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## VISITGST: A Visitor Management Android Application

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**ABSTRACT**: A visitor management system is required for offices where a large number of visitors visit daily. The project 'VisitGST' is used to maintain records of everyone who visits the GST office and is also used to accept visitor appointment requests. Many people visit government offices every day, they have to wait for the office employees to free their schedule. There is also no appointment system in place to ease the process of visiting. People have to wait for a long time before visiting employees due to them not being available at the office at that moment. Looking at these problems, we wanted to design an application that can help save time for both the employees and visitors that will also help with saving records digitally in the databases. Manual systems are often a problem because of their time-consuming nature but this visitor management software makes the process quick and effective by recording all relevant information about the visitor and storing it automatically.

**KEYWORDS**: Visitor Management System, Database, Visitor, DFD

#### I. INTRODUCTION

Currently, most organizations are using the manual method for keeping track of all the visitors of every department. The main problem is maintaining so much data without a proper system. On top of that, security also is the main issue in every particular organization. Furthermore, the logbook has been used to track all the visitor records which will never be enough. The logbook is not an efficient way to keep records for several years and producing reports, retrieving or inquiring about previous records from 2-3 years back is very hard and it takes a lot of time.

Therefore, we thought of using a management system to manage visitors' requests and appointments. More specifically, the visitors request entry and appointments to one or multiple employees which are then sent to specific employees. The employees are provided with different options such as accept, reject and wait to assign to every new visitor. There is also no strong record maintained for all of the people that visit. Our project helps in this domain by providing an option where employees get to view their visitor history for future purposes. The admin monitors all the users, system, and employee and visitor history.

Our system is very user-friendly and the functions of the system are easily accessed by administrators, employees, and visitors even when the user does not know the direct operation of the system provided by the organization. It is a very easy system to be understood and maintained. Compared to the manual system, users need to go page by page to search for information of visitors in any certain circumstance. Issues such as waiting in a long queue will be no more an issue and give the best impression of a well-organized system and function.

Our project is developed with the help of Android Studio IDE, within that XML is used for system UI designing, JAVA is used for logic and backend programming and The Firebase is used as Database for the system.

#### **II. PROBLEM DEFINITION**

To develop a visitor management application to manage the people visiting the GST office daily which will primarily make employees aware of the people wanting to visit them or wanting to take their appointments. Providing a service where commoners can know if a specific officer is available at that instant in the office. The employees can update their status (available or not available) for the people to check on the application. The existing system lacks some features like, the visitor (s) can't check the availability of the employee from the visitor's location, and blocking a troublesome visitor(s) is not possible. An application that will satisfy all the aforementioned problems is to be developed.

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#### III. RELATED WORK

Sr.	Name of Paper	Publisher	Author	Description
1	COVID 19 Visitor Management System	2021 International Conference on Computational Intelligence and Knowledge Economy (ICCIKE) March 17–18, 2021, Amity University Dubai, UAE	Kartik Gautam Amity University Uttar Pradesh, Noida, Nitin Sharma Amity University Uttar Pradesh, Noida, Praveen Kumar Amity University Uttar Pradesh, Noida, Ved Prakash Mishra Amity University Dubai, UAE	Most of the world's countries are in the grip of a coronavirus pandemic. COVID - 19 is spread primarily by respiratory droplets contaminating surfaces and hands that then transmit the virus to another person's respiratory system. To tackle this problem, this system consists of different devices coupled together to work with each other to provide the utmost protection from infection. It keeps track of people visiting, their condition while entering the premises, safety gear equipment, etc.
2	Gate-pass Management System	February 2019 International Journal of Scientific Development and Research (IJSDR)   Volume 4, Issue 2	Prof. Archana S. Banait, Ms. Neha Buwa, Ms. Varsha Jadhav, Ms. Pooja Ganate, Ms. Shubhangi Dagale MET Bhujbal Knowledge City, Nashik	The Project 'Gate-pass Management System' is to record the details and various activities of the user. It simplifies the task and reduces the paperwork. In this project, they are reducing the paper work which is done by giving the paper gate pass. They are providing the electronic version of the paper gate pass.
3	Visitors Management System by Applying the Model of UTAUT	2012 IEEE Symposium on Business, Engineering, and Industrial Applications	Norizan Anwar, Mohamad Noorman Masrek, <u>Yancy</u> Rahayu Rambli Faculty of Information Management, Universiti Teknologi MARA, Selangor, Malaysia	VMS provides an easy method for the front desk officer to search the ongoing visit of the day. They will be timely notified of the current visitor visiting their department. The Search method is also faster and the system will give output that the user needs.

