

Online Facility of Ticket Booking and Generating Buspass Using QR Code

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Abstract – The aim of this project is to implement online system of bus pass and tickets booking system for regular passengers of Nagpur city. This application basically uses database to store the information of the commuters. This project has two login pages i.e. one for user and other-one is for admin. This system is used for ticket generation, bus pass formation as well as renewing the existing bus pass of the user. It is based on web application for the people who are interested to book their ticket and get their bus pass through online. This application is beneficial for commuters as they receive their pass on time because of this facility commuters don't need to wait in a prolonged queue. The OTP (one time password) will be produced for every passenger when they will register for the very first time and this OTP will be sent on user's mail id. In addition to this, notification is sent to user's mail id which would be produced before the expiry date of bus pass.

Key Words: commuters, account creation, notification, verification.

1. INTRODUCTION

This online Bus Pass and Ticket Generation System is a web application which is beneficial for the regular passenger of Nagpur city who are facing problems because of the record or register facility in the bus depots. Because of the increased growth in technology, peoples are changing them with improved technology and contributing in the digital world. This system is developed to facilitate to provide efficient, inexpensive, well grounded, well planned and comfortable usage of this application for Nagpur city commuters. The heavy rush in the bus depots causes lengthy waiting time for the registration of the bus pass and also to get them. This application offers the facility to get bus tickets and bus pass with the help of an android mobile application. In addition to this, this project gives a provision by which the passenger is able to book their ticket through online procedure. This application will also send a notification in user's email ID about the expiration period of bus pass. This application maintains a bond between users and admin.

1.1 PROBLEM DEFINITION

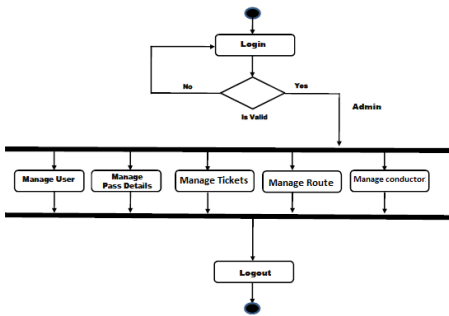
It is a hand operated procedure in which commuters have to submit their application forms at the bus depots by filling their details in the form. This application form will be checked by some person manually and then the bus pass will be issued to the specific user after the verification of the application. This is a quite tedious and hectic process to do manually because of this it will take time to generate bus pass and the passengers have to wait in long queue. This existing online bus pass systems involves manual work in which commuters have to fill their necessary information manually and thus this information is later verified by some authorized person in bus depots. This long verification process causes delay to users in order to get their bus pass on time.

1.2 PROPOSED SYSTEM

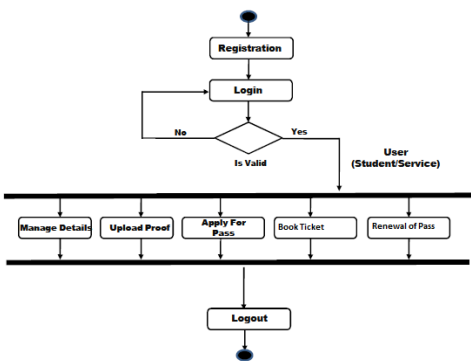
This proposed system will make sure that information about the user will be well organised, safe and correctly kept and is handled in a database. Renewal of user's bus pass is also done via online with the help of user name and password which is submitted by the user after registration. If in case the passenger is not fascinated to use the facilities of this bus pass system then he/she can cancel their booked tickets. As this system is online the registration and the confirmation of the tickets is secured and the confidential details of the user is also safe in the database. When the user's book tickets then his ticket is confirmed only when the user has did the payment and this payment is done via online transaction. With the help of this online bus pass system, the admin can get all the required details which are mandatory in order to generate the bus pass. The user must have to submit the correct detail for the verification of an authorised person.

2. ACTIVITY DIAGRAM

FOR ADMIN



FOR USER



3. MODULES IN THE SYSTEM:

- Registration Module
- Authentication Module
- Payment Module
- Generation of Bus Pass
- Bus Pass Renewal
- Notification Module
- Scanning Module

3.1 REGISTRATION MODULE :

In this module user has to fill a form which contain his/her details to create new account. After the creation of account the user is able to create bus pass and book ticket.

