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Gatepass Generation and Management System Using QR Code

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Abstract: Gatepass Generation and Management System is a android mobile application. The Project “Gatepass Generation and Management System” is itself tells that is to generate gate pass and maintain entry and exits for organization for visitor, students, teachers, employees and customers. It maintains the record of visitor and students digitally . This can be used to replace our manual visitor process or existing and then give them passes and management process through our system. Gatepass Generation and Management system is can be used for visitor, students, teachers, employees and customers and it is easy to use and manage. This system is defined as a security Gatepass System. It’s main aim to secure colleges from outside visitors, the department and the various working institutes.

Gate pass Generation and management system help the organization to manage the Gate passes count through QR code generator in efficient way. While First time using an app for students have to register in the app with their college mail id then app will validate the mail and then they can login in the android application. In app there is option for QR code generation if we register in the app then QR code will be generated automatically.

This generated QR code is nothing but the gate pass for students and teachers to manage entrance and exit. If we show our QR code to the guard, then that guard will scan it mark us in or out and if our entered input is correct then our entry and exit is automatically saved in the database. So, it is very time reduction process. One of the main advantage of using this system is maintain all the entry and exit record of a person is saved and we can easily access it. This system is user friendly for anyone.

Keywords—Java, Android Development, Gradle, Android studio, MySQL, PHP.

I. INTRODUCTION

The main objective of Gatepass Generation and Management System is to expand and update the current system by making it well organized and time by reducing manual process which is done with the help of guard. The software also improves the

currently working methods by replacing the existing manual process with the computer-based system. In current time, most organization is using the manual process in keeping track all the incoming and outgoing visitors records in each of the department or some of the organization are using IOT based system which are costly. Problem arises when at certain point of time the number of visitors visiting the department, institutes increasing and unable to manage and messed manual system. If college or organization has any event in their institute, for that event so many people is visiting from other organization that is a security issue and also is the main issues in distribution of visitor pass to all of them.

This Android Application enables the right security, where you could keep an eye on the people who are taking the access out of the premises, institutes and also generate the passes for the visitors after registering in the app and this pass is valid for only one day. The pass generated is QR code based of automatic generated unique string which guard will scan it and then visitor will get entry in organization.

II. OVERVIEW

- To overcome existing method and security issues arising from it. Our system is proposed to beat.
- To develop Android application.
- Android application are going to be utilized by students, staff and visitors.
- In Android app the guard, will have special accesses that he's ready to scan the passes of tourists et al.
- Another tab in application employed by admin for the aim of executing different operations like create the event in app to crosscheck any doubted person, add guard etc.
- App is extremely easy and eco-friendly to use for anyone.

III. NEED

This application helps us to prevent the entry of any unauthorized and unwanted person in the college premises, institutes. This leads to enhance the security of the our organization. Currently many colleges, institutes use the notebook and pen to maintain the entry and exit of the staff students and visitors else to check the name on identity card and to check whether person entering is in college is college student or staff member so it is very time consuming and messed crucial process to maintain data. To overcome all the processes, we hope that our application GGMS will solve this problem. It can also provide the feature to admin to generate the data from database by using query.

IV. LITERATURE SURVEY

We conducted literature reviews on two papers published in different journals. The two papers are as follows:

Sr. No.	Paper title	Author Name	Problem Discussed	Source
1)	Visitor Information Management System	Ms. Neha Buwa Ms. Varsha Jadhav Ms. Pooja Ganate, Ms. Shubhangi Dagale	This System is basically for reduce the paper work and manual work and easy method for front desk officer by providing electronic pass and can only all visitors in organization.	https://www.ijedr.org/papers .
2)	Smart Gate Pass Security Management System Using Random Key Generation	Richita Rodrigues Aruna Pavate Rujuta Sawant Nehal Lopes	In this paper they used as name suggest one time random key generation using the email or phone at the time of entry and exit.	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3879985

V. Problem Definition

This system familiar till in some college but this kind of system is familiar in companies and organization. Now a day's guard uses a notebook for entry and exit, it's not a correct way to maintain the all record of student and teachers and visitors so this method is extremely useful for guards. There is no control over the students and teacher arrival in any institutes. Anyone can enter within the college premise. it's going to be and also possible that some unknown person may enter in organizations. There's no way of knowing who and when and by who was invited to any institutes

The information noted down in record book doesn't mean that information is true. There's no authentication process for that. It can also be accustomed access and process any data needed easily and in less in time. Therefore, it's expected that Gate pass Generation and Management System application system ready to solve the matter.

