

# Railway Ticket Checking System

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## Abstract:

The Railway Ticket Checking System in India is done through one alternatives. The individual ticket gets checked by the Ticket Collector (TC). The TC supposed to go all passenger to see their ticket, check their PRN number in the list he has. This is the manual process where time required for ticket checking. All the passenger tickets not get checked by using this traditional system. We want to design an application which will help to TC to check the ticket. Data of the particular passenger will get fetch from the details which will be present in the application. Biometric technique is being used for fetching the data this will help to reduce manual work. Also the OTP technique is used for getting the record of the passenger. The application will have all data of passenger, which will help to come to know the exact number of passenger aboard on the train.

## 1. Introduction

The railway ticket checking system is design to overcome the problem of the traditional ticket checking system where the ticket checking is done is the manual process ticket checker use to check ticket by using PRN number which helps him to identify the passenger. The ticket checking now a day is very time consuming and also due to more time required all passenger tickets not get checked which leads to many such passenger to travel through train without having ticket with them. To overcome this problem, we suppose to design an application which will help ticket checker to check the ticket through the mobile application which will be less time consuming. ticket checking will be done of each and every individual passenger this is our prime job. We suppose to design a system through which ticket get checked of each passenger and ticket checker job get reduce by using this application. the ticket collector in the current system having a list of all passenger he wants to check the name of each passenger in their list. This s a hectic process and very time consuming. This application will also contain all detail information of each individual passenger, also all relevant information of the passenger this will help to keep a track record of every passenger. Any misplacement of passenger luggage will be traced through it, In the traditional system the work load of ticket checker is very difficult. Here we can see in this system that how the Ticket Checker actually works while ticket checking.

## 2. Literature Review:

The literature survey on the railway Ticket Checking system is done by visiting the railway platform and through the internet by visiting the websites and related paper published on the railway ticket checking system. The literature review contains the survey on how the particular system works recently. The survey contains all the relevant information on how checking is performed by the ticket checker how they keep the records of the passenger how the information of the passenger is being stored to the ticket checker. The literature survey gives a brief idea about the Railway Ticket Checking System which is been now in use also about the research technique and work done on the ticket checking process. The literature survey helps in identifying the various technique which are recently in use for ticket checking in railway. There is various technique which we come to seen in the literature review for ticket checking in railway. The techniques are:

### 1. Traditional System:

In this System the Manually Process is used for the ticket checking. This is the technique which is been used for the Ticket checking recently. In this technique the Ticket checker manually checks the ticket of each and every passenger. This is the lengthy process and very time consuming also. TC have a list of all passenger he uses this list to check the ticket he goes to each and every passenger and ask them for their PRN number i.e. Passenger Record Number and verify that number by the number he having in his list. In this way the Ticket collector checks the ticket of every passenger. This is the traditional system where the three is lengthy manual process done by the ticket checker. All passenger ticket not get checked in this system this is major drawback of this system.



Figure 1: Traditional Railway Ticket Checking System

## 2. SMS Alert System:

The SMS Alert System is the system which is associated with the traditional system. The Passenger who do the ticket reservation they get an SMS on their mobile phone after doing the online reservation. The SMS gives the details of how many passenger having reservation and also helps in showing details. If the ticket gets misplace the SMS can be shown but still, there is compulsion of carrying the ticket with them. This system is same as of traditional system where ticket checking is a manual process. It is also time consuming process the ticket checking is not done compulsary also required to carry the ticket with them.

## 3. Barcode Scanning System:

The passengers will scan their tickets through the barcode scanner which will be there in the respective boogie and accordingly the ticket distribution systems located at various stations will be updated. Suppose, if Ticket number 4 is absent out of 5, then the Microcontroller 1 will send the absent number via sender ZigBee and the receiver ZigBee will receive the absent ticket number 4 to Microcontroller 2 which will send absent number via GSM to station GSM. All the waiting passengers will then get message on their mobile through GSM.



