

# Efficient Bus Pass Generation and Authentication using QR Code



N. Krishnammal, Ramya C, Shiva Ganesh K, ShrenidhiR

**Abstract:** *The main aim of the project is to effective bus pass generation and authentication using QR code. In this project the entire bus pass generation is made as a online application. So one can easily apply and renew their bus pass in a simple and easy manner. This very useful for students and regular bus pass users. In this application user and admin both have login pages. The Users need to register by submitting the details and user id will be generated for the user. After registration user can use their details to login. If the person who applies for pass is a student then the details are forwarded to the school admin and if the school admin approves it then admin will approve the applicant. Bus conductor or ticker checker can know the details about the bus pass by just scanning through their device .The role of school admin is introduced to decrease the work of admin and avoid duplicate pass users.*

**Keywords:** *Users, School admin, Generation, Ticket Checker.*

## I. INTRODUCTION

By using the advanced technologies it is much easier to bring the entire bus pass generation to online. It is very easy and also efficient when compare to the old bus pass generation method. Old method is took very long time and have to maintain lot of details in physical form. It is very hard to transfer that much of data in physical form , so it take lot of man power to get the job done. This process is highly time consuming and more complex. Even though it is very difficult and time consuming it has lot of drawbacks. The first and main disadvantage is it does not provide any security options. This is mainly useful for school and college students and old age peoples. The aim is develop this system for government. So that it can used by many peoples. These pass are auto renewed or it can renewed in the online application. Renewed QR code can be downloaded from the website. Busconductor can verify or check the bus pass by just scanning it from their android phone or QR code scanner.

**Revised Manuscript Received on May 30, 2020.**

\* Correspondence Author

**Mrs. N. Krishnammal\***, Assitant Professor, UG Student, Department of Computer Science and Engineering, Sri Shakthi Institute of Engineering and Technology, Coimbatore

**Ramya C**, UG Student, Department of Computer Science and Engineering, Sri Shakthi Institute of Engineering and Technology, Coimbatore

**Shiva Ganesh K**, UG Student, Department of Computer Science and Engineering, Sri Shakthi Institute of Engineering and Technology, Coimbatore

**ShrenidhiR** , UG Student, Department of Computer Science and Engineering, Sri Shakthi Institute of Engineering and Technology, Coimbatore

© The Authors. Published by Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). This is an [open access](http://creativecommons.org/licenses/by-nc-nd/4.0/) article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

If the pass is valid the it will provide all the route and basic information about the passenger. If the pass is not valid for duplicate it will prompt as not valid. So it is easy to prevent fraudulent activities by using this application.

## II. LITERATURE SURVEY

### [1] Detailed Survey collection on online bus pass generation :

In this paper, a solution for current issue in the buspass generation is discussed. This system intended to provide a solution for drawbacks in the current system and reduces paper work and man power. Admin and user has their respective login pages. Then the user can apply for pass by filling the details in online form and uploading the proof. Then the proof and form are verified by the admin. If the proof and form filled by user are valid then a notification is sent to the user. After the user receive notification he/she can do the payment only authorized sources. Once the payment is done by the user then pass is generated to the user in online as pass with Aztec code, in which the information is encoded. The user can download it and use it. If bus pass is damage, the user can download the temporary pass in online. This makes user work easy and it takes less time. The conductor scans the code by using the recommended device for scanning.

### [2] Online Bus Pass Generation System using Web Application:

In this paper, the system has separate logins pages for user and the admin person. This system concentrates on security and confidentiality of the user details, so once the user register in the website, he /she receives a OTP code to his/her mail, by doing this the admin can verify whether the user is valid one or not. Then the user enters the OTP and he/she can login into the website. The user can apply for the pass and do the online payment or net banking . Once the payment is done and verified by the admin the pass is generated and sent to the students or users mail. Then the user can have the softcopy of the pass and he/she can download it and make it as hardcopy and use it. The user can also renew the bus pass by login into the website.

A notification has been sent to the users registered e-mail if the pass is about to expire, so he /she can aware of it and renew it.

### [3] Digital Bus Pass for Local Buses:

In this system, the online bus pass generation system is a cross platform, it is supported in kind of devices. So one can apply the bus pass from anywhere easily without any difficulties. As like all other systems it provides the same functionalities with one additional functionality. The additional function is tracking, which is for women safety.

This system ensures women safety by keep tracking of women pass users and also the pass, whenever the pass is scanned or used by women user a message is sent to the guardian of the women through system with location. Tracking can also be done using this incase of pass lost or theft.

