Smart solutions of Railways Ticket Booking System

Literature Review

Problem Statement:

To propose smart solutions for Railways Ticket Booking System using IOT technology.

Abstract:

Indian railway is the third-largest human transport system in India with over 30million passengers travelling every day all over the country. One of the most prevalent problems in Indian Railway stations is that the platforms are overcrowded. We have recommended a system to tackle this issue. The system that we are proposing is to issue a smart seat allotment to passengers. More over Indian railways is using more than 2 tonnes of paper for booking and verification process. To avoid these problems and more over to move the nation towards digitalization we are proposing this idea. Here in this proposal we are building web-based application for ticket reservation process.

Proposed Methods to Provide Smart Solutions

1) By using Bio-metric finger print sensor

For overcoming these problems were are proposing a new idea. For booking purpose we are going to use an web application which is developed in Java JSP technology .Through this web application, we can book ticket using our biometrics as the primary key. Since our biometric is recorded in the UIDAI Aadhar KYC system, there won't be any necessity to enter any further details. For booking tickets for multiple passengers, it is necessary to have their aadhar number for booking the ticket. While in case of the verification time, biometrics should be verified for all the passenger who boarded in the train. If the passenger has a confirmed ticket, then it will verify. Otherwise it will check in the waiting list. For waiting list, if the data is not authenticated means it will go refund if not, no refund will be provided. This application is accessed by using an external fingerprint sensor or with an inbuilt sensor. Each official will have individual login credentials. So, by this itself we can identify everything. Untravelled seats are automatically allocated for boarded waiting list passengers. More over with is application, Lower seat preference will be adjusted by the medical track and senior citizenship claim also. Main thing which we are going to

utilize is here is AEPS. This means Aadhar Enabled Payment System. By this system payment is done by using biometric id itself. Refund will be also given with consideration of this biometric. The proposed system also used the GPS for tracking. Passengers can view the upcoming station name while traveling in the train or know the timing of the upcoming train in before-hand.

2) By using QR code

A QR-code (it stands for "Quick Response") is a mobile phone readable barcode that can store website URL's, plain text, phone number, Email addresses and pretty much any other alphanumeric data. The Quick Response (QR) code first used in automotive industry has now become popular due to its large storage capacity and extremely less response time, here QR-code is used to store user information in encoded form

The proposed system initially make passenger do their registration and then login to their system with valid credentials and then fill the ticket details. information is stored in the passenger details database. After scanning the ticket holder details, the information is verified and in response server generate QR-code which is stored in passenger / user application. Once the QR-code is generated the passenger can use that QR-code for day today traveling through train. The generated QR-code is need to show to ticket checker when passenger wants to travel, the ticket checker has QR-code scanner through which it scans the ticket details of passenger and check validity of ticket through available details which are displayed on his web application.

The proposed system would enable the passengers to register for the train tickets. It also enables the passengers to get the ticket within two or three clicks on their device. This system uses the web application for ticket booking and to verify the ticket. The passenger wants to sign in the basic information like name, address, banking details, source and destination and so on and these are stored into the database and generated in the form of QR-code. The ticket checker scans the QR-code and accordingly validation will be checked through it. The proposed system also used the GPS for tracking. Passengers can view the upcoming station name while traveling in the train or know the timing of the upcoming train in before- hand.

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