3.2 AUTHENTICATION MODULE:

After creating a new account, the user's information is verified by the system admin and the user is then able to login with their username and password for renewing their bus pass or for ticket booking. The user who has registered in this application is authorized by admin to

identify whether the correct user has logged into the system

3.3 PAYMENT MODULE:

In this system, the user has to do payment at the time of ticket booking and for renewing the bus pass. When the user books the ticket, his ticket is confirmed only when he has did the payment for his ticket. However, this payment is done via online through this payment module. Similarly, for renewing the bus pass, the passenger has to do his payment via online transaction.

3.4 GENERATION OF BUS PASS:

After submitting all the required correct details, it will be verified by the admin. If the user is verified by the admin as a authorized person, then the Bus Pass will be formed in a pdf form which is basically a QR code and this QR code will be sent on the user's mail ID. This QR code will have the all information about the pass. This bus pass will also have the detail about the detail of expiration of the bus pass.

3.5 RENEWAL OF BUSPASS:

In this system module, for renewing the bus pass the user has to login into the system. The user has to give the renewal month of his existing pass. For doing the payment via online transaction, the user has to give his credit card details. After going through all this process, the users bus pass will automatically renewed.

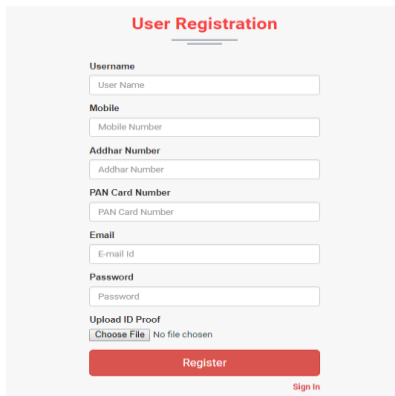
3.6 NOTIFICATION MODULE:

In this notification module, the notification will be sent to in registered user's mail id before the pass of the user is going to expire. Before the completion of expiry date of bus pass this alert message will be sent on the registered user's mail ID. If in case the user doesn't done the renewing of pass the expiration month of pass, then his bus pass would be terminated for that respective month. And if the user doesn't do the renewal of bus pass for succeeding alert mail then his pass will be cancelled.

3.7 SCANNING MODULE:

This module is for conductor side, where we have developed an android based application. Using this application, conductor first have to do the scanning of the bus pass because of which he will get the information about the bus pass validity, he also can check the user's history. Before scanning the QR code, the conductor will login. And through this module the conductor will retrieve all the necessary details of the user related to the bus pass.

4. RESULT AND DISCUSSION:



User Registration

Username

Mobile

Addhar Number

PAN Card Number

Email

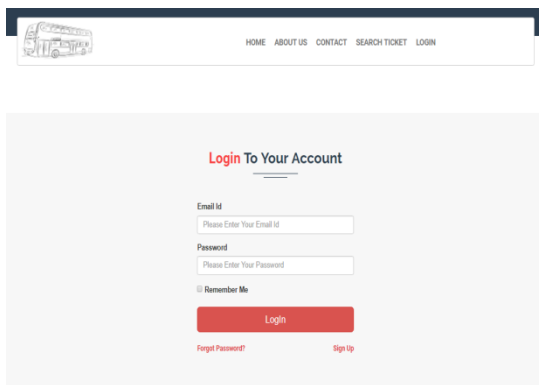
Password

Upload ID Proof
 No file chosen

[Sign In](#)

fig:4.1 Registration Page

In this page, user has to enter his details like username, mobile number, adhar number, pan number, e-mail, password and upload proofs for the completion of registration process.



Login To Your Account

Email Id

Password

Remember Me

[Sign Up](#)

[Forgot Password?](#)

Fig:4.2 Authentication Page

In this, the user is verified by admin by providing the username and password. If the user has entered the correct details about the username and password then only he can use the facility of further process.