This is one of the great way to provide security. The conductor who scans the QR code using the scanning app should login into the website to ensure confidentiality, whenever the pass is scanned the information are get stored in the database of the system. The conductor uses the recommended android app for the QR code scanning and whenever the pass is used or scanned a notification is sent through message for the card user and for guardian of women users.

### III. EXISTING SYSTEM

The current bus pass generation system that has been used for so long . This system is ineffective and inefficient in all the ways. It consumes more money and energy from both the government and people. It even cannot benefit the one side. There are lot of mistake happening while allocating are generating bus pass. This happens because the large amount of data in physical form , it is almost impossible to protect all of the data. This system has no fraudulent detection options or mechanism.

### IV. PROPOSED SYSTEM

This system which is described in this project is very easy to implement. This system consists of application form in website where the user can apply for pass in online and renew it. And the user needs to provide a document proof while applying for pass which in later used for verification process. And also apart from other systems it introduce a new role called school admin to verify students to reduce the work load of main system admin.

#### A. Scope

The proposed system aims at online bus pass generation and authentication i.e verification using QR code.

- To overcome the difficulties of the current system by digitalizing bus pass generation process and renewing process.
- This system generates bus pass through online in the form of QR code which reduces the time and man power..
- It satisfies the user requirement.
- User friendly easy interface.
- Scalable.

#### B. Functionalities

- Online bus pass generation provides facilities like the user can login, apply for pass, apply for renewal, view status of apply, logout.
- The admin can login, view pass apply, view user, view renewal apply, add user, add or remove route of bus ,log out.
- To increase the efficiency of bus pass generation and renewal.
- It actively monitoring all the process happening in web application.

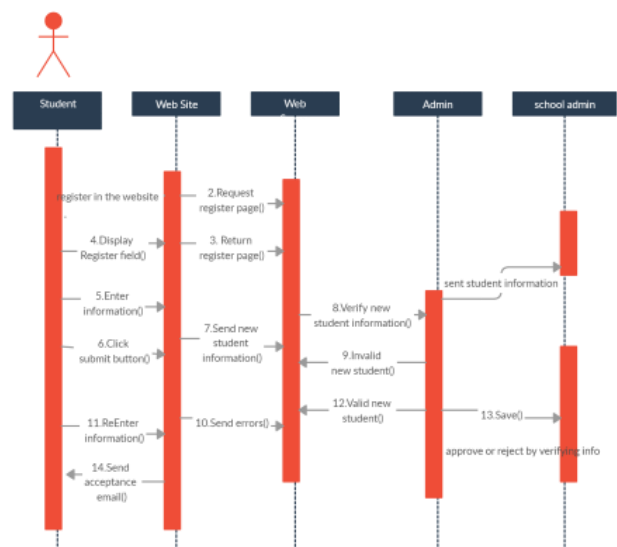
#### C. Modules

- **Admin Module:** The admin module consists of features like:
  - View user-The registered users details can be viewed here.
  - View apply-The applied users details can be viewed here by admin.
  - View renewal- The renewal applied users details can be viewed here by admin.
  - Add route-The admin can add route here.
- **Passenger Module:** The passenger can login using username and password and access the following features:
  - View route-User can view bus routes here.
  - Apply pass-User can apply for bus pass.
  - Apply renewal-User can apply for pass renewal.
  - Status-User can check the status of his/her bus pass.
- **School admin Module:** The school admin verifies the student detail sent by admin.
  - View user-The admin can view users.
  - View apply-The admin can view users applied for pass.
  - Approve/reject-The admin confirms whether student studies in a valid insitution.