VI. Proposed System

1.Admin:

- Admin is basically a superuser. Admin can add manager, Guard, can approve a gate pass, restrict the entry of any person in organization.
- Admin will keep eye on each gate pass which was generated by student or visitors and manage organization Security.
- Admin is responsible for the any error in the system is generated. Admin is also responsible for to add event in application which held in the organization for generation of passes.

2.Guard:

- Guard is the basic requirement of the Gate Pass Management and generation system.
- Guard can view entry gate details, whether a gate pass is approved or not by the admin.
- They would allow only if the gate pass is generated.
- Guard is also responsible for scan the QR code which generated by the visitors, students etc. If in case any one's pass that is QR code is not able to fetch by scanner then guard will register for him/her again from his login.

3.Visitor:

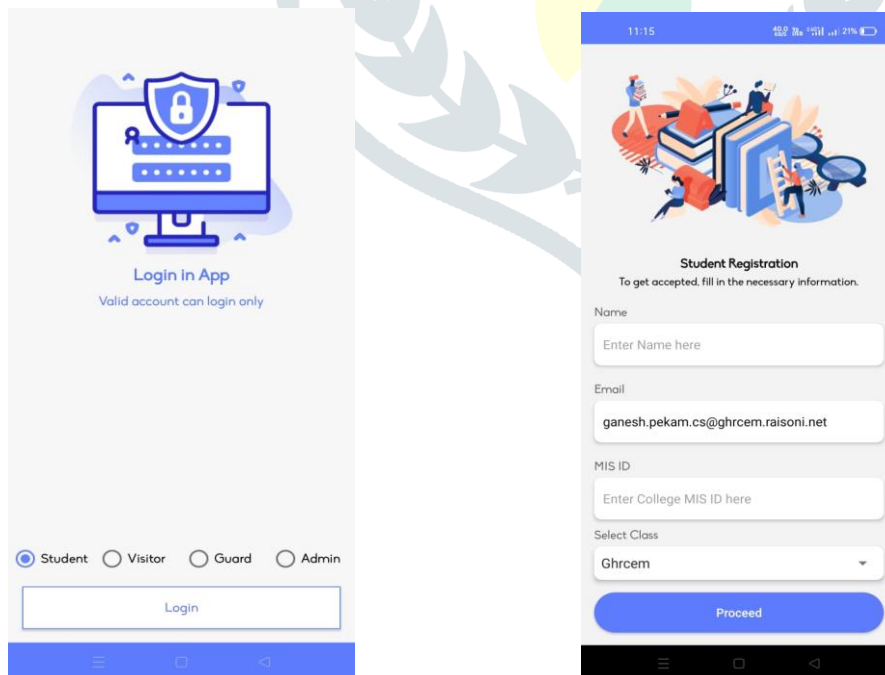
- Its compulsory to register on application for each visitor. • for registration, the visitor must fill required information and national identity like Aadhar, pan, voter id etc. From that id app will generate QR code which is Gate pass which is valid for in the future
- If visitors didn't give his identity the access are going to be denied Student it's compulsory to register within the app at time of register student must enter unique college roll no from that pass will generate i.e., QR code will valid for 6 months.

4.Student:

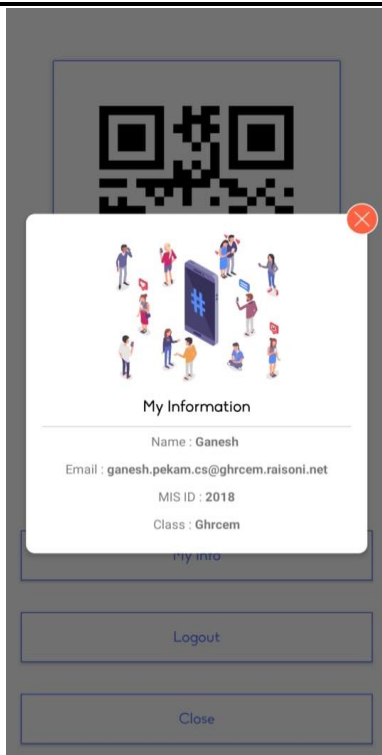
- It is compulsory to register within the app at time of register student must have to enter unique college roll no from that pass will generate that's QR code will valid for 6 months.