Verify your mobile number

Thanks for giving your details. An OTP has been sent to your Mobile Number. Please enter the 4 digit OTP below Login

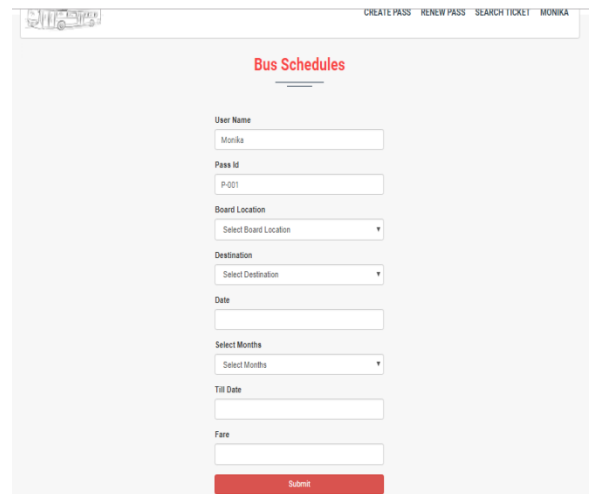
Fig:4.3 Verification Page

After providing the valid username and password, one OTP(One time password) is send in the user's mail ID. This OTP will be send only to the valid user.



Fig:4.4 Home page

After logging into the page, the user is now able to use the facilities of this system like booking tickets, search for desired tickets or generating/renewal of buspaas.



Bus Schedules

User Name

Pass Id

Board Location

Destination

Date

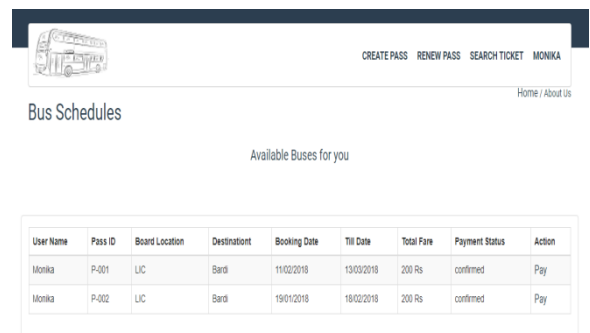
Select Months

Till Date

Fare

Fig:4.5 Bus Schedules

In this, based on the user's desired source and destination the user will search for the bus. In which the fare for this bus schedules will be given according to his destination.



Bus Schedules

Available Buses for you

User Name	Pass ID	Board Location	Destination	Booking Date	Till Date	Total Fare	Payment Status	Action
Monika	P-001	LIC	Sard	11/02/2018	13/03/2018	200 Rs	confirmed	Pay
Monika	P-002	LIC	Sard	19/01/2018	18/02/2018	200 Rs	confirmed	Pay

Fig:4.6 List of available buses

After giving the source and destination, the list of available buses will be displayed to the user with the cost of travelling. The user can then select the bus according to his need.

PayU Form

Mandatory Parameters

Amount: First Name:

Email: Phone:

Product Info:

Success URI:

Failure URI:

Fig:4.7 Payment Gateway

After selecting the bus, the user has to pay his ticket payment via online. For this payment, these PayU form will appear in which all the details regarding to payment will be shown to the user.

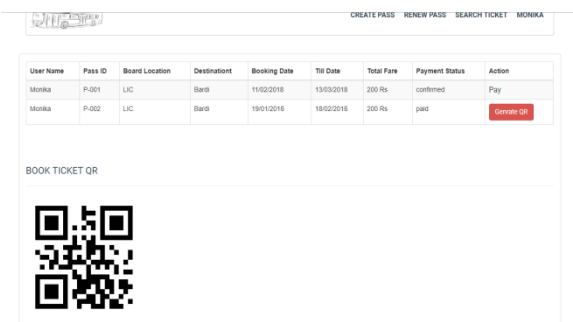


Fig:4.8 Generation of QR code

Once the online transaction is done successfully, the QR code will be generated which contains the details related to booked ticket.