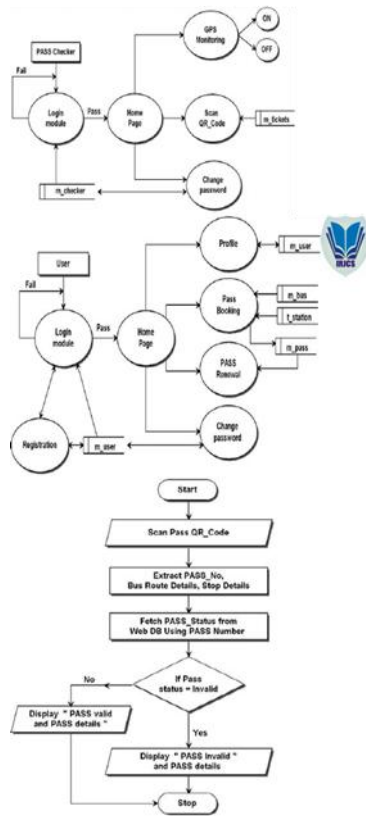
#### D. Technologies Used

- **Front end : PHP**  
It is used for creating static or dynamic websites and web applications. It is secure, fast and reliable. It is flexible for database connectivity.
- **Back end : My SQL Server**  
It provides database management system with queries and connectivity capabilities.
- **QR code generator:**  
It is a software that stores the user data in into a QR code. Example QR code studio etc..
- **QR code scanner:**  
Scanning apps in android mobiles are used as QR code scanners.

### V. SEQUENCE DIAGRAM



VI. DATA FLOW AND FLOW CHART DIAGRAM



VII. USE CASE DIAGRAM



VIII. RESULT AND DISCUSSION

The project that is proposed is useful for passengers who are suffering from current bus pass generation system. It is a web application where the passenger can fill details and submit it, instead of filling it in paper form. So it reduces paper work and easy to maintain user details and data secured. When pass is approved user gets QR code so that it can be used as bus pass, so it need not to be maintained in person, it can be used as softcopy. Therefore this proposed model helps people and makes bus pass apply and renewal as a easy process.

IX. CONCLUSION & FUTURE WORK

The advantage of the use of this system is the user can get bus pass without wasting their time. This device can be implemented on district level as well as state level bus pass generation. This application can be accessed from one or more device and it is scalable. Through the friendly user interface of web app the unique user of the system does not need exclusive kind of training and can use the application with ease. This paper discusses the difficulty in the current bus pass generation system and provides the solution for the same.

REFERENCES

1. A Simple Online bus pass generation, Swetha C4, Yashaswini, Ravali D3 K5 1Assistant Professor,a Institute of Technology, Bangalore
2. A. Ponnmalar,SkandaGurunathan,P. Sharmila,, "Bus pass renewal system", Journal of Computer EngineeringTrends, August-2016,vol.3, Issue 8,
3. An Effective online Bus pass generation system, Sandhya Kulkarni2 ,Parashuram Baraki1 , , Spurthi Kulkarni3 , Arpita Goggi4 , Keertipriya I5 1 , Associate Professor, Dept of CSE
4. A Detailed Survey Collection on online bus pass generation system , Akshay K, Abhisek Chowdhury, Keerthana D, Manjula K, Rajeswari S Student, Department of Information Science, New Horizon College of Engineering, India
5. Online buspass generation system by using advanced web app, G.Priyanka2 , S.Famitha1,M.Vasanthi, B.E3 Assistant Professor1 Department of Computer Science and Engineering .
6. Hong, H. Lee,J. Lee, K., J. Lim and S. Kim, (2012) "Bus information system based on smart-phone Apps", in Proc of KSCI Winter Conference.
7. M. O'Mahony, "An examination of the public transport information requirements of users" vol. 8, no. 1, (2007), pp. 21–30., IEEE Transactions on Intelligent Transportation Systems,
8. S.Chandurkar, S. Mugade, S. Sinha, M. Misal and P. Borekar, "Implementation of Real Time Bus Monitoring and Passenger Information System"vol. 3, no. 5, (2013), pp. 1-5., International Journal of Scientific and Research Publications.

AUTHORS PROFILE



**N.Krishnammal**, completed her Bachelor of Engineering in Electronic and Communication Engineering and Master of Engineering in Computer Science and Engineering. She is currently working as an Assistant Professor in the Department of Computer Science and Engineering, Sri Shakthi Institute of Engineering and Technology. Her current research is on AdhocNetworks .Assistant Professor.  
[krishn@gmail.com](mailto:krishn@gmail.com)



**C.Ramya**UG Student Department of Computer Science and Engineering, Sri Shakthi institute of Engineering and Technology, Coimbatore.  
[ramyachandran@gmail.com](mailto:ramyachandran@gmail.com)



**K. Shiva Ganesh**UG Student, Department of Computer Science and Engineering, Sri Shakthi institute of Engineering and Technology, Coimbatore.  
[kevinevil241@gmail.com](mailto:kevinevil241@gmail.com)



**R .Shrenidhi**UG Student, Department of Computer Science and Engineering, Sri Shakthi institute of Engineering and Technology, Coimbatore.  
[shrejaangu98@gmail.com](mailto:shrejaangu98@gmail.com)