US6734783 B1" by- Noriyoshi Anbai "Gate Management System".
- [2] Hitachi International Ltd. "US7755480 B2" by- Shoji Suzuki, Hiroshi Hanyu, Fumio Enmei "Smart Security System".
- [3] Honeywell International Inc. "US7362210 B2" by- Rida M. Hamza, David W. Meyers "System For Gate Access Control".
- [4] Korean Society of Computer Information by- Kwon, Ki-Hyeon; Lee Hyung-Bong "Gate Management System by Face Recognition using Smart Phone".