#### IV. METHODOLOGY

Following are the functionalities included in the application and their description

- 1. Visitor
- 2. Employee

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3. Admin

#### • VISITOR MODULE

In this module, the visitor will have two options for visiting the office. Either register for an instant meeting if only the officer is available or book an appointment and wait for the officer's response. While registering for an instant meeting the visitor will be verified by their phone number and will be able to check the availability status of the officer. For booking an appointment, the visitor will have to initially log in to the application with their details like name and phone number. If the visitor is a repeater, the verification time will be saved. To book an appointment the visitor will have to enter the name or the designation of the officer they wish to meet and the purpose behind the meeting. After requesting an appointment, the officer will decide according to his schedule and make changes in the application from his side and the visitor will then be notified about the decision.

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#### • EMPLOYEE MODULE

In this employee module, the employee will have to first log in to the application with his name, phone number, designation, and code number. The employee will have the option of updating their availability status. The motive of this on/off button is that if the employee is already in a meeting or is busy, they can simply turn off the button for the visitors to know that they are not available at the moment. This option will be visible to the visitors, so while booking an appointment if the status is 'on' that means the officer is available for meetings. This way time can be saved and overcrowding can be avoided. After receiving an appointment request which includes the name and purpose of the appointment, the employee will have three options whether to accept, decline, or make them wait according to the schedule. Respectively, the visitor will receive a notification informing them about the appointment. The employee will also be able to see the history of his visitors.

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#### • ADMIN

Admin can log in and have access to all the records of visitors and employees. Admin can view, delete or block any profile. They will also be able to change passwords if needed.



#### • PROPOSED SYSTEM

The system consists of three modules, visitor module, employee module, and admin. The visitors can book two types of appointments. One is instant, which can be booked at the security gate of the office and includes



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name, person to meet, the purpose of the meeting, and phone number verification. And the second one can be booked from where ever the visitor is, and includes logging into the visitors' account and then booking an appointment. They can book an appointment while being aware of the availability of the officer.

Once the employee has logged into their account by entering their name, phone number, designation, and code number, they will receive requests from the visitors who wish to meet them, and then he can arrange the meetings according to their schedule. The employee will have the option to show their availability status by clicking one button so that the visitor who wants to meet them will know if the officer is available or not before booking an appointment. After receiving requests employee will have three options to handle the visitor, to accept the request and schedule the meeting or decline and ask them to schedule another time or make them wait for some time.

The admin module, after logging in, can view all the records, edit or delete the profiles or even block the profile in case of any misuse.

#### V. PROJECT DESIGN

#### **1. SYSTEM ARCHITECTURE:**



#### 2. DATAFLOW DIAGRAM:

#### 2.1 DFD Level 0:



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#### 2.2 DFD Level 1 Employee:



2.3 DFD Level 1 Visitor:



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2.4 DFD Level 1 Admin:



#### VI. CONCLUSION

This project is specially made for the State GST offices and will surely help them manage their records and visitors better. There are also more advantages than limitations of this project which will provide a better system to all the employees and visitors. The appointment system and the availability button can save time and this will help nullify a major con of visiting a government office i.e; wasting a lot of time to get a small amount of work done. Hence, our project is all in all a boon to any office and will surely make a positive impact.

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- 2. Gate-pass Management System by Prof. Archana S. Banait, Ms. Neha Buwa, Ms. Varsha Jadhav, Ms. Pooja Ganate, Ms. Shubhangi Dagale, MET Bhujbal Knowledge City, Nashik.
- COVID 19 Visitor Management System by Kartik Gautam Amity University Uttar Pradesh, Noida, Nitin Sharma Amity University Uttar Pradesh, Noida, Praveen Kumar Amity University Uttar Pradesh, Noida, Ved Prakash Mishra Amity University Dubai, UAE
- E-Visitor Information Management System(E-VIMS) using MyKad by M.N. Noorhuzaimi @ Karimah, S. Junaida , A. Noraziah, K. Huei Chen Fakulti Sistem Komputer & Kejuruteraan Perisian, Universiti Malaysia Pahang Karung Berkunci 12, 25000 Kuantan, Pahang.
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