VII. System Design Sample

For Student : – First start the Gatepass application, we have application name as SmartIn. firstly for student user can register themselves using email id →



We have successfully registered and have logged into the application. It shows the following information for student: Name, Mis Id, Email and QR code.



Your Qr

Show this QR at the gate



My Info

Logout

Close

For Visitor: It is compulsory to register in the app for visitor using national identity like aadhar, pan. Then QR code will be generated and it is valid for one day only.

Gatepass for Visitor
To get accepted, fill in the necessary information.

Name

Mobile

Info. Type
Aadhar ID

Info Id

Reason



Your Qr

Show this QR at the gate

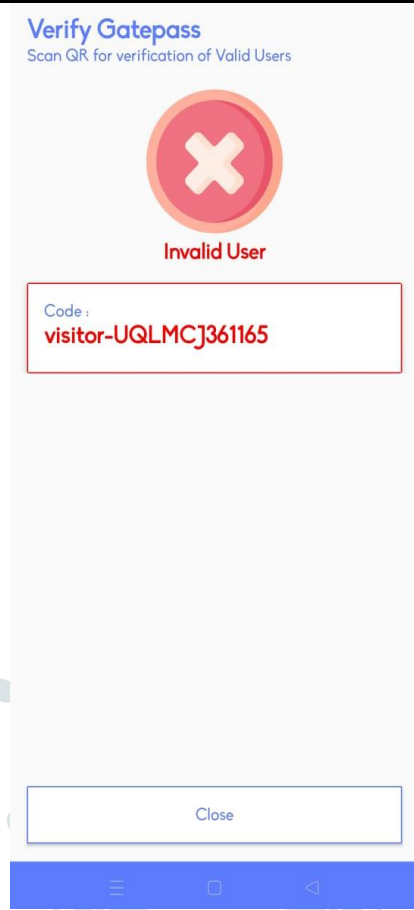


My Info

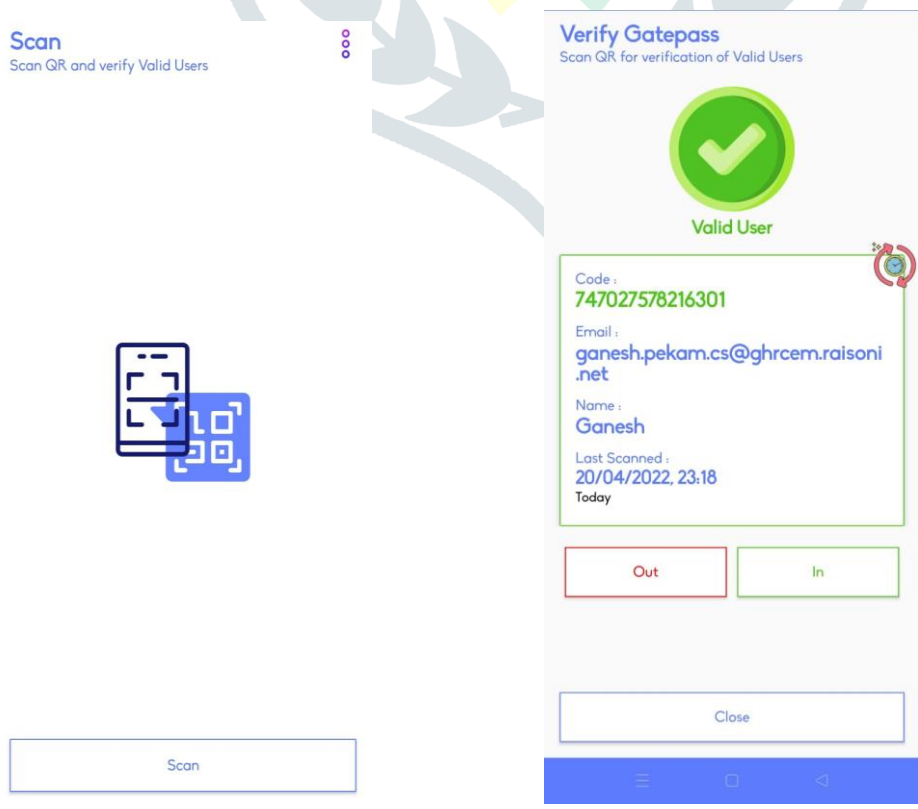
Logout

Close

If visitor had register one day before in the app then after scanning the QR code by the guard it will show invalid user



