

Developments of An Effective offline Bus Pass Generation and Renewal System For Transportation Service In Maharashtra

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Abstract- This project will be mainly aims to provide generation of bus pass and renewal of bus pass. It also keeps the record of pass holders. This system has only admin access through which admin can view all details and balance of particular pass holder. It is a desktop application which is very useful to perform function like accessing information, authentication and provide the pass to the particular pass holder and sending notification to pass holder before expiry date. As an output of system it will produce a pass as a message or print. This will be beneficial for every passenger so one can easily renew issued pass using fingerprint and pass_id within time. The main advantage of this project is to reduce paper work and make process in simple and faster way.

Keywords- MSRTC bus pass, Bus pass generation system, Pass holder, passengers.

I. INTRODUCTION

We are proposing this system to provide "safe, reliable, time saving, efficient, comfortable and affordable" services for people, although the cost for providing this service has been substantial as per the previous system of our MSRTC. Maharashtra state road transport corporation provides online portal as well as mobile App for bus reservation facility, busses schedule and all details of monthly, three monthly and yearly passes. There is no facility to get pass online[6]. Brihanmumbai Electric Supply and Transport (BEST) have started their own website where passengers can take the advantages of such system and everyone from anywhere can get city bus passes efficiently and easily[7].

But especially in rural area it is not working as compare to metro city. There are various environmental and psychological reasons so that preferred to collect the passes from controller office of bus depot. First reason is Passengers are unaware about online applications or exact process. Second, they regret to follow online process, as most of the

passengers from rural area regularly travel from bus depot they prefer to follow traditional process. Third, which we required to consider, which comes under environmental constraint is that in rural area most of the time there is irregularity of internet services passengers. The bus passes issue system that is currently in existence. It is a manual process in which students and employee are required to submit application forms along with their details. These application forms will be verified and then the bus pass is issued to the concerned person after the application form is verified. Here this each and every process needs to perform manually on paper.

In proposed system, Firstly pass holder fill the application form then we required to verify this form from institute after verification of this form, we required submitting it to MSRTC office, then authorized person from MSRTC office verify the details of pass and after payment confirmation issue the pass to pass holder. Proposed system ensures safety and also minimizes the processing time as well as reduces paper work which will make the process very much easier and comfortable for the users acquiring the pass. This system helps people to make the work a bit faster.

II. LITERATURE REVIEW

Authors in paper[1] proposed system specifically for transport service in Karnataka state. System is intended to develop an application to perform functionalities like accessing the basic information for authentication and provide Bus pass to a particular person without placing him/her in a queue for a long time. This system is helpful as it reduces the paper work, time consumption and makes the process of getting bus pass in simple and faster way. User can refill their account and extend the validity every time when the pass expires. Admin can view all users' details and through its login.

Authors in paper [2] developed online bus pass generation system that would be useful for commuters to get

their bus passes online instead of standing in long queues to obtain their passes. This system is intended to perform functionalities like accessing basic information for authentication and provide Bus pass for the commuters without placing them in long queues. The official in the bus, would be able to verify the authenticity of the pass by scanning the Aztec code provided on the pass with a recommended device. The Aztec code barcode is suitable for the tickets sold online and for the tickets printed out by the commuters. This printed ticket can be scanned by the device that reads the Aztec code.

Authors in paper [3] proposed a web application for people to get bus pass through online. The benefit of this project is no one can reuse issued pass due to photograph and unique id. The notification will generate before expiring monthly pass. This is beneficial for every passenger to get pass in time. The one time password will be generated for every user while registering first time. Aim of this system is to generate daily and monthly bus pass.

Authors in paper[4] designed and developed online bus pass generation system for Tamilnadu state. This system is useful for students who are facing problems with the current manual work of bus pass registration and renewal.

The students need to register by submitting their details through online. After registration an OTP code will be send to student's mail.

In paper [5], authors discussed basic of fingerprint features. Authors also discussed some fingerprint matching techniques and their pros and cons. Though in this review it is found that minutia based matching widely used for fingerprint recognition. There is a need to develop new hybrid methods that will give better performance in fingerprint recognition.

III. PROPOSED SYSTEM

This project is created to replace existing manual bus pass generation system. It is a real time project that will be useful for the users who are facing problems with the recent manual process of the bus pass issuing and renewal system. The proposed system is a desktop application which enabling the people to get the bus passes as message or print as well as they can renews the bus passes effectively. Further, system will verify the validity of passes and generate the list of pass holder and as per that send notification on respective pass holder's mobile. This will ensure safety and also minimize the processing time as well as reduce paper work which will make the process very much easier and comfortable for the users

acquiring the pass. Figure 1 shows the architecture of proposed system.

First admin login into the system with valid username and password. Then select type of pass, student pass or employee pass. Suppose we will select student category then first admin fill the registration form, and if he is registered student then it will identify using pass_id or fingerprint pass will be renew. Based on registration details of students and employees pass, system will either generate the new pass or renew the existing with validity of one month or three months. After completing the registration and payment process of pass, admin will send the message to the pass holders or give the print. This message includes Pass_id and name of the pass holder with their pass validity along with their source to destination location. Further, system will verify the validity of passes and generate the list of pass holder and as per that send notification on respective pass holder's mobile.

IV. PROJECT IMPLEMENTATION AND RESULTS

Implementation of this project is divided into various modules such as Admin login module, category wise registration module, searching module, printing and notification module and fingerprint module.

- **Home page**-As it is desktop application, only admin has access of this system. Through login credentials admin has access to operate whole system. It is as shown in figure 2.
- **Passenger categories**-After successful login, Admin choose category of passenger pass which falls under one of the category. Figure 3 shows four categories such as student, employee, concession/free pass and holiday pass.
- Once Admin get all details with cash from passenger then he do further procedure to take print of pass as well as send text message to pass holder's registered mobile number.
- Test cases

Table 1 shows the list of some of the instances of our system.

I d	Test Case	Excepted Output	Actual Output	Pass/Fail
01	Successful admin verification	The Login to the system should be try with the login the correct password	Login successfully enter into the system when admin enter correct credential. Otherwise give wrong credential message.	Pass
02	Fill registration form	Admin should properly fill registration Detail	Admin successfully submit there Registration form with appropriate detail.	pass
03	Fill pass form	Fill pass details	Outcome pass in printable or message format	pass
04	Pass generation	Pass as printing or message form	After submitting all details with pass fare system generate pass as printed form or text message	Pass
05	Sending Notification	Send notification before expiry of pass date	Admin successfully send notification to users	pass

V. CONCLUSION

It is a real time project that will be useful for the users who are facing problems with the recent manual process of the bus pass issuing and renewal system. The proposed system is a desktop application which enabling the people to get the bus passes as message or print as well as they can renew the bus passes effectively. Further, system will verify the validity of passes and generate the list of pass holder and as per that send notification on respective pass holder's mobile. This will ensure safety and also minimize the processing time as well as reduce paper work which will make the process very much easier and comfortable for the users acquiring the pass.

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