Figure 2: Barcode Based Technique

#### 4. QR Code Scanning System:

For making the working of TCs more comfortable, we are proposing the new system in which the manual working of TCs using the sheets of paper will be converted into the digital form. This system integrates all the services provided by Indian railways to the TCs & the passengers. It has two parts. First is Centralized system which will be situated in the control room at the divisional head office of railways where the tasks like management of databases, allocation of Duties to the TCs will be done. As well as the requests from the onboard TCs will be served efficiently & they will be provided with the all related services. Second part is Android App for TCs by which all works of them can be done digitally like authentication of seat allocation by scanning QR code on the ticket & verification of QR code information with the database. Also by using this app, TC can communicate with the centralized system for availing the services as well as to launch enquiries & complaints.

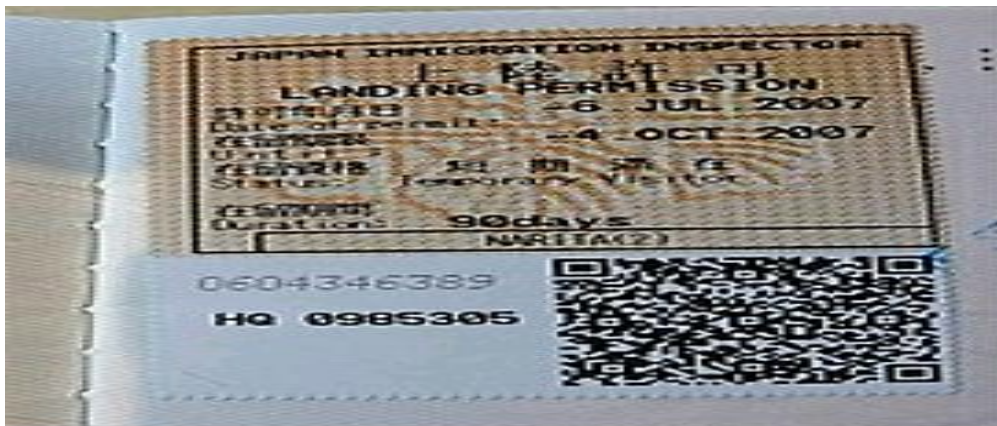


Figure 3: QR Code Based Scanning Technique

#### 3. Proposed System:

The System we suppose to design is the Application based system the application is the mobile app which will be at the ticket checker. The application contains all the data about the passenger. Also the application will contain the data about the passenger according to their priority the priority is based on the arrival station of the passenger the passenger whose station is near that will having more priority. In this way the data of passenger is saved on the application.

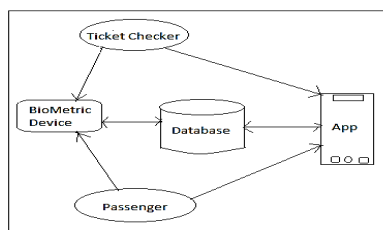


Figure:Propose System

Figure 4: Proposed System

The ticket checking is done by using Biometric technique. The technique can be used by either thumb or by the eye scanning. When the Ticket Collector goes in any particular boggy all the passenger will randomly give their thumb and their ticket checking get conformed. The passenger who's having more priority will be checked first. If any particular passenger does not check, there ticker then that will be get displayed on the application which the ticket collector has. The different color will help to get conform whether the ticket is checked or not. If there is the case that the biometric will not detected of any particular passenger, then the ticket checking will be done using the OTP (one Time Password). The OTP will be get generated on the mobile number of the particular passenger and the ticket get checked of that passenger. When passenger will tell that OTP number the ticket checker will enter that OTP number in front of that passenger name if the OTP is correct then the ticket gets checked is confirmed. By using this technique there is no need to carry the ticket. Ticket checker job get very less. The process of ticket checking will be very fast. Almost all the passenger ticket will get checked.

#### 4. Conclusion:

Using latest technologies in embedded system we can easily automize ticket checking in railways. Also, a total digitized ticket checking system is formed which helps to avoid unauthorization of tickets.

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