

# Bus Pass Monthly Booking with QR Code & Verification using OTP

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## ABSTRACT

*In this paper, we are proposing Bus Pass Monthly Booking & Verification using QR Code and OTP. Users generate QR Code instead of the ticket for monthly pass and Daily system. In this web application, after registration profile, we have to attach our dummy bank details to this web application and add money to the wallet. Whenever we go by bus, we have to select from and to location Then it will generate amount details for per head. Also, we can buy a ticket for extra members and generate the QR Code and this QR Code Provide to Bus Conductor for Book the Tickers. It Scans the QR code from the conductor of the bus with a particular ID. Then we provide OTP to Conductor for confirmation. So directly money will transfer from our wallet to transport corporation on basis of conductor ID. and if any user want to monthly bus pass then select the From and To Location and process the monthly pass payment and then generate the QR Code for Monthly Pass also generated the Monthly reports, View travelling Details. When conductor Scan the QR Code for Ticket then Send SMS Alert for ticket payment proof to respected Users also conductor view the Ticker Details Report.*

**Keywords:-**Android Application, Android Mobile.

## 1. INTRODUCTION

In this paper, we are proposing Bus Pass Monthly Booking & Verification using QR Code and OTP. Users generate QR Code instead of the ticket for monthly pass and Daily system. In this web application, after registration profile, we have to attach our dummy bank details to this web application and add money to the wallet. Whenever we go by bus, we have to select from and to location Then it will generate amount details for per head. Also, we can buy a ticket for extra members and generate the QR Code and this QR Code Provide to Bus Conductor for Book the Tickers. It Scans the QR code from the conductor of the bus with a particular ID. Then we provide OTP to Conductor for confirmation. So directly money will transfer from our wallet to transport corporation on basis of conductor ID. and if any user want to monthly bus pass then select the From and To Location and process the monthly pass payment and then generate the QR Code for Monthly Pass also generated the Monthly reports, View travelling Details. When conductor Scan the QR Code for Ticket then Send SMS Alert for ticket payment proof to respected Users also conductor view the Ticker Details Report As technology is growing fast, so we need to update ourselves to be in touch with new technology. The current process of bus ticketing is very slow and tedious process. Customer needs to stand in long queue for issuing bus pass in bus Depot which is time consuming and this process is hectic to employees in the Depot as well as user. Existing bus pass system has same drawbacks, like pass is regenerated every time. This is a vapid process, which require to reprint the pass every time. And existence system does not provide any security options. This system provides effective software for maintaining bus pass. Digital bus pass generating system is useful for peoples to get their bus pass online instead of standing in long queues to get their bus pass. This system reduces paper work, time consumption and makes the process of issuing pass in simpler and faster way. User can use the pass for long time, just need to recharge their account of digital pass and extend the validity of pass every time when pass is going to expire. No need to print the pass every time. This system performs functionalities like accessing basic information of user authentication. This system provides security option for women by notifying their guardian when pass is scanned. The admin and the conductor of the bus would be able to verify the authenticity of the bus pass by scanning QR code which is provided on the recommended device like android mobile and after scanning it will notify to user when pass is accessed.

## 2. LITERATURE SURVEY

### **Paper 1: Development of an Online Bus Ticket Reservation System for a Transportation Service in Nigeria.**

**Description:** The Online Bus Ticket Reservation System is a web-based application that allows visitors check bus ticket availability, buy bus ticket and pay the bus ticket online (Asaad, Ayad and Hayder, 2012). This system is established for all the home/office users after gaining access from the administrator. According to Invaderzim (2011), Online Bus Reservation System provides bus transportation system, a facility to reserved seats, cancellation of seats and different types of enquiry which need an instant and quick reservation. This system can be used by the users in performing online reservation via internet for their all business purposes. Users can use this program directly on their websites and no need to install it. The use of bus traveling is a large growing business in Nigeria and other countries; hence bus reservation system deals with maintenance of records of each passenger who had reserved a seat for a journey. It also includes maintenance of information like schedule and details of each bus (Shivaji, 2010). Also, we get to know that there are many operations, which they have to do manually. It takes a lot of time and causes many errors. Due to this, sometimes a lot of problems occur and they were facing many disputes with customers. To solve the above problem, and further maintaining records of items, seat availability for customers, price of per seat, bill generation and other things, we are offering this proposal of reservation system. The reservation system has three modules. First module helps the customer to enquire the availability of seats in a particular bus at particular date, the second module helps him to reserve a ticket and with the third module he can cancel a reserved ticket. However, since the current reservation system is still conducted manually and separately at each branch, contact must be made by each branch's front-officer to the head office for each customer's enquiry in order to get the latest update on schedule, seat availability and other reservation-related information; as well as to avoid duplicate bookings or over-capacity. There is also a physical limit to the reservation availability as each branch only operates during certain hours and reservations can only be made on-the-spot. These limitations are not the only issues the company is currently facing. Other factors that create problems include human errors (e.g. miscalculations in ticket price, mistakes in noting passenger data, etc.), the fluctuation of passengers during certain periods of time that causes a bottleneck in the check-in process because of the inability of the front officer to multitask and the lack of overview or report of the on-going business; making it difficult for the company to judge past/current performance or plan future improvements. Looking at these problems and limitations, it is clear that both the company and the customers require an integrated reservation system that is more efficient in information update and reservation handling and also easy to use. Electronic tickets, or e-tickets, give evidence that their holders have permission to enter a place of entertainment, use a means of transportation, or have access to some internet services. Bus Ticket Reservation System enables the customer to buy bus ticket, make payment, and ask for information online easily. Furthermore, staff can sell bus ticket using Bus Ticket Reservation System after check bus ticket availability for the customer and print the bus ticket to the customer that queue up in the counter. The method to solve this problem is to create an online buying bus ticket system. Customer can buy the bus ticket over the Internet, 24 hours a day, 7 days a week and the bus ticket can't be lost, stolen or left behind. In addition, the online system lets the customers check the availability of the bus ticket before they buy bus ticket (Wee, 2007). Furthermore, customers no need to pay cash to buy bus ticket because they can pay the bus ticket by using deposit slip number order by bank[1].