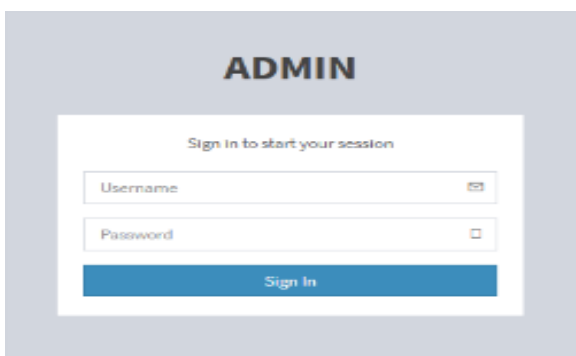


Fig:4.9 Admin Login Page

This page is only for admin, where the admin has to logging by providing username and password. In this, the admin will have all the database related to passenger, bus tickets, pass renewal, etc.

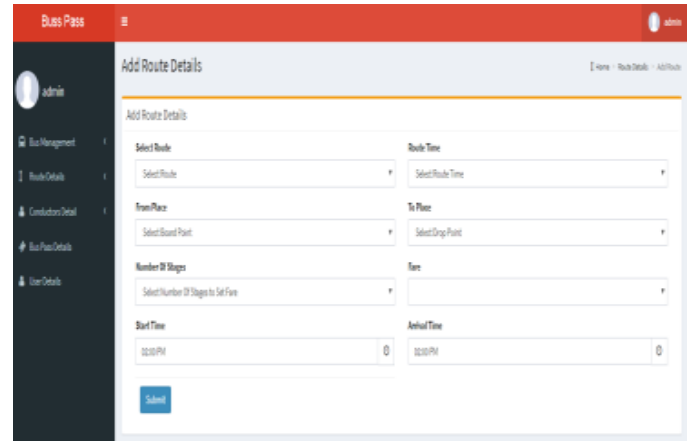


Fig:4.10 Route details

In this, the database for route will be managed by admin. In this the admin can add or delete the route details. This route detail includes arrival and departure of bus, source and destination of bus, etc.

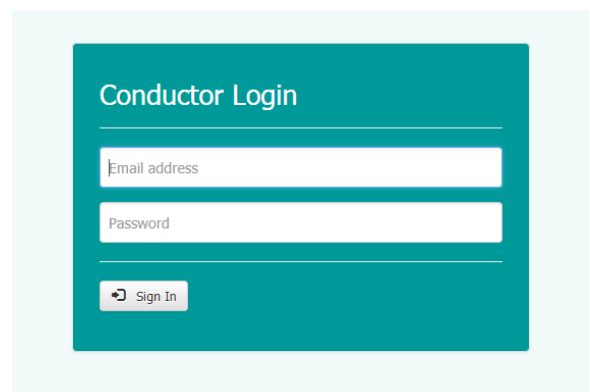


Fig: 4.11 Conductor login page

This module is only for conductor where the conductor will login and scan the user's QR code and he will retrieve the information or status of user's booked ticket or bus pass details.



fig:4.12 Scanned details

The conductor will scan the user's QR code and after scanning the conductor will get all details related to the user's booked ticket or pass generation and the status of payment.

SCOPE FOR FUTURE ENHANCEMENT

This project has a wide scope for future development, as the user's requirement is always going to be changed which is not static and these needs are dynamic. The technology which is famous today becomes out-dated in very next day. To keep abstract of technical improvements, the system may be further refined. So such type of system is improved in further future development.

This enhancement is done in an efficient and effective manner. We can thus update the same with further modification establishment and can be integrated with minimal modification. Thus the project is extendable and can be developed in anytime with more advanced features.

CONCLUSION

It is concluded that the system will work well and thus it will fulfil the end users requirement. The system is tested and errors are accurately removed. This application will be accessed from one or more than one system and hence login from more than one system is tested.

This system is user friendly so that everyone can use this application easily. User has to give the proper documentation. The end user is able to easily understand how this overall application. The system is evaluated, implemented and its performance is found to be satisfactory to the end users. The required result for the user's requirements is generated.

Further enhancements can be added to these system, because the features of this application is very attractive and it is useful than the present one. The speed of the transactions is achieved.

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