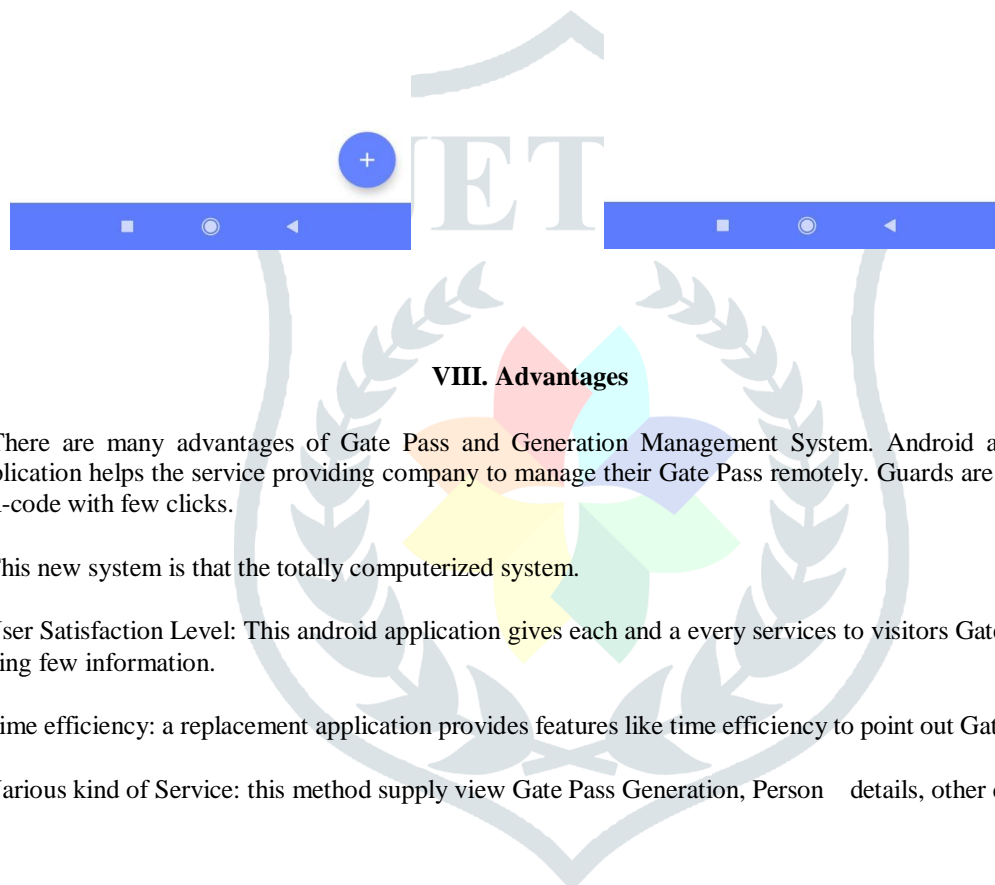
For Guard: He will scan the QR code for student, visitor in his login and mark the entry or exit for everyone after guard scans entry will be saved in database.



For Admin: He will be responsible for insert or update the guard, student info and can maintain report as we mentioned above.

Name	Email
guard4	abhialane1045@gmail.com
Shrinivas	shrinivaschalikwar2001@gmail.com
Guard1	okcoding21@gmail.com
A	pekamganesh5907@gmail.com

Name	Details	Time
Ram	Visitor	23:18
Ganesh	ganesh.pekam.cs@ghrcem.rasoni.net	23:18
Ram	Visitor	23:17
Ganesh	ganesh.pekam.cs@ghrcem.rasoni.net	23:17



VIII. Advantages

- There are many advantages of Gate Pass and Generation Management System. Android application. This android application helps the service providing company to manage their Gate Pass remotely. Guards are finding everything about QR-code with few clicks.
- This new system is that the totally computerized system.
- User Satisfaction Level: This android application gives each and a every services to visitors Gate Pass Generation just by giving few information.
- Time efficiency: a replacement application provides features like time efficiency to point out Gate Pass, Guards details etc
- Various kind of Service: this method supply view Gate Pass Generation, Person details, other details just in few clicks.

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X. CONCLUSION

This is a better platform to enhance the security of any organization, this will also help on maintain the entry and exit of the everyone who visit on fingertips. We also get the information digitally in few clicks so it is very useful for any organization or college.