### **Paper 2: Online Bus Ticket Reservation System.**

**Description:** Online Bus Ticket Reservation System is a Web based application that works within a centralized network. This project presents a review on the software program "Online Bus Ticket Reservation System" as should be used in a bus transportation system, a facility which is used to reserve seats, cancellation of reservation and different types of route enquiries used on securing quick reservations. OBTRS is built for managing and computerizing the traditional database, ticket booking and tracking bus and travel made. It maintains all customer details, bus details, reservation details. In order to achieve the design, Imo Transport Company (ITC) was chosen as a case study because of its strategic importance to Imo State. Structured Systems Analysis and Design Methodology (SSADM) was adopted. In addition, PHP Hypertext Preprocessor (PHP) language was used for the front-end of the software while the back end was designed using MySQL. The software achieved is capable of improving the customer hand and relationship management in ITC operations. It is recommended that despite the present functionality of the designed software, an additional functionality such as the use of E-mail to send tickets and notifications to the customer and an online payment using credit cards/debit cards should be implemented into the system. Furthermore, other operations carried by ITC such as the courier services should also be integrated in order to enhance the system[2].

### Paper 3: MOBILE – BASED BUS TICKETING SYSTEM

**Description:** The use of bus in traveling is a large growing business in Iraq and other countries. Hence, bus ticketing system deals with maintenance records of each passenger who had reserved a seat for a journey. Moreover, the ticketing system includes maintenance of schedule, fare and details of each bus traveling. However, there are many bus operations, which were operated manually. The manual or traditional system takes a lot of time and causes many errors of the operation. Due to this, lot of problems occur and they were facing many disputes with customers and each branch works separately. To solve the above problem, and further maintaining records of items, seat availability for customers, and the price of per seat, bill generation and with the emergence of mobile devices are rapidly increasing among users, bus travel companies a chance to improve their business' performance by adopted mobile-based application. A prototype of mobile bus ticketing system (MBTS) is developed by using agile software development approach and Unified Modeling Language (UML) for designing the MBTS. The prototype is evaluated on it usability to ensure the successful implementation of the MBTS in the real environment[3].

### Paper 4: CUSTOMER SATISFACTION IN PUBLIC BUS TRANSPORT

**Description:** An increase in population generates increasing in travel demand. Indonesia as one of the most populated countries in the world next after China, India, and USA face a large number of travel demand. Nowadays, Indonesia deals with an explosive growth in vehicle ownership and utilization. An increased road length and new roads generate faster and longer trips, more trips by car and higher car ownership all of which adds up to more traffic congestion and pollution. Public transport is one important solution for this problem. Public transport operators are forced to place emphasis on the monitoring and improvements of the services provided in an attempt to address the increasing rate of car ownership. This study focuses on traveler's satisfaction with service quality attributes. Using self rate questionnaire to investigate overall customer satisfaction and factor that influence public transport users' satisfaction. Data were analyzed using descriptive, correlation, factor and regression analysis. It is highly recommended to pay more attention on functional factor in order to improve and develop attractive and marketable public transport. From regression analysis suggested that two factor that were measure only have low influence on overall customer satisfaction, and it is interesting to investigates another original factor from Indonesia perspectives that also has influence in overall satisfaction. To enrich and give the perspective in local level, data analysis also carried out for both cities; Jakarta and Jogjakarta. The results suggested similar result with the main finding. This means that so far, the condition is remain similar because customer in both cities evaluate that public bus transport were not satisfied[4].

### 3. PROPOSED SYSTEM

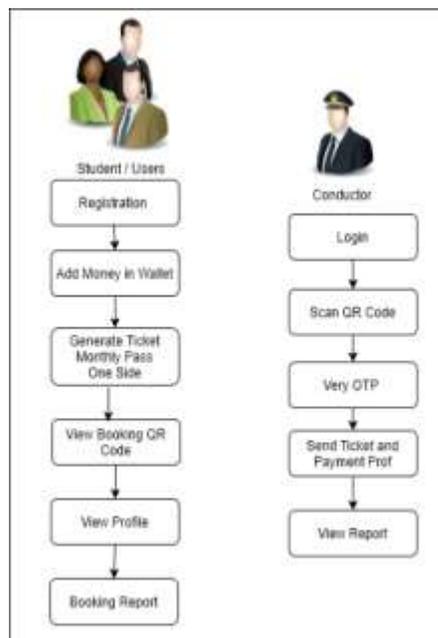


Figure: System Architecture Diagram

In proposed method, we are introducing Bus Pass Monthly Booking with QR Code & Verification using OTP. Here, we will create one android application for Bus Conductor and Web Application for Users for Generate the Monthly Pass for specific Source and Destination and also Generate the QR Code for one Side travelling with single or multiple members.

The main of proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitation of the existing system. The system provides proper security and reduces the manual work.

- Security of data.
- Ensure data accuracy's.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater service.
- User friendliness and interactive.
- Minimum time required.
- Using small amount of data massive data can be generated at runtime.
- More than one related outcomes occur by only one search.
- Accuracy should be increased.
- Efficiency is increased

#### **4. CONCLUSION**

We are Proposed Bus Pass Monthly Booking with QR Code & Verification using OTP. Here, we will create one android application for Bus Conductor and Web Application for Users for Generate the Monthly Pass for specific Source and Destination and also Generate the QR Code for one Side travelling with single or multiple members.

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