



Online Ticket Booking and Automatic Buspass Generation using QR Code

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ABSTRACT

The aim of this project is to provide online facility of bus pass and tickets system to the daily commuters of Nagpur city. It uses database to store data about passenger, bus, ticket and bus pass. This project has two logins, one for user and another for admin. In this project ticket reservation and bus pass creation as well as renewal system has been provided. It is a web application for people who want to book ticket and get bus pass online. It is very useful as it reduces pressure of manual work. This system was intended to develop a web application to perform functions like accessing data of users for authentication and provide pass to particular commuter. This system is helpful for people to get a pass in time as user doesn't need to wait in a queue for his/her turn. User can get a pass from our system anytime. The OTP (one time password) will be generated for every user while registering for the first time which will be sent to his email id. The notification will be sent to user's email id which will be generated before the pass expires. This is beneficial for every passenger to get pass in time.

Keywords: *passenger, notification, authentication, registration*

1. INTRODUCTION

This online Bus Pass and Ticket Generation System is a project which will be helpful for those everyday commuters of Nagpur city who are dealing with troubles of these days's manual system of generation of bus passes. Due to rapid growth in technology people need to upgrade themselves to current fashions and our upcoming ages are searching forward for

essential administrations in a single touch. This project is created to provide effective, cheap, reliable, time saving, efficient and comfortable services for people of Nagpur city. The large crowd causes long waiting instances to apply for the bus passes and collecting them. Bus pass generation would be useful to implement legitimate and better rates for passes and furthermore it would be valuable for travellers who forget to carry their bus passes with them while travelling. Handling tickets in a bus is a tedious task now-a-days. The current system of taking tickets for larger crowd leads to stop the bus for long time and this delay annoys the employees as they have to reach their work place earlier. This system proposes a facility to take bus tickets and bus passes using android mobile application. This system provides a facility by which the user can book the ticket via online transaction. This system also reminds the user that bus pass is about to expire. It can be used to apply/renew the bus pass through smart phone that will help all generation people. This system establishes a connection between users and admin. Data is managed in android app, which facilitates GUI for the user.

1.1 PROBLEM DEFINITION

It is a manual process in which students and other commuters are required to submit application forms along with their details filled. These application forms are to be verified and then the bus pass is issued to the concerned person after the application form is verified. This is a time consuming job that involves people to wait in prolonged line to obtain their passes. This causes in a great amount of time wastage for the passengers. Also, the bus pass issue takes place in the

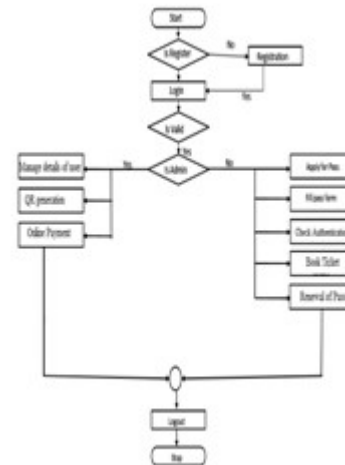
current system, only for a limited period of time during the day that is until evening. The existing online bus pass system needs the passengers and students to fulfil the necessary details by going in the specific bus depots. Once the documents are submitted, it would be verified by the officials present at the depots. Because of this, an ample amount of time is wasted for the commuters as they have to go to the bus depots for confirmation of tickets. Once the verification is done, the bus pass would be issued on a specified date as communicated to the user. This is a quite difficult job for the consumer to go frequently in bus depots just for the purpose to gain their passes.

1.1 PROPOSED SYSTEM

This system will make sure that data is accurate. Records will be efficiently and accurately stored and maintained in a DBMS. Renewal can also be done online with the reference identification that is provided after the registration is done by the user. If the student or commuters is not interested to use the services of bus pass then he/she can drop their booking. Minimum time would be required for processing the details submitted and to generate the bus pass.

Passenger can purchase the bus ticket through the Internet, with the help of this the tickets confirmation is secured. Other than this, the online system helps the commuters to inspect the availability of the bus ticket before consumer can purchase the bus ticket. In addition to this, customers has to pay the amount of their required tickets via online and do not need to pay via cash. Hence, there is a need of reformation of the system with more advantages and flexibility. The Bus pass booking System reduces the manual work. Bus pass system provides bus pass generation, bus pass renewal, ticket booking and payment is done via online transaction, etc. Using this bus pass system we can inspect all necessary details equivalent Bus pass tickets and it provides the guidelines to the customers like how to renew pass how to update it. This system handles every details of Bus pass. Passengers first need to verify themselves by providing the necessary details. Once the user is verified by the admin/system then it allows users to book passes for any route via online.

2. SYSTEM FLOW CHART



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:

Registration is the first phase in this project. The user has to give complete details about him/her to create a new account which includes their Name, Phone number, Adhaar card number, E-mail, PAN (optional), DOB, etc.. Once the account is created successfully, the user is then able to book ticket or renew his bus pass. All the transactions are performed based on their user id. The user can book the tickets or renew their bus pass if they have registered into this system. After registering, all the user's details will be stored in Admin's database so that admin will verify their details for further procedure. If the user is already registered in these system then he do not register himself again, he is able to directly login into the system.

3.2 AUTHENTICATION MODULE:

Authentication is the second important module in this project. Once the user submits their details his information is approved by admin and the user can login with their username and password. Using this username and password, the user is able to renew their bus pass and also for booking their desired tickets. Only the registered users can do the renewal process in this module. The Admin will authorize user by sending OTP (one time password). Unauthorized user cannot login into the system.

3.3 PAYMENT MODULE:

Payment is one of the challenging tasks to be done across the wide spread network. In this project, payment module is used for two purposes:

- I. Ticket booking.
- II. Bus passes renewal.

When the user will book his ticket, the user has to pay for his ticket. The user's ticket will be confirmed only when he has done the payment of his travelling ticket. And this payment is done via Online with the help of this payment module. The user has to give his card details which include cvv (CardVerification Value), etc.

When the user's bus pass is going to expire on or before the date of expiry, the user has to renew his bus pass. For renewing the bus pass, the user has to go with the online transaction process where the payment of renewing pass is paid through online that should be secure and it must reach to the authenticated user. All the transactions carried must be committed properly. In case of any power failure the transaction should not take place.

3.4 GENERATION OF BUS PASS:

After providing all the necessary valid details such as proofs, phone number, route information, etc., the details are submitted to the admin. Then the admin will verify and evaluate the detail. If the user is approved as a trusted one, the Bus Pass will be generated in a pdf form which is basically a QR code and this QR code will be sent to user via Email. This QR code will contain all the necessary details of pass i.e. Name, phone number, bus pass ID, pass, source-destination, cost, etc. This bus pass also contains the information of expiry of bus pass.

3.5 RENEWAL OF BUS PASS:

In this module, the user will login to his account for renewal of his bus pass. The user has to mention the month of renewal, user id and the other necessary details. The user has to renew his bus pass on or before the date of expiry of bus pass. If the user fails to renew his pass before the date of expiry then the user will not be able to use his existing bus pass. The payment of renewing the pass is done through online transaction. For making the payment through online the user has to give his credit card number and pin number for amount transaction. Once the process is completed the user bus pass will be renewed automatically.

3.6 NOTIFICATION MODULE:

In this module, user will get notification of their bus pass status before the expiry date of bus pass. To make aware of their bus pass expiry, an alert mail is automatically delivered to the user with the help of his registered mail id. Before the start of the expiry month of pass, an alert message will be sent via online. If suppose the user fails to renew the pass within the first fifteen days of the month, then the pass will be closed for that particular month. If he/she fails to renew the pass consecutively for 3 months, then the account will be blocked.

3.7 SCANNING MODULE:

This module is basically for conductor side, we have created android based application which will be used by conductor for scanning the QR code of user's booked ticket. In addition to this, through this app conductor is able to scan the bus pass by this he will know the validity of the pass; check the history of user's. For this, conductor will login in this app. The QR code which is generated in user's mail id in pdf form, with the help of this scanning module the conductor is able to scan the QR code. Through this app, the conductor is also able to check the status of passenger's bus ticket whether the payment for the required ticket is